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RHYTHM AND VOICE-LEADING AS A FACET OF STYLE: KEYBOARD WORKS OF J. S. BACH, C. P. E. BACH, AND MOZART.

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RHYTHM AND VOICE-LEADING AS A FACET OF STYLE: KEYBOARD WORKS OF J.S. BACH, C.P.E. BACH, AND MOZART

by

NANCY BARNES HAGER

A dissertation submitted to the Graduate Faculty in Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1978

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May 6, 1978 — Howard Brofsky
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INTRODUCTION

This study represents a preliminary exploration into the relationship between rhythm and outer-voice counterpoint as an aspect of eighteenth-century keyboard style. The investigation therefore focusses on the interaction of two fundamental structural and organizational forces in eighteenth-century music: principles of harmony and counterpoint, which are the sources of tonal motion and direction, and the pulse and its subdivision, which are the basic units of temporal ordering.

The approach to harmonic-contrapuntal structure clearly reveals the influence of Heinrich Schenker, as pointed out in Chapter 1, "Analytic Concepts and their Graphic Representation". Although Schenker was principally concerned with tonal structure, he was also interested in the effects of accent and rhythmic shaping. He devoted a chapter to meter and rhythm in Der freie Satz,[1] focussing on metric-rhythmic organization in relation to phrasing and harmonic goals. In addition, many of Schenker's graphs reveal interesting details of rhythmic design and motivic

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[1]Heinrich Schenker, Der freie Satz, rev. and ed. by Oswald Jonas (Vienna: Universal Edition, 1956).

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relations in the foreground and middleground.[1]

Although a comprehensive theory of rhythm and meter comparable to Schenker's systematic investigation of tonal structure is not now available, pulse, accent, weak and strong beats, and other aspects of temporal organization have often attracted the attention of theorists.[2] Recently rhythm and meter have been the subject of several studies by authors who acknowledge the influence of Schenker in their attempt to apply the concept of levels of structure in the analysis of rhythm. For example, Cooper's and Meyer's The Rhythmic Structure of Music, although essentially non-Schenkerian in orientation, presents a theory of large-scale rhythmic relationships. Musical spans from the smallest unit to an entire piece are analyzed in terms of five basic rhythmic groups derived from Greek classification of poetic meter.[3] The rhythmic structure of a piece is

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[1]For a discussion and evaluation of Schenker's treatment of rhythm the reader is referred to Carl Schachter, "Rhythm and Linear Analysis: a Preliminary Study," The Music Forum, Vol. IV (New York: Columbia University Press, 1976) 281-334.

[2]A valuable survey of 18th to 20th century theories of rhythm and meter, including the writings of Schenker, is found in Gudrun Henneberg, Möglichkeiten und Grenzen rhythmischer und metrischer Analyse, dargestellt am Beispiel der Wiener Klassik (Tutzing: Hans Schneider, 1974).

[3]Grosvenor Cooper and Leonard B. Meyer, The Rhythmic Structure of Music (Chicago: Chicago University Press, 1960). For a discussion and illustration of these five basic rhythmic groupings, see their Chapter 1.

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therefore hierarchical with patterns of accented and unaccented pulses appearing at different levels.

Arthur Komar's Theory of Suspensions[1], which is influenced by Schenker's theory of a hierarchy of pitch values, also employs the concept of different levels of metric structure. To derive metrical values at various structural levels, Komar defines the initial appearance (attack point) of an analytically significant tone at a particular level of tonal structure as metrically unaccented in relation to tones which are present at prior, more background, levels. The study is confined to the suspension whose distinctive features are thought by Komar to result from the rhythmic shift of tones in moving from more remote to more immediate strata of tonal structure.

Edward T. Cone has also dealt with concepts of rhythmic analysis, evolving a theory of rhythmic progression from weak to strong which is derived from tonal direction at different levels. One of his central ideas is that of a "structural downbeat" for a significant tonal event which coincides with a point of rhythmic stress (for example, a cadential tonic on the downbeat).[2]

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[1]Arthur Komar, Theory of Suspensions: a Study of Metrical and Pitch Relations in Tonal Music (Princeton: Princeton University Press, 1971).

[2]Edward T. Cone, Musical Form and Musical Performance (New York: W.W. Norton, c. 1968). Discussion and illustration of the concept of upbeats and downbeats at

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Carl Schachter, in addition to discussing Schenker's theories (particularly in response to various criticisms of Schenker's treatment of rhythm), also evaluates the contributions of Cooper and Meyer, Komar, and Cone. For example, he questions the possibility of hearing weak-strong, upbeat-downbeat relationships at remote levels of structure. In addition, Schachter offers some new insights into the distinction between rhythm produced by tonal motion and that arising from accent, duration and grouping; the possibility of different levels of rhythmic organization comparable to the strata of tonal structure; and the relation between the metric strength and the pitch function of tones.[1]

Another work devoted to the study of the nature and relationship of tonal and rhythmic levels is Maury Yeston's The Stratification of Musical Rhythm.[2] In Yeston's approach, which relies on Schenkerian techniques and concepts, the accentually uninterpreted flow of tones in the music itself is given metric form by the motion from tone to tone in the middleground. Meter is therefore generated by the inter-

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various levels are found primarily in Chapters 1 and 2 and in Cone's article, "Analysis Today," The Musical Quarterly (April 1960) 172-188.

[1]Carl Schachter, "Rhythm and Linear Analysis."

[2]Maury Yeston, The Stratification of Musical Rhythm (New Haven: Yale University Press, 1976).

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action of two levels of tonal structure. He also proposes that the coherence of a work is the result in part of the recurrence at different structural levels of rhythmic figures which are members of a common family.

Anne Alexandra Pierce's dissertation, "Analysis of Rhythm in Tonal Music"[1] also studies tonal-metric relationships at various levels. She cutlines and illustrates through examples primarily from short piano works of Schubert an approach to the analysis of rhythm in which the relative strength of structural tones at various levels is determined by their function in the tonal organization at that level. The analytic process works from the background where the first scale step and its supporting tonic triad are the most strongly accented, the third and fifth scale steps supported by the tonic triad are of secondary stress, and the connecting steps, 2 and 4, receive the least structural accent. Each succeeding tonal level, which represents a systematic increase in complexity of elaboration from the background to the foreground, displays a similarly derived hierarchy of structural accents. The discussion centers on the coincidence or non-coincidence of structurally accented tones with points of metric stress, on the relative duration of structural tones

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[1]Anne Alexandra Pierce, "The Analysis of Rhythm in Tonal Music" (Unpublished PhD Dissertation: Brandeis, 1968).

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and groups (that is, temporal-tonal spans which constitute phrases, sub-phrases, etc.), the relative finality of the close of structural groups, and the accentual effect of other but subordinate elements such as dynamics, orchestration, articulation, register, etc. There are also sections devoted to Schenker's concept of prolonging techniques, to his chapter on rhythm and meter in Der freie Satz, and to a critical appraisal of Cooper and Meyer's approach to the description and analysis of rhythm.

Several concepts central to the present study closely resemble ideas expressed by these writers, as is pointed out in later chapters. However, the analytic approach employed here deviates fundamentally from the investigations cited in its concentration on tonal-temporal interaction at only the most immediate level of structure rather than on the relationship between different strata of organization. The analysis of tonal structure is therefore confined to the linear-vertical framework which underlies the melodic-harmonic surface of the music and is not concerned with determining the function of the constituent tones at more remote levels of structure. Similarly, the study of temporal organization focusses on the beat which underlies the rhythmic surface, but does not consider the next level of structure at which the differentiation between strong and weak beats produces meter.

In addition, to my knowledge the synthesis of

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rhythm and outer-voice motion has never been examined systematically as an aspect of style in the music of any period, group of composers, or individual composer. The purpose of this investigation is therefore to explore, within a limited repertoire, the stylistic relevance of some linear-rhythmic relationships, and to develop an analytic format through which these relationships can be expressed.

The study is presented in two volumes. Volume II contains the analyses which set forth in a metric context the judgments regarding the outer-voice voice-leading that underlies the surface of the music. Volume I consists of textual commentary and tables which present the observations and conclusions drawn from study and comparison of the analyses. This discussion focusses on the following points:

1) the extent to which tones of the outer-voice framework do or do not coincide with points of rhythmic stress,
2) the extent to which corresponding tones of the outer-voice framework do or do not occur simultaneously,
3) the causes of vertical non-alignment when corresponding outer-voice members do not occur simultaneously,
4) distinctive and characteristic rhythmic-linear configurations of apparent stylistic significance.

The works selected for analysis are from harpsichord suites of J.S. Bach and from keyboard works of C.P.E. Bach and Mozart. These are three composers whose

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works employ a tonal harmonic vocabulary and demonstrate the systematic use of diatonic processes. Therefore an abstract presentation of some facets of middleground structure would probably show many similarities. In addition, many voice-leading techniques are very similar. Yet, their styles are recognizably different, representing the Late Baroque, Empfindsam, and Classical periods. Works of these composers, whose styles have already been characterized and compared in numerous studies, therefore constitute a repertoire well suited to the testing of stylistic criteria.[1] In addition, limiting the study to keyboard works minimizes the influence of other stylistic variables related to medium.

It is important to emphasize that any observations and conclusions proposed are valid only for the composers and works analyzed and may require modification on the basis of further analysis. This study is therefore offered as an introductory investigation, but with the hope that the approach will prove useful to the definition of musical style.

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[1] A partial listing of style studies is given in the Bibliography.

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CHAPTER 1

ANALYTIC CONCEPTS AND THEIR GRAPHIC REPRESENTATION

The analytic process employed in this study involves the determination of the tones of the linear-vertical framework which underlies the surface of the music. Thus, within a given musical context some tones and chords provide the basic structure and direction while others elaborate and embellish that structure.[1]

This underlying tonal framework, which is extracted from the thematic design, constitutes the most immediate level of tonal organization and corresponds to the foreground in Schenkerian analysis.[2] As Schenker discovered, the

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[1] On the basis of years of study and analysis Schenker identified and described various fundamental principles and processes of tonal motion. Since these principles and processes manifest themselves uniquely in each musical context, the determination of tonal function requires interpretative decisions by the analyst. Therefore, the analyses in this study present judgments based on this writer's repeated hearing and study of the passages included. It is expected that the reader may at times prefer alternate readings.

[2] In the subsequent discussion this linear-vertical framework is variously referred to as foreground voice-leading and foreground or outer-voice framework. The members of the linear-vertical framework are similarly identified as foreground or framework tones and outer-voice tones or members. The distinction between the melodic lines of soprano and bass in the music itself and the outer-voice lines of the foreground should be noted. As can be seen in the analyses and as pointed out in the text, the lines of the outer-voice framework are frequently elaborated and embellished by motions to and from other members of the prevailing foreground chords, these members being designated as inner-voice tones. Inner-voice tones or members of an inner-voice line are therefore not synonymous with alto and tenor voice parts but refer to chord tones other than those of the foreground outer-voices which occur within the melodic lines.

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foreground itself consists of principal and dependent tones, the former belonging to a still more remote, or middleground level of organization. Since this level too reveals a hierarchy of structural values, the analytic process in Schenker's approach is one of successive reductions in which subordinate elements are gradually eliminated, moving from the complexity of the composition to the fundamental, or background, level which contains the tones and chords of most far-reaching effect and significance. Consequently a work is viewed as simultaneously unfolding strata of ever more broadly related compositional events.

This interaction of tonal events at different levels of structure can be seen in Schenker's analyses in Der freie Satz and in his Five Graphic Analyses. In addition, the Schenkerian system is the basis of numerous other analytic studies, including Felix Salzer's Structural Hearing and many articles in The Music Forum and Journal of Music Theory.[1]

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[1]Heinrich Schenker, Der freie Satz, op. cit.; Heinrich Schenker, Five Graphic Analyses (New York: Mannes School of Music, 1933; repub. with an introduction by Felix Salzer, New York: Dover, c. 1969); Felix Salzer, Structural Hearing: Tonal Coherence in Music (New York: C. Boni, c. 1952; repub. New York: Dover, c. 1962); The Music Forum, Vols. I, II and III ed. William J. Mitchell and Felix Salzer, Vol. IV ed. Felix Salzer (New York: Columbia University Press, 1967, 1970, 1973 and 1976); Journal of Music Theory (New Haven: Yale University, pub. semi-annually). For a more complete list of writing by Schenker and theorists influenced by Schenker see David Beach, "A Schenker Bibliography," Journal of Music Theory 13/1 (1969) 2-37.

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In the graphs of a Schenkerian analysis explicit rhythmic and metric factors are apparent principally in the first stage of reduction in the analytic process, that is, in the foreground. The present investigation in its consideration of rhythmic relationships in the foreground voice-leading is concerned with only these most immediately perceptible details of tonal-rhythmic interaction. However, in a larger sense, phenomena of rhythm and accentuation as related to tonal structure are intimately inter-connected with various large-scale aspects of structure. The study of rhythm and meter in relation to tonal organization is therefore a far more encompassing task than this study undertakes.

Because this investigation is limited to foreground voice-leading, the format of the graphic presentations and the symbols used in the analyses of Volume II, while derived in large part from those employed in Schenkerian studies, are not intended to clarify relationships between structural levels. In addition, the conventional symbols have frequently been modified and supplemented in order to show the foreground voice-leading in the context of its temporal disposition.

Each analysis is presented in three forms. In the first representation, symbols indicating continuity of voice-leading at the foreground level are added to the printed music. Immediately below is a graphic reduction

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which extracts the principal tonal material of the linear-vertical framework onto a two-stave system. The analytic symbols employed in these graphs are described in the Glossary, page 170.

The third analytic format shows, without indication of pitch, the position within the measure of the outer-voice framework tones indicated in the preceding graphs. The meter of the passage is given at the beginning of each system. Vertical lines mark off the measures while the evenly spaced dots between these lines symbolize the pulse. The arrival of the foreground upper-voice and bass tones with respect to the pulse are marked by short strokes on the upper and lower horizontal lines, respectively.[1]

The three representations thus allow study of the underlying voice-leading in the context of the compositional setting, with the ornamental detail eliminated, and in its relation to the beat.

About 200 pages of analyses are included for each of the three composers. In order to allow a broad picture of style to emerge, it was decided to analyze sections from a relatively large number and variety of movements rather than present complete analyses of a few. The selection of the works analyzed was intended to be objective: all J.S.

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[1]My reading of the beat always conforms to the notated time signature, including those cases, such as hemiola, where a temporary rhythmic-metric conflict occurs.

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Bach's French and English Suites are included while in the C.P.E. Bach and Mozart sections the works within the categories of early, middle and late were freely chosen. All movements of each work are represented with the exception of three doubles of J.S. Bach and two constructed on drone basses (where there is no moving bass line and therefore no real tonal-temporal interaction in the bass) as well as unmetered sections in the works of C.P.E. Bach (where the intended metric-rhythmic freedom makes study of the relation between beat and tonal structure inappropriate). The basic criterion for inclusion is that each passage constitute a coherent musical statement on the foreground level.[1] On the other hand, in keeping each section close to 200 pages, passages were excluded if a) they were largely redundant, for example, the literal return of a rondo theme, or b) the analysis was unconvincing.

The works included and the code by which each is identified in the analyses of Volume II and in the textual commentary and tables of Volume I are listed on pages 174 to 181. As indicated in the column headed "Section(s) Analyzed", the analyses vary in extent from a few measures

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[1]Since in the foreground inner voice tones are frequently transferred to uppermost positions, temporarily acting as the "upper voice", in the reductions beyond the foreground level the identification of the "true" outer voices may be at variance with the interpretation given here. It is the functioning outer voices in any given passage which serve as the basis of this study.

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to complete movements. Among the analyses of J.S. Bach, for example, shorter units are often one strain of an optional suite movement, as in the two four-measure phrases from JB 27. In C.P.E. Bach and Mozart such two-phrase excerpts are frequently themes which display an antecedent-consequent relationship, the first phrase closing on the dominant and the second completing the harmonic statement with a cadence on the tonic. Examples can be seen in CB 34 and M 11. Lengthy sections often encompass one section of a binary-form movement such as the second strain of an allemande in JB 37, or the exposition of a sonata-form movement, as in CB 7 and M 13.

The section on J.S. Bach contains analyses from 81 movements of the French and English suites. The works in the section devoted to C.P.E. Bach were selected from his major keyboard publications - the early Prussian and Württemberg sonatas (published 1742 and 1744, respectively), the Probestücke appended to Die wahre Art das Klavier zu spielen (1753), and the six volumes of the Kenner und Liebhaber collection (published 1779, 1780, 1781, 1783, 1785 and 1787). Fifty-two movements are represented, many through analyses of fairly extensive excerpts. The Mozart section consists of analyses, many of comparatively lengthy passages, from 27 movements chosen from early (K. 279, K. 280 and K. 281), middle (K. 309, K. 311, K. 330 and K. 333), and late (K. 457 and K. 576) piano sonatas.

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CHAPTER 2

INTERACTION OF RHYTHM AND FOREGROUND VOICE-LEADING

A fundamental consideration in this investigation has been the extent to which the disposition of the tones of the underlying outer-voice framework confirms or contradicts the normal temporal organization into strong and weak rhythmic units. Thus, a basic premise is that tones of the foreground voice-leading, because they function as the sources and goals of motion in the contrapuntal-harmonic unfolding, are points of tonal stress. The motion from one such tone to another therefore generates a rhythm which is the result of the pitch functions of the tones. When these tones coincide with points of rhythmic-metric stress, producing patterns which express and define the beat and meter, temporal and tonal organization are mutually reinforcing. When, on the other hand, activity in the outer-voice framework occurs at points which contradict the strong-weak values of the pulse, conflict arises between the accents of the evolving tonal organism and those of the beat and its subdivisions.

This approach to tonal-temporal interaction is essentially what Maury Yeston terms a pitch-to-rhythm analysis. Thus, foreground tones are always characterized

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by tonal stress, although not necessarily rhythmic-metric accent and, conversely, tones do not become points of tonal stress because of their coincidence with positions of rhythmic-metric accent. In addition, Yeston's description of "an overall motion from event to event"[1] on levels of tonal structure below the musical surface seems to correspond to the concept of tonal rhythm presented here. However, Yeston's study focusses on the creation of meter through the interaction of different pitch-rhythm levels rather than on the reinforcement or conflict of tonal and temporal organization on one level of structure.

Carl Schachter's distinction between tonal rhythm which "flows from the succession and combination of tones" and durational rhythm, "a complex pattern of durations, emphases and groupings"[2] also appears to resemble closely concepts central to the present study. In discussing the relation between these two types of rhythm he states:

> The designs of tonal rhythm often maintain a high degree of independence from any metrical scheme. Very frequently, however, aspects of tonal rhythm underscore the meter. . . tonal movement can help to express the meter.[3]

Thus, both Yeston and Schachter introduce the

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[1]Maury Yeston, The Stratification of Musical Rhythm, 58.

[2]Carl Schachter, "Rhythm and Linear Analysis," 313.

[3]Ibid., 318.

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concept of tonal-metric interaction, although without setting forth guidelines for the systematic study of such interaction or pursuing the possibility of its stylistic significance.

The remaining pages of this chapter are devoted to the presentation and illustration of the criteria utilized in this study for the classification of foreground tones and tonal rhythm as weak or strong. One basic principle is that temporal and tonal events are considered coordinated when foreground activity falls on any beat in the measure, effecting a tonal articulation of the pulse. No distinction is therefore made between weak and strong beats, although the following discussion occasionally touches upon aspects of temporal organization which are related to meter.

The foreground of JB 1, for example, illustrates complete correlation of tonal motion and the pulse where, although the pace of motion is variable, all tones of the outer-voice framework coincide with the dotted-quarter note beat. As shown in the linear analysis, the passage is based on an underlying structure of ten chords: the unfolding tonic triad in measures 1 to 4, chords generated by motion in parallel tenths which lead to the dominant in the middle of measure 7, and a concluding cadence in the dominant key area in measures 8 to 9. Thus, of the 39 beats of the excerpt, 11 are articulated by voice-leading activity. In two instances tonal emphasis is achieved through motion in the bass alone (measures 7 beat 1 and 8 beat 3), in seven instances through simultaneous activity

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in both voices (measures 5 to 9) and, in measures 2 and 3, through vertical displacement of corresponding tones (bass in measure 3 beat 1, upper-voice tone in measure 3 beat 3). Displacement thus results in the tonal stress of two points which, in this example, are also positions of rhythmic accent. This information is summarized in Table JB I (page 107) where of the 13 points marked by voice-leading activity in the outer voices, none is classified as weak.

JB 49 provides another example of consistent coincidence of foreground activity and the beat. In the analysis almost all downbeats are marked by the arrival of a bass tone of the underlying framework, but in several instances the upper voice is delayed, producing a second point of tonal stress. In measures 4, 6 and 8, for example, a superposed inner-voice tone on the downbeat coincides with the framework bass tone, postponing the arrival of its corresponding upper voice to the following beat. In measure 3, the melody tone E♭ on beat 2 delays the upper-voice tone F to beat 3, the outer-voice members of the two chords thereby stressing the three beats of the measure, as shown in the metric abstraction. Thus, referring again to Table JB I, all 32 points articulated by voice-leading activity in one or both voices are classified as reinforcing rhythmic-metric organization.

JB 16 also demonstrates complete coordination of voice-leading activity and temporal organization. As in

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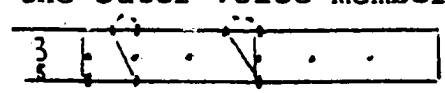
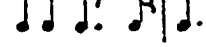
the foregoing passages, members of the underlying linear framework do not appear in every measure, measures 2 to 6, for example, involving a prolongation of the tonic chord. However, in 25 of the 33 measures of the excerpt one or more beats are marked by the arrival of one or more tones of the outer-voice framework. There are also several examples of chords in which vertical displacement of corresponding tones results in the tonal articulation of two beats, for instance, in measures 25, 27 and 29.

In measure 32, displacements through the anticipation of A and G in the upper voice produce a tonal stress on the midpoints of beats 1 and 3, respectively. Although the middle of the beat is weak in relation to the beat, the tonal rhythm in this particular context is considered strong because it is immediately followed by tonal activity of stronger metric position. In other words, the forward rhythmic drive from the relatively weaker middle of the beat to the relatively stronger succeeding beat is paralleled tonally by the motion from the anticipation to its reiteration with the supporting bass. Thus, in measures 32 to 33, the position of the outer-voice members, shown in the metric abstraction as  , produces the combined or cumulative tonal rhythm  which defines and expresses the eighth-note beat.

CB 43 illustrates outer-voice tones between beats where the motion from tone to tone in the outer-voice

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framework again coincides with a weak-to-strong direction rhythmically. In measure 45 the upper-voice tone F# on the final triplet subdivision of the last beat leads directly to E on the downbeat of measure 46, generating the tonal rhythm . A similar tonal rhythm is produced in measure 50 by the upper-voice motion A to B, end of beat 2 to beat 3, while measure 55 illustrates the tonal rhythm in the upper-voice motion from A to G, supported by A to B in the bass.

The two passages analyzed from CB 3 provide further examples of framework tones which, falling within in addition to on the beat, affirm the strong and weak subdivision of the pulse. In measure 87, for instance, the dislocated upper-voice tone G coincides with the middle of beat 2. The outer-voice members of the three chords thereby produce four points of tonal stress, their combined activity generating the strong tonal rhythm . In the two other instances of outer-voice tones between beats - measures 7 and 86 - the bass tones (B♭ in measure 7, B♭ in measure 86) fall on the downbeat while the corresponding upper voice of each is delayed to the middle of the last beat. The displaced tone is, therefore, positioned as an upbeat which, leading to the next foreground chord on the following downbeat, creates the weak-to-strong tonal rhythm . Thus, as shown in Table CB I (page 131), the analysis of CB 3 contains no instances of weakly disposed foreground tones,

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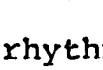
the combined or cumulative activity of the two outer voices generating strong, pulse-reinforcing patterns of tonal rhythm.

Measures 1 to 16 of M 25 illustrate strong voice-leading rhythm when the pulse is tonally subdivided in compound meter. In this passage most outer-voice motion occurs on the dotted-quarter pulse, with 11 of 31 beats being articulated by foreground activity in one or both voices. In addition, outer-voice tones on the last third of the beat produce a strong upbeat-to-downbeat tonal rhythm at the end of measures 7, 11 and 15 and, through vertical displacement, a two-member upbeat figure at the end of measure 3.

In JB 2 the disposition of outer-voice tones within the beat produces a variety of patterns of tonal motion which have a strong pulse reinforcing effect. The tonal rhythm , for example, is produced in measure 6 to the downbeat of measure 7 by a foreground chord in the middle of beat 4. In measure 8, displaced upper-voice tones articulate the middle of beat 3 and the last sixteenth note of beat 4, the position of the outer voice producing the tonal rhythm  from beat 3 of measure 8 to the downbeat of measure 9. The sixteenth-note subdivision also supports tonal activity in measures 7 and 15 where the upper-voice tones A and E, respectively, are anticipated on the last sixteenth note of the previous beat. In both

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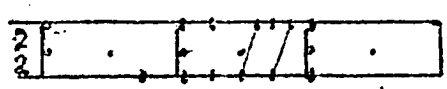
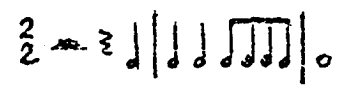
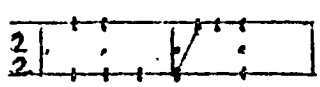
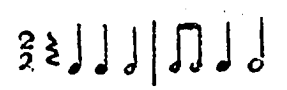
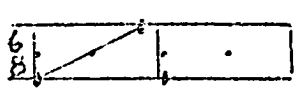
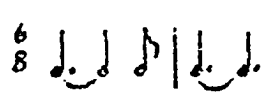
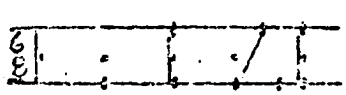
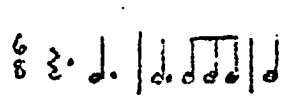
instances their immediate reiteration on the beat, coupled with the arrival of a framework bass tone, produces a weak-to-strong rhythmic gesture. And, finally, in measure 5, in addition to chords at the beginning and middle of beat 4, the anticipated upper-voice tone B articulates the second sixteenth note of the beat, producing the pulse-defining rhythm in which the relatively weak anticipation is followed immediately by a more strongly disposed reiteration in the middle of the beat. Thus, as indicated in Table JB I, none of the 32 points stressed by voice-leading activity is designated as metrically weak.

A tone of the outer-voice framework is therefore considered as reinforcing temporal organization when a)it coincides with the beat, or b)it falls between beats but leads directly to another outer-voice framework tone, either in the same or the other voice, which is of relatively stronger position. The following are further examples of tonal rhythms classified as pulse reinforcing as they appear in the analyses.

Source	Metric Abstraction	Tonal Rhythm
JB 57, m. 3-5		
m. 7-8		
JB 66, m. 8-9		
m. 20-22		

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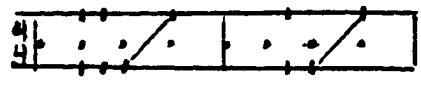
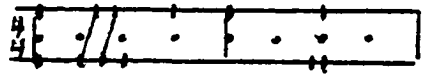
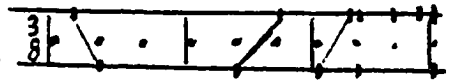
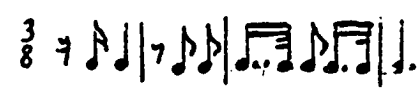
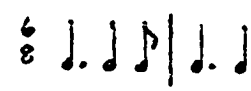
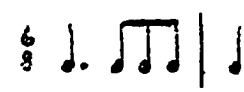
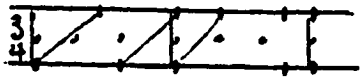
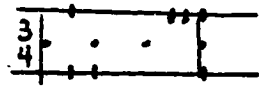
Source	Metric Abstraction	Tonal Rhythm
CB 29, m. 4-5		
m. 7-8		
CB 40, m. 13-16		
M 15, m. 47-49		
m. 55-56		
M 17, m. 1-3		
m. 7-8		

In contrast to tonal rhythm which affirms the weak-to-strong direction of rhythmic-metric motion, conflict between temporal and linear organization occurs when foreground tones between the beats do not lead directly to outer-voice members of relatively stronger rhythmic position.[1] The disposition of the foreground tones thus produces a syncopated rhythm of tonal motion in which the rhythmic drive from a weak to a strong subdivision of the beat is not fulfilled through a corresponding motion from one foreground tone to the next. In this study, then, the description of a tone as rhythmically "weak"

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[1]As indicated in the Glossary, page 170, all tones classified as weak are identified by an asterisk (*) above their position in the metric abstraction.

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is used in a contextual sense, indicating that a tone which falls between beats is not followed by another relatively stronger tone rhythmically. As illustrated below, the resulting weak, or syncopated, tonal rhythm may result from the weak disposition of vertically aligned outer-voice tones, of tones moving in oblique motion against a stationary voice, or of one or both corresponding tones which are vertically non-aligned.

JB 42, for example, contains one instance (measure 21) of corresponding tones which are aligned on a relatively weak part of the beat, the outer-voice tones C and E♭ stressing the middle of the first beat. However, the weak-to-strong rhythmic direction from the middle of beat 1 to the beginning of beat 2 is not paralleled tonally, the arrival of the next foreground chord being delayed to beat 3.

The remaining eight examples of tonal-rhythmic conflict in this analysis involve vertically dislocated tones, one of which is weakly disposed. In three instances the cumulative rhythm of the two tones is , the bass coinciding with the pulse while the upper voice follows immediately on the second sixteenth note of the beat (measures 4 beat 1, 5 beat 3 and 8 beat 1). In four other instances the displaced upper-voice tone falls in an upbeat position, either in the middle or on the last quarter subdivision of the beat, but, not leading to a foreground chord on the following beat, contradicts the weak-to-strong

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rhythmic drive (measures 6 beat 3, 7 beat 3, 15 beat 3 and 23 beat 1). In measure 23 the combined motion of the outer voices produces a syncopated rhythm of tonal motion within the third beat. Thus, the beginning of the beat is stressed by the bass, the second sixteenth by the upper voice, and the last sixteenth by both, generating the tonal rhythm in which F in the upper voice is rhythmically weak.

As summarized in Table JB I, of the 67 points stressed tonally by outer-voice framework tones in JB 42, 9, or about 13%, are positioned in conflict with the pulse and its subdivision into weak and strong subunits.[1] The voice, or voices, in which the syncopated tonal rhythm occurs is given in Table JB II (page 111) where, as indicated, one of the nine metrically weak points stressed by voice-leading motion involves both voices vertically aligned while eight occur in a vertically displaced upper voice.

Referring to Table CB I, in the analysis of CB 45, of the 38 metric points marked by the arrival of an outer-voice framework tone, 17, about 45%, are rhythmically weak, generating a syncopated rhythm of tonal motion. As indicated in Table CB II (page 134), in three instances, although the bass coincides with the beat, its non-aligned upper-voice tone falls in a position which is weak in the

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[1]In this table and in all others, percentages are given to the nearest percent.

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context of the linear unfolding: in measure 3 beat 2 and measure 6 beat 2 the upper-voice tone arrives within the beat but does not lead to voice-leading activity on the following beat while in measure 5 beat 2 the bass on the beat and the upper voice on the second sixteenth note produce the syncopated tonal rhythm . In two other instances of vertical displacement it is a non-aligned bass which is rhythmically weak, falling on the second sixteenth of beat 2 in measures 1 and 2 while the corresponding upper-voice tones, D and E, respectively, are strong, coinciding with the beat.

The analysis also contains two examples of displacement in which both tones are weakly positioned, each resulting in two points of conflict between tonal rhythm and the pulse. In measures 11 and 12 the bass tones arrive within the beat while their corresponding upper-voice tones are delayed to the last quarter subdivision of the following beat, conferring tonal emphasis on a total of four relatively weak subdivisions of the pulse.

Two instances of conflict between metric-rhythmic accent and tonal stress are the result of oblique motion in the bass (on the last quarter of the beat in measures 4 and 10) while the remaining six involve both outer voices aligned within the beat (measures 1 beat 1, 13 beats 1, 2 and 3, and 14 beats 1 and 2).

Table M I (page 152) shows that the analysis of

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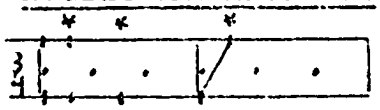
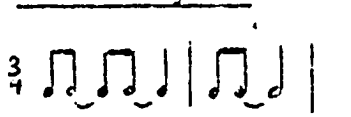
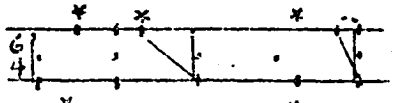
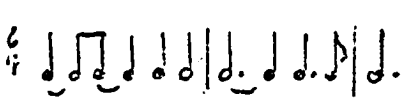
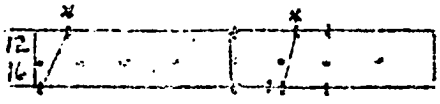
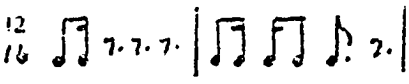
M 20 contains 72 points marked by foreground outer-voice activity of which 11, about 15%, fall at positions which produce conflict between the rhythm of the linear unfolding and the pulse. As indicated in Table M II (page 154), of the 11, six are the result of oblique motion in which an upper-voice tone arrives at a relatively weak point rhythmically, either in the middle (measures 9, 11, 21 and 25) or on the second quarter subunit (measures 10 and 20) of the quarter-note pulse. In all instances the absence of an immediately following foreground chord of stronger rhythmic disposition results in a syncopated rhythm of tonal motion.

Three other instances of weak tonal rhythm occur in the upper voice where the bass coincides with the downbeat while its vertically delayed upper voice confers tonal stress on a weak subdivision of the beat (measures 5, 28 and 30). And, finally, in measure 19, two relatively weak points - the middle of beats 1 and 2 - are articulated tonally by the non-aligned members of an outer-voice framework chord.

The following examples provide further illustrations of voice-leading rhythm which is classified as weak as they appear in the metric abstractions of the analyses.

Source	Metric Abstraction	Tonal Rhythm
JB 25, m. 7-8		
JB 55, m. 10-12		
JB 73, m. 23-24		

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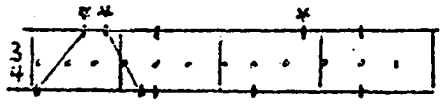
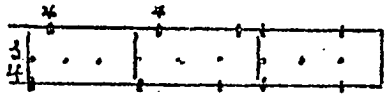
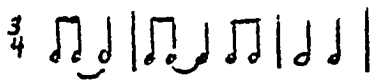
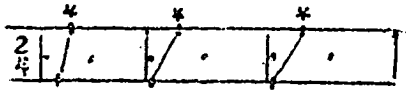
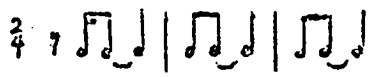
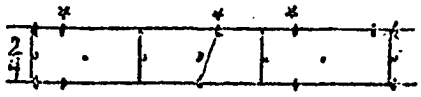
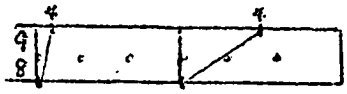
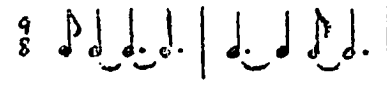
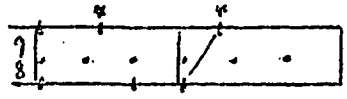
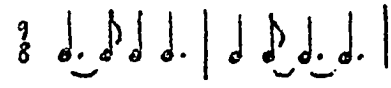
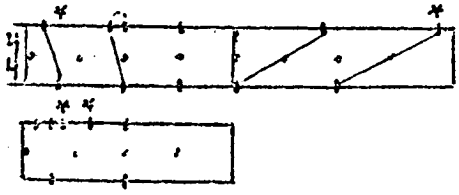
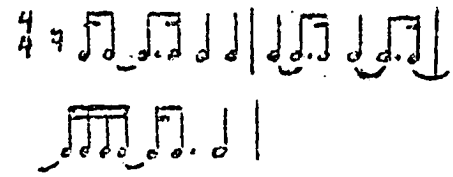
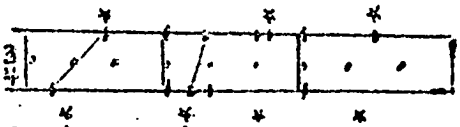
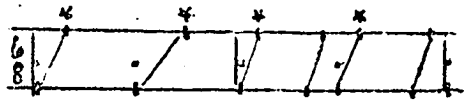
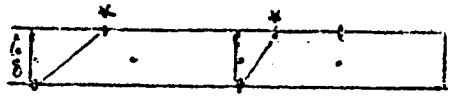
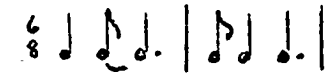
Source	Metric Abstraction	Tonal Rhythm
CB 1, m. 1-4		
m. 14-16		
CB 12, m. 12-14		
m. 22-25		
CB 20, m. 1-2		
m. 5-6		
M 1, m. 10-12		
M 20, m. 19-21		
M 25, m. 23-24		
m. 39-40		

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CHAPTER 3

TYPES OF VERTICAL NON-ALIGNMENT IN THE FOREGROUND VOICE-LEADING

As has been shown, vertical non-alignment, whereby corresponding outer-voice tones do not occur simultaneously in the linear unfolding, is a compositional device found in the works of all three composers. Such vertical displacement, through which the arrival of one chord member is delayed, results in two points of tonal stress, producing three possible relationships between temporal organization and the disposition of the members of the outer-voice framework: 1)the position of both constituent tones may coincide with weak-to-strong rhythmic direction, 2)one may confirm and the other contradict strong metric-rhythmic values, or 3)both may produce syncopated rhythm of tonal motion. This information is presented in Tables JB III, CB III, and M III (pages 115, 137, and 156) which indicate the number and percentage of foreground chords in which corresponding outer-voice members are non-aligned and the metric-rhythmic character of the non-aligned tones. For example, referring to Table M III, of the 106 foreground chords of M 19, 36, or about 34%, involve vertically displaced outer-voice tones. In 17 of these the disposition of both voices reinforces the

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beat and its weak-strong subdivision while in the remaining non-aligned chords syncopated tonal rhythm is produced by the position of the upper voice in 16, by the bass in two, and by both in one.

In addition to the rhythmic aspect of vertically non-aligned tones, the dislocation of corresponding outer-voice framework members is the result of one of several causes. These causes, indicated below the linear abstraction of each analysis, are as follows:

Inner voice (abbreviated i.v.): an outer-voice member is replaced and delayed by an inner voice of the chord (see page 15, footnote 2 for the meaning of inner voice)

Suspension (abbreviated susp.): an outer-voice tone is delayed by an outer-voice member retained from the previous foreground chord; the suspended tone, which may be either tied or reiterated, is thus prepared and resolves by step to the delayed tone

Suspension in an inner voice (abbreviated susp. i.v.): the displacing tone is prepared by being an inner-voice member of the previous foreground chord; it resolves by step to a voice of the new chord

Appoggiatura (abbreviated appogg.): the delaying tone is an unprepared, non-chord member, usually a dissonance, which resolves to the outer-voice tone it displaces

Appoggiatura in an inner voice (abbreviated appogg. i.v.): the outer-voice member is delayed by a non-chord

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member, usually a dissonance, in an inner voice

Anticipation (abbreviated antic.): a foreground chord is immediately preceded by one of its outer-voice tones; most commonly the anticipating tone is reiterated with its metrically stronger corresponding tone, the anticipation and its reiteration being connected in the analyses by dotted lines (usually , occasionally)

Rest: a framework tone is not replaced by another tone but by a rest; motion is thus suspended in one outer-voice part.

JB 3 illustrates five of these displacing functions in various voice-leading/metric configurations. As indicated in the linear abstraction, the melody begins with a primarily stepwise motion connecting the chord tone A with C♯, the first tone of the upper-voice framework. This is counterpointed by motion through the tonic chord, A-E-A, in the bass. Thus, while the root of the opening chord occurs at the outset, its corresponding upper-voice tone is replaced and delayed by A, a superposed inner-voice tone, as indicated i.v. below the metric abstraction. Both tones coincide with points of rhythmic stress, the bass falling on the first downbeat and the upper voice arriving on the downbeat of the second measure.

Measure 4 provides an illustration of the anticipation, the upper-voice tones B and A immediately preceding

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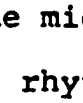
their supporting bass tones on the third beat of measure 4 and the downbeat of measure 5. In both cases the upper voice is then reiterated with the bass, the configuration generating an upbeat-to-downbeat, or weak-to-strong, tonal rhythm. Other examples are found in measures 8, 14 to 15, and 18.

The displacing tone in measure 6 is classified as an appoggiatura since B in the melody enters as an unprepared dissonance against F♯ in the bass. The resolution to the upper-voice tone A is marked as weak because it coincides with the second quarter subdivision, producing the syncopated tonal rhythm within beat 1. In measures 11 and 13, on the other hand, the resolution of the appoggiatura in the upper voice is followed immediately by a framework bass tone in the middle of the beat, producing the pulse defining tonal rhythm  .

In measure 17 the tonal rhythm is also strong, the bass and its corresponding upper voice coinciding with the first and second beats, respectively. The displacing tone, the A notated in small type as an ornament, is classified as an appoggiatura in an inner voice, that is, an accented passing tone between B, an inner voice of the B-major chord of measure 16, and G♯, an inner voice of the E-major chord at the beginning of measure 17.

The dissonant relationship between the bass and its coincident melody tone in measures 2 and 5 is labelled

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a suspension, C# against D in the bass resolving to B in measure 2, while in measure 5 A suspended against E# resolves to G#. Rhythmically the foreground motion of the preparation, suspension, and resolution generates a strong voice-leading rhythm ♩♫♩, effecting tonal articulation of the beginning of both beats as well as the middle and last quarter subdivision of beat 2.

This information is summarized in Tables JB III and JB IV (pages 115 and 119). As indicated in Table JB III, 13 of 35, or 37%, of the foreground chords of JB 3 involve vertically dislocated tones. In ten of the 13 the position of both tones generates a strong, pulse-defining tonal rhythm while in the remaining three the upper voice is weak. Referring to Table JB IV, which indicates for each analysis the cause of non-alignment, one displacement in JB 3 is the result of an inner-voice tone, three of suspensions, four of appoggiaturas (one inner voice), and five of anticipations.

As shown in Table CB IV (page 140), CB 20 also contains instances of vertical non-alignment due to inner-voice tones, suspensions and appoggiaturas. There are, for example, three displacements in which the bass tone coincides with an inner-voice member, causing the delay of the upper voice. In all three chords the arrival of the upper-voice tone is rhythmically weak (measures 1, 12 and 13). In measure 11, the displacement is the result of an appoggiatura, or accented passing tone, in the melody. In the

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unfolding D^7 chord the bass tone D coincides with G, a passing tone between the inner-voice tone A and F♯, the upper-voice framework tone. Rhythmically the bass is strong but F♯ is weakly positioned. The tonal rhythm of the suspension displacement in measure 6 is also syncopated, the suspended G delaying the subsequent upper-voice tone F to a weak subdivision of the beat. The same linear-metric configuration recurs in measure 8. In measure 4 the suspended tone is notated as an ornament whose execution postpones the arrival of C to the end of the beat.

In measures 2 and 14 the suspension involves an inner-voice tone that coincides with the bass. In measure 14, B♮, an inner voice of the dominant chord at the end of measure 13, is reiterated on the downbeat, resolving upward to C on the third beat. In measure 2, on the other hand, while the bass falls on the downbeat, its corresponding upper-voice tone is rhythmically weak. Moreover, while in measure 14 the dissonant inner-voice tone resolves to the outer voice, in this example the resolution of the inner-voice tone A, retained from the tonic chord of measure 1, is to another inner-voice tone, G♯.

The two remaining examples of displacement in CB 20 are the result of rests which cause a break in activity in all but the bass line. Thus, in measures 9 and 10, the bass sounds alone on the downbeat, the inner voice of the unfolding chord following immediately on the second

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eighth-note subdivision while the corresponding upper-voice member is weakly positioned at the end of the second beat.

The analysis of CB 20 therefore contains 11 chords in which corresponding outer-voice tones are not aligned, totalling approximately 61% of the chords of the foreground framework. As shown in Table CB III (page 137), in nine of these the bass is strong but the upper-voice is weak while both voices are strongly disposed in the other two instances of vertical displacement. In addition, as indicated in Table CB IV, three of the 11 displacements are caused by an inner voice, five by suspension of an outer or inner-voice tone, with two examples of non-alignment due to rests and one to an appoggiatura.

Two examples of displacements by appoggiaturas in an inner voice are found in the analysis of M. 1. In both instances - measure 32 and its repeat in measure 34 - an unprepared dissonant tone, D#, coincides with the foreground bass tone C. Analysis of the counterpoint reveals that D# is an accented passing tone, providing a chromatic link between the inner-voice tone D in the tonic chord of the beginning of the measure and E, an inner-voice tone of the II^6 chord. The resolution to E is followed by motion down through the chord to A, the outer-voice tone of the 3-2-1 descent in the upper part.

As summarized in Table M IV (page 158) the remaining displacements are the result of inner-voice tones in

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three chords, of suspensions in seven, of appoggiaturas twice, of one anticipation, and, in eight instances, of rests. In addition, Table M III indicates that of 23 chords involving non-aligned outer-voice members, both voices are rhythmically strong in 13. Of the chords in which vertically dislocated tones are weakly disposed, seven are found in the upper voice and three in the bass.

In the works analyzed, therefore, vertical displacement in the outer-voice framework results from four main types of voice-leading relationships: 1)an outer-voice member is delayed by another member of the unfolding chord, 2)an outer-voice member is delayed by a tone which is not a member of the unfolding chord, being either prepared or unprepared, 3)an outer-voice member is delayed by a rest, and 4)an outer-voice member is anticipated. The comparative frequency of these displacing operations and their possible stylistic significance are discussed in the following chapters.

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CHAPTER 4

J.S. BACH

The works of J.S. Bach exhibit as a group a high degree of coordination between foreground activity and rhythmic organization. In fact, as indicated in Table JB I, in 37 of 81 analyses there are no instances of weakly positioned framework tones producing syncopated tonal rhythm. Similarly, in 27 of the remaining 44 works less than 10% of the foreground tones appear at points which result in conflict between tonal rhythm and weak-to-strong rhythmic direction. The highest incidence of disparity between tonal and temporal organization occurs in JB 7, JB 44, JB 55, JB 68 and JB 72 where between 15% and 19% of the tones of the linear framework are designated as weak.

As indicated in the totals of Table JB II, 88 of 98 of the rhythmically weak points stressed by foreground activity involve the upper voice. The most common contrapuntal configuration entails a weakly positioned upper-voice tone vertically displaced from its rhythmically strong bass, being found in 38 of the 44 analyses in which tonal-rhythmic conflict occurs and accounting for a total of 71 upper-voice tones designated as weak. The remaining instances are the result of the upper-voice in oblique motion (total of eight weak points), aligned with a rhythmically weak supporting

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bass (total of seven weak points) and, in one work (JB 74) vertically displaced from a bass tone which is also weak (total of two weak upper-voice tones).

With respect to the vertical relationship between corresponding foreground tones, as shown in Table JB III, outer-voice members of the linear framework consistently occur simultaneously in two analyses, JB 46 and JB 65. The highest incidence of non-alignment is found in JB 11, JB 36, JB 42 and JB 44 where in half or more of the chords of the underlying counterpoint outer-voice members do not coincide. Between these two extremes are 50 works in which less than 30% of the corresponding framework tones are vertically displaced.

In the vast majority of the instances of non-aligned outer-voice members the rhythmic position of the upper and bass tones generates a strong, pulse-defining rhythm of tonal motion. In fact, as indicated in Table JB III, in 39 analyses both voices are strong in all instances of displaced outer-voice tones. Thus, of a total of 421 foreground chords involving non-alignment, both tones are rhythmically strong in 343, or over 80%. In those chords in which syncopated tonal rhythm occurs, the position of the upper voice is weak in 72, the bass in four, and both voices in two.

The most frequent cause of displacement is an inner-voice tone which replaces and delays a tone of the

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outer-voice framework, accounting for about 36% of the total instances of non-alignment and occurring in 63 of the 81 analyses. As indicated in Table JB V, the position of both voices produces strong tonal rhythm in a total of 104 chords in which the upper voice is delayed and in 21 chords in which the bass is delayed. Thus in about 80% of the chords (125 of 153) in which vertical dislocation is due to an inner-voice tone, the voice-leading rhythm generated by the outer-voice members is strong.

Similarly, in 70% of the displacements caused by suspensions or appoggiaturas in an outer or inner voice, both the delayed tone and its corresponding outer-voice coincide with positions which define and reinforce the beat. As shown in Table JB VI, of a total of 150 chords where one outer-voice member is delayed by a non-chord tone, both outer voices are strong in 105, the upper voice being delayed in 82 and the bass in 23.

Rests in the unfolding of an outer-voice part are found only 18 times in 16 analyses and occur almost exclusively at the opening of those works. As with displacements caused by inner-voice tones, suspensions and appoggiaturas, the positions of the non-aligned outer voices tend to generate strong tonal rhythms, the only examples of syncopated voice-leading motion occurring in JB 72 and JB 75.

The anticipation, which accounts for about 23% of the cases of vertical non-alignment, invariably produces

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strong tonal rhythm. This figure is characteristically the result of the premature appearance of a member of the upper voice of the linear framework, the same tone being immediately repeated with its supporting bass. Rhythmically the anticipation is weaker than its reiteration so that the direction is from weak to strong, frequently upbeat to downbeat. The reiterated tone is, therefore, stressed by its coincidence with its corresponding bass tone and rhythmically by its relative metric supremacy. Occasionally the anticipated tone is not reiterated (for example, JB 22, measures 3 and 4), but in all instances tonal and rhythmic directions coincide.

Tonal and temporal organization are therefore predominantly mutually reinforcing elements. The rhythm of the voice-leading largely expresses the pulse and, conversely, tones of the linear framework, whether vertically aligned or non-aligned, are generally stressed by their position in the measure, generating strong rhythms of tonal motion.

In addition, various characteristic linear-rhythmic configurations further highlight and clarify the underlying contrapuntal framework. In many analyses an outer-voice tone, following prolonging activity, is regained just prior to the arrival of its continuation, emphasizing the linear association of the two tones. The opening four measures of JB 18, for example, are based on an ascent in the upper

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voice from G to B♭ and then a neighbor-note prolongation of B♭ , counterpointed in the bass by a neighbor motion and the supporting tones of a II^6-V-I progression. Rhythmically all framework tones of this passage are strong, coinciding with the half-note pulse. In the composition itself the underlying structure is elaborated by various motions such as neighbor embellishments (eg., G in the upper voice by its neighbors A and F# in measure 1 and the inner voice D by C and E♭ in measure 2), and passing motions between outer and inner-voice tones (eg., A between the upper-voice tones B♭ and G in measure 3). However, as indicated by the dotted lines connecting the stems, each prolongation in the upper voice is terminated by a return to the governing tone. In the bass the tone D in measure 4 is similarly regained. Thus, the melodic design, through which the regained tone is closely juxtaposed to its succeeding tone, clarifies the linear connection between foreground tones, counteracting the discontinuity produced by embellishing activity.

Clarification of the outer-voice framework through regained tones is a conspicuous rhythmic-linear device in the J.S. Bach works analyzed, of which the following provide some further examples: JB 1, JB 9, JB 15, JB 17, JB 23 (with a change of register in measures 1-2), JB 29, JB 30, JB 31, JB 33, JB 34, JB 35 (with a change of register in measure 21), JB 37 (with a change of register in measure 23), JB 42, JB 46, JB 49, JB 51, JB 56, JB 58, JB 59 (with a change of

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register in measures 4-6), JB 68, JB 71, JB 73 and JB 80.

Study of regained tones in the foregoing analyses reveals diverse rhythmic-melodic patterns through which linear continuity is promoted. The time interval between the arrival of a tone and its return at or near the end of the prolongation, for example, may be equivalent to one or two beats (eg., JB 23 measures 2-3), to a measure (eg., JB 9 measures 11-13), or may extend over several measures (eg., JB 15 measures 14-21 and 29-33, JB 30 measures 7-11). In addition, the regaining configurations may occur primarily in one part (eg., the upper voice in JB 58) or in both voices (eg., JB 33, JB 49 measures 10-13, JB 68, and JB 73 measures 11-23). However, in all instances clarification of linear structure is achieved through coordination of tonal design and rhythmic direction.

Inner as well as outer-voice tones are also stressed through their position in the measure. For example, the strains of many movements open with a bass member of the linear framework supporting an inner-voice tone on the beat. A typical instance is illustrated by JB 77 where the melody begins in an inner voice, moving through the tonic triad to G♯, the first foreground tone of the upper voice in the middle of the second measure. The inner-voice tone B is thus stressed by its coincidence with the bass on the opening beat. Such accentuation of an inner-voice member at the beginning of a main section occurs in the first

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strains of JB 20, JB 45, JB 51, JB 58 and JB 70, and in the second strain of JB 25. In allemandes and courantes an initial inner-voice tone is often further emphasized by the rhythmic thrust of an anticipation, as exemplified by the opening of allemandes JB 42 and JB 48 and, among the courantes, in JB 4, JB 11, JB 18, JB 24, JB 62 and JB 68 as well as both strains of JB 3.

Inner-voice tones are also stressed in movements of fugal texture where, in the initial exposition of the subject, chord tones characteristically coincide with points of rhythmic emphasis. For example, in the openings of JB 35 and JB 41 (both fugal gigues) rhythmically strong inner and outer-voice tones are embellished by weaker neighbor and passing motions. In JB 41 the chord tones D, F and A are positioned prominently on the first downbeat, midpoint of the measure and on the following downbeat, respectively, while the passing tones E and G coincide with the intervening second and fourth beats, and C♯, the lower neighbor of D, falls within the beat. In JB 35, upper and inner-voice tones of the E minor triad coincide with the first and third beats of the opening measure. The bass tone E marks the downbeat of the remaining measures of the subject statement, functioning as a pedal under the chromatic descent between the rhythmically strong chord tones E and B.

Accentuation of inner-voice tones is also characteristic of extended opening arpeggiations such as that of

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JB 36 where the bass of the opening D minor triad enters on the first downbeat and is retained as a pedal point until measure 6. Over this pedal the tonic chord unfolds, embellished by neighbor tones (eg., C♯, G and B♭ in measure 1), and passing motions (eg., the descent from D in measure 3 to F in measure 6, as outlined in the linear abstraction). As can be seen in the analysis in the printed music, the functional distinction between chord members and embellishing tones is reflected in the stronger rhythmic disposition of the former, in particular A, D and F on the downbeats of measures 2, 3 and 6, respectively. Similar openings are illustrated by JB 1, JB 2 and JB 36.

Inner-voice tones of chords other than the opening triad are also often stressed by their strong position within the measure. In the first six measures of JB 65, for example, the unfolding of each chord entails motion into and out of inner-voice tones which coincide predominantly with the beat. In addition, the arrival of the inner-voice tone G on the downbeat of measure 2 coincides with the arrival of E♭, a bass tone of the outer-voice framework.

The analysis of JB 66 also illustrates prolonging motions in which inner-voice tones are articulated rhythmically through their position on the beat, and in some instances, tonally as well through concurrence with strongly disposed bass tones.

In addition, displacement by an inner-voice tone

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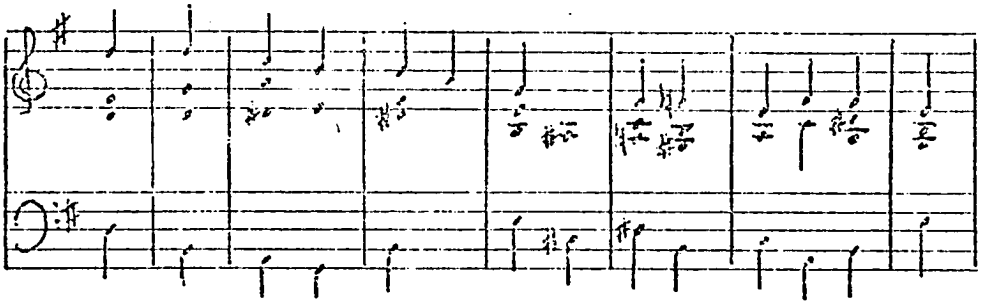
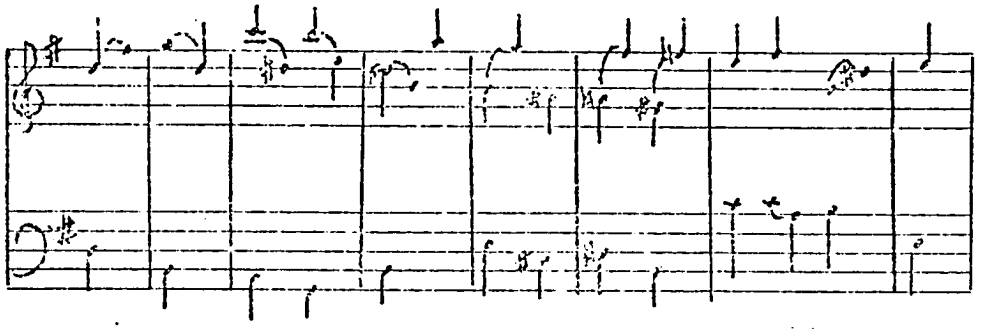
characteristically involves the bass, coincident inner-voice, and delayed upper-voice member all strongly disposed. The inner voice is, thus, emphasized by its position within the measure and, tonally, by its simultaneous arrival with a member of the outer-voice framework.

Such tonal-rhythmic interaction, which articulates and accentuates inner-voice tones may also confer linear integrity on an inner part, as in JB 71 where inner-voice motions are highlighted through temporal disposition. In measures 11 to 18, for instance, the underlying chord structure shown in Example 1 unfolds with frequent leaps back and forth between outer and inner-voice members, some of which are registrally superior, as outlined in Example 2.

Example 1, JB 71, m. 11-18



Example 2, JB 71, m. 11-18



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As can be seen in the analysis in the printed music, the rhythmic stress of these tones through their coincidence with the beat and its principal subdivisions produces a melody which strongly implies motion in the inner as well as the outer voices. Thus, the upper-voice descent from D in measure 11 to the cadence on E in measure 18 is clearly counterpointed by the inner-voice motions F#-G in measures 11 and 12, D#-E-D# in measures 13 and 14, and the chromatic line B-A#-A♮-G# in measures 15 and 16.

Measures 4 to 8 of JB 4 provide another example of polyphonic melody, that is, a single line whose horizontal design suggests the linear continuity of more than one unfolding part. The passage is based on the chord progression shown in Example 3. Example 4 outlines an embellishment of this underlying structure through vertical displacements (measures 5, 6 and 8) and by motions into and out of inner voices which are often registrally superior. In the composition itself the tones of this framework are all stressed rhythmically. In addition, linear motions in the upper and inner voices are frequently clarified through juxtaposition of contiguous tones, for example, B-A and G#-F#-E in the upper voice in measures 5 and 7 to 8, respectively, and, in the inner voice, E-D# in measures 4 to 5 and C#-D# in measures 6 to 7. Consequently, despite changes of register and intervening prolonging motions, perception of the linear connection between these tones is furthered by their

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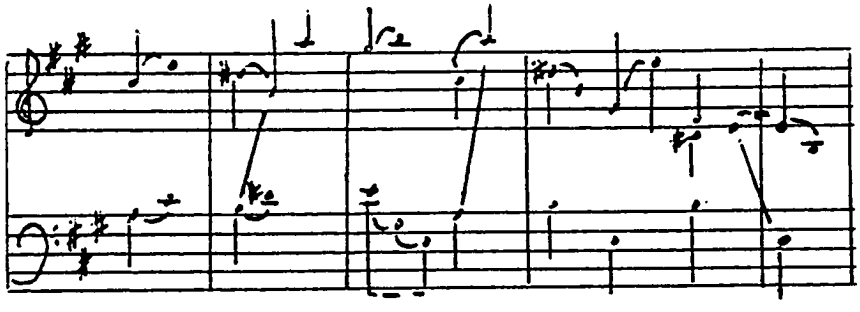
Example 3, JB 4, m. 4-8

Example 4, JB 4, m. 4-8



position in the measure.

Many of the works analyzed contain examples of this coordination of linear motion and the beat through which the continuity of the foreground voice-leading is articulated. In order to illustrate accentuated inner-voice motions, stems between the staves have been added to inner-voice tones in the voice-leading abstraction of the following passages:

JB 9: inner voice C-B-A-G♯ in measures 2 and 3; A-G♯-G♮-F♯ F♮-E in measures 4 to 9; F-E-D-C-B-C-A-G♯-A in measures 11 to 19

JB 15: inner voice C-B♭-A-B♮-A-G-F-E-F♯-G in measures 21 to 28

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JB 16: inner voice F-G-A in measures 24 to 28

JB 17: inner voice B♭-A-G-F♯ in measures 3 to 4

JB 18: inner voice G-A-B♭-A-G in measures 7 to 12

JB 19: inner voice D-E-F♯-G-A in measures 5 to 8

JB 22: inner voice B♮-C-A-B♭-G-A in measures 3 to 4

JB 25: inner voice B♮-C-B♭-C-B♭-G in measures 17 to 21

JB 28: inner voice A-B♮-C♮-B in measures 2 to 3

JB 29: inner voice D♯-E-C♯-D-B-C♯-A♯-B-G in measures 8 to 12

JB 37: inner voice A-G-A-B♭-A-G in measures 17 to 22

JB 49: inner voice C-B♮-B♭-A♭-G in measures 3 to 8

JB 53: inner voice C-B♮-C-D-C in measures 1 to 7

JB 54: inner voice C♯-D-C♯-B in measures 2 to 4

JB 58: inner voice B-A♯-B-C♯-B-A♯-B-C♯-B-A♯ in measures 2 to 8

JB 66: inner voice C-B♭-A♭-G in measures 8 to 14

JB 67: inner voice C♯-D-B-C♯-D-C♯ in measures 6 to 8

JB 68: inner voice G-F♯-G-F♯ in measures 2 to 4; B-G-F♮-E-F♯ in measures 4 to 7; C♯-D-C♯-D-C♯-D-C♯-A in measures 10 to 16

Certain linear-rhythmic figures also effect the articulation of form. For example, anticipations occur typically at the opening of each major section of allemandes and courantes, as well as of other movements, providing an emphatic upbeat-to-downbeat thrust. In JB 23, for example, motion in the upper voice is initiated by anticipation of

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the first upper-voice tone, F. Other works which exemplify this opening are JB 10, JB 17, JB 30, JB 61 and JB 67 (allemandes) and JB 31, JB 38, JB 43, JB 55 and JB 75 (courantes).

Within the unfolding of a passage framework tones on the beat may be given additional emphasis through an anticipation. In the opening measure of JB 26, for instance, the second upper-voice tone is anticipated, giving a rhythmic push to the melodic ascent, F-G-A. Further illustrations of a rising third in which the second tone is stressed by an anticipation are found in measures 10 to 11 and, in various rhythmic guises, in JB 2 (measures 5 and 7), JB 6 (measure 7), JB 11 (measure 5), JB 67 (measure 1, 4, and 5), and JB 71 (measures 1 and 5).

Anticipations also occur typically at cadences, either at the close of a strain or at an intermediate cadence. Most often the tone anticipated is the final upper-voice tone on the downbeat, or occasionally on another beat within the measure at internal cadences. In the first strain of JB 14, for example, the cadential progression concludes on the downbeat of measure 8, but the upper-voice tone E is anticipated on the last eighth-note of the preceding measure. The tonal goal of the passage is thereby emphasized rhythmically by the weak-to-strong disposition of the upper-voice anticipation and its reiteration.

In a similar cadential pattern, which is

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especially characteristic of the French courantes, the penultimate as well as the final upper-voice tone is anticipated. The cadence in measures 15 to 16 of JB 18 demonstrates the typical appearance of this figure, with anticipation of both E and D. The rhythmic priority of both tones, which fall on successive beats, is therefore further enhanced by the rhythmic stress of the anticipation.

Cadential anticipations occur in all types of movements, appearing in more than half of the Bach works analyzed. In fact, one or both of the configurations illustrated above can be found in almost all of the analyses listed as containing anticipation displacements in Table JB IV.[1]

In addition to the anticipation of the last upper-voice tone, measures 15 to 16 of JB 33 also illustrate another recurring cadential figure whose distinctive feature is the absence of outer-voice activity on the downbeat of the penultimate measure. In this example, the bass tone A is delayed to the middle of the first beat of measure 15 by C, an inner voice of the II^6 chord. Outer-voice motion within measures 14 to 16 therefore produces hemiola. In this instance three bars of triple meter sound like four of duple meter, the tonal rhythm being abstracted as

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[1]In only six works - JB 19, JB 25, JB 28, JB 41, JB 61 and JB 75 - anticipations of outer-voice tones appear exclusively at points other than cadences.

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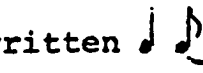
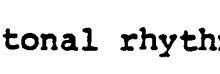
follows: written , sounds  .
A similar example is found in JB 8, measures 3 to 4, where conflict between the position of the outer-voice tones and the time signature, indicated by the asterisk, actually creates hemiola in which the real unit of beat is not the dotted-quarter as written, but the quarter, yielding the tonal rhythm  . In both cases increased pace of tonal activity intensifies the drive to the final chord.

In other analyses absence of a new foreground chord on the downbeat of the penultimate measure of a section results in a contrast between the metrically weaker beginning of the progression and its metrically strong conclusion. In JB 14, for example, the initiation of the final cadential progression is delayed to the end of the first beat by prolongation of the tonic chord of measure 5. Thus, tonal direction is reinforced through rhythmic means, the progression beginning in measure 7 in a position which is weak in relation to its termination on the downbeat of measure 8. The final chord is thereby emphasized both tonally and rhythmically as a point of arrival. Further illustrations of such cadential intensification are found in JB 13 (measures 23-24), JB 15 (measures 33-34), JB 17 (measures 11-12), JB 27 (measures 31-32), JB 30 (measures 11-12), JB 31 (measures 11-12) and JB 61 (measure 10).

The cadence may also be intensified by immediate

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juxtaposition of syncopated and beat-reinforcing tonal rhythm. In the cadential progression in measures 10 to 12 of JB 12, absence of outer-voice motion on the penultimate downbeat syncopates D, the upper-voice of the II^6 chord in measure 10, introducing conflict between tonal and rhythmic stress. A similar tonal-rhythmic configuration is found in JB 60, measures 32 to 34. In the conclusion of both progressions, voice-leading and temporal organization are mutually reinforcing, creating an emphatic tonal-rhythmic statement. The metric-rhythmic disposition of the foreground tones therefore heightens the contrast between the drive of the unfolding progression and the final chord as a point of relaxation.

Another configuration which exhibits conflict between outer-voice motion and rhythmic-metric accent is found at internal cadences where the final upper-voice tone of the phrase is delayed to a weak point by a suspension or appoggiatura. In JB 13, for example, the opening eight measures are based on a I-V-I progression which is prolonged by a neighbor-note motion in the upper voice, the position of the outer-voice tones coinciding with the beat. The close of the phrase on the tonic in measure 8, on the other hand, is rhythmically syncopated, with C delayed to the second eighth-note by the suspended D. The first phrase of JB 70 also illustrates weak tonal rhythm at the cadence in measure 4 with both the upper-voice tone B and the inner-

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voice tone G being rhythmically weak within the beat. Similarly the first phrase of JB 59 contains an appoggiatura displacement in which the dissonant tone A in the upper voice resolves to G in the middle of the downbeat in measure 4.

Thus, while the cadence marks a point of arrival in the tonal unfolding, the delay of the final upper-voice tone by a dissonance and the rhythmically weak position of its resolution introduces tension, counteracting a feeling of relaxation and finality. The combination of dissonance and syncopated tonal rhythm creates a forward momentum across the cadence and into the next phrase. This cadential configuration, which is particularly characteristic of internal cadences in lighter textured, optional movements, is further illustrated by JB 14 (measure 4), JB 26 (measure 8), JB 27 (measure 28), JB 42 (measure 5), JB 59 (measure 4), JB 64 (inner-voice tones D and B in measure 4), JB 67 (measure 2), JB 70 (measure 4) and JB 71 (measure 4).

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CHAPTER 5

C.P.E. BACH

The analyses of C.P.E. Bach demonstrate a significantly high degree of conflict between foreground contrapuntal activity and rhythmic-metric organization. As can be seen in Table CB I, in 30, or more than half, of the 52 analyses, 20% or more of the points stressed by outer-voice motion are classified as weak. Lack of coordination between voice-leading rhythm and weak-to-strong rhythmic direction is most extreme in CB 23 and CB 45 where the disposition of about 45% of the tones of the underlying framework produces syncopated rhythm of outer-voice activity. In the metric abstraction of CB 23, 25 of the 55 points stressed by the arrival or one or both outer-voice framework tones are marked by an asterisk, indicating a conflict between the strong and weak values of the beat and the disposition of the unfolding outer voices. At the other extreme are two works - CB 3 and CB 43 - in which linear activity is completely coordinated with points of rhythmic-metric stress.

Most syncopated tonal rhythm results from the position of the upper voice. In fact, referring to Table CB II, in 18 of the 52 analyses all instances of non-coordinated tonal and rhythmic accent occur in the upper voice.

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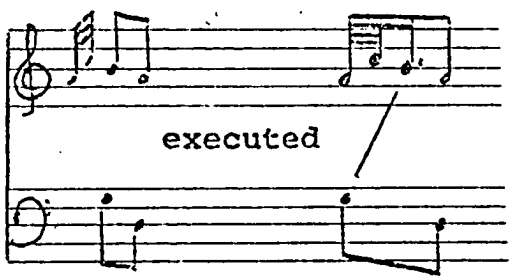
In CB 36, for example, all six members of the linear framework which are designated as weak are upper-voice tones, one moving against a stationary bass (measure 39) while five are vertically displaced from their rhythmically strong bass tones (measures 30, 31, 33, 35 and 36).

In some instances the weak disposition of an upper-voice member results from the execution of an ornament. For example, of the 62 points which support outer-voice activity in CB 16, 21 are weak. Of these, two (in measures 8 and 12) are caused by an Anschlag, or disjunct double appoggiatura, in which the notes in small type take up about one-quarter of the note value, the upper voice thereby being delayed to a weak subdivision of the beat (see Example 5).[1]

Example 5, CB 16, m. 8



Measure 8 of CB 34 provides an example of a Vorschlag whose execution pushes the upper-voice tone F to the second sixteenth of the beat, again producing a syncopated rhythm of tonal motion (see Example 6). Similar examples occur in

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[1]The interpretation of the ornaments is based on C.P.E. Bach, Versuch über die wahre Art das Klavier zu spielen, trans. by William Mitchell as Essay on the True Art of Playing Keyboard Instruments (New York: Norton, 1949).

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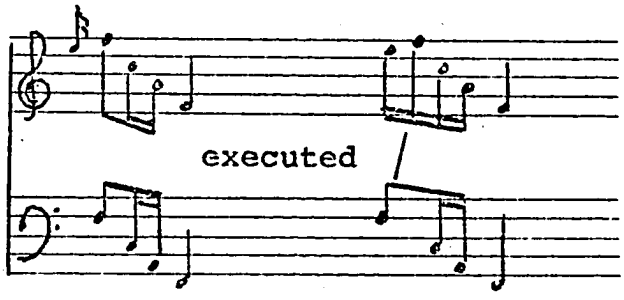
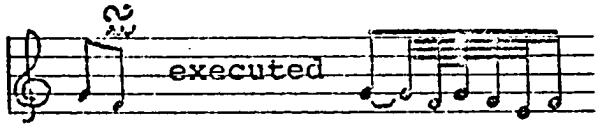
Example 6, CB 34, m. 8



CB 42 (measure 4), CB 4 (measure 6), CB 5 (measure 1), CB 36 (measure 36) and CB 9 (measure 24).

Conflict between rhythmic-metric organization and the position of outer-voice tones may also be the result of the prallender Doppelschlag, an ornament which appears frequently in the analyses from the Probestücke (CB 16 through CB 25) and the Kenner und Liebhaber collections (CB 26 through CB 52). The execution of the figure - a combination of a short trill and a turn - takes half the value of the ornamented note, with the first note tied to the preceding note and ending on the main note in the middle of the beat (see Example 7).

Example 7, C.P.E. Bach, Prallender Doppelschlag



When this ornament occurs at a cadence, such as in CB 39, measures 12 and 29 to 30, the ornamented tone is characteristically followed by foreground activity on the next beat, producing a strong rhythm of tonal motion. When, on the

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other hand, the upper voice is positioned as an upbeat but does not lead to a new framework chord, the tonal rhythm is syncopated, as illustrated by CB 18 (measure 2), CB 30 (measure 7), CB 36 (measure 32), CB 40 (measure 8), CB 51 (measure 9) and CB 52 (measure 69).

Despite the predominance of tonal-rhythmic conflict in the upper voice, weak tonal rhythm involving the bass moving either with, or in oblique motion against, its corresponding upper voice occurs in 31 of the 52 C.P.E. Bach analyses. Moreover, in 12 works - CB 4, CB 5, CB 6, CB 10, CB 13, CB 14, CB 22, CB 23, CB 45, CB 47, CB 49, and CB 52 - a weakly positioned bass tone is involved in half or more of the instances of syncopated voice-leading rhythm. In CB 13, for example, six tones of the outer-voice framework are located in rhythmically weak positions. Of these, four occur in the bass moving either against a stationary upper voice (measure 18) or vertically displaced from its corresponding upper-voice member (measures 6, 10 and 16). CB 52 provides further illustrations of syncopated tonal rhythm where rhythmically weak points are articulated by members of the supporting bass line (measures 69, 70, 76, 77 and 79) as well as by both outer voices simultaneously (measure 88). Thus, the bass is involved in six of the 12 instances of conflict between tonal stress and the weak-strong subdivision of the beat.

Vertical displacement is also a prominent feature

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of CB 52, with corresponding tones of the linear framework non-aligned in half (16 of 32) of the chords of the foreground voice-leading. As shown in Table CB III, such a high incidence of non-synchronized outer-voice motion is found in many of the C.P.E. Bach analyses. In fact, in 40 works corresponding outer voices are vertically displaced in one third or more of the framework chords. Moreover, no analyses exhibit complete coincidence of outer-voice activity with the lowest incidence of displacement involving about 24% of the component chords. Thus, in CB 14 only four of the 17 chords and in CB 47 just six of the 26 chords shown in the metric abstraction exhibit non-alignment of the constituent members. At the other extreme are the analyses of CB 22, CB 26 and CB 48 where vertical dislocation of an outer-voice tone occurs in over 70% of the chords of the linear framework. Of the 27 chords indicated in the analysis of CB 26, for example, the outer-voice members of 20 are non-aligned. Thus, only seven chords are produced by simultaneous motion in both outer voices (measures 1, 9, 12 and 21) or by oblique motion in one voice (measures 3, 16 and 20).

Strong tonal rhythm is particularly characteristic at cadences where framework tones, whether aligned or displaced, tend to reinforce weak-to-strong rhythmic direction. In one recurring linear-rhythmic figure the final upper-voice tone is delayed from its supporting bass by a dissonant melody tone. For example, at the end of CB 24 the bass of

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the last chord falls on the downbeat while C, its corresponding tone, is displaced to the following beat by D, the upper voice of the preceding dominant chord. At the cadence in measure 20 of CB 8 the disposition of the outer voices is the same metrically, but D, the tone coinciding with the bass on the downbeat, is an unprepared dissonance, notated as a Vorschlag. The resulting broadening effect, whereby the relaxation of tension is extended over two or more beats, is further illustrated by the following cadences: CB 15, measures 13 and 34 (the latter notated as a Vorschlag), CB 17 (measure 8), CB 20 (measure 14), CB 26 (measure 10), CB 28 (measures 143 to 144), CB 29 (measure 7), CB 38 (measure 4), CB 40 (measures 4 and 24), CB 45 (measure 8), and CB 46 (measure 8).

However, complete cadences most often conclude with both outer voices on the downbeat, the final chord of the progression being highlighted by its rhythmic-metric position. Thus, while in CB 17 the upper voice is displaced from its supporting bass at the half cadence in measure 8, both outer voices coincide on the downbeat at the final cadence of the section (measure 32).[1]

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[1]Of the analyses which conclude at the end of a major section only four close on a beat other than the downbeat: CB 23 and CB 47 end on beat 3 and CB 29 on beat 4 in 4/4 while CB 50 in 6/8 ends in the middle of the measure.

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Frequently the cadential progression is further intensified by increased melodic activity within the penultimate measure with the bass of the dominant chord supporting a 3-2 descent in the upper voice. The final cadence of CB 12 provides a typical example, illustrating a succinct harmonic statement in which disposition of the outer voices produces an emphatic expression of the beat. Tonal-rhythmic activity at the cadence thus contrasts with the previous 30 measures which exhibit a more liesurely, erratic, and at times syncopated rhythm of voice-leading. Other analyses concluding with similar cadential progressions are CB 1, CB 4, CB 7, CB 13, CB 17, CB 18, CB 21, CB 22, CB 35, CB 43, and CB 52.

Internal cadences which are harmonically complete also tend to drive to the downbeat, as illustrated by CB 15 measures 25 to 26, CB 16 measures 3 to 4, CB 30 measures 9 to 10, CB 39 measures 29 to 30, and CB 52 measures 66 to 67. However, internal cadences are most often deceptive or half cadences which interrupt or deflect the motion directed to the tonic. Metrically their termination on a relatively weak beat or weak subdivision of the beat parallels their unfulfilled harmonic goal. In CB 14, for example, while at the cadence at the end of the except in measure 10 both outer voices of the tonic triad coincide with the downbeat, at the deceptive cadences in measures 4 and 8, one or both voices of the

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concluding chord fall within the measure on the second beat. Similarly, in CB 21 the half cadence on the dominant in measure 12 is metrically weakened by the suspension which delays the upper voice to the end of the measure. In the penultimate measure of the section, on the other hand, the 6-5 intervallic motion over the bass of the dominant chord effects a strong linear-rhythmic push to the tonic on the following downbeat. Further examples of deceptive or incomplete cadences moving away from rather than toward the downbeat can be found in many analyses, the following works providing some further illustrations: CB 4 (measures 17, 19, 21, 25 and 27), CB 8 (measure 8), CB 10 (measure 4), CB 11 (measure 10), CB 16 (measures 8, 12, 24, and 28), CB 17 (measure 8), CB 18 (measure 8), CB 19 (measures 8 and 16), CB 20 (measure 4), CB 26 (measures 8 and 13), CB 27 (measure 40), CB 28 (measure 121), CB 32 (measures 4 and 12), CB 33 (measure 4), CB 36 (measure 31), CB 39 (measures 8 and 12), CB 40 (measure 8), CB 41 (measure 78), CB 46 (measure 8), CB 50 (measure 29).

As indicated by Table CB III, one or both tones are weakly disposed in half the foreground chords in which outer-voice members are vertically non-aligned. Consequently, while contrapuntal activity generally reinforces rhythmic organization in displacements at full cadences, non-aligned tones within phrases tend to produce syncopated tonal rhythms, one and occasionally both of the constituent tones

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coinciding with a rhythmically weak point. For example, in more than half of the non-aligned chords in CB 7 (11 of 19) the tonal rhythm is strong, as indicated in Table CB III. However, of these, nine occur at cadences either within the penultimate or final chord (measures 2, 3, 4, 14, 16 and 19, and measures 14, 16 and 20, respectively). And of the ten chords with vertically displaced members within phrases, the delayed voice produces weak tonal rhythm in eight. Similarly, in CB 40 tonal rhythm is syncopated in six and strong in only four non-aligned chords between cadences while cadential displacements consistently exhibit strong tonal rhythm (measures 3 to 4, 7, 13, 15, and 24).

Delay of a chord member through suspension of a tone of the previous chord is the most prominent cause of displacement in C.P.E. Bach. In fact, vertical displacement due to suspended tones occurs in all but three works analyzed (CB 6, CB 31 and CB 32) while, as indicated in Table CB IV, in 32 analyses a third or more instances of non-alignment are caused by a tone retained from the previous framework chord.

Non-alignment of outer voices because of appoggiaturas occurs on the whole with less frequency than suspensions, being totally absent in 13 analyses, as shown in Table CB IV. However, the linear-rhythmic configurations produced by suspension and appoggiatura displacements exhibit many similarities. For example, as indicated in

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Table CB V, the upper voice is delayed in over 90% of the instances of non-alignment due to non-chord members. Suspensions and appoggiaturas in the bass are found only 16 times in 11 analyses (CB 4, CB 9, CB 11, CB 12, CB 15, CB 21, CB 22, CB 23, CB 24, CB 29 and CB 47). Rhythmically the delayed bass in consistently strong in the earlier Prussian and Württemberg sonatas (CB 4, CB 9, CB 11, CB 12 and CB 15) while in four analyses from the later collections (CB 22, CB 24, CB 29 and CB 47) the bass tone is weakly disposed in every chord where it is replaced and delayed by a tone designated as a suspension or appoggiatura.

As indicated in Table CB V, in more than half the instances of non-alignment caused by suspensions and appoggiaturas one or both voices are rhythmically weak. In addition, in 31 analyses tonal rhythm is syncopated in half or more of such chords.

Suspensions and appoggiaturas in an inner voice also occur with significant frequency, accounting for about one third of the displacements classified as suspensions (67 of 229) and about one half of those designated as appoggiaturas (49 of 107). CB 30, for example, contains 12 displacements labelled as suspensions, all of which involve a weakly disposed tone. In addition, in six instances the upper-voice tone is delayed by a retained inner-voice member. Thus, while the dissonances F against

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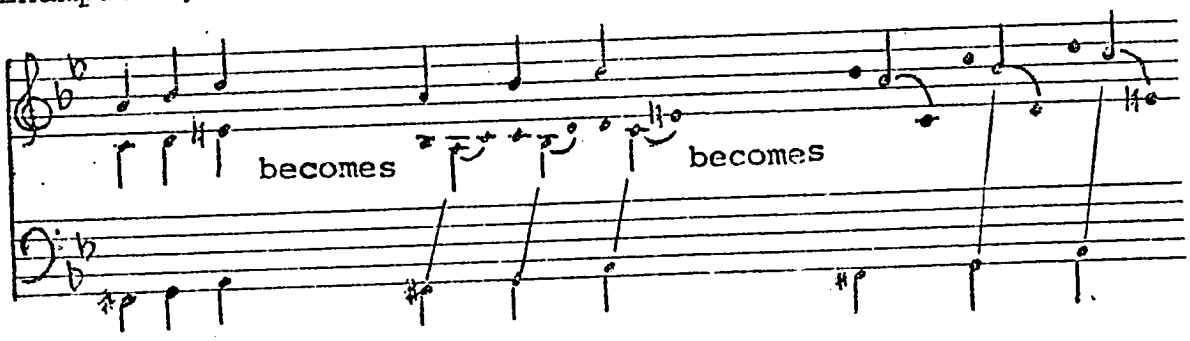
B♭ and D against G on the second beat of measures 2 and 3, respectively, are the result of upper-voice tones held over from the previous foreground chords, on the first three beats of measure 4 the dissonant tones B♭, C and D are inner-voice members of the previous chords transferred into a higher register (see Example 8).

Example 8, CB 30, m. 4



In the foregoing analysis the dissonant tones resolve immediately, clarifying the linear association of the two tones. However, in many instances melodic activity following the suspension or appoggiatura further postpones the arrival of the displaced outer-voice member. In CB 35, measure 68, for example, the chromatic passing-tone F♯ intervenes between the suspended upper-voice tone A and G, its weakly disposed resolution. A more extensive embellishment is illustrated by CB 48, measures 39 to 40, where a chromatic passing tone, A♯ and a leap up to the chord tone F♯ precedes the resolution to A in the upper voice. Variants of these figures can be found in CB 5 measure 5, CB 27 measure 38, CB 44 measure 6, and CB 51 measure 7.

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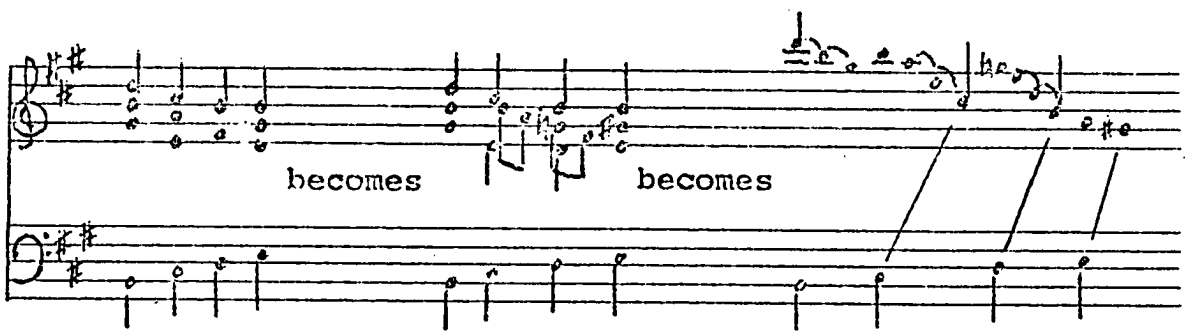
A particularly characteristic configuration which separates the upper voice from its supporting bass is illustrated by CB 33 measure 4. The bass members of the first two chords coincide with dissonant melody tones, B on beat 1 being an inner voice retained from the previous chord while G on beat 2 is an accented passing tone between the inner-voice tones A and F#. In both chords the arrival of the upper voice is attained by motion down through the chord after the dissonance has resolved in an inner voice (see Example 9).

Example 9, CB 33, m. 4



In CB 33 the disposition of the delayed upper voice produces a beat-reinforcing weak-to-strong rhythm, although syncopated tonal motion is also associated with this figure, as illustrated by the following additional examples: CB 3 (measure 7), CB 7 (measures 14, 16 and 19), CB 11 (measure 3), CB 19 (measure 3), CB 28 (measures 142 to 143), CB 30 (measure 3), CB 31 (measure 97), CB 33 (measure 6), CB 37 (measure 34), CB 38 (measure 14), CB 40 (measures 7 and 15), CB 41 (measure 81), CB 48 (measure 43), CB 50 (measure 31), CB 51

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(measures 2, 12 and 16), and CB 52 (measures 78 to 79 and 89 to 90).

Another prominent cause of a delayed framework tone is a rest in an outer voice. Although as indicated in Table CB IV, 10 of the 52 analyses contain no instances of non-alignment arising from rests, in some works, for example, CB 4, CB 22, CB 23, CB 29, CB 31, CB 32, CB 47 and CB 50, rests account for a substantial proportion of the instances of vertically displaced outer-voice tones.

In some analyses, particularly those of the earliest works, rests occurs in the opening chord, as in CB 1, CB 4, CB 6 and CB 10 where motion is initiated in one part alone, the other members of the chord entering in succession. More often, however, rests occur within a passage, interrupting the motion in one outer voice. In CB 32, for example, non-alignment, which occurs in 13 of the 26 chords of the underlying framework, is caused in all but one instance by rests in the upper voice. In some cases the delayed upper-voice tone enters immediately (eg., measure 3 and its repetition in measure 11), but, as in the suspension and appoggiatura, at other times is further delayed by intervening embellishing activity (measures 8 and 16). Metrically the cumulative motion of the outer voices may reinforce the beat, as in measure 7 and its parallel in measure 15 where alternating activity between bass and upper voice results in tonal articulation of beats

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1 and 2 as well as each sixteenth-note subdivision of the first beat. More frequently, however, the delayed tone coincides with a weak subdivision of the beat, producing a syncopated rhythm of tonal motion, as in measures 3, 7 (beat 2), 8, and in the repeat of the phrase, in measures 11, 15 and 16.

Although rests most often occur in the upper voice of the underlying linear structure, as indicated in Table CB VI, interruptions in the bass are found in 26, that is half, of the analyses, totalling 56 of 167 such displacements. CB 23 provides an extreme example with eight of 20 instances of non-aligned outer voices resulting from the upper voice alone on the beat, preceding its supporting bass (measures 5 to 9 and 17). In addition, the bass enters in a rhythmically weak position. Its linear integrity is thus impaired by absence of rhythmic-metric stress and by rests which interrupt the flow of the line. Some other instances of rests in the bass are found in the following works: CB 4 (measures 11, 20, 22 and 26), CB 7 (measures 2 and 3), CB 10 (measures 6 to 7), CB 13 (measures 8 and 10), CB 17 (measures 9 and 13), CB 22 (measures 33 and 37), CB 26 (measures 5, 6 and 14), CB 28 (measures 122 and 125), CB 39 (measures 10 and 13), CB 42 (measures 1, 2 and 5), and CB 48 (measures 30 and 37 to 38).

Non-alignment due to an inner-voice tone which delays an outer-voice member of the unfolding chord occurs

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in 44 of the 52 analyses, accounting for about 18% of the displacements in the works analyzed. As shown in Table CB IV, inner-voice displacements appear prominently in some analyses, for example, CB 5, CB 25, CB 28, CB 34 and CB 35. However, with the exception of a few works, displacements caused by non-chord tones outnumber those which are the result of an inner tone of the chord. In CB 42, for example, in two of ten instances of non-alignment a member of the outer-voice framework is delayed by an inner-voice tone (measures 3 and 5) while five of the remaining eight displacements are caused by suspensions (measures 4, 9, 10 and 11) or appoggiaturas (measure 12).

Strong disposition of both outer voices where one is replaced and delayed by an inner-voice tone is notably characteristic of the earlier Prussian and Württemberg sonatas (CB 1 to CB 6 and CB 7 to CB 15). As shown in Table CB VII, in 33 of the 40 instances of inner-voice displacements found in the 15 analyses from these collections, tonal rhythm produces strong patterns of rhythmic-metric accent.

On the other hand, inner-voice displacements which produce weak rhythm of voice-leading activity appear with particular prominence in the Probestücke (CB 16 to CB 25). In fact, of a total of 46 chords in which syncopated tonal rhythm results from the metric disposition of outer-voice tones non-aligned because of inner voices, 25 occur in the ten analyses from the Probestücke. In CB 25, for

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example, in three of the four chords in which the upper-voice tone is vertically displaced from its supporting bass by an inner voice, one or both outer-voice tones are rhythmically weak. In one chord the bass arrives at a point which is weak (measure 6), in one the upper voice is positioned in conflict with the weak-strong values of the beat (measure 9), and in the third both outer-voice tones fall in positions which generate syncopated tonal rhythm (measure 7).

Perception of the vertical connection of members of the underlying framework is therefore frequently obscured by vertical dislocation of corresponding members, by the rhythmically weak position of tones in the foreground, and, conversely, by the rhythmic-metric prominence of dissonant, non-chord tones in outer or inner voices. In addition, the underlying counterpoint in many analyses contains abrupt changes of register, perhaps an element of idiomatic keyboard style. In CB 45, for example, while the upper voice in the first four measures is registrally consistent, the bass begins in the upper-voice range (E in measure 1) but then leaps into the middle (F# and G# of measures 1 and 2, B of measure 4) and bass (A of measure 3) registers. In the continuation of the phrase in measures 5 to 8, the upper voice unfolds in three different octaves, E in measure 6 appearing at a lower pitch level than the tones of measure 5 while the concluding F# to E descent occurs in the bass register. Thus, registral shifts, frequent vertical

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displacement and weak disposition of framework tones combine to produce a flexible and unpredictable quality of motion.

In some passages the continuity of voice leading, whether in a uniform or a shifting register, is clarified by embellishing motions in which the governing outer-voice tone is regained in close juxtaposition to its continuation. In CB 18, measures 19 to 25, for example, the linear connection of the tones of the upper-voice descent D-C-B is made explicit by the melodic prolongations of D and C which begin and terminate on the governing tone. Rhythmically the tonal motion is strong, the regained tone in an upbeat position leading to the next framework tone on the following beat.

Frequently, however, the tonal direction from a regained tone to the subsequent tone is not reinforced through rhythmic-metric accent, resulting instead in the syncopation of the new tone. In CB 39 regained tones almost consistently result in the displacement of the subsequent foreground tone, often to a weak position between the beats. For example, the first upper-voice tone, B, is transferred from its initial register in measure 1, recurring an octave higher at the beginning of the inverted turn figure in measure 5, thereby delaying C and syncopating the tonal rhythm, as shown in the metric abstraction. In measures 10 and 11, the upper-voice tones C and B are regained on the downbeat and in measures 17 and 18 B and C# are positioned in the middle of beat 1, in each instance postponing

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the following upper-voice tone to a weaker position rhythmically. The linear direction from the regained tone to its subsequent framework tone is thus counteracted rather than reinforced by a corresponding weak-to-strong rhythmic motion. Among other passages exhibiting similar tonal-temporal conflict are the following: CB 4 (measure 5), CB 11 (measures 6 to 8), CB 12 (measures 2 to 12), CB 17 (measures 5 to 6 and 20 to 23), CB 19 (measures 12 to 13), CB 22 (measures 34 to 35), CB 23 (measures 1 to 3 and 6 to 7), CB 24 (measures 8 to 12), CB 25 (measures 9 to 11), CB 30 (measures 1 to 3 and 14 to 17), CB 31 (measures 102 to 106), CB 40 (measures 20 to 21), CB 41 (measures 67 to 69), CB 46 (measures 5 to 6), and CB 48 (measures 35 to 36).

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CHAPTER 6

MOZART

Conflict between rhythmic organization and the position of tones of the outer-voice framework is a conspicuous feature of many of the Mozart analyses. As shown in Table M I there are no works in which there is complete coordination of outer-voice motion with patterns of weak-to-strong rhythmic direction. Only three analyses - M 5, M 17 and M 24 - exhibit a relatively low incidence of weakly positioned foreground tones while in nine of the 27 analyses the disposition of 20% or more of the framework tones produces a syncopated rhythm of tonal activity. The most extreme opposition between linear organization and metric-rhythmic accent occurs in M 27 where of 23 points marked by the arrival of one or both outer-voice tones, nine, or about 39%, are not coordinated with positions of rhythmic stress.

In the vast majority of instances of tonal-rhythmic conflict the weakly disposed tone is in the upper voice. In fact, in 12 of the analyses in Table M II, all tones designated as weak in the metric abstraction occur in the upper voice. One such work is M 25 where 20 weak points are stressed by the arrival of a member of the outer-voice framework, in two instances an upper-voice tone moving

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against a stationary bass and in 18 displaced from its supporting bass.

Non-alignment of corresponding framework tones is also a prominent feature in the Mozart analyses. As shown in Table M III, the foreground counterpoint of M 16 and M 23 exhibits an unusually low degree of displacement, vertical dislocation occurring in just more than a quarter of the chords designated as members of the foreground structure. In M 2, M 9, M 12 and M 24, on the other hand, outer-voice members are non-aligned in half or more of the framework chords. Between these two extremes are the bulk of the analyses in which outer-voice tones are vertically displaced in one third to one half of the foreground chords.

In addition, conflict between tonal and rhythmic accent of vertically non-aligned outer voices is found in every analysis. As indicated in Table M III, in 14 analyses syncopated tonal rhythm occurs in half or more of the chords with non-coincident outer-voice members. For example, in M 10 the upper voice is weakly positioned in 19 of 33 chords, in M 16 a weak member in the upper or bass voice (five chords and two chords, respectively) occurs in a total of half of the chords with displaced tones, while 19 of 36 non-aligned chords in M 19 exhibit tonal-rhythmic conflict either in the upper voice (16 chords), in the bass (2 chords) and in one instance in both voices. Taken as a whole, of a total of 510 foreground chords in which corresponding outer

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voices are non-aligned, in 258 one or both voices are classified as weak. The most characteristic configuration involves a strong bass and a weak upper voice, accounting for 226, or about 87%, of the total instances of weak tonal rhythm is vertically non-aligned chords.

The most common cause of displacement is an inner-voice tone which delays the arrival of the outer voice, being found in every analysis, as indicated in Table M IV. Most involve the delay of the upper-voice member, delayed bass tones occurring in only 14 of 143 chords, as shown in Table M V.

In slightly more than half of the total inner-voice displacements both tones arrive at a position which is reinforced by metric-rhythmic accent. However, in 10 analyses inner-voice displacements in which one and occasionally both outer-voice members are weak outnumber those where the tonal rhythm is strong.

Non-aligned outer voices due to suspensions and appoggiaturas are also found in every analysis. Referring to Table M VI, in the vast majority of cases the delayed framework member is in the upper voice, the only instances of delayed bass tones occurring in M 4, M 20, M 23 and M 27. In addition, the bass tone characteristically arrives at a strong point in the measure, weak bass tones being found a total of only two times in M 20 and M 23.

However, while the bass tone in such non-aligned

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chords almost always falls at a position of metric-rhythmic accent, more than half of the upper-voice tones displaced by suspensions and appoggiaturas are weak, outnumbering strongly disposed upper-voice members in 14 of 27 analyses.

Rests in the linear framework are also a significant cause of non-coincident outer-voice tones, accounting for about 26% of the chords exhibiting vertical dislocation. However, while displacements caused by suspensions, appoggiaturas or inner-voice tones are found in every analysis, non-aligned chord members due to rests are totally absent in six analyses, all of which are, perhaps significantly, slow movements. On the other hand, as shown in Table M IV, rests are particularly prominent in the linear framework of M 1, M 2, M 3, M 4, M 6, M 7, M 8, M 9, M 22 and M 24, accounting for from 33% to 60% of the instances of non-alignment found in those analyses. In M 6, for example, almost half the instances of delayed tones are the result of rests in either the upper voice (measures 25 to 29, 70, and 72 to 75) or the bass (measures 1 and 8).

Taken as a whole, in more than half the displacements caused by rests, one, and in a few cases both, of the outer-voice tones arrive at a point which is weak. As indicated in Table M VII, in ten works (M 1, M 5, M 9, M 13, M 16, M 18, M 19, M 21, M 25 and M 27) the tonal rhythm of the dislocated outer-voice tones is most often syncopated.

In chords of cadential progressions displaced

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outer-voice members are often positioned at points of metric-rhythmic accent, accounting for a significant proportion of non-aligned foreground chords whose members are both rhythmically strong. The analysis of M 15, for example, contains nine instances of vertical displacement due to inner-voice tones. Of the four in which the tonal rhythm is classified as strong, two occur within cadential progressions (measures 7 and 47). In each instance the non-alignment occurs in the penultimate chord (in the II^6 and the IV chords at the semi-cadences), the delayed upper voice providing an upbeat-to-downbeat gesture toward the final chord. Similar cadential displacements are found in the following analyses: M 2 (measure 20), M 3 (measures 3 and 37), M 9 (measures 7, 11, 13 and 15), M 12 (measures 15 and 18), M 13 (measures 23, 36 and 38), M 14 (measure 7), and M 21 (measure 7).

One recurring cadential configuration involves motion out of an inner voice over the dominant in the bass followed by a rapid 3-2 descent to the tonic in the upper voice. As illustrated by M 16 (measure 41), M 17 (measures 7 and 19), M 19 (measure 49), M 22 (measures 47 and 62), and M 23 (measure 7), the rhythmic disposition of the outer-voice tones generates a strong tonal rhythm with the delayed upper voices providing an upbeat motion to the final chord on the downbeat.

M 19, measures 57 to 58, provides an example of

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a cadential broadening found in some analyses where the arrival of the upper-voice tone is substantially delayed by motion out of an inner voice so that the unfolding of the chord, in this instance the dominant, extends over several beats. Other examples can be seen in M 4 (measure 23), M 21 (measure 30) and M 22 (measure 50).

Strong tonal rhythm is also often found where an appoggiatura or suspension delays an upper-voice tone at a cadence. In M 2, in the seven instances of non-alignment in measures 7 to 9 and 22 to 25, a non-chord tone in the melody displaces the upper-voice framework tone to a position which is rhythmically weak. However, tonal rhythm is strong at the cadence in measures 15 to 16 where non-alignment results in an increased animation of outer-voice activity, and at the cadence at the end of the section (measure 28) where the relaxation of tension is extended by the suspension of the upper voice on the downbeat and its resolution on the third beat. Other examples of these two cadential configurations can be seen in the following analyses: M 1 (measures 32, 34 and 37), M 4 (measure 26), M 5 (measures 2, 8 and 60), M 11 (measures 7, 12, 16 and 39), M 12 (measures 15 and 18), M 13 (measure 39), M 17 (measure 2), M 18 (measures 2, 4, 10 and 12), M 19 (measures 9, 37 and 63), M 20 (measures 7, 25 and 31), M 21 (measures 3 and 11), M 24 (measure 29), M 25 (measures 3 and 8), and M 26 (measures 8 and 16).

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Cadences therefore often exhibit either intensification or broadening of tonal activity with strong rhythm of foreground motion. However, the voice-leading between cadences is frequently characterized by a high incidence of non-alignment and weak disposition of outer-voice framework tones, particularly in the upper voice.

In the opening theme of M 14 (measures 1 to 8), for example, both instances of tonal-rhythmic conflict are the result of displaced upper-voice tones within the phrases. However, at the half cadence in measure 4 and the concluding cadence in measure 8 the tonal rhythm is strong. Similarly, of the 11 weakly disposed tones in the foreground framework of M 20, only one occurs in the bass (measure 19) and only one at a cadence (measure 20). Thus, motion in the bass tends to reinforce metric-rhythmic organization with all but one of its 48 framework members coinciding with the beat or its strong subdivision. In the upper voice, on the other hand, ten of 48 tones are weak, either moving in oblique motion (six times) or vertically displaced from their corresponding bass tones (four times).

This temporal interaction of outer voices whereby tones of the underlying bass line principally coincide with positions of metric-rhythmic accent while the upper-voice line is frequently syncopated and vertically displaced from its supporting bass might be characterized as a "foreground rubato". Mozart, who regarded tempo rubato as an important

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device for the expressive performance of slow movements described his rubato technique as one in which the melody is flexible while the bass provides an accompaniment in strict time.[1] Indeed, as in M 14 and M 20, weak bass tones account for a comparatively low proportion of the instances of tonal-rhythmic conflict among the slow movements. As indicated in Table M II, in M 14 all but two rhythmically weak tones are in the upper voice, M 20, M 23, and M 26 each contain one instance of tonal-rhythmic conflict in the bass, while the members of the foreground bass line in M 5, M 11 and M 17 consistently coincide with positions of metric-rhythmic stress. M 2 is the only slow movement in which syncopated tonal rhythm is conspicuous in the bass, five of 19 weak points being stressed by the arrival of a framework bass tone.[2]

M 23 further illustrates the fluid relationship between the framework voices typical of the middle movements. In this passage 22 of 23 tones of the underlying bass line coincide with the beat while of 24 tones in the upper voice, the position of seven produces syncopated tonal rhythm. In

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[1]Mozart's letter to his father of 24 October 1777. The Letters of Mozart and his Family. Ed. and trans. by Emily Anderson (New York: St. Martin's Press, 1966), Vol. I, 340.

[2]M2 is also atypical of the slow movements analyzed in its high proportion of non-aligned outer voices due to rests.

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addition, in seven of 31 foreground chords the upper voice is displaced from its metrically strong supporting bass. Thus, while motion in the bass is predominantly coordinated with the beat, the upper-voice line, which provides the skeletal underpinning for the melody, unfolds above it in its own flexible and subtle rhythm.

Similarly, all 22 tones of the foreground bass line of M 26 coincide with the beat, frequently the downbeat. In the upper voice 12 of 24 framework tones sound after the arrival of their supporting bass tones on the beat. Moreover, six coincide with rhythmically weak points, generating a syncopated rhythm of tonal activity.

In fast movements, although rubato performance may be inappropriate, weakly positioned framework tones and vertical displacement frequently result in a fluid and flexible outer-voice interaction in which rubato effects are integrated into the linear design.

M 15, for example, opens with a distinctively expressive and cantabile rondo theme (measures 1 to 16) in which the bass consistently coincides with the beat, articulating the downbeat in all but two measures (3 and 11) and frequently the midpoint of the measure as well. In the upper voice, however, 15 of 24 framework tones are weak. In addition, there is a high incidence of vertical displacement, the upper voice being delayed from its supporting bass in 16 of 25 chords. Thus, while the motion in the bass

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expresses the beat and meter, the rhythmic shape of the upper-voice line which underlies the melody exhibits great freedom from the rhythmic scheme.

Another expressive theme in which the unfolding of the foreground upper voice displays rhythmic independence from the bass is the first theme of M 10 (measures 1 to 21) in which a framework bass tone on the beat frequently coincides with a rest, suspension, appoggiatura or inner-voice tone in the melody, delaying the arrival of the upper-voice framework tone. In addition, while the bass is consistently strong, in more than half of these displacements the arrival of the upper voice coincides with a weak point rhythmically.

The opening theme of M 18 also exhibits a melody of flowing, songlike quality in which tonal-rhythmic conflict and non-aligned foreground tones are conspicuous. In over a third of the foreground chords (12 of 34) corresponding outer-voice members do not arrive simultaneously, in most instances the upper voice being delayed.

In many other analyses from fast movements frequent displacement and weakly positioned tones in the foreground framework are associated with themes of a distinctly cantabile character, for example, the first themes of M 7 (measures 1 to 8), M 12 (measures 1 to 19), M 21 (measures 1 to 16), and M 27 (measures 1 to 16) as well as both themes of M 9 (measures 1 to 8 and 28 to 39), M 13 (measures 1 to 7

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and 17 to 24), and M 19 (measures 1 to 10 and 23 to 38).

On the other hand, themes written in a style of idiomatic keyboard figuration rather than one of flowing, lyrical character exhibit greater coordination of linear and rhythmic organization. In the opening theme of M 3 (measures 1 to 10), for example, the melody is constructed of a succession of broken chord and neighbor motions, moving largely in continuous sixteenth-notes instead of the varied rhythmic patterns typical of Mozart's cantabile themes. Underlying this melody and its supporting accompaniment is a linear framework whose tonal rhythm is consistently coordinated with strong patterns of rhythmic-metric accent. Voice-leading activity and temporal organization are also mutually reinforcing elements in the second theme of M 6 (measures 38 to 66) where the foreground framework is elaborated primarily through patterned figuration rather than a melody of diverse rhythms and fluid linear design.

Vertically coordinated and rhythmically strong outer-voice motion is also found in transitional and cadential passages employing figuration. For example, in measures 34 to 40 of M 15, the cadential close of the modulatory bridge leading to the dominant theme of measure 41, the downbeat is uniformly stressed tonally, the only instance of weak tonal rhythm and displacement occurring in the II^6 chord of the penultimate measure.

The distinction between passages of strong as

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opposed to syncopated tonal rhythm therefore may have formal implications. In M 13, while the bass tones of the outer-voice framework of both theme groups (measures 1 to 7 and 17 to 24) coincide consistently with the beat, the upper voice is characterized by a high degree of non-alignment with many tones delayed to weak positions. In the closing figuration which establishes and reiterates the secondary key area in measures 24 to 29, on the other hand, outer-voice motion is predominantly aligned and coordinated with strong rhythmic positions.

An analogous example is provided by M 19 where tonal and rhythmic forces are largely synchronized in the final section of the exposition (measures 50 to 63), contrasting with the frequent vertical displacement and weak disposition of the outer-voice tones in the themes of the first and second key areas. Thus, this closing passage contains only five of 36 displacements and three of 27 instances of syncopated tonal rhythm indicated in the analysis. Similarly, the last eight measures of the bridge (measures 15 to 22) which are based largely on instrumental figuration, also display a comparatively low incidence of weak tonal rhythm and non-alignment in the foreground voice-leading.

In the 63 measures of M 22, 12 of 25 displacements and five of 13 rhythmically weak tones are found in the 19 measures of the first theme. Six other displacements and

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five instances of syncopated tonal rhythm occur in the five measures of the closing section included in the analysis (measures 59 to 63). The bridge theme (measures 23 to 30) and the second theme (measures 36 to 58), on the other hand, are characterized by predominantly rhythmically strong and vertically coordinated outer voices. In M 25 formal areas of the movement also present contrasting patterns of tonal-temporal interaction, although in this work non-alignment and weak disposition of framework tones are found mostly in the modulatory section of the bridge (measures 17 to 26) and a theme of the secondary key area (measures 42 to 53) while the first theme (measures 1 to 16) and the first theme in the dominant (measures 28 to 41) exhibit a comparatively high degree of tonal-rhythmic coordination.

M 15 provides an illustration of a rondo movement in which areas of different linear-rhythmic relationship are juxtaposed. The theme has been cited as an example of an expressive melody exhibiting a high degree of vertical displacement and tonal-rhythmic conflict. In the transition passage from measures 34 to 40, however, outer-voice motion occurs principally on the downbeat of each measure with only one instance of a displaced and rhythmically weak upper-voice member (measures 39). The thematic material of the B section, in contrast to that of the main theme, also displays a high degree of coordinated linear-rhythmic organization with vertical displacement and syncopated tonal rhythm

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occurring primarily at cadences (measures 47, 54 to 55 and 61 to 63).

Contrasting types of rhythmic-tonal interaction may also articulate phrase units within a passage. In the five measures of closing material in M 10 (measures 54 to 58) tones of the neighbor-chord embellishment of the first two measures are consistently non-aligned with syncopated tonal rhythm in three of five chords. In the last three measures, on the other hand, both voices are coordinated with the downbeat and midpoint of each measure, providing an emphatic harmonic close in which tonal and rhythmic motions are mutually reinforcing.

In the cadential close of the dominant theme of M 15 (measures 56 to 64) the outer-voice tones which underly the embellishment of the tonic chord in measures 56 to 60 are aligned on the downbeat while in the six chords of the following cadential progression corresponding tones are vertically dislocated in four, in two instances the upper voice being delayed to a rhythmically weak point.

Themes exhibiting duality may also juxtapose contrasting tonal-rhythmic outlines. For example, the first eight measures of the second theme of M 10 (measures 35 to 42) are based on two contrasting ideas, one triadic (measures 35 to 36 and 39 to 40) and the other a melodic second (measures 37 to 38 and 41 to 42). The rhythm of the foreground voice-leading of the first figure is strong with

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outer voices aligned on the downbeat while the answering part of the phrase demonstrates a high degree of vertical displacement and syncopated tonal rhythm.

Tonal-rhythmic interaction thus appears to be an intrinsic element in contrasting thematic and motivic material, of which further examples can be seen in the close of the first theme of M 9 (measures 8 to 10 versus measures 10 to 12), the conclusion of the exposition of M 10 (measures 54 to 56 versus 56 to 58) and the cadential close of the dominant key area in M 15 (measures 56 to 60 versus 61 to 64).

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CHAPTER 7

COMPARISON OF THE THREE COMPOSERS

This chapter presents a summary of the findings of the analyses and a comparative overview of the three composers with regard to the specific areas investigated. It is important to point out that this discussion is mainly based on the analyses of each composer taken as a whole and any conclusions will not apply equally to every individual analysis in every respect. The statistic cited in the text and presented in the summaries of Tables I, II, III and IV are therefore not a final goal, but an objective way of presenting overall similarities and differences.[1] It is ultimately through the repeated hearing of the analyses, with concentration on the disposition of the outer voices in terms of the criteria established, that aspects of style become evident.

Rhythmic Disposition of Foreground Tones

Summary 1 of Tables JB I, CB I and M I (page 166) indicates that the analyses of J.S. Bach demonstrate the highest degree of coordination of outer-voice motion with points of rhythmic stress. While 37 of 81 of the J.S. Bach analyses contain no instances of syncopated tonal rhythm

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[1]However, since the tables quantify the findings of the analyses, they do permit study of other possibly significant aspects of style not considered in this investigation, such as the comparative frequency of various tonal-rhythmic relationships in different types of movements or, in the case of C.P.E. Bach and Mozart, in works from different chronological periods of their keyboard output.

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because of weakly positioned foreground tones, only two of the 52 C.P.E. Bach analyses and none of the 27 movements by Mozart are without examples of conflict between voice-leading rhythm and temporal organization. Similarly, in 63 of the J.S. Bach analyses less than 10% of the tones of the outer-voice framework fall at points which are rhythmically weak and in no analyses are more than 20% of such tones weakly positioned. On the other hand, in a relatively substantial proportion of the analyses of C.P.E. Bach (30 of 52) and Mozart (9 of 27) 20% or more of the outer-voice tones coincide with positions which are designated as weak, producing a syncopated rhythm of tonal motion. The most extreme degree of conflict occurs in 13 analyses of C.P.E. Bach and two of Mozart where 30% or more of the foreground tones arrive at points which do not reinforce weak-to-strong rhythmic direction.

The comparative frequency of weakly positioned foreground tones is also shown in Summary 2 of Tables JB I, CB I and M I where the disposition of just 5% of all foreground tones in the analyses of J.S. Bach produces a syncopated rhythm of voice-leading activity while in C.P.E. Bach 21% and in Mozart 19% of the points stressed tonally by members of the linear framework are classified as weak.

The relative prominence of weakly positioned foreground tones in Mozart may support in part Edward T. Cone's view that in works of the classical period "...the

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pulse is seldom persistently obvious to our ears" so that there is

> ...no compulsion whatsoever to mark every important beat by an attack. It [a classical work] may call upon syncopations to set up cross-rhythms much more drastic than those of the Baroque. And it is just here that we find the clue to the Classical approach to meter.... The rhythmic surface is here insistently at odds with the prevailing measure.[1]

Voice(s) in which Syncopated Foreground Tones Occur

Referring to the Summary of Tables JB II, CB II and M II (page 167), in the works of all three composers the majority of weakly positioned tones occur in chords in which corresponding members are vertically non-aligned. In J.S. Bach 80%, in C.P.E. Bach 76% and in Mozart 78% of the instances of tonal-rhythmic conflict involve chords in which outer-voice tones do not occur simultaneously.

However, the voice in which the weakly positioned tone occurs differs significantly among the three composers. In the Mozart analyses a rhythmically weak upper-voice tone, whether in oblique motion, vertically aligned, or displaced from its supporting bass, accounts for about 88% (293 of 334) of the total instances of syncopated tonal rhythm. The proportion is somewhat larger in the J.S. Bach analyses, about 90% (88 of 98) but in C.P.E. Bach only about 77% (344 of 445) of the instances of tonal-rhythmic conflict result

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[1]Edward T. Cone, Musical Form and Musical Performance, 72.

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from a weak upper voice. Conversely, in C.P.E. Bach 32% (141 of 447) of the rhythmically weak points stressed by foreground activity involve the bass either aligned with its upper-voice tone (in 40 chords), displaced from an upper-voice tone which is also weak (26 weak bass tones), in oblique motion against a stationary upper voice (30 times), or displaced from a rhythmically strong upper voice (in 45 chords). In J.S. Bach weak bass tones occur in 17% (17 of 99) of the instances of tonal-rhythmic confict while in Mozart syncopated tonal rhythm involves a weakly positioned bass tone in only 15% (51 of 334) of the instances of rhythmically weak foreground activity.

Vertical Relation between Foreground Tones

Non-alignment of corresponding outer-voice chord members occurs with significantly less frequency in J.S. Bach than in C.P.E. Bach and Mozart, as indicated in Summary 1 of Tables JB III, CB III and M III (page 168). Thus, in 53, or about 65% of the J.S. Bach analyses less than 30% of the tones of the voice-leading framework are vertically dislocated. In contrast, in about 83% of the analyses of C.P.E. Bach (43 of 52) and about 89% of those of Mozart (24 of 27) 30% or more of such tones do not occur simultaneously.

In addition, Summary 2 of Tables JB III, CB III and M III, which presents an overall picture of the rhythmic

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disposition of displaced outer-voice members, indicates that in J.S. Bach both tones are strongly positioned in over 80% of the instances of non-alignment. In approximately 50% of the vertical displacements in C.P.E. Bach and Mozart, however, one or both of the constituent tones is rhythmically weak.

Causes of Delayed Tones in the Foreground Voice-Leading

The Summary of Tables JB IV, CB IV and M IV (page 169) shows that the various causes of vertical displacement of corresponding outer-voice tones do not occur with equal frequency among the three composers. For example, while anticipations account for almost a quarter of the instances of non-alignment in J.S. Bach, they appear comparatively rarely in C.P.E. Bach and Mozart. Rests, on the other hand, are a prominent cause of displaced outer-voice members in C.P.E. Bach and Mozart, but occur infrequently in J.S. Bach. Similarly, although suspensions and appoggiaturas in an inner or outer voice account for a total of 36% of the displacements in J.S. Bach and 44% in Mozart, such tones are especially evident in C.P.E. Bach where they are responsible for 53% of the instances of vertical non-alignment in the outer-voice framework. And, finally, while tones in inner voices frequently replace and delay outer-voice tones in the works of all three composers, in C.P.E. Bach almost half (49%) are appoggiaturas or suspensions (67 suspended inner-

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voice tones and 49 inner-voice appoggiaturas) rather than chord members (a total of 119 displacements due to an inner-voice tone). In J.S. Bach and Mozart, on the other hand, dissonant tones account for about a quarter (21% and 25%, respectively) of the total non-alignments caused by tones in an inner voice.

Characteristic Rhythmic-Linear Configurations

In the analyses of J.S. Bach the position of members of the outer-voice framework generally produces strong, beat reinforcing patterns of tonal motion. In addition, upbeat-to-downbeat figures through which framework tones are frequently approached (anticipation and its reiteration, regained tone and its succeeding tone) further enhance the function of foreground tones as points of arrival linearly and rhythmically. Thus, rhythmic-metric direction parallels and reinforces that of tonal rhythm and, conversely, the rhythm of voice-leading produces patterns of strong rhythmic-metric emphasis. This close coordination of tonal and temporal organization may be a contributing factor to the energy and forward drive which characterizes much of J.S. Bach's music.

Walter Piston makes a similar observation in discussing melodic style. He writes:

> The sense of motion forward to the next downbeat, imparted by the anacrusis, seems to be continually present in melodies possessing unmistakable rhythmic

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> vitality, such as those of J.S. Bach. It is as though each downbeat serves as a springboard for the start of another anacrusis, ever renewing the rhythmic life of the melody.[1]

In Mozart's keyboard works the outer voices unfold with considerable rhythmic independence, members of the underlying upper-voice line frequently being non-aligned with rhythmically strong tones of the supporting bass. Furthermore, suspensions and appoggiaturas, considered to be intrinsic ingredients of an expressive melody, occur not only in melodic embellishments but, with dissonant voice-leading relationships in the foreground, in the underlying framework itself. The outer voices therefore serve distinctive functions, the bass defining and confirming the metric-rhythmic structure while the upper-voice line is written out in the manner of an expressive rubato, generating rhythmic patterns which are independent of the beat.

Edward T. Cone, in a discussion of classical style, describes this interaction of tonal motion and meter as follows:

> There is, in the best examples of this style, a balance between the demands of the abstract meter and those of the concrete rhythm that produces a uniquely satisfying effect. The music itself gives the effect of creating the meter that it requires for its own existence.[2]

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[1]Walter Piston, Counterpoint (New York: Norton, c. 1947), 34.

[2]Edward T. Cone, Musical Form and Musical Performance, 74.

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Mozart's fluid and expressive melodic style therefore seems to be the result of foreground organization and relationships as well as of the melodic patterns and figurations which embellish the underlying tonal framework.

The different rhythmic-linear relationships in J.S. Bach and Mozart may have implications for the performer, as suggested by Cone who, in a discussion of style and interpretation writes:

> The Bach figuration demands to be played clearly, i.e., with every beat and sub-beat clearly articulated. The Mozart must be played melodically, with attention to the motivic relationships that determine the rhythmic shape.[1]

The analyses of C.P.E. Bach also exhibit a comparatively high degree of conflict between voice-leading activity and rhythmic organization. Tones of the foreground framework frequently arrive at points which are rhythmically and metrically weak, while regained tones often result in the syncopation rather than the rhythmic stress of the following tone. Although this "foreground rubato" is most characteristic of the upper voice, weakly disposed bass tones are prominent in some works. In addition, frequent rests and changes of register in the unfolding of the outer voices obscure the linear connections between framework tones and may account in part for the spontaneous and

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[1]Edward T. Cone, Musical Form and Musical Performance, 80.

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restless keyboard style associated with C.P.E. Bach.

C.P.E. Bach's statement that "the beginning of a caesura [that is, a cadence] which terminates a tempo rubato may be drawn into the manipulation, but the end, as in all endings of this tempo, must find all parts together over the bass"[1] seems to have its counterpart at the foreground level in C.P.E. Bach and Mozart where full cadences characteristically generate a strong rhythm of tonal activity, concluding with both outer-voices on the downbeat. On the other hand, voice-leading rhythm between full cadences is often syncopated. In addition, corresponding outer-voice members are frequently dislocated vertically by suspensions and appoggiaturas, creating forward motion through the need for resolution. Phrase structure is thus articulated through the interaction of tonal and rhythmic-metric forces, with dissonances and syncopations within the phrase creating tension which is resolved at the rhythmically strong cadence.

In J.S. Bach, outer-voice motion is also coordinated with points of metric-rhythmic accent at emphatic cadences. On the other hand, the final upper-voice tone is often displaced by a dissonant tone at cadences within a section, creating a conflict between voice-leading rhythm and metric organization which counteracts a strong sense of

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[1]C.P.E. Bach, Essay on the True Art of Playing Keyboard Instruments, 161.

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close. As Charles Rosen points out:

> ...in the High Baroque, too strong a cadence long before the end had its dangers; given the fluid, continuous and self-generating rhythm of Baroque music the only way to stop a piece was a forceful tonic cadence. This was an effect which could be used only with caution before the final page.[1]

Thus, tonal and rhythmic motions are largely reinforcing within the phrase while internal cadences are often injected with tension through dissonant voice-leading relationships and syncopated tonal rhythm. The unfolding voices seem to "spin out", the level of tension remaining fairly constant until the final or other principal cadence. Charles Rosen makes a similar observation in a comparison of Baroque and Classical melodies where he describes Baroque melody as

> ...extensible, almost indefinitely so....the tension diffused rather than concentrated - this diffusion making it possible to sustain the melody at such length. Both the energy and the tension of a classical theme (often uniting a variety of rhythmic elements) are more clearly concentrated, and this climax logically demanded a symmetrical resolution of the melody.[2]

In the works of all three composers, inner-voice tones are stressed through coincidence with a tone of the outer-voice framework, causing the delay of the corresponding outer-voice member. As mentioned in the chapter on J.S. Bach, such motions often produce a melody which suggests the

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[1]Charles Rosen, The Classical Style: Haydn, Mozart, Beethoven (New York: Viking Press, 1971; Norton, 1972), 49.

[2]Ibid., 77.

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linear unfolding of inner as well as outer voices. In addition, in the J.S. Bach analyses, leaps from one voice to another, coordinated with strong rhythmic motions, produce a vigorous, angular, often athletic melodic style.

Non-alignment due to inner-voice tones is also prominent in the Mozart analyses. About one-third occur at cadences where leaps into and out of inner voices give a sense of heightened animation and increased momentum, while those within phrases lack any explicit linear association with succeeding or following inner-voice tones. Such inner-voice members are thus not accentuated as members of a separate and independent line but are absorbed into one dominating melody of expressive, songlike character.

In the analyses of C.P.E. Bach, inner-voice tones emphasized by coincidence with tones of the outer-voice framework are frequently non-chord members, suspensions and appoggiaturas in the inner voice accounting for almost half the displacements caused by inner-voice tones. Thus inner as well as outer-voice motions are characterized by tension and the demand for resolution, introducing considerable intensity into the underlying linear framework.

A similar observation is made by Adele Katz who, in describing the Prussian Sonata No. 4 in C minor (CB 4) cites

> ...the pronounced domination of one melodic line, with the other two voices subordinated to give the effect of an accompaniment. There are other aspects

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> of the treatment, however, that contribute to the fluidity and flexibility of style. Among these is the frequent use of suspensions and the constant shift of register in the prolongations.[1]

Conclusions and Prospects

The results of the analyses suggest that rhythmic aspects of foreground voice-leading are an integral element of eighteenth-century keyboard style. Comparison of the works of the three composers not only reveals different and distinctive patterns of rhythmic-tonal interaction, but these patterns can to some extent be correlated with other descriptions and characterizations of their works.

Such correlations emphasize that style is not a function only of surface detail (cadential formulas, stereotyped melodic and rhythmic figures, etc., or of conventions of form and instrumentation) but can be studied at more remote levels in the integration and interaction of two fundamental musical elements, tone and pulse.

In addition, the foregoing study casts some light on broader and more general aspects of the study of tonal-temporal interaction. For example, the analyses support the stated or implied view of several writers, among them Victor Zuckerkandl, Cone, Cooper and Meyer, Komar, Schachter

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[1]Adele Katz, Challenge to Musical Tradition (New York: Knopf, 1945), 70.

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and Yeston, that rhythmic-metric organization is to some extent the product of tonal motion and design. Thus, music with a strong sense of rhythmic drive, such as that of J.S. Bach, exhibits a foreground structure in which voice-leading activity produces beat-defining tonal rhythms. The established metric scheme, however, seems at the same time to lead a somewhat independent existence, for tonal stress may contradict weak-strong rhythmic values without destroying the sense of a regularly recurring pattern of beat. On the other hand, if the contradication becomes too extreme, the result may be a sense of rhythmic irregularity and metric freedom, as in some works of C.P.E. Bach. Tonal design must therefore be added to the criteria of duration, dynamics, register, articulation, etc., as a source of accent.

Many questions remain unanswered, however. For example, while occasional reference has been made to tonal-rhythmic configurations typical of a particular type of movement (such as page 49 regarding the opening of fugal movements in J.S. Bach and, on page 81, the absence of rests in the foreground voice-leading in slow movements of Mozart) and works from different chronological periods of a composer's output (such as the rhythmic disposition characteristic of inner-voice displacements in the different C.P.E. Bach collections, mentioned on page 74), a systematic investigation of the sensitivity of this analytic approach in these areas of style requires additional study and comparison. In

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addition, only further analysis will reveal the extent to which relationships between voice-leading and rhythm as described in the foregoing chapters appear in other genres, such as orchestral, chamber and vocal music. Another possible area of investigation is the rhythmic-linear relationships in the works of other Baroque, transitional and Classical composers which may therefore be considered general characteristics of these styles. Conversely, the idioms of individual composers might be more sharply described and defined through consideration of rhythmic-tonal interaction. In addition, the relevance of rhythmic aspects of voice-leading to the style of periods other than the eighteenth century has not been examined. And, finally, there has been no attempt here to even touch upon the question of tonal-temporal relationships at more remote levels of structure. All of these are areas still requiring investigation, but it is hoped that the results of this study are of sufficient interest and value to encourage further analysis of the interaction of tonal structure and rhythmic organization.

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TABLE JB I

RHYTHMIC DISPOSITION OF FOREGROUND TONES

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.*
JB 1	11	0	-
JB 2	32	0	-
JB 3	48	3	6%
JB 4	18	0	-
JB 5	8	0	-
JB 6	17	0	-
JB 7	13	2	15%
JB 8	17	2	12%
JB 9	27	0	-
JB 10	30	2	7%
JB 11	21	2	10%
JB 12	23	1	4%
JB 13	32	1	3%
JB 14	14	2	14%
JB 15	30	2	7%
JB 16	34	0	-
JB 17	31	0	-
JB 18	26	0	-
JB 19	25	0	-
JB 20	19	2	11%

*In all tables percentages are given to the nearest percent.

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TABLE JB I, Cont.

Work	No. points stressed tonally	Weak points stressed No.	Pct.
JB 21	48	1	2%
JB 22	32	0	-
JB 23	11	0	-
JB 24	15	1	6%
JB 25	40	3	8%
JB 26	27	1	4%
JB 27	10	1	10%
JB 28	22	0	-
JB 29	29	2	7%
JB 30	23	1	4%
JB 31	20	0	-
JB 32	22	0	-
JB 33	18	0	-
JB 34	25	0	-
JB 35	30	0	-
JB 36	10	1	10%
JB 37	27	0	-
JB 38	27	1	4%
JB 39	24	0	-
JB 40	21	0	-
JB 41	11	0	-
JB 42	67	9	13%
JB 43	23	0	-

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TABLE JB I, Cont.

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.
JB 44	39	6	15%
JB 45	34	1	3%
JB 46	20	0	-
JB 47	26	0	-
JB 48	30	3	10%
JB 49	32	0	-
JB 50	16	0	-
JB 51	14	1	7%
JB 52	13	1	8%
JB 53	27	0	-
JB 54	29	4	14%
JB 55	23	4	17%
JB 56	25	3	12%
JB 57	17	0	-
JB 58	25	2	8%
JB 59	13	1	8%
JB 60	35	2	6%
JB 61	26	0	-
JB 62	30	0	-
JB 63	13	1	8%
JB 64	13	1	8%
JB 65	9	0	-
JB 66	22	0	-

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TABLE JB I, Cont.

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.
JB 67	45	2	4%
JB 68	26	4	15%
JB 69	22	2	9%
JB 70	15	1	7%
JB 71	53	1	2%
JB 72	21	4	19%
JB 73	38	5	13%
JB 74	38	4	11%
JB 75	30	3	10%
JB 76	16	0	-
JB 77	12	0	-
JB 78	21	1	4%
JB 79	12	0	-
JB 80	12	1	8%
JB 81	31	0	-
TOTAL	1984	98	5%

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TABLE JB II

VOICE IN WHICH SYNCOPATED TONE OCCURS

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
JB 1	0						
JB 2	0						
JB 3	3				3		
JB 4	0						
JB 5	0						
JB 6	0						
JB 7	2				1		1
JB 8	2	2					
JB 9	0						
JB 10	2			1		1	
JB 11	2				2		
JB 12	1				1		
JB 13	1				1		
JB 14	2			1	1		
JB 15	2				2		
JB 16	0						
JB 17	0						
JB 18	0						
JB 19	0						
JB 20	2				2		
JB 21	1				1		

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TABLE JB II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
JB 22	0						
JB 23	0						
JB 24	1			1			
JB 25	3	1			1	1	
JB 26	1				1		
JB 27	1				1		
JB 28	0						
JB 29	2				2		
JB 30	1				1		
JB 31	0						
JB 32	0						
JB 33	0						
JB 34	0						
JB 35	0						
JB 36	1				1		
JB 37	0						
JB 38	1				1		
JB 39	0						
JB 40	0						
JB 41	0						
JB 42	9	1			8		
JB 43	0						
JB 44	6				6		

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TABLE JB II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
JB 45	1				1		
JB 46	0						
JB 47	0						
JB 48	3				3		
JB 49	0						
JB 50	0						
JB 51	1				1		
JB 52	1				1		
JB 53	0						
JB 54	4	1			3		
JB 55	4	1		1	1	1	
JB 56	3				3		
JB 57	0						
JB 58	2				2		
JB 59	1				1		
JB 60	2				2		
JB 61	0						
JB 62	0						
JB 63	1			1			
JB 64	1				1		
JB 65	0						
JB 66	0						
JB 67	2				2		

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TABLE JB II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
JB 68	4				3		1
JB 69	2			1	1		
JB 70	1				1		
JB 71	1				1		
JB 72	4	1			1	1	1
JB 73	5			2	3		
JB 74	4		4				
JB 75	3				3		
JB 76	0						
JB 77	0						
JB 78	1				1		
JB 79	0						
JB 80	1						1
JB 81	0						
TOTAL	98	7	4	8	71	4	4

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TABLE JB III

VERTICAL RELATION BETWEEN FOREGROUND TONES

Work	No. chords	No. and % non-aligned		both strong	upper weak	bass weak	both weak
JB 1	10	1	10%	1			
JB 2	22	10	45%	10			
JB 3	35	13	37%	10	3		
JB 4	13	5	38%	5			
JB 5	7	1	14%	1			
JB 6	14	4	29%	4			
JB 7	9	4	44%	2	1	1	
JB 8	16	1	6%	1			
JB 9	25	2	8%	2			
JB 10	22	9	41%	9			
JB 11	14	7	50%	5	2		
JB 12	17	6	35%	5	1		
JB 13	30	2	7%	1	1		
JB 14	10	4	40%	3	1		
JB 15	21	8	38%	5	3		
JB 16	28	6	21%	6			
JB 17	25	6	24%	6			
JB 18	21	5	24%	5			
JB 19	18	7	39%	7			
JB 20	17	3	18%	1	2		
JB 21	34	14	41%	13	1		
JB 22	25	7	28%	7			
JB 23	9	2	22%	2			

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TABLE JB III, Cont.

Work	No. chords	No. and pct. non-aligned		both strong	upper weak	bass weak	both weak
JB 24	12	3	25%	3			
JB 25	31	9	29%	8	1		
JB 26	19	8	42%	7	1		
JB 27	9	2	22%	1	1		
JB 28	20	3	15%	3			
JB 29	26	3	12%	1	2		
JB 30	18	5	28%	4	1		
JB 31	17	3	18%	3			
JB 32	18	4	22%	4			
JB 33	15	3	20%	3			
JB 34	24	2	8%	2			
JB 35	27	3	11%	3			
JB 36	6	4	67%	3	1		
JB 37	21	6	29%	6			
JB 38	21	6	29%	5	1		
JB 39	19	5	26%	5			
JB 40	20	1	5%	1			
JB 41	9	2	22%	2			
JB 42	43	25	58%	17	8		
JB 43	16	7	44%	7			
JB 44	26	13	50%	7	6		
JB 45	26	9	35%	8	1		
JB 46	20	0	-				
JB 47	21	5	24%	5			

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TABLE JB III, Cont.

Work	No. chords	No. and pct. non-aligned		both strong	upper weak	bass weak	both weak
JB 48	21	10	48%	7	3		
JB 49	27	5	19%	5			
JB 50	14	3	21%	3			
JB 51	11	4	36%	3	1		
JB 52	11	2	18%	1	1		
JB 53	24	3	13%	3			
JB 54	23	6	26%	3	3		
JB 55	19	4	21%	3	1		
JB 56	18	7	39%	4	3		
JB 57	15	3	20%	3			
JB 58	22	3	14%	1	2		
JB 59	11	2	18%	1	1		
JB 60	28	7	25%	5	2		
JB 61	20	6	30%	6			
JB 62	24	6	25%	6			
JB 63	11	2	18%	2			
JB 64	11	2	18%	1	1		
JB 65	9	0	-				
JB 66	17	7	41%	7			
JB 67	34	11	32%	9	2		
JB 68	19	7	37%	3	3	1	
JB 69	16	6	38%	5	1		
JB 70	12	3	25%	2	1		

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TABLE JB III, Cont.

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
JB 71	43	11	26%	10	1		
JB 72	17	4	24%	2	1	1	
JB 73	30	4	13%	1	3		
JB 74	31	7	23%	5			2
JB 75	22	8	36%	5	3		
JB 76	12	4	33%	4			
JB 77	9	3	33%	3			
JB 78	20	5	28%	4	1		
JB 79	10	2	20%	2			
JB 80	10	2	20%	1		1	
JB 81	27	4	15%	4			
TOTAL	1574	421	27%	343	72	4	2

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TABLE JB IV

CAUSES OF DELAYED TONES IN THE FOREGROUND VOICE-LEADING

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
JB 1	1	1						
JB 2	10	1	5				3	1
JB 3	13	1	3		3	1	5	
JB 4	5	2					3	
JB 5	1	1						
JB 6	4	2					2	
JB 7	4	1	2	1				
JB 8	1						1	
JB 9	2	1						1
JB 10	9	3	2				4	
JB 11	7	3	1	1			2	
JB 12	6	2	2	1			1	
JB 13	2	1	1					
JB 14	4		1		1		2	
JB 15	8	4	3				1	
JB 16	6			3			2	1
JB 17	6	3	1				2	
JB 18	5	2	1				2	
JB 19	7	4	2				1	
JB 20	3	2			1			
JB 21	14	6	7					1
JB 22	7	2					4	1

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TABLE JB IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
JB 23	2		1				1	
JB 24	3	2					1	
JB 25	9	3		1	1		4	
JB 26	8	1	1	3			3	
JB 27	2				1		1	
JB 28	3	2					1	
JB 29	3	2						1
JB 30	5	3					2	
JB 31	3						3	
JB 32	4	2	2					
JB 33	3			2			1	
JB 34	2	1					1	
JB 35	3	1		1				1
JB 36	4	1	2					1
JB 37	6	4	1				1	
JB 38	6	1	1				4	
JB 39	5	1					4	
JB 40	1	1						
JB 41	2						1	1
JB 42	25	3	13	5			4	
JB 43	7	2		2			3	
JB 44	13		9	3		1		
JB 45	9	5	1	2		1		

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TABLE JB IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
JB 46	0							
JB 47	5		1		1		3	
JB 48	10	2	3	4	1			
JB 49	5	4				1		
JB 50	3			2	1			
JB 51	4	2	2					
JB 52	2	1			1			
JB 53	3	3						
JB 54	6	2	1	1				
JB 55	4	1		1			2	
JB 56	7	1	6					
JB 57	3		1	1	1			
JB 58	3	3						
JB 59	2			1	1			
JB 60	7	5	1	1				
JB 61	6	2	3				1	
JB 62	6	4	1				1	
JB 63	2	2						
JB 64	2	1	1					
JB 65	0							
JB 66	7	5		1				1
JB 67	11	3	3				5	
JB 68	7	7						

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TABLE JB IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
JB 69	6	1	2				3	
JB 70	3	2	1					
JB 71	11	5	2				3	1
JB 72	4		1				1	2
JB 73	4	2		1				1
JB 74	7	3					4	
JB 75	8	5					1	2
JB 76	4	2	1				1	
JB 77	3	2					1	
JB 78	5	2	3					
JB 79	2						1	1
JB 80	2	1						1
JB 81	4	3					1	
TOTAL	421	155	95	38	13	4	98	18

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TABLE JB V

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY INNER-VOICE TONES

Work	Upper Delayed		Bass Delayed		Other
	strong	weak	strong	weak	
JB 1	1				
JB 2	1				
JB 3	1				
JB 4	2				
JB 5	1				
JB 6	1		1		
JB 7				1	
JB 8					
JB 9	1				
JB 10	1		2		
JB 11	3				
JB 12	1				
JB 13	1				
JB 14					
JB 15	1	3			
JB 16					
JB 17	1		2		
JB 18	2				
JB 19	4				
JB 20	1	1			
JB 21	4	1	1		

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TABLE JB V, Cont.

Work	Upper Delayed strong	Upper Delayed weak	Bass Delayed strong	Bass Delayed weak	Other
JB 22	1		1		
JB 23					
JB 24	2				
JB 25	3				
JB 26			1		
JB 27					
JB 28	2				
JB 29		1			bass delayed, upper weak - 1
JB 30		1	2		
JB 31					
JB 32	2				
JB 33					
JB 34	1				
JB 35	1				
JB 36		1			
JB 37	2		2		
JB 38	1				
JB 39	1				
JB 40			1		
JB 41					
JB 42	3				
JB 43	2				
JB 44					

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TABLE JB V, Cont.

Work	Upper Delayed strong	Upper Delayed weak	Bass Delayed strong	Bass Delayed weak	Other
JB 45	4		1		
JB 46					
JB 47					
JB 48					
JB 49	4				
JB 50					
JB 51	2				
JB 52		1			
JB 53	2		1		
JB 54	1	1			
JB 55					Bass delayed, upper weak - 1
JB 56	1				
JB 57					
JB 58		2	1		
JB 59					
JB 60	1	2	2		
JB 61	2				
JB 62	4				
JB 63	2				
JB 64	1				
JB 65					
JB 66	5				
JB 67	3				

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TABLE JB V, Cont.

Work	Upper Delayed strong	Upper Delayed weak	Bass Delayed strong	Bass Delayed weak	Other
JB 68	3	3		1	
JB 69		1			
JB 70	2				
JB 71	4		1		
JB 72					
JB 73		2			
JB 74	1				Upper delayed, both weak - 2
JB 75	3	2			
JB 76	1		1		
JB 77	3				
JB 78	2				
JB 79					
JB 80			1		
JB 81	3				
TOTAL	104	22	21	2	Bass delayed, upper weak - 2 Upper delayed, both weak - 2

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TABLE JB VI

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY SUSPENSIONS OR APPOGGIATURAS

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
JB 1					
JB 2	4		1		
JB 3	4	3			
JB 4					
JB 5					
JB 6					
JB 7	1	1	1		
JB 8					
JB 9					
JB 10	1		1		
JB 11		2			
JB 12	3				
JB 13		1			
JB 14	1	1			
JB 15	1		2		
JB 16	3				
JB 17			1		
JB 18	1				
JB 19	2				
JB 20		1			
JB 21	7				

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TABLE JB VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
JB 22					
JB 23	1				
JB 24					
JB 25		1	1		
JB 26	1	1	2		
JB 27		1			
JB 28					
JB 29					
JB 30					
JB 31					
JB 32	2				
JB 33	2				
JB 34					
JB 35	1				
JB 36	1		1		
JB 37	1				
JB 38		1			
JB 39					
JB 40					
JB 41					
JB 42	6	7	4		Bass delayed, upper weak - 1
JB 43			2		
JB 44	5	6	2		

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TABLE JB VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
JB 45	1	1	2		
JB 46					
JB 47	1		1		
JB 48	5	3			
JB 49	1				
JB 50	3				
JB 51	1	1			
JB 52			1		
JB 53					
JB 54		2			
JB 55	1				
JB 56	3	3			
JB 57	3				
JB 58					
JB 59	1	1			
JB 60	2				
JB 61	3				
JB 62	1				
JB 63					
JB 64		1			
JB 65					
JB 66	1				
JB 67	1	2			

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TABLE JB VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
JB 68					
JB 69	1		1		
JB 70		1			
JB 71	1	1			
JB 72	1				
JB 73		1			
JB 74					
JB 75					
JB 76	1				
JB 77					
JB 78	2	1			
JB 79					
JB 80					
JB 81					
TOTAL	82	44	23		Bass delayed, upper weak - 1

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TABLE CB I

RHYTHMIC DISPOSITION OF FOREGROUND TONES

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.
CB 1	54	9	17%
CB 2	49	12	24%
CB 3	41	0	-
CB 4	90	21	23%
CB 5	18	2	11%
CB 6	13	4	31%
CB 7	78	16	21%
CB 8	40	1	3%
CB 9	53	10	19%
CB 10	41	11	27%
CB 11	37	7	19%
CB 12	44	13	30%
CB 13	29	6	21%
CB 14	21	2	10%
CB 15	51	1	2%
CB 16	62	21	34%
CB 17	52	7	13%
CB 18	25	1	4%
CB 19	34	5	15%
CB 20	29	10	34%
CB 21	44	13	30%
CB 22	37	12	32%

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TABLE CB I, Cont.

Work	No. points stressed tonally	weak points stressed No.	Pct.
CB 23	55	25	45%
CB 24	47	14	30%
CB 25	38	11	29%
CB 26	47	10	21%
CB 27	39	9	23%
CB 28	44	3	7%
CB 29	80	17	21%
CB 30	55	21	38%
CB 31	62	8	13%
CB 32	39	9	23%
CB 33	41	6	15%
CB 34	16	2	13%
CB 35	28	3	11%
CB 36	28	6	21%
CB 37	18	8	44%
CB 38	20	4	20%
CB 39	82	20	24%
CB 40	58	7	12%
CB 41	42	9	21%
CB 42	29	4	14%
CB 43	25	0	-
CB 44	16	5	31%
CB 45	38	17	45%

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TABLE CB I, Cont.

Work	No. points stressed tonally	Weak points stressed No.	Ptc.
CB 46	19	4	21%
CB 47	32	6	19%
CB 48	21	3	14%
CB 49	19	1	5%
CB 50	25	9	36%
CB 51	33	8	24%
CB 52	48	12	25%
TOTAL	2087	445	21%

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TABLE CB II

VOICE IN WHICH SYNCOPATED TONE OCCURS

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. motion	Vert. Displ.	Obl. Motion	Vert. Displ.
CB 1	9	1		2	6		
CB 2	12	4	2	1	5		
CB 3	0						
CB 4	21	2		3	5	7	4
CB 5	2		2				
CB 6	4	2			2		
CB 7	16	2		3	8	3	
CB 8	1			1			
CB 9	10		2		6		2
CB 10	11	3	2		4		2
CB 11	7	3			4		
CB 12	13	2	2		8	1	
CB 13	6				2	1	3
CB 14	2				1		1
CB 15	1				1		
CB 16	21	4	8		7	2	
CB 17	7				7		
CB 18	1				1		
CB 19	5		2		3		
CB 20	10			1	9		
CB 21	13	2			11		

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TABLE CB II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
CB 22	12				6		6
CB 23	25	4	2		5	6	8
CB 24	14	1	6	3	3		1
CB 25	11	1	2	3	3		2
CB 26	10				9		1
CB 27	9		2		7		
CB 28	3			1	2		
CB 29	17		4		9	1	3
CB 30	21		2	1	14	1	3
CB 31	8			1	7		
CB 32	9				9		
CB 33	6				6		
CB 34	2			1	1		
CB 35	3				3		
CB 36	6			1	5		
CB 37	8	1	2	3	1		1
CB 38	4			2	2		
CB 39	20		2	3	13		2
CB 40	7			1	6		
CB 41	9			1	8		
CB 42	4				4		
CB 43	0						
CB 44	5				4	1	

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TABLE CB II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
JB 45	17	6	4		3	2	2
JB 46	4				4		
JB 47	6			2		4	
JB 48	3			1	2		
JB 49	1						1
JB 50	9			1	5		2
JB 51	8				8		
JB 52	12	1	6		3	1	1
TOTAL	445	40	52	36	242	30	45

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TABLE CB III

VERTICAL RELATION BETWEEN FOREGROUND TONES

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
CB 1	42	13	31%	7	6		
CB 2	37	12	32%	6	5		1
CB 3	28	14	50%	14			
CB 4	66	25	38%	16	5	4	
CB 5	14	5	36%	4			1
CB 6	10	3	33%	1	2		
CB 7	59	19	32%	11	8		
CB 8	31	9	29%	9			
CB 9	42	11	26%	2	6	2	1
CB 10	30	11	37%	4	4	2	1
CB 11	25	12	48%	6	4	2	
CB 12	32	12	38%	3	8		1
CB 13	20	9	45%	4	2	3	
CB 14	17	4	24%	2	1	1	
CB 15	33	20	61%	19	1		
CB 16	45	17	38%	6	7		4
CB 17	37	15	41%	8	7		
CB 18	20	5	25%	4	1		
CB 19	23	12	52%	8	3		1
CB 20	18	11	61%	2	9		
CB 21	28	17	61%	6	11		
CB 22	21	16	76%	4	6	6	
CB 23	38	20	53%	1	7	11	1

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TABLE CB III, Cont.

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
CB 24	35	12	34%	5	3	1	3
CB 25	30	8	27%	2	3	2	1
CB 26	27	20	74%	10	9	1	
CB 27	25	14	56%	6	7		1
CB 28	35	10	29%	8	2		
CB 29	55	25	45%	11	9	3	2
CB 30	36	19	53%	1	14	3	1
CB 31	40	22	55%	15	7		
CB 32	26	13	50%	4	9		
CB 33	25	16	64%	10	6		
CB 34	11	5	45%	4	1		
CB 35	22	[illegible]	27%	3	3		
CB 36	20	9	45%	4	5		
CB 37	14	4	29%	1	1	1	1
CB 38	14	6	43%	4	2		
CB 39	58	25	43%	9	13	2	1
CB 40	41	17	41%	11	6		
CB 41	27	15	56%	7	8		
CB 42	20	10	50%	6	4		
CB 43	19	6	32%	6			
CB 44	11	5	45%	1	4		
CB 45	27	11	41%	3	3	3	2
CB 46	12	7	58%	3	4		
CB 47	26	6	23%	6			

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TABLE CB III, Cont.

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
CB 48	12	9	75%	6	3		
CB 49	12	7	58%	6		1	
CB 50	15	10	67%	3	5	2	
CB 51	20	13	65%	5	8		
CB 52	32	16	50%	9	3	1	3
TOTAL	1463	638	44%	316	245	51	26

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TABLE CB IV

CAUSES OF DELAYED TONES IN THE FOREGROUND VOICE-LEADING

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
CB 1	13	4		5	1			3
CB 2	12	5	3			1	1	2
CB 3	14	4	1		8	1		
CB 4	25	4	3	4	1		1	12
CB 5	5	3		1	1			
CB 6	3	1						2
CB 7	19	3	6	1		3	3	3
CB 8	9		3	2	1	2		1
CB 9	11	1	5		1			4
CB 10	11	2	3	2	2			2
CB 11	12	3	3	1	1	2	2	
CB 12	12	1	5			4		2
CB 13	9		3	2		2		2
CB 14	4	2	1					1
CB 15	20	7	2	4	2			5
CB 16	17	6	7	1	3			
CB 17	15	2	5		2			6
CB 18	5	1	4					
CB 19	12	1	3	1	2	2		3
CB 20	11	3	3	2	1			2
CB 21	17	2	3	4	2	1		5
CB 22	16	2	5		2			7

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TABLE CB IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
CB 23	20	6	2				3	9
CB 24	12	4	3		3		2	
CB 25	8	4	2					2
CB 26	20	1	7	6	3			3
CB 27	14	4	9	1				
CB 28	10	5	1		1	1		2
CB 29	25	2	4		1	4		14
CB 30	19		6	6	1	2		4
CB 31	22	4			2	1		15
CB 32	13				1			12
CB 33	16	5	4	2		2		3
CB 34	5	3	1	1				
CB 35	6	3	2			1		
CB 36	9	1	4	3				1
CB 37	4	1		1			1	1
CB 38	6	1	3		1	1		
CB 39	25	2	12	3	2	2		4
CB 40	17	3	3	1	4	4		2
CB 41	15	1	4		3	1	2	4
CB 42	10	2	3	1	1			3
CB 43	6	3	1	1				1
CB 44	5		4					1
CB 45	11	1	3	3		2	1	1

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TABLE CB IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
CB 46	7	1	2		1	1		2
CB 47	6	1	1					4
CB 48	9		5	1		1		2
CB 49	7	3	1	2				1
CB 50	10	1	1	1		1		6
CB 51	13		3	1	1	4		4
CB 52	16		3	3	3	3	1	3
TOTAL	638	119	162	67	58	49	17	166

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TABLE CB V

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY SUSPENSIONS OR APPOGGIATURAS

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 1	3	3			
CB 2	1	3			
CB 3	10				
CB 4	5	2	1		
CB 5	2				
CB 6					
CB 7	4	6			
CB 8	8				
CB 9	1	3	1		Upper delayed, both weak - 1
CB 10	2	3			Upper delayed, bass weak - 1
CB 11	2	3	2		Upper delayed, both weak - 1
CB 12		8	1		
CB 13	3	2			
CB 14		1			
CB 15	6		2		
CB 16	4	7			
CB 17	4	3			
CB 18	3	1			
CB 19	6	1			Upper delayed, both weak - 1
CB 20	2	4			
CB 21	3	6	1		

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TABLE CB V, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 22	1	1		3	Upper delayed, bass weak - 2
CB 23		1	1		
CB 24	2	2			Upper delayed, bass weak - 1
CB 25	1	1			Bass delayed, both weak - 1
CB 26	8	8			
CB 27	4	5			Upper delayed, both weak - 1
CB 28	2	1			Bass delayed, both weak - 1
CB 29	4	3			Upper delayed, both weak - 1
CB 30		12			Upper delayed both weak - 1
CB 31	3				Upper delayed, bass weak - 2
CB 32		1			
CB 33	7	1			
CB 34	1	1			
CB 35	1	2			
CB 36	3	4			
CB 37					Upper delayed, both weak - 1
CB 38	3	2			
CB 39	6	12			Upper delayed both weak - 1
CB 40	9	3			
CB 41	1	7			
CB 42	1	4			
CB 43	2				
CB 44	1	3			

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TABLE CB V, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 45	2	2			Upper delayed, both weak (2)
CB 46	3	1			Upper delayed, bass weak (2)
CB 47			1		
CB 48	5	2			
CB 49	3				
CB 50	2				Upper delayed, bass weak - 1
CB 51	1	8			
CB 52	5	3			Upper delayed, both weak - 3
TOTAL	150	146	10	4	Upper delayed, bass weak - 11 Upper delayed, both weak - 13 Bass delayed, both weak - 2

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TABLE CB VI

RHYTHMIC DISPOSITION OF FOREGROUND TONES DELAYED BY RESTS

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 1	1	1			Bass delayed, upper weak - 1
CB 2		2			
CB 3					
CB 4	3	3	2	4	
CB 5					
CB 6		2			
CB 7		1	2		
CB 8	1				
CB 9		3		1	
CB 10	1			1	
CB 11					
CB 12			1		Bass delayed, both weak - 1
CB 13			1	1	
CB 14				1	
CB 15	5				
CB 16					
CB 17	2	2	2		
CB 18					
CB 19	2	1			
CB 20		2			
CB 21	1	3			Bass delayed, upper weak - 1
CB 22	2	3	1	1	

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TABLE CB VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 23	1			8	
CB 24					
CB 25		1		1	
CB 26			2	1	
CB 27					
CB 28			2		
CB 29	4	6	1	3	
CB 30	1	2		1	
CB 31	9	6			
CB 32	4	8			
CB 33		3			
CB 34					
CB 35					
CB 36			1		
CB 37		1			
CB 38					
CB 39	1	1		2	
CB 40		1	1		
CB 41	3	1			
CB 42			3		
CB 43			1		
CB 44					Bass delayed, upper weak - 1
CB 45		1			
CB 46		2			

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TABLE CB VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 47	4				
CB 48			1		Bass delayed, upper weak - 1
CB 49					Upper delayed, bass weak - 1
CB 50		4	1	1	
CB 51	4				
CB 52	1		2		
TOTAL	50	60	24	26	Bass delayed, upper weak - 4 Bass delayed, both weak - 1 Upper delayed, bass weak - 1

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TABLE CB VII

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY INNER-VOICE TONES

Work	Upper Delayed strong	Upper Delayed weak	Bass Delayed strong	Bass Delayed weak	Other
CB 1	3	1			
CB 2	4				Upper delayed, both weak - 1
CB 3	4				
CB 4	3		1		
CB 5	2				Bass delayed, both weak - 1
CB 6	1				
CB 7	2	1			
CB 8					
CB 9				1	
CB 10	2				
CB 11	2	1			
CB 12	1				
CB 13					
CB 14	1		1		
CB 15	6	1			
CB 16	1		1		Bass delayed, both weak - 3
CB 17		2			Upper delayed, both weak -1
CB 18	1				
CB 19		1			
CB 20		3			
CB 21	1	1			

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TABLE CB VII, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 22		2			
CB 23		5		1	
CB 24	1	1			Upper delayed, both weak - 2
CB 25	1	1			Upper delayed, both weak - 1
CB 26		1			Upper delayed, bass weak - 1
CB 27	1	1	1		
CB 28	4	1			
CB 29	2				
CB 30					
CB 31	3	1			
CB 32					
CB 33	2	2	1		
CB 34	3				
CB 35	2	1			
CB 36		1			
CB 37					Upper delayed, bass weak - 1
CB 38	1				
CB 39	2				
CB 40	1	2			
CB 41	1				
CB 42	1		1		
CB 43	3				
CB 44					

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TABLE CB VII, Cont.

work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
CB 45					
CB 46					Bass delayed, upper weak - 1
CB 47	1				
CB 48					
CB 49	3				
CB 50		1			
CB 51					
CB 52					
TOTAL	67	31	6	2	Upper delayed, bass weak - 2 Upper delayed, both weak - 5 Bass delayed, upper weak - 2 Bass delayed, both weak - 4

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TABLE M I

RHYTHMIC DISPOSITION OF FOREGROUND TONES

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.
M 1	98	16	16%
M 2	70	19	27%
M 3	53	9	17%
M 4	60	10	17%
M 5	50	4	8%
M 6	100	13	13%
M 7	68	15	22%
M 8	19	2	11%
M 9	90	25	28%
M 10	109	21	19%
M 11	29	3	10%
M 12	35	9	26%
M 13	113	20	18%
M 14	63	9	14%
M 15	92	19	21%
M 16	66	22	33%
M 17	37	2	5%
M 18	46	8	17%
M 19	139	27	19%
M 20	72	11	15%
M 21	71	12	17%
M 22	84	13	15%

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TABLE M I, Cont.

Work	No. points stressed tonally	Weak points stressed	
		No.	Pct.
M 23	39	8	21%
M 24	37	1	3%
M 25	98	21	21%
M 26	37	7	19%
M 27	23	9	39%
TOTAL	1798	334	19%

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TABLE M II

VOICE IN WHICH SYNCOPATED TONE OCCURS

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
M 1	16			4	7	2	3
M 2	19		6	1	10	1	1
M 3	9	2			3		4
M 4	10			1	9		
M 5	4				4		
M 6	13				13		
M 7	15	2		4	7		2
M 8	2				2		
M 9	25			1	24		
M 10	21			2	19		
M 11	3			1	2		
M 12	9			3	6		
M 13	20			2	16		2
M 14	9			1	7		2
M 15	19			1	18		
M 16	22			12	5	2	2
M 17	2			1	1		
M 18	8			2	3		3
M 19	27	2	2	3	16	2	2
M 20	11		2	6	3		
M 21	12			2	5		5

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TABLE M II, Cont.

Work	No. weak points	Both Voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
M 22	13			2	11		
M 23	8			2	5		1
M 24	1						1
M 25	20			2	18		
M 26	7	1			6		
M 27	9	2		1	4	1	1
TOTAL	334	10	10	54	224	8	28

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TABLE M III

VERTICAL RELATION BETWEEN FOREGROUND TONES

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
M 1	76	23	30%	13	7	3	
M 2	45	25	56%	11	10	1	3
M 3	38	16	42%	9	3	4	
M 4	40	19	48%	10	9		
M 5	36	14	39%	10	4		
M 6	72	28	39%	15	13		
M 7	49	19	39%	10	7	2	
M 8	14	5	36%	3	2		
M 9	55	35	60%	11	24		
M 10	80	33	41%	14	19		
M 11	23	8	35%	6	2		
M 12	21	13	62%	7	6		
M 13	87	26	30%	8	16	2	
M 14	49	14	29%	6	7	1	
M 15	65	27	42%	9	18		
M 16	53	14	26%	7	5	2	
M 17	28	10	36%	9	1		
M 18	34	12	35%	6	4	2	
M 19	106	36	34%	17	16	2	1
M 20	56	17	30%	13	3		1
M 21	52	19	37%	9	5	5	
M 22	61	25	41%	14	11		

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TABLE M III, Cont.

Work	No. chords	No. and pct. non-aligned		Both strong	Upper weak	Bass weak	Both weak
M 23	31	8	26%	2	5	1	
M 24	23	14	61%	13		1	
M 25	67	31	46%	12	19		
M 26	26	12	46%	6	6		
M 27	16	7	44%	2	4	1	
TOTAL	1303	510	39%	252	226	27	5

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TABLE M IV

CAUSES OF DELAYED TONES IN THE FOREGROUND VOICE-LEADING

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
M 1	23	3	7		2	2	1	8
M 2	25	3	4	3	2			13
M 3	16	3	1	2				10
M 4	19	6			2			11
M 5	14	2	4	1	3		2	2
M 6	28	10	1	1	4			12
M 7	19	4	4	4				7
M 8	5	2	1					2
M 9	35	15	6	1				13
M 10	33	10	11	2	5			5
M 11	8	3	3		1	1		
M 12	13	2	8		1			2
M 13	26	9	3	3	10			1
M 14	14	6	7		1			
M 15	27	9		1	12	1		4
M 16	14	8			3			3
M 17	10	4	1	2	2	1		
M 18	12	2	2		3		2	3
M 19	36	7	11	4	2	1	4	7
M 20	17	2	4	2	8	1		
M 21	19	9	5		1			4
M 22	25	3	2		7			13

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TABLE M IV, Cont.

Work	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
M 23	8	5			3			
M 24	14	2	2	2	3			5
M 25	31	7	6	4	4	2		8
M 26	12	4	1	4	1	2		
M 27	7	3	1		2			1
TOTAL	510	143	95	36	82	11	9	134

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TABLE M V

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY INNER-VOICE TONES

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 1	2				Upper delayed, bass weak - 1
M 2	1	1	1		
M 3	3				
M 4		6			
M 5	1	1			
M 6	3	7			
M 7	3	1			
M 8	1	1			
M 9	7	6			
M 10	7	2	1		
M 11	2		1		
M 12	2				
M 13	6	2		1	
M 14	4	1		1	
M 15	3	5	1		
M 16	6			2	
M 17	4				
M 18	1	1			
M 19	2	3	1		Bass delayed, upper weak 0 1
M 20	2				
M 21	4	4			Upper delayed, bass weak - 1

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TABLE M V, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 22	3				
M 23	2	3			
M 24			1	1	
M 25	2	5			
M 26		4			
M 27	1	2			
TOTAL	72	55	6	5	Upper delayed, bass weak - 2 Bass delayed, upper weak - 3

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TABLE M VI

RHYTHMIC DISPOSITION OF FOREGROUND TONES

DELAYED BY SUSPENSIONS OR APPOGGIATURAS

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 1	7	4			
M 2	1	8			
M 3		3			
M 4			1		Bass delayed, upper weak - 1
M 5	7	1			
M 6	6				
M 7	3	5			
M 8	1				
M 9	2	5			
M 10	1	17			
M 11	3	2			
M 12	3	6			
M 13	2	14			
M 14	2	6			
M 15	3	11			
M 16	1	2			
M 17	5	1			
M 18	4	1			
M 19	10	8			
M 20	7	3	4		Upper delayed, both weak - 1
M 21	5	1			

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TABLE M VI, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 22	3	6			
M 23		2		1	
M 24	7				
M 25	9	7			
M 26	6	2			
M 27		2	1		
TOTAL	98	117	6	1	Bass delayed, upper weak - 1 Upper delayed, bass weak - 1

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TABLE M VII

RHYTHMIC DISPOSITION OF FOREGROUND TONES DELAYED BY RESTS

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 1	1	3	2		Bass delayed, both weak - 2
M 2	8	1	1		
M 3	2		4	4	
M 4	7	2	2		
M 5		2			
M 6	4	6	2		
M 7	4	1			
M 8	1	1			
M 9	2	11			
M 10	5				
M 11					
M 12			2		
M 13				1	
M 14					
M 15	2	2			
M 16		3			
M 17					
M 18				2	Bass delayed, upper weak - 1
M 19		3		2	Bass delayed, upper weak - 1
M 20					Bass delayed, both weak - 1
M 21				4	
M 22	4	5	4		

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TABLE M VII, Cont.

Work	Upper delayed strong	Upper delayed weak	Bass delayed strong	Bass delayed weak	Other
M 23					
M 24	1		4		
M 25	1	5			Bass delayed, upper weak - 2
M 26					
M 27				1	
TOTAL	42	45	21	16	Bass delayed, upper weak - 4 Bass delayed, both weak - 6

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SUMMARY OF TABLES JB I, CB I AND M I

RHYTHMIC DISPOSITION OF FOREGROUND TONES

Summary 1	0% weak	1%-9% weak	10%-19% weak	20%-29% weak	30%-39% weak	40%-49% weak
J.S. BACH	37 works	26 works	18 works			
C.P.E. BACH	2 works	5 works	15 works	17 works	10 works	3 works
MOZART		3 works	15 works	7 works	2 works	

Summary 2	Total no. points stressed tonally	Total weak points stressed No.	pct.
J.S. BACH	1984	98	5%
C.P.E. BACH	2087	445	21%
MOZART	1798	334	19%

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SUMMARY OF TABLES JB II, CB II AND M II

VOICE IN WHICH SYNCOPATED TONE OCCURS

	No. weak points	Both voices		Upper Voice		Bass Voice	
		Vert. Align.	Vert. Displ.	Obl. Motion	Vert. Displ.	Obl. Motion	Vert. Displ.
J.S. BACH	98	7	4	8	71	4	4
C.P.E. BACH	445	40	52	36	242	30	45
MOZART	334	10	10	54	224	8	28

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SUMMARY OF TABLES JB III, CB III AND M III

VERTICAL RELATION BETWEEN FOREGROUND TONES

Summary 1	0%-9% displ.	10%-19% displ.	20%-29% displ.	30%-39% displ.	40%-49% displ.	50%-59% displ.	60%-69% displ.	70%-79% displ.
J.S. BACH	7 works	16 works	30 works	15 works	9 works	3 works	1 work	
C.P.E. BACH			9 works	11 works	11 works	12 works	6 works	3 works
MOZART			3 works	12 works	8 works	1 work	3 works	

Summary 2	No. chords non-aligned	Both strong No.	pct.	Upper weak No.	pct.	Bass weak No.	pct.	Both weak No.	pct.
J.S. BACH	421	343	81%	72	17%	4	1%	2	.005%
C.P.E. BACH	638	316	49%	245	38%	51	8%	26	4%
MOZART	510	252	49%	226	44%	27	5%	5	1%

SUMMARY OF TABLES JB IV, CB IV AND M IV

CAUSES OF DELAYED TONES IN THE FOREGROUND VOICE-LEADING

	No. chords non-aligned	i.v.	susp	susp (iv)	appogg	appogg (iv)	antic	rest
J.S. BACH	421	155	95	38	13	4	98	18
		37%	23%	9%	3%	1%	23%	4%
C.P.E. BACH	638	119	162	67	58	49	17	166
		19%	25%	11%	9%	8%	3%	26%
MOZART	510	143	95	36	82	11	9	134
		28%	19%	7%	16%	2%	2%	26%

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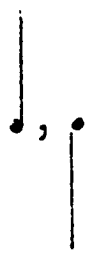
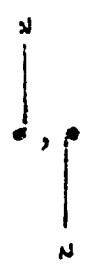
GLOSSARY*

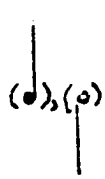


an elongated stem identifies an outer-voice tone of the underlying linear framework, an upward stem signifying an upper-voice tone, and a downward stem a bass tone; this symbol, as well as those following, denotes pitch only and expresses neither temporal value nor rhythmic relationship

an Arabic numeral above the stem of an upper-voice tone identifies it as a scale step of the diatonic succession which governs the section analyzed



N designates a foreground tone that functions as a neighbor (either complete or incomplete) of another foreground tone, a complete neighbor moving by step away from and back to the tone it embellishes; the function of a neighbor is thus prolonging since it extends the span over which a tone prevails



a foreground tone in parentheses indicates the elision of an essential member of the upper-voice diatonic succession or of a supporting bass tone

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*For a detailed explanation of Schenkerian symbols see the Glossary in The Music Forum, Vol. I (1967) and Felix Salzer's Glossary appended to Heinrich Schenker's Five Graphic Music Analyses (New York: Dover, c. 1969)

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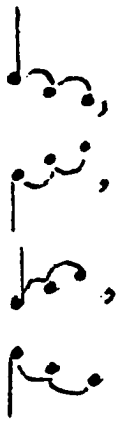
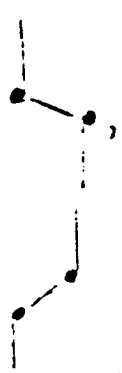


a slur connecting a tone of the outer-voice framework with one or more notes not given a stem indicates motion through the prevailing chord, moving from an outer to an inner voice or vice versa; such tones may be superposed, that is, registrally superior to the upper-voice tone (as in the third example), or registrally inferior to the framework bass tone (as in the last example)

a dotted line connecting stems signifies a retained tone, that is, a foreground tone which is left and then regained following a subsidiary motion, often into an inner voice or through the chord; the regained tone may be in the original register (as in the first two examples) or motion through the chord may bring about a transfer into a higher or lower register (as shown in the last two examples)



a diagonal line between outer-voice tones connects the bass to its corresponding upper-voice tone which does not occur simultaneously; such a voice-leading relationship is referred to in the text as non-alignment, vertical displacement, vertical dislocation, or delayed outer-voice tones

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i.v. susp. susp.(i.v.) appogg. appogg.(i.v.) antic. rest	when tones are vertically displaced the cause of the displacement of the corresponding tone is indicated below the metric abstraction; these functions are explained and illustrated in Chapter 3
I, II^6, V, etc/	Roman numerals under bass tones indicate chords which evidence a harmonic function within the context of the passage being analyzed. The flow of all voices in the texture generates chords which, as in the melody, vary in their contextual meaning; thus, some chords provide the vertical foundation or framework while other chords execute the directional impulses, embellishing and connecting the structural chords; this distinction between vertical and horizational, or harmonic and contrapuntal chords, is reflected by reserving Roman numeral designations for chords of harmonic significance
I: I-II^6-V; V: I-IV-V; etc.	a Roman numeral followed by a colon designates foreground activity within a prolonged key area, I signifying the tonic, V the dominant, etc.

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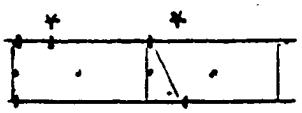
5-6-5;
10-10-10;
8-7;
6-5;
etc.

Arabic numerals under the bass line or between the staves of a system are employed to point out intervallic relationships in the voice-leading of the outer parts; thus 5-6-5 may signify a means of avoiding consecutive fifths; 10-10-10 indicates motion in parallel tenths; 8-7 or 6-5 indicate passing motions, etc.



an asterisk (*) over a stroke marking the position of an outer-voice tone in the metric abstraction identifies a tone which is rhythmically weak; for the criteria governing the classification of a tone as weak or strong see Chapter 2.

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IDENTIFICATION CODE OF WORKS ANALYZED

Work	Section(s) analyzed	Code
J.S. BACH		
English Suite in A major		
Prelude	m. 1-10	JB 1
Allemande	m. 1-16	JB 2
Courante I	entire	JB 3
Courant II	m. 1-8	JB 4
Sarabande	m. 1-8	JB 5
Bourree I	m. 1-16	JB 6
Bourree II	m. 1-16	JB 7
Gigue	m. 1-12	JB 8
English Suite in A minor		
Prelude	m. 1-19	JB 9
Allemande	m. 1-12	JB 10
Courante	m. 1-12	JB 11
Sarabande	m. 1-12	JB 12
Bourree I	m. 1-24	JB 13
Bourree II	m. 1-8	JB 14
Gigue	m. 1-34	JB 15
English Suite in G minor		
Prelude	m. 1-33	JB 16
Allemande	m. 1-12	JB 17
Courante	m. 1-16	JB 18
Sarabande	entire	JB 19
Gavotte I	m. 1-8	JB 20

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Work	Section(s) analyzed	Code
Gigue	m. 1-20	JB 21
English Suite in F major		
Prelude	m. 1-12	JB 22
Allemande	m. 1-6	JB 23
Courante	m. 1-8	JB 24
Sarabande	entire	JB 25
Menuet I	m. 1-16	JB 26
Menuet II	m. 25-32	JB 27
Gigue	m. 1-8	JB 28
English Suite in E minor		
Prelude	m. 1-22	JB 29
Allemande	m. 1-12	JB 30
Courante	m. 1-12	JB 31
Sarabande	m. 1-8	JB 32
Passepied I	m. 1-16	JB 33
Passepied II	m. 1-24	JB 34
Gigue	m. 1-26	JB 35
English Suite in D minor		
Prelude	m. 1-19	JB 36
Allemande	m. 13-24	JB 37
Courante	m. 1-16	JB 38
Sarabande	entire	JB 39
Gavotte I	m. 1-8	JB 40
Gigue	m. 1-11	JB 41
French Suite in D minor		
Allemande	entire	JB 42

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Work	Section(s) analyzed	Code
Courante	m. 1-10	JB 43
Sarabande	entire	JB 44
Menuet I	entire	JB 45
Menuet II	m. 1-16	JB 46
Gigue	m. 1-12	JB 47
French Suite in C minor		
Allemande	m. 1-8	JB 48
Courante	m. 1-24	JB 49
Sarabande	m. 1-8	JB 50
Air	m. 1-4	JB 51
Menuet	m. 1-8	JB 52
Gigue	m. 1-32	JB 53
French Suite in B minor		
Allemande	m. 1-12	JB 54
Courante	m. 1-12	JB 55
Sarabande	m. 1-8	JB 56
Anglaise	m. 1-8	JB 57
Menuet	m. 1-16	JB 58
Trio	m. 1-8	JB 59
Gigue	m. 1-34	JB 60
French Suite in Eb major		
Allemande	m. 1-10	JB 61
Courante	m. 1-16	JB 62
Sarabande	m. 1-8	JB 63
Gavotte	m. 1-8	JB 64
Air	m. 1-6	JB 65

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Work	Section(s) analyzed	Code
Gigue	m. 1-22	JB 66
French Suite in G major		
Allemande	m. 1-12	JB 67
Courante	m. 1-16	JB 68
Sarabande	m. 1-16	JB 69
Gavotte	m. 1-8	JB 70
Bourree	m. 1-10	JB 71
Loure	m. 1-8	JB 72
Gigue	m. 1-24	JB 73
French Suite in E major		
Allemande	m. 1-12	JB 74
Courante	m. 1-16	JB 75
Sarabande	m. 1-8	JB 76
Gavotte	m. 1-8	JB 77
Polonaise	m. 1-8	JB 78
Menuet	m. 17-24	JB 79
Bourree	m. 1-12	JB 80
Gigue	m. 1-24	JB 81
C.P.E. BACH		
Prussian Sonata No. 1		
First movement	m. 1-24	CB 1
Second movement	m. 1-3, 9-12, 15-22	CB 2
Third movement	m. 1-8, 64-88	CB 3
Prussian Sonata No. 4		
First movement	m. 1-30	CB 4
Second movement	m. 1-14	CB 5

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Work	Section(s) analyzed	Code
Third movement	m. 49-60	CB 6
Württemberg Sonata No. 1		
First movement	m. 1-20	CB 7
Second movement	m. 1-33	CB 8
Third movement	m. 1-33	CB 9
Württemberg Sonata No. 2		
First movement	m. 1-19	CB 10
Second movement	m. 1-18	CB 11
Third movement	m. 1-32	CB 12
Württemberg Sonata No. 3		
First movement	m. 1-20	CB 13
Second movement	m. 1-11	CB 14
Third movement	m. 1-34	CB 15
Probestücke Sonata No. 1		
First movement	entire	CB 16
Second movement	entire	CB 17
Third movement	m. 1-8, 18-42	CB 18
Probestücke Sonata No. 3		
First movement	m. 1-20	CB 19
Second movement	m. 1-14	CB 20
Third movement	m. 1-24	CB 21
Probestücke Sonata No. 5		
First movement	m. 27-44	CB 22
Second movement	m. 1-9, 15-20	CB 23
Third movement	m. 1-25	CB 24
Probestücke Fantasia in E♭	m. 1-15	CB 25

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Work	Section(s) analyzed	Code
Kenner und Liebhaber Sonatas, Vol. I		
Sonata No. 2		
First movement	m. 1-21	CB 26
Second movement	m. 34-49	CB 27
Third movement	m. 116-152	CB 28
Sonata No. 6		
First movement	m. 1-25	CB 20
Second movement	m. 1-19	CB 30
Third movement	m. 70-84, 92-122	CB 31
Kenner und Liebhaber Sonatas, Vol. II		
Rondo No. 3	m. 1-16	CB 32
Sonata No. 3	m. 1-11, 27-32	CB 33
Kenner und Liebhaber Sonatas, Vol. III		
Rondo No. 3	m. 1-8	CB 34
Sonata No. 3		
First movement	m. 65-82	CB 35
Second movement	m. 28-40	CB 36
Third movement	m. 26-36	CB 37
Kenner und Liebhaber Sonatas, Vol. IV		
Rondo No. 2	m. 1-16	CB 38
Sonata No. 2		
First movement	m. 1-36	CB 39
Second movement	m. 1-30	CB 40
Third movement	m. 64-82	CB 41
Rondo No. 3	m. 1-12	CB 42

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Work	Section(s) analyzed	Code
Kenner und Liebhaber Sonatas, Vol. V		
Sonata No. 1		
First movement	m. 44-56	CB 43
Second movement	m. 1-8	CB 44
Third movement	m. 1-16	CB 45
Rondo No. 1	m. 1-8	CB 46
Rondo No. 2	m. 1-9	CB 47
Fantasia No. 2	m. 30-45	CB 48
Kenner und Liebhaber Sonatas, Vol. VI		
Rondo No. 1	m. 1-16	CB 49
Sonata No. 2		
First movement	m. 23-33	CB 50
Second movement	m. 1-18	CB 51
Third movement	m. 60-95	CB 52
MOZART		
Sonata K. 279		
First movement	m. 1-38	M 1
Second movement	m. 1-28	M 2
Third movement	m. 1-38	M 3
Sonata K. 280		
First movement	m. 1-43	M 4
Second movement	m. 1-8	M 5
Third movement	m. 1-77	M 6
Sonata K. 281		
First movement	m. 1-40	M 7
Second movement	m. 1-14	M 8

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Work	Section(s) analyzed	Code
Third movement	m. 1-39	M 9
Sonata K. 309		
First movement	m. 1-58	M 10
Second movement	m. 1-16, 33-40	M 11
Third movement	m. 1-19	M 12
Sonata K. 311		
First movement	m. 1-39	M 13
Second movement	m. 1-8, 17-38	M 14
Third movement	m. 1-16, 34-64	M 15
Sonata K. 330		
First movement	m. 1-42	M 16
Second movement	m. 1-20	M 17
Third movement	m. 1-18	M 18
Sonata K. 333		
First movement	m. 1-63	M 19
Second movement	m. 1-31	M 20
Third movement	m. 1-36	M 21
Sonata K. 457		
First movement	m. 1-63	M 22
Second movement	m. 1-13	M 23
Third movement	m. 1-30	M 24
Sonata K. 576		
First movement	m. 1-58	M 25
Second movement	m. 1-16	M 26
Third movement	m. 1-16	M 27

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RHYTHM AND VOICE-LEADING AS A FACET OF STYLE: KEYBOARD WORKS OF J.S. BACH, C.P.E. BACH, AND MOZART

by

NANCY BARNES HAGER

VOLUME II: ANALYSES

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ANALYSES

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Bourree I	JB 6	213
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Courante	JB 11	228
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First movement	M 25	814
Second movement	M 26	827
Third movement	M 27	831

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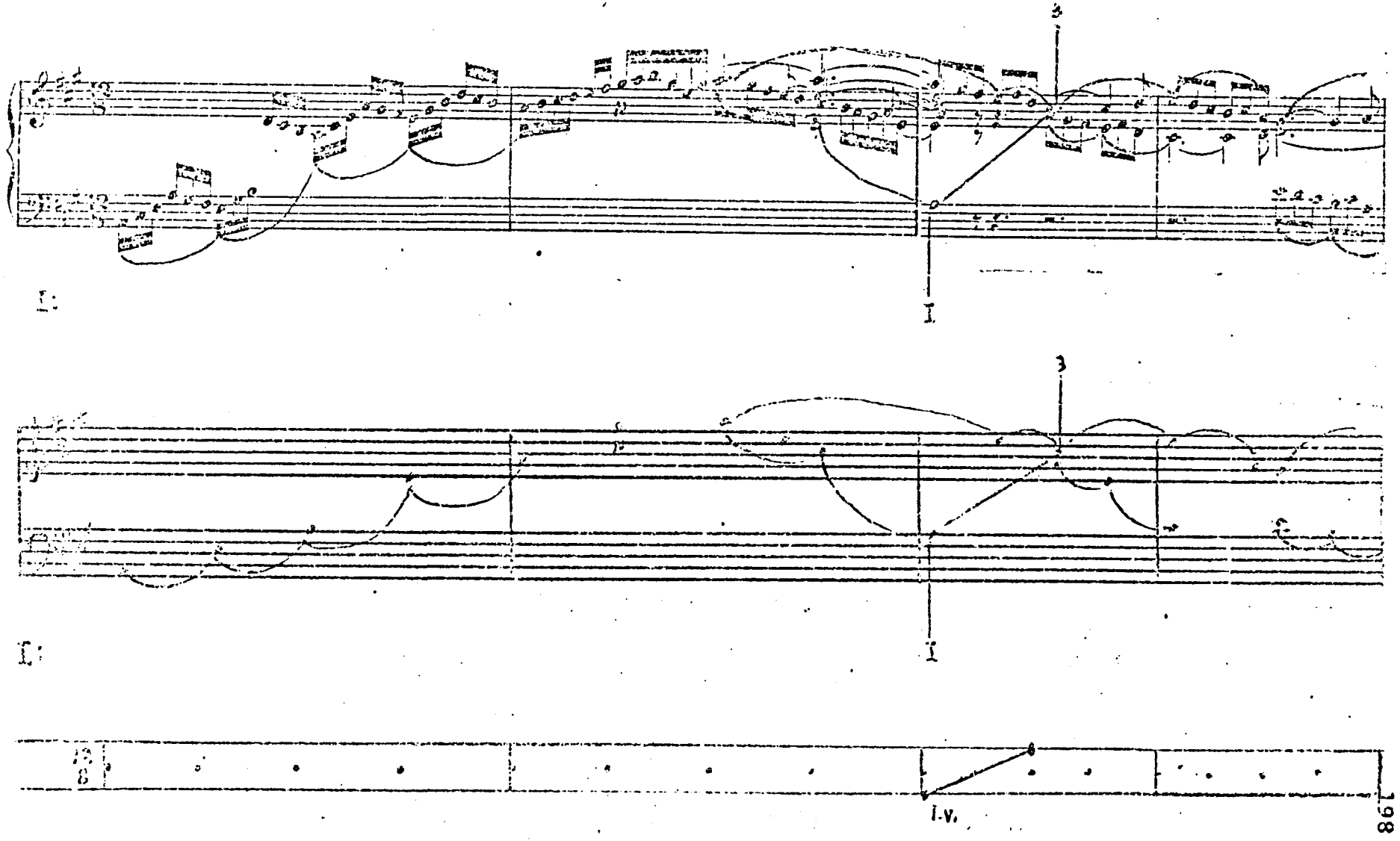
English Suite in A major, Prelude

JB 1



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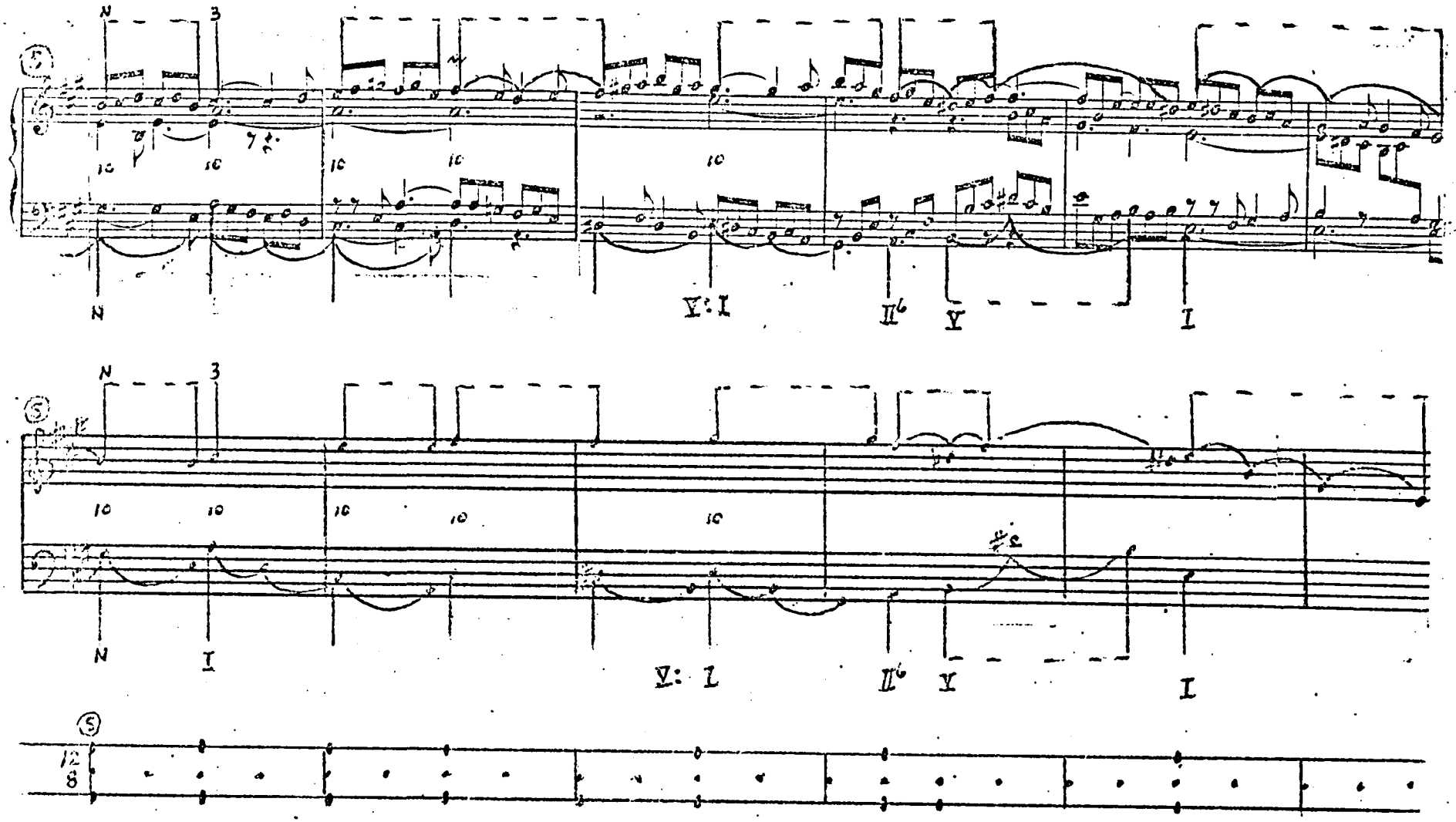

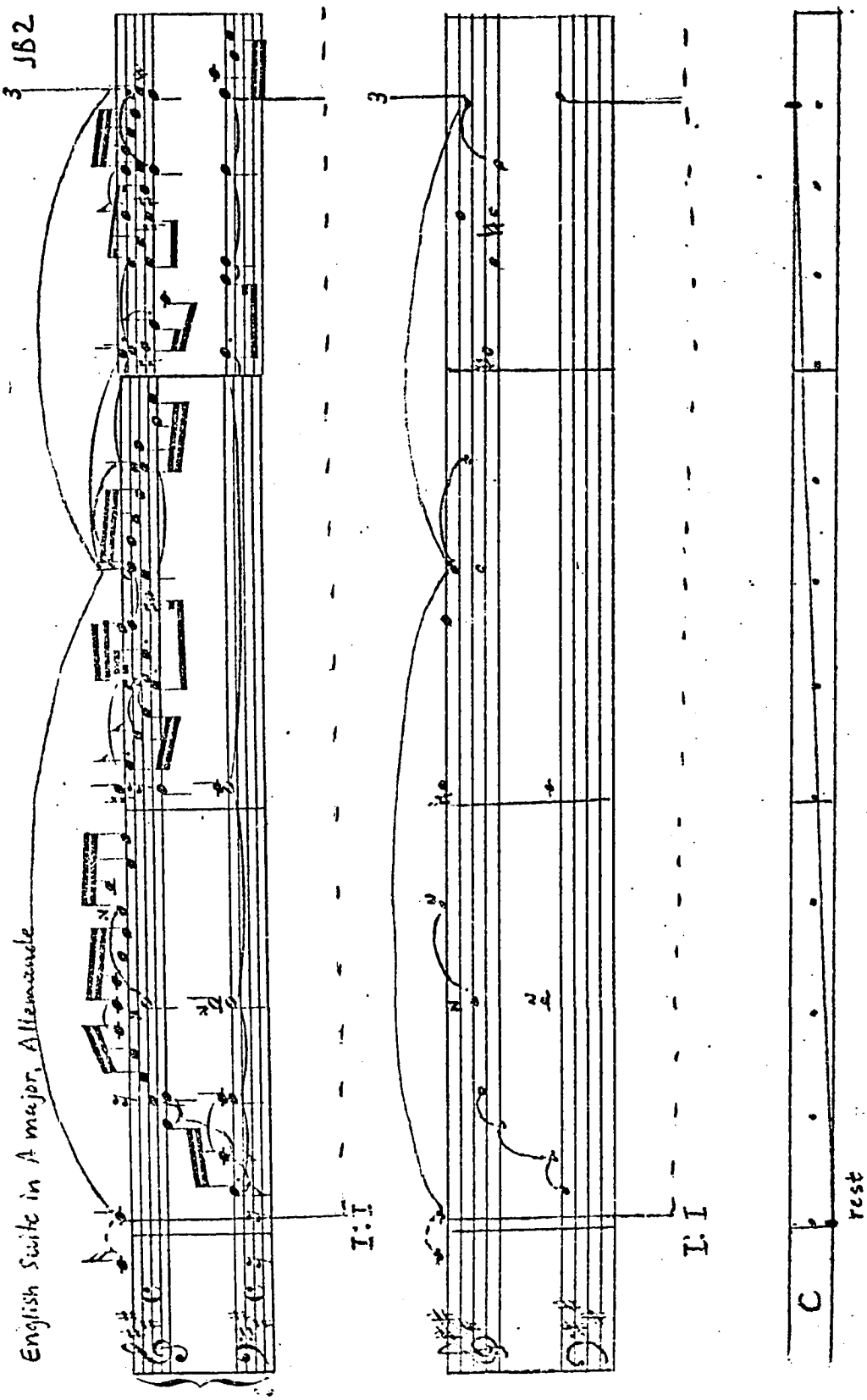

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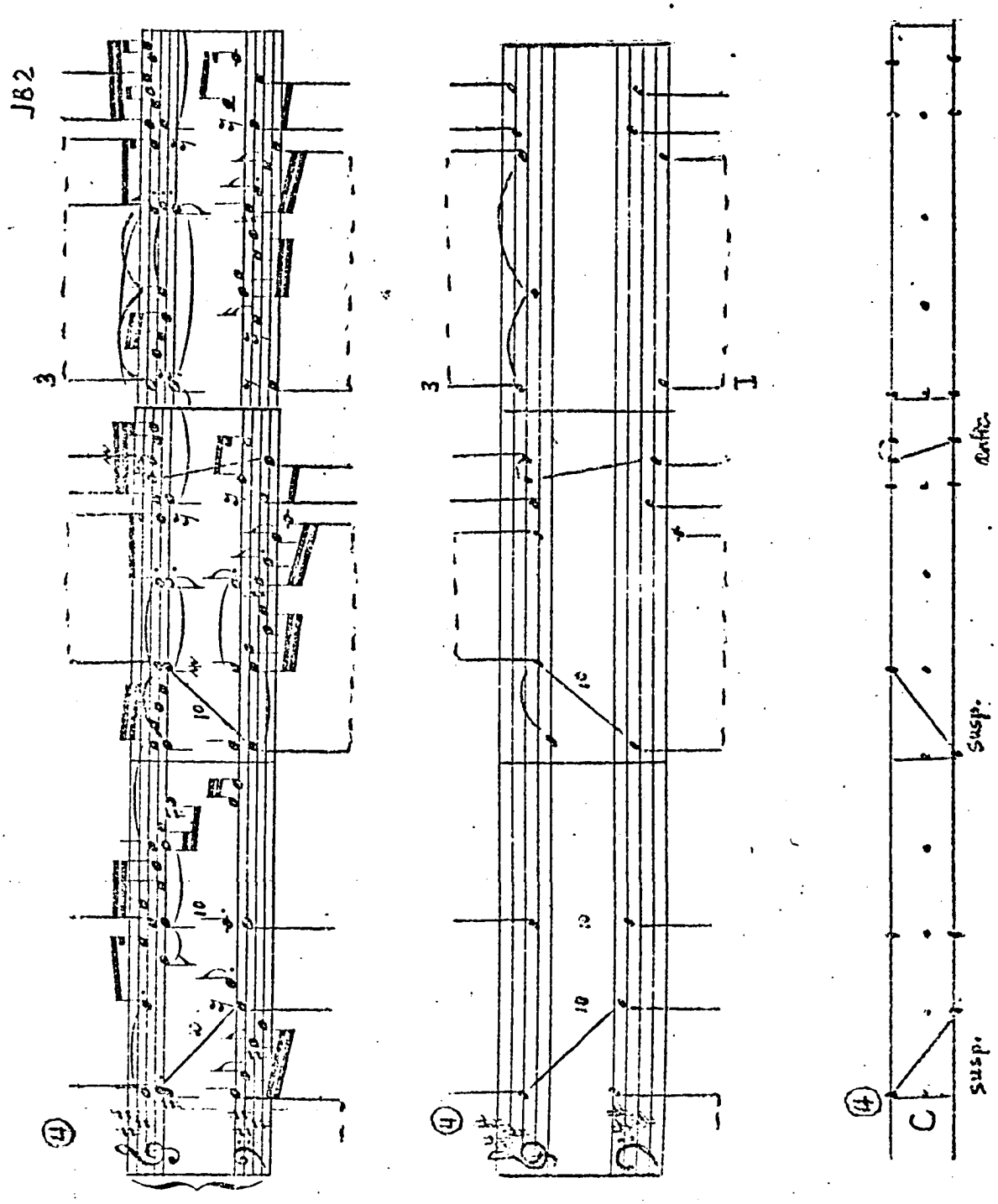

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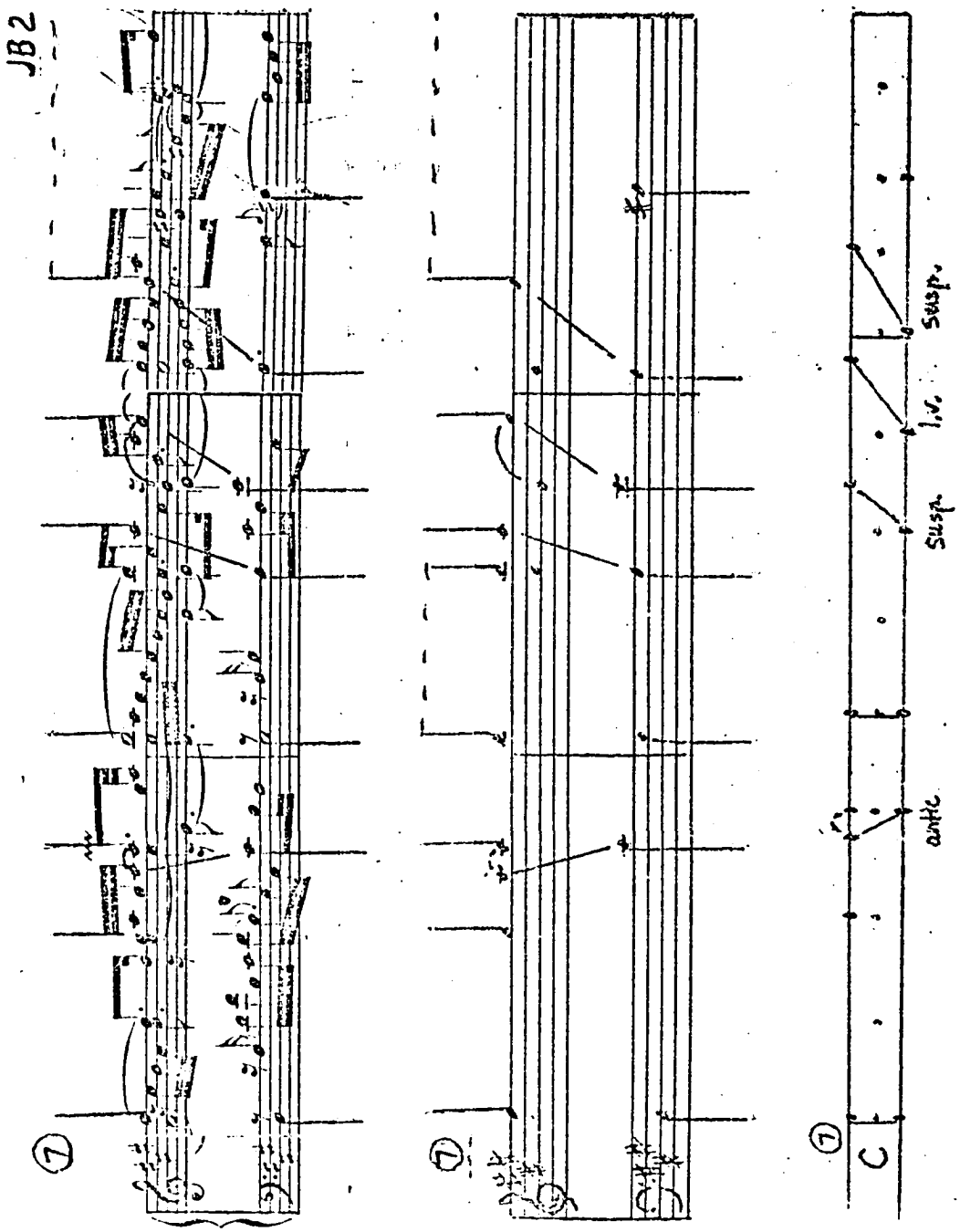

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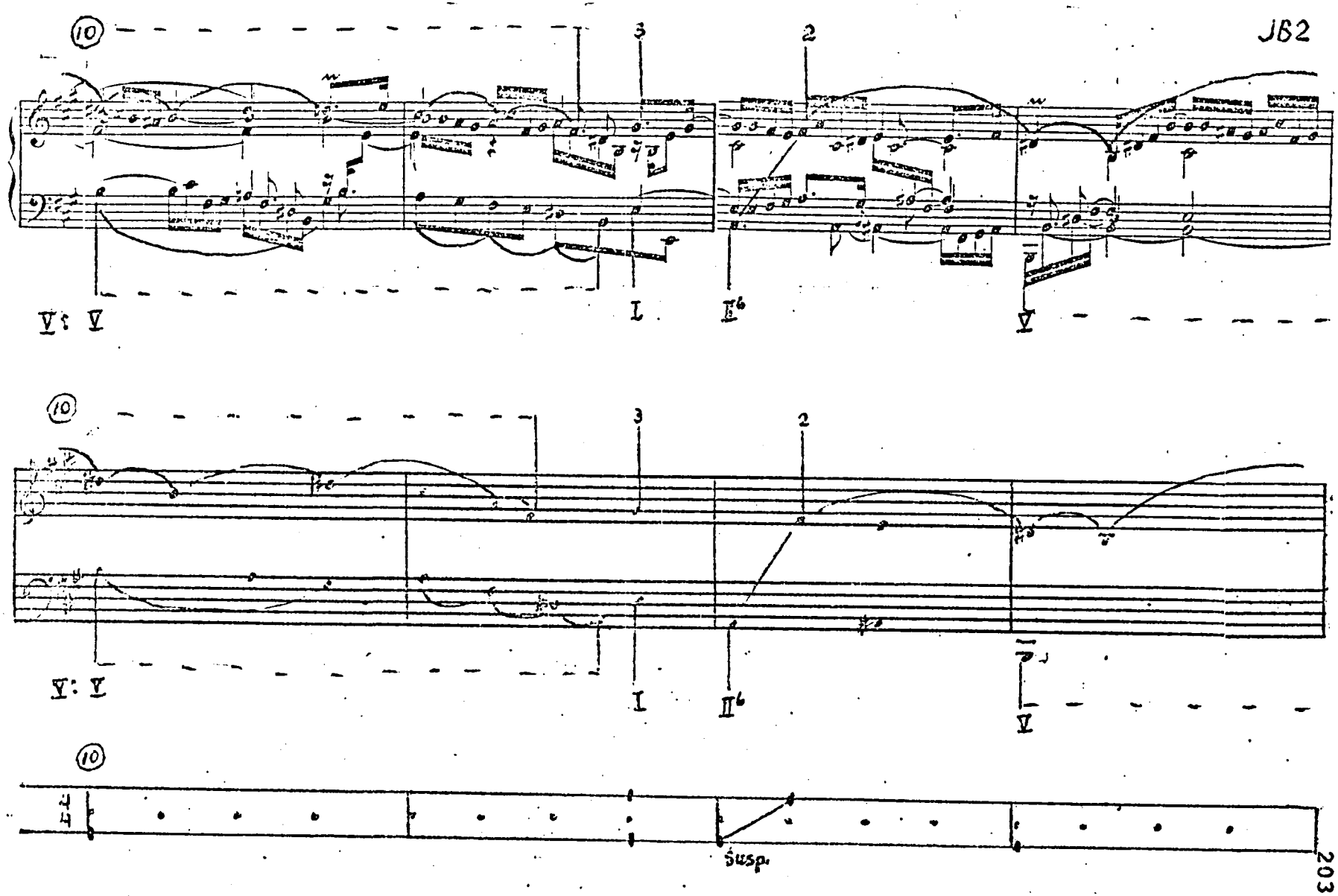

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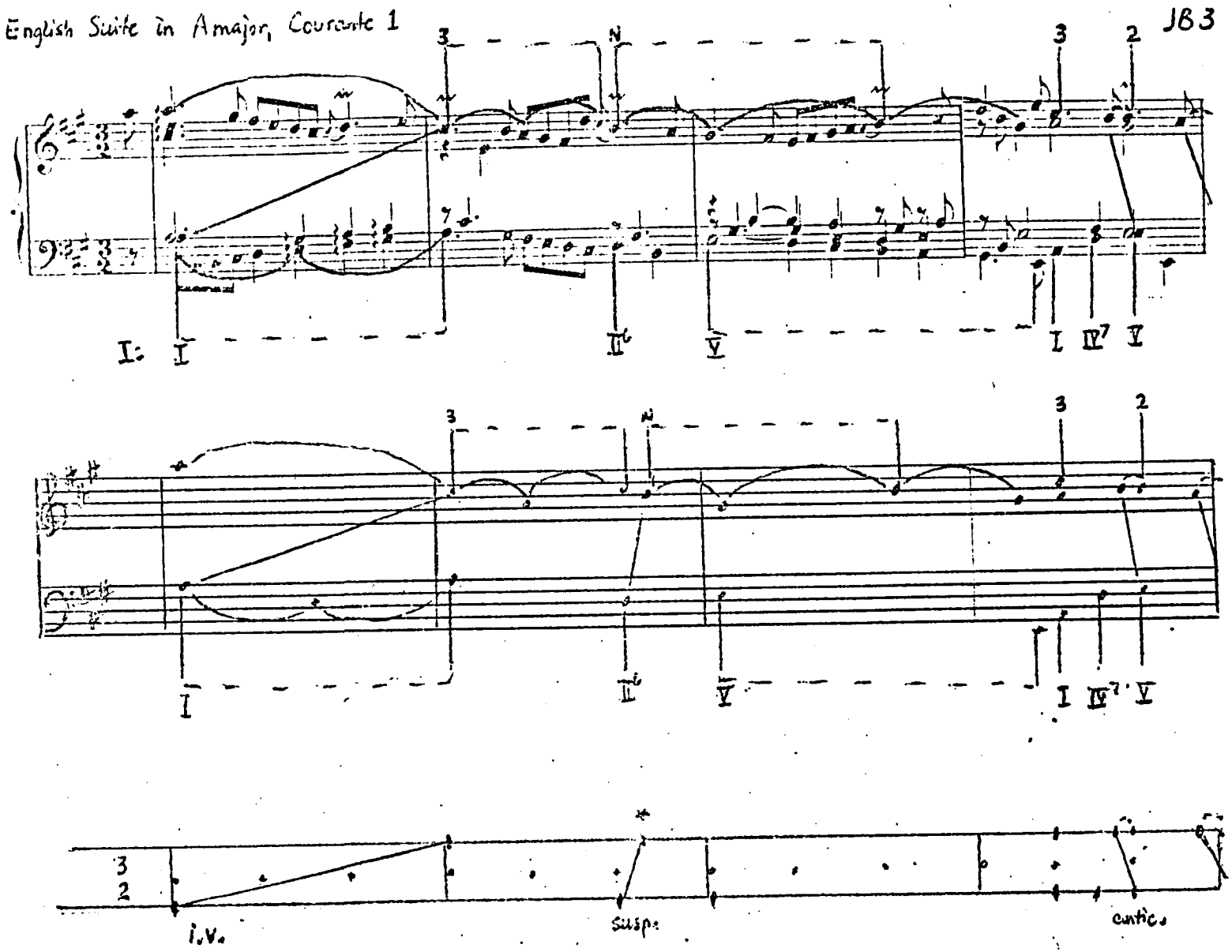

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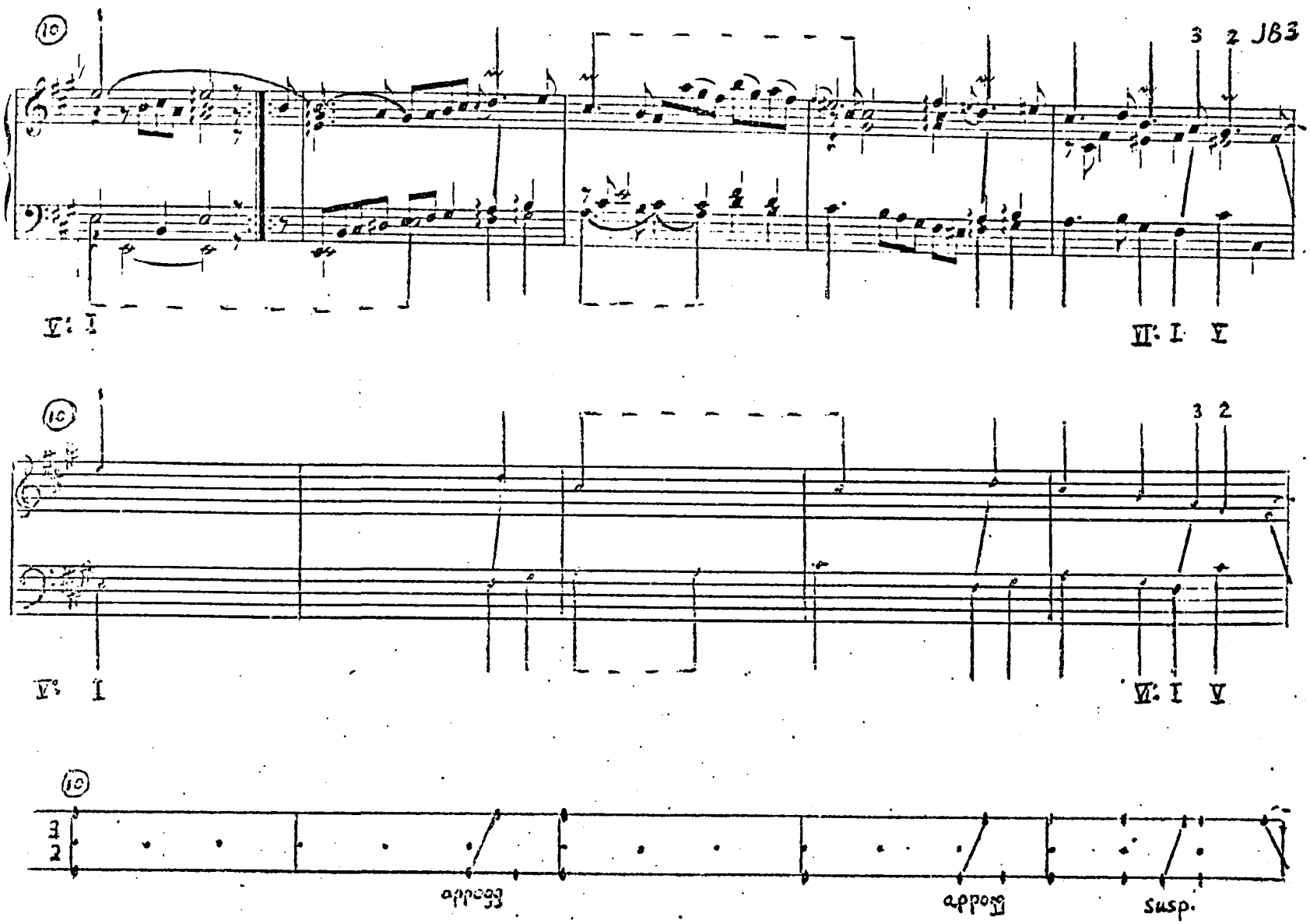

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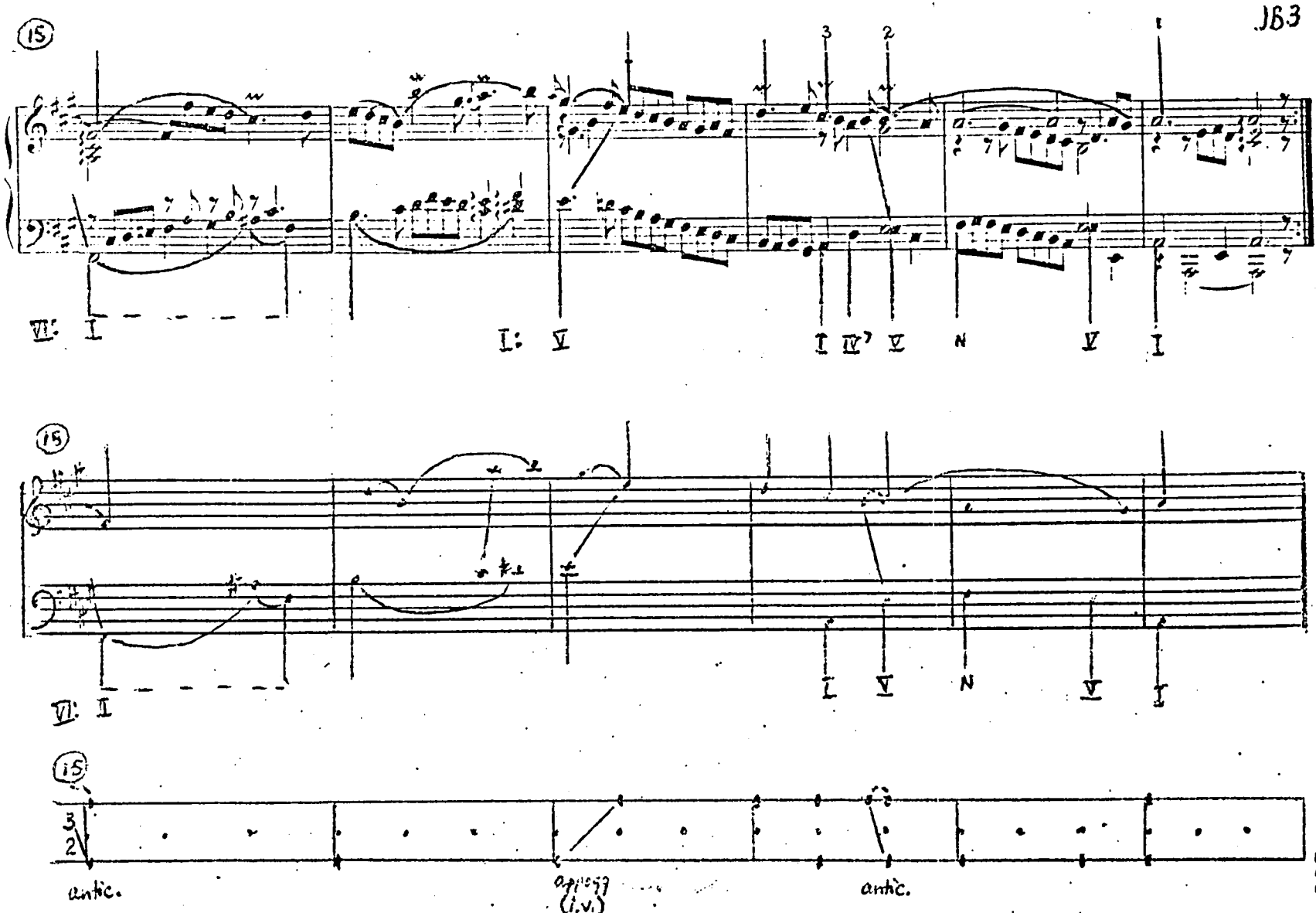

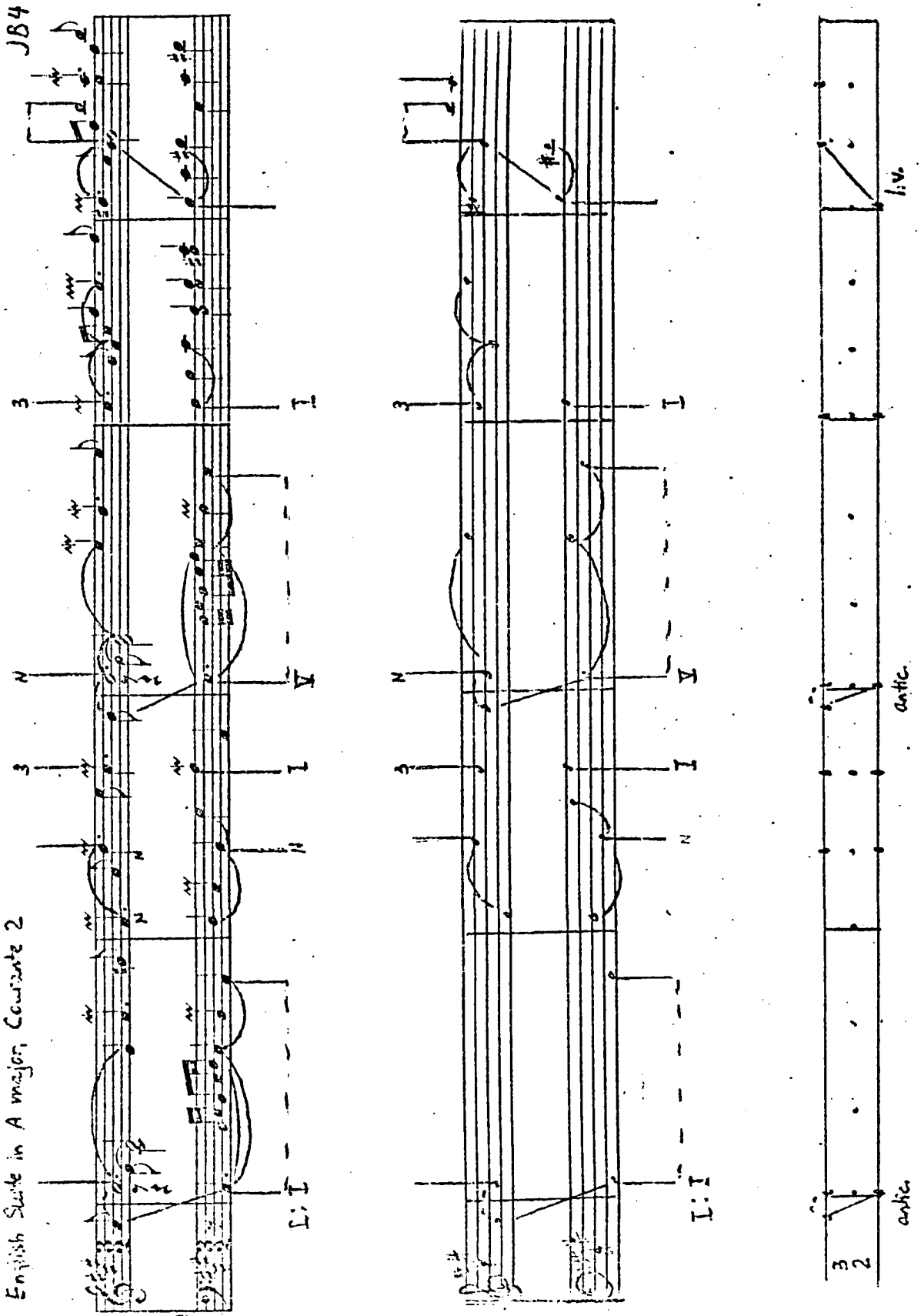

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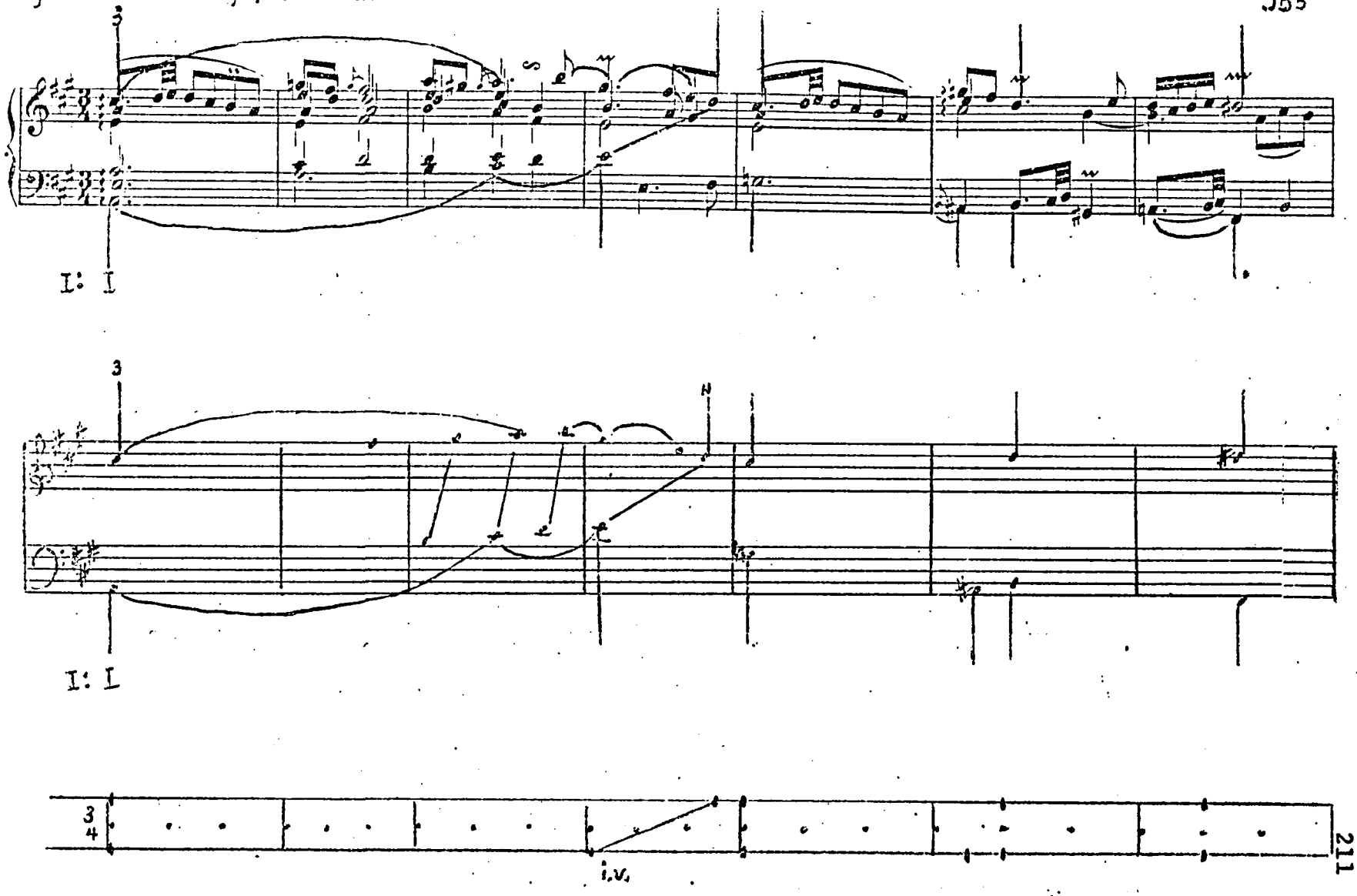

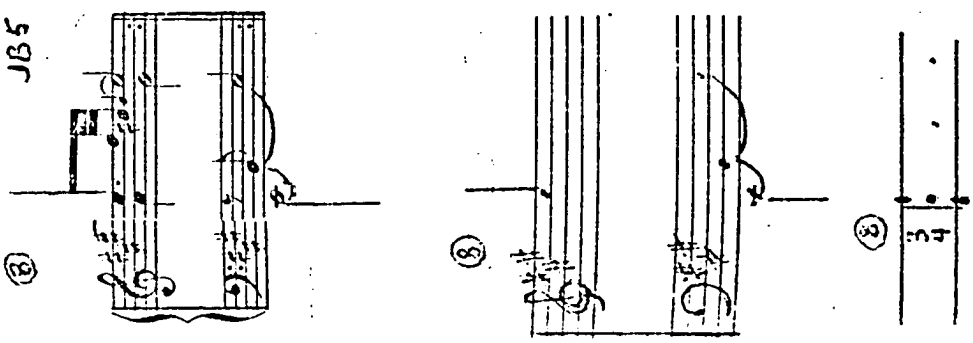

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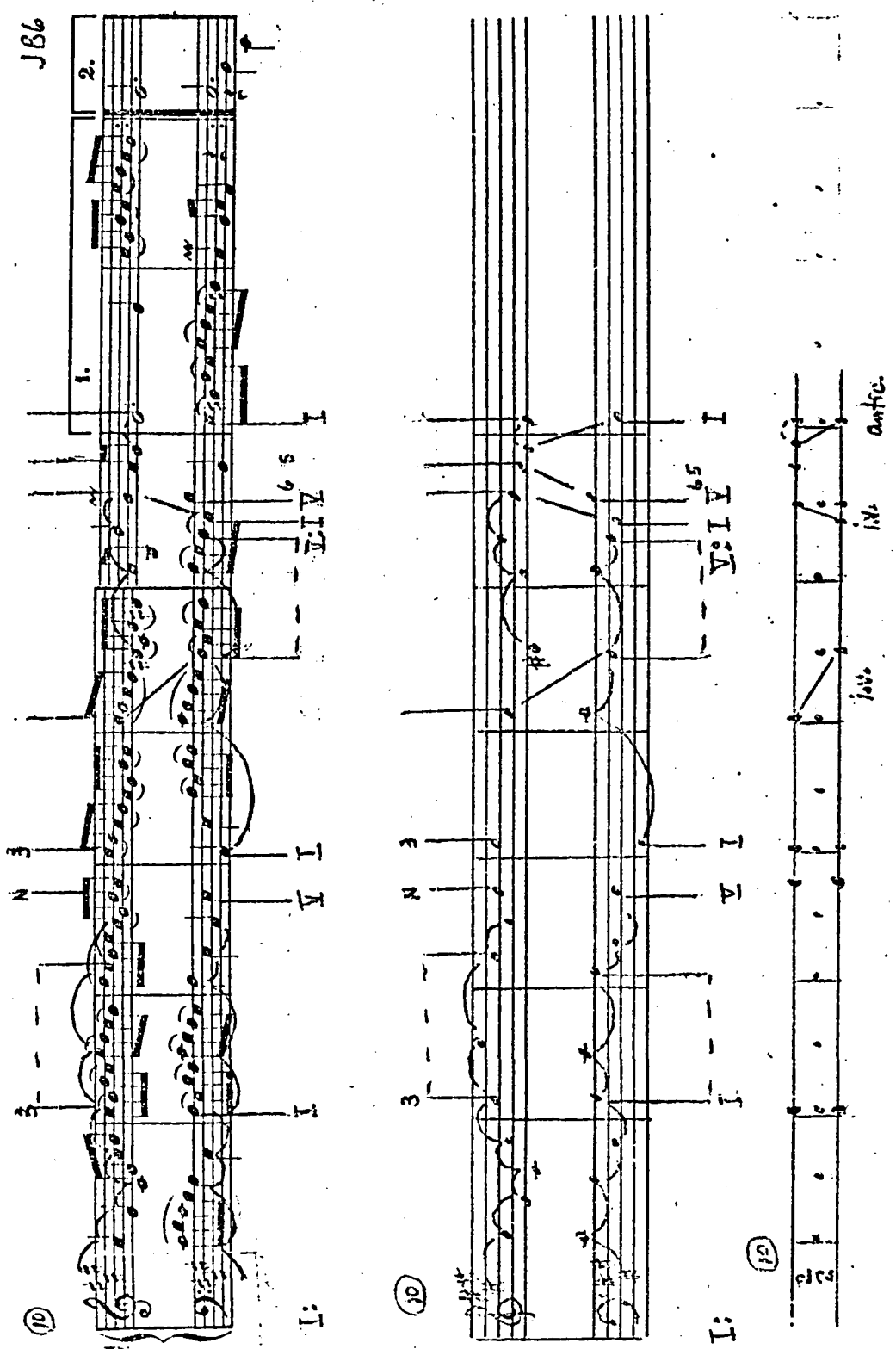

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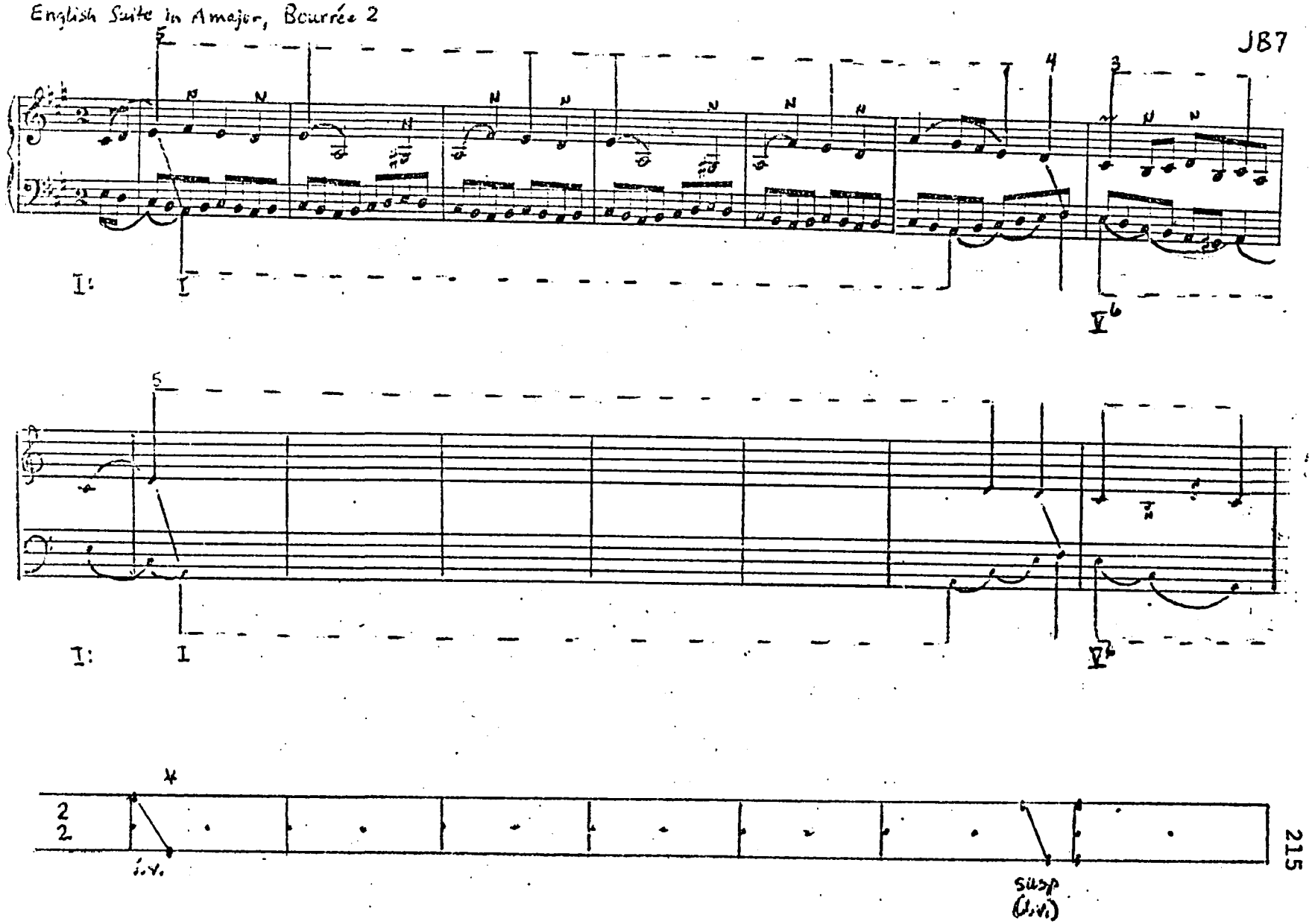

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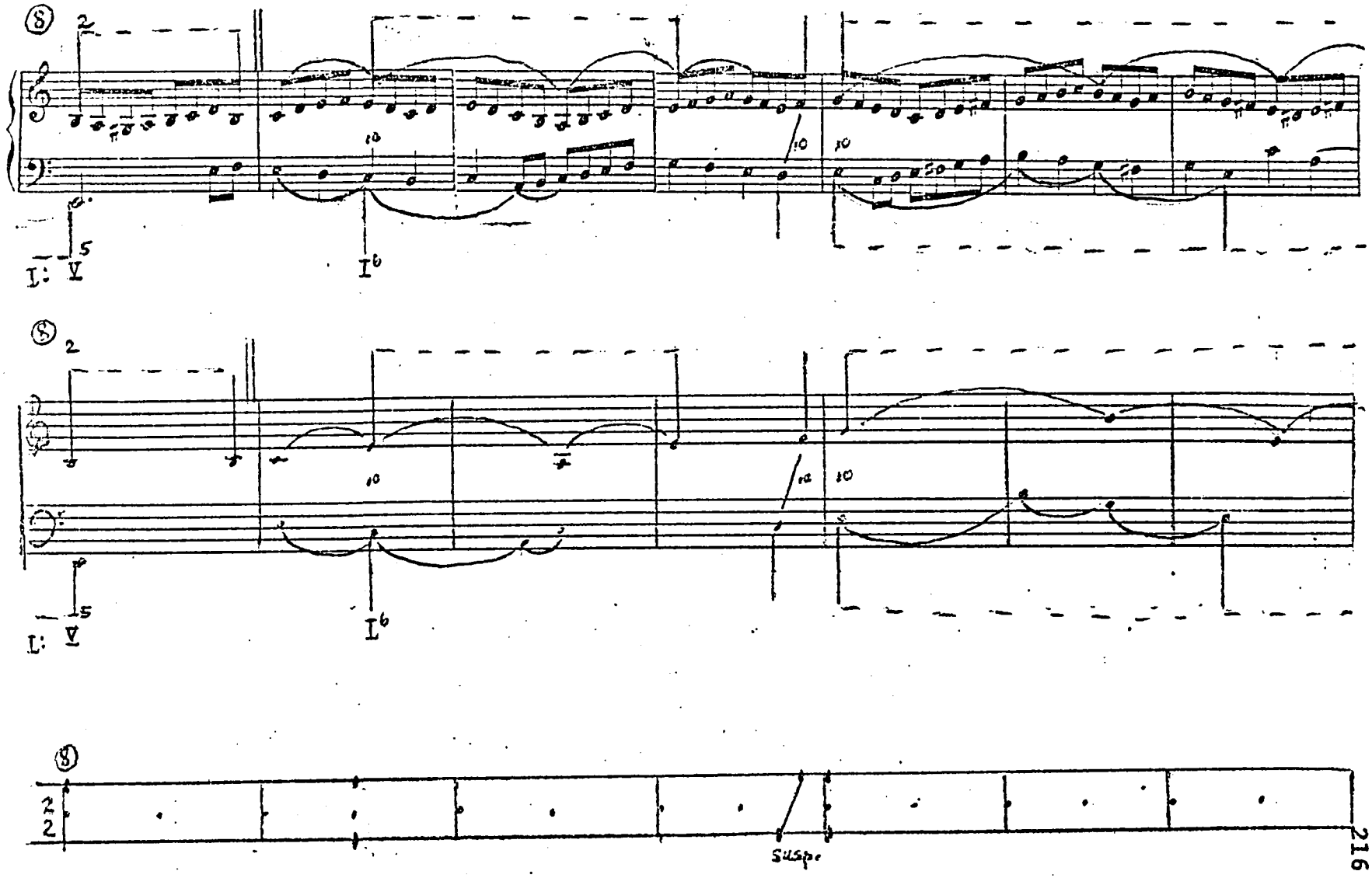

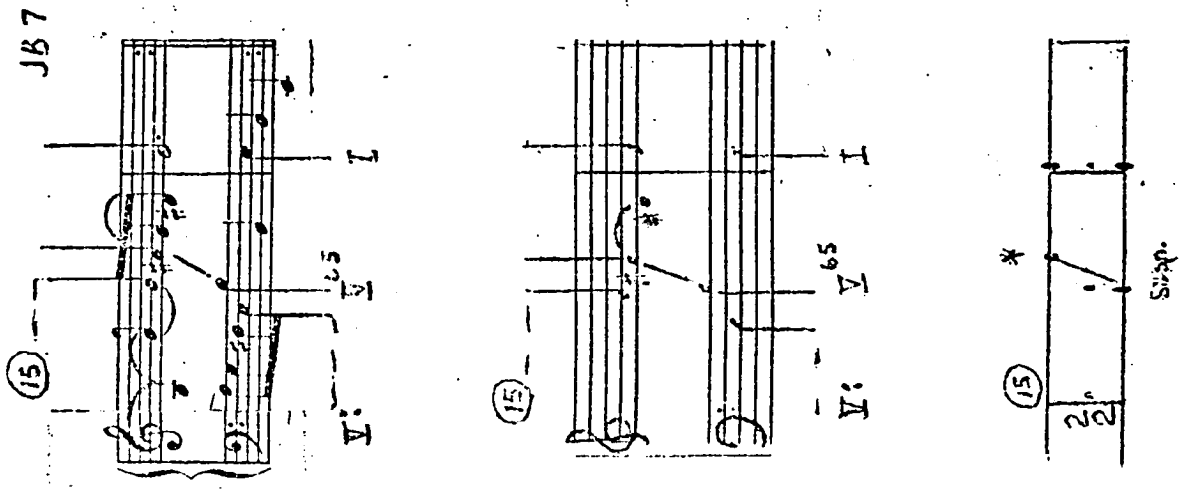

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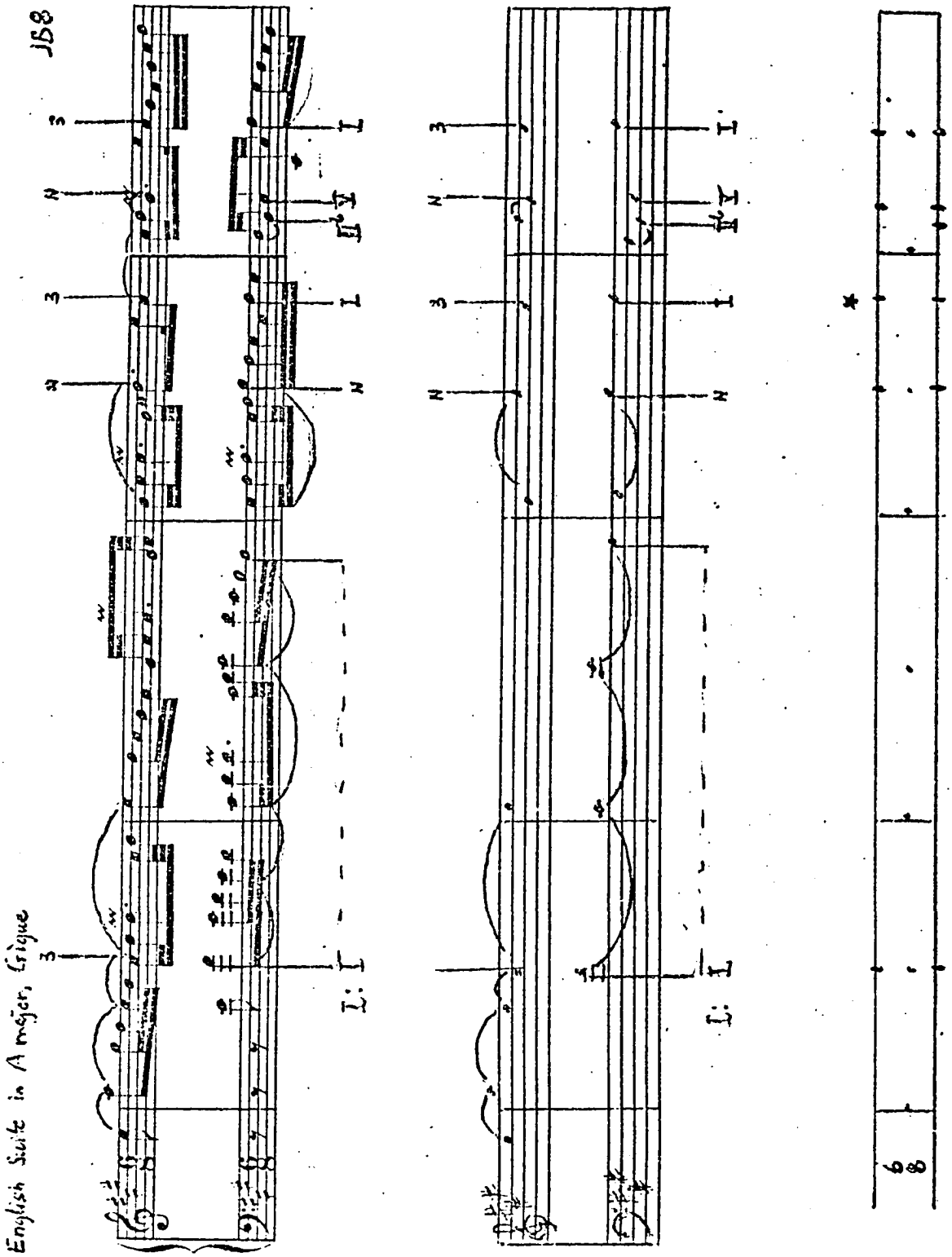

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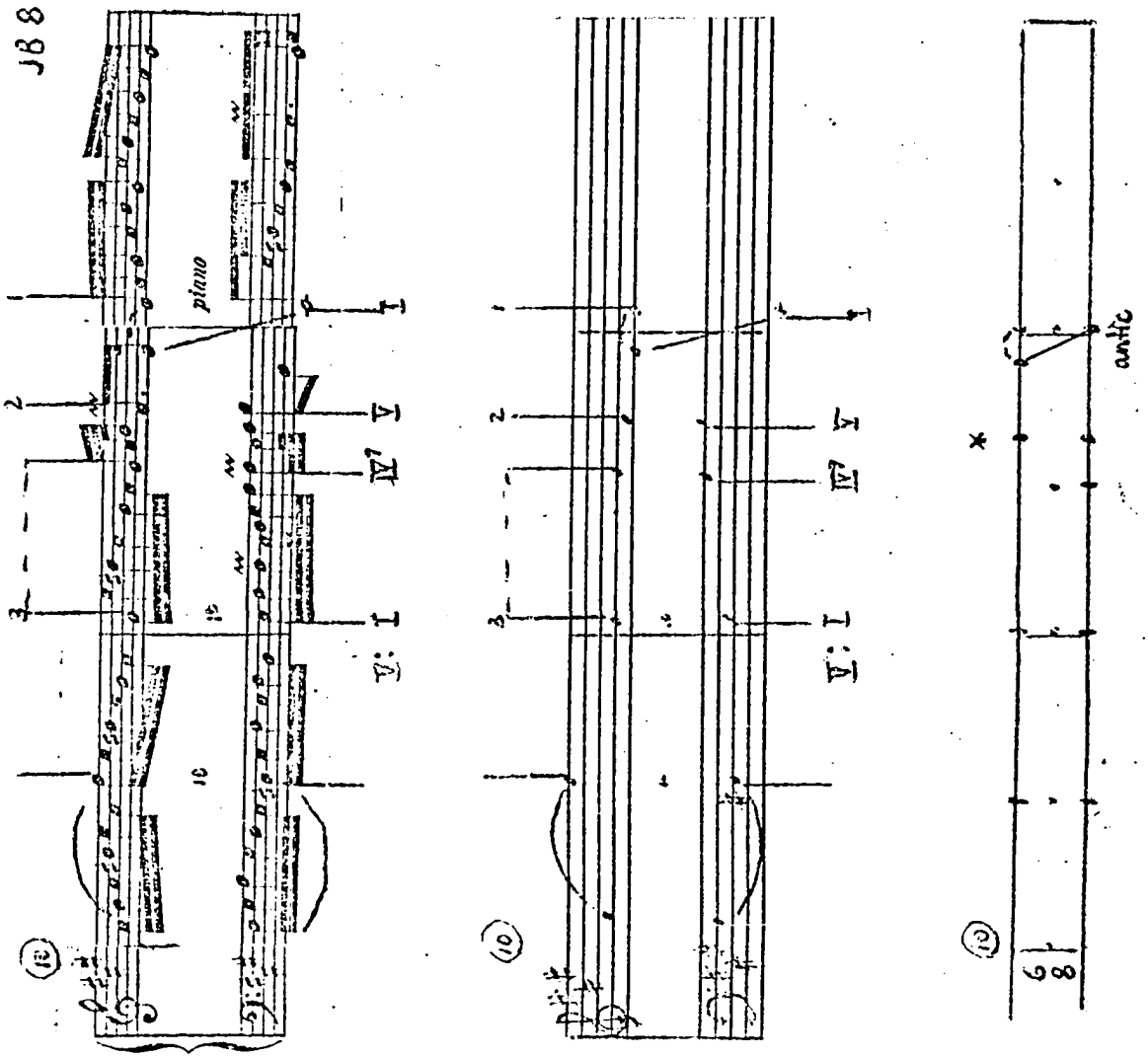

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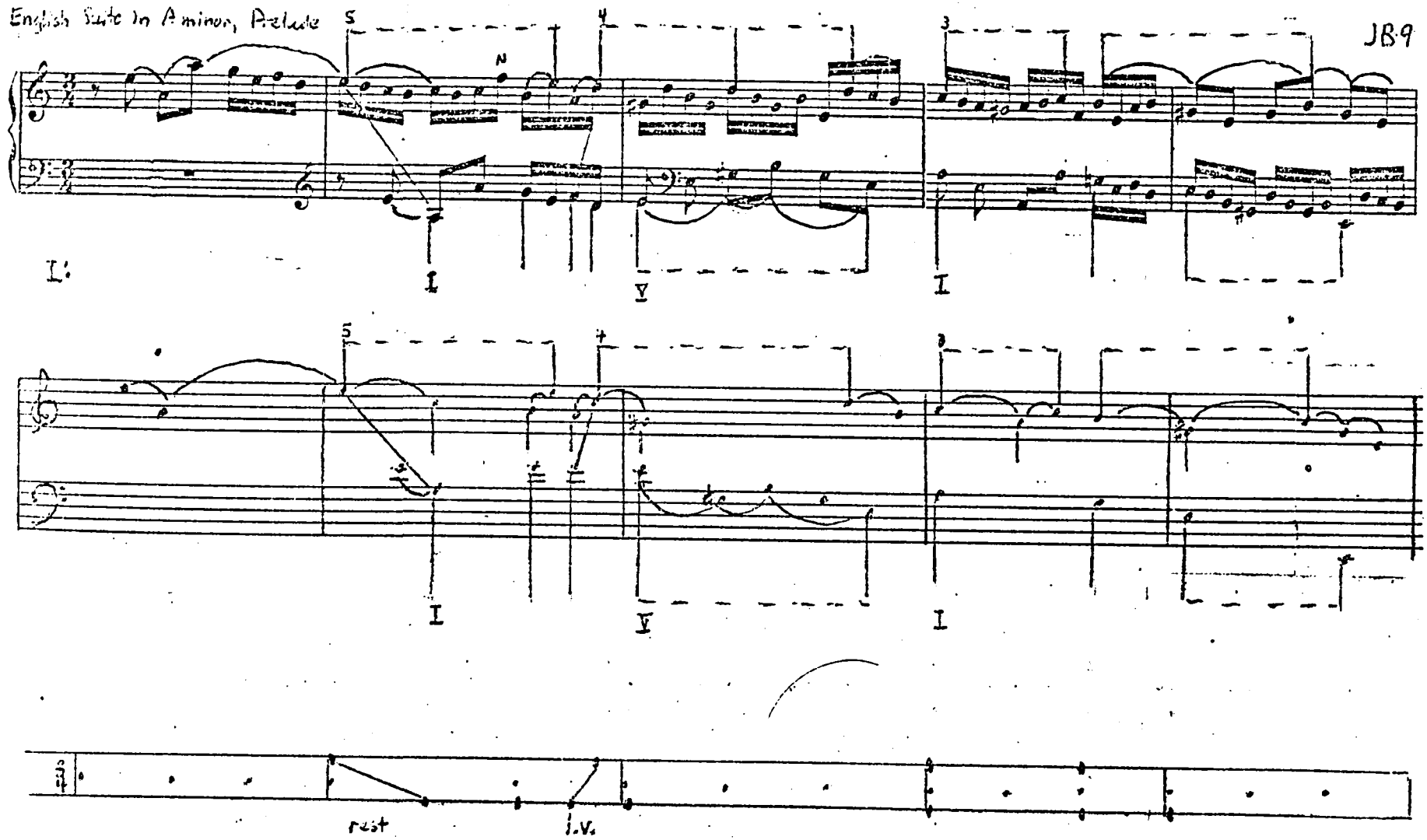

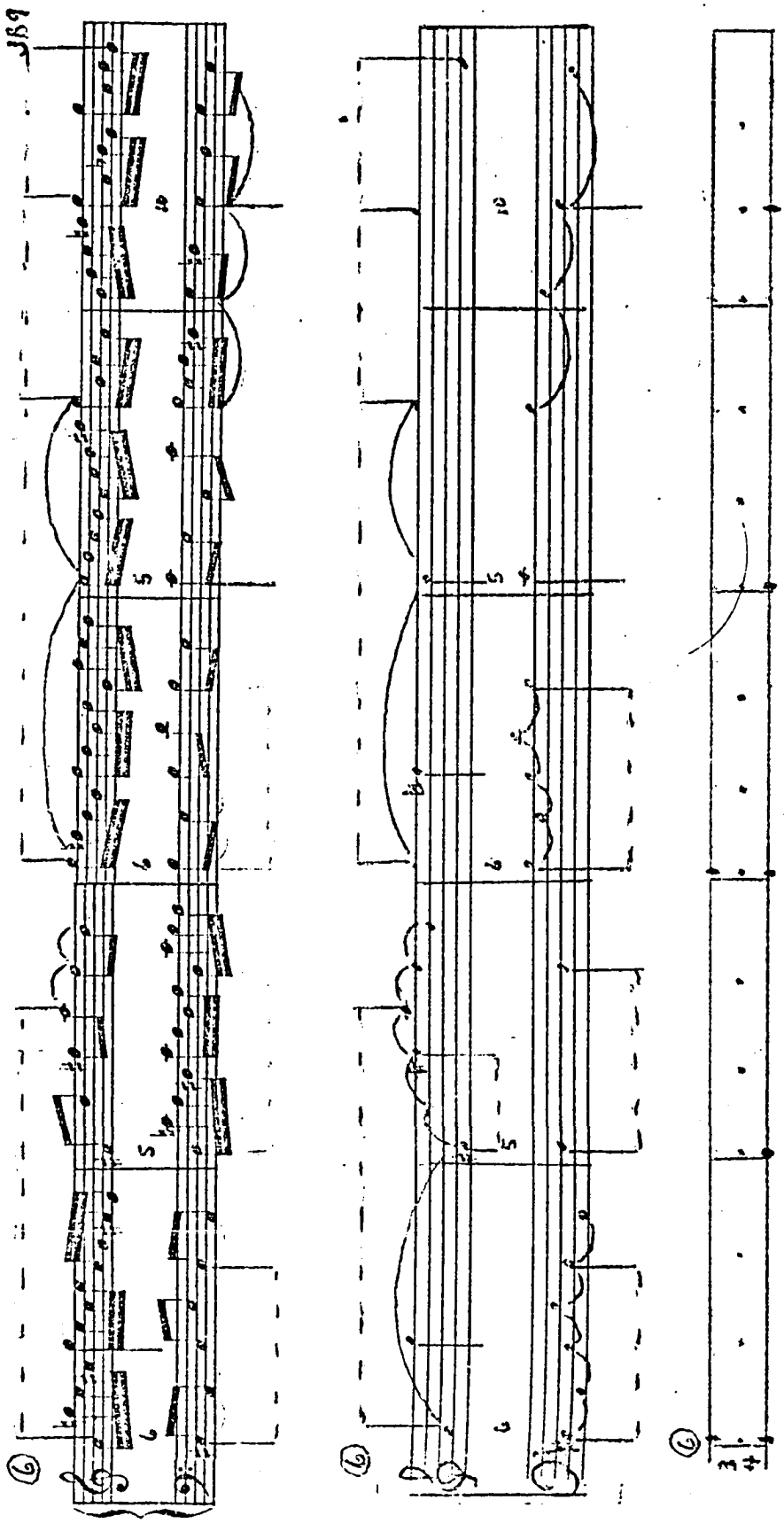

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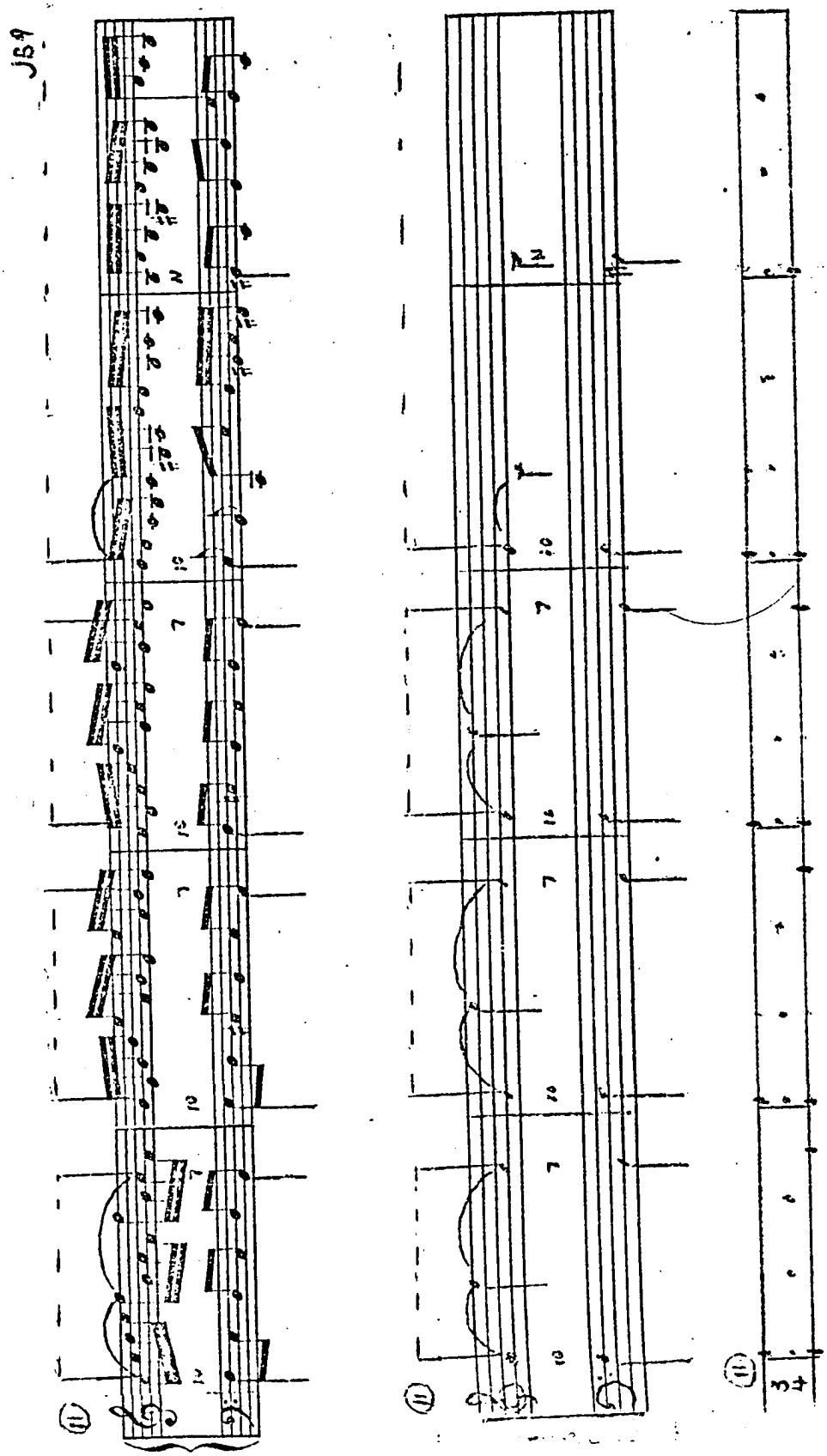

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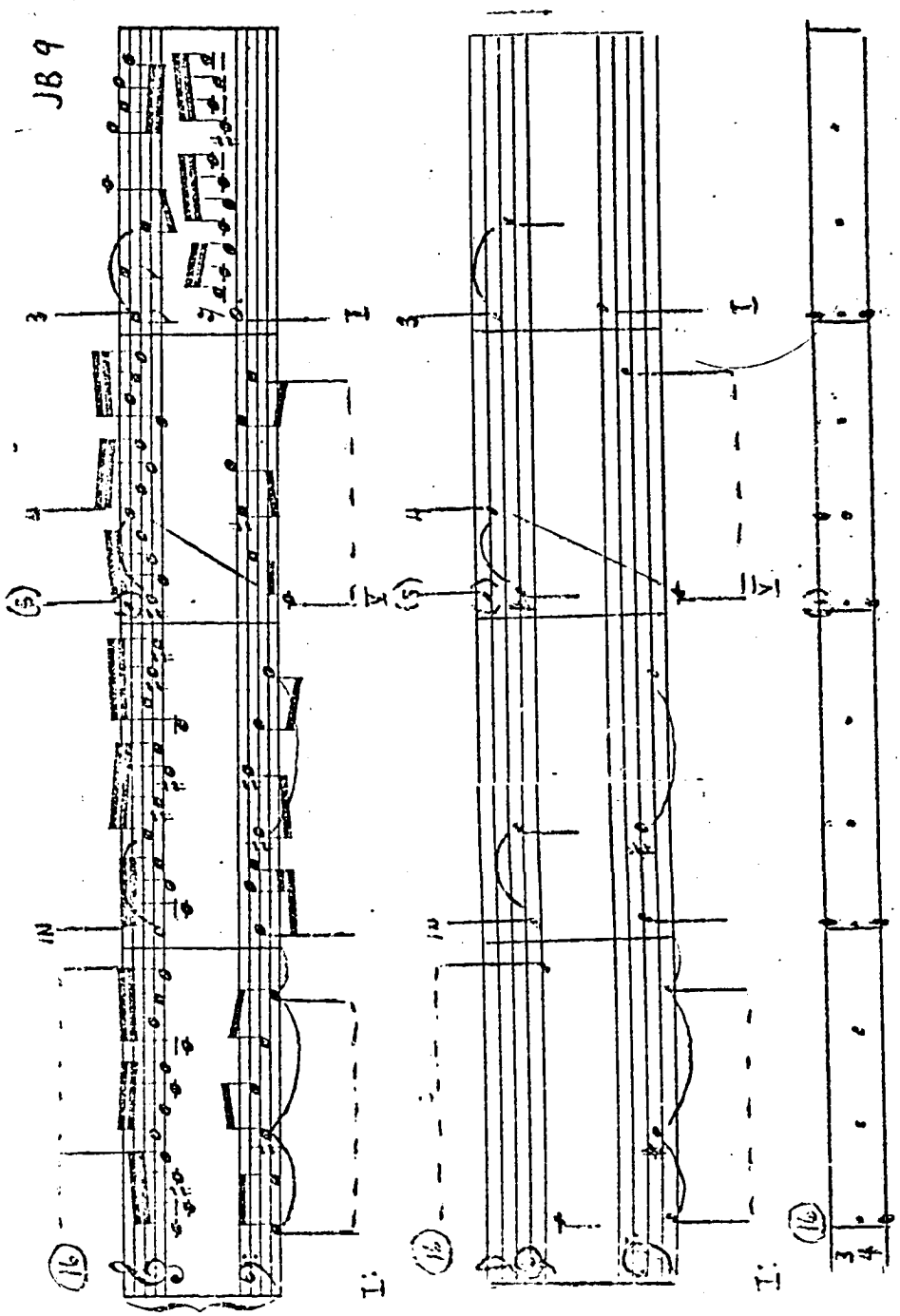

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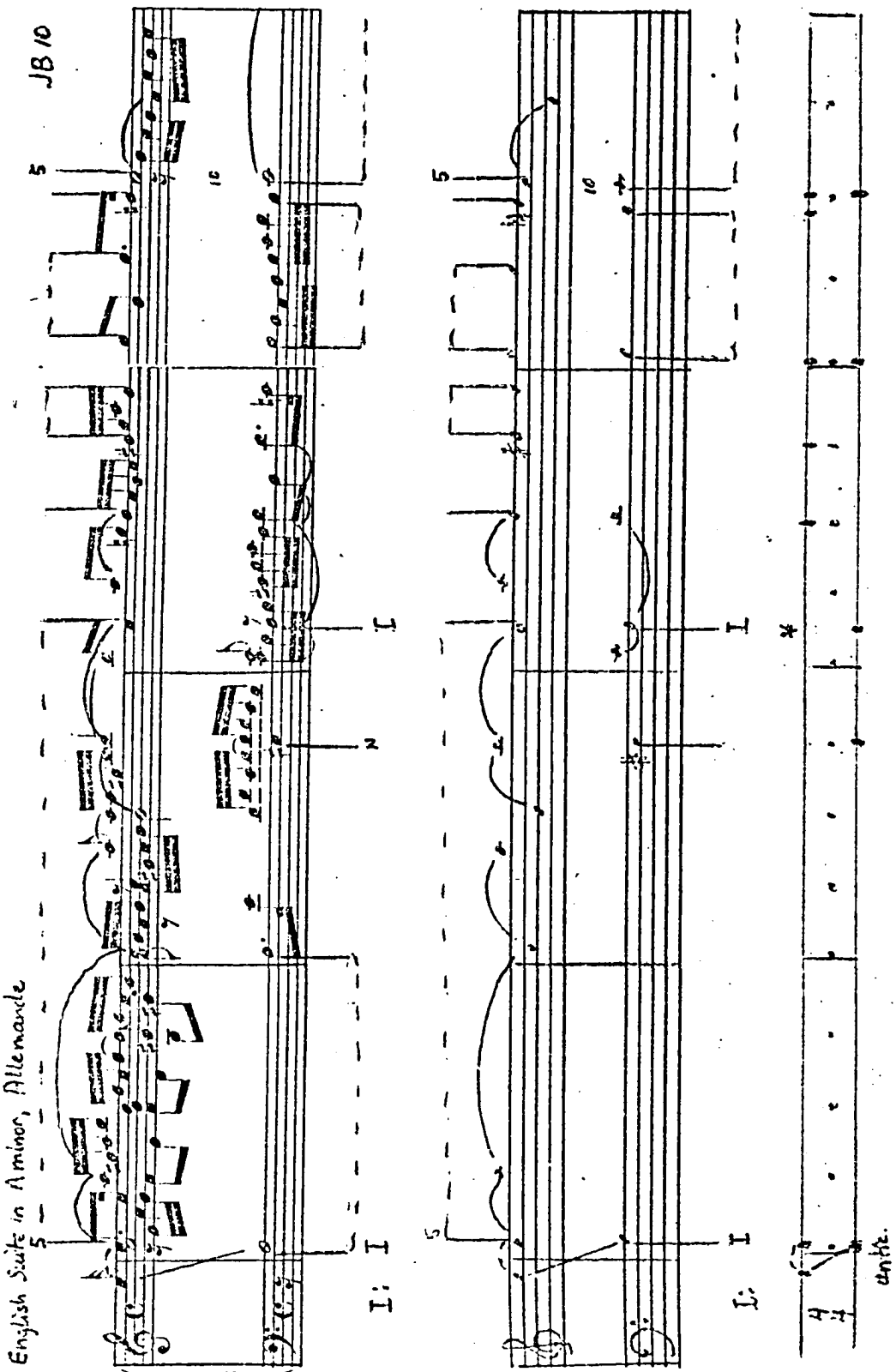

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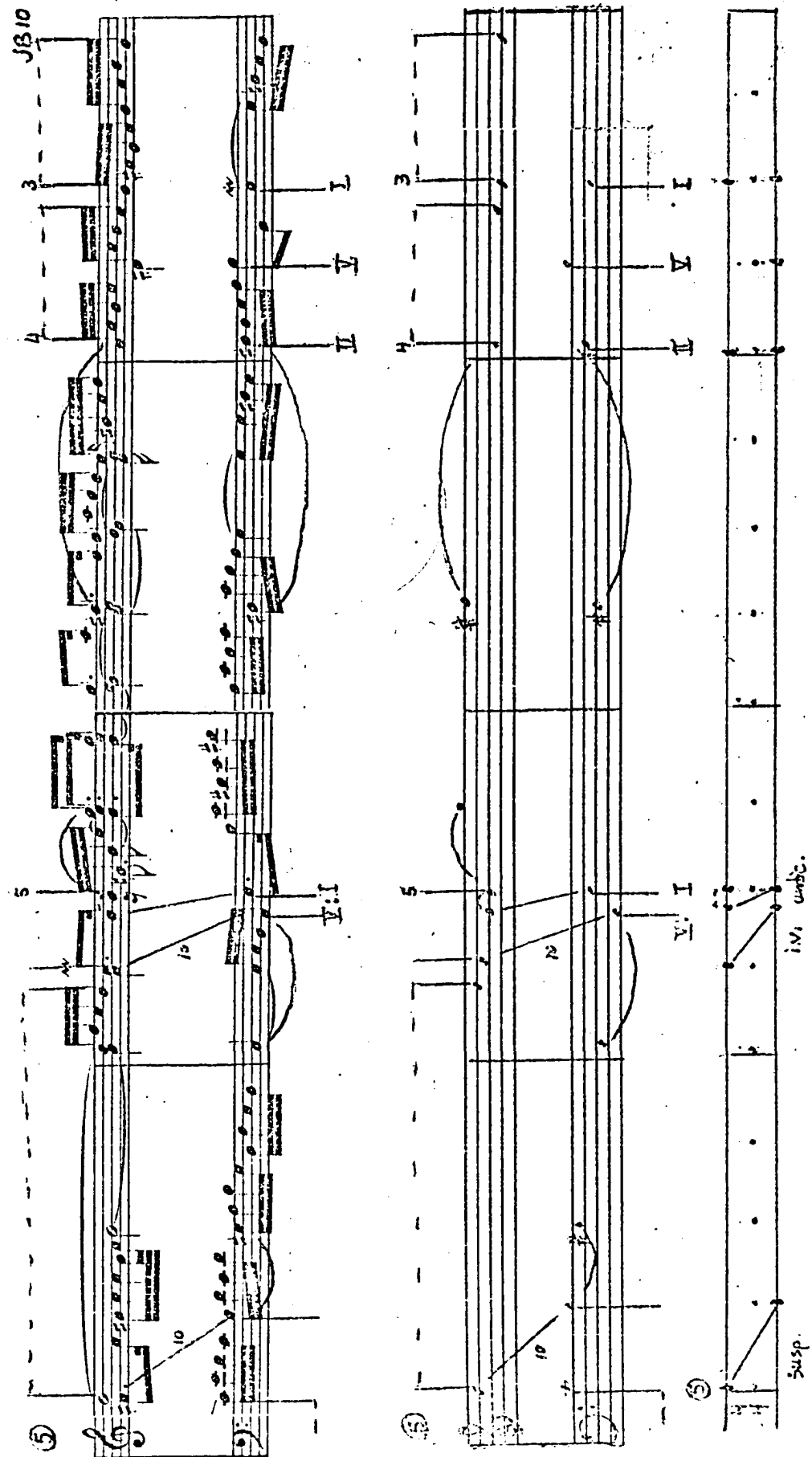

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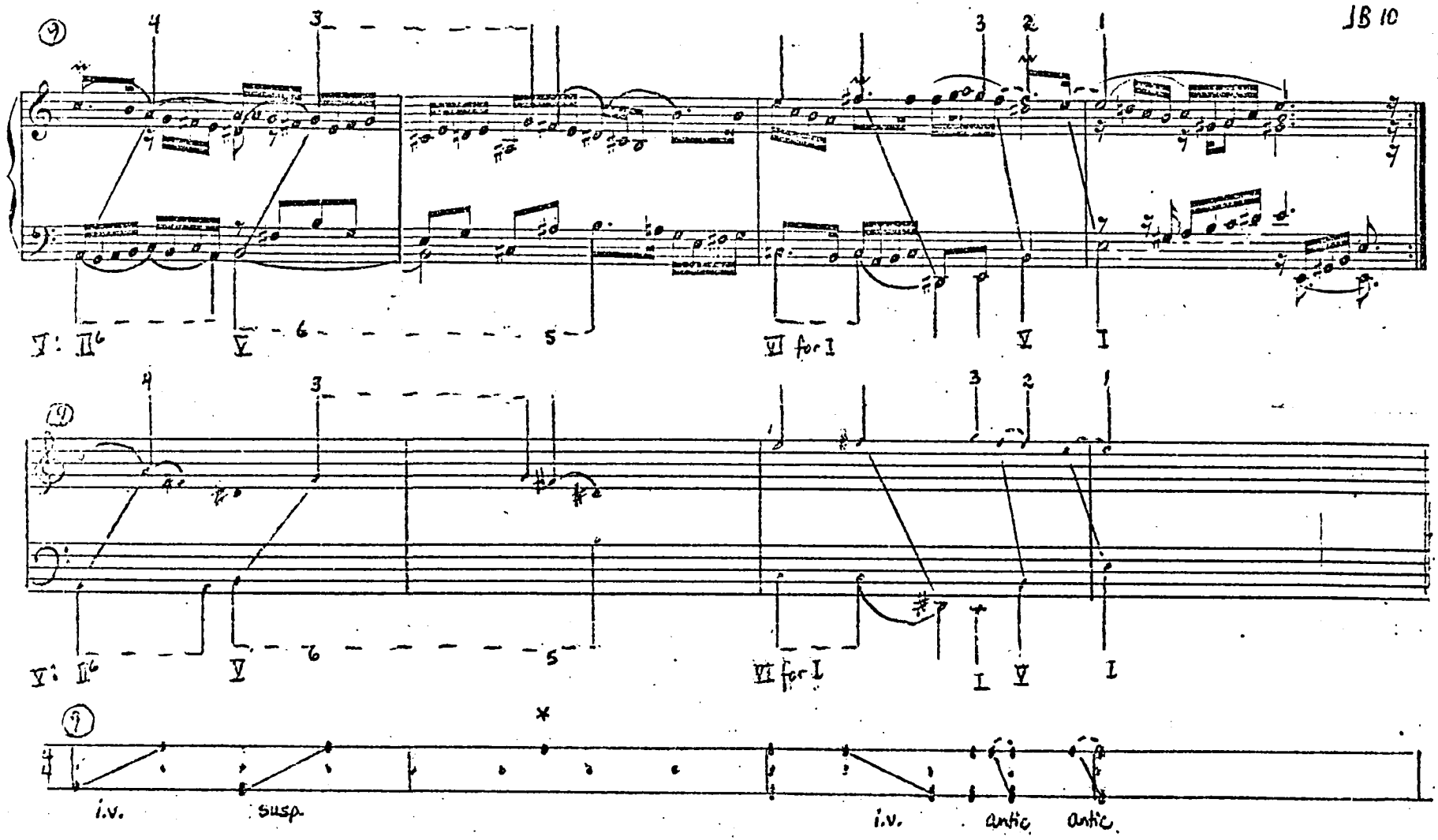

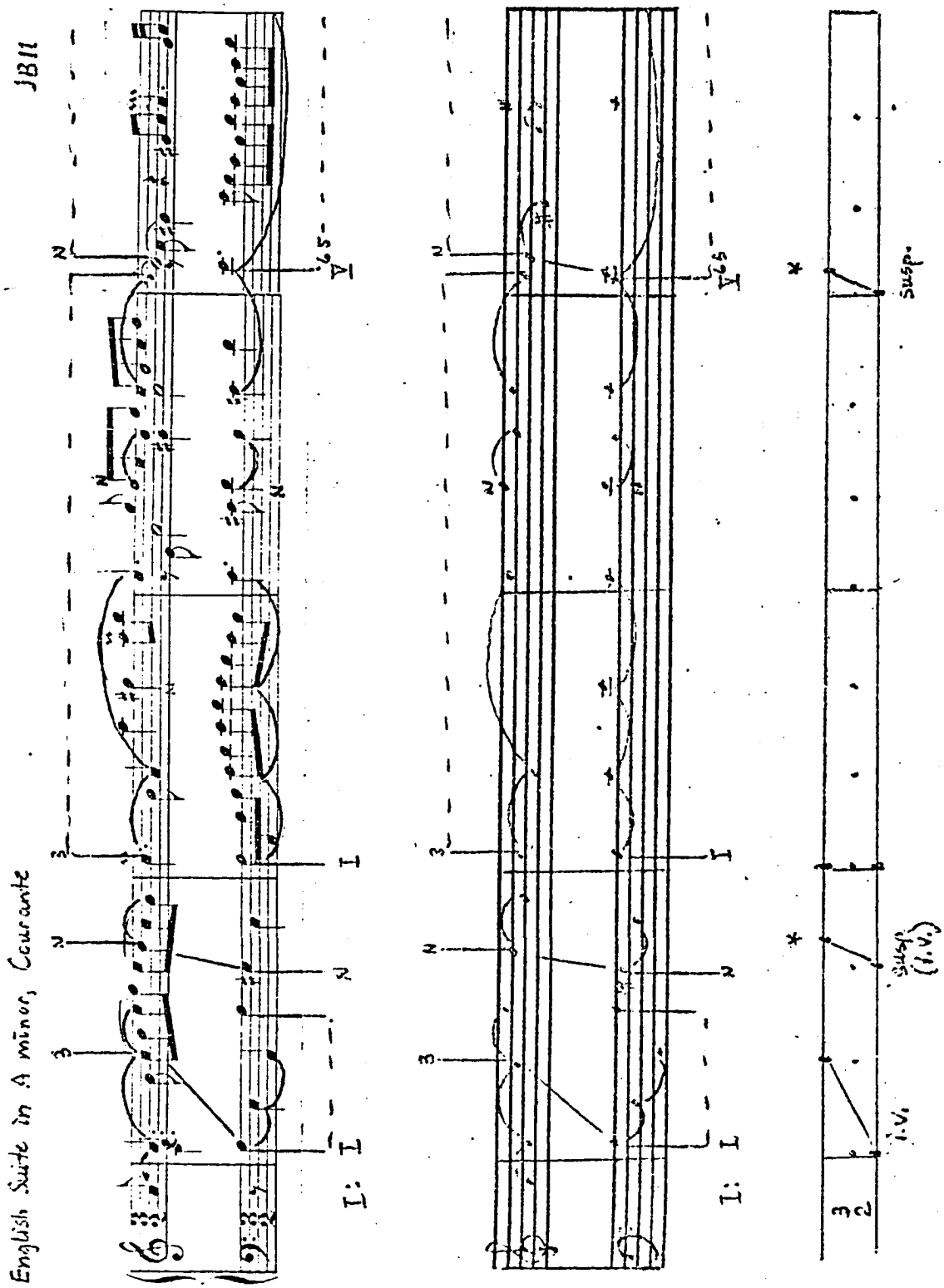

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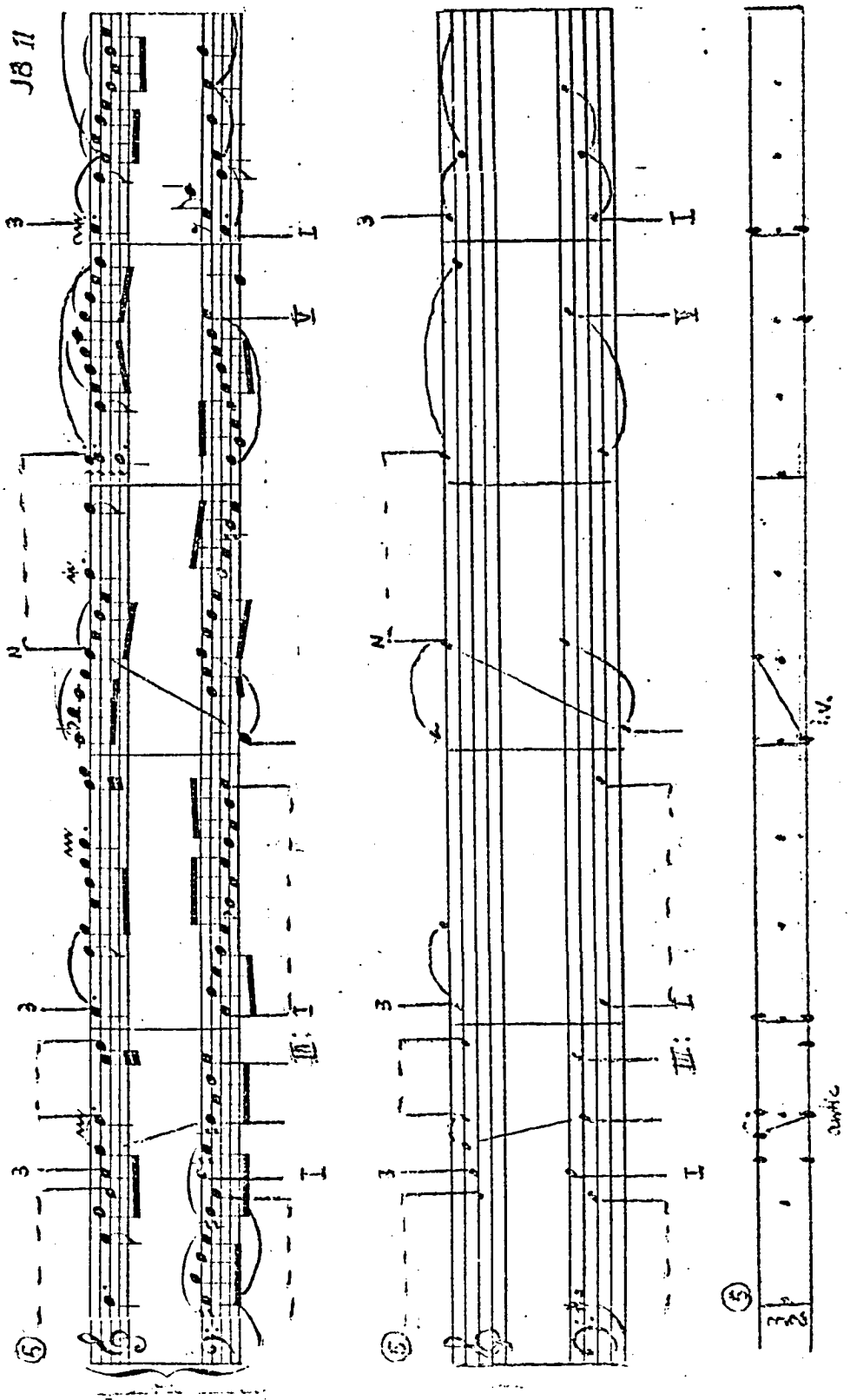

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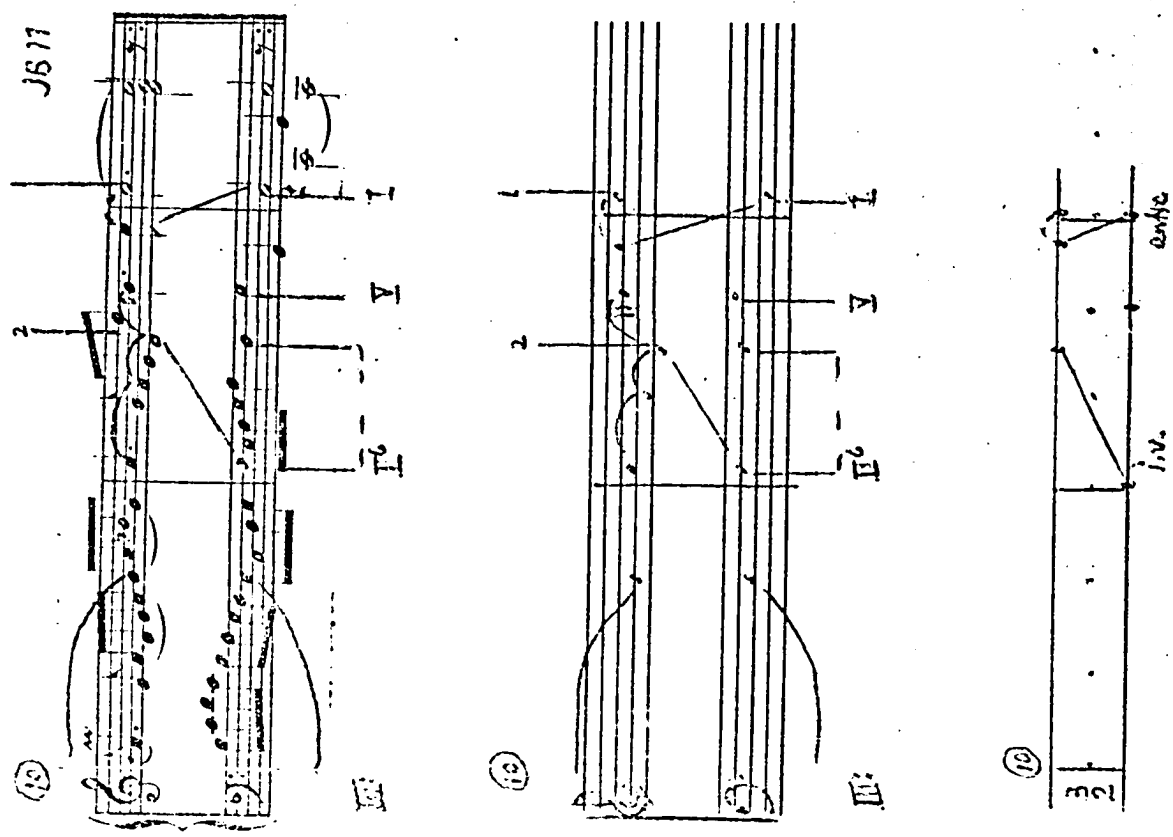

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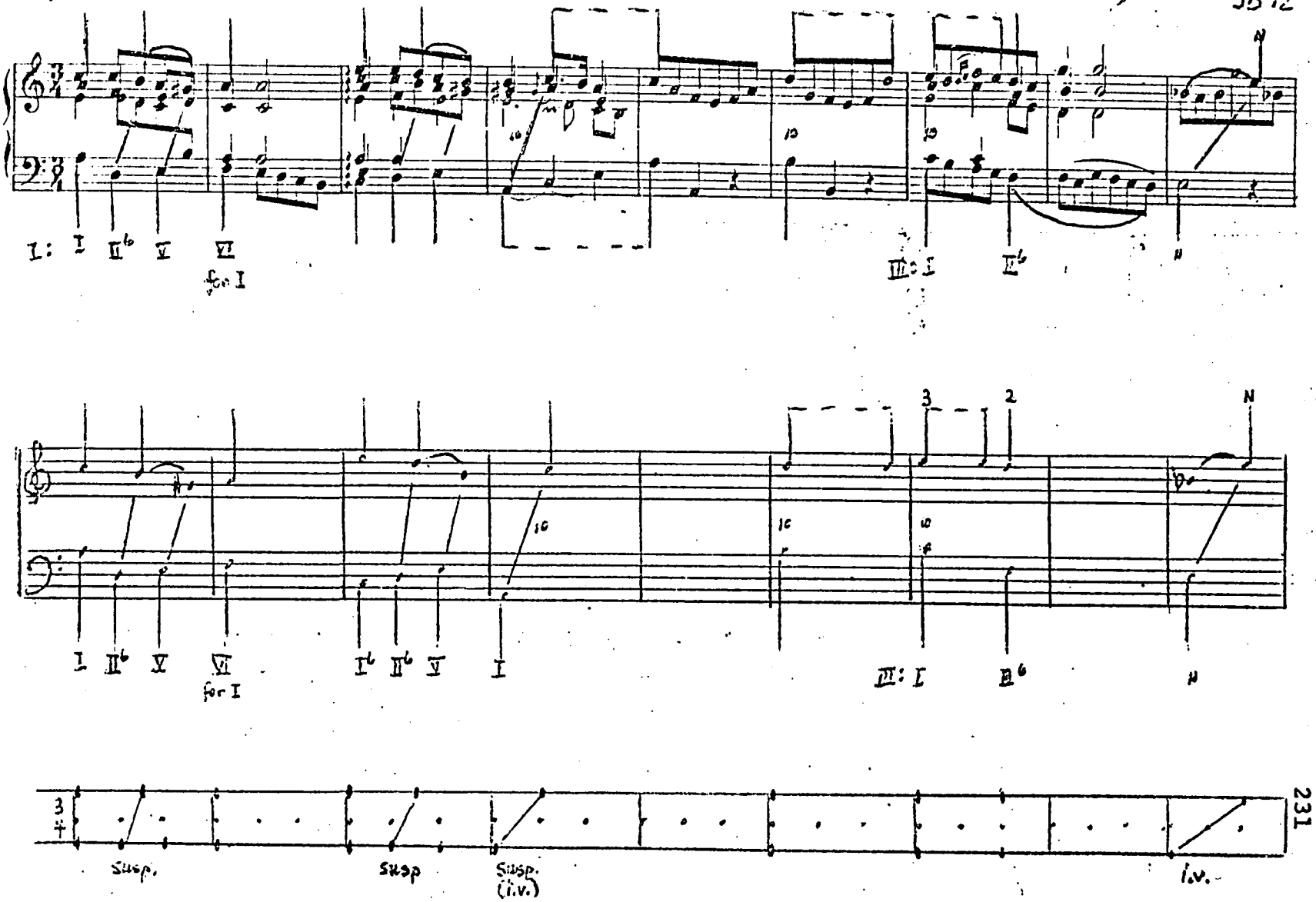
English Suite in A minor, Sarabande



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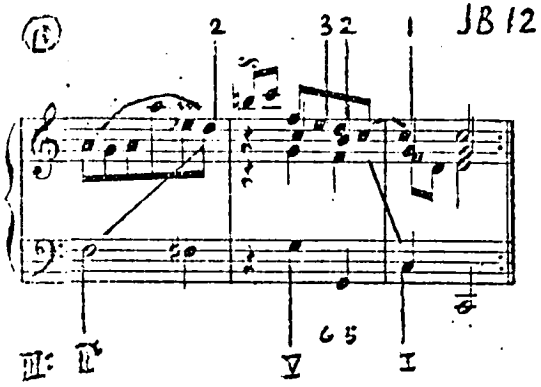

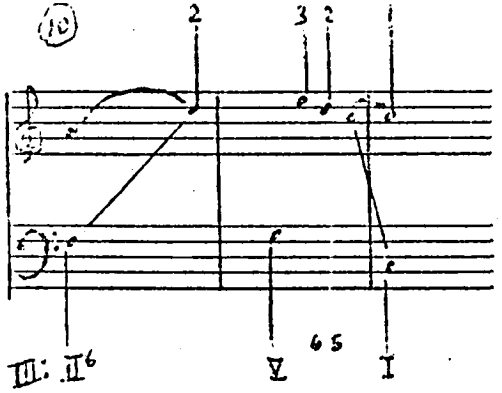

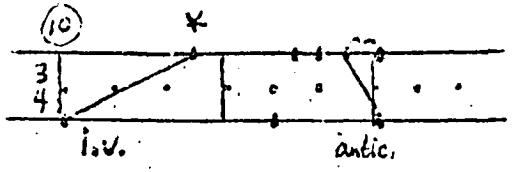

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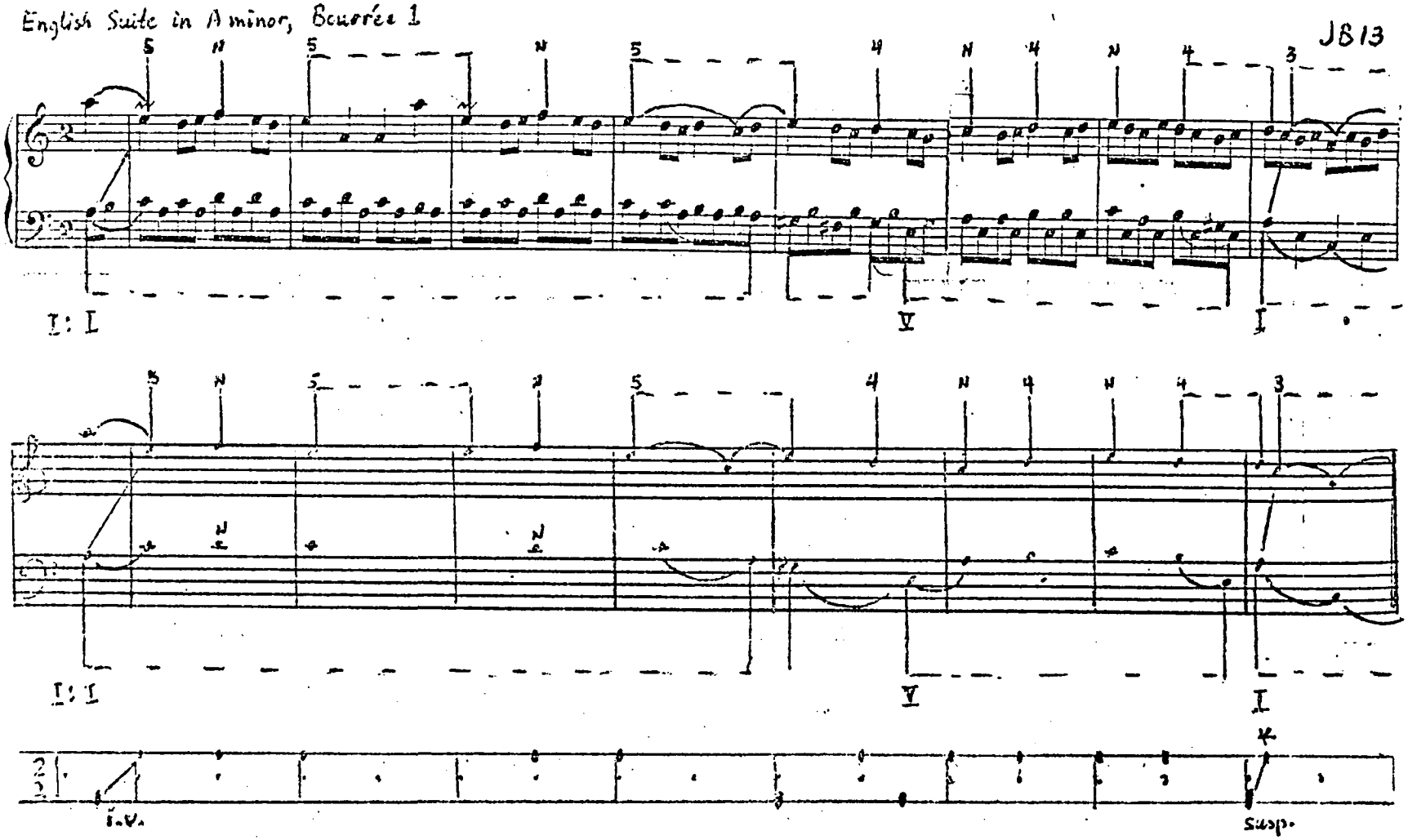

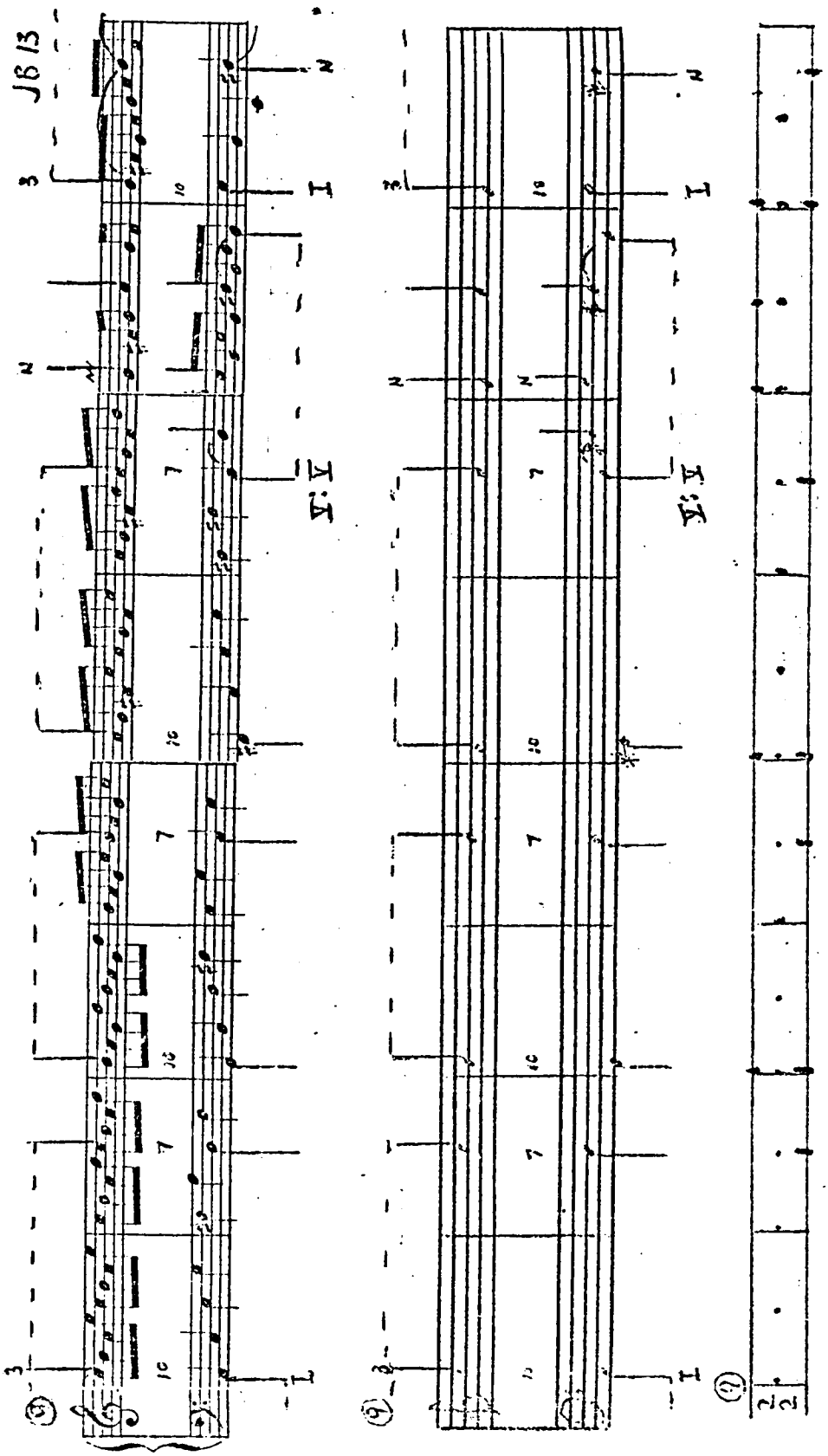

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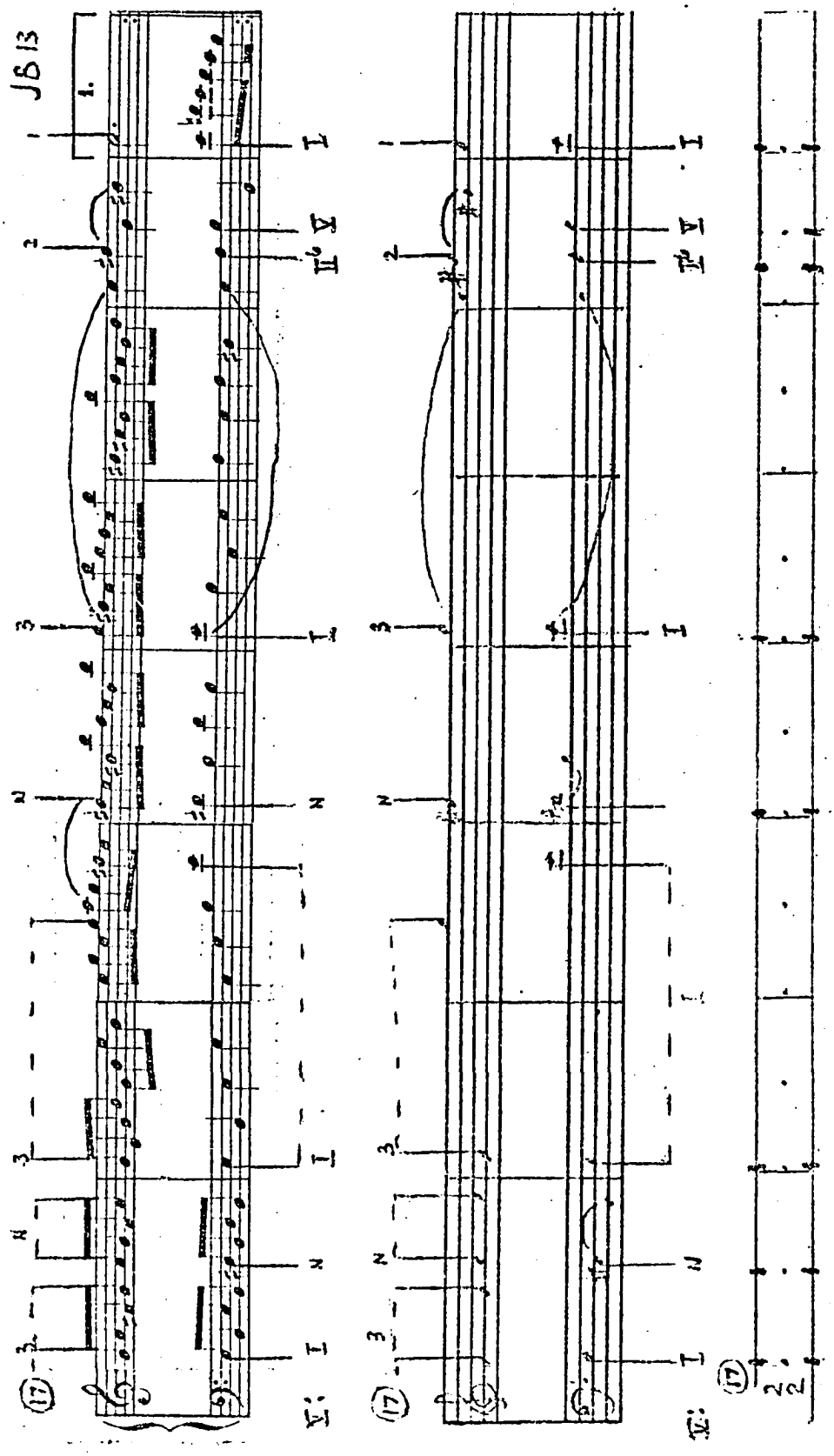

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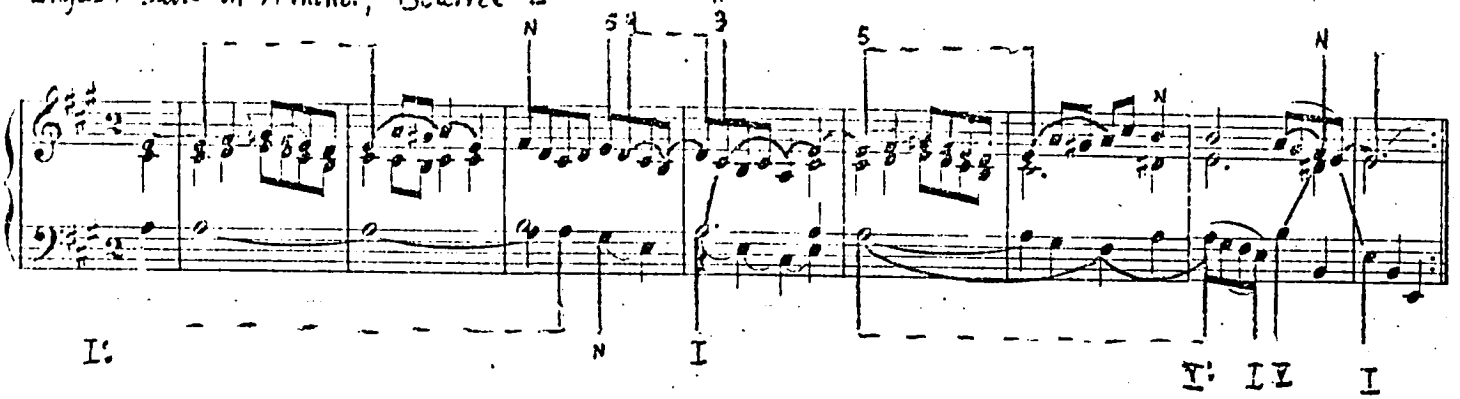
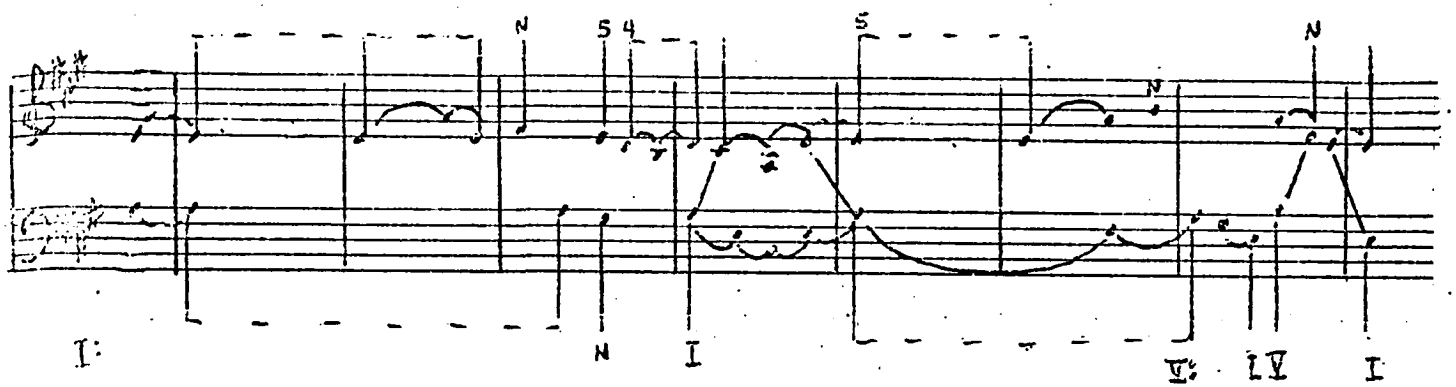
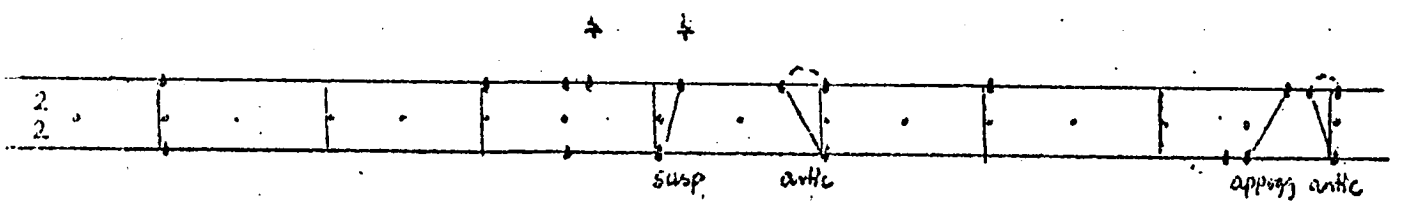
English Suite in A minor, Bourrée 2







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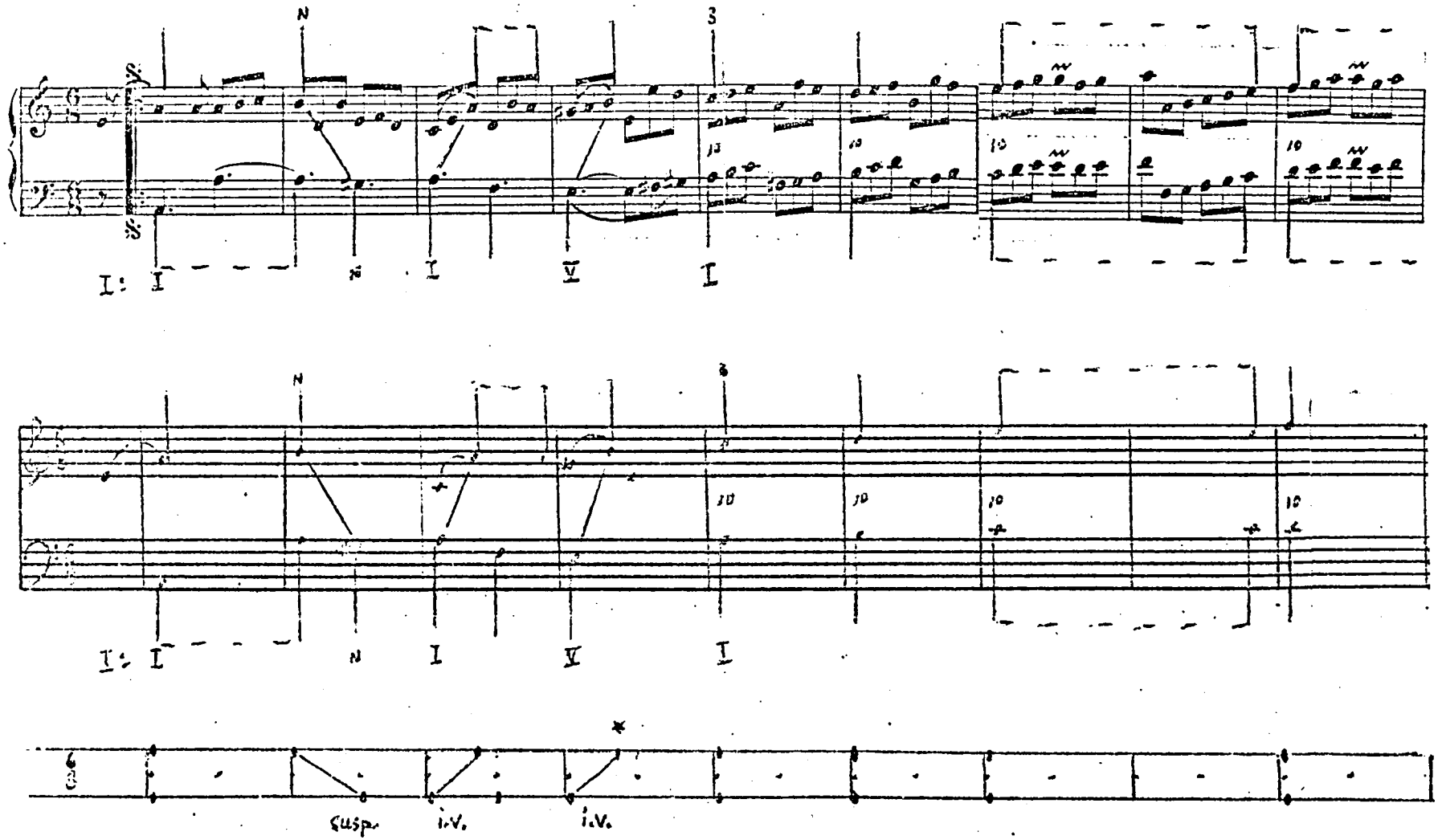

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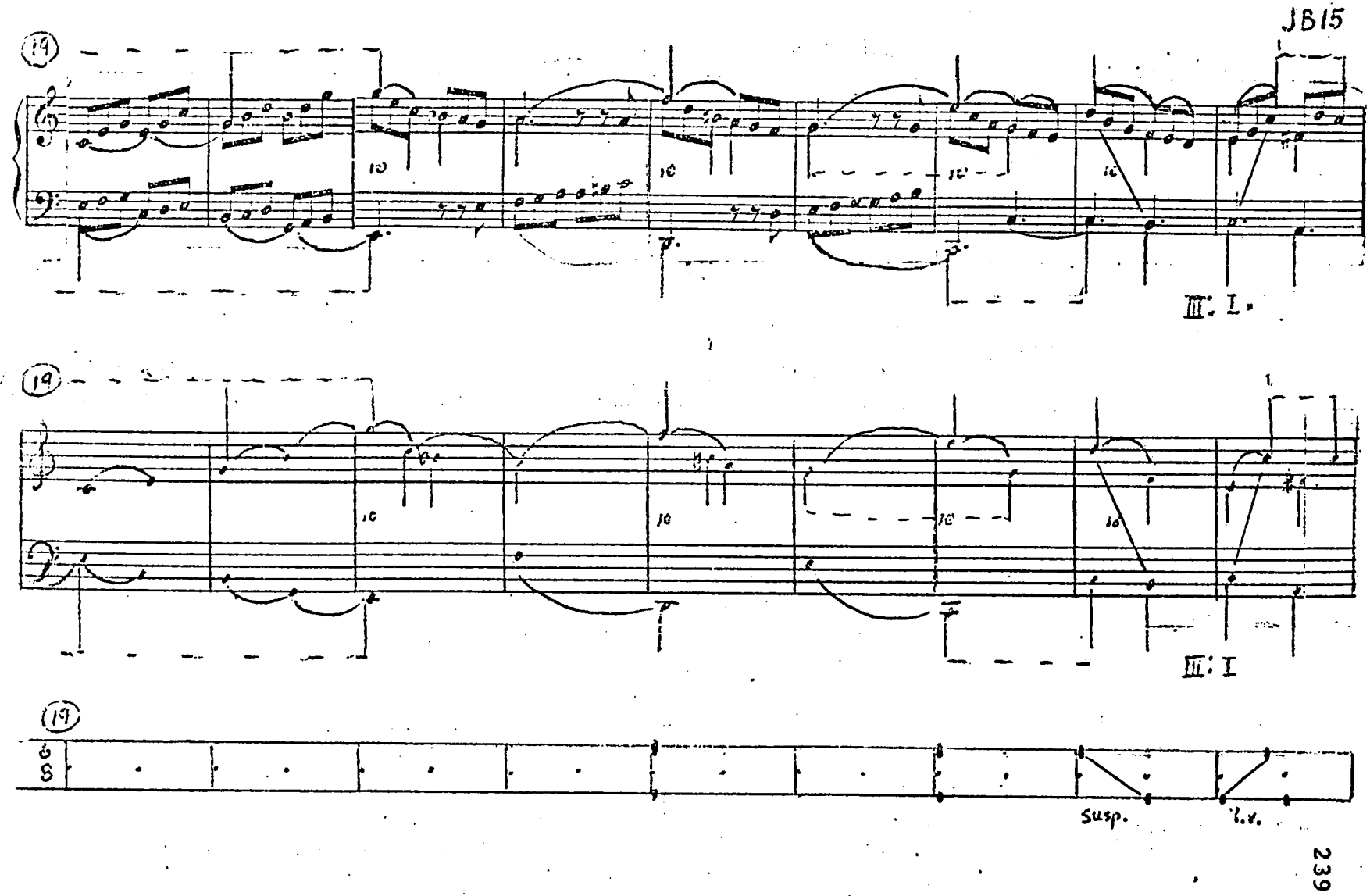

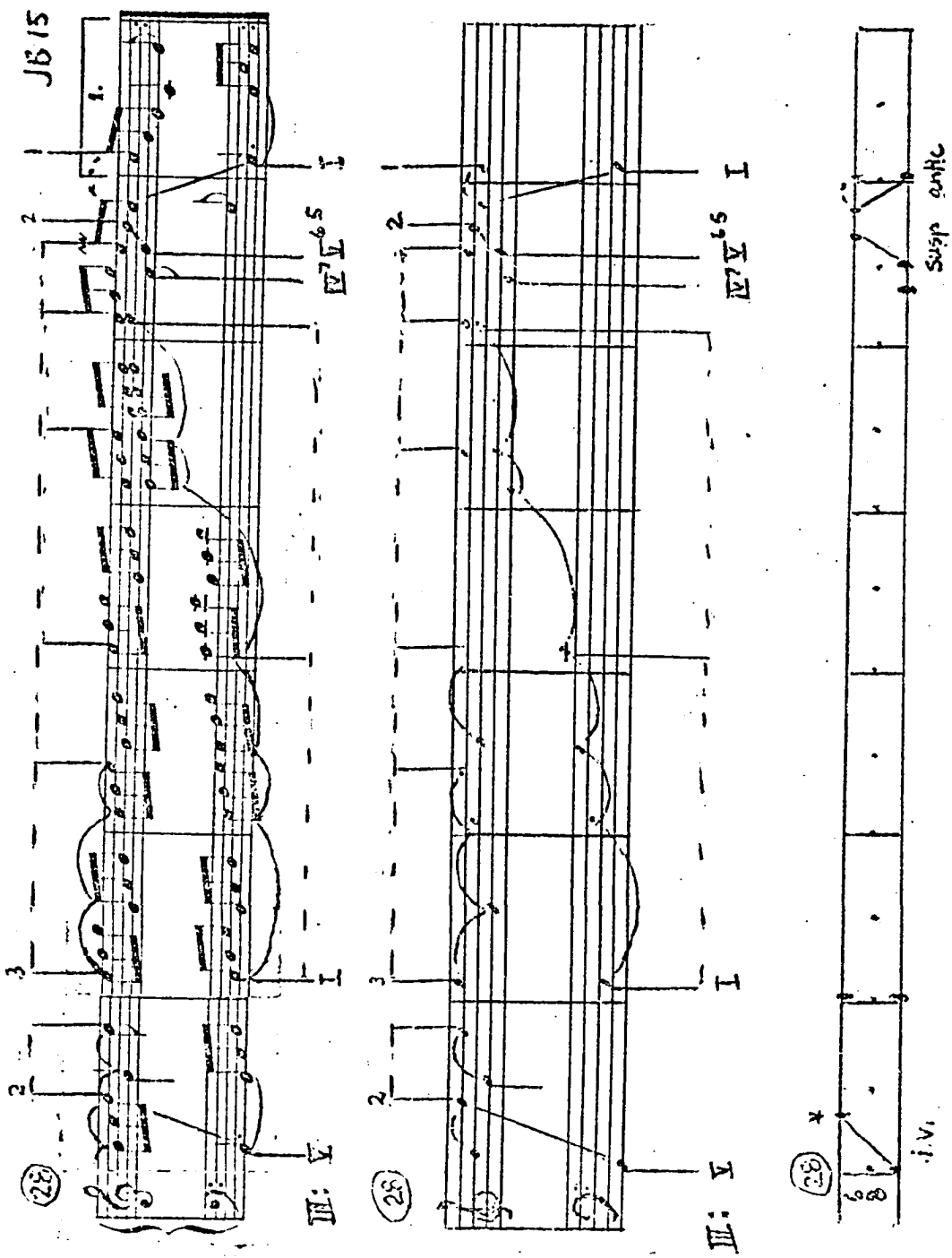

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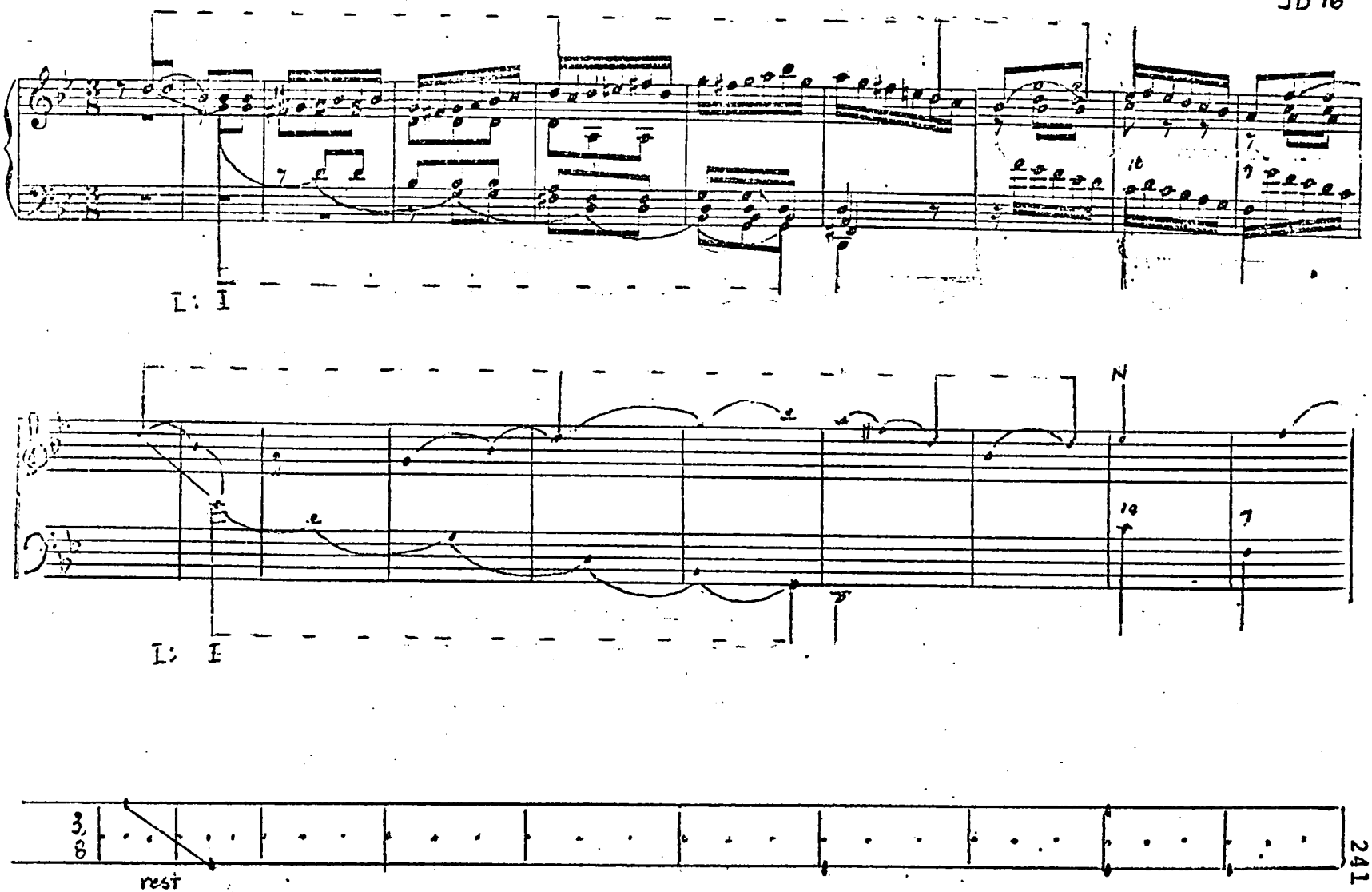
English Suite in G minor, Prelude



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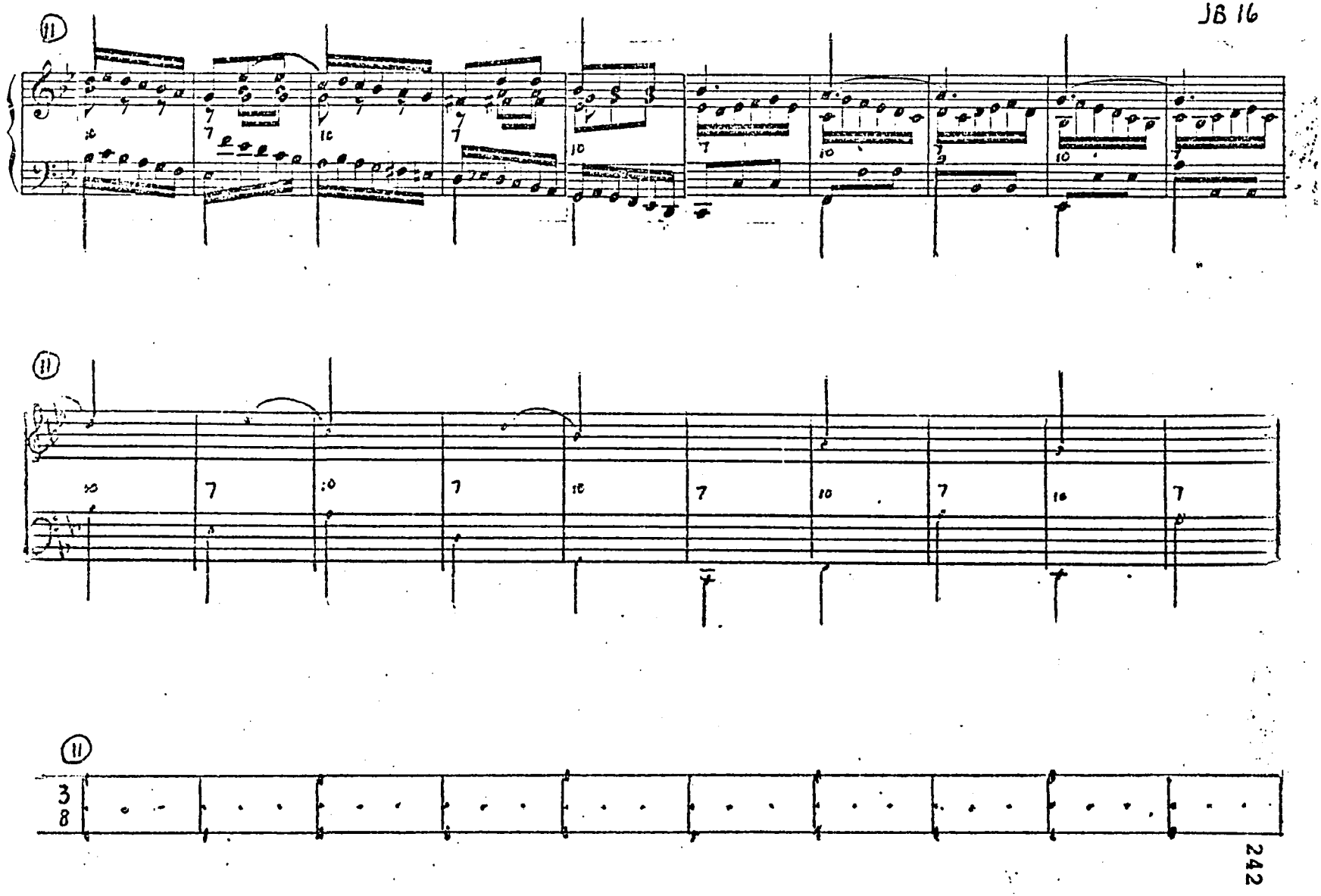

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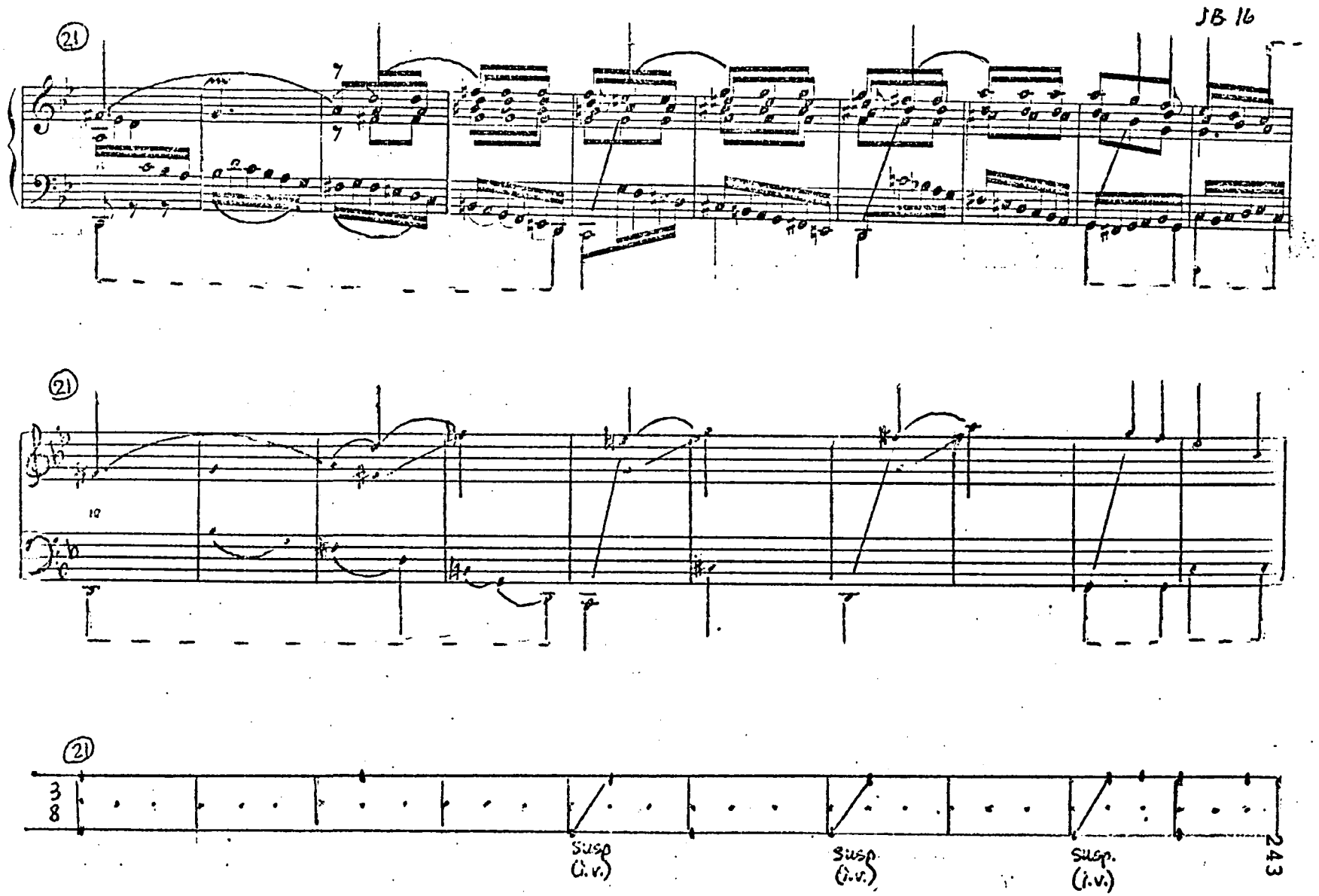

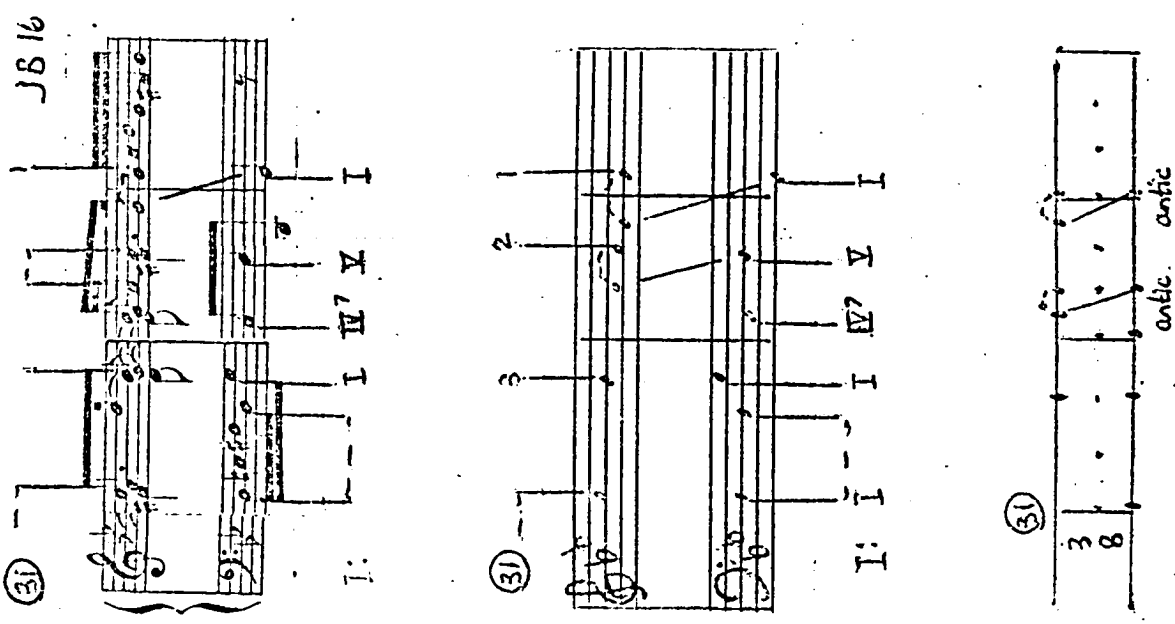

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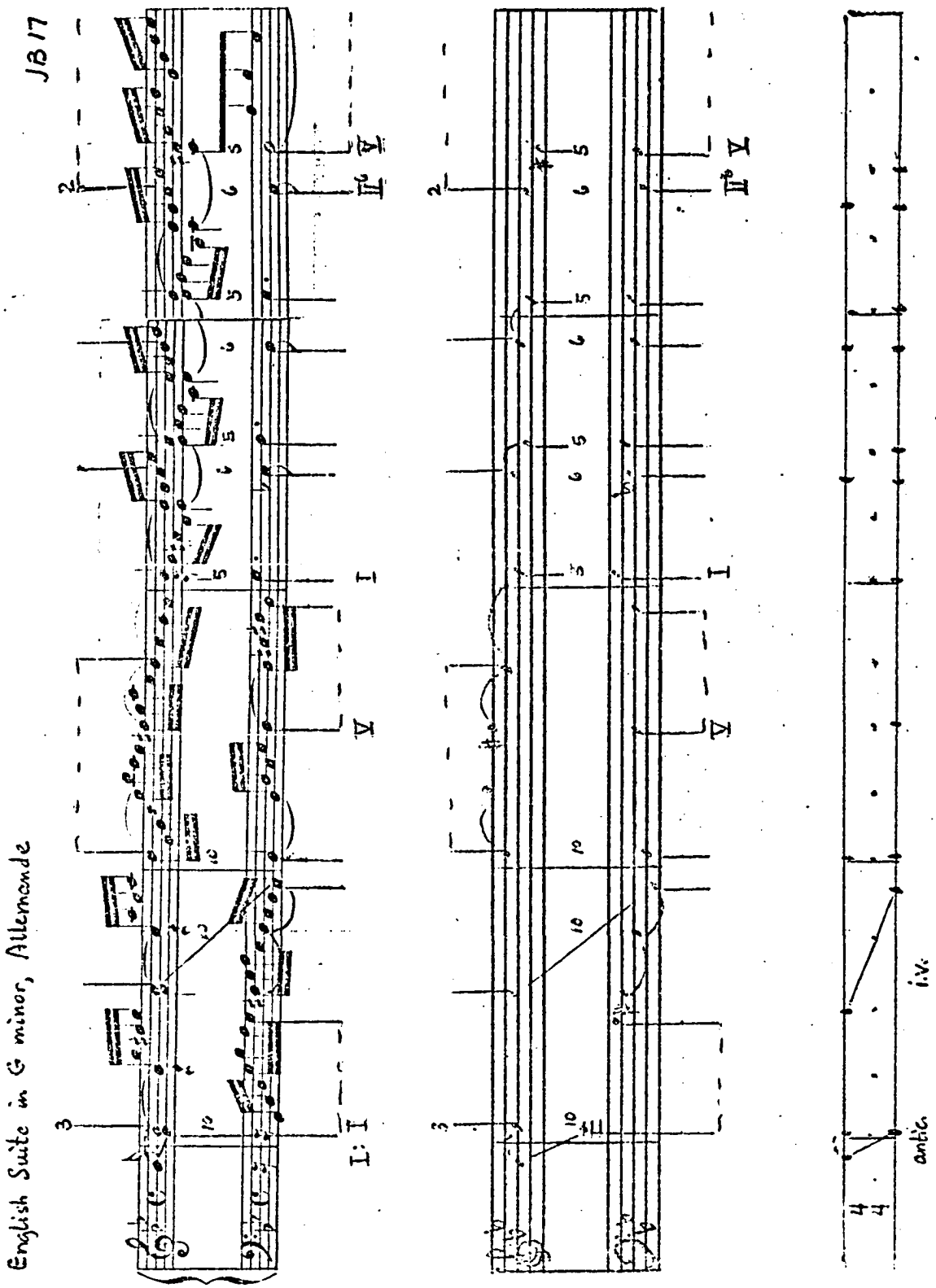

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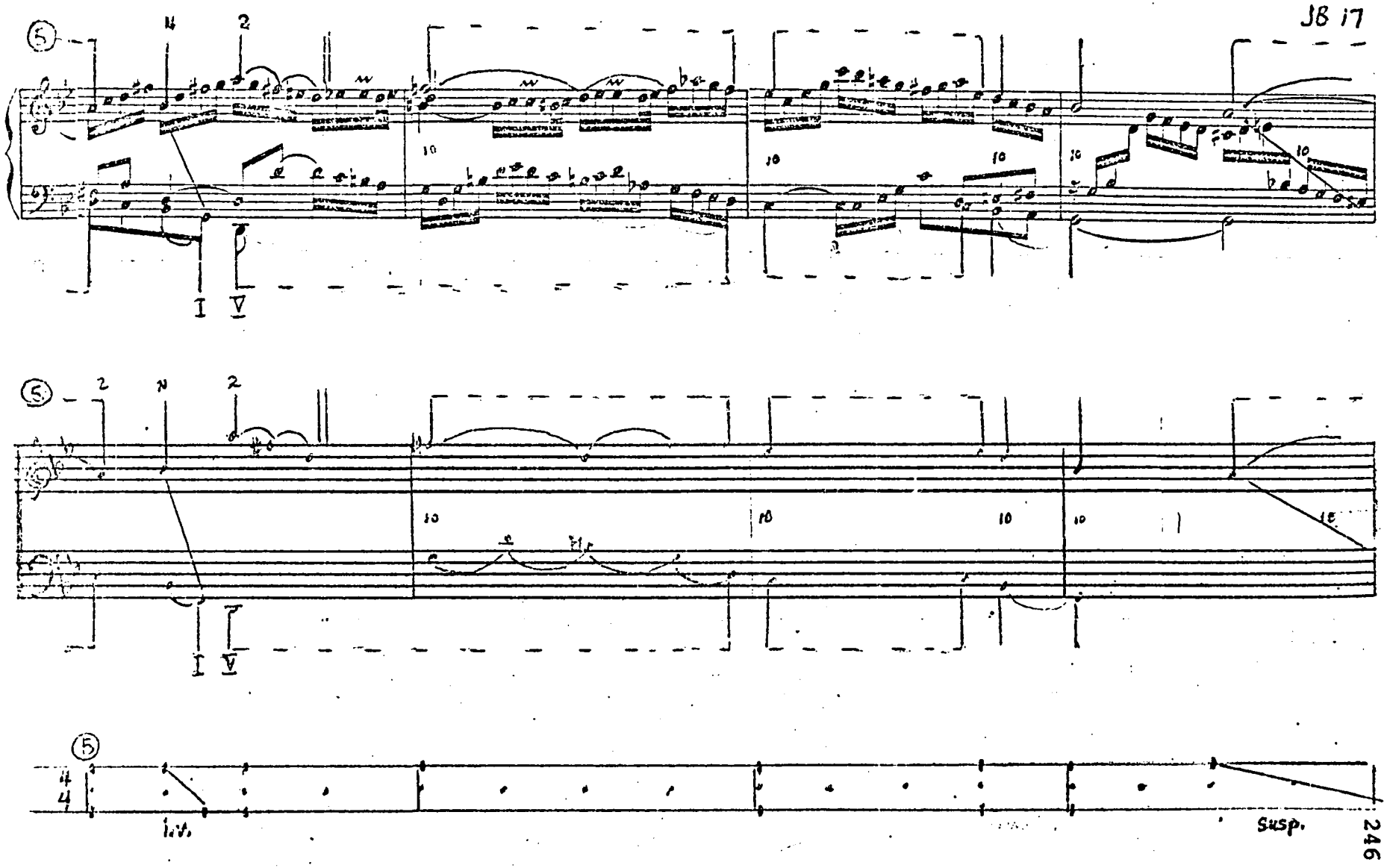

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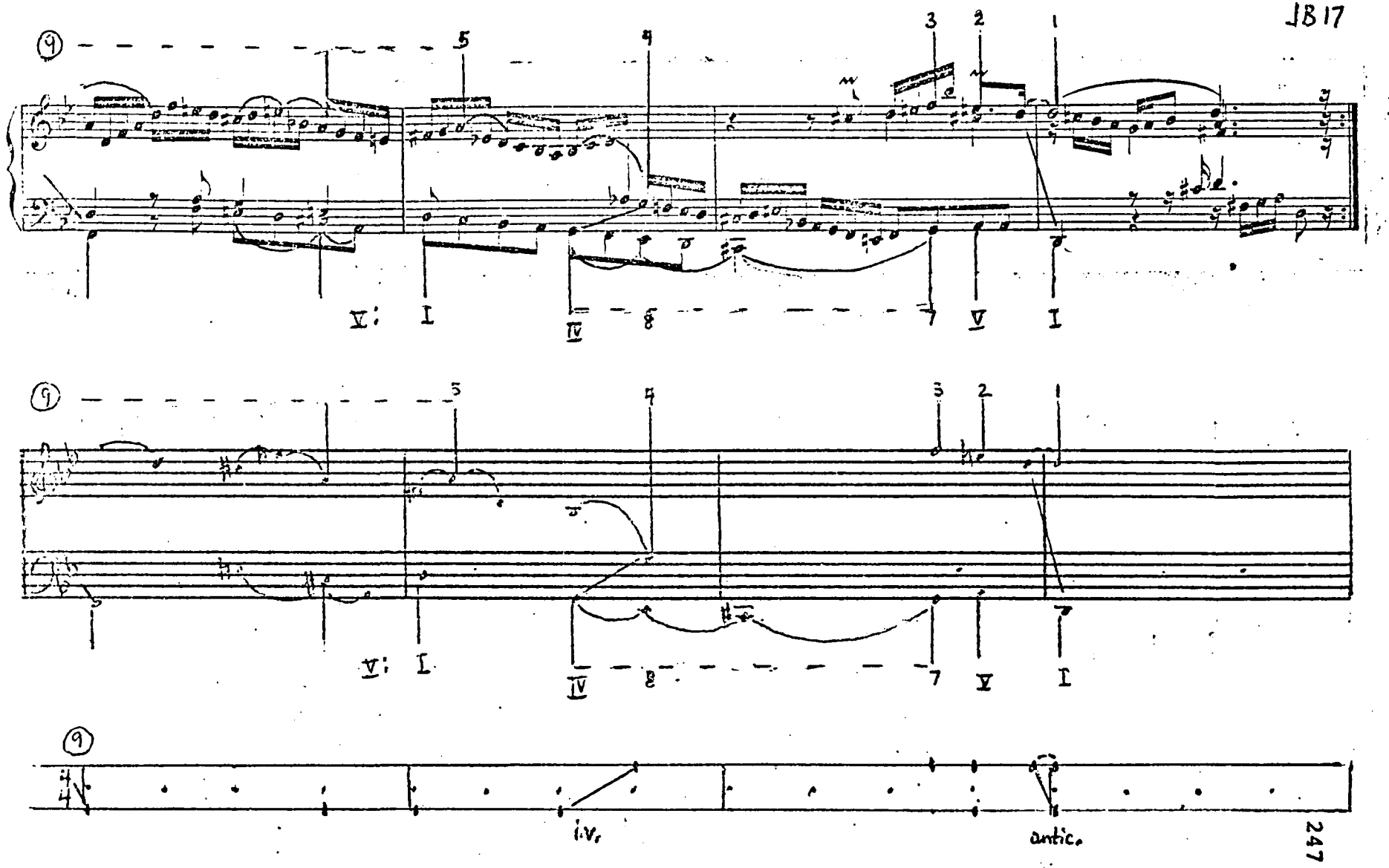

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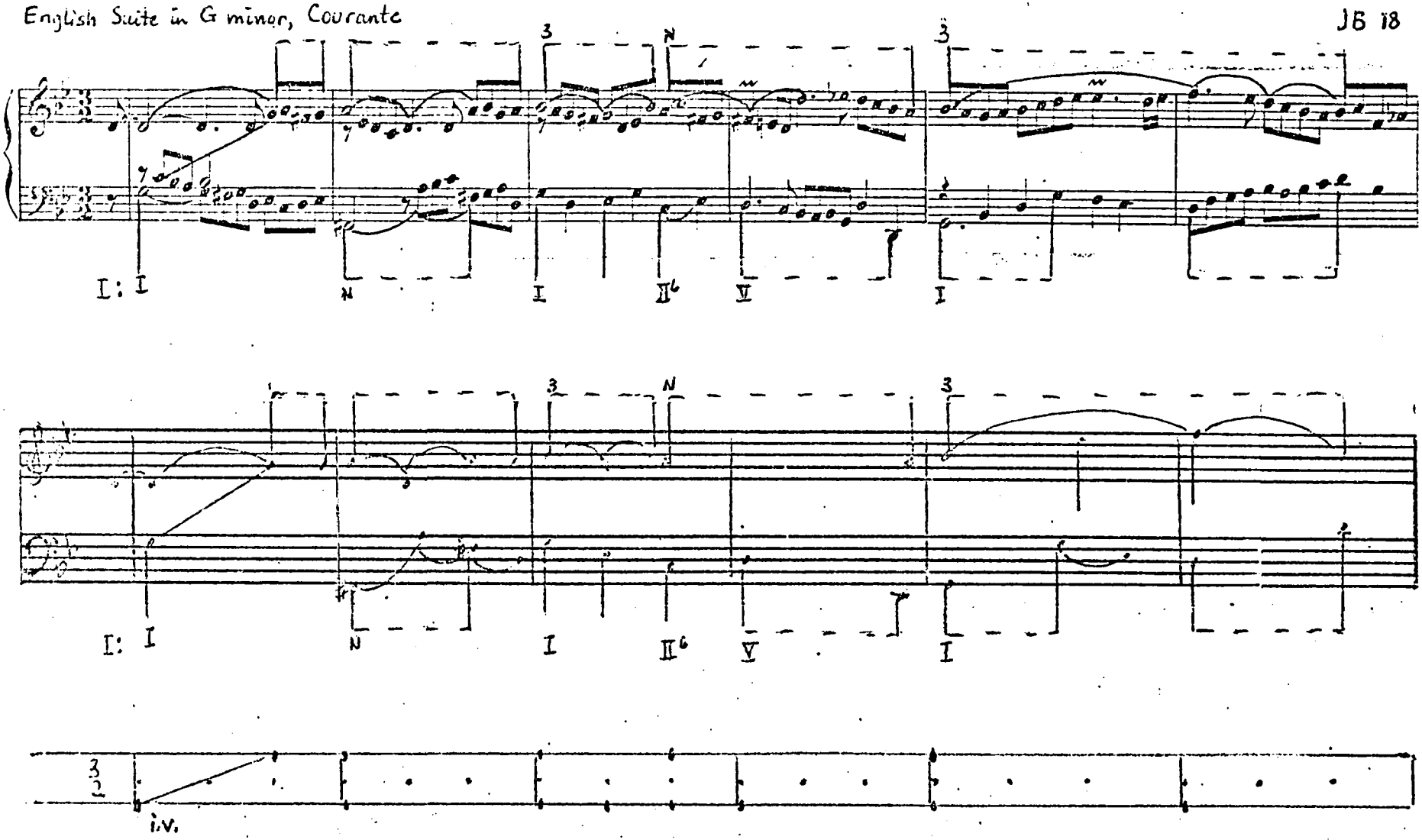

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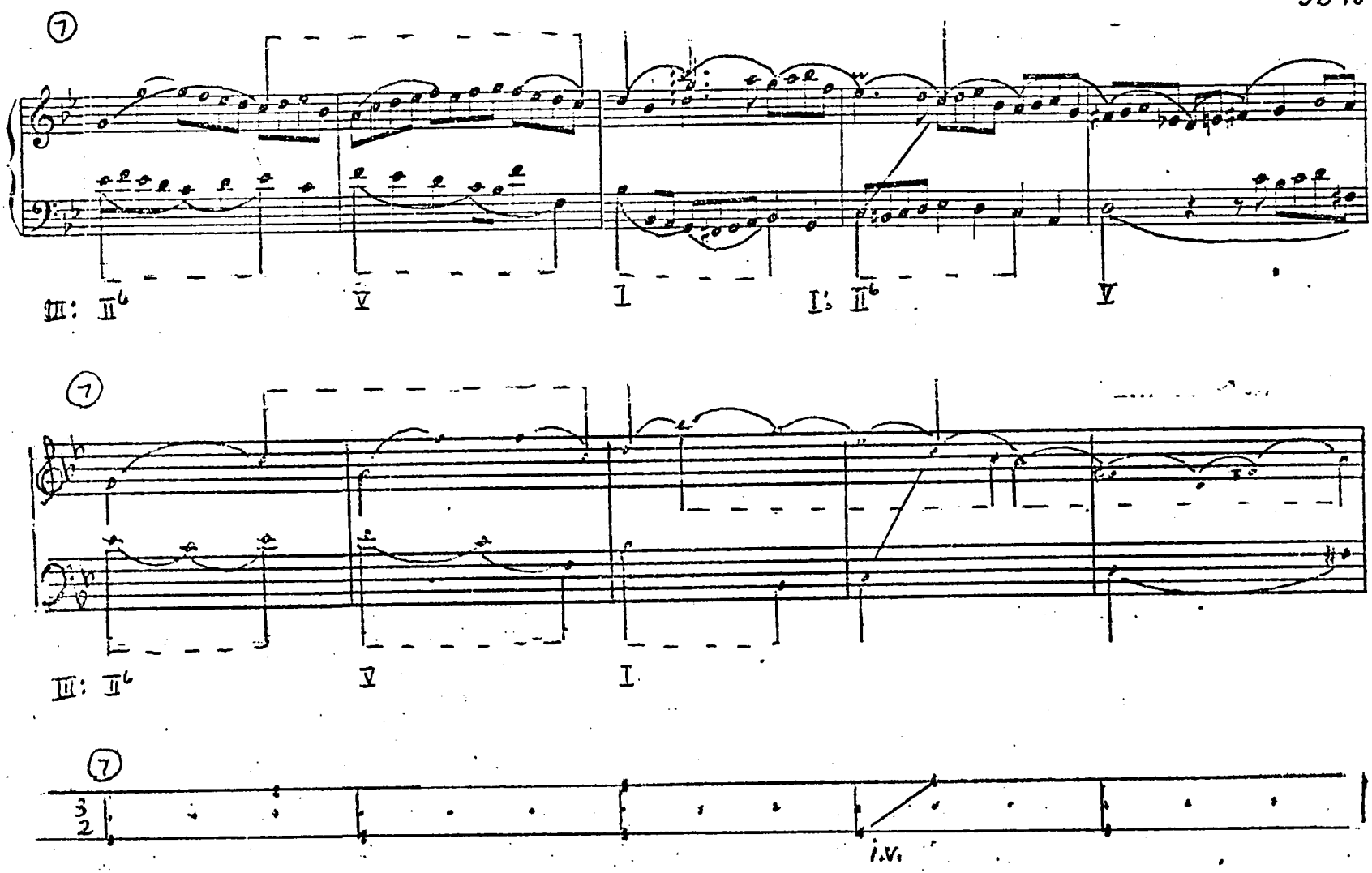

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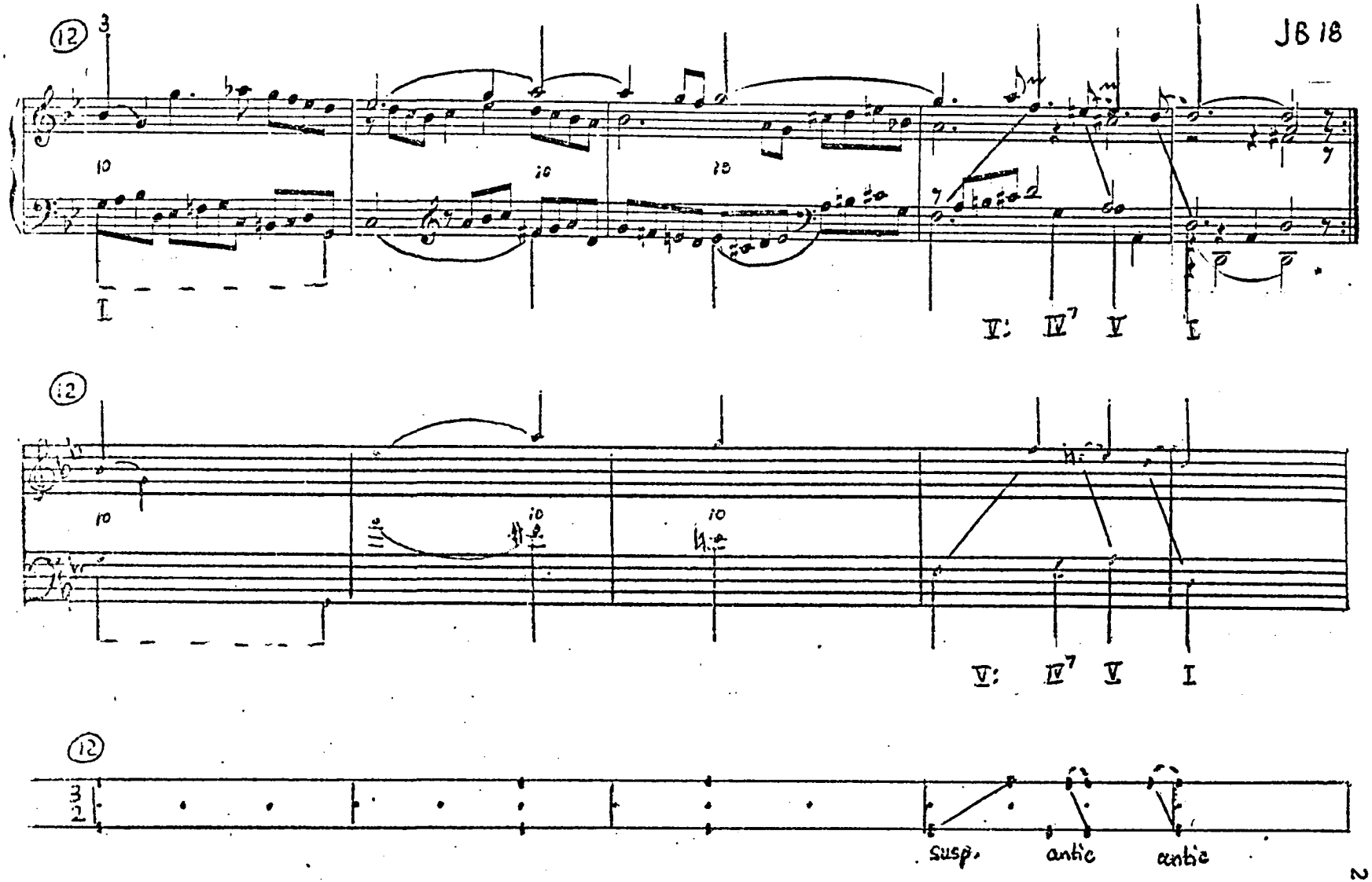

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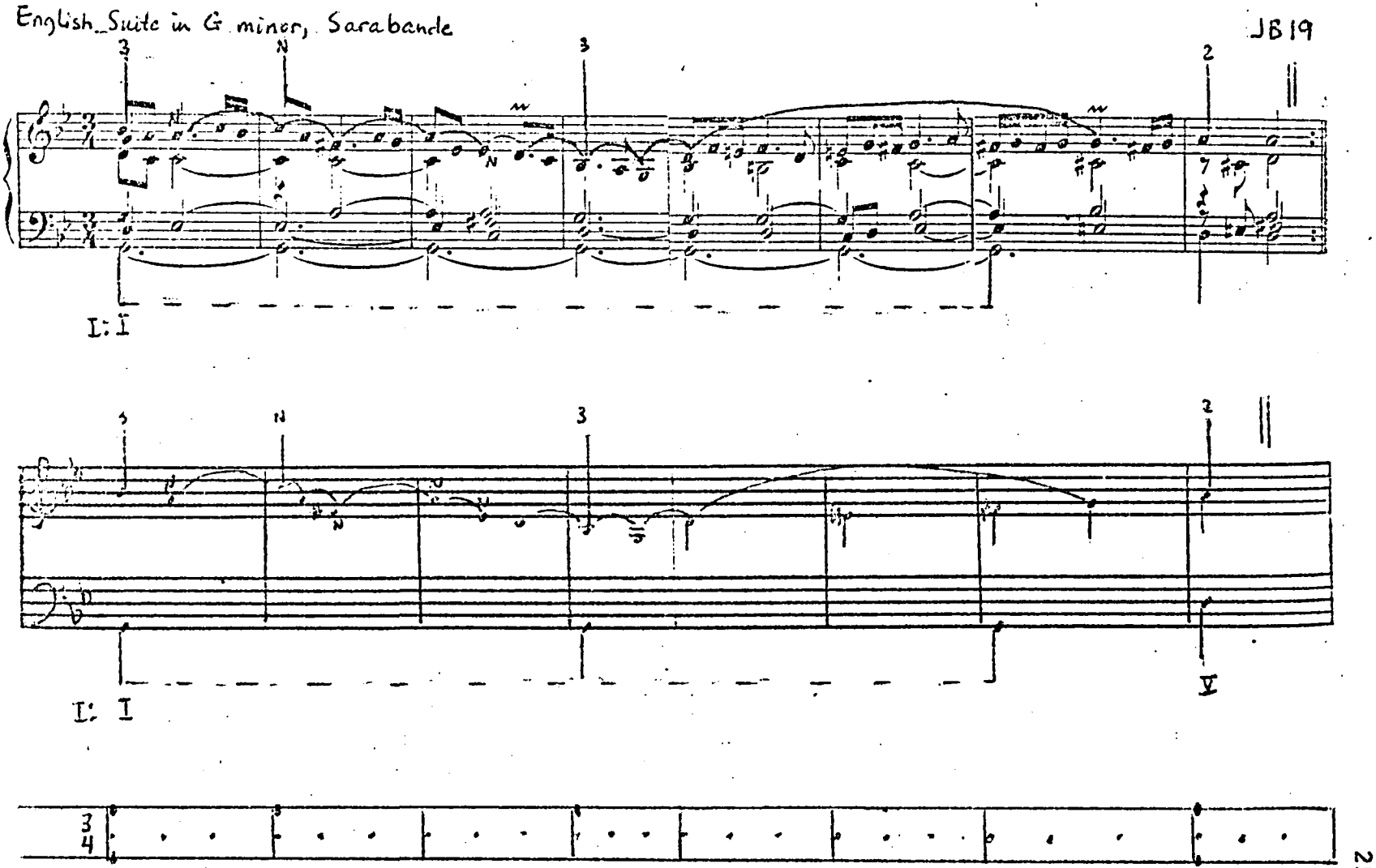

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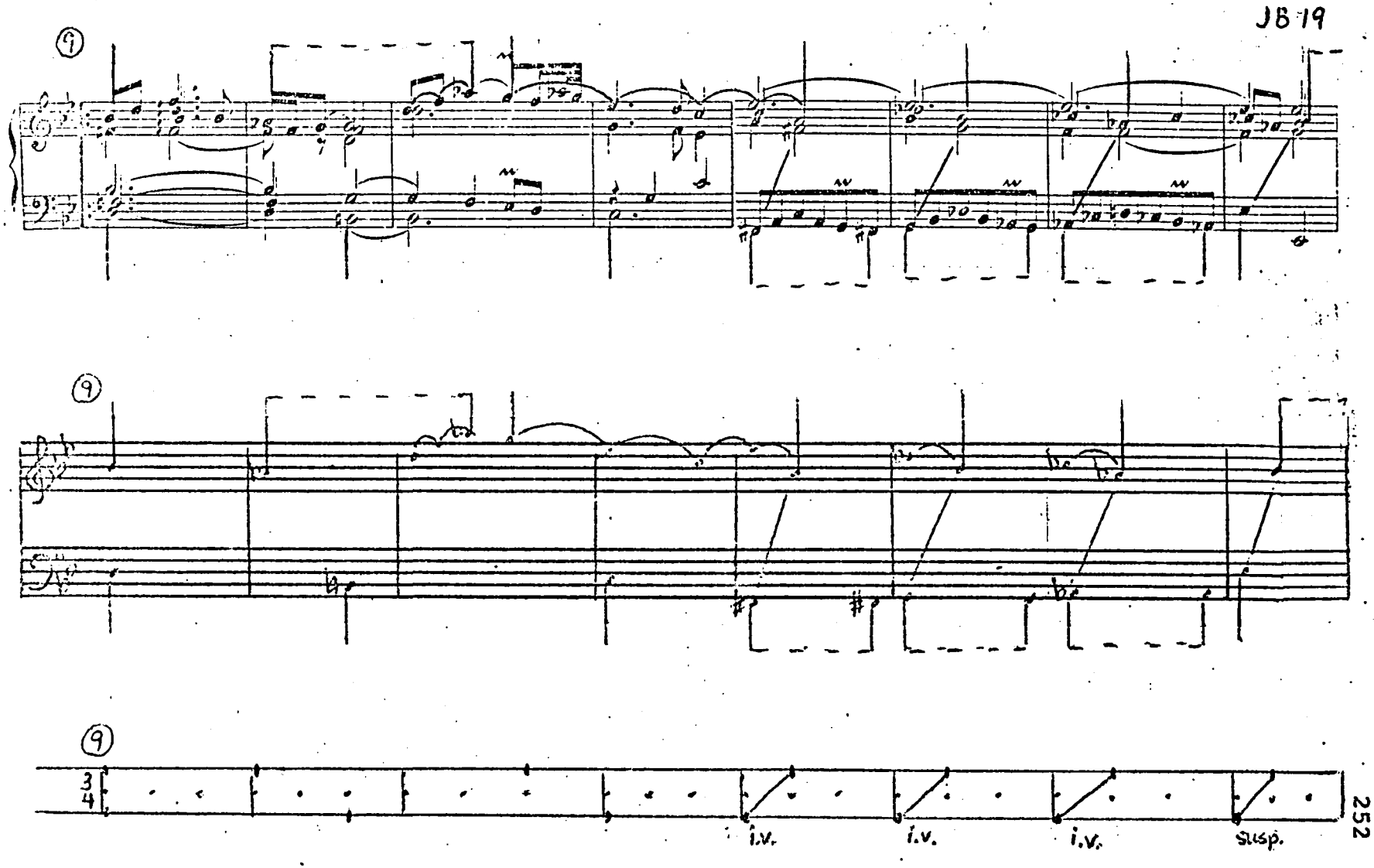

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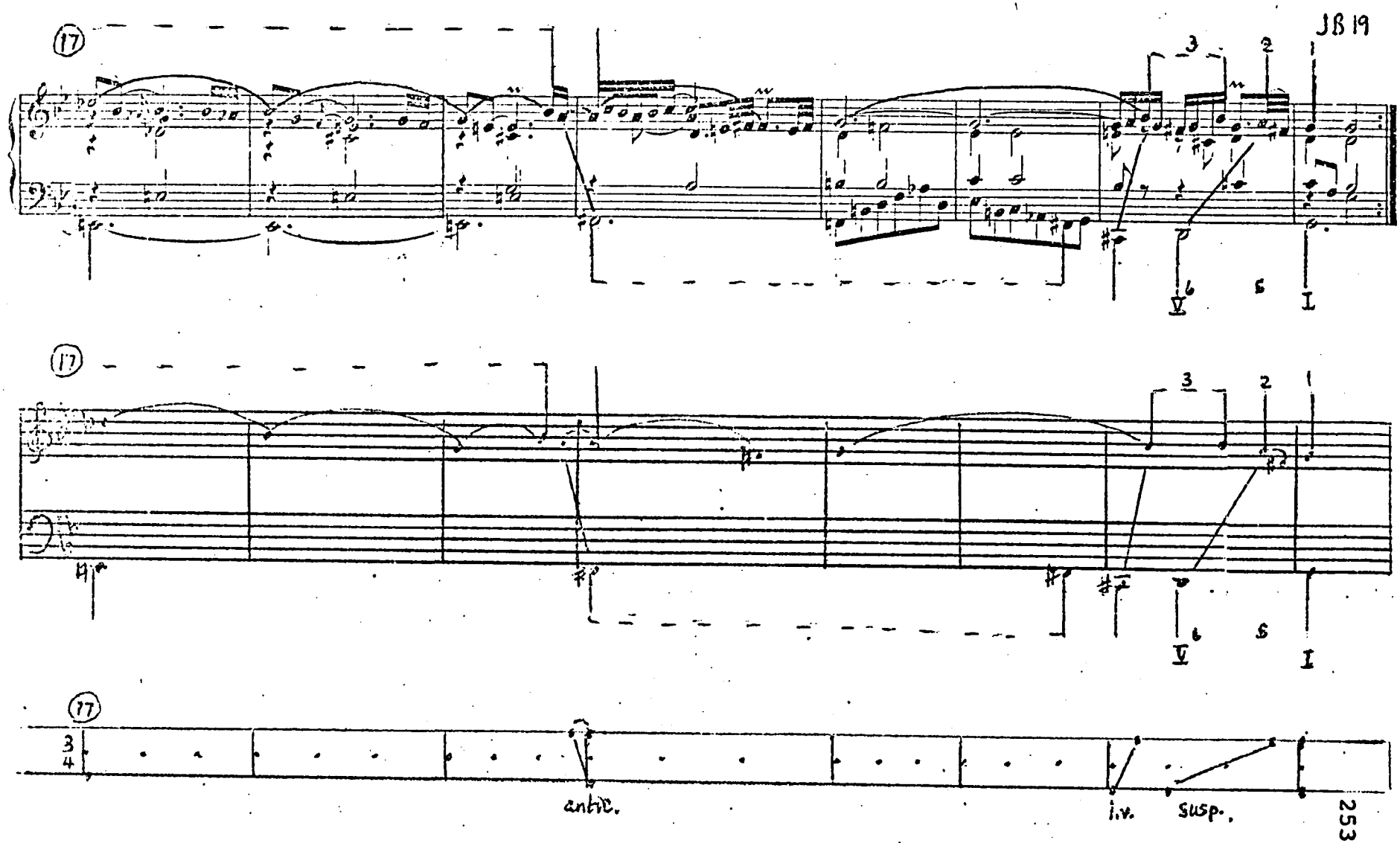

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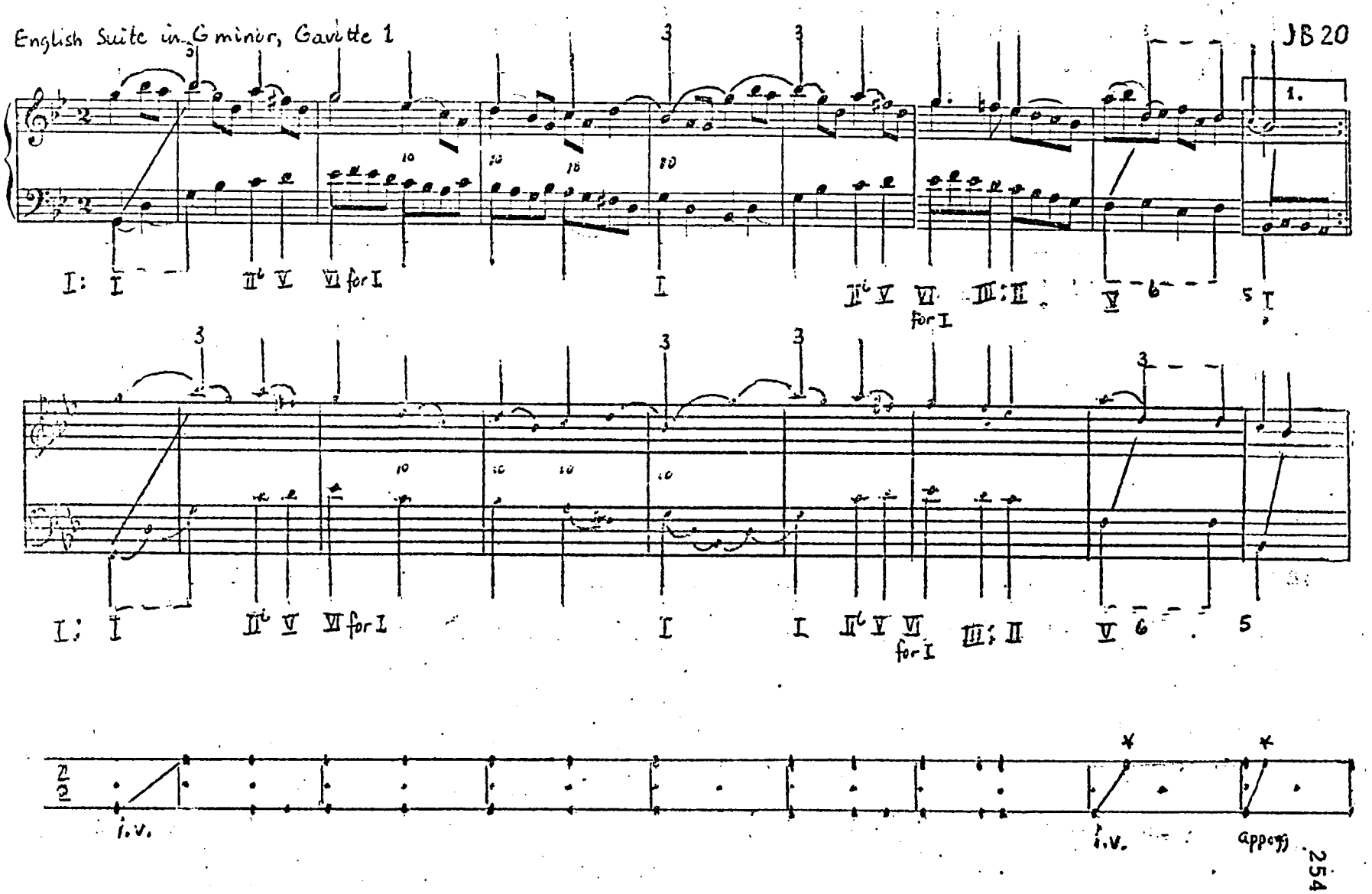

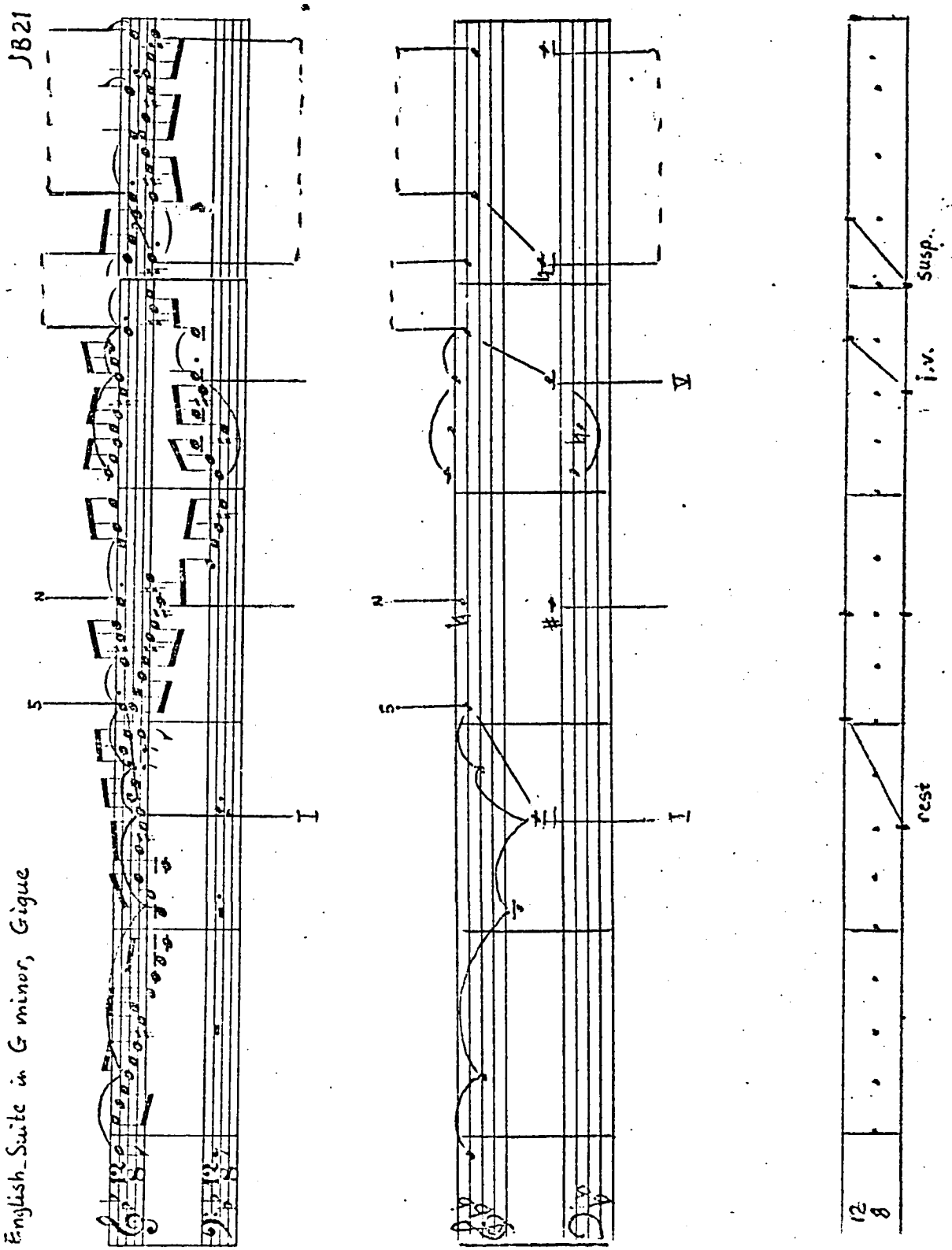

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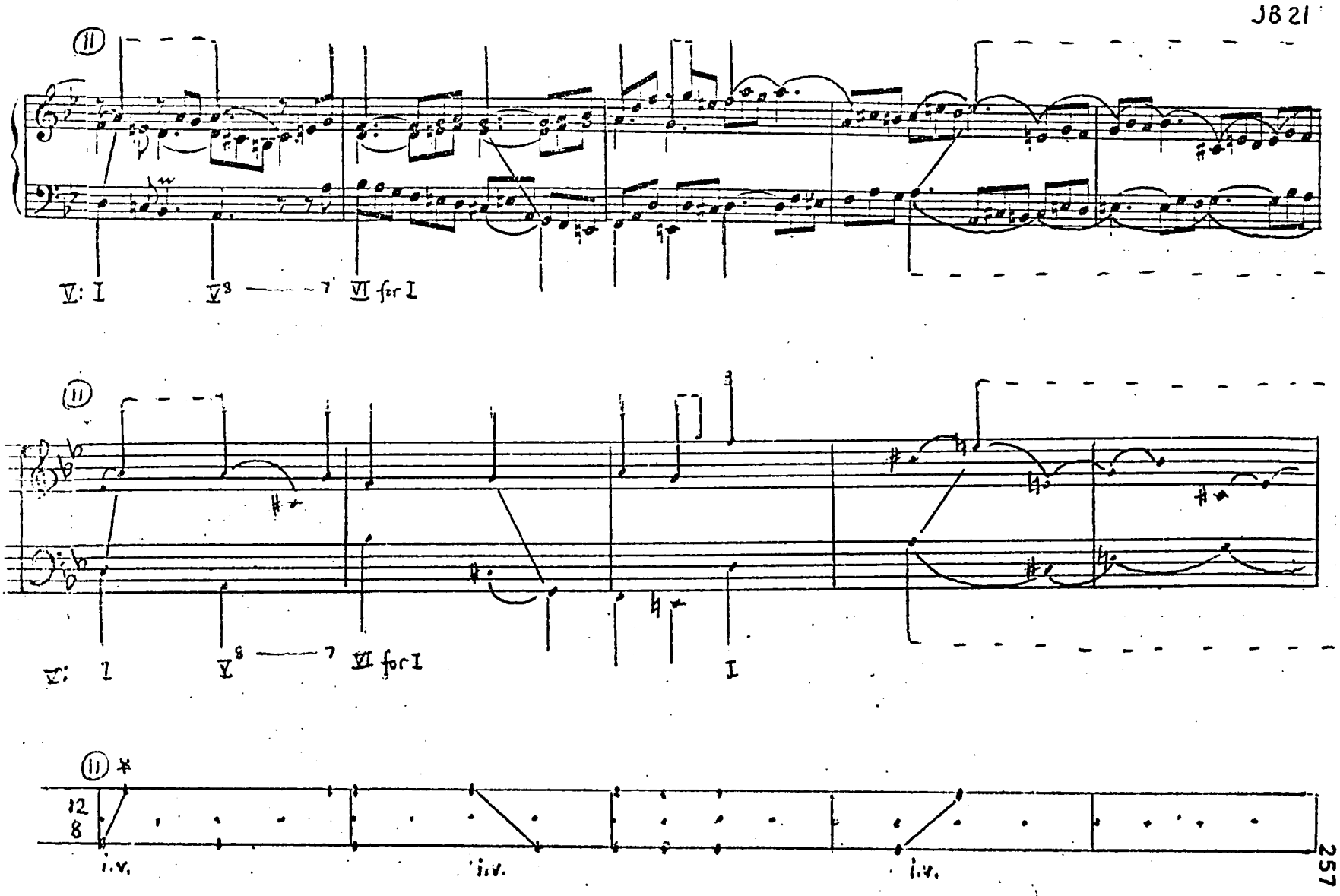

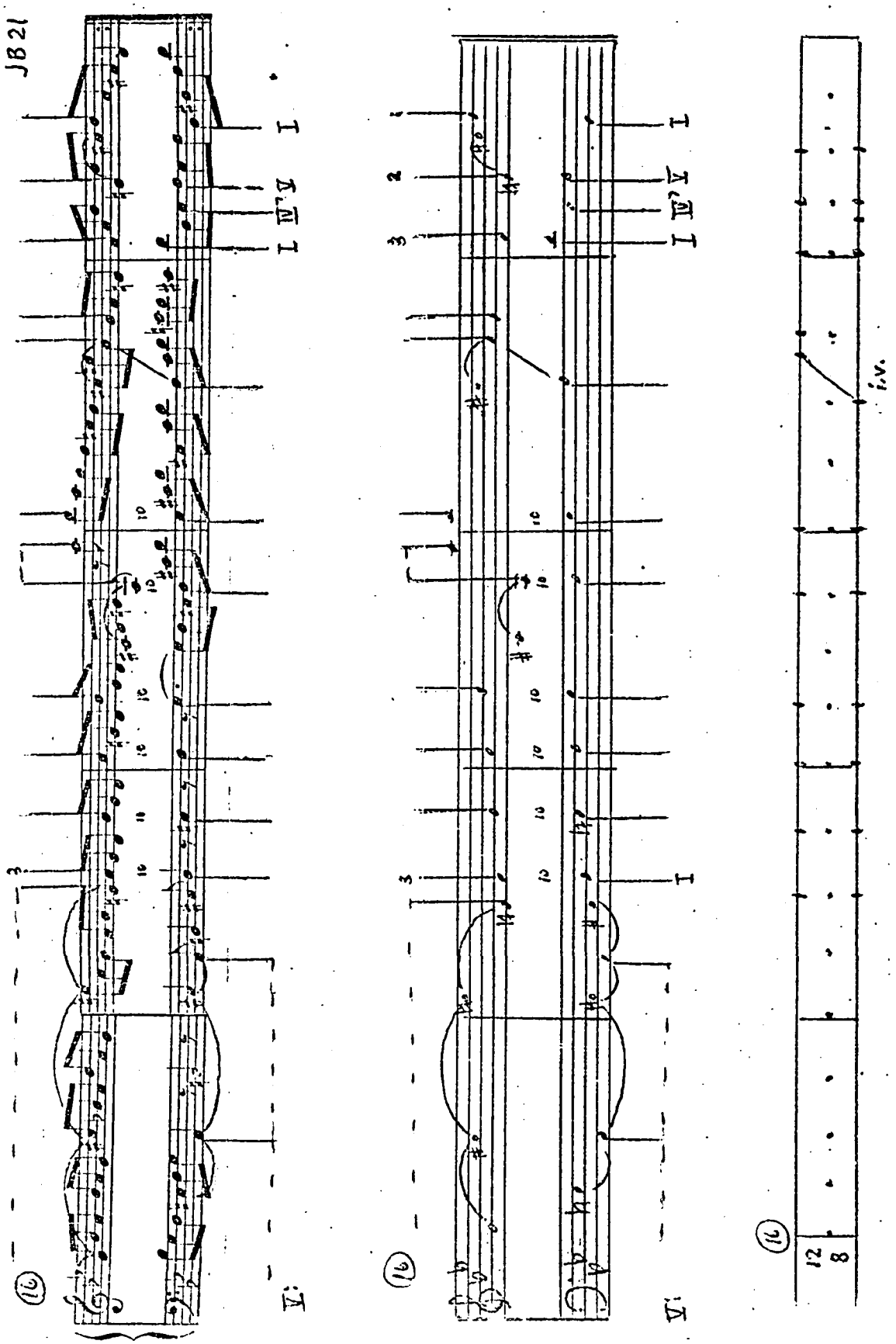
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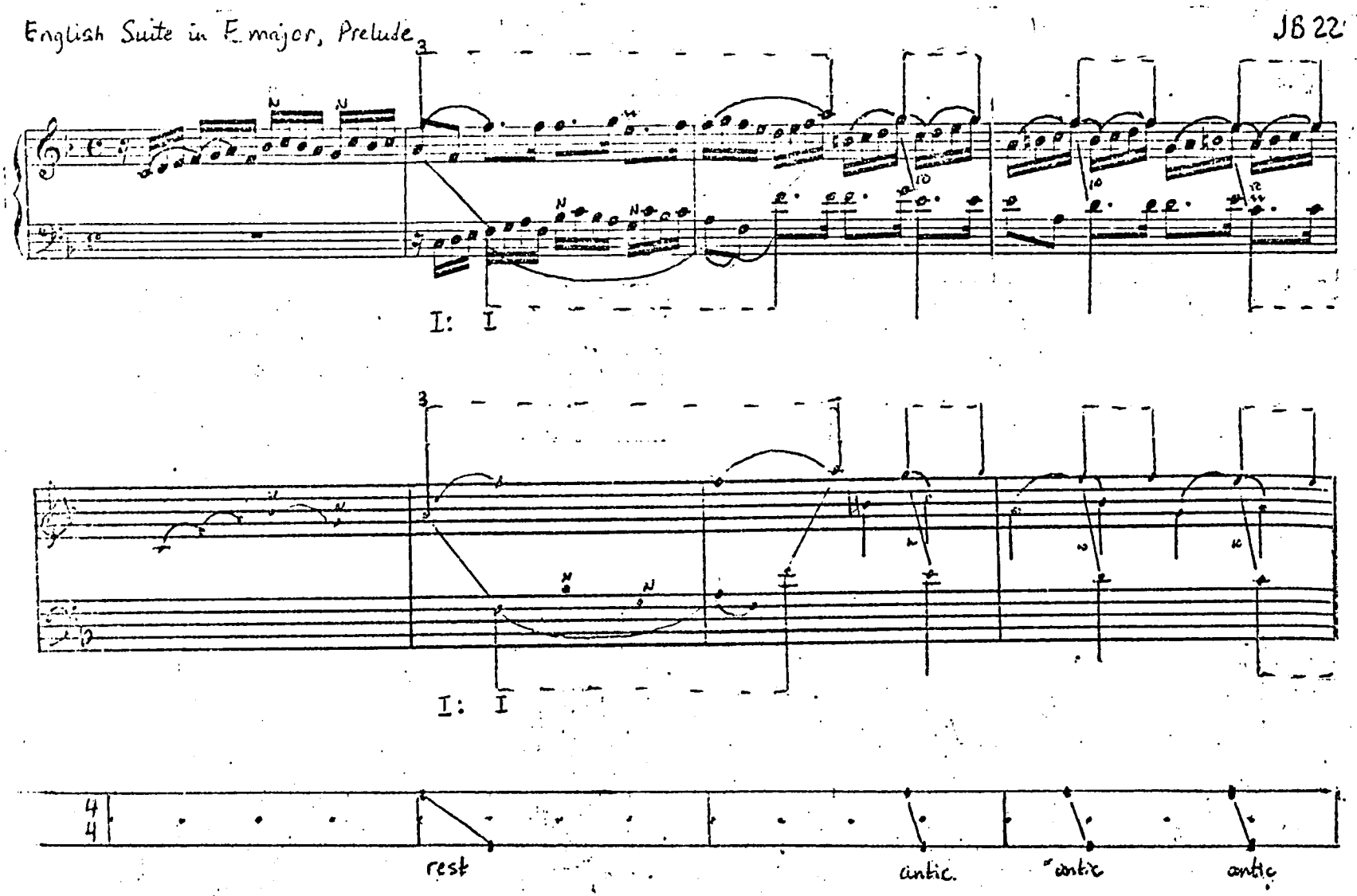

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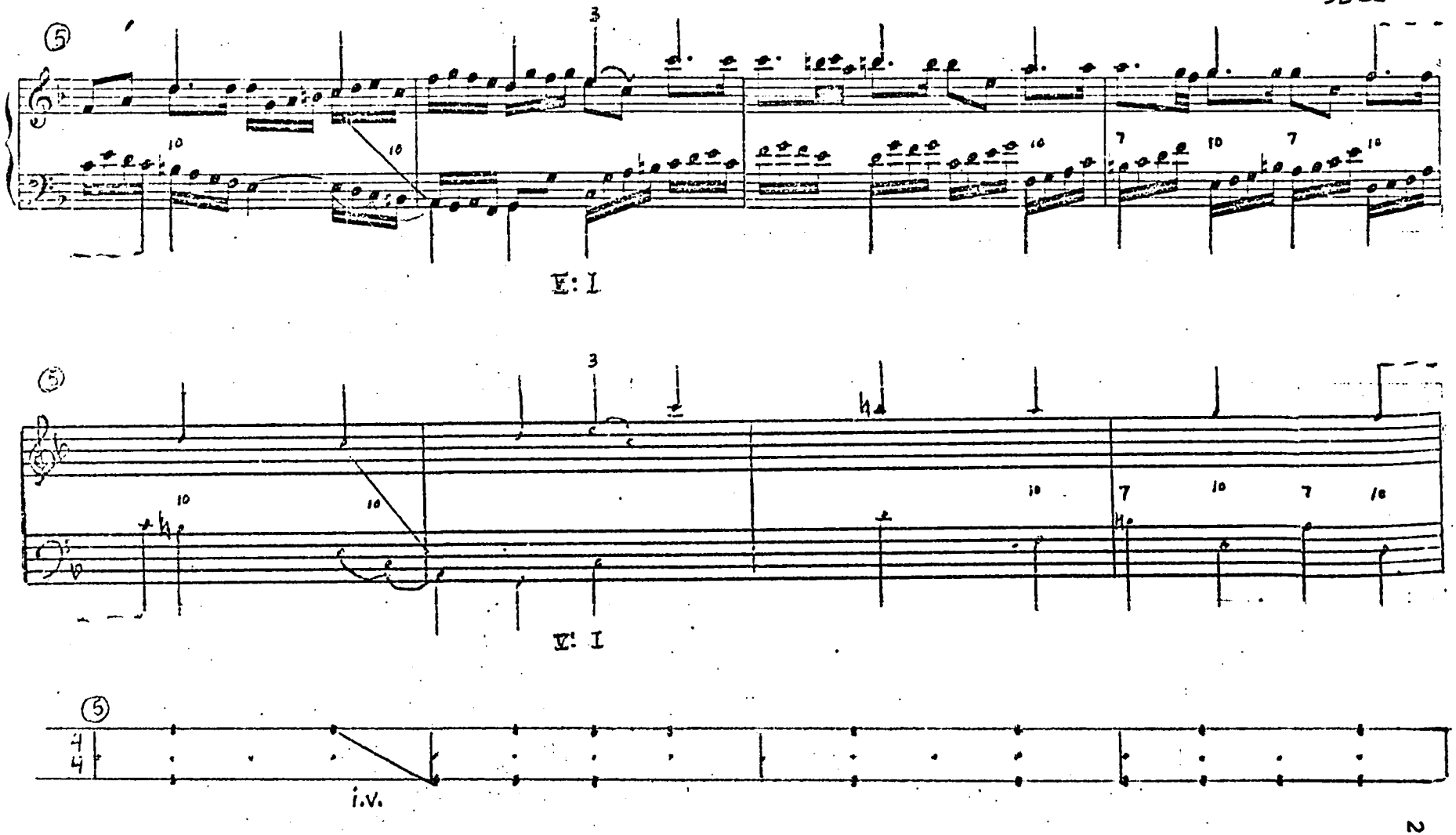

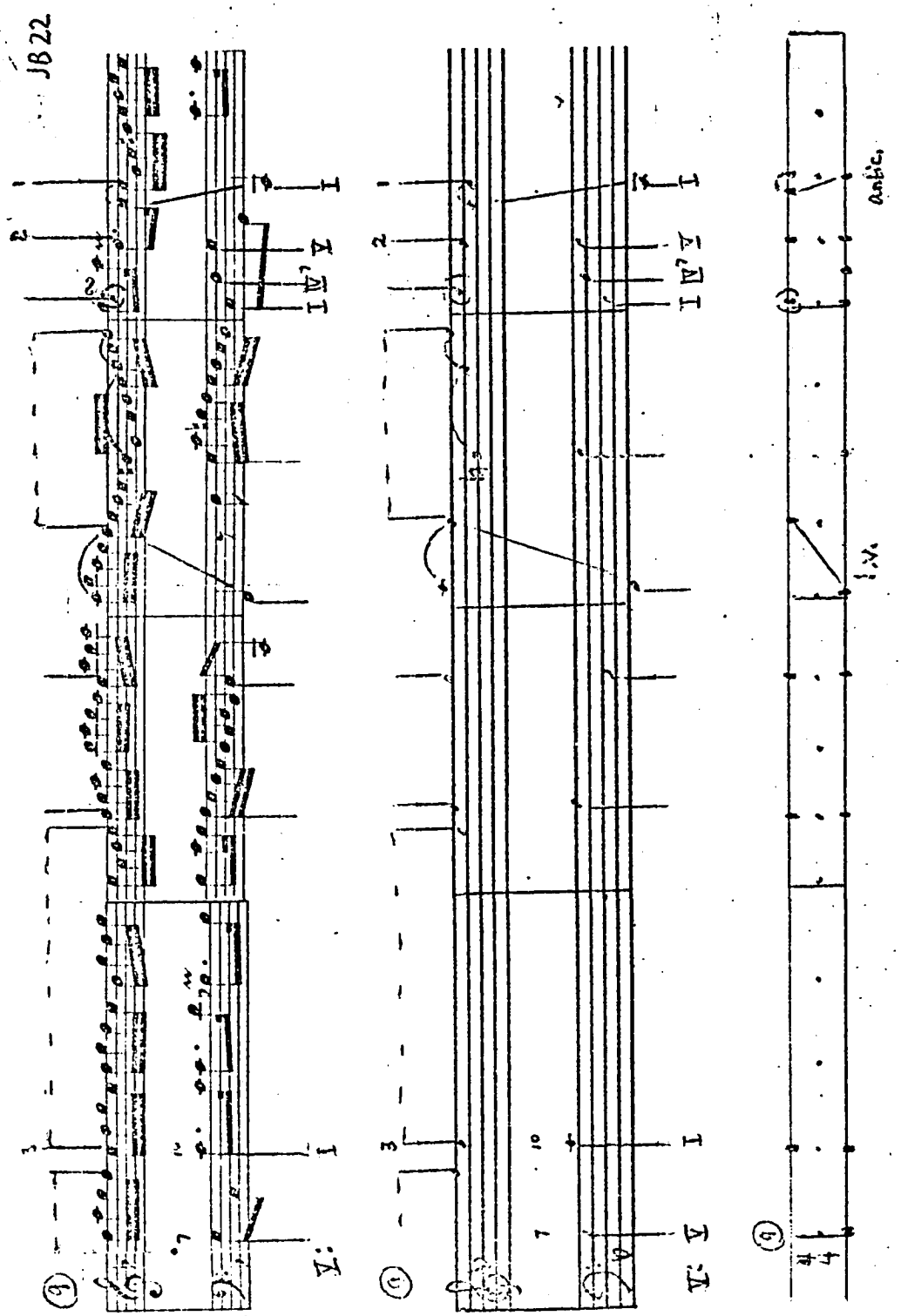

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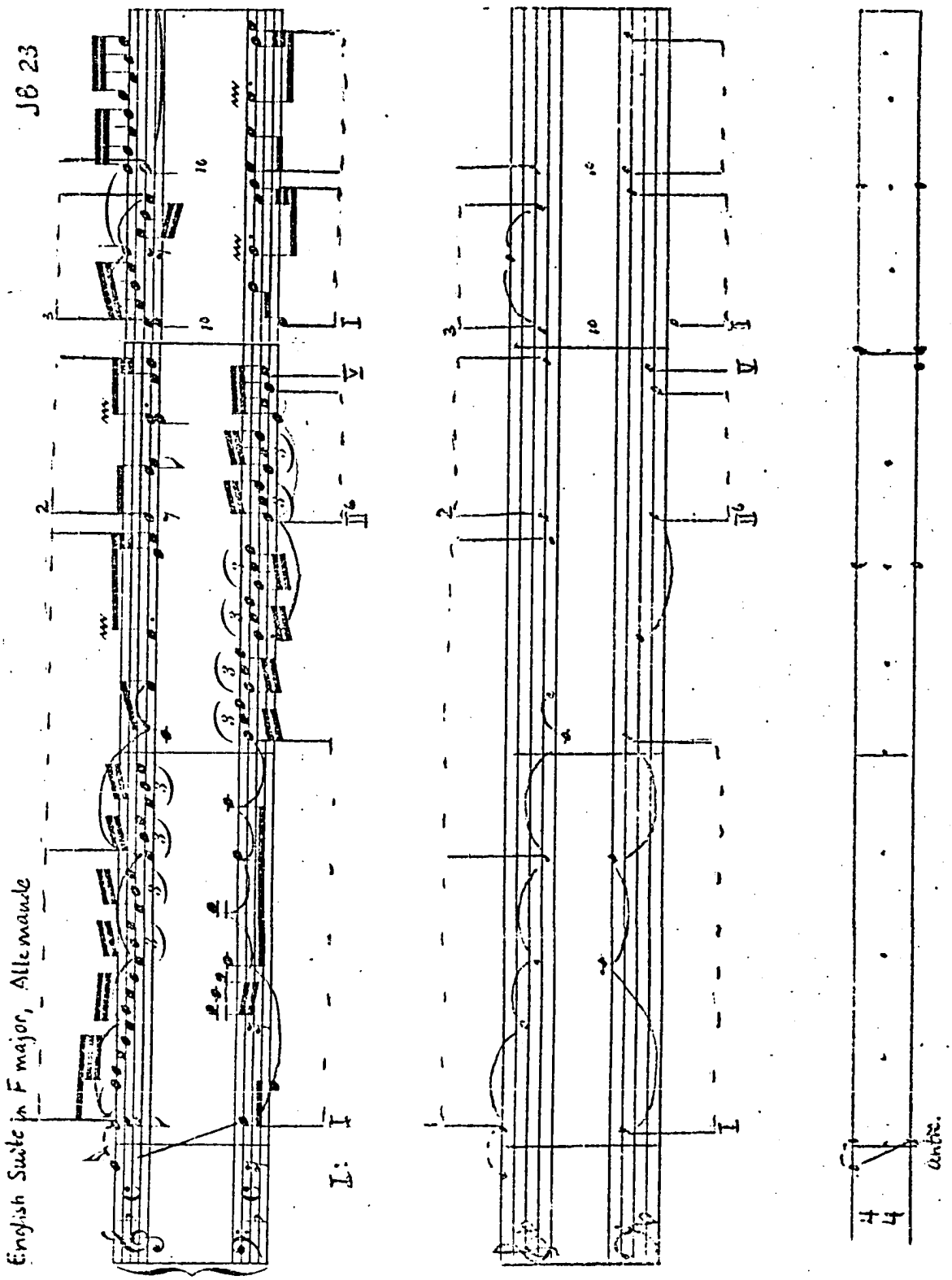

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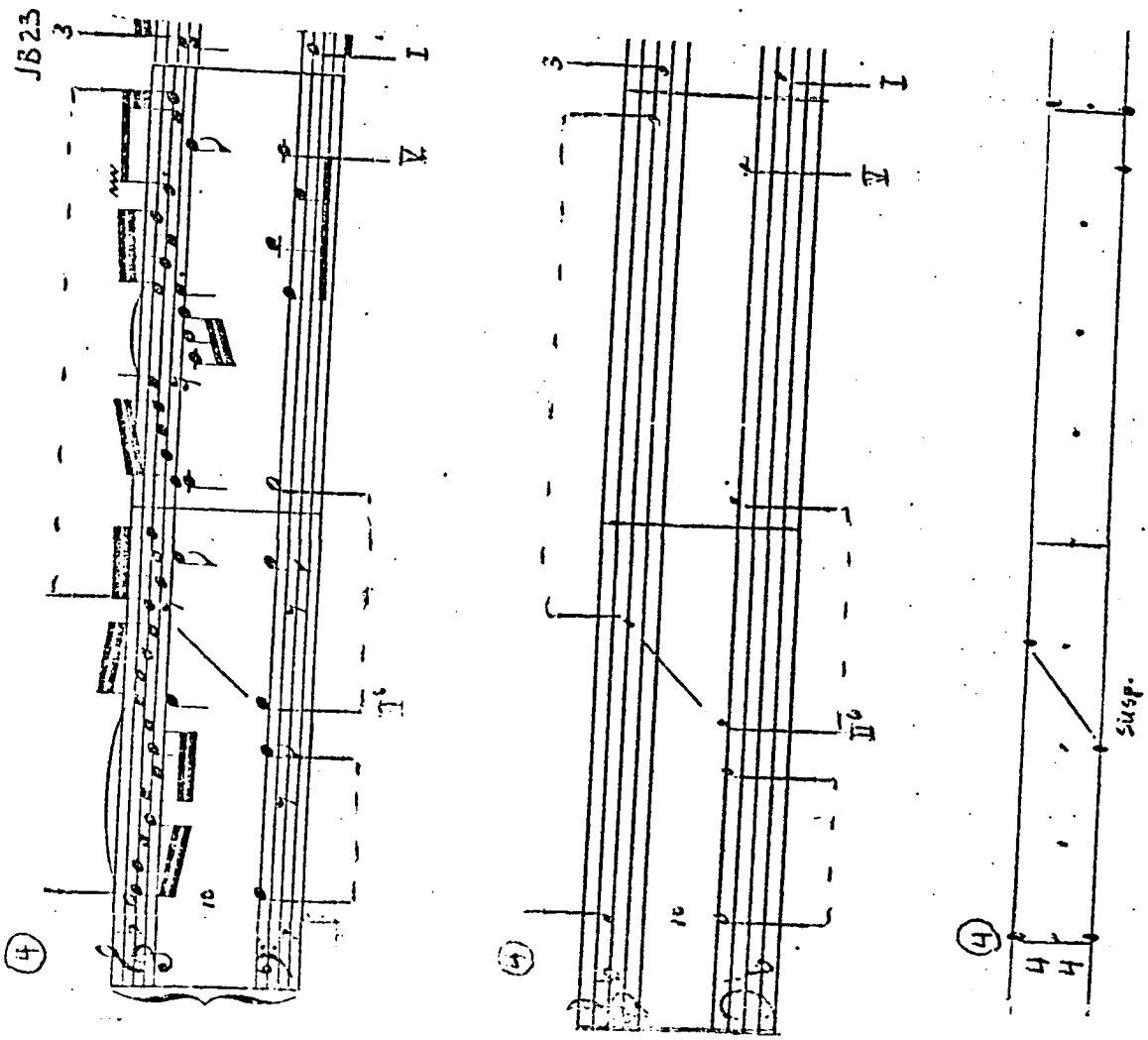

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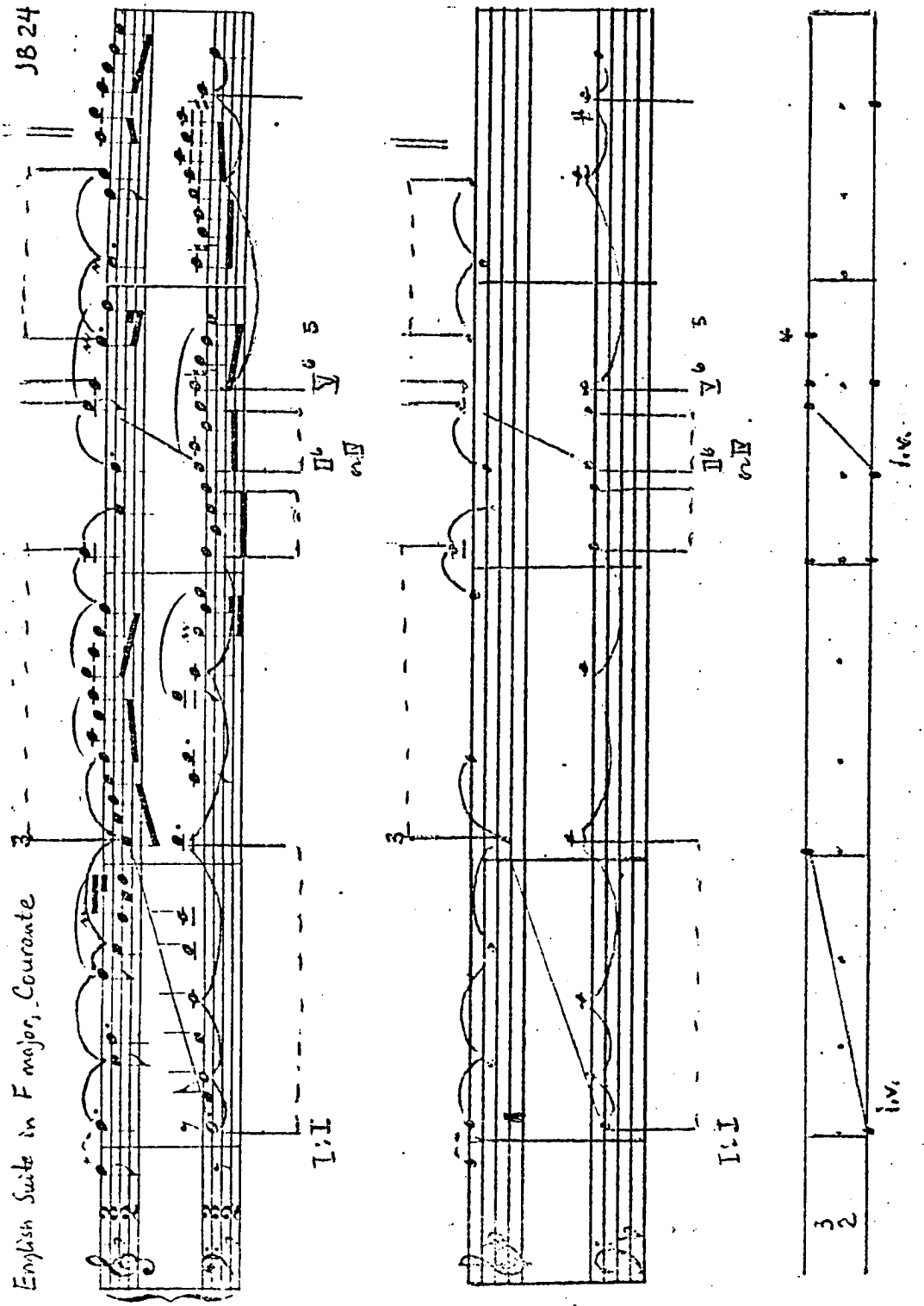

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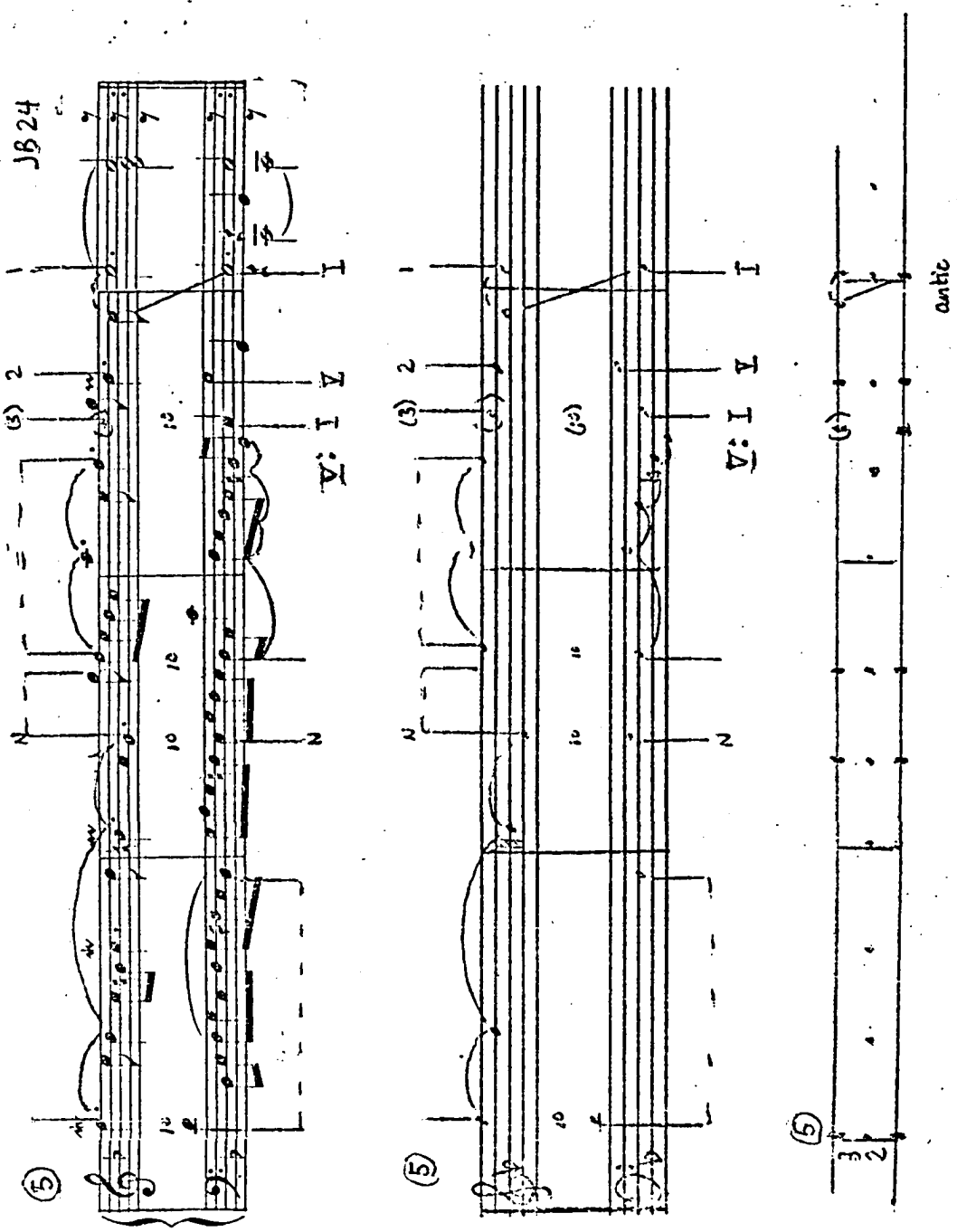

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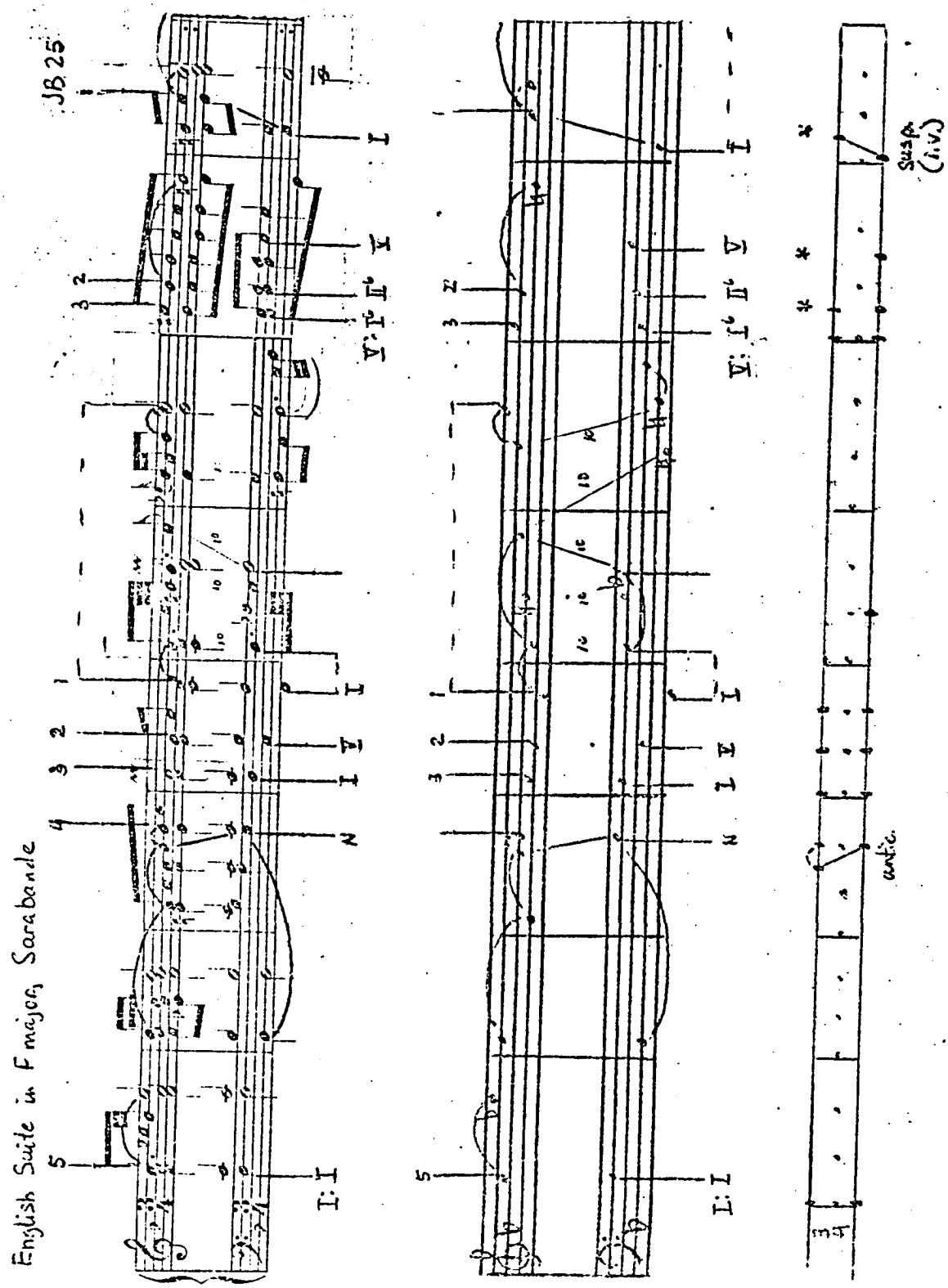

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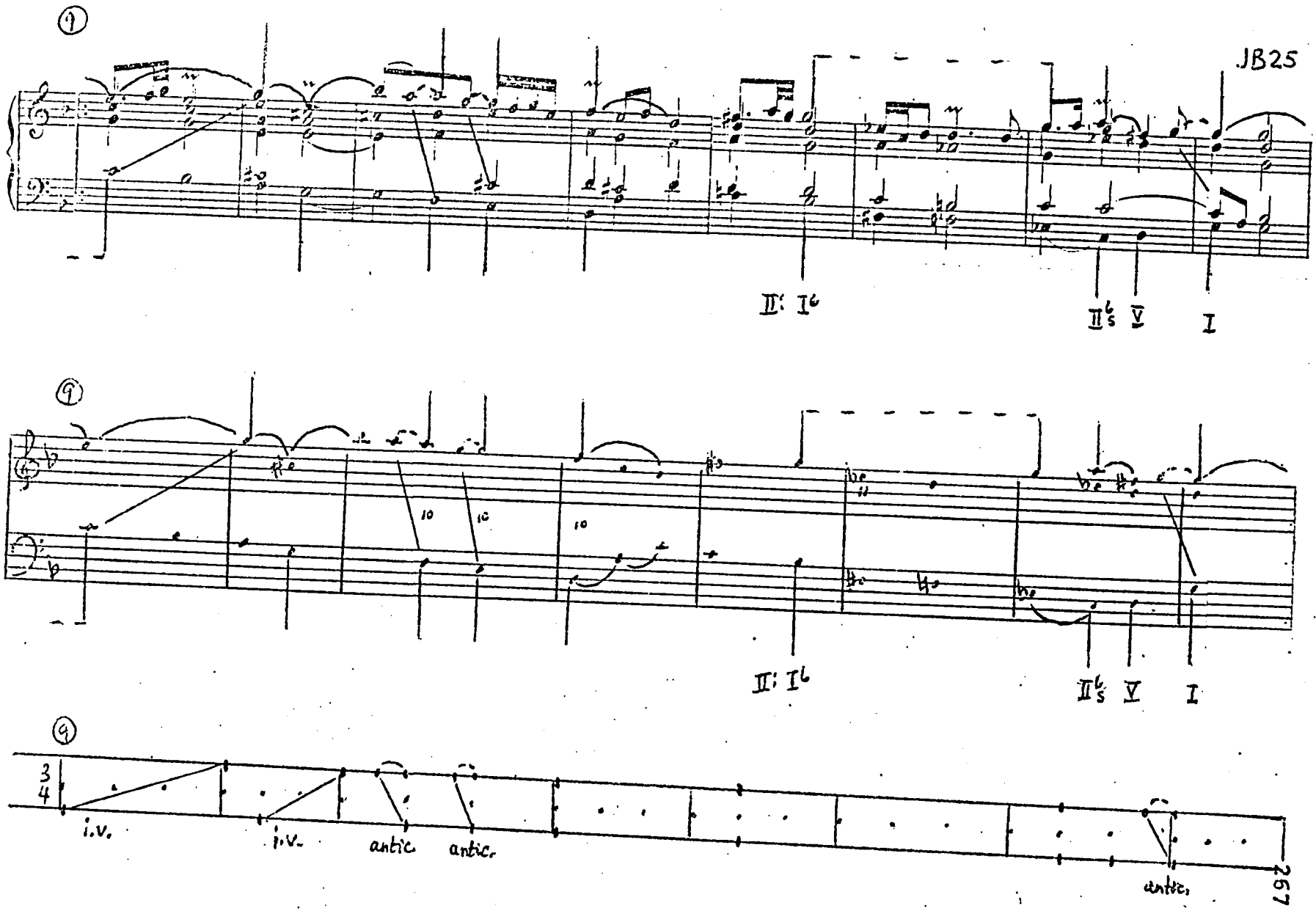

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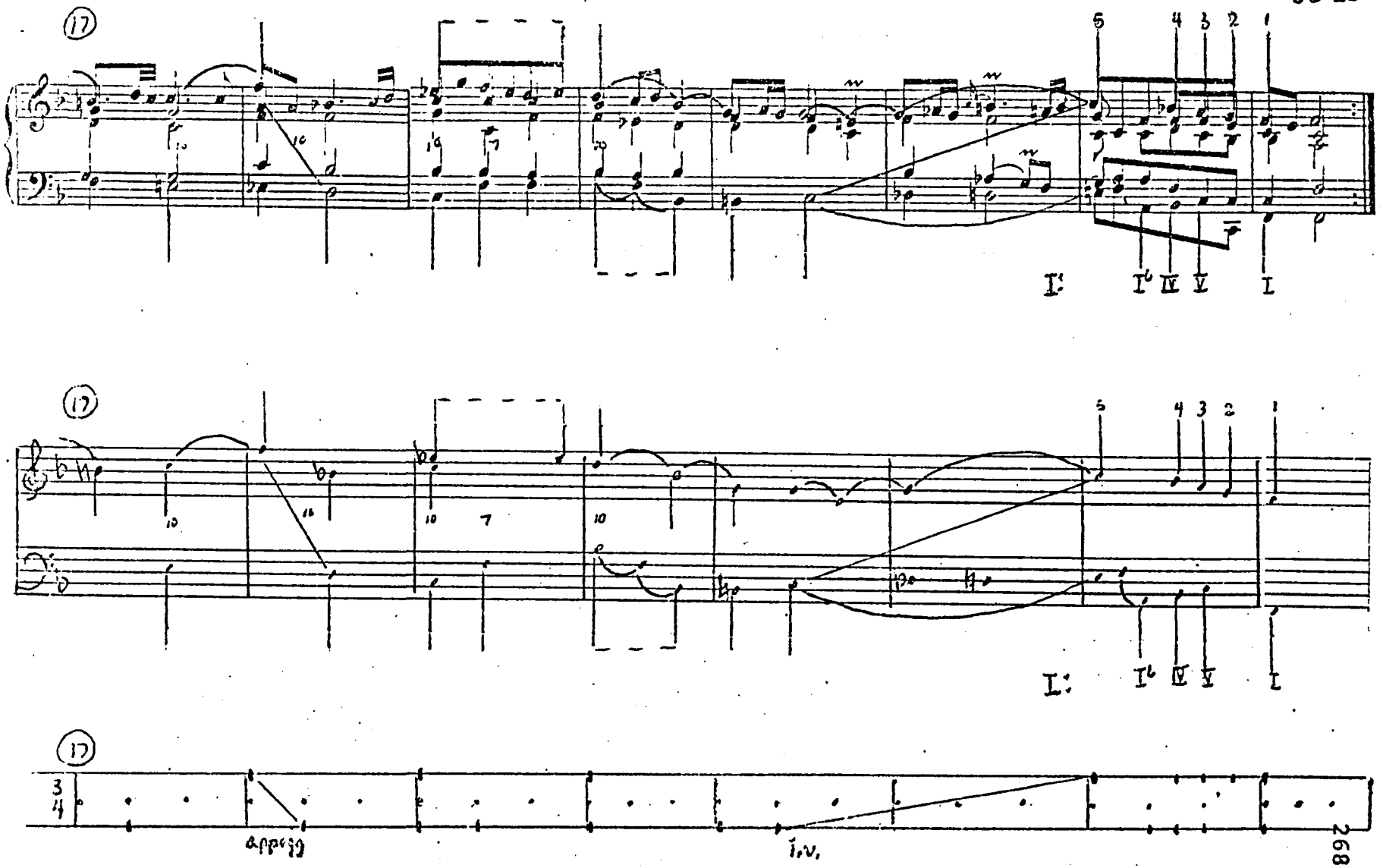

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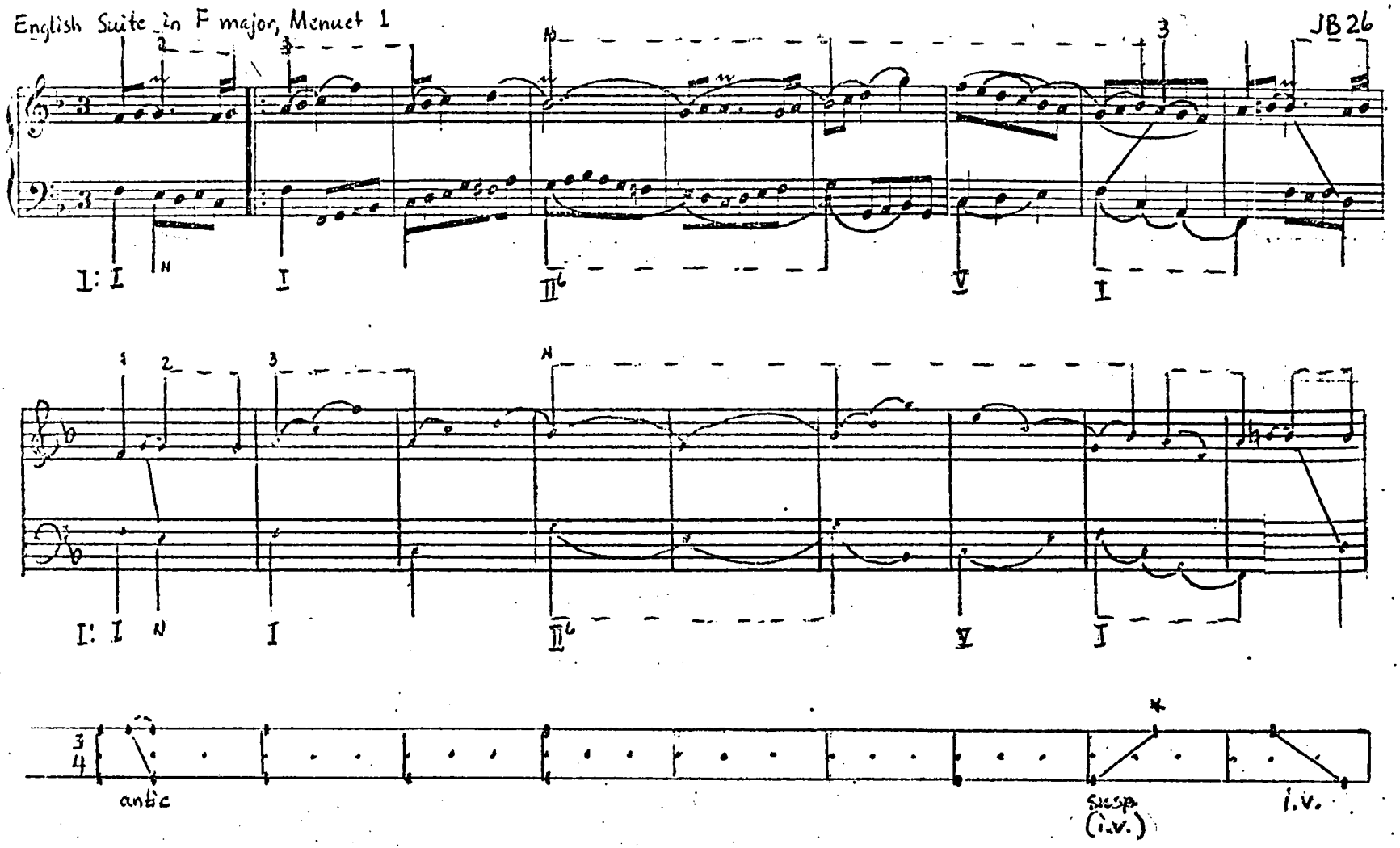

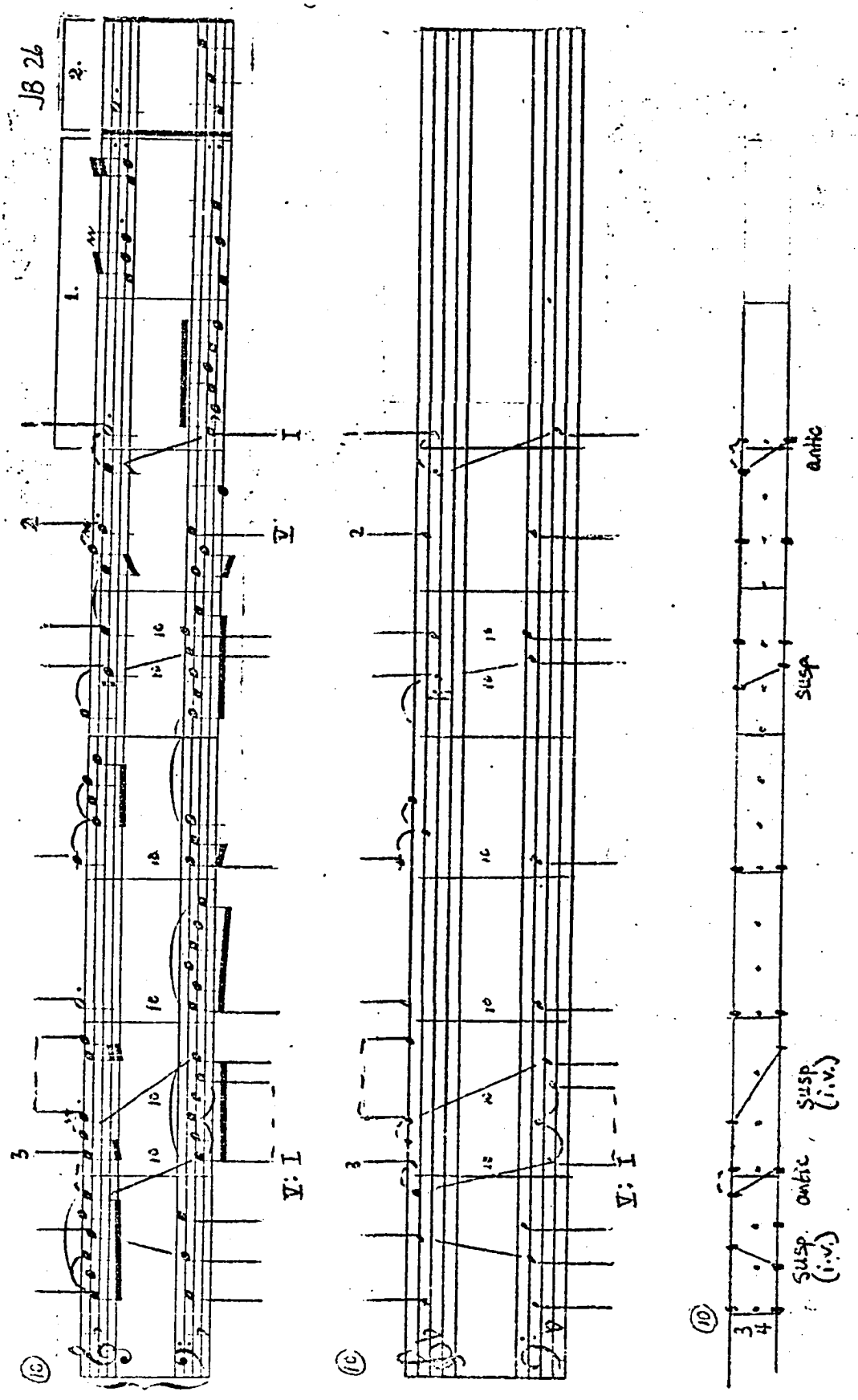

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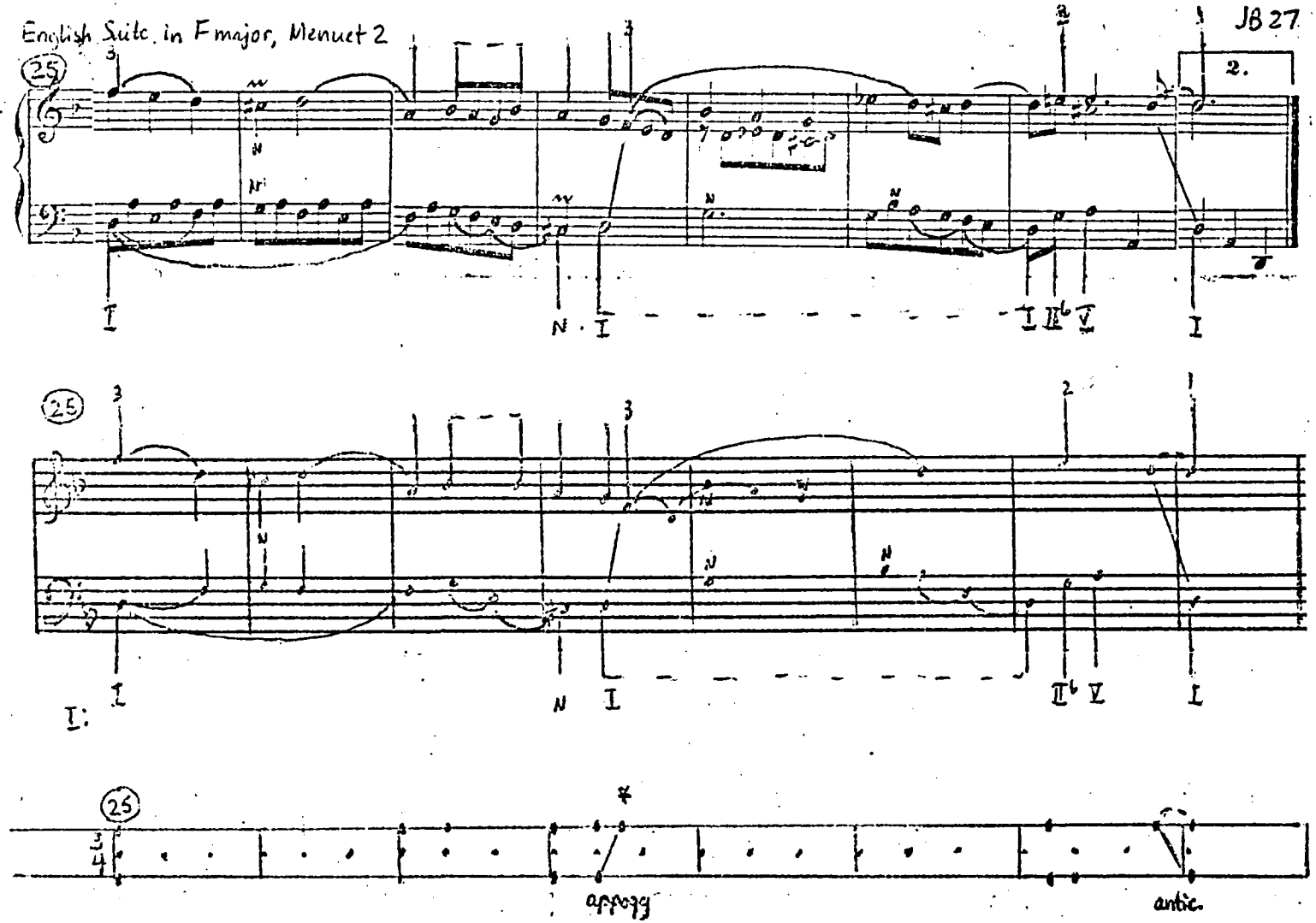

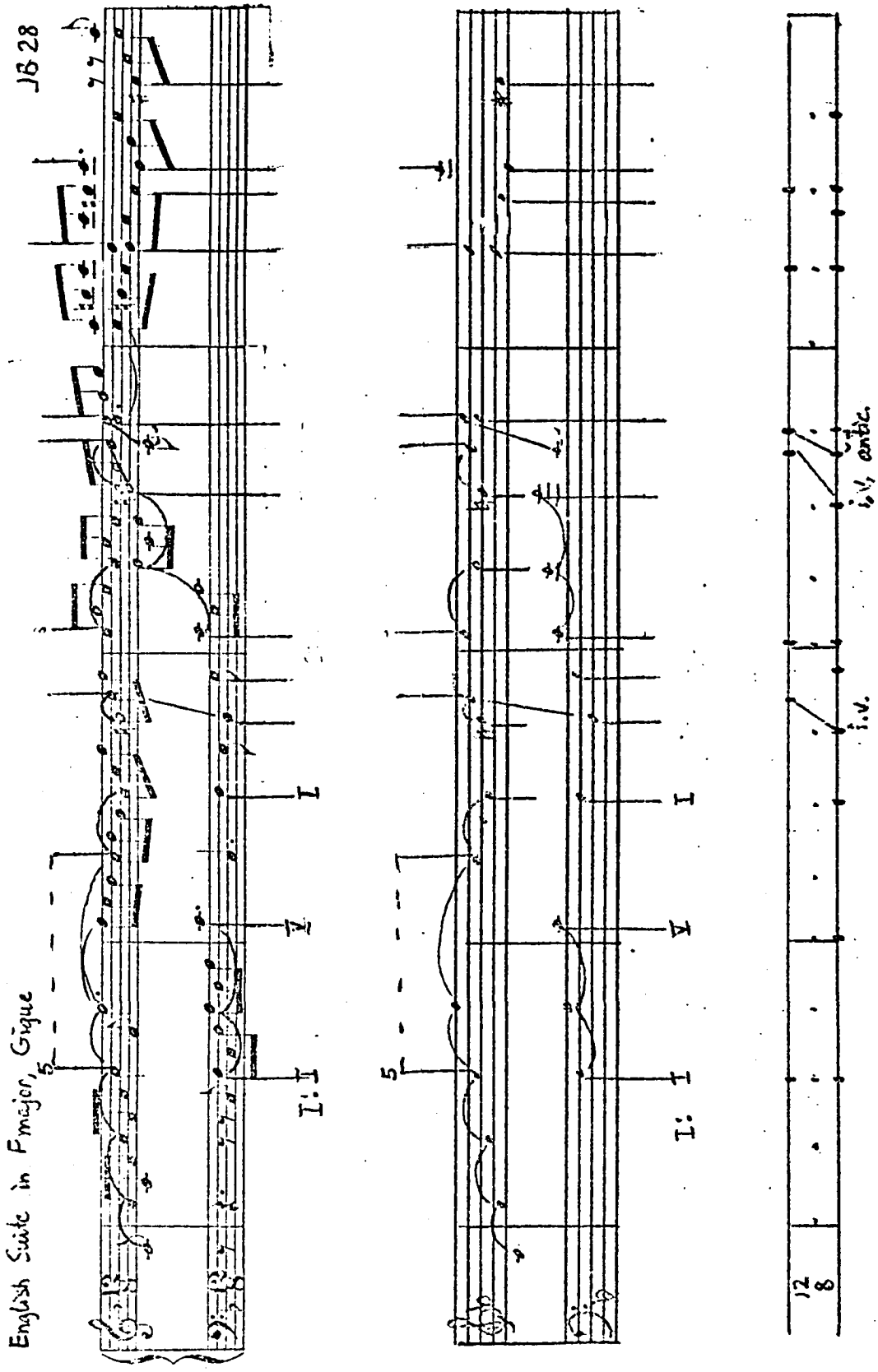

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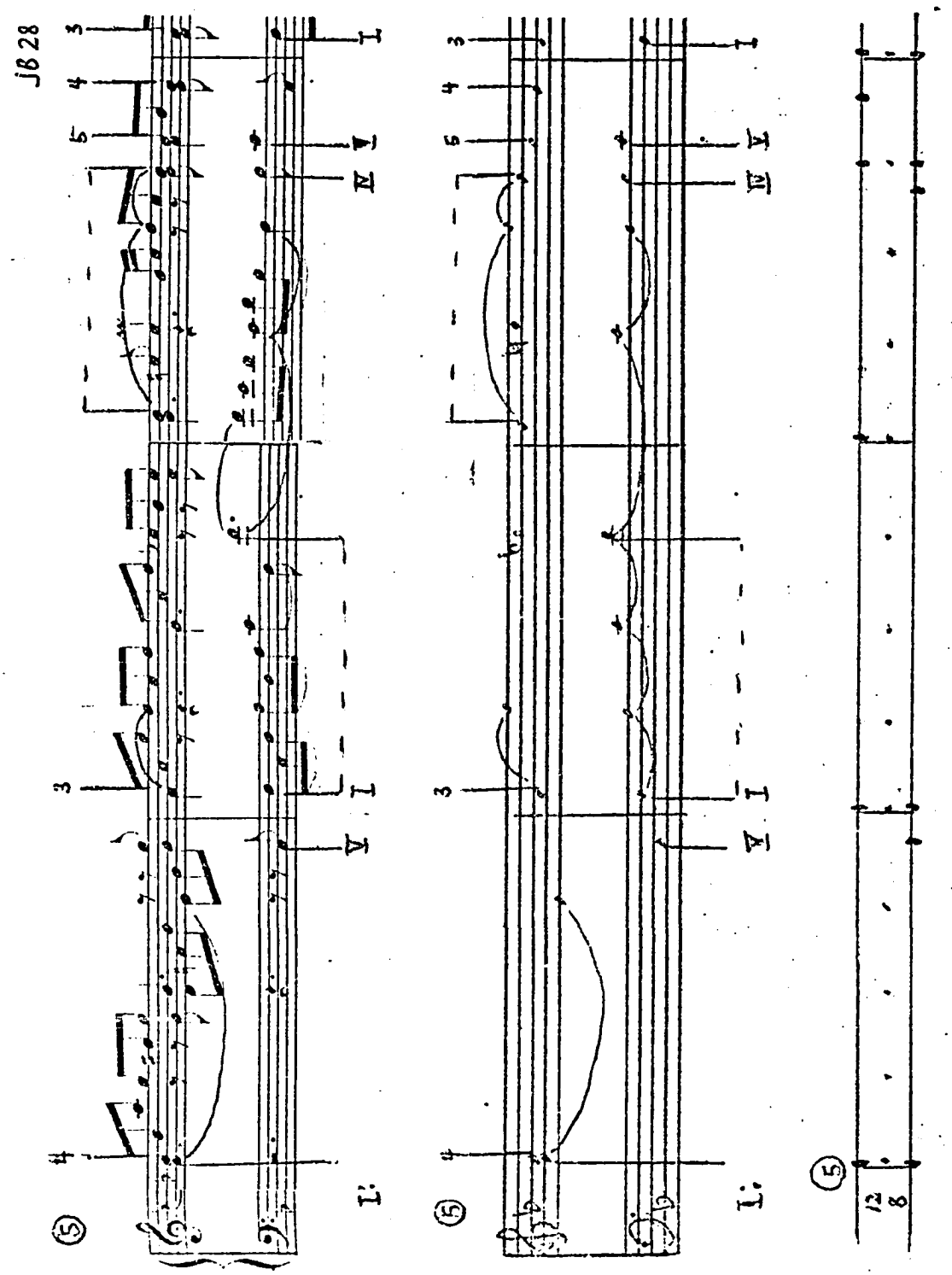
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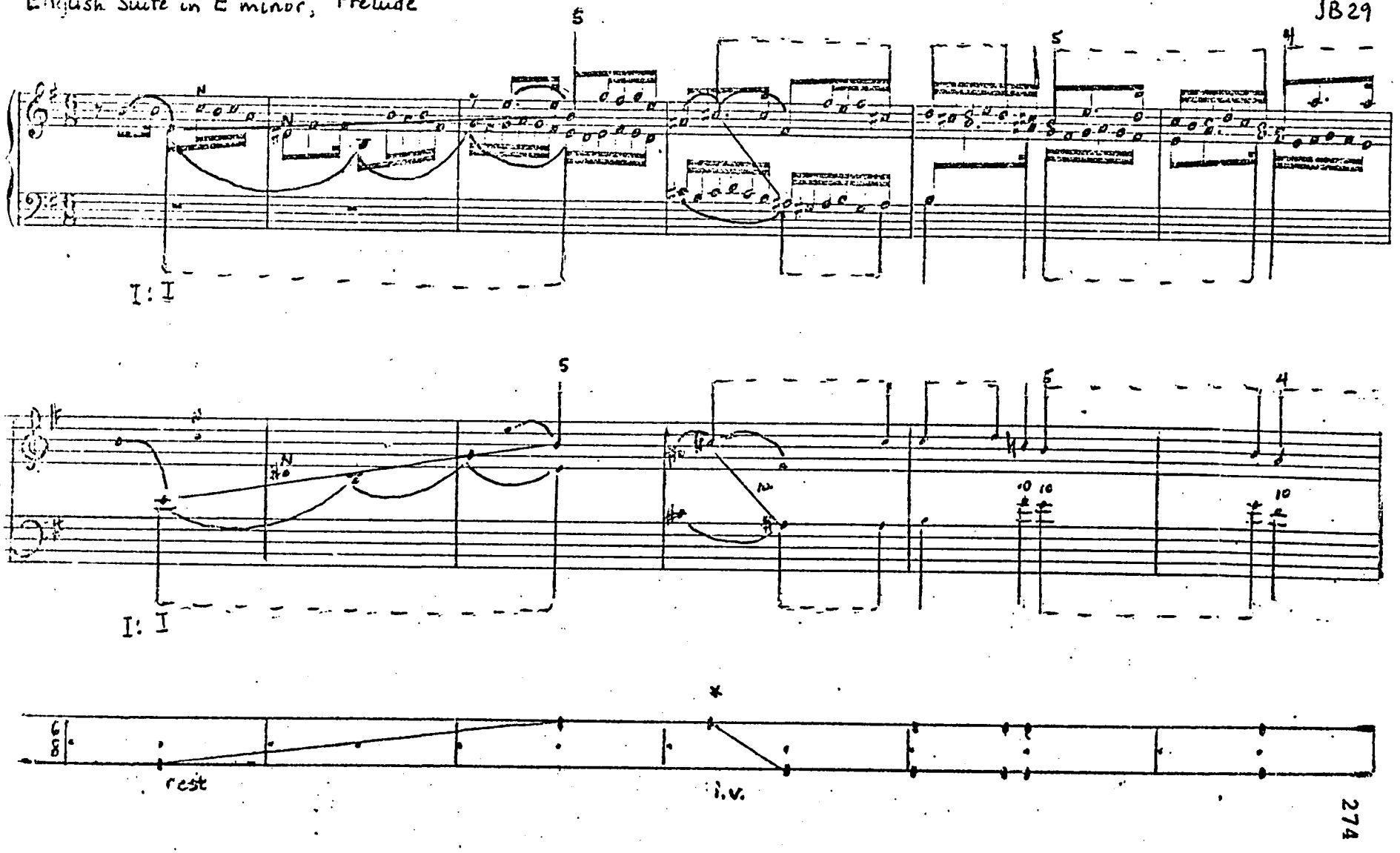
English Suite in E minor, Prelude



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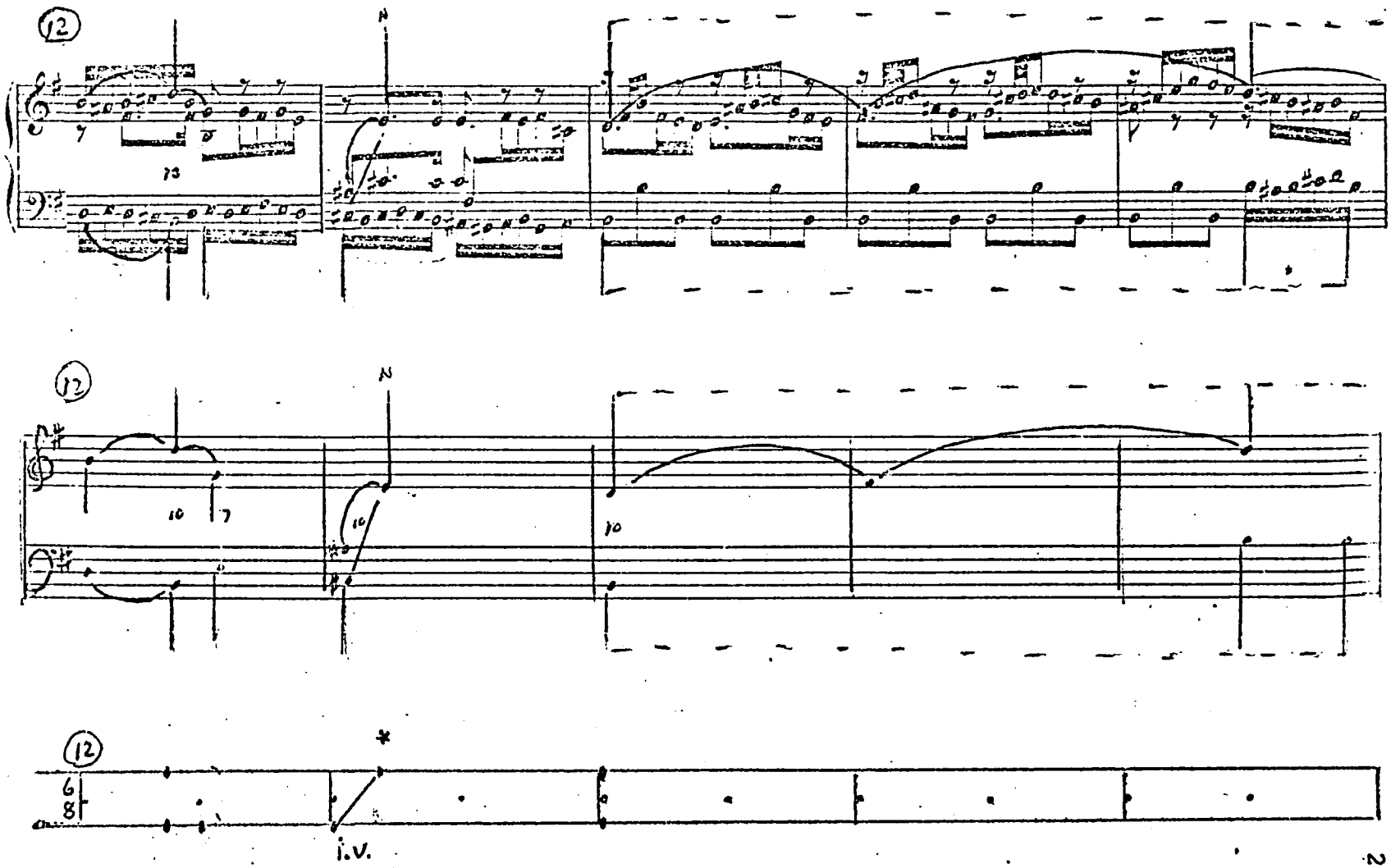

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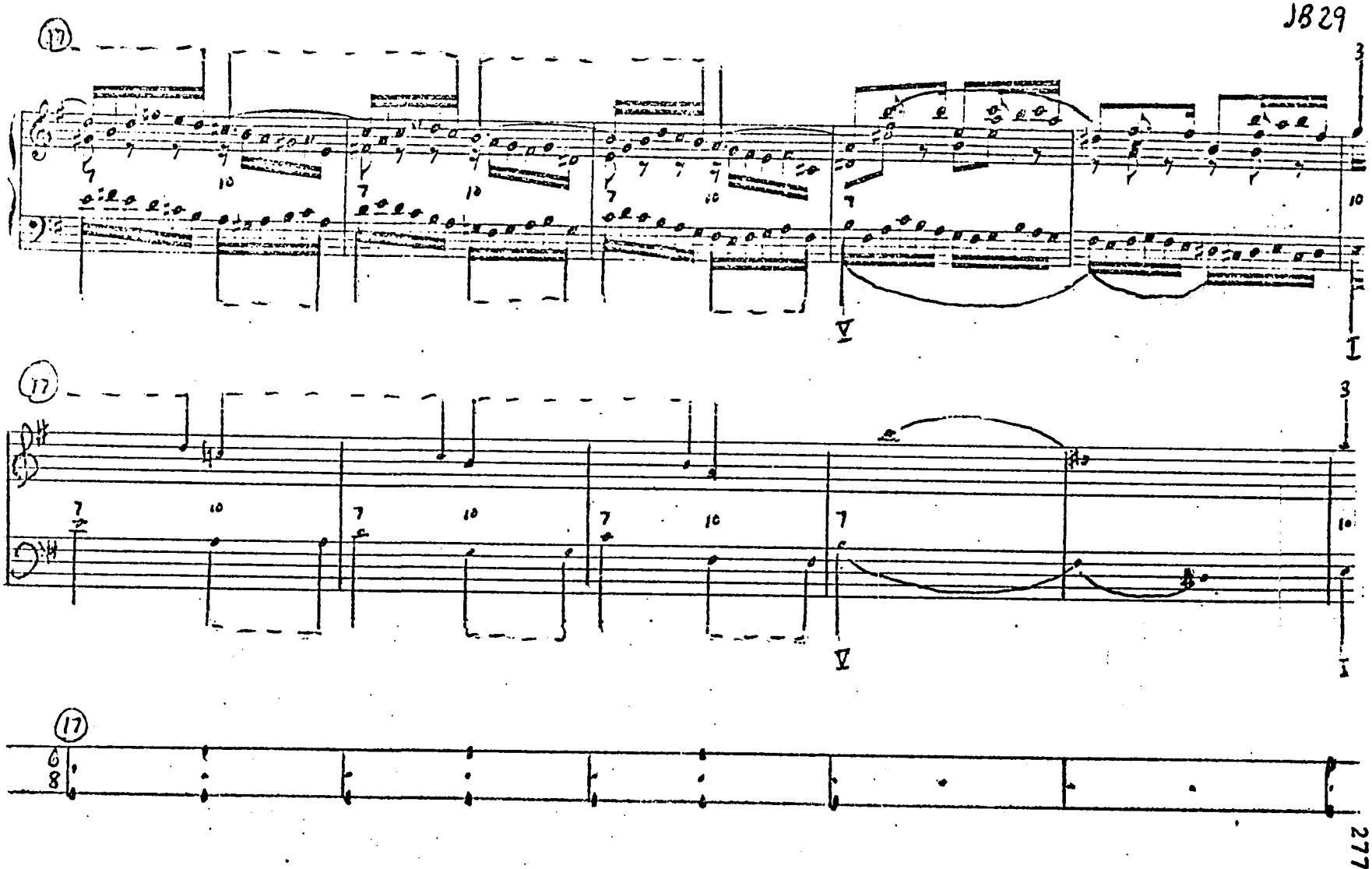

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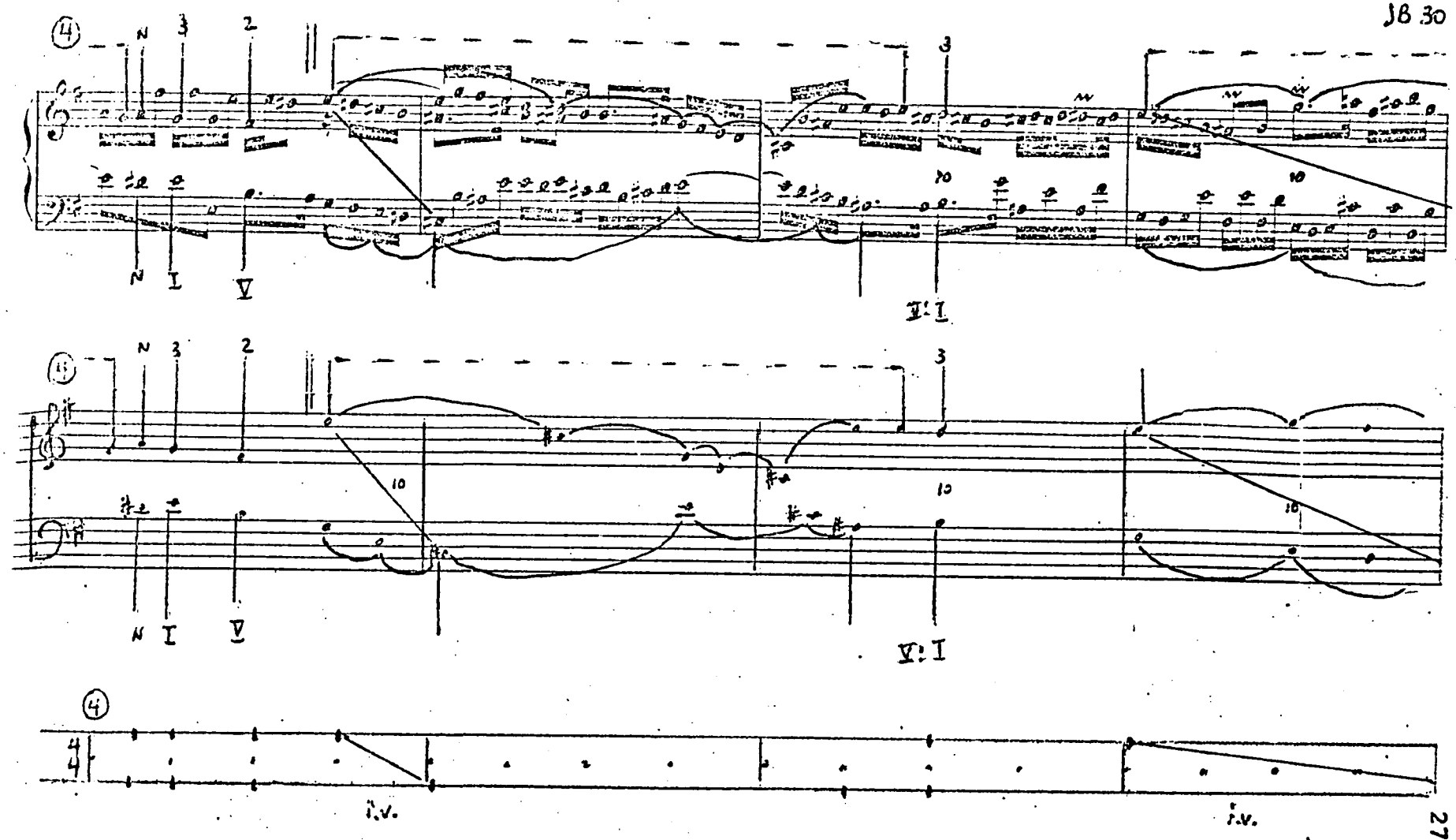

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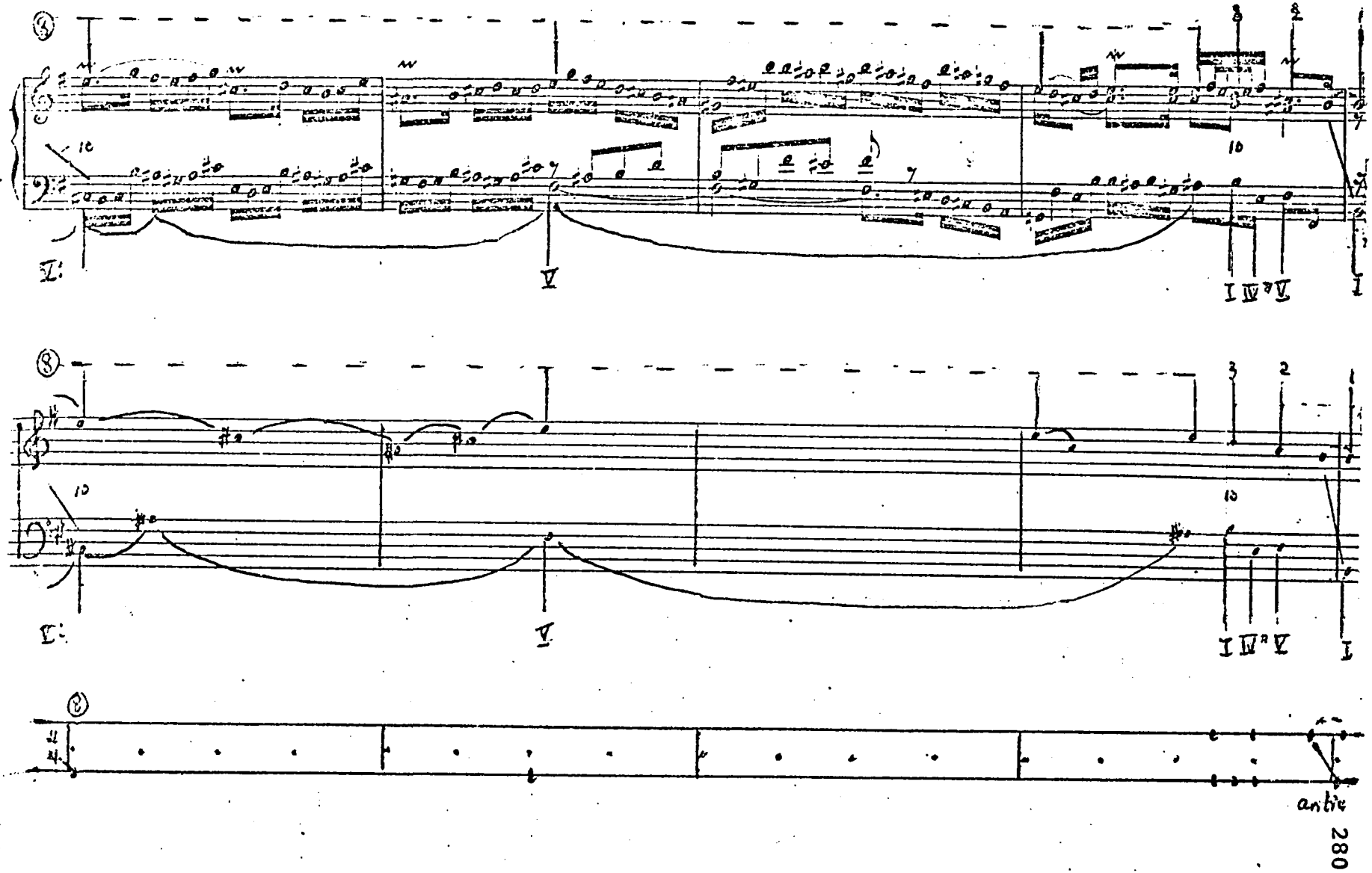

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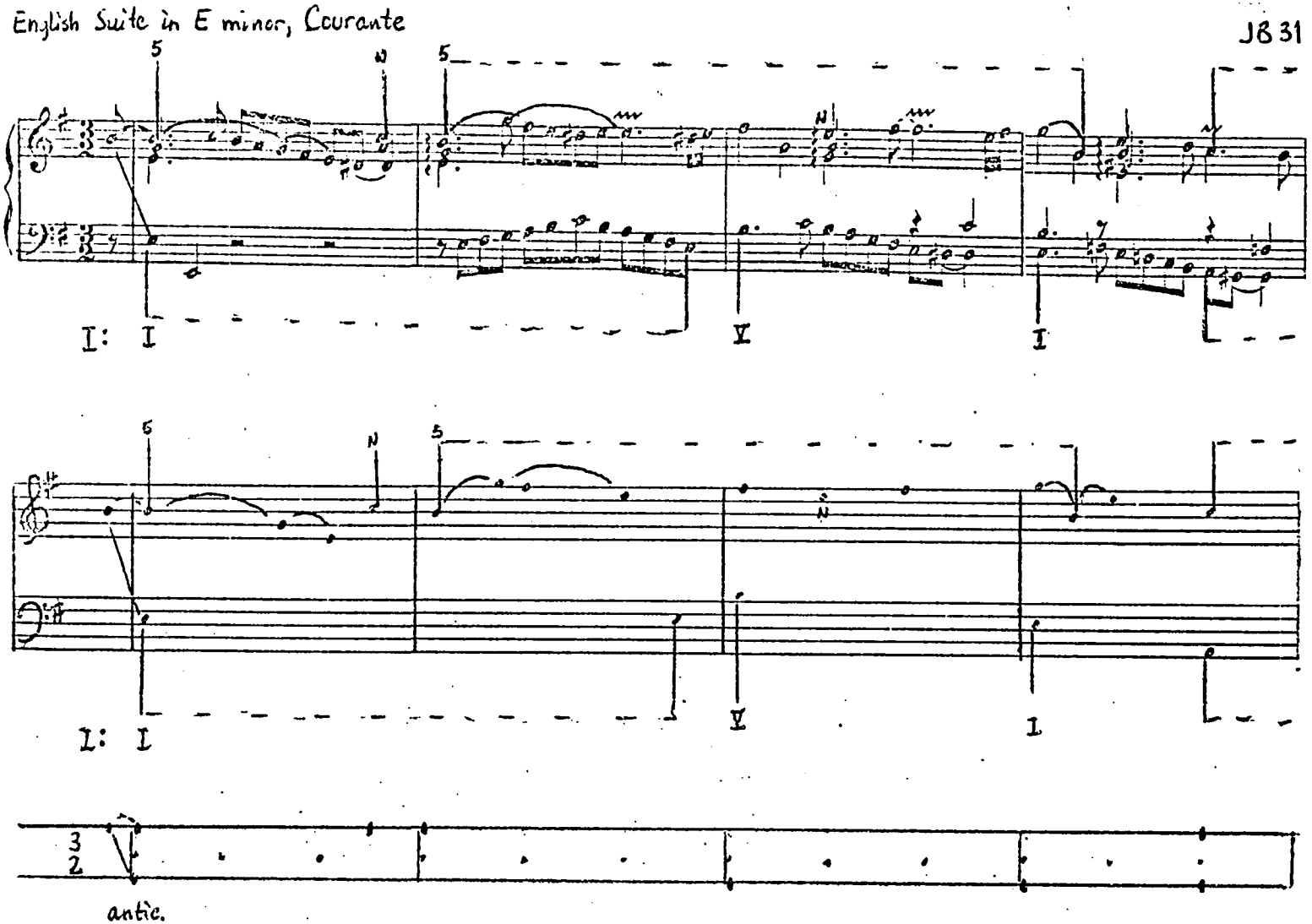

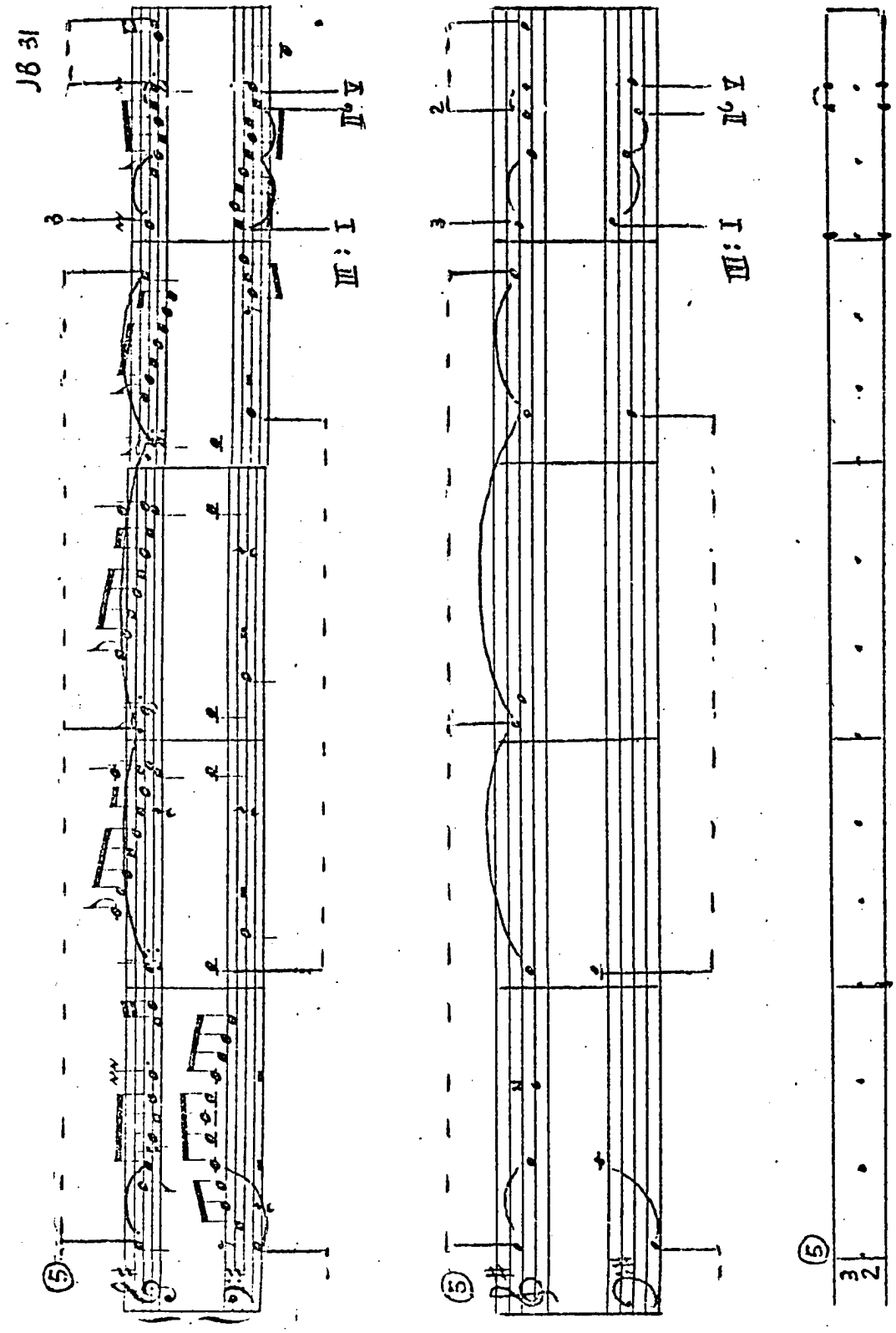

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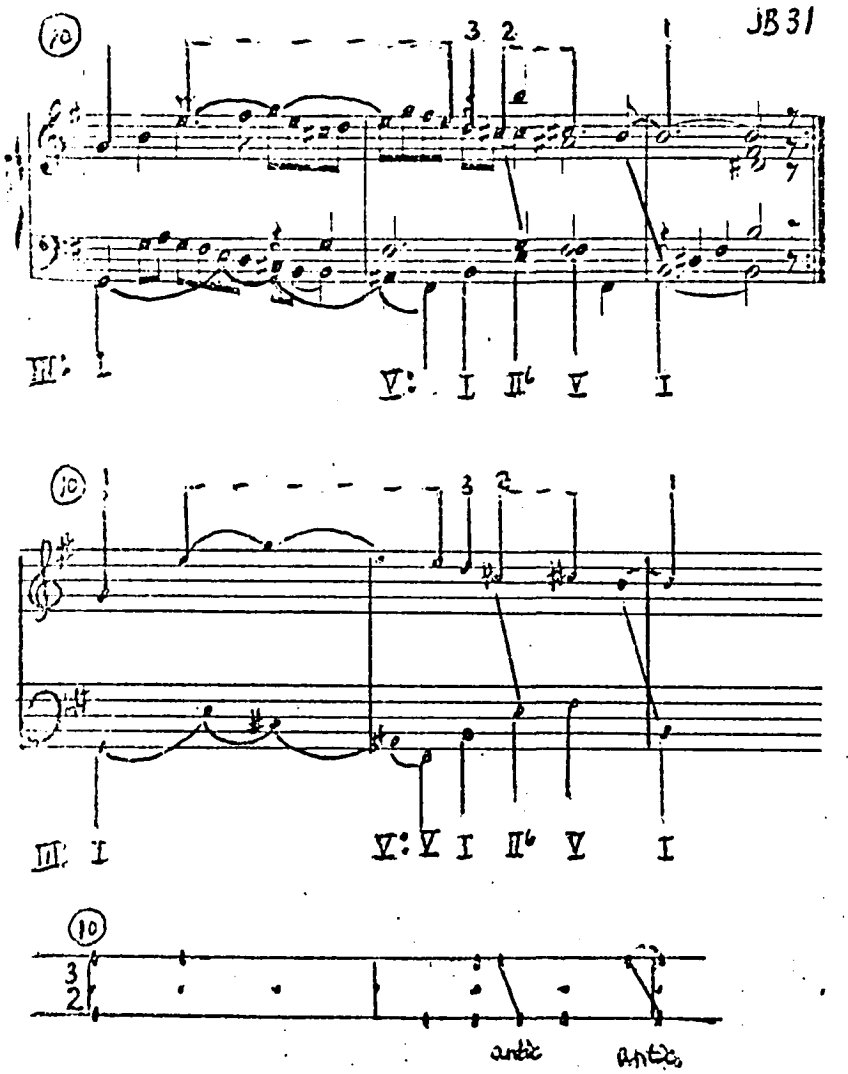

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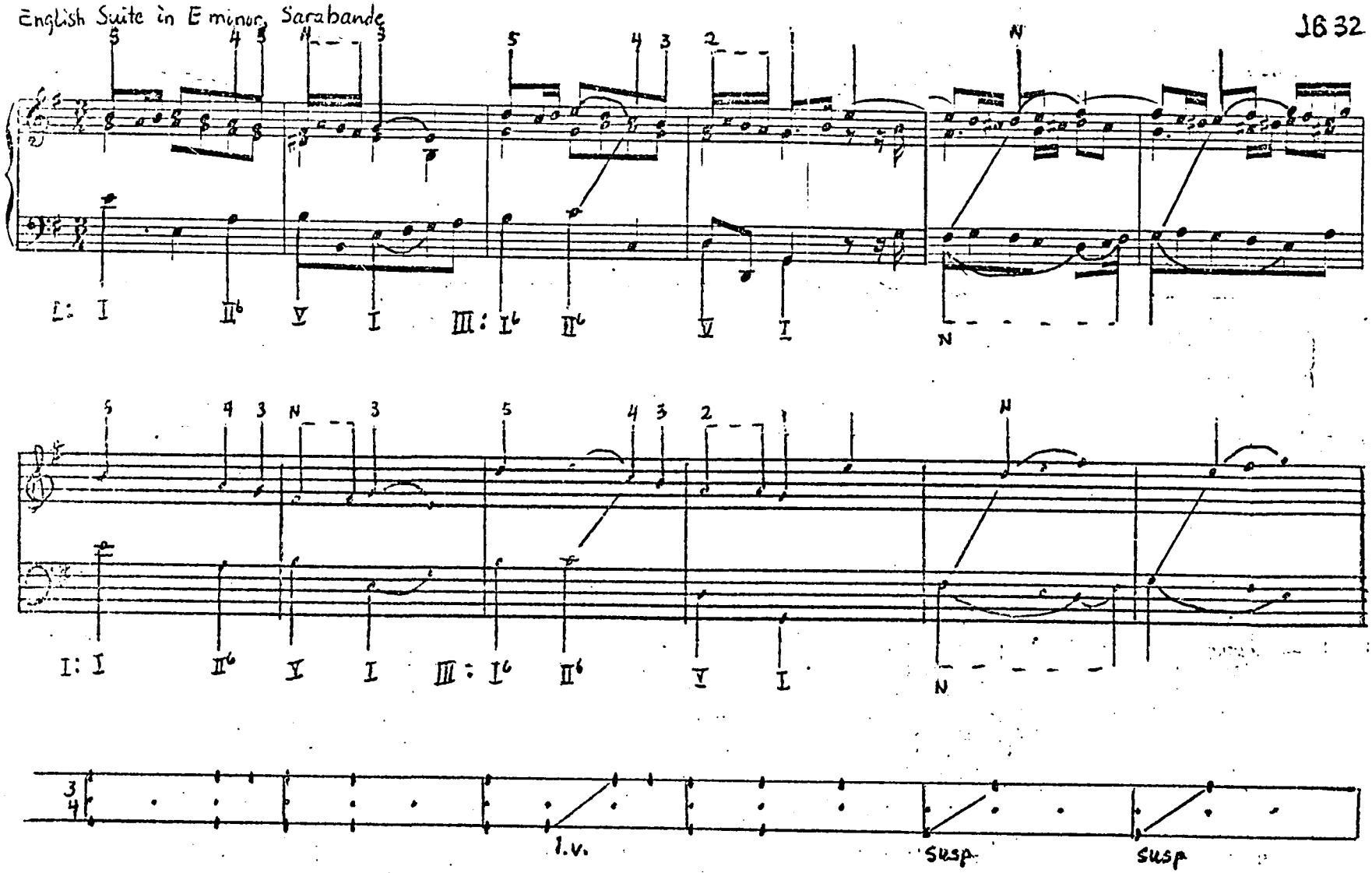

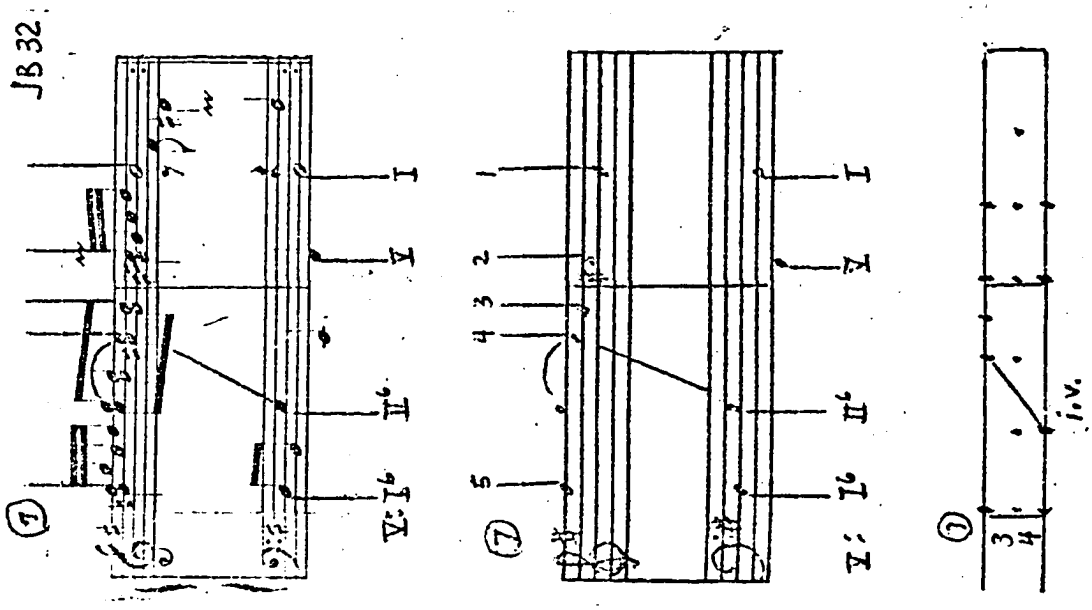

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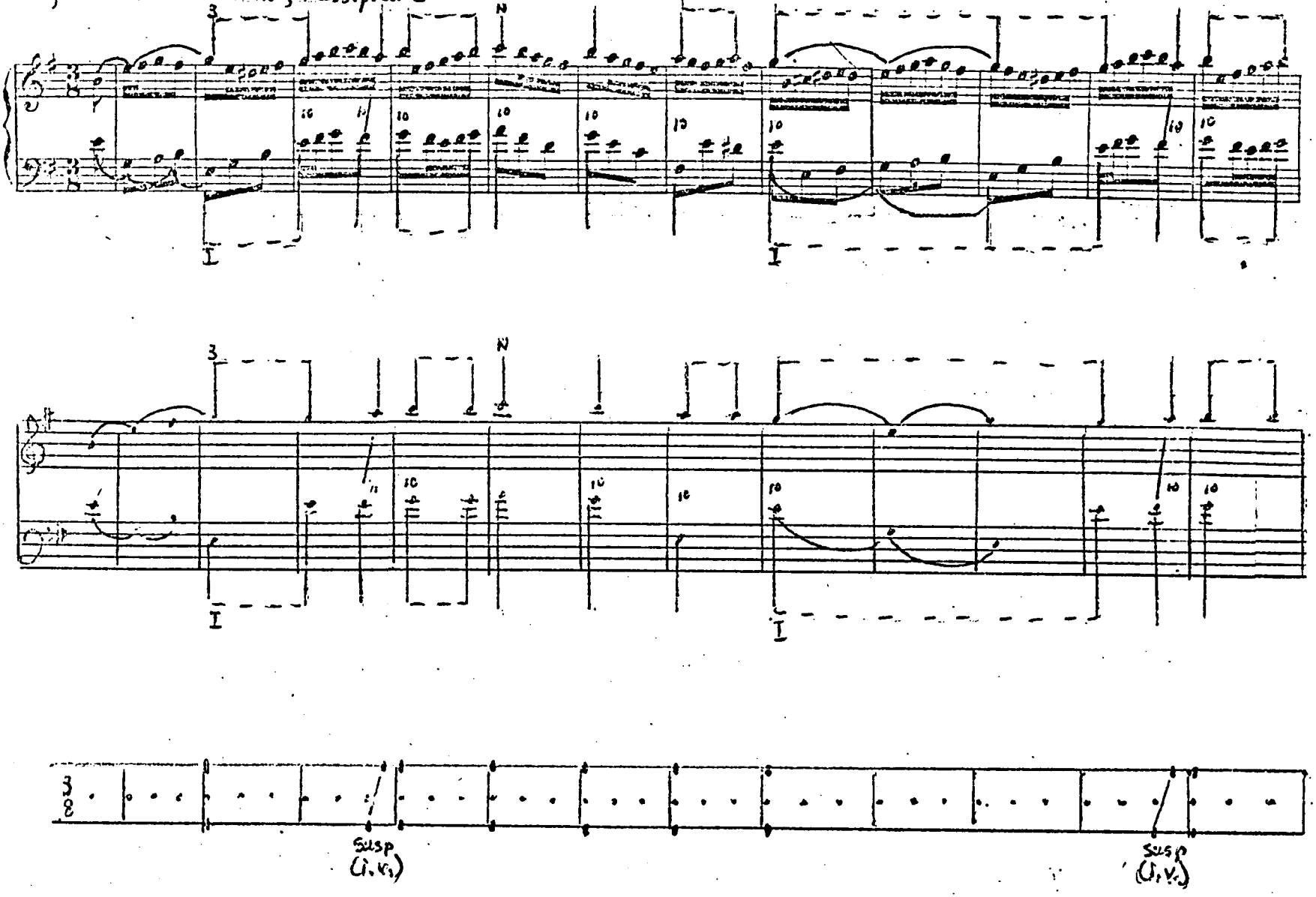

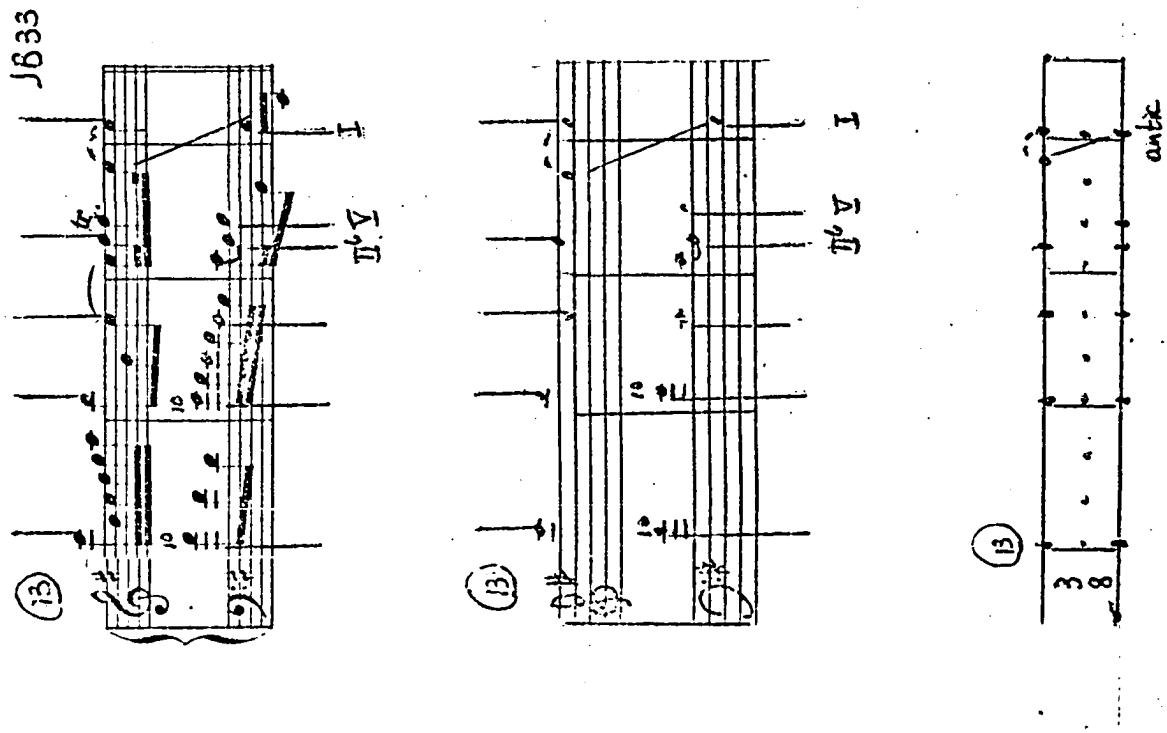

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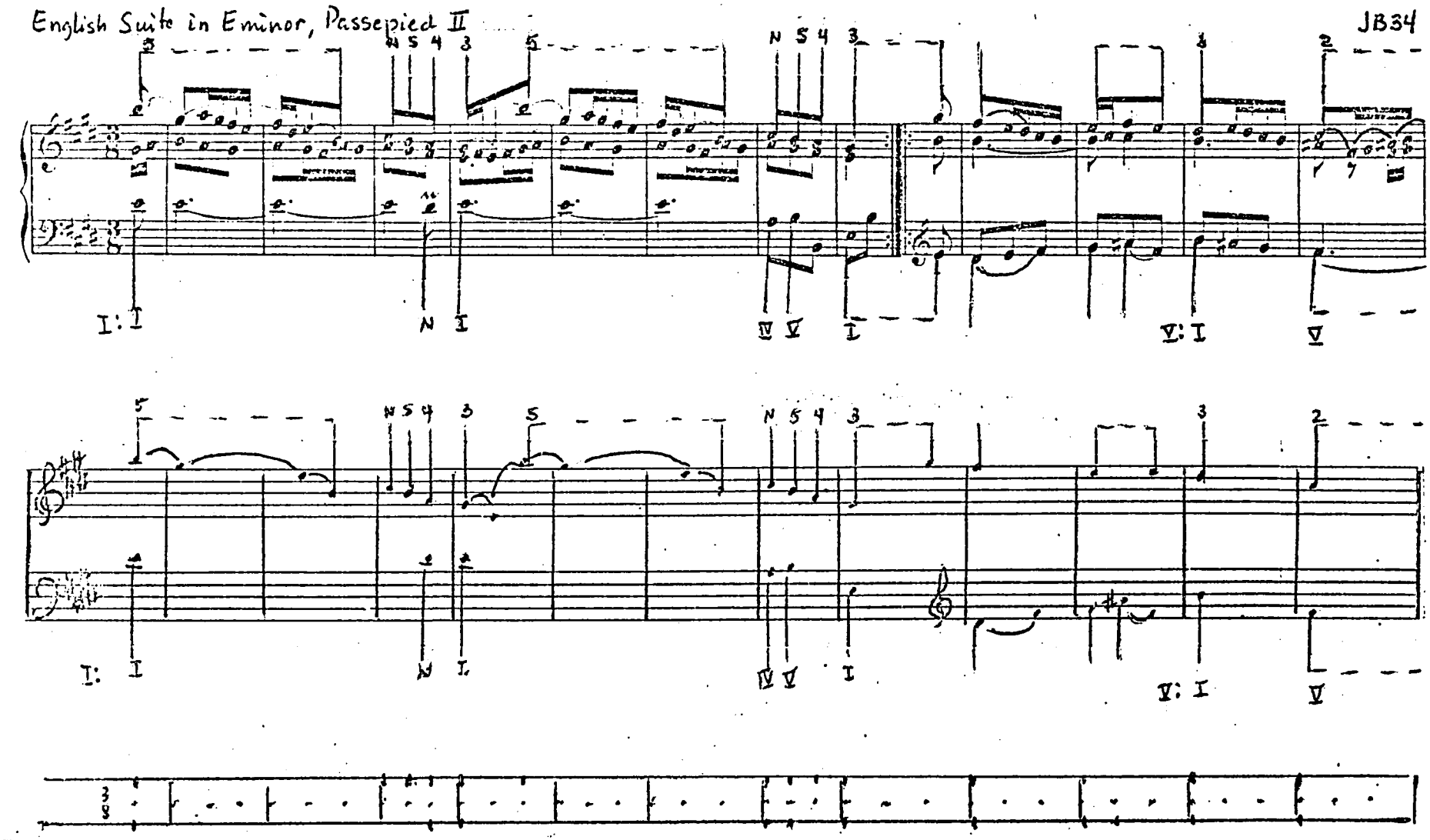

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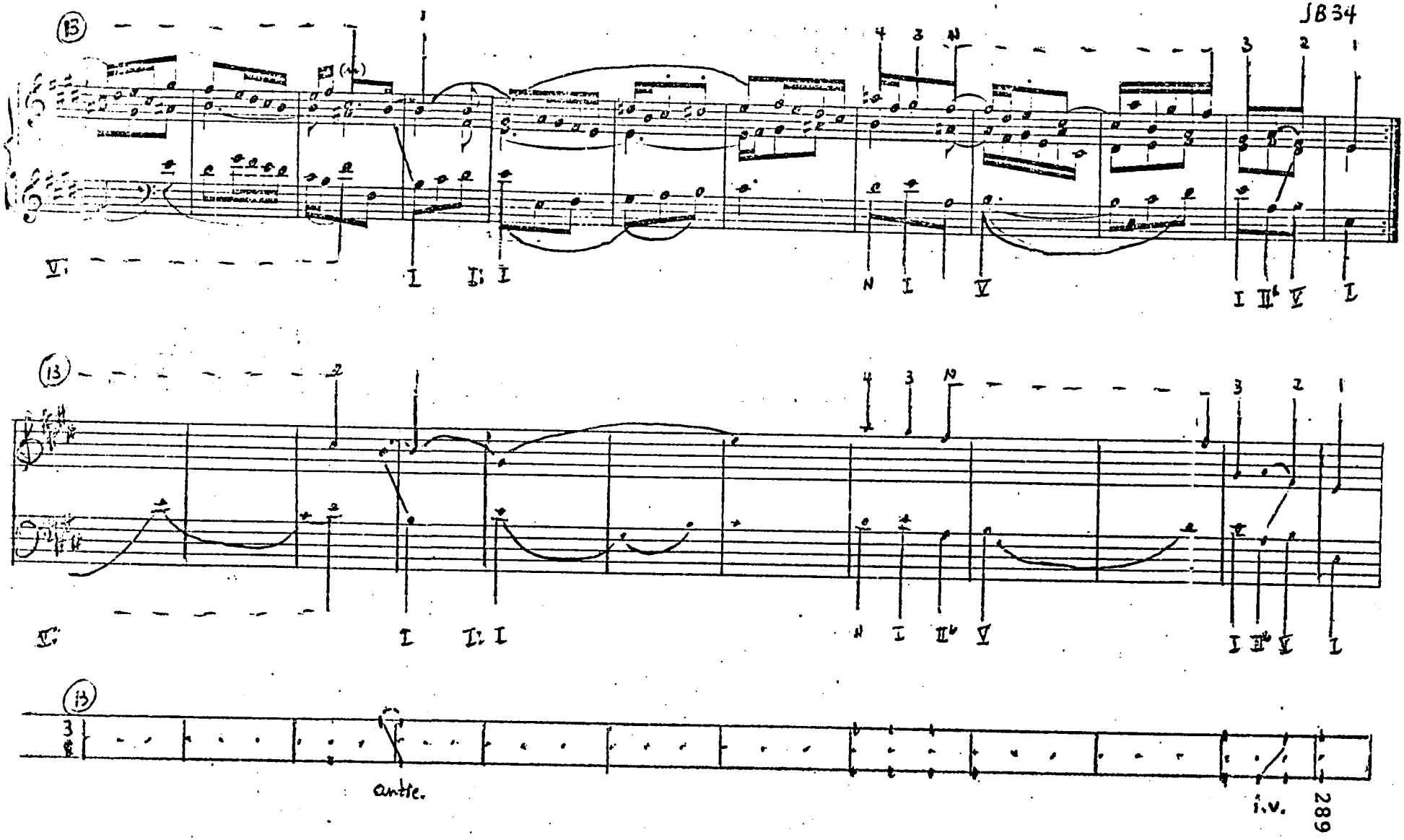

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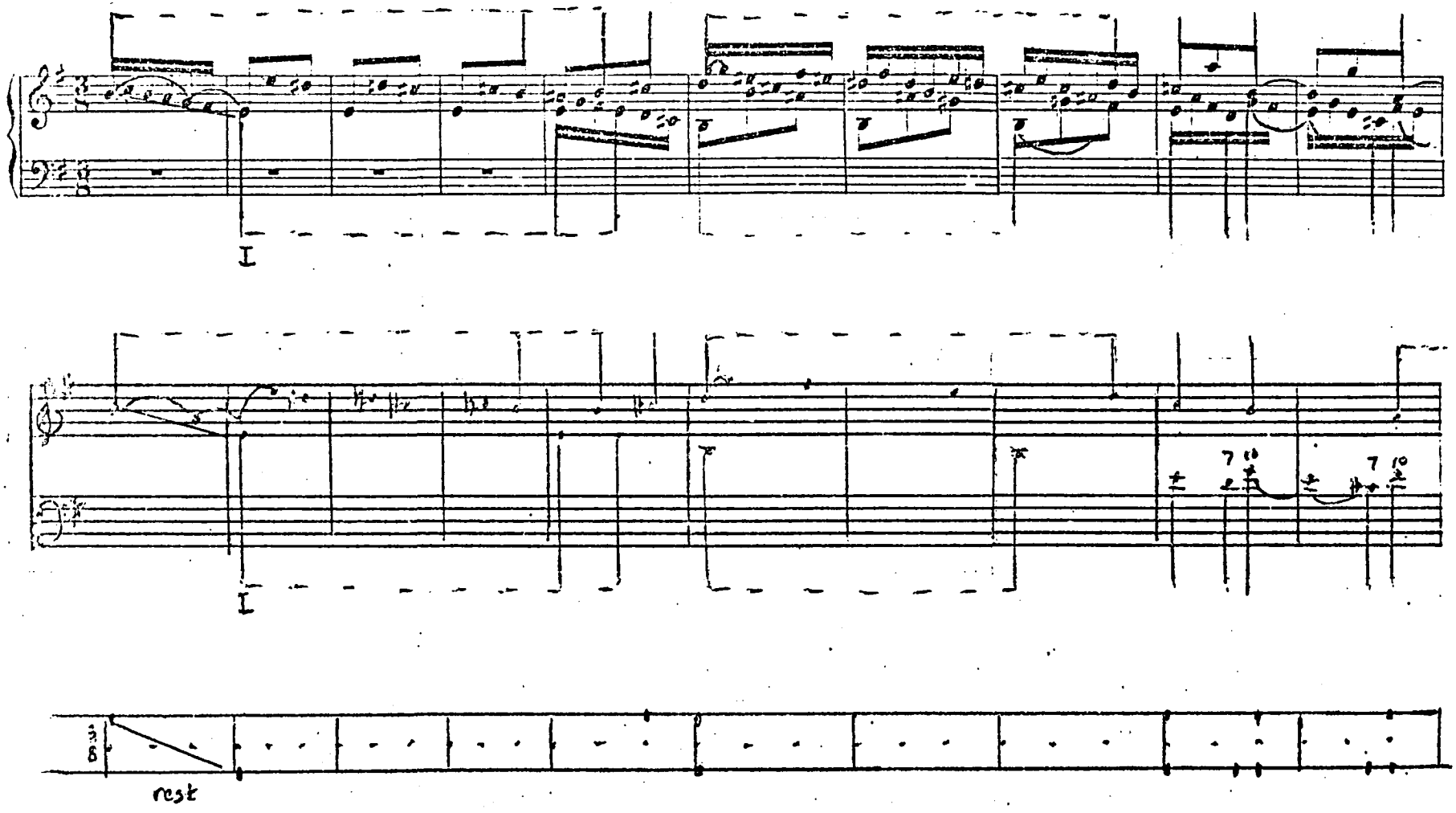
English Suite in E minor, Gigue JB 35



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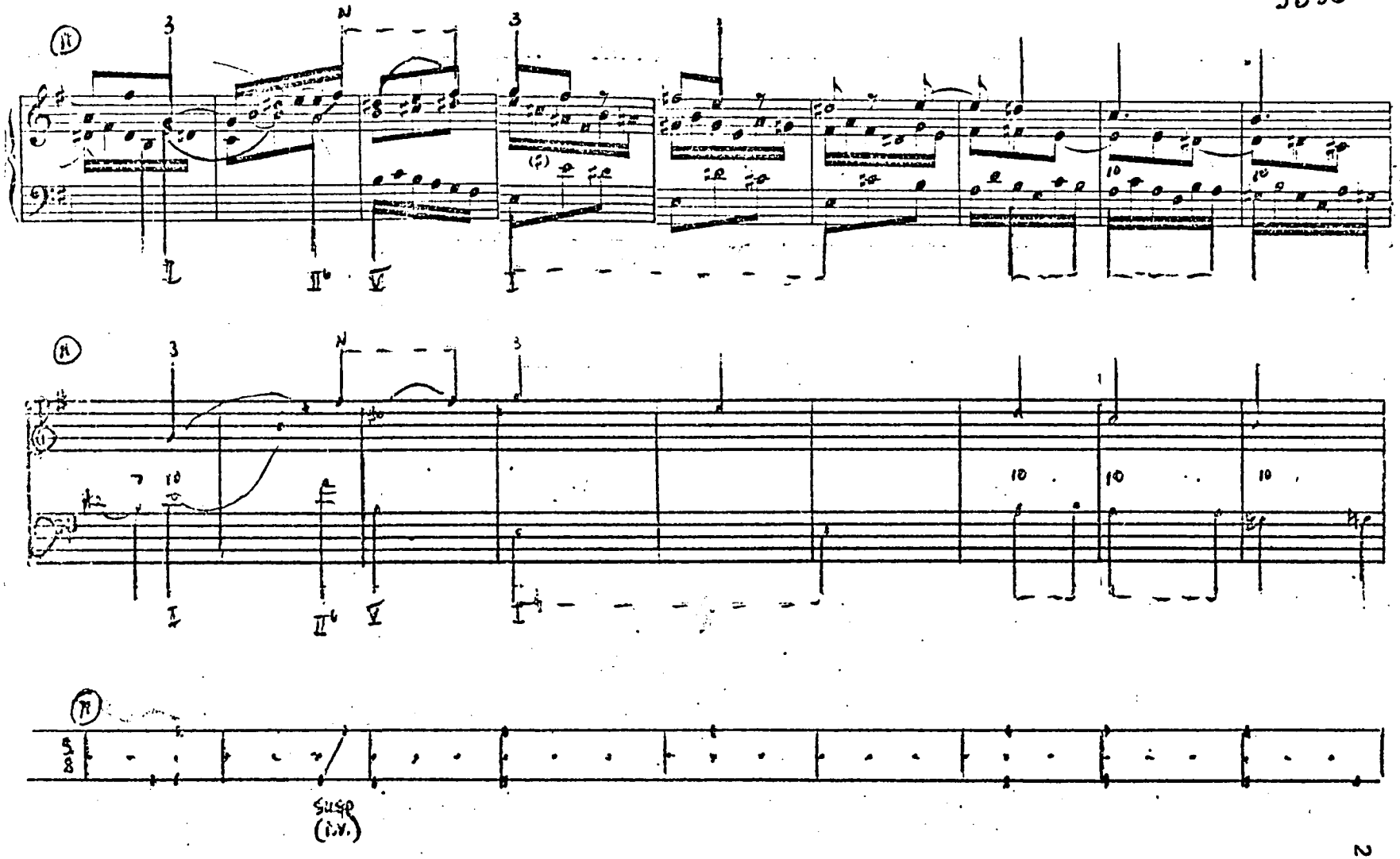

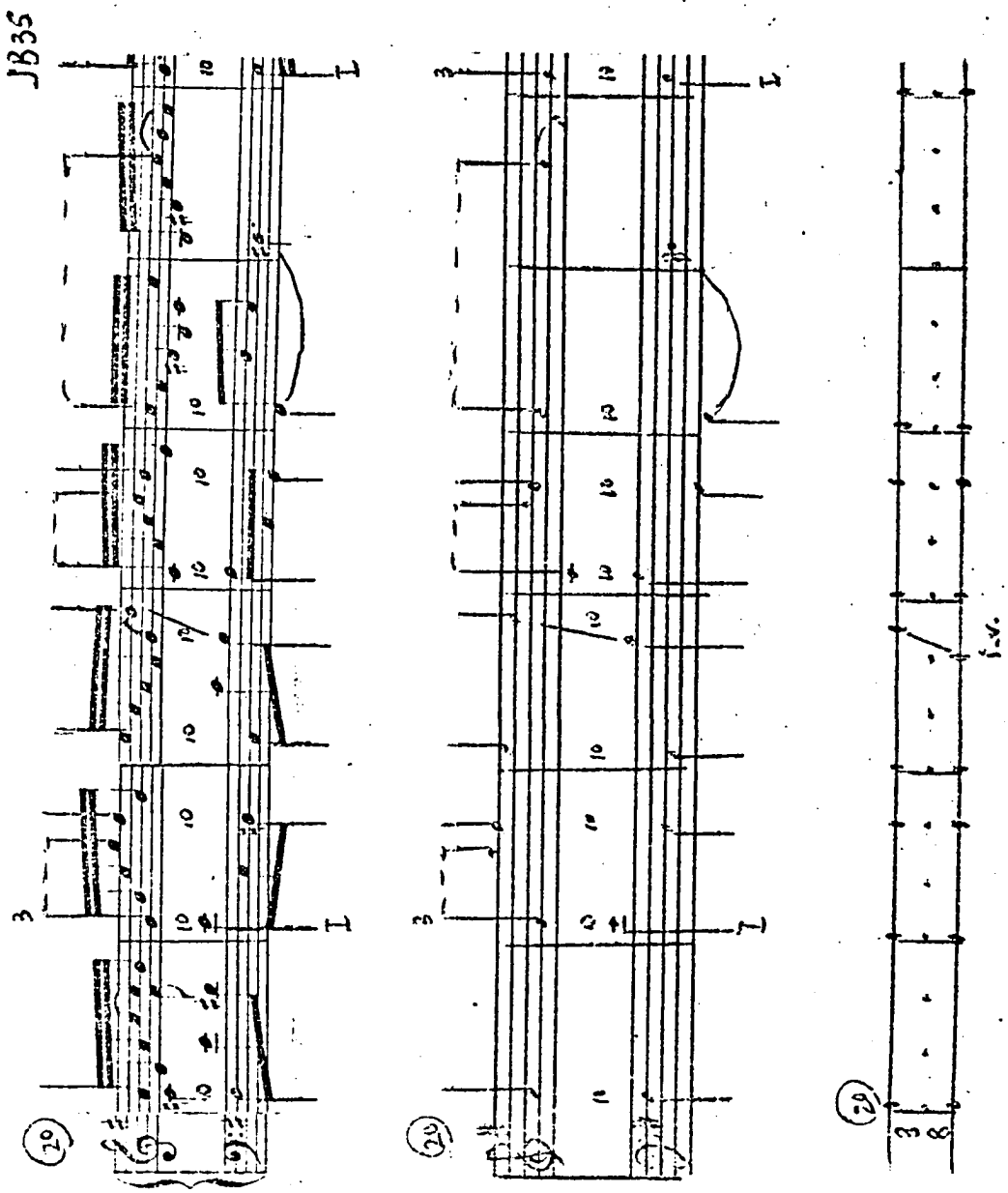

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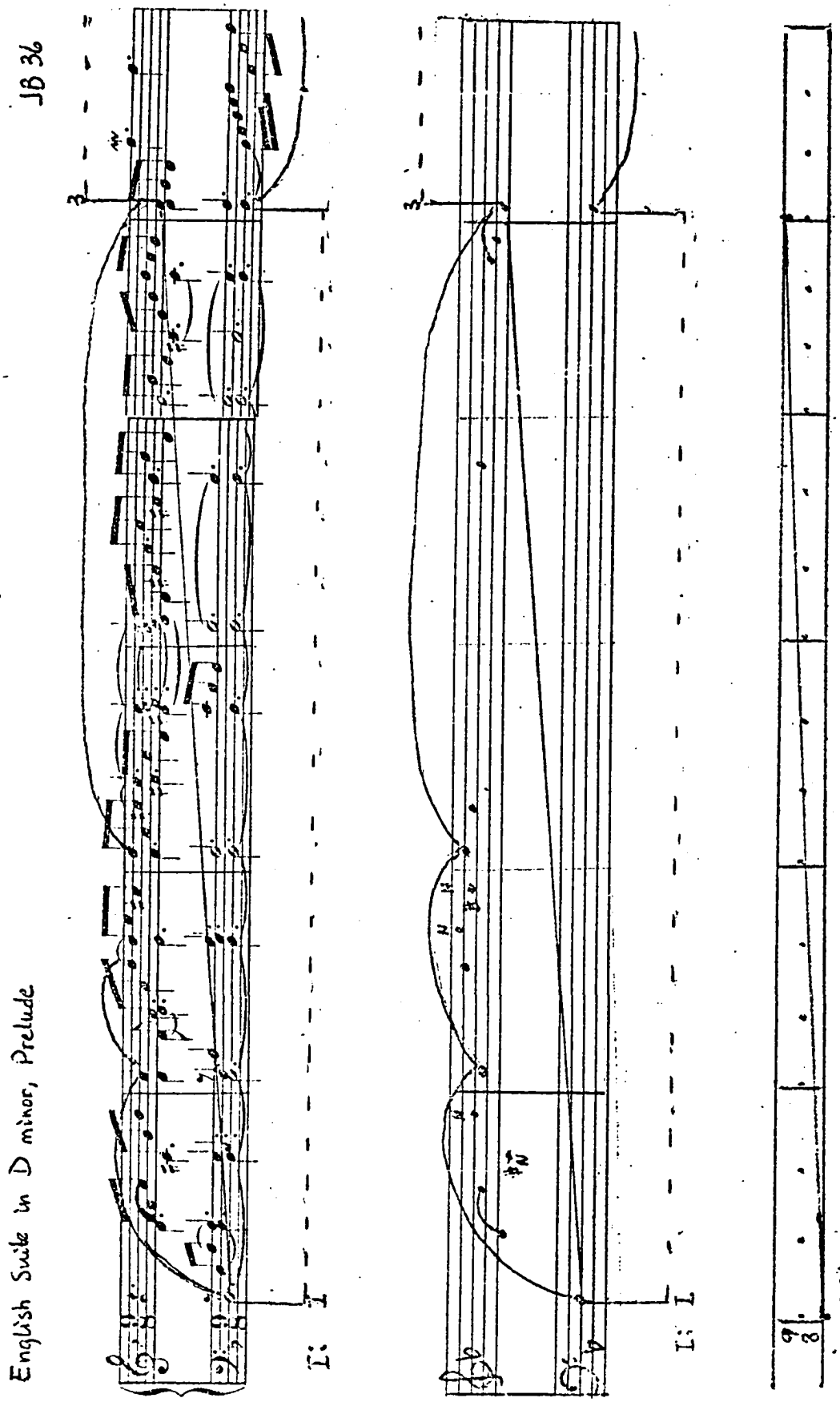

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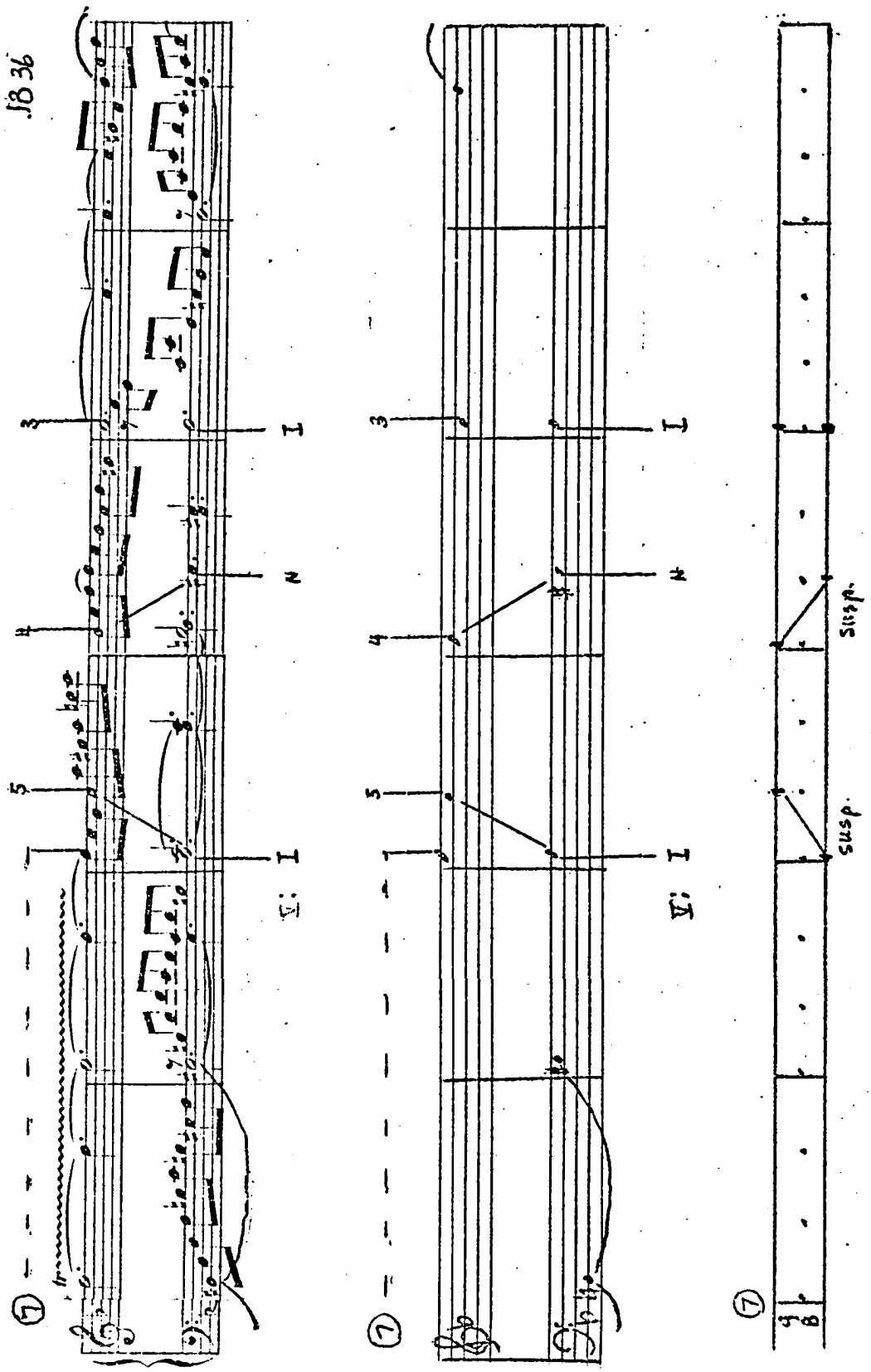

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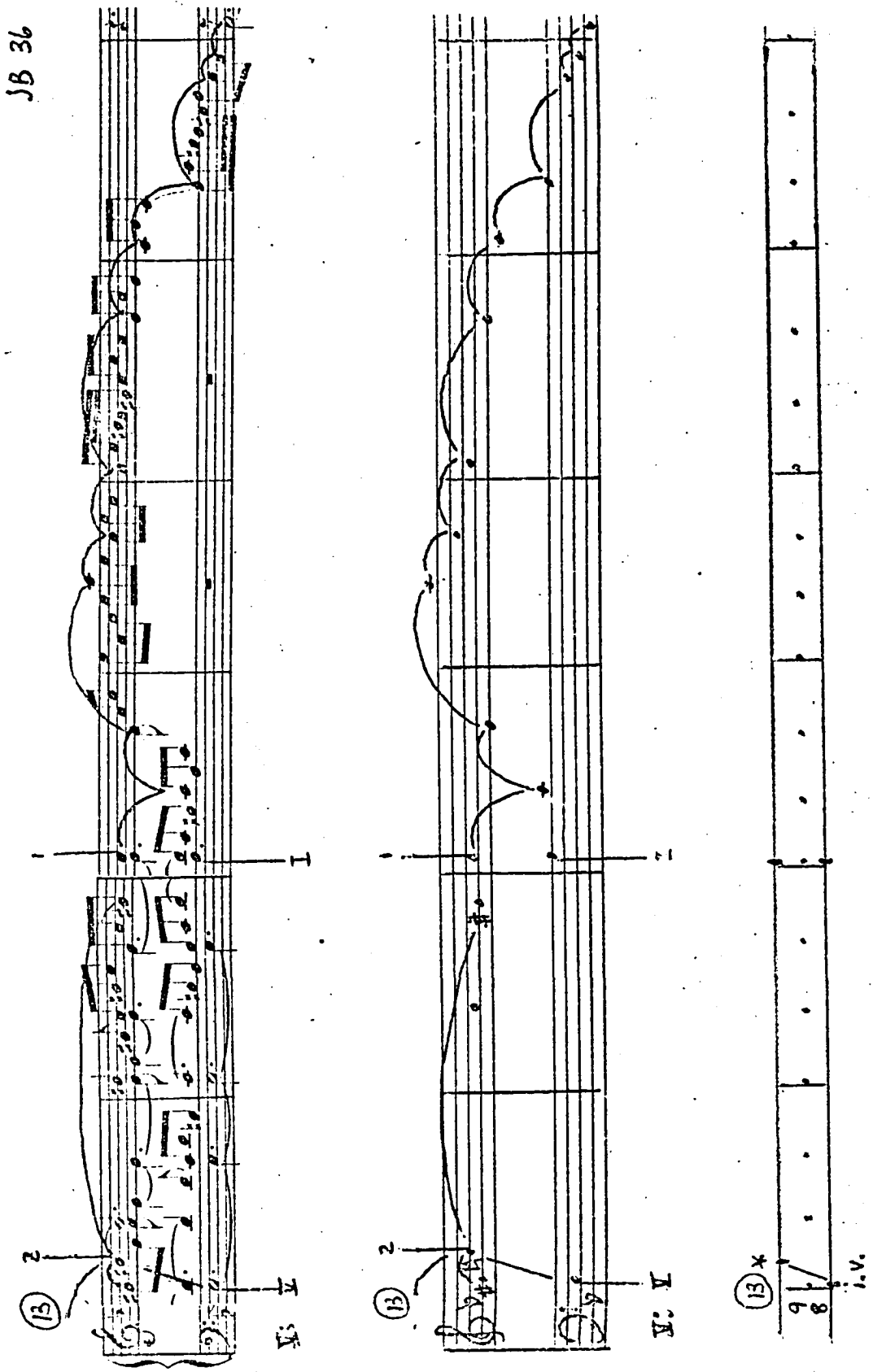

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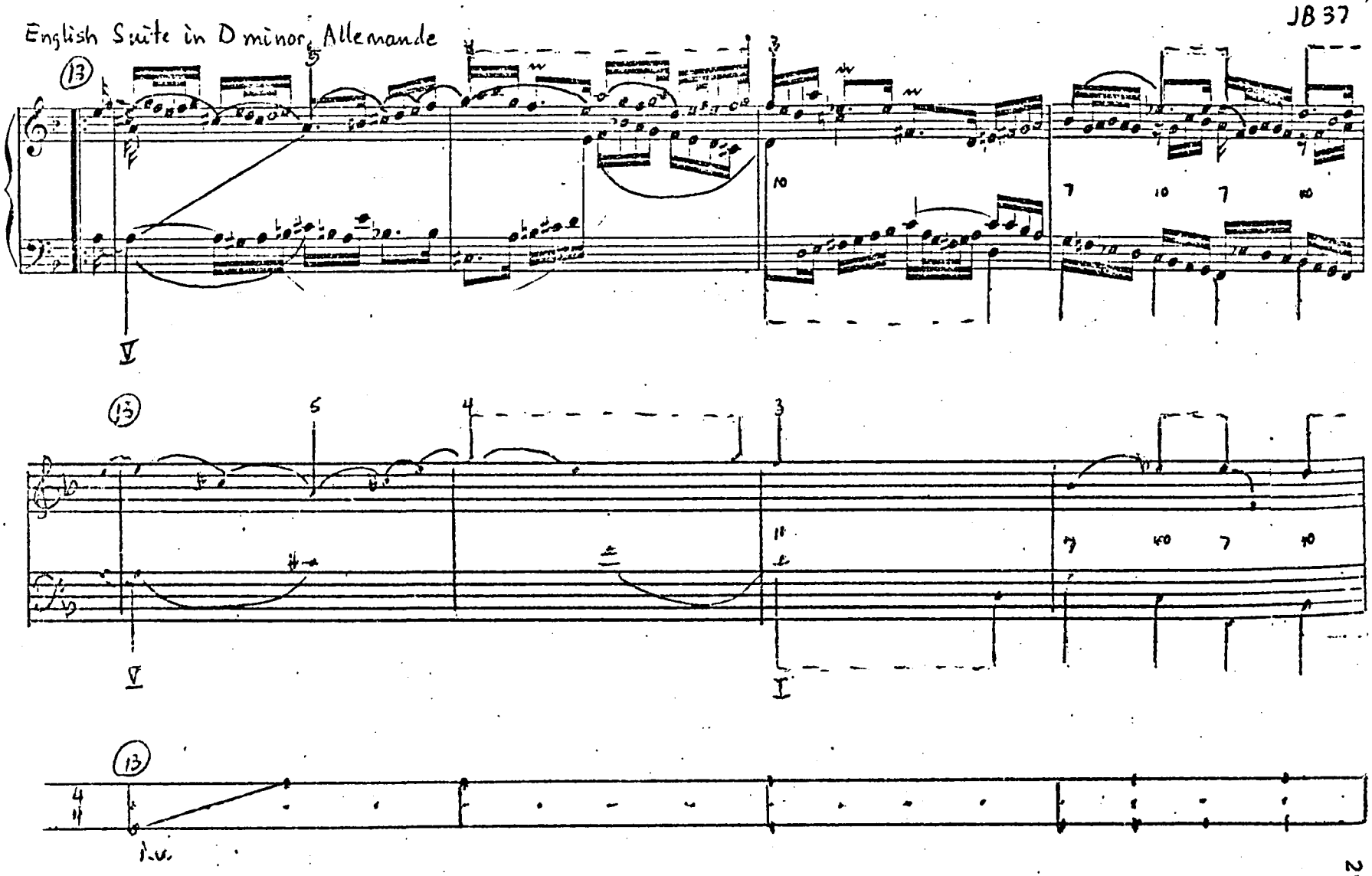
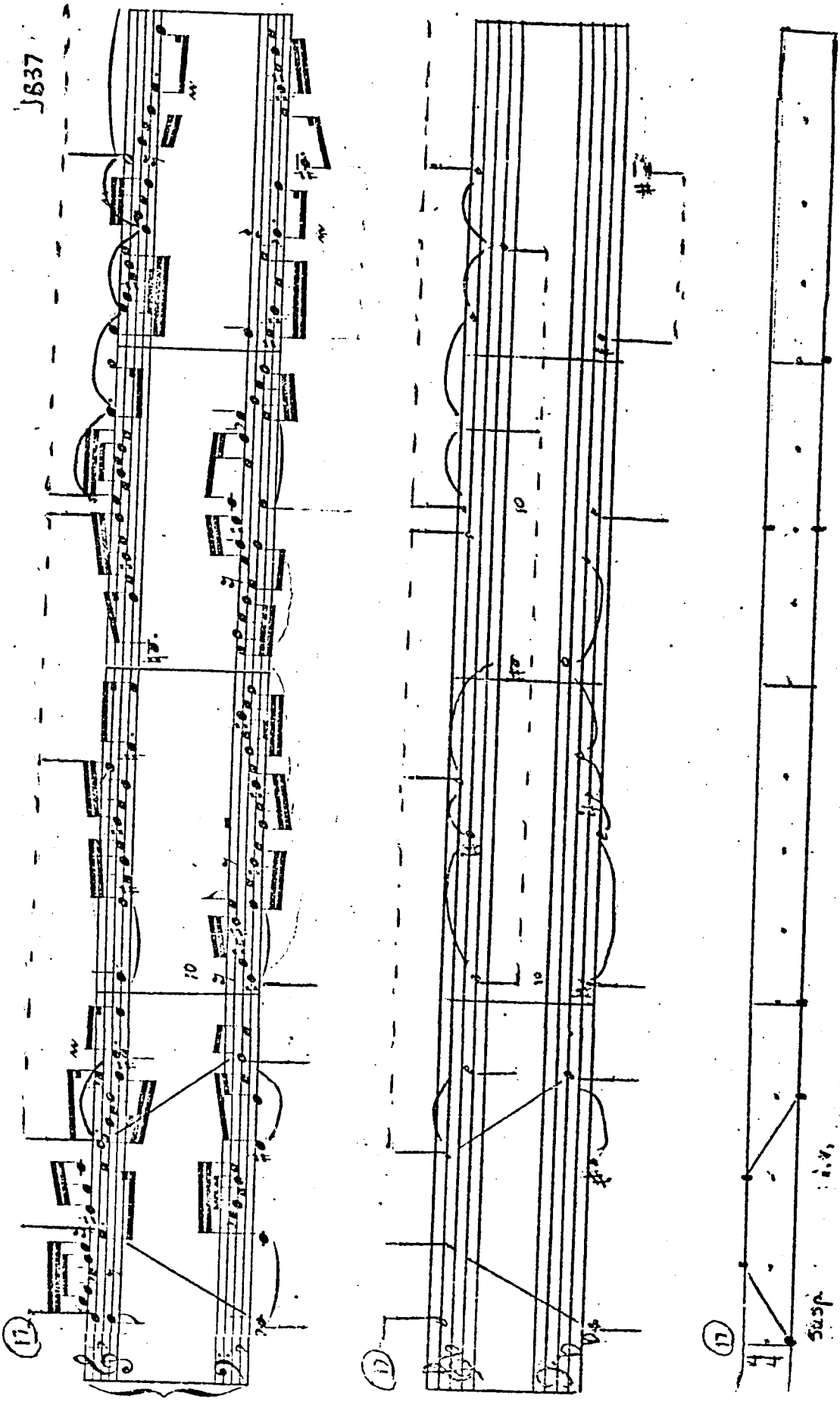
English Suite in D minor, Allemande





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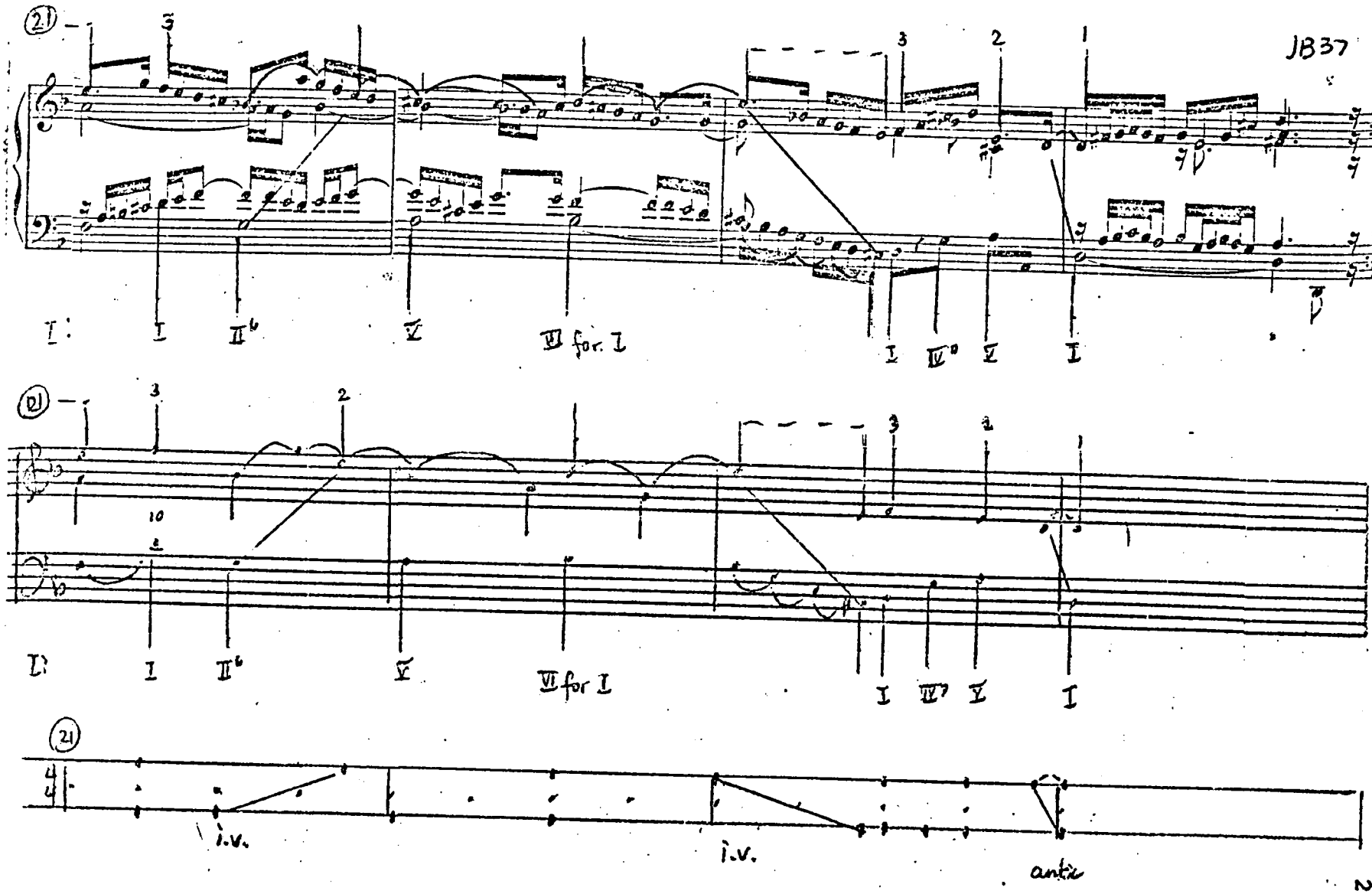

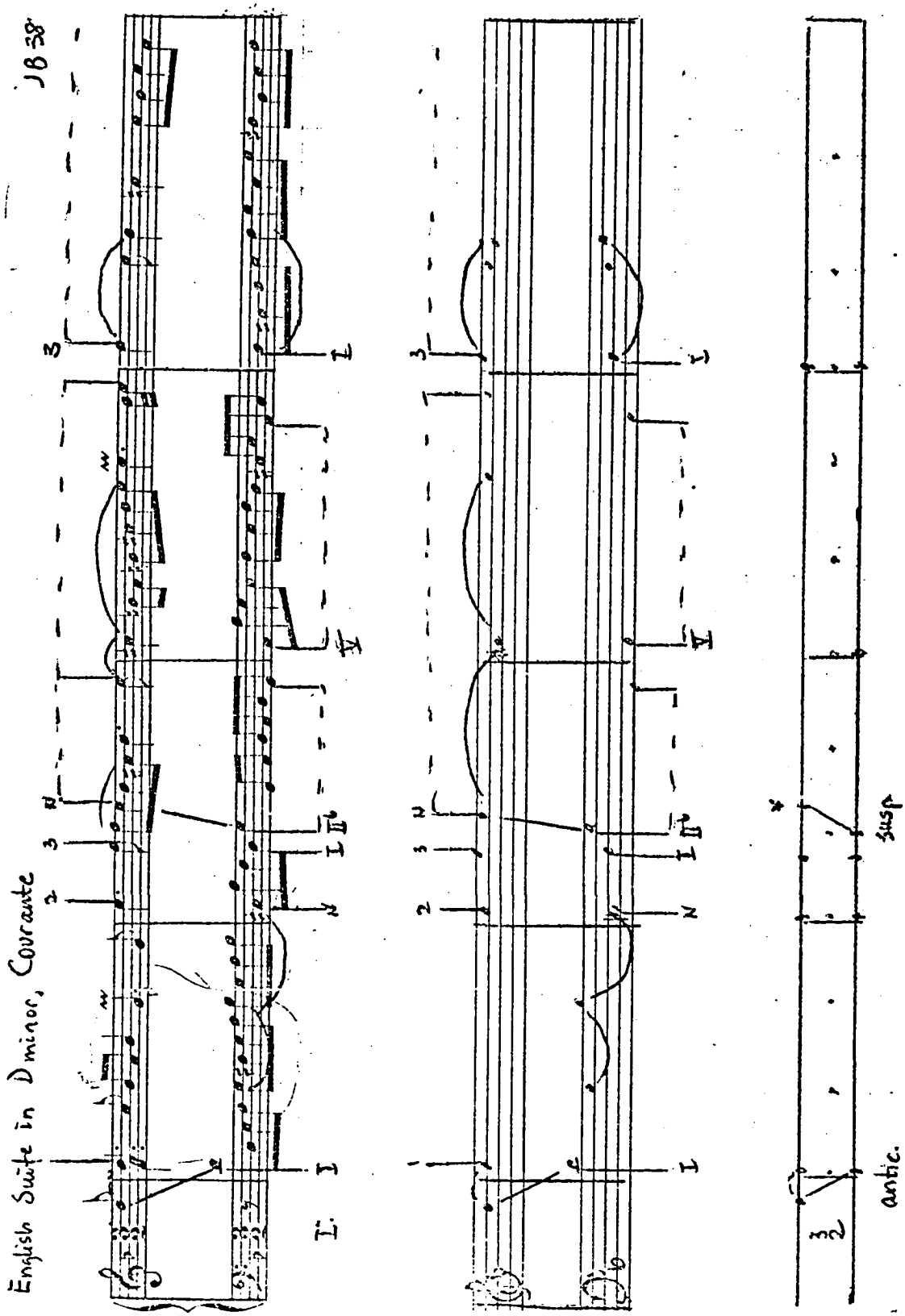

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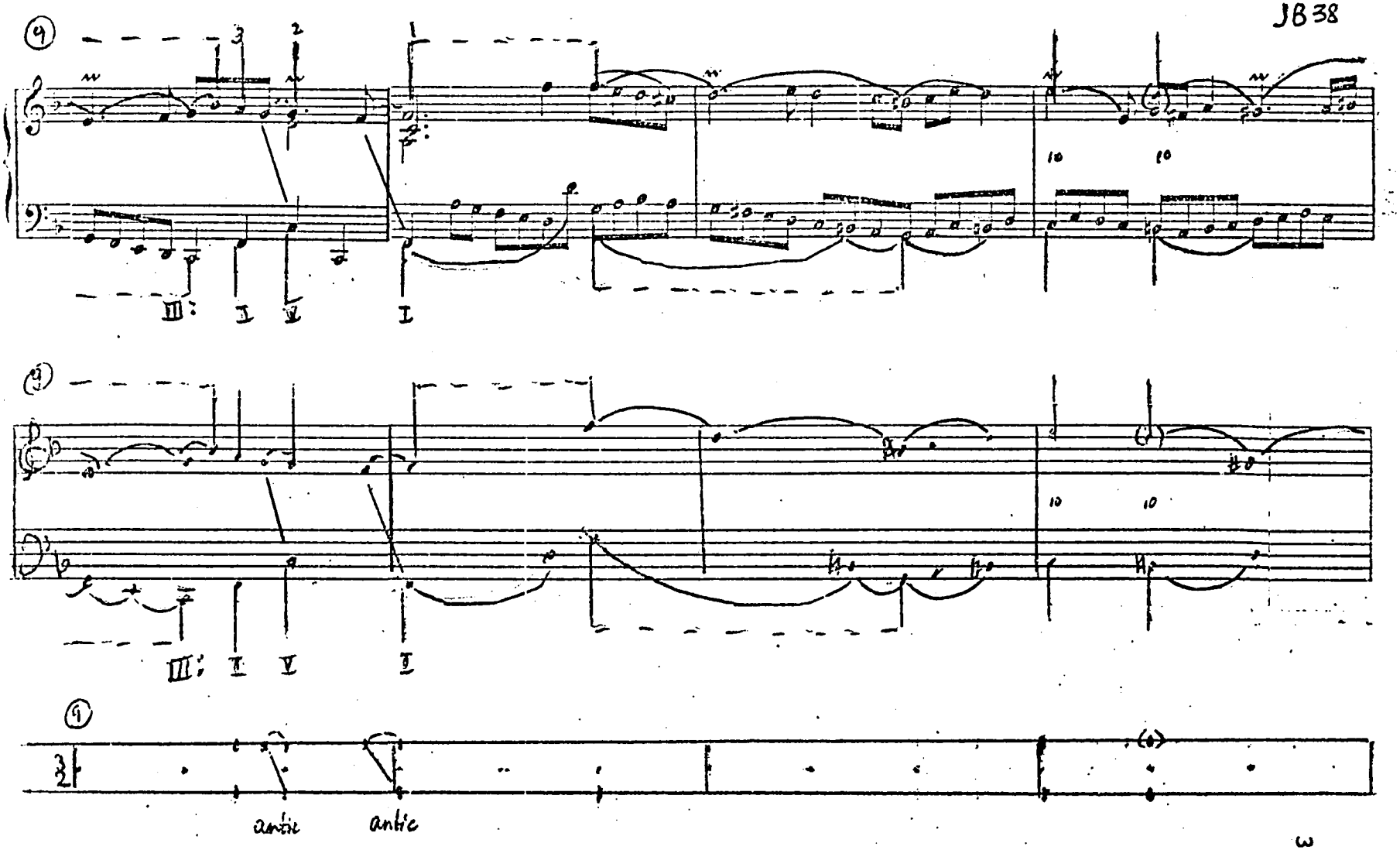

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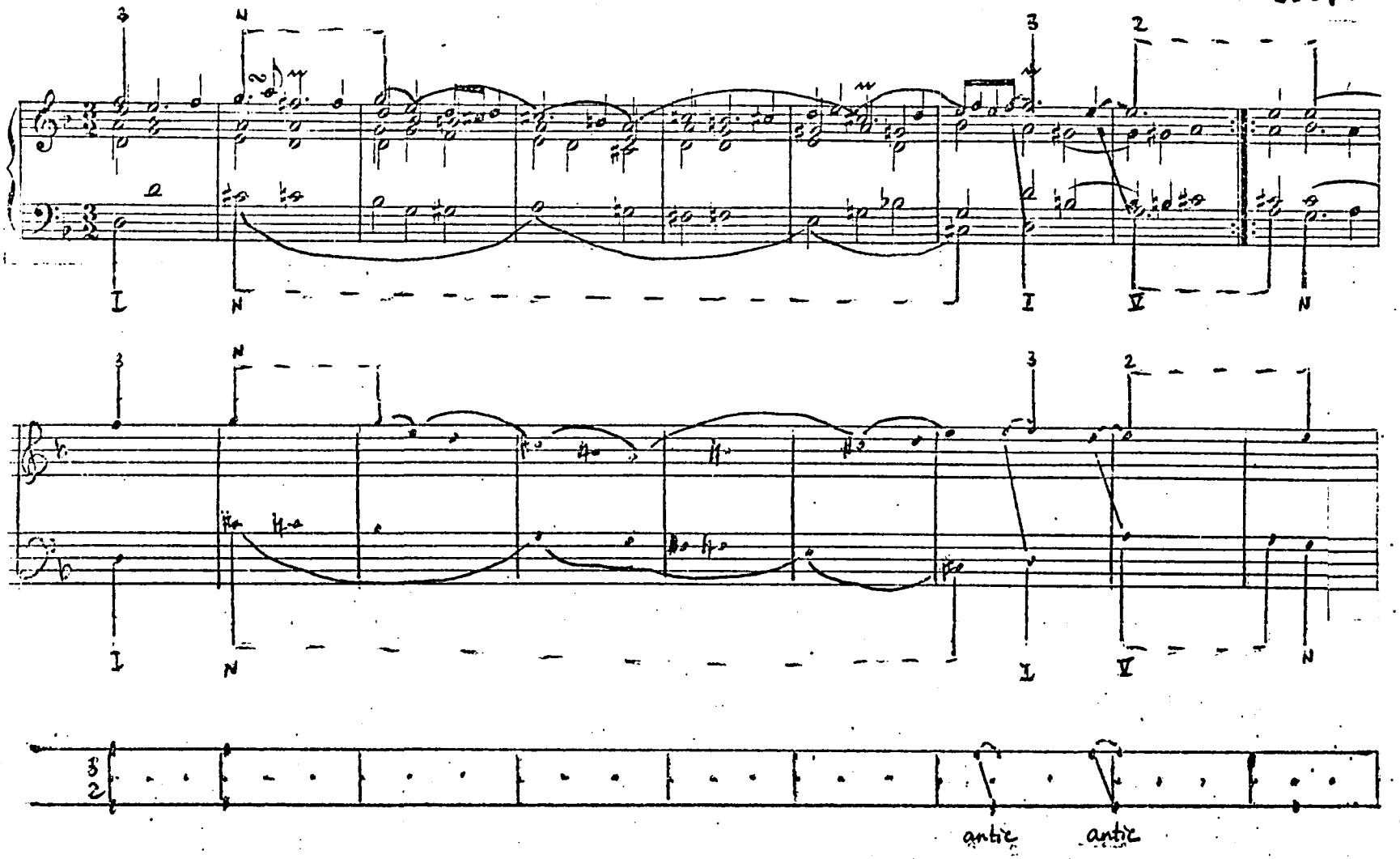
English Suite in D minor, Sarabande

JB 39



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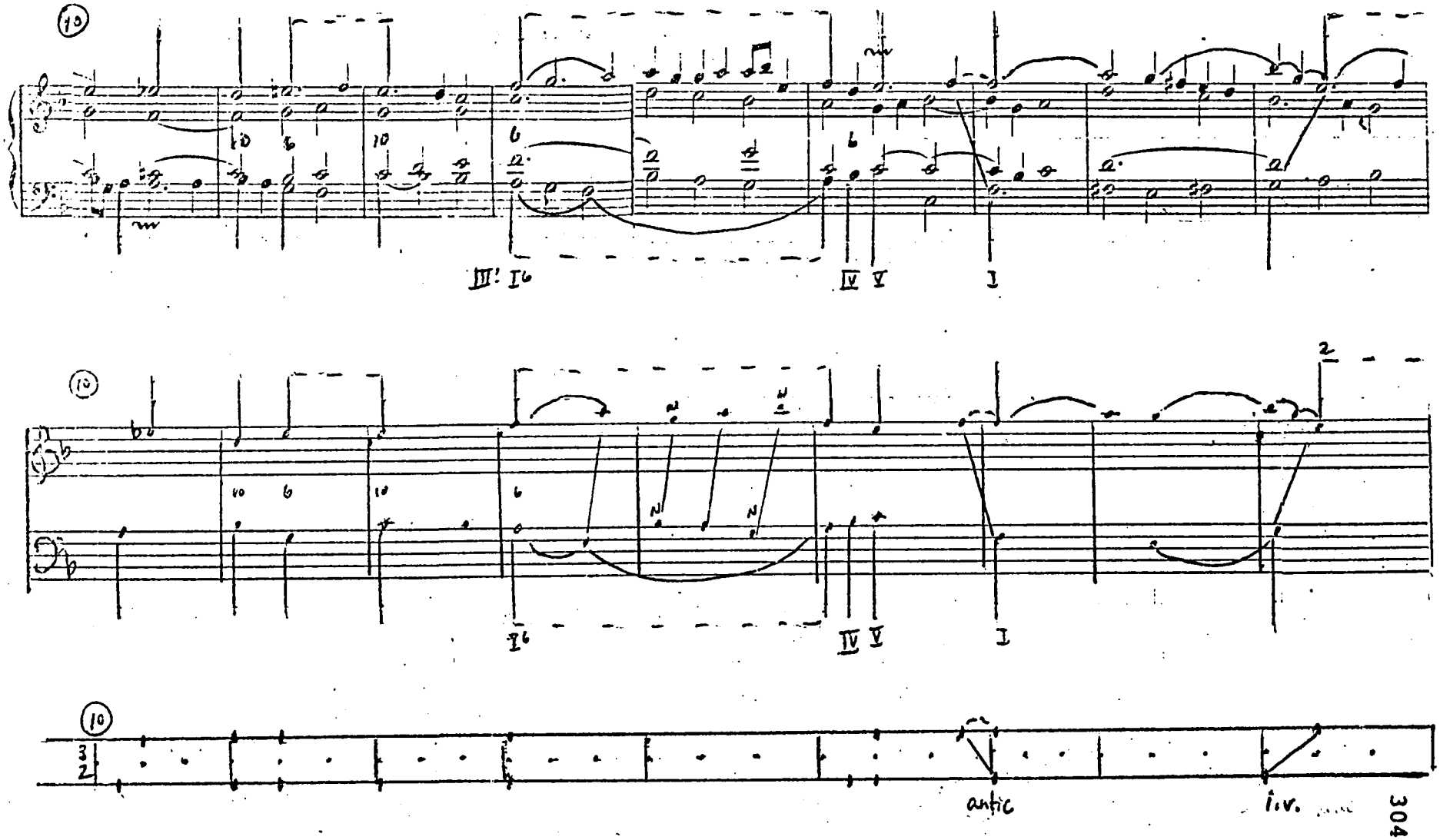

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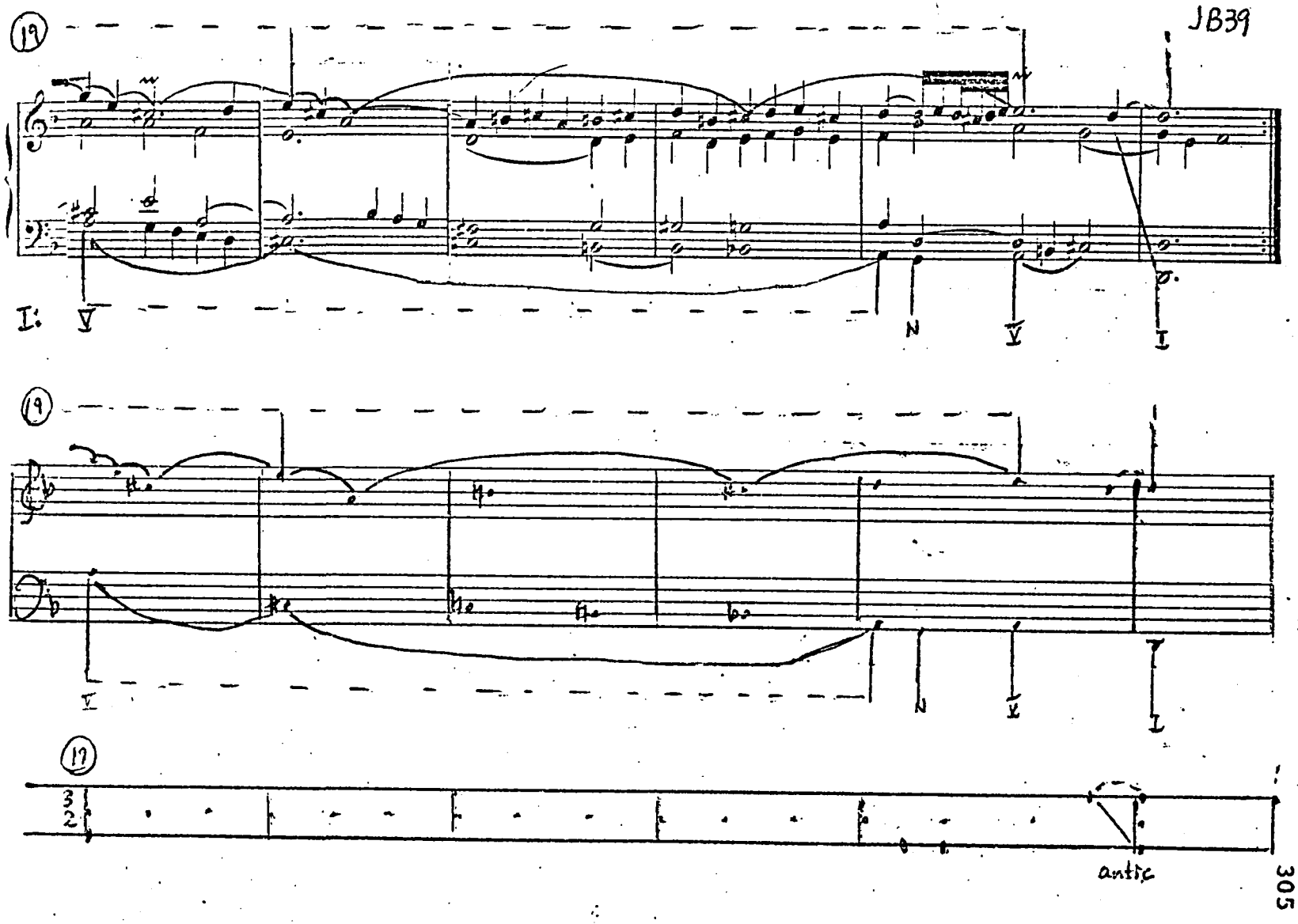

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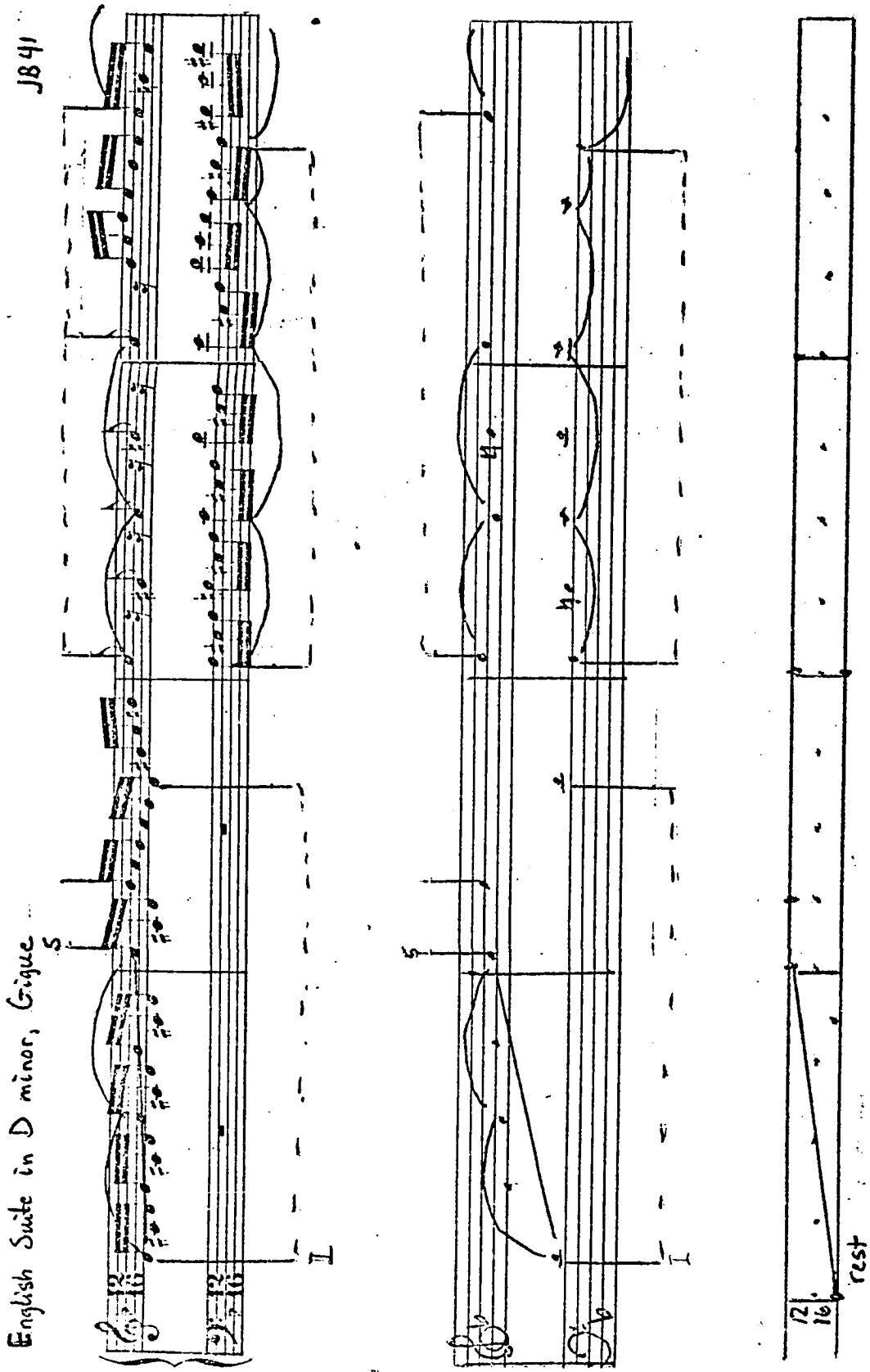

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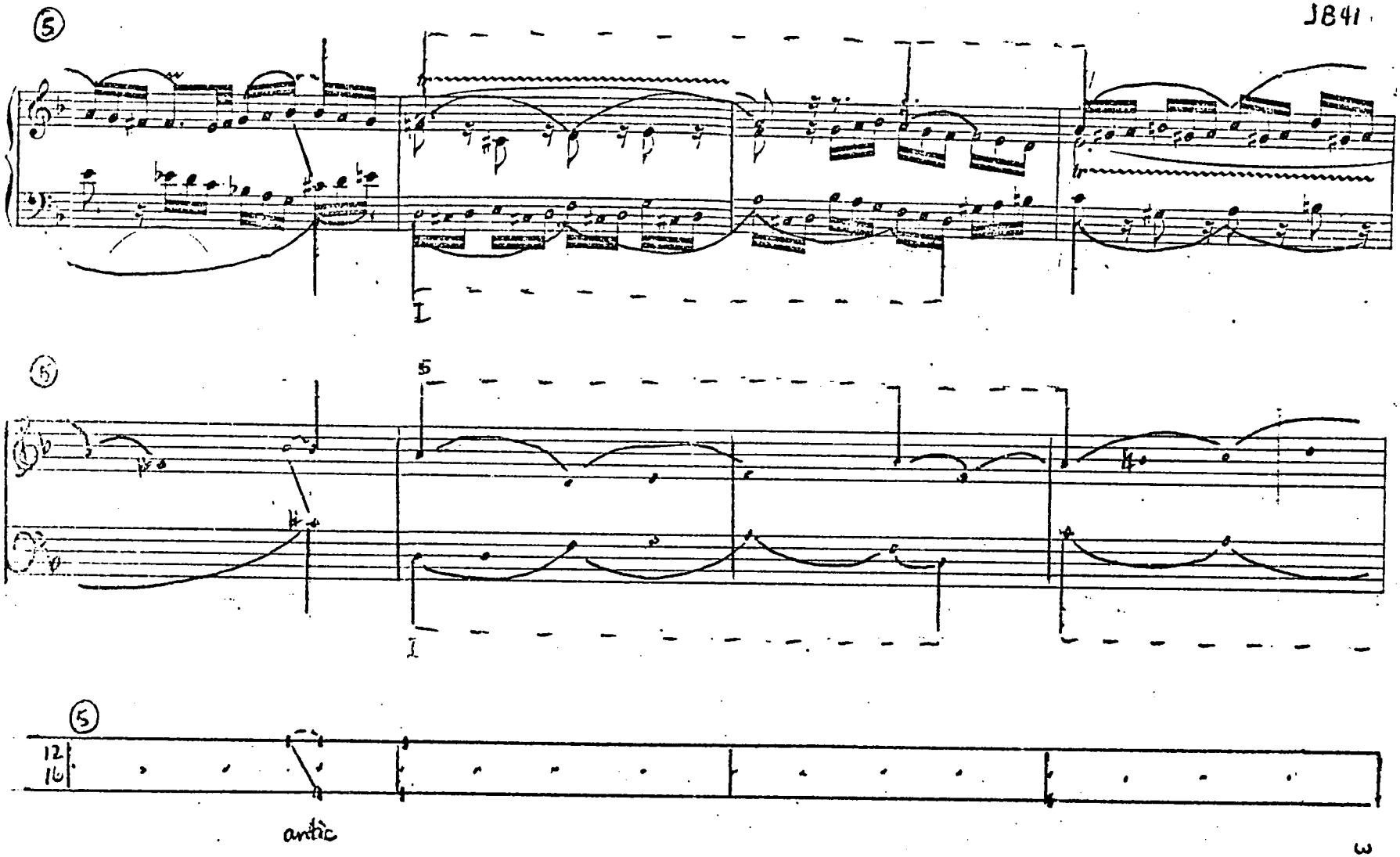

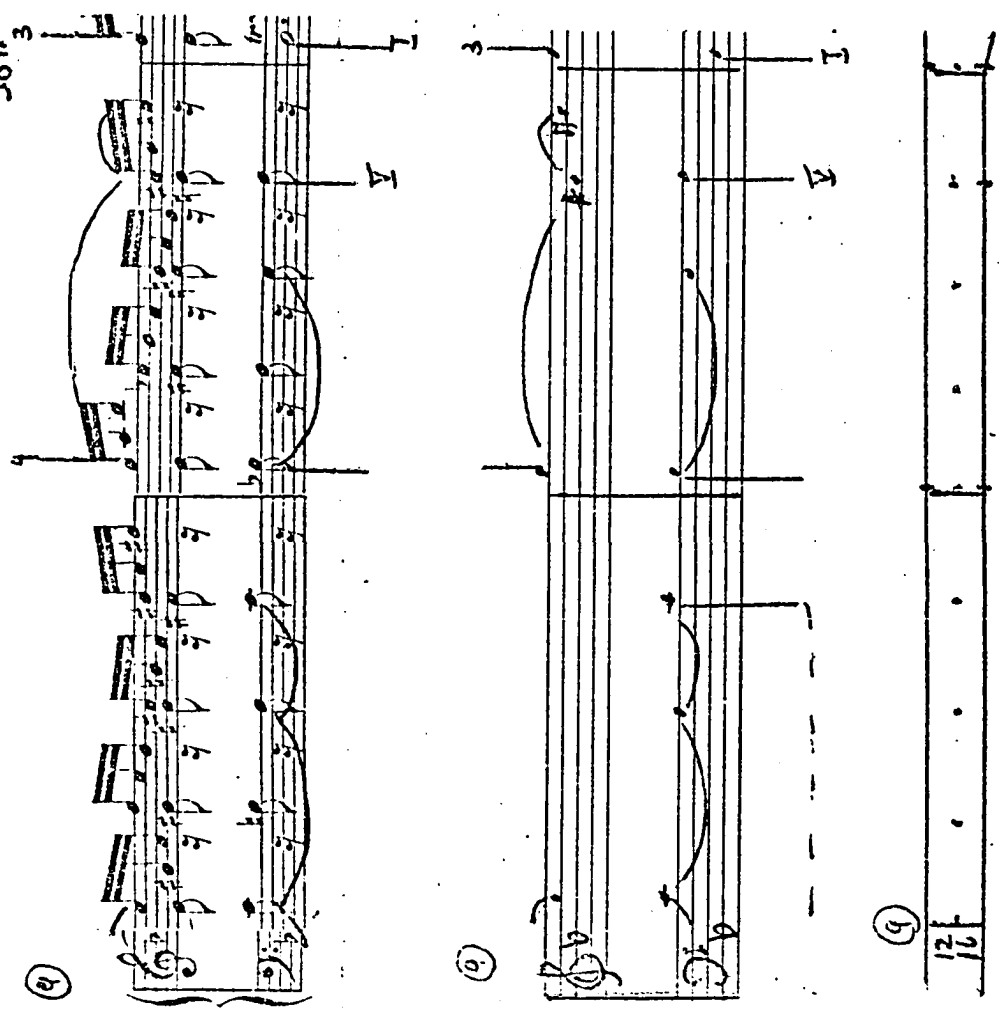

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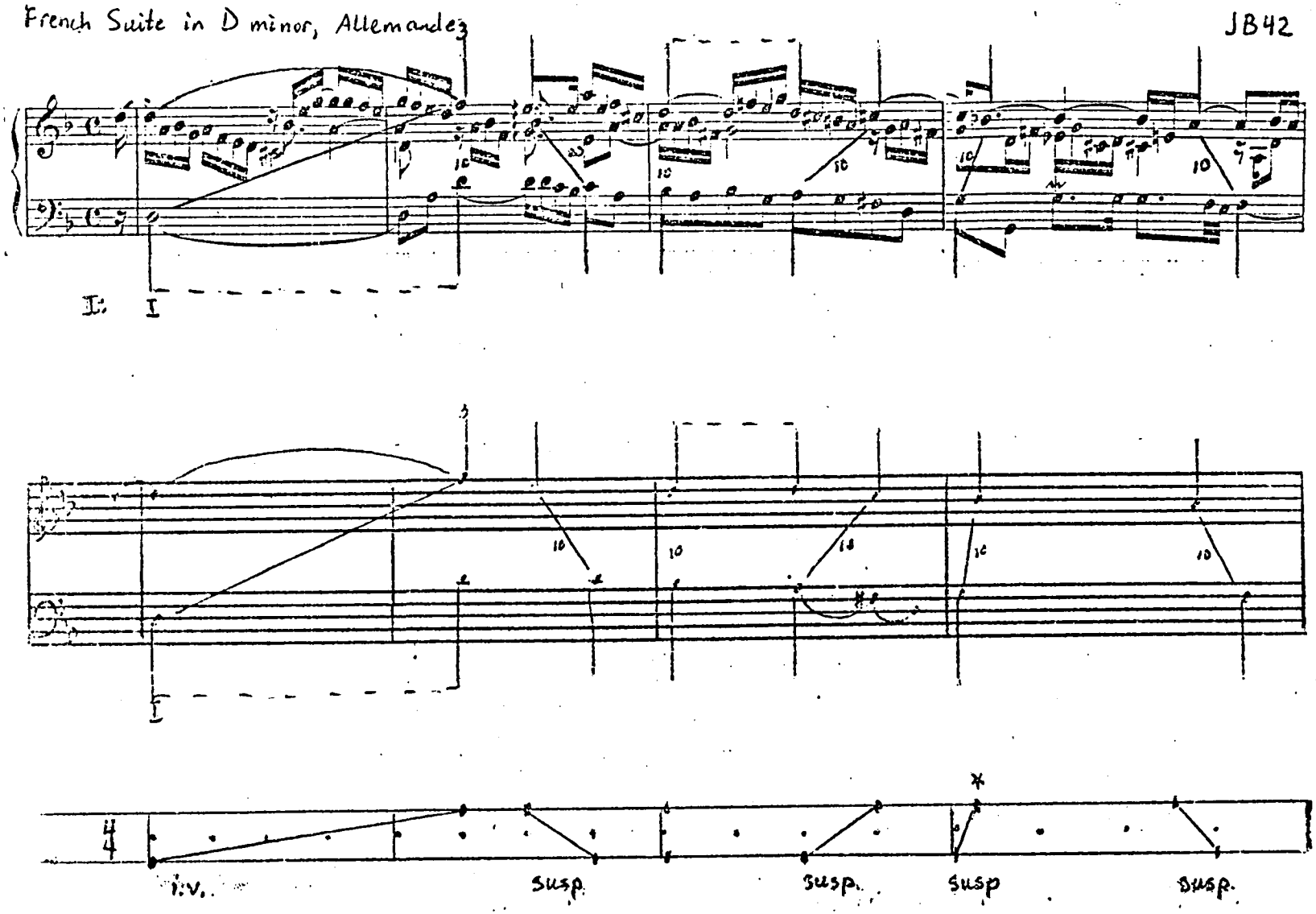
French Suite in D minor, Allemande
JB42
I: I
10
10
10

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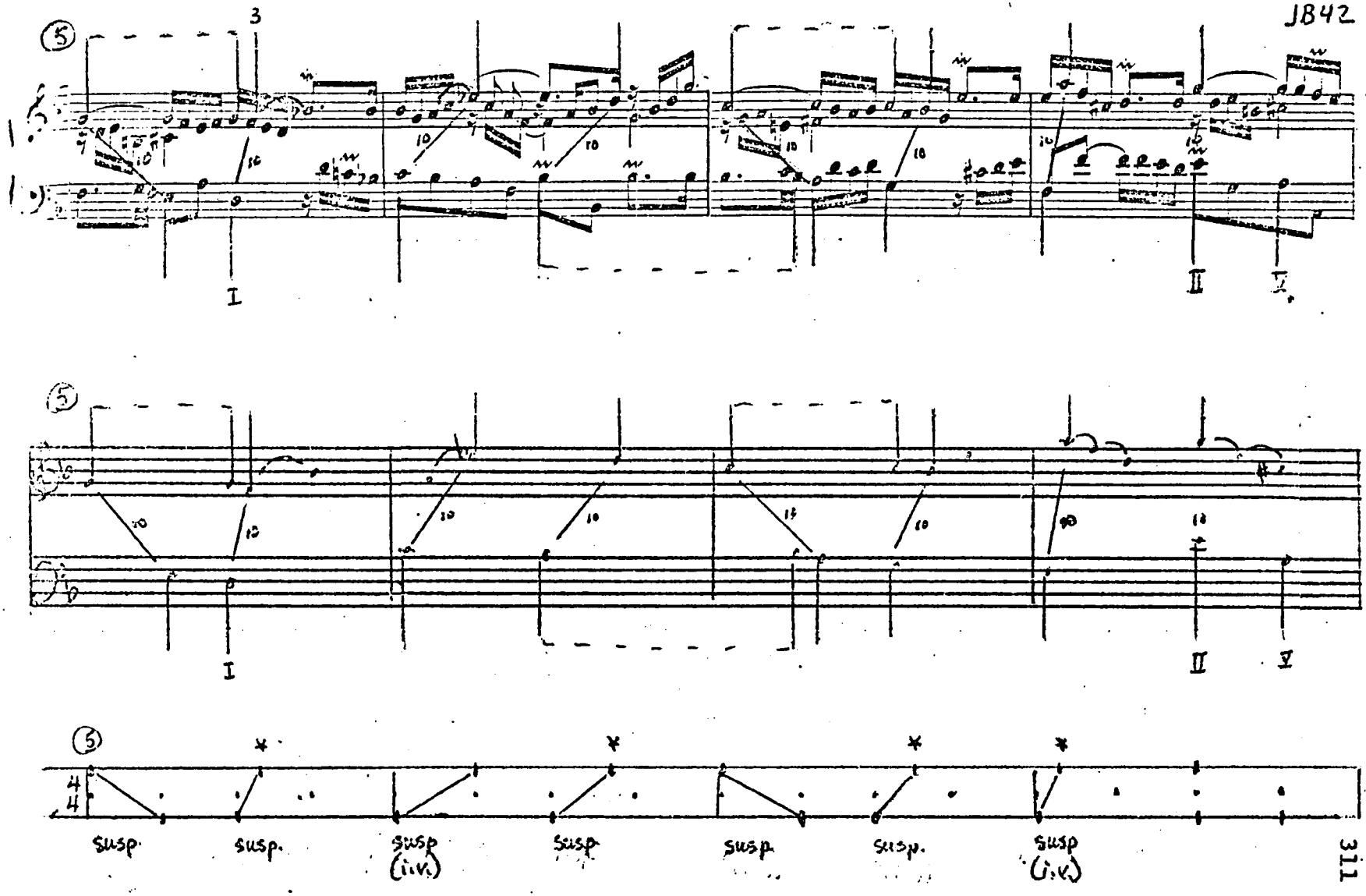

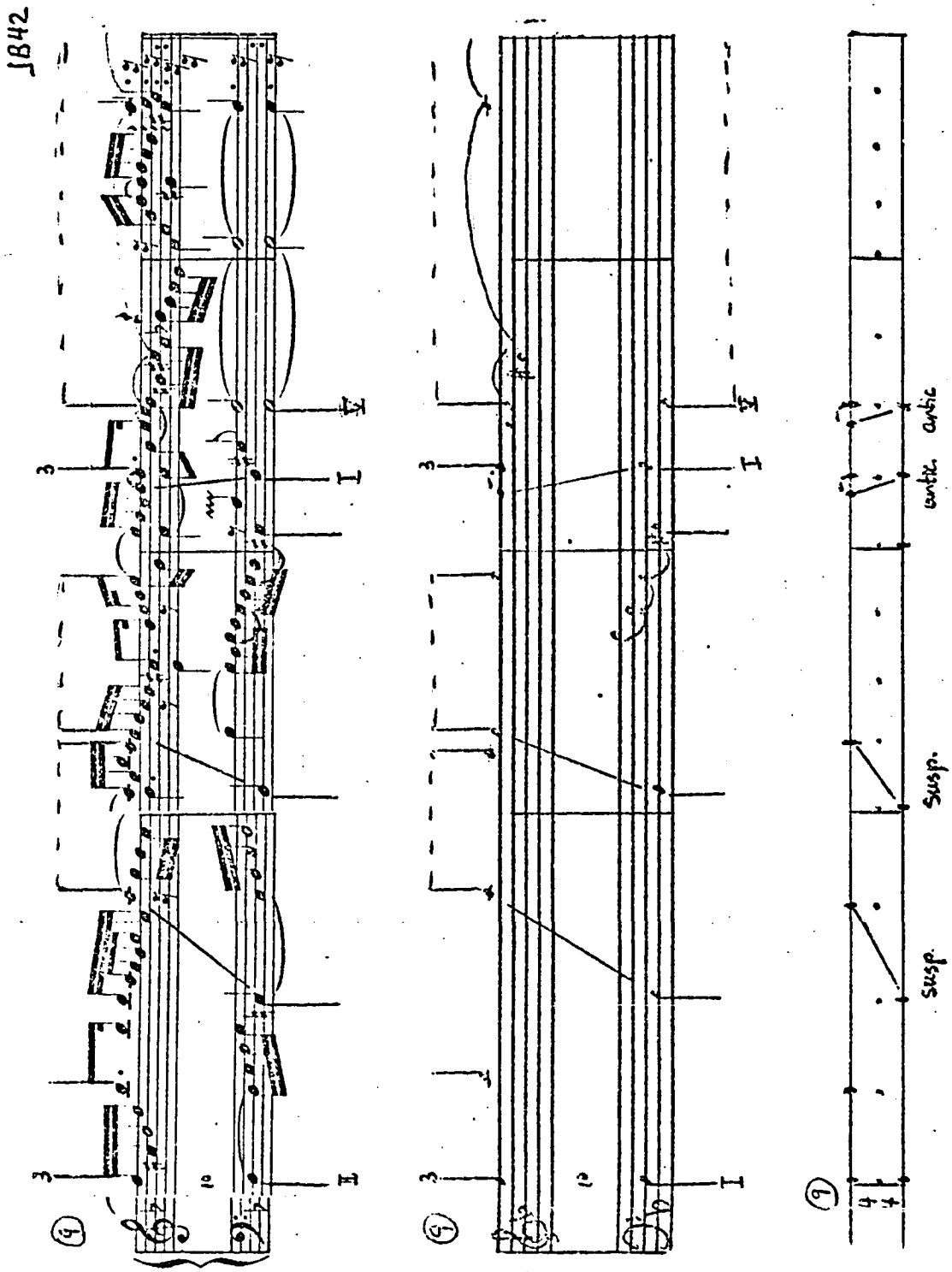

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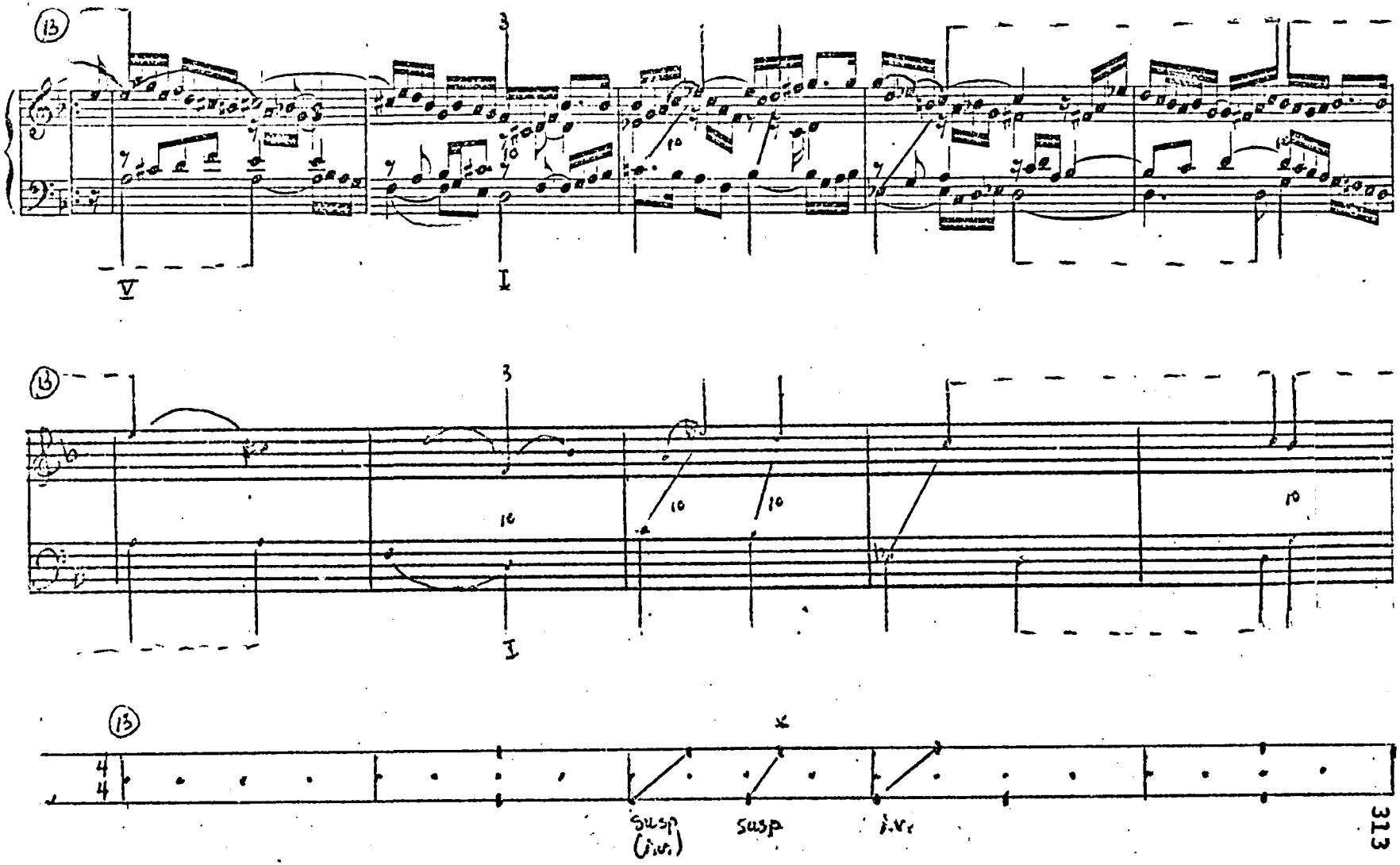

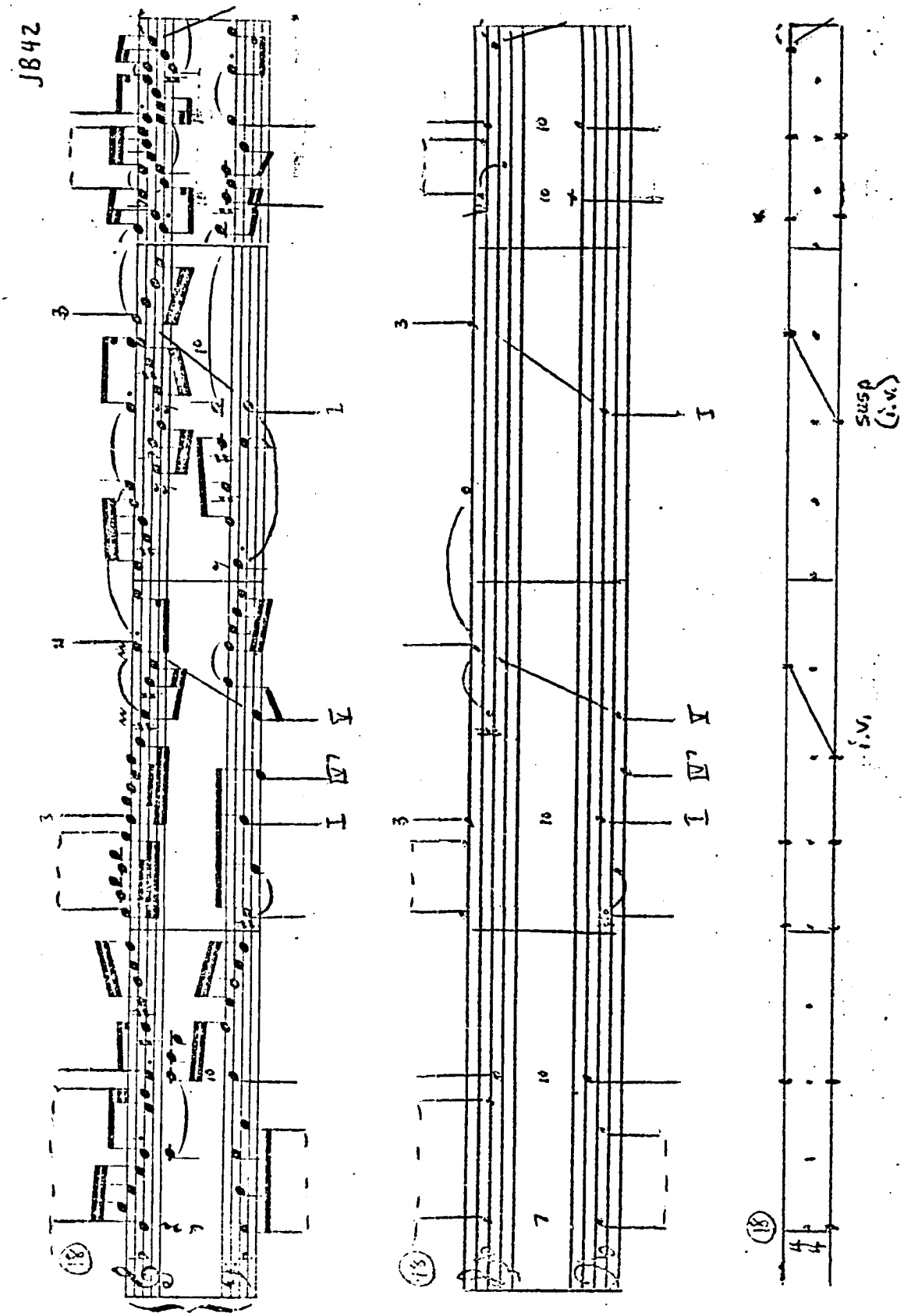

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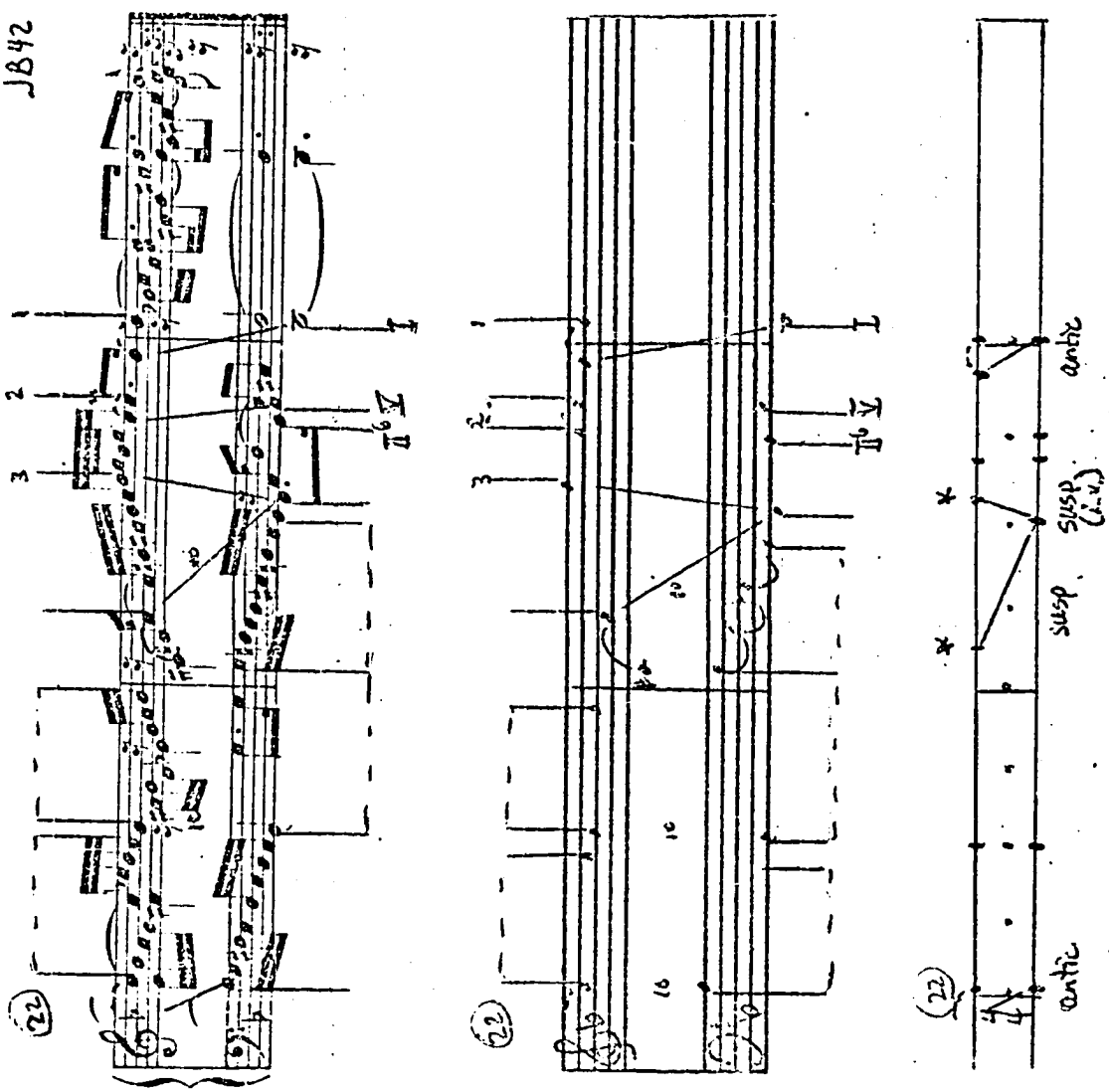

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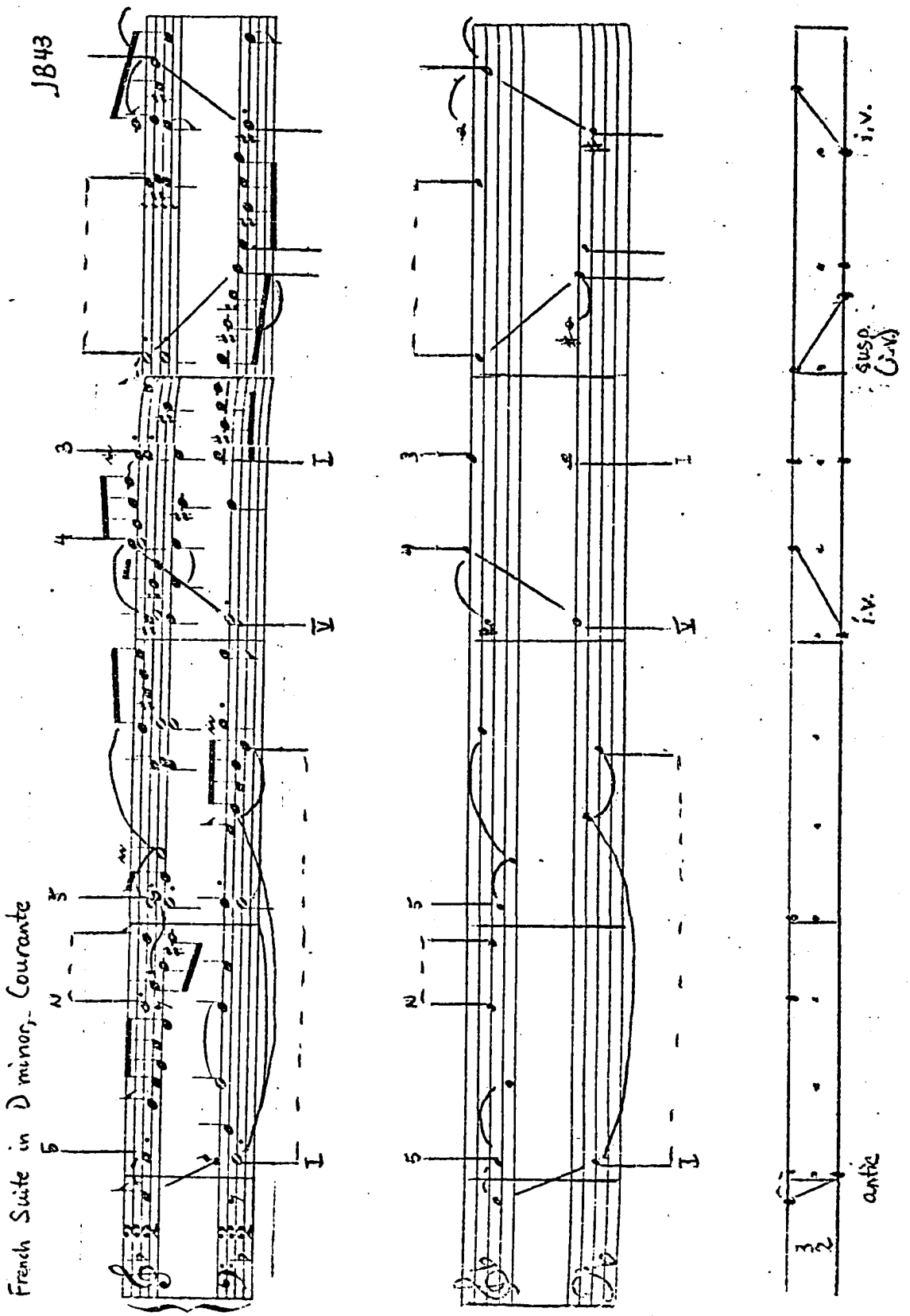

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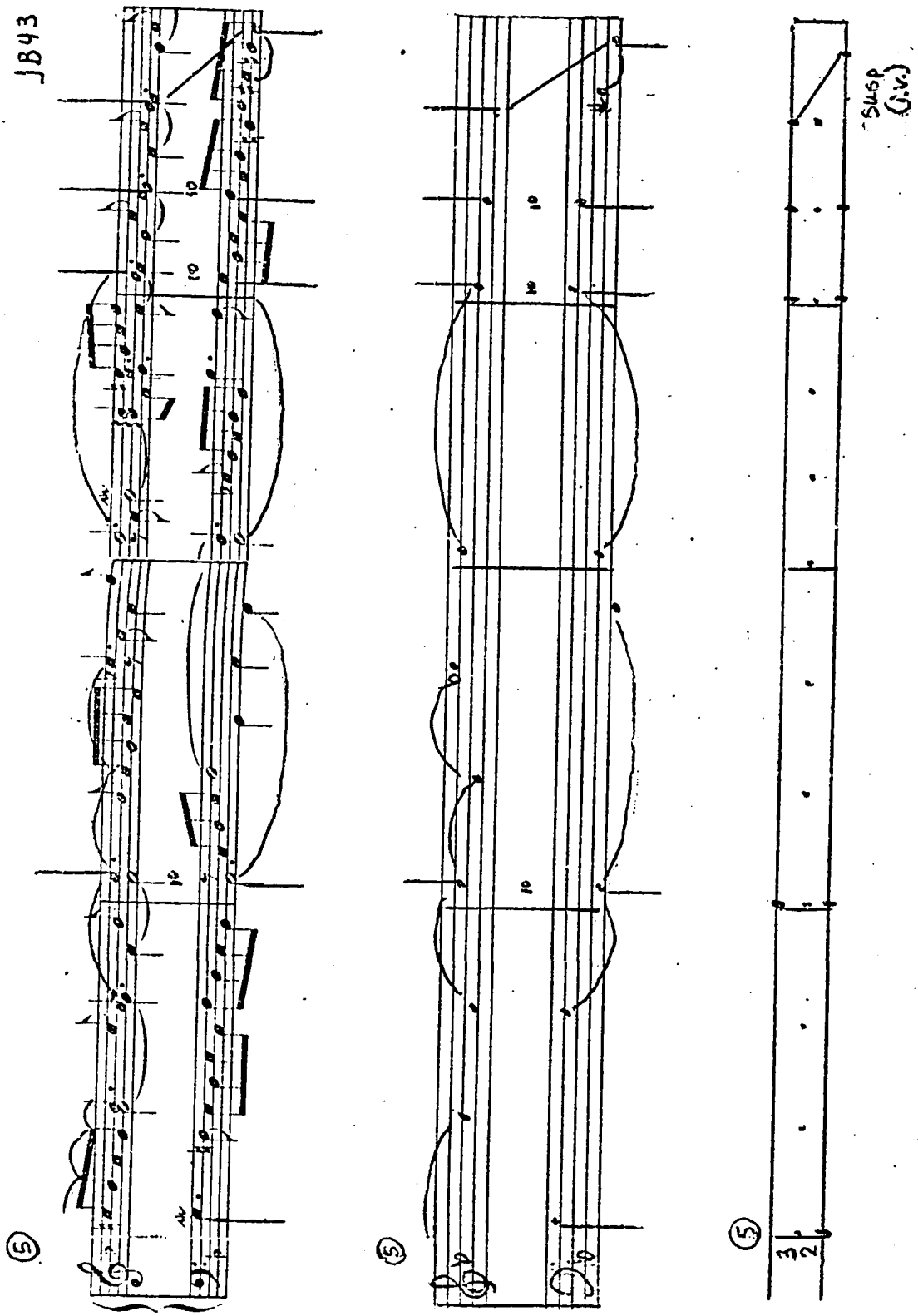

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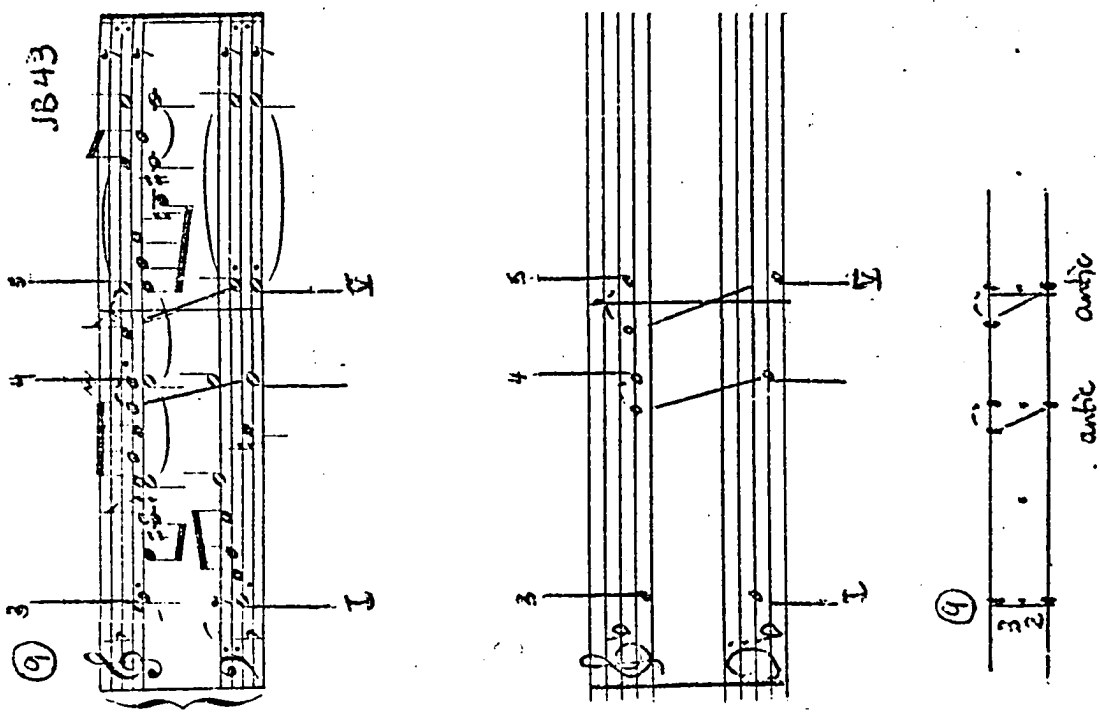

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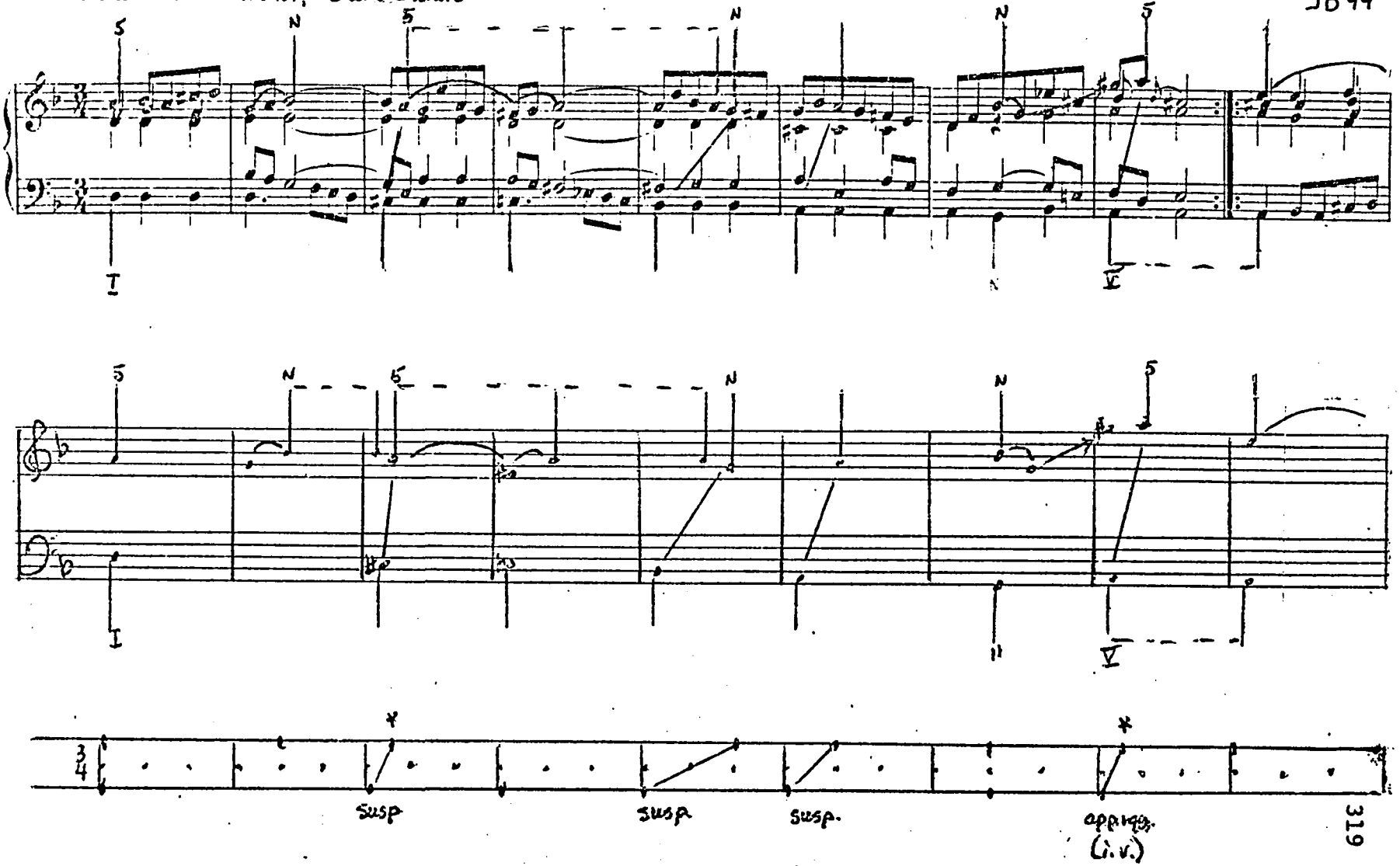
French Suite in D minor, Sarabande

JB 44



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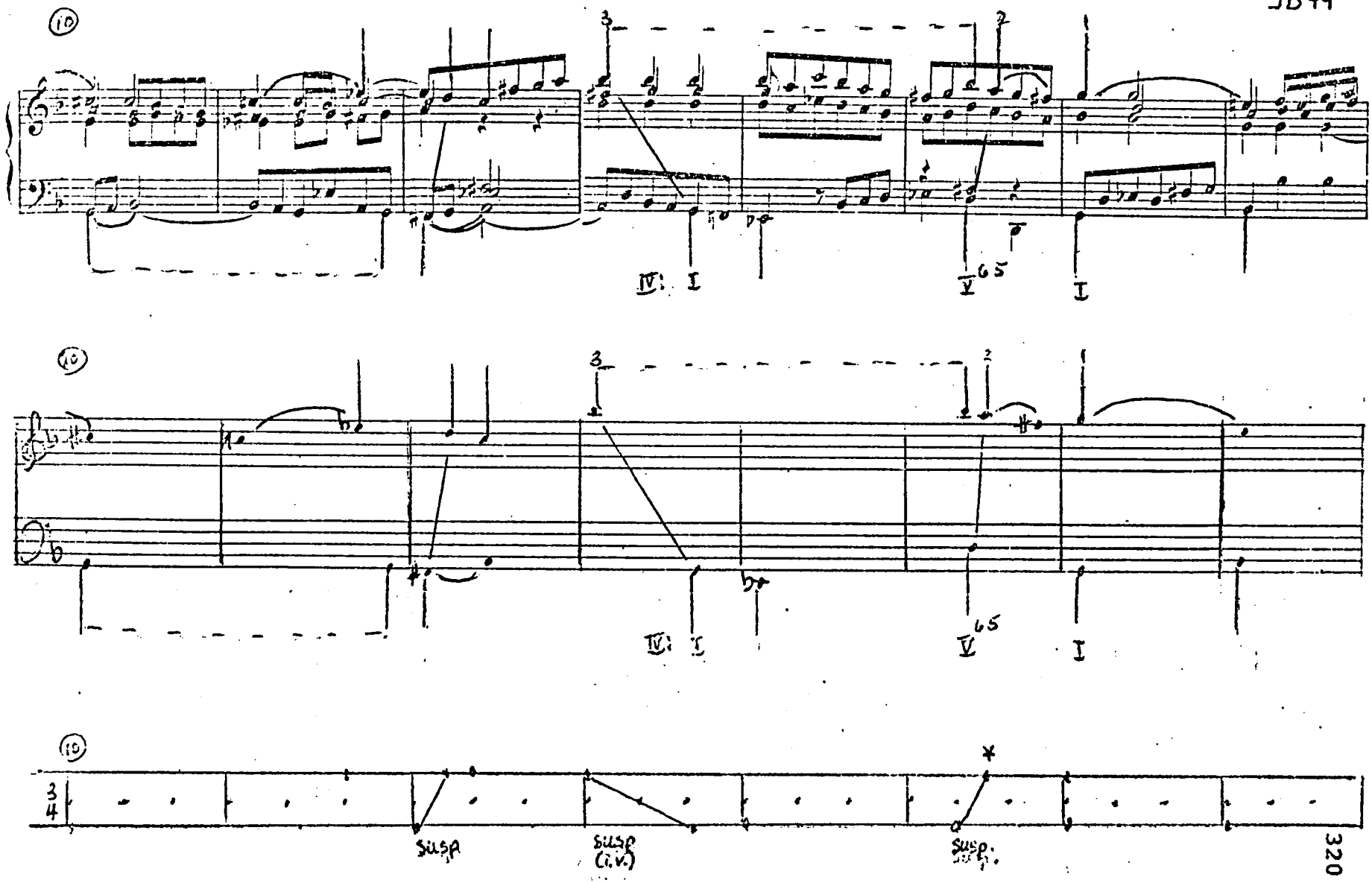

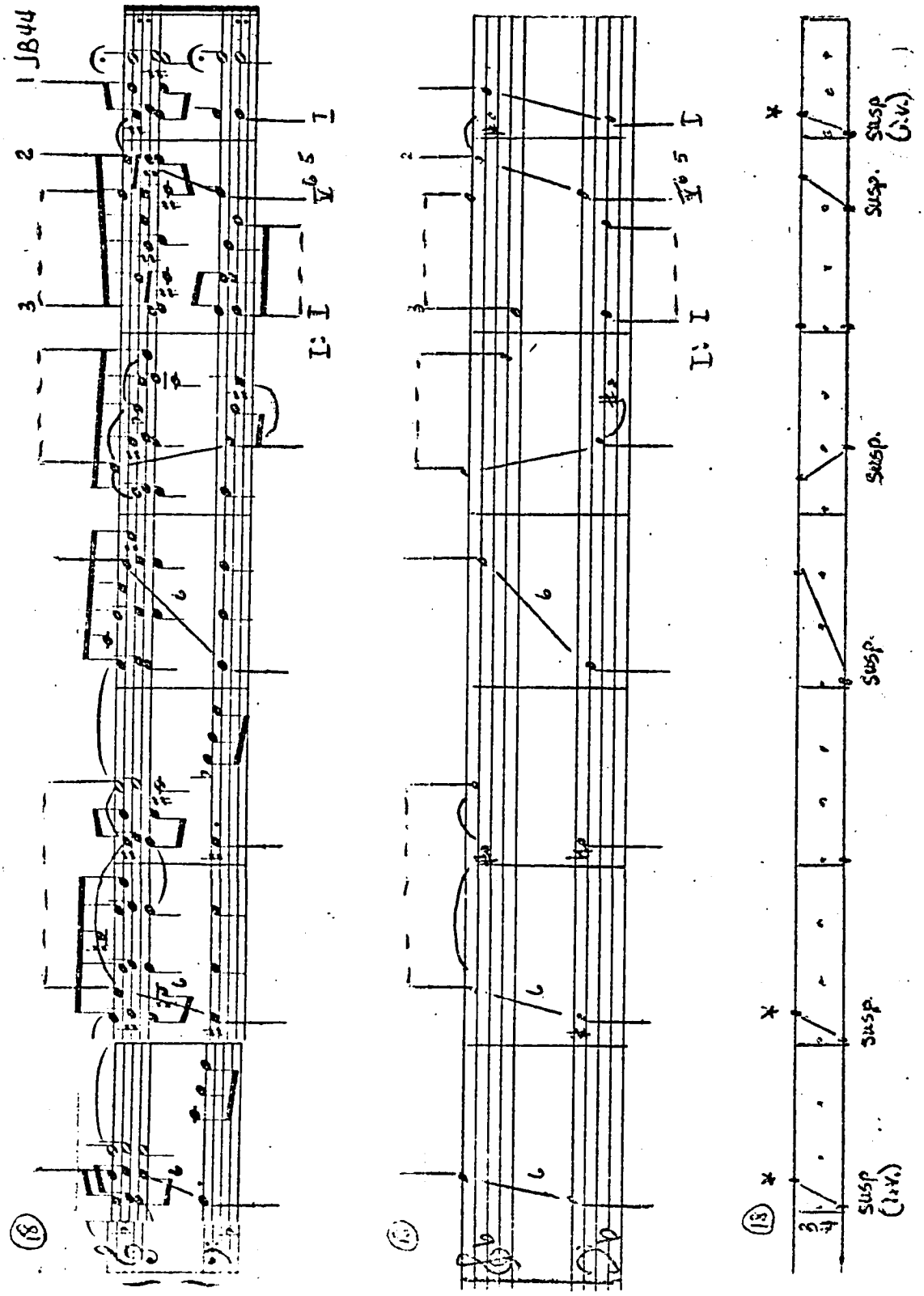

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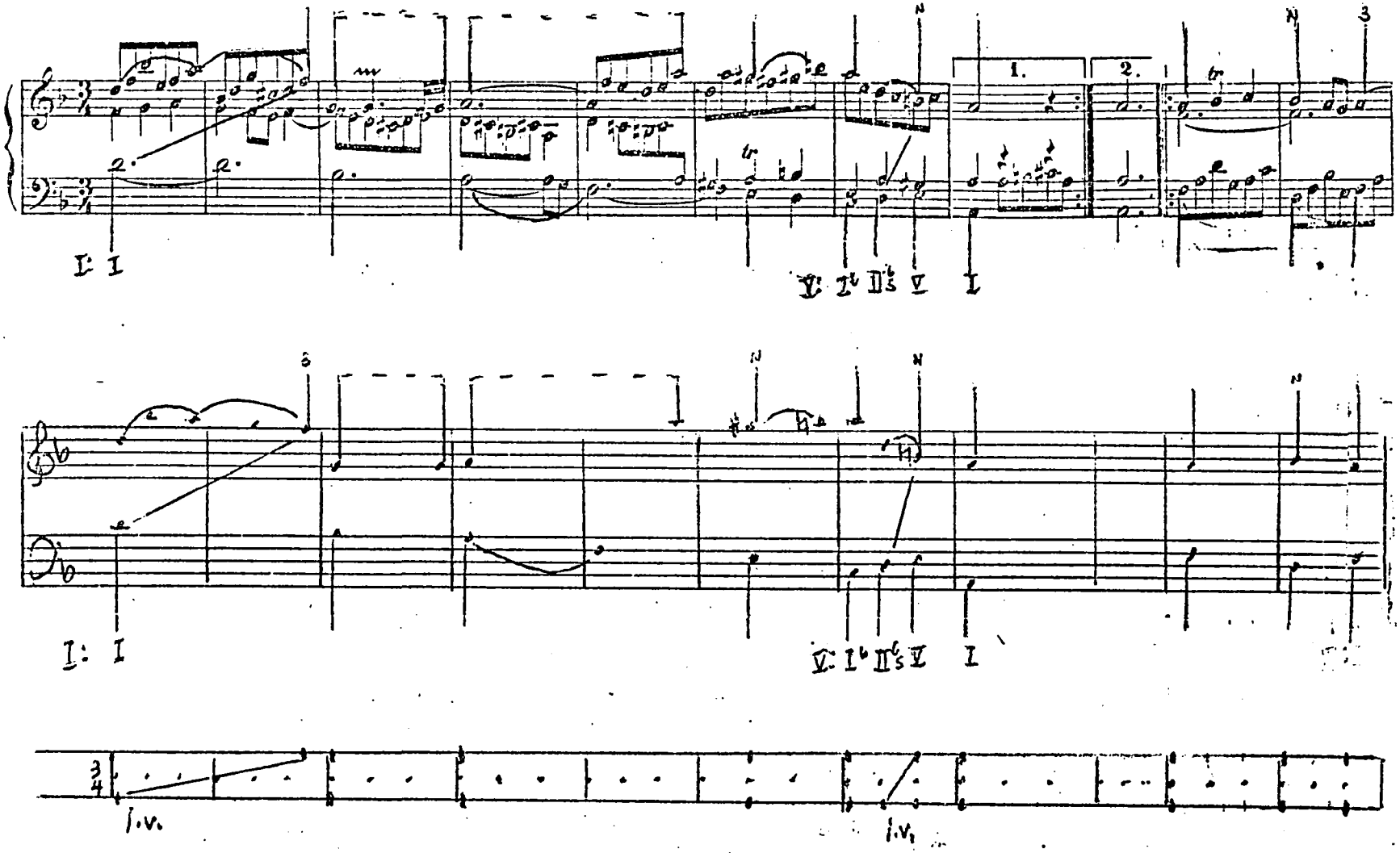
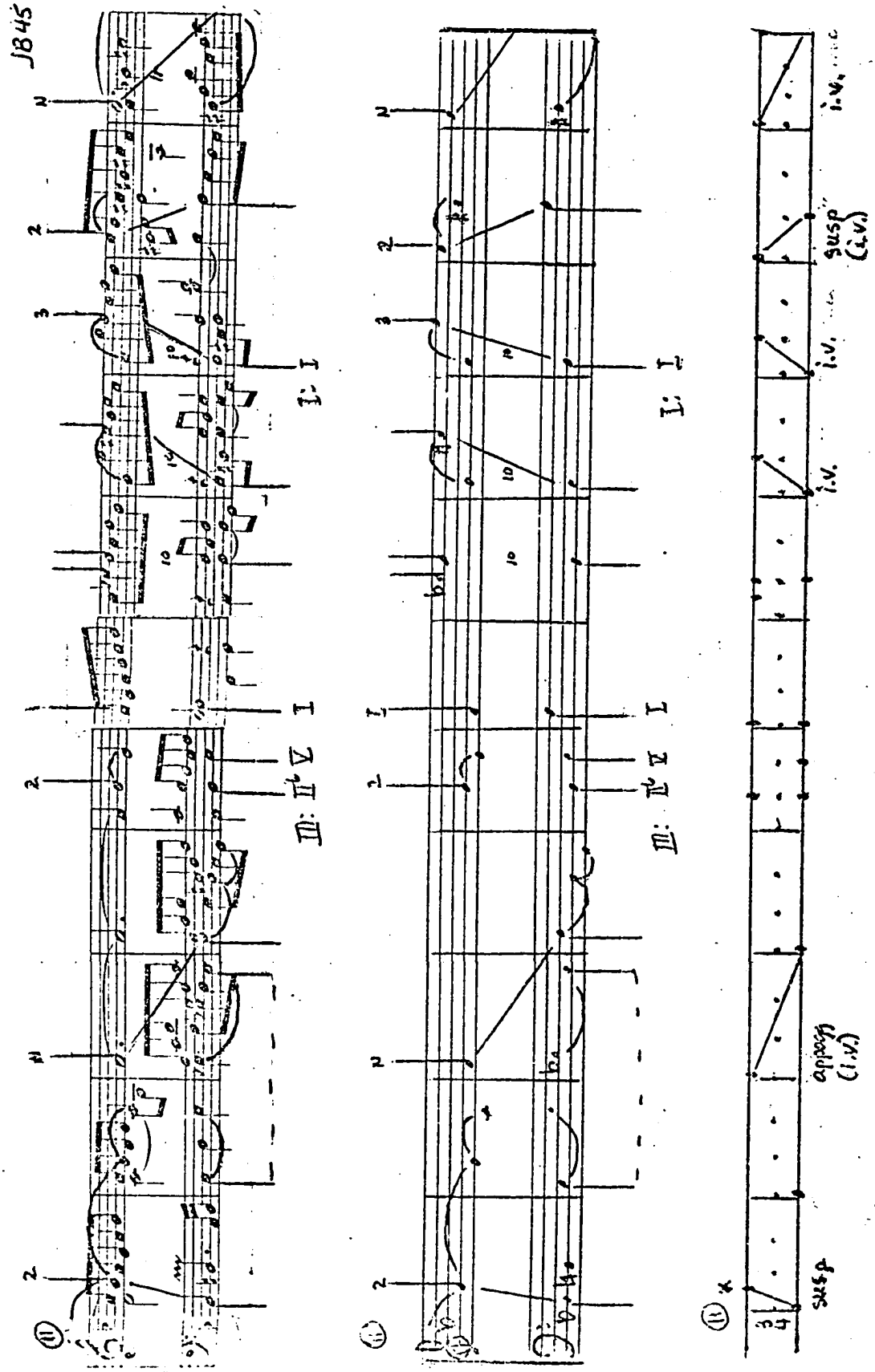
French Suite in D minor, Menuet I

JB 45





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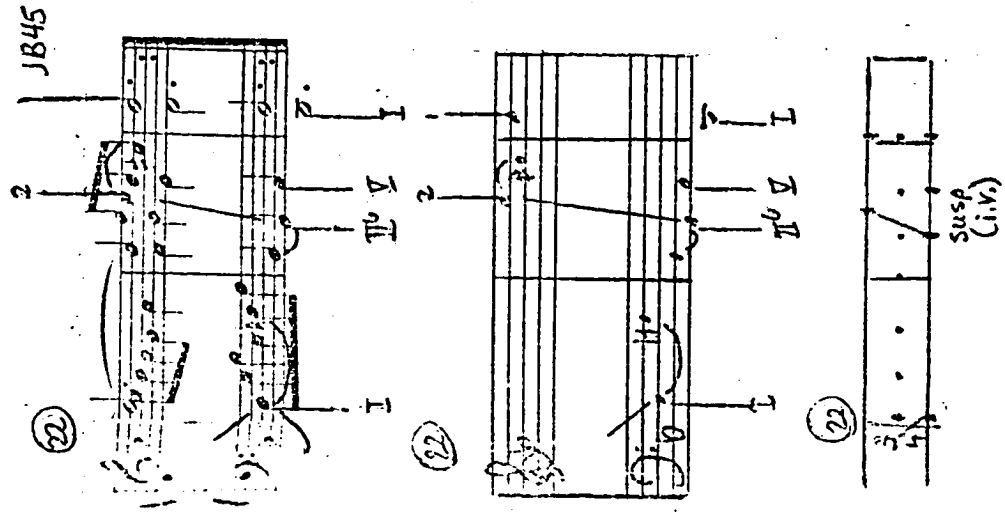

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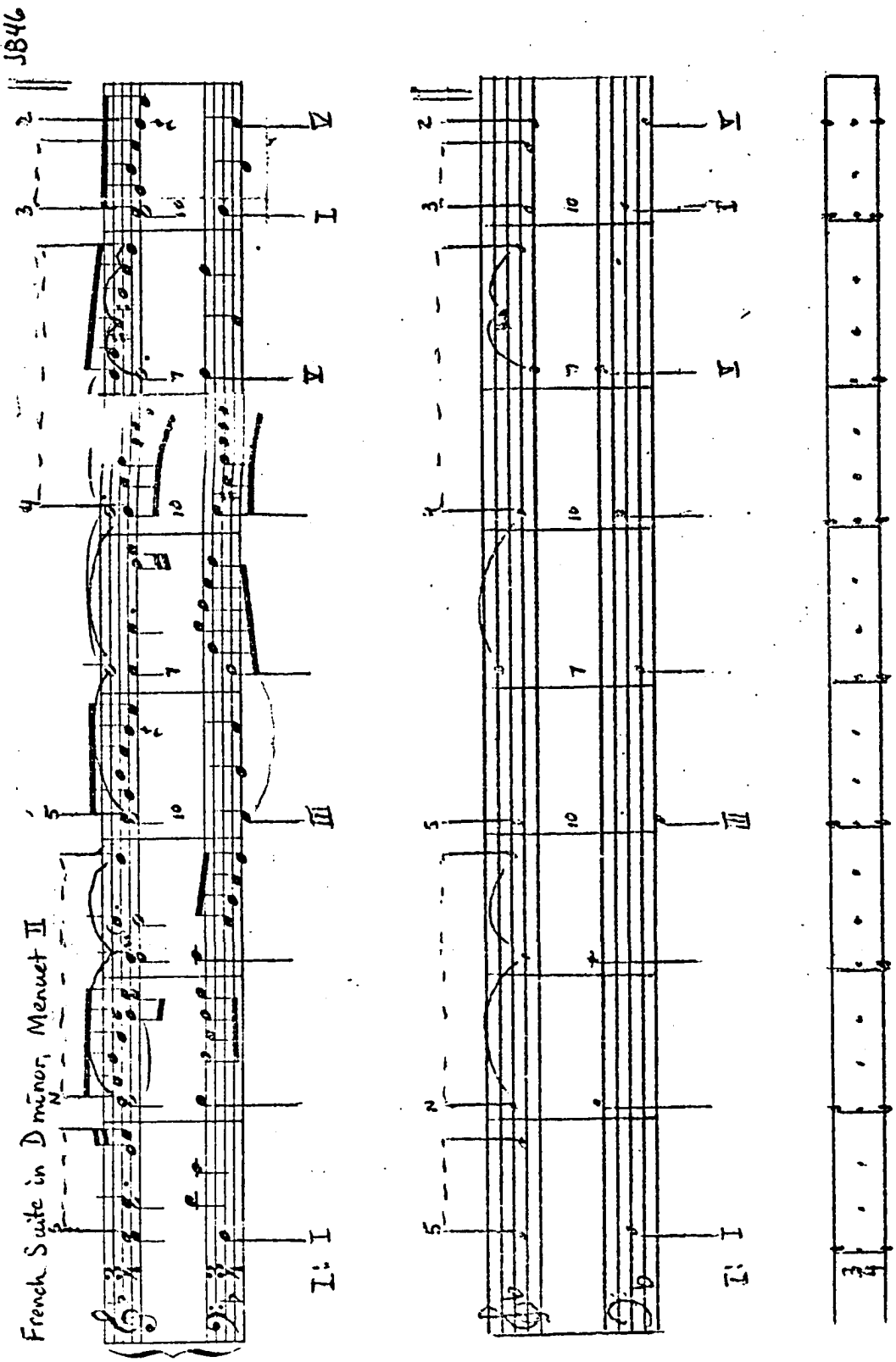

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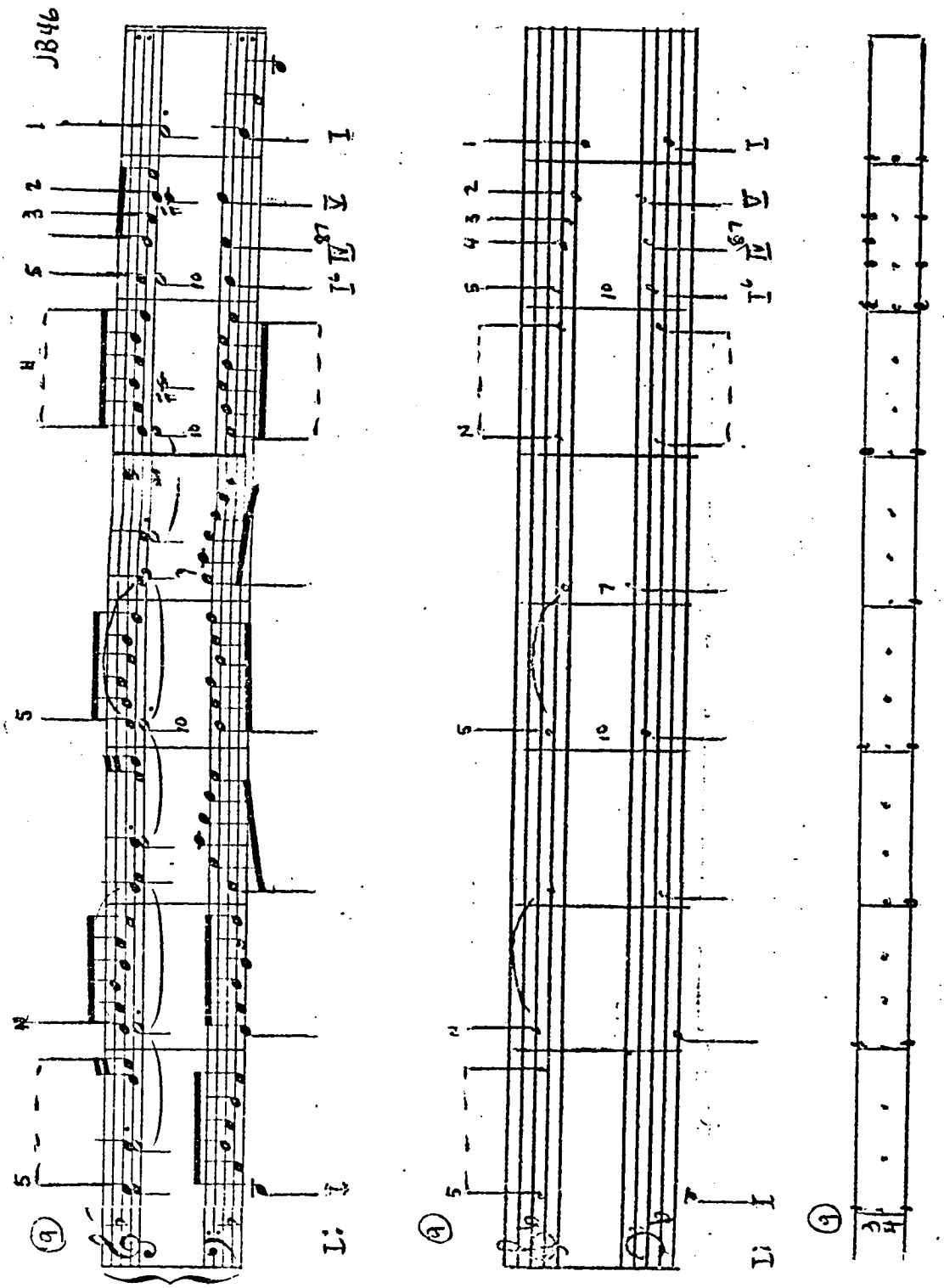

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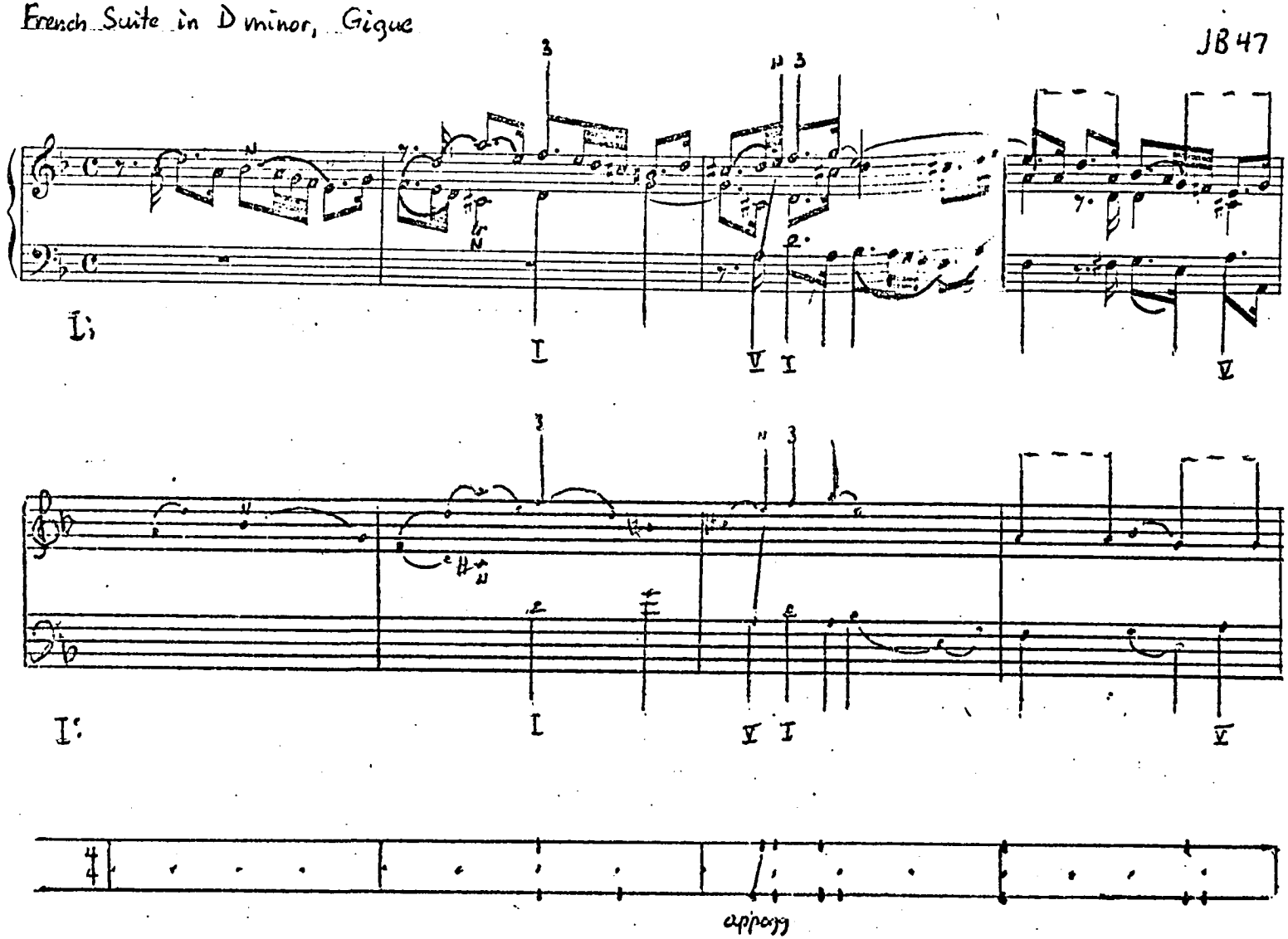

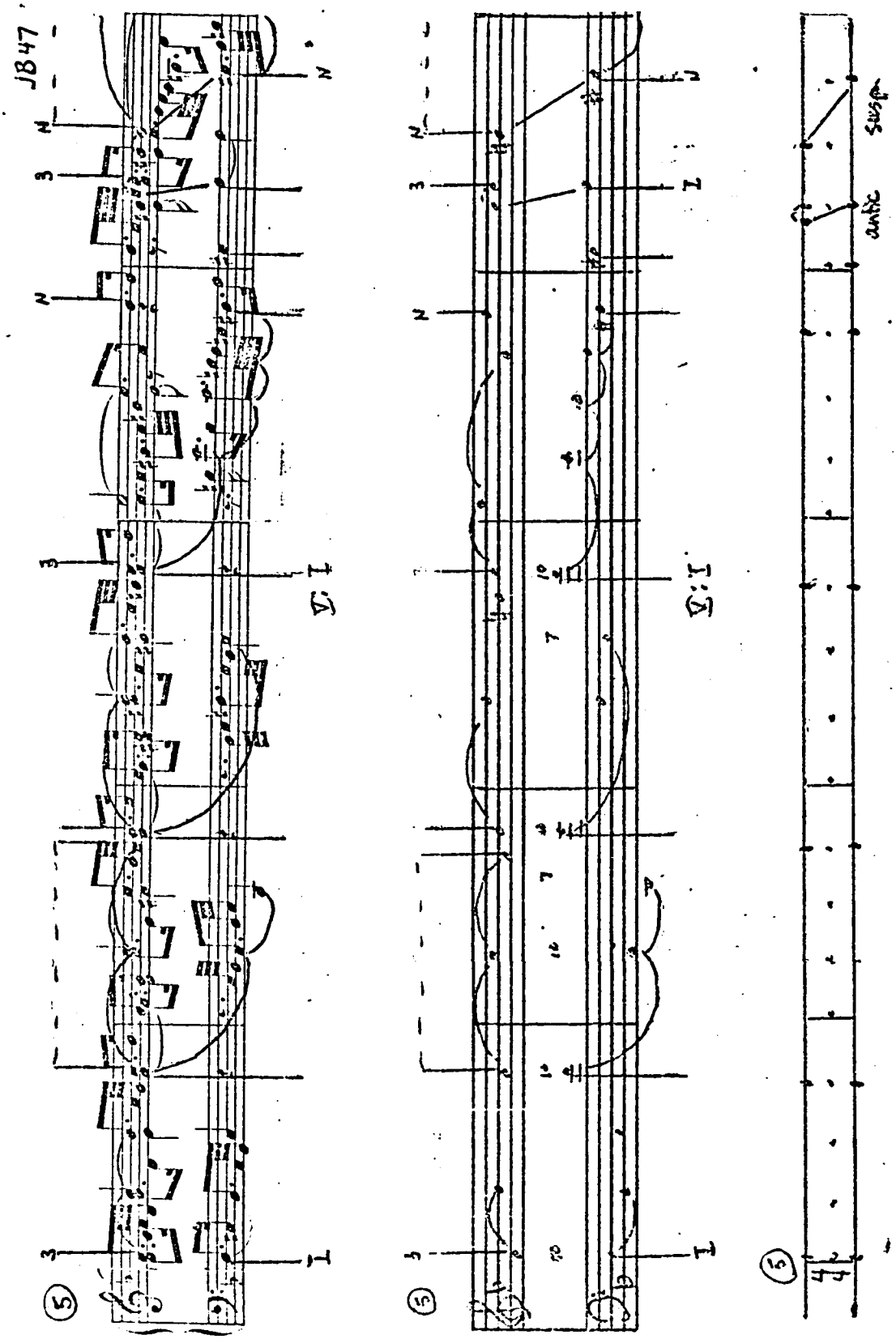

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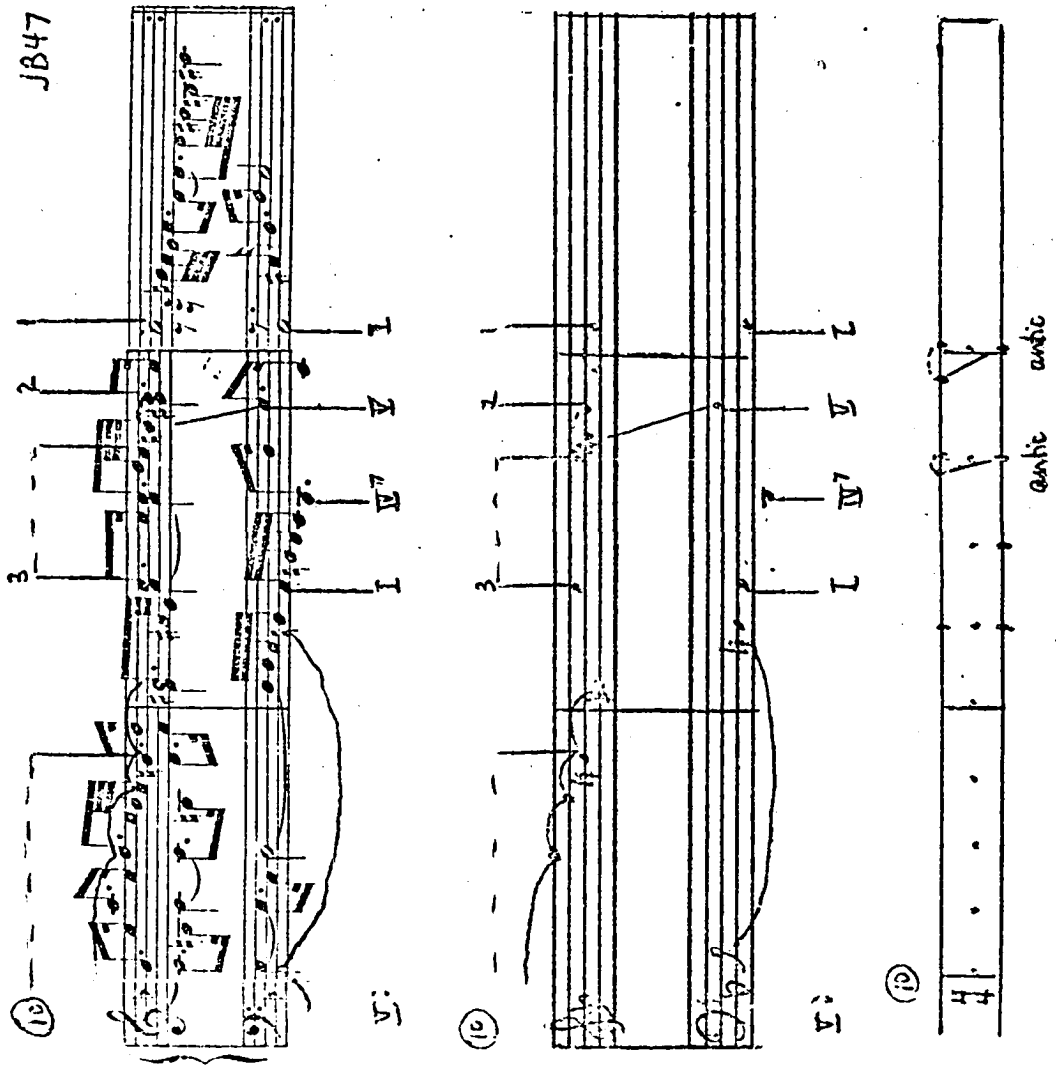

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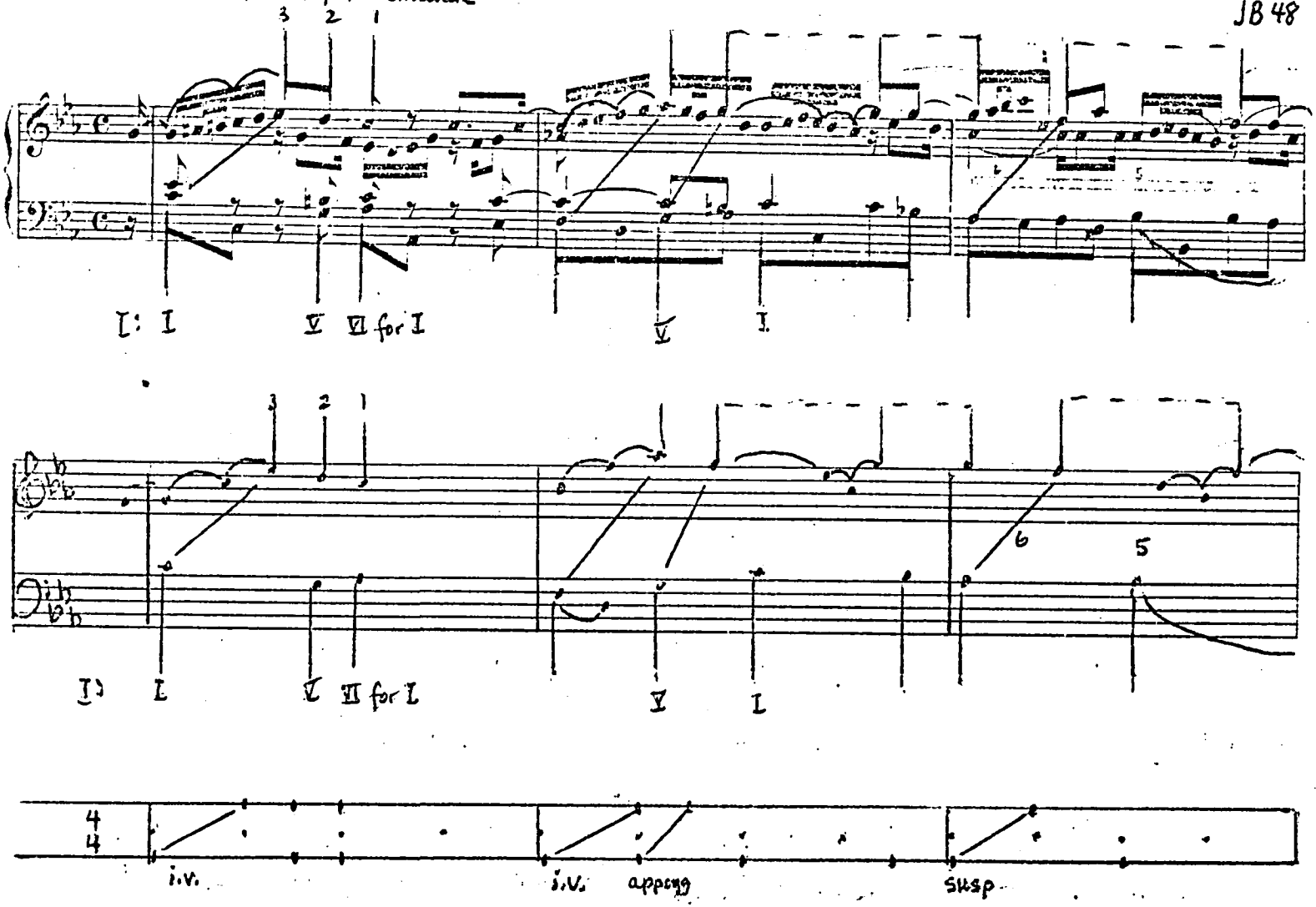
French Suite in C minor, Allemande

JB 48



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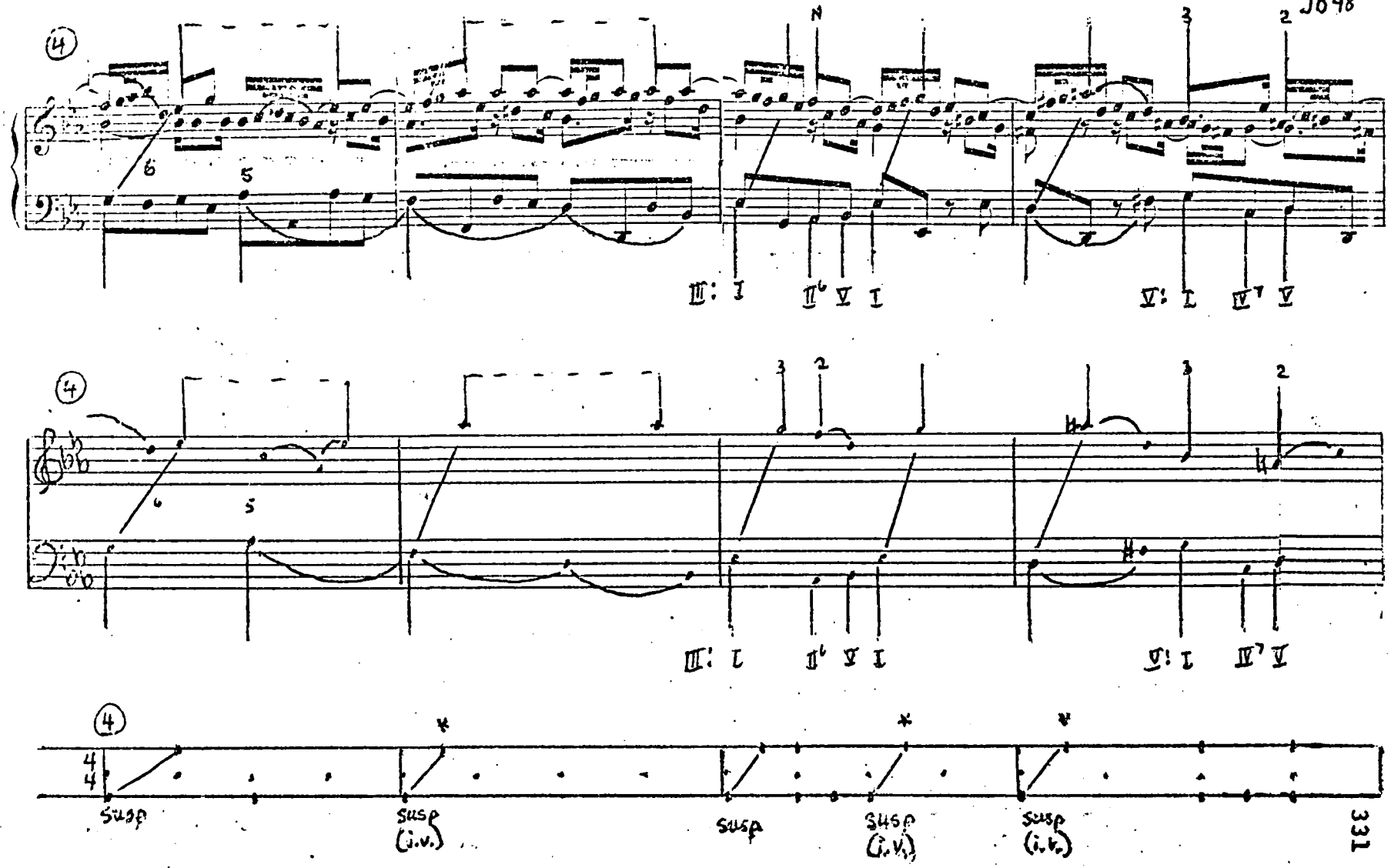

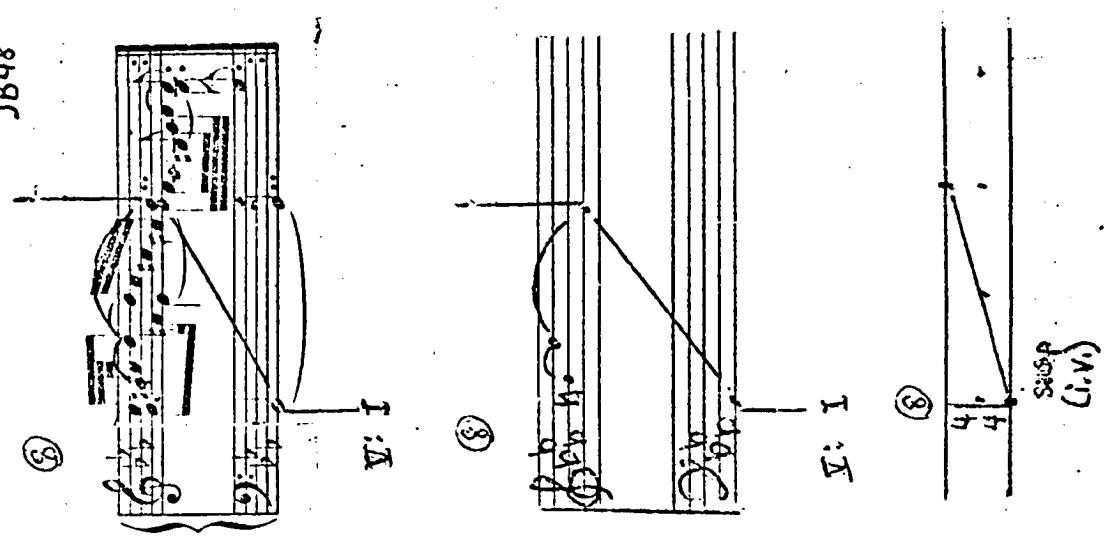

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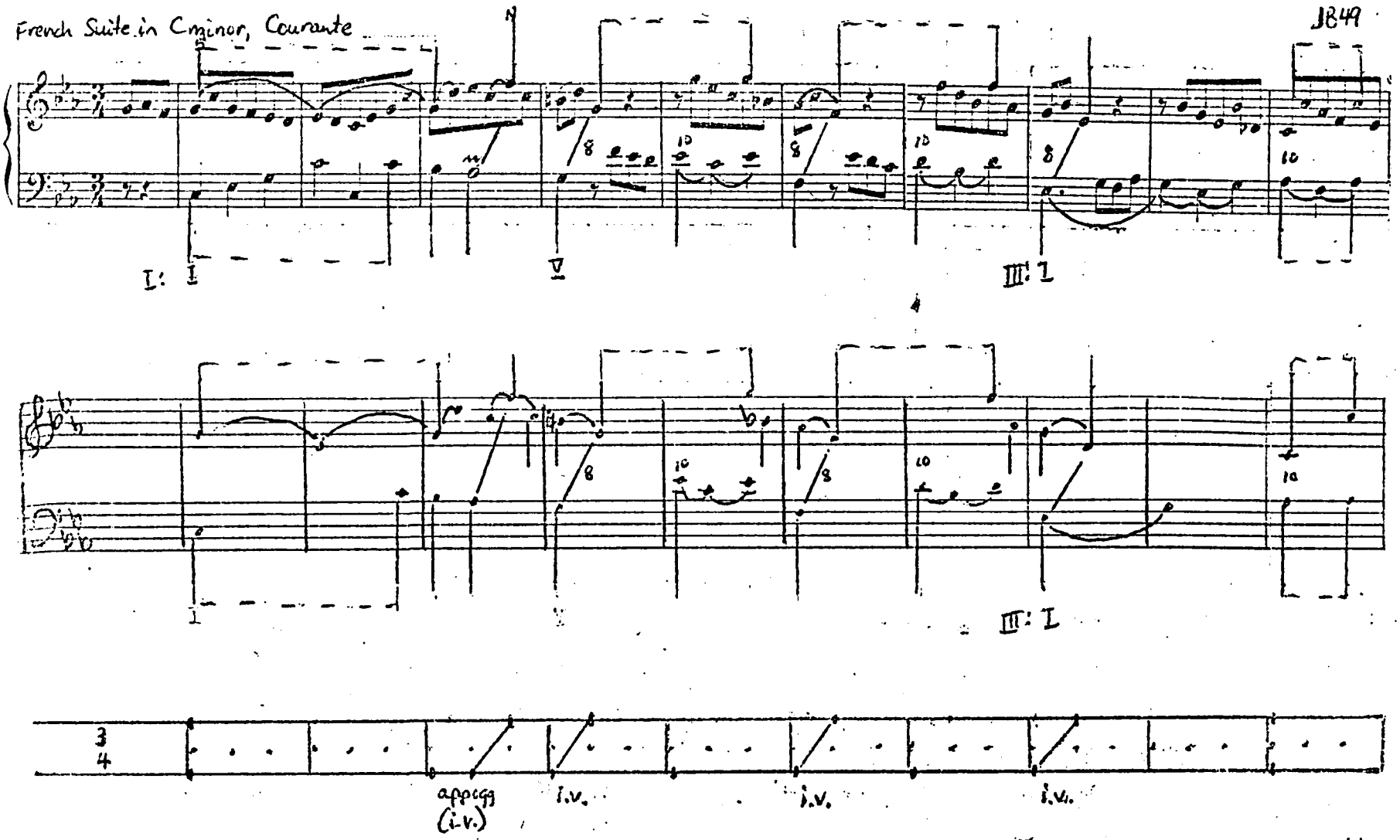

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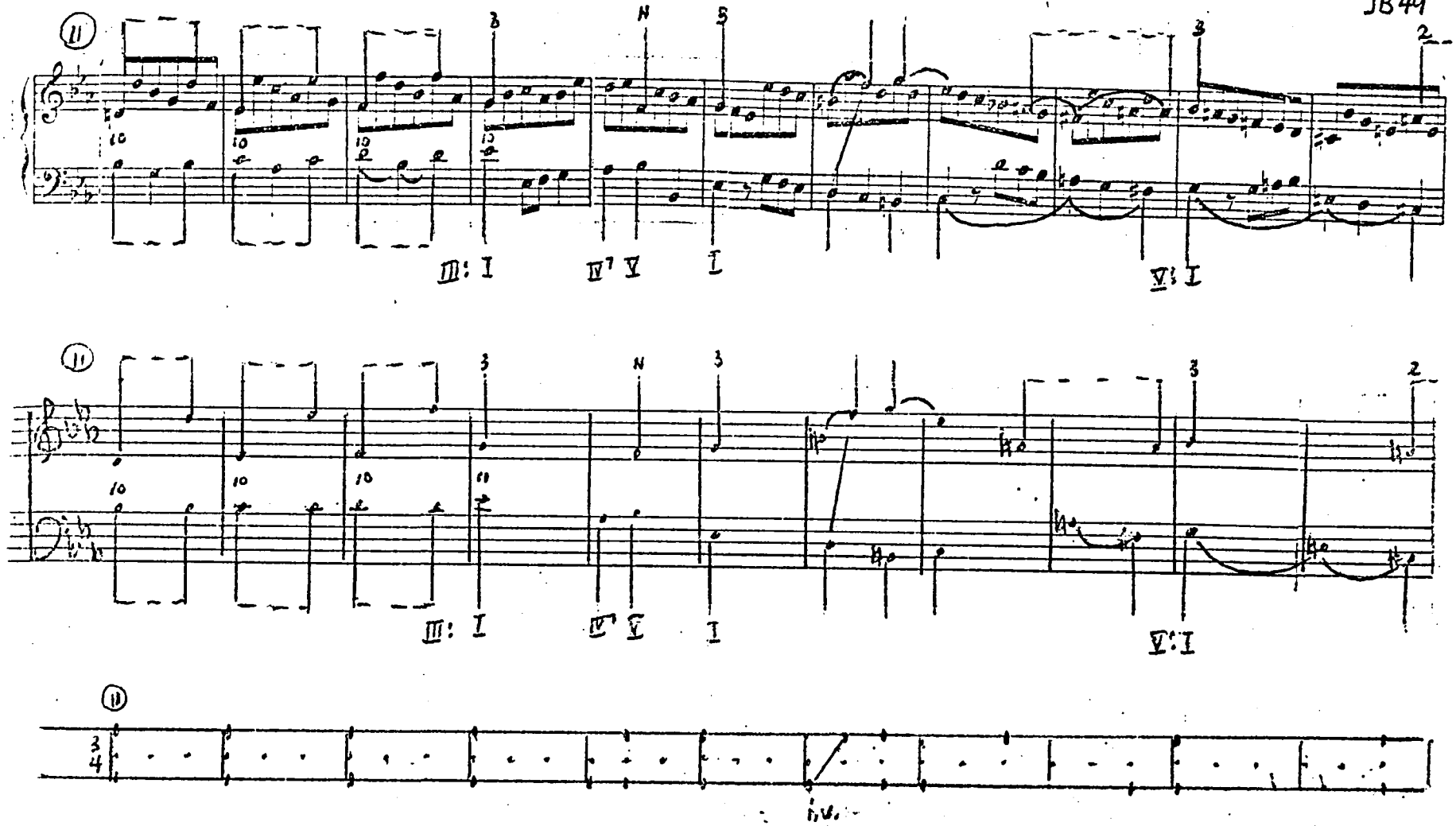

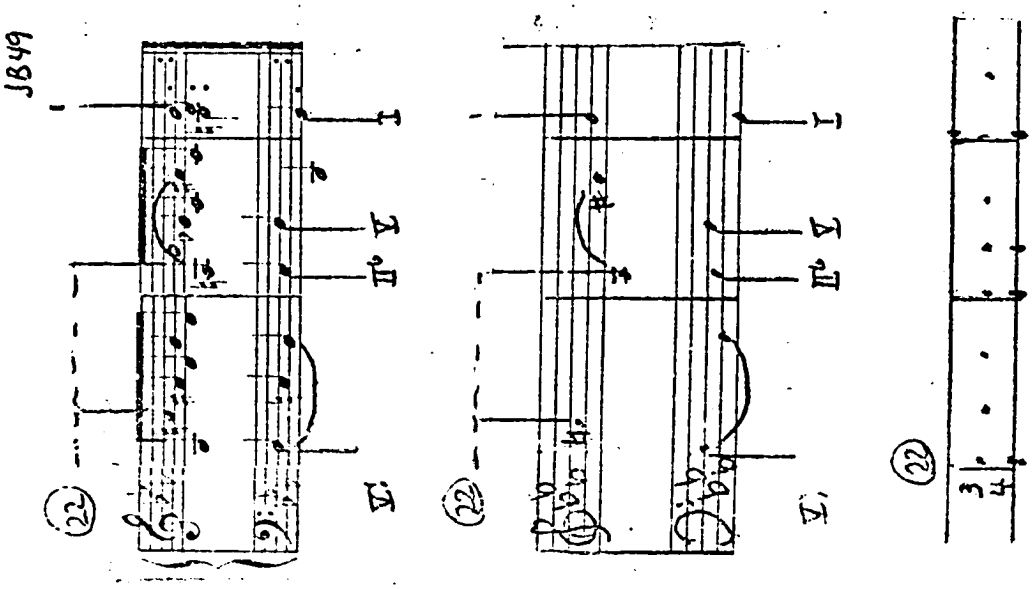

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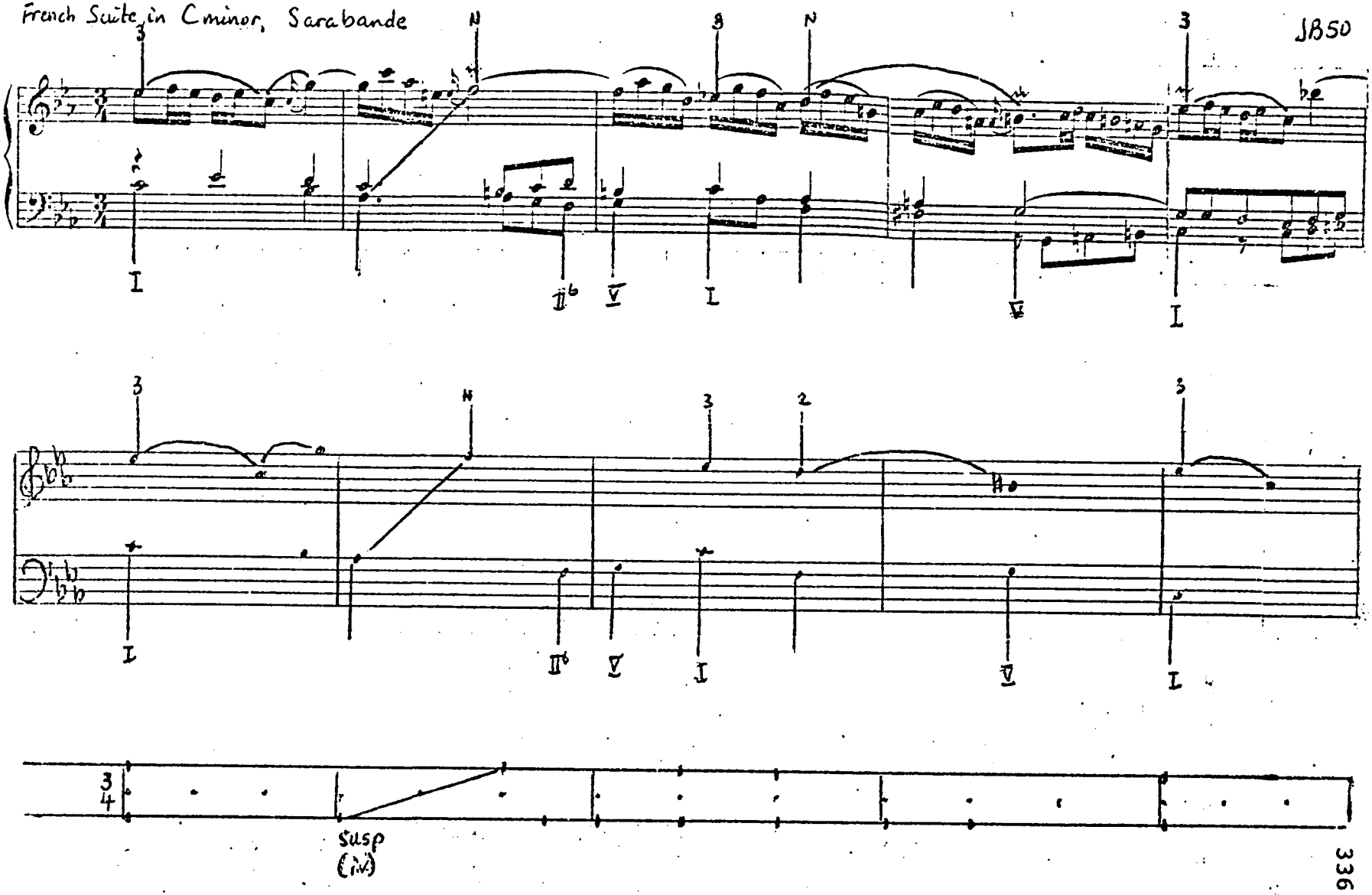

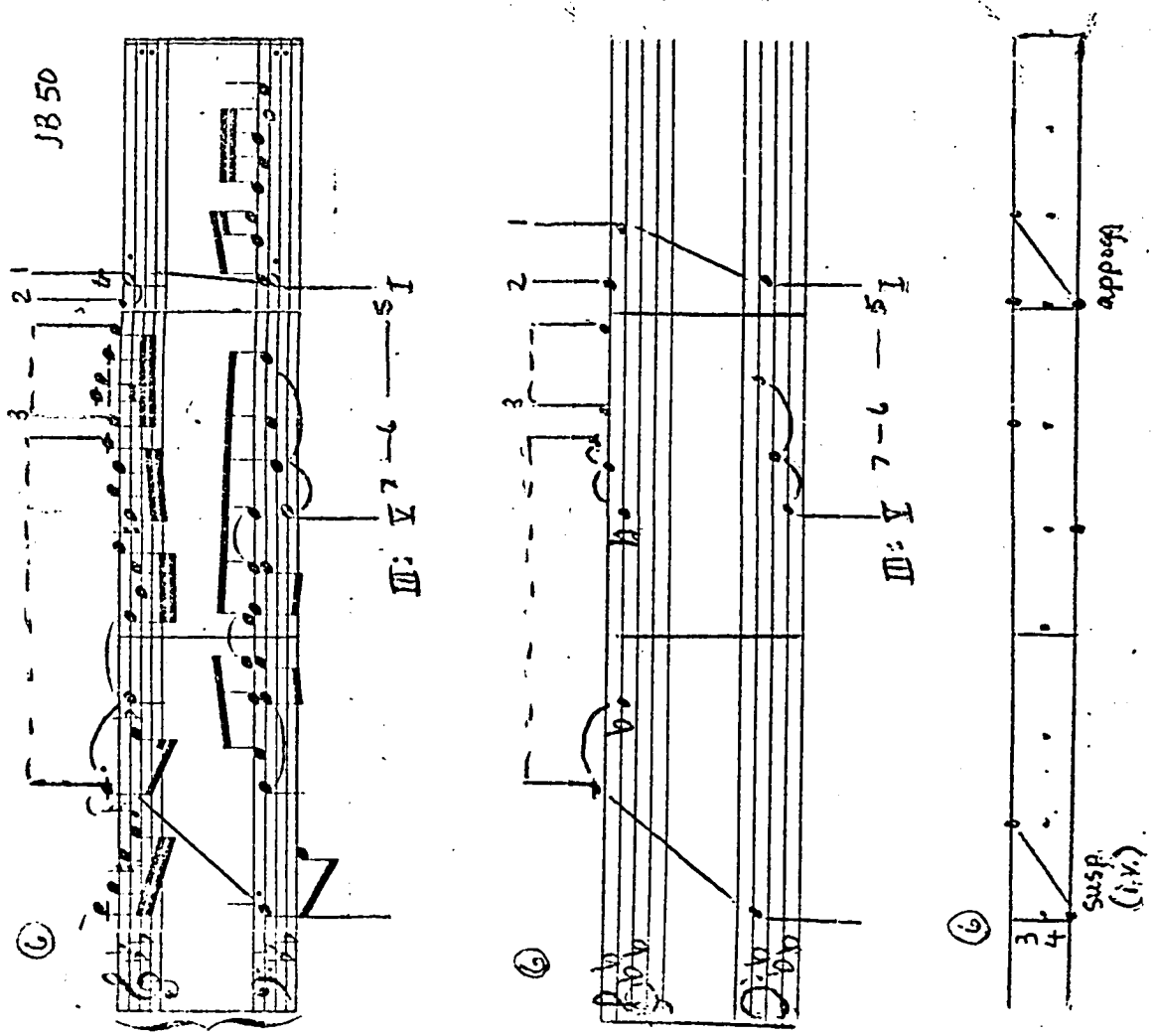

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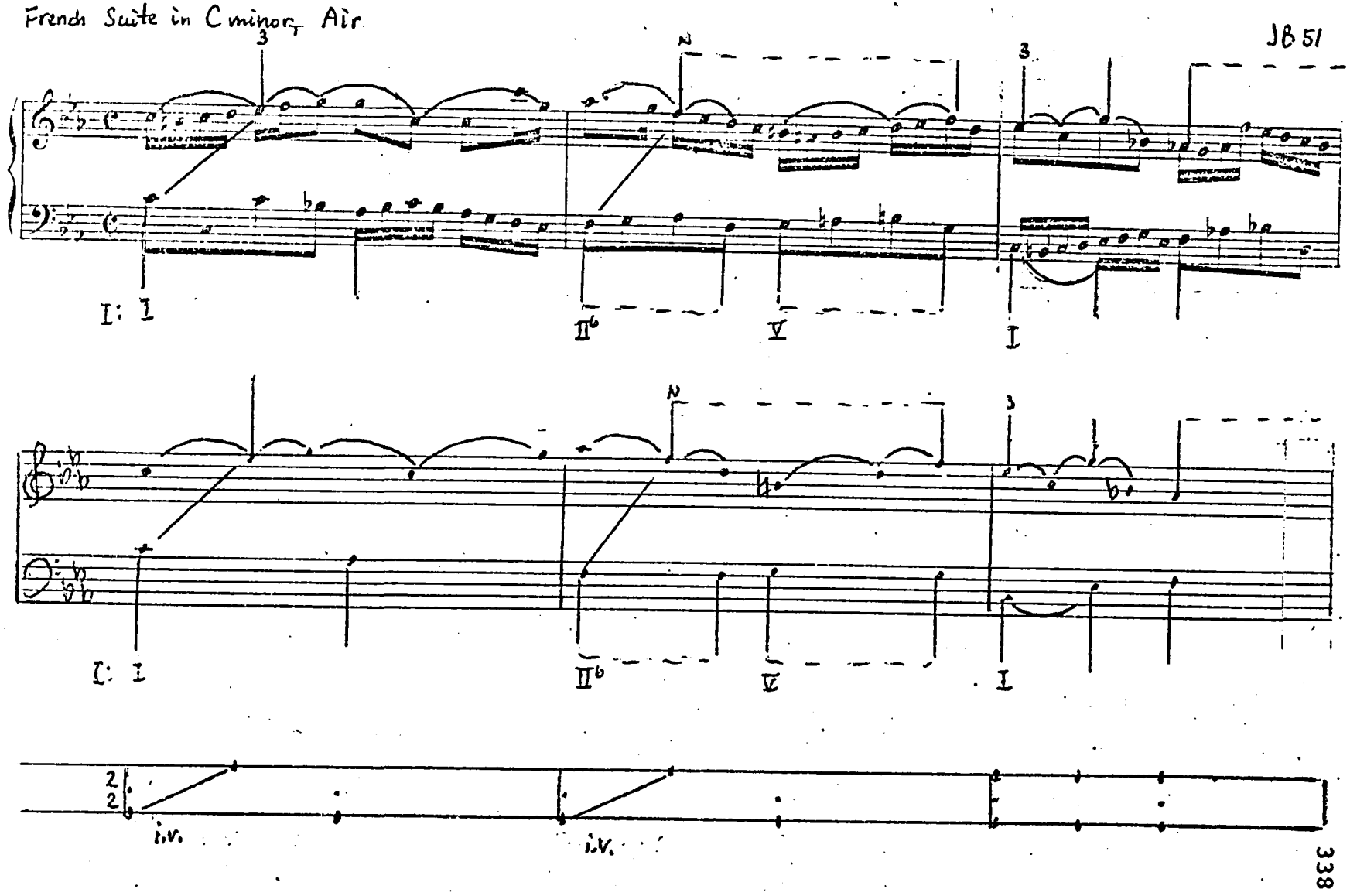

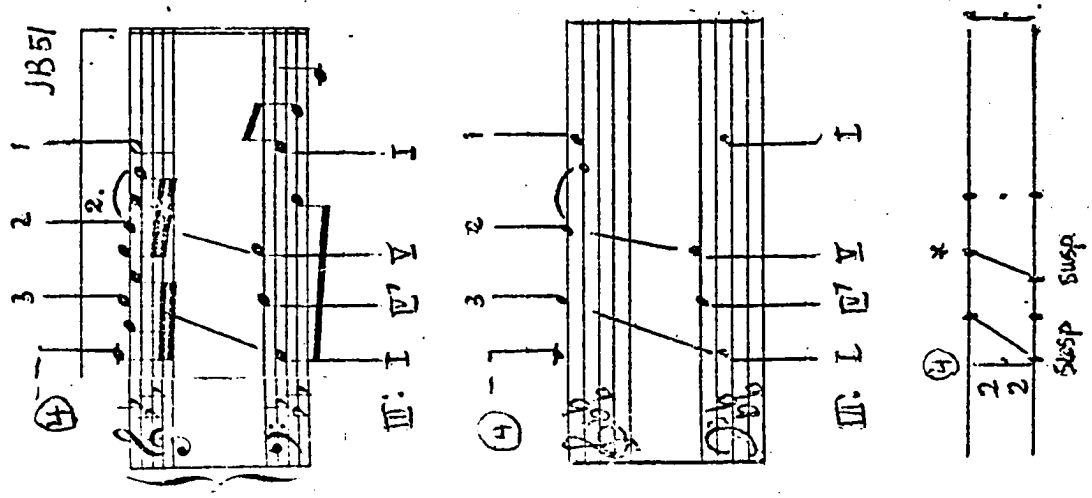

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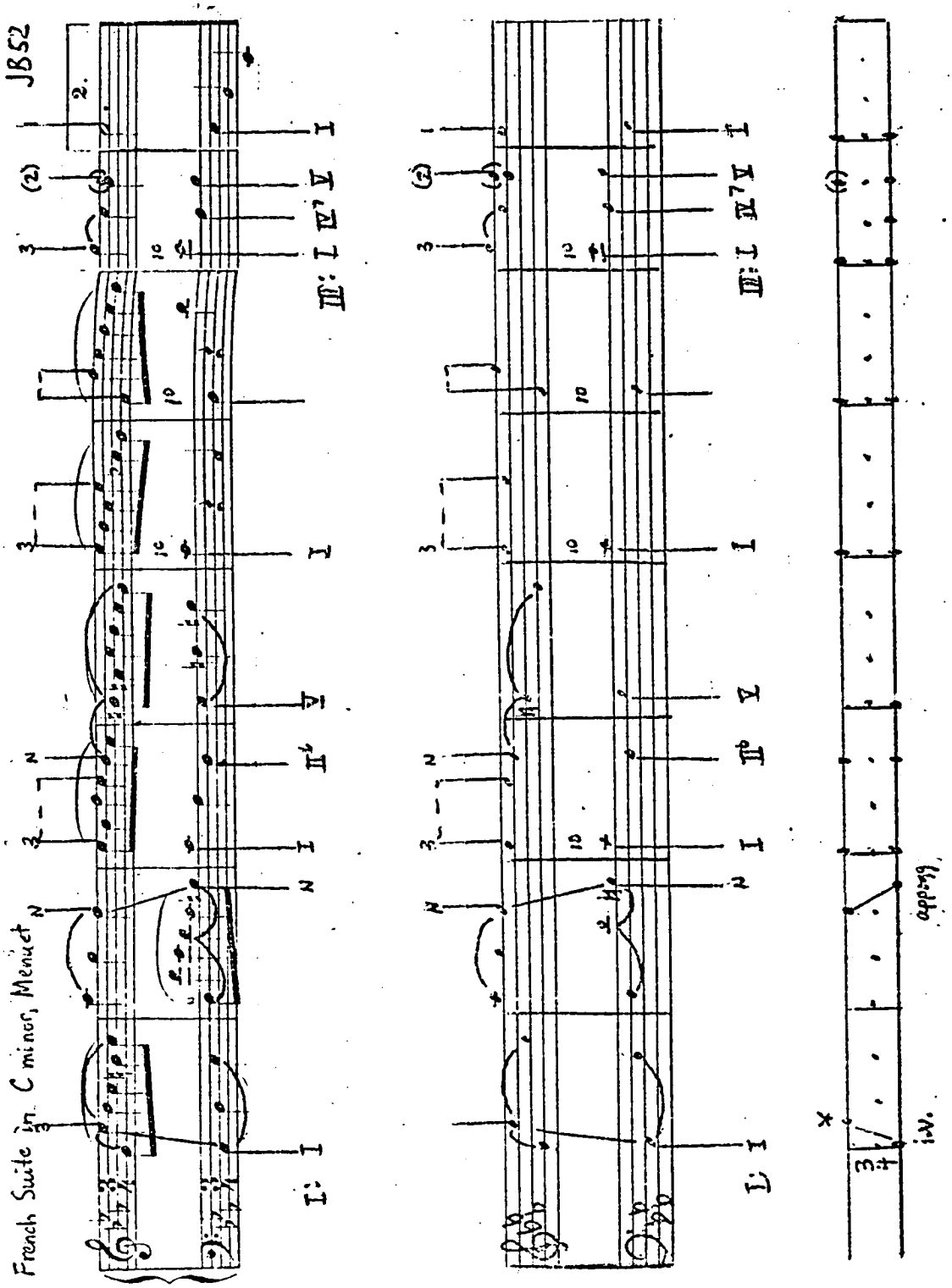
JBS2
French Suite in C minor, Menuet
I: I
I A, A I :||
I
IV
V
I
I
I

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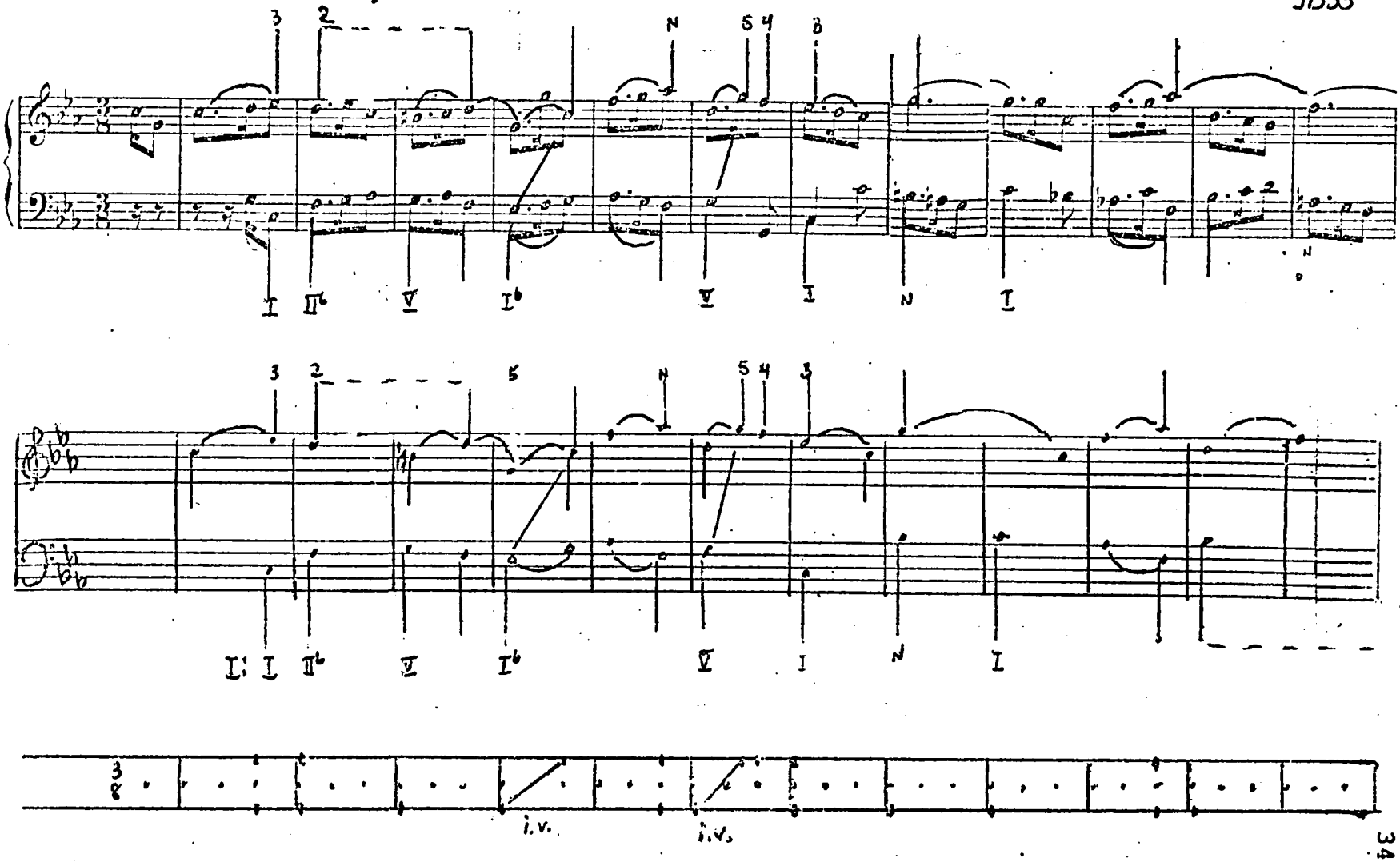
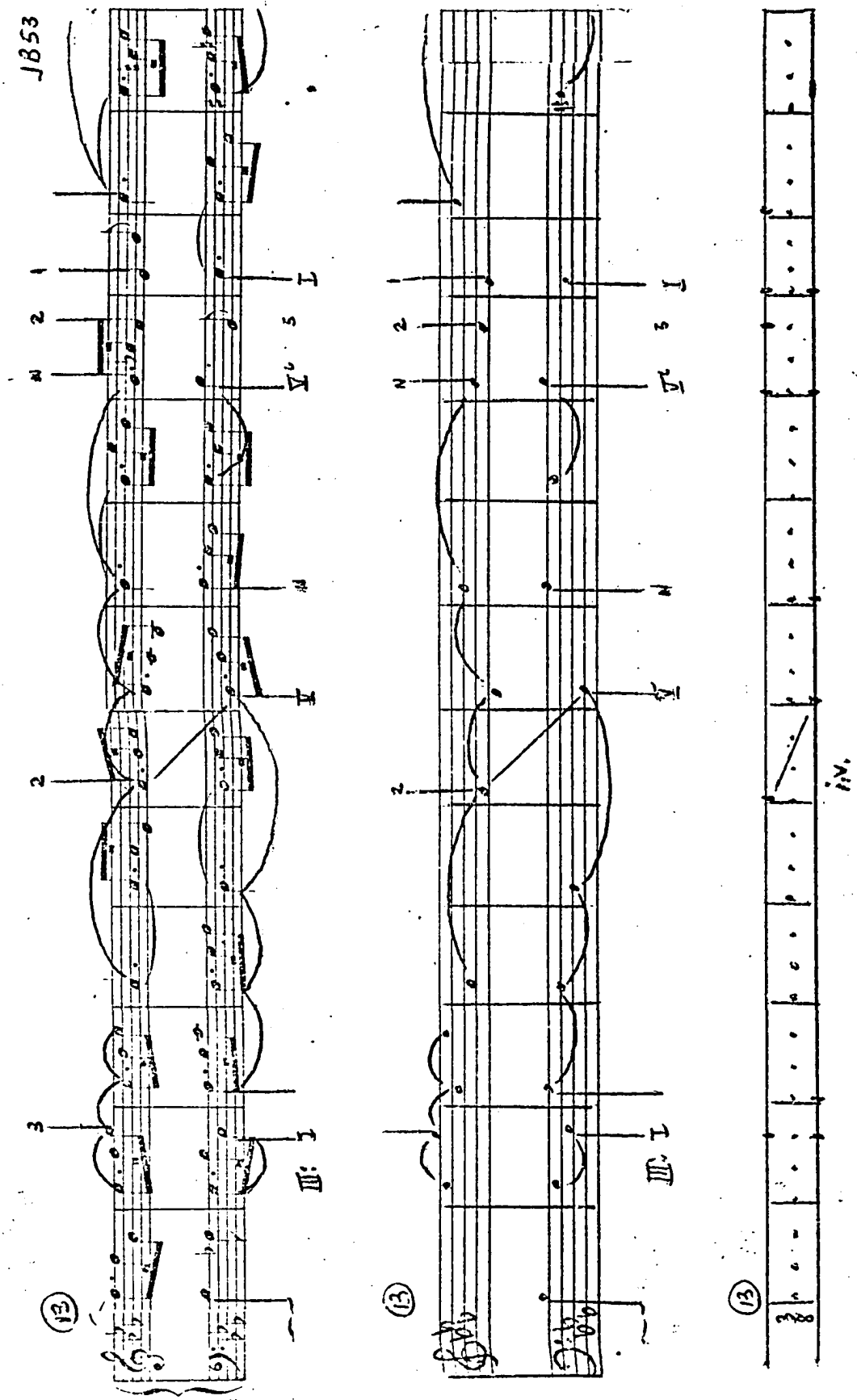
French Suite in C minor, Gigue

JB53





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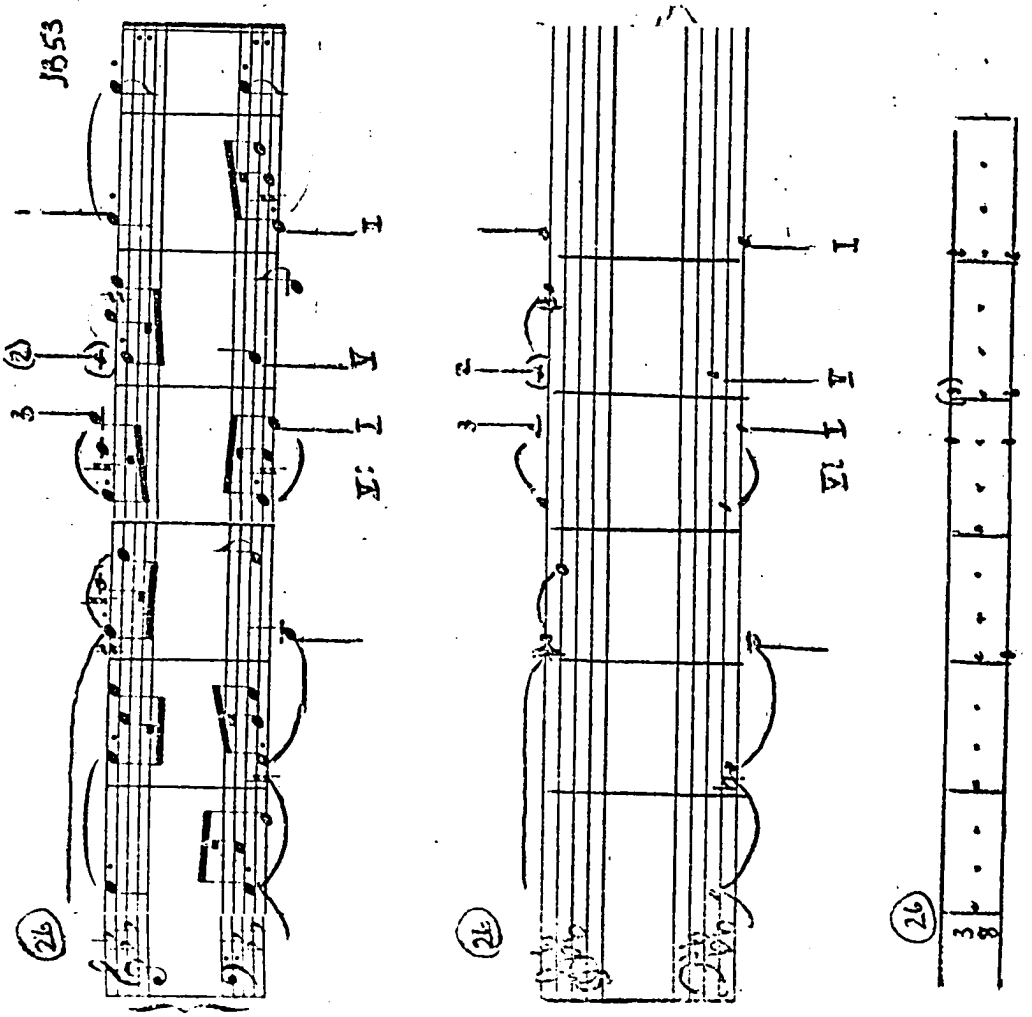

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French Suite in B minor, Allemande

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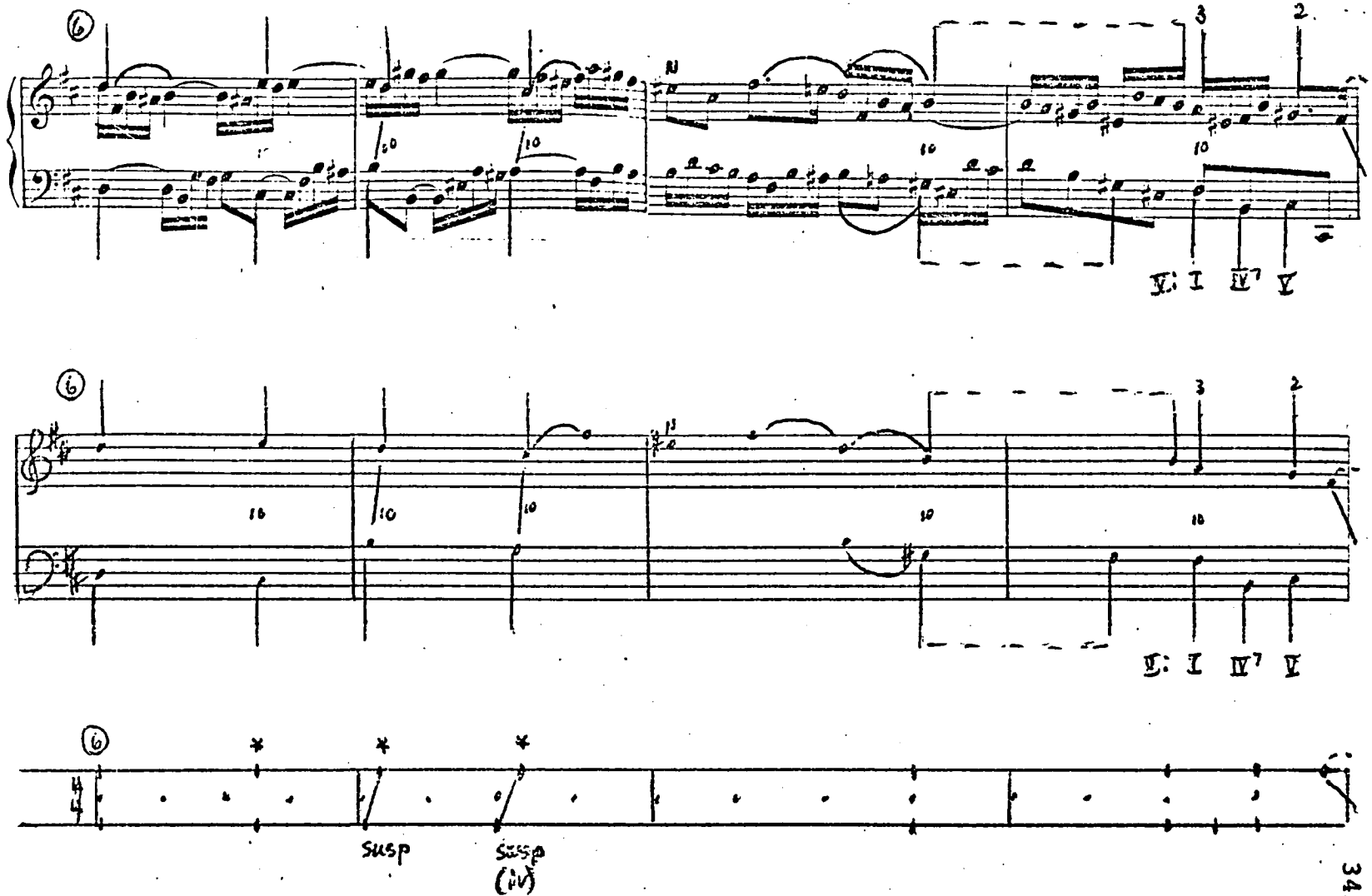

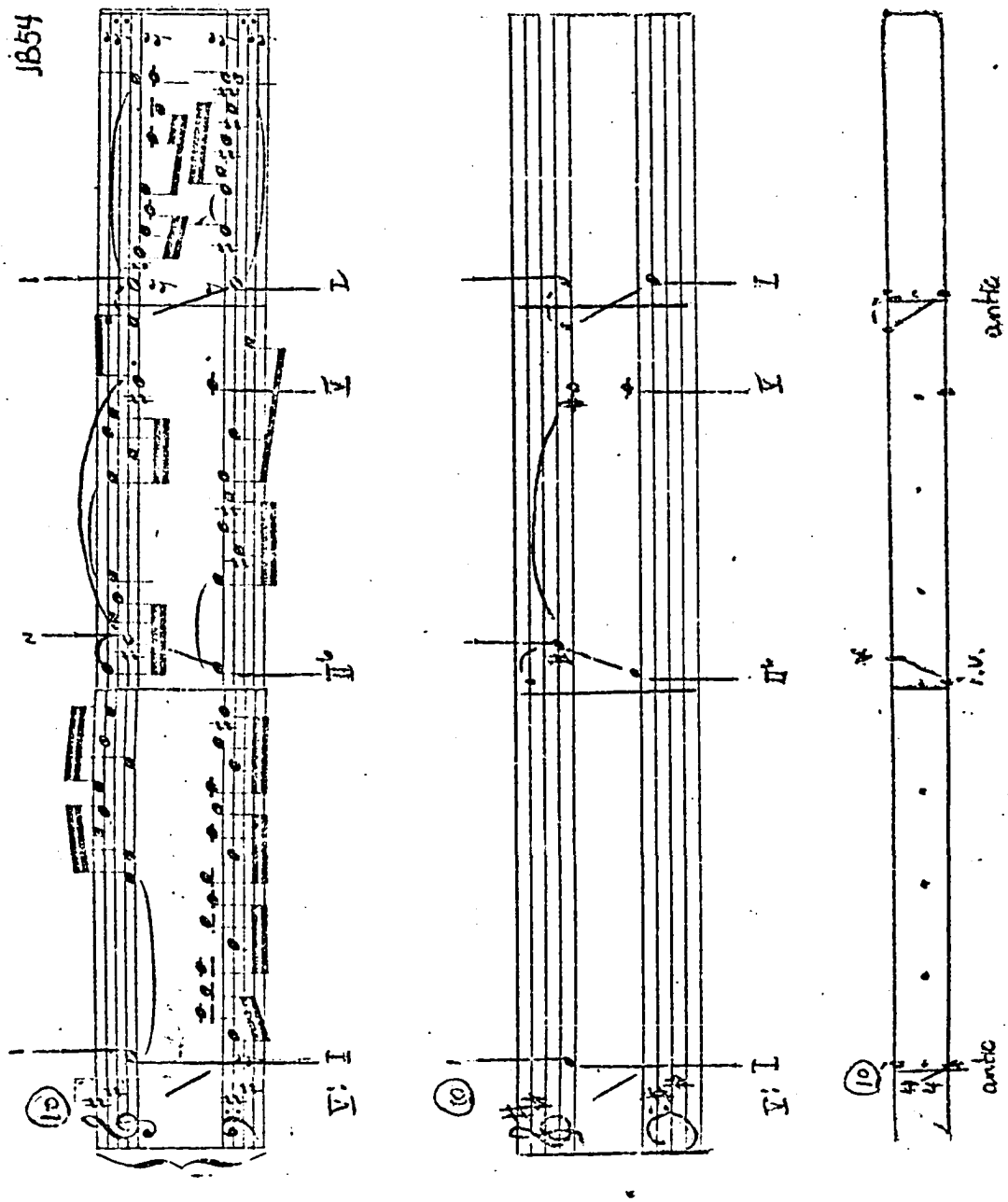

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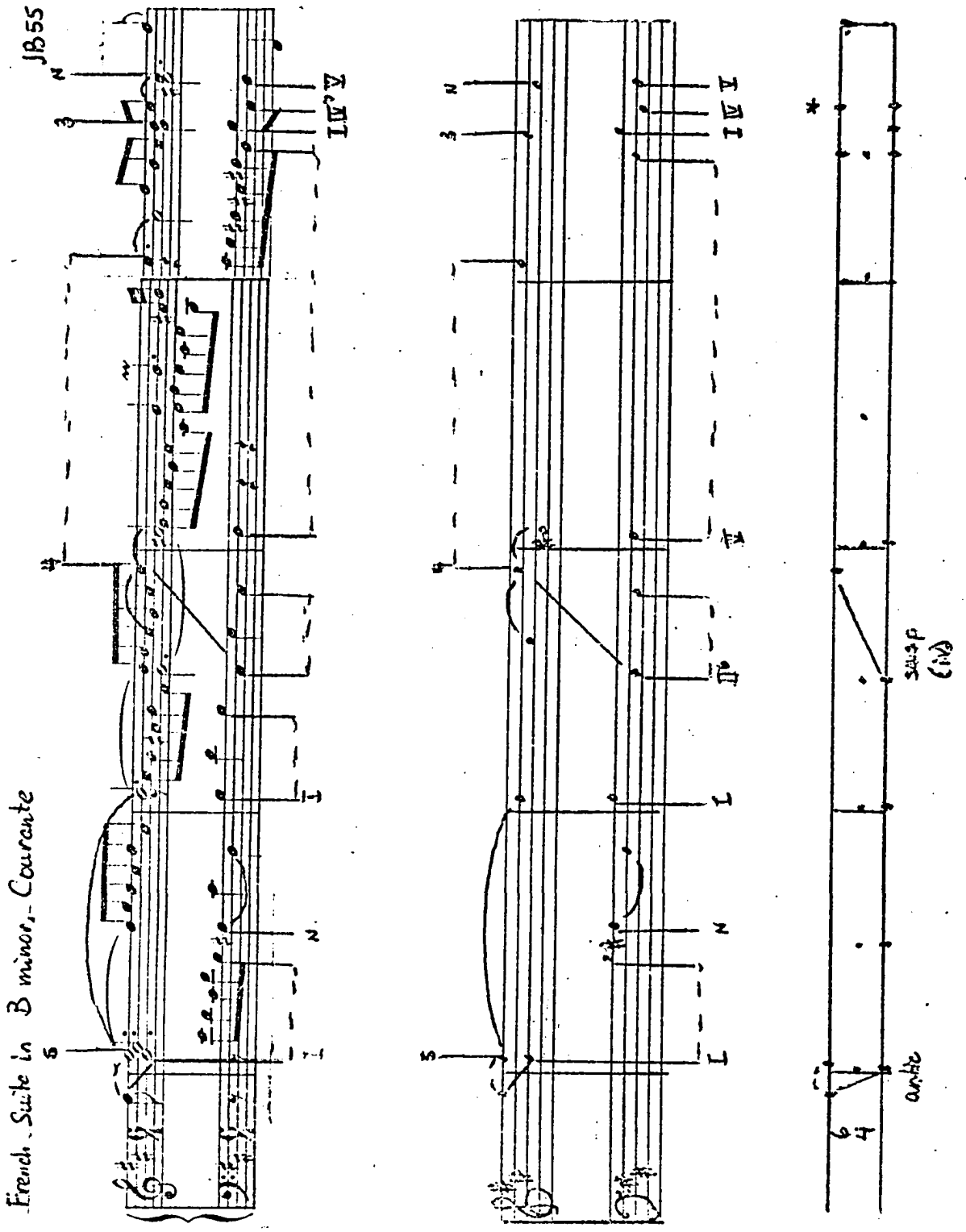

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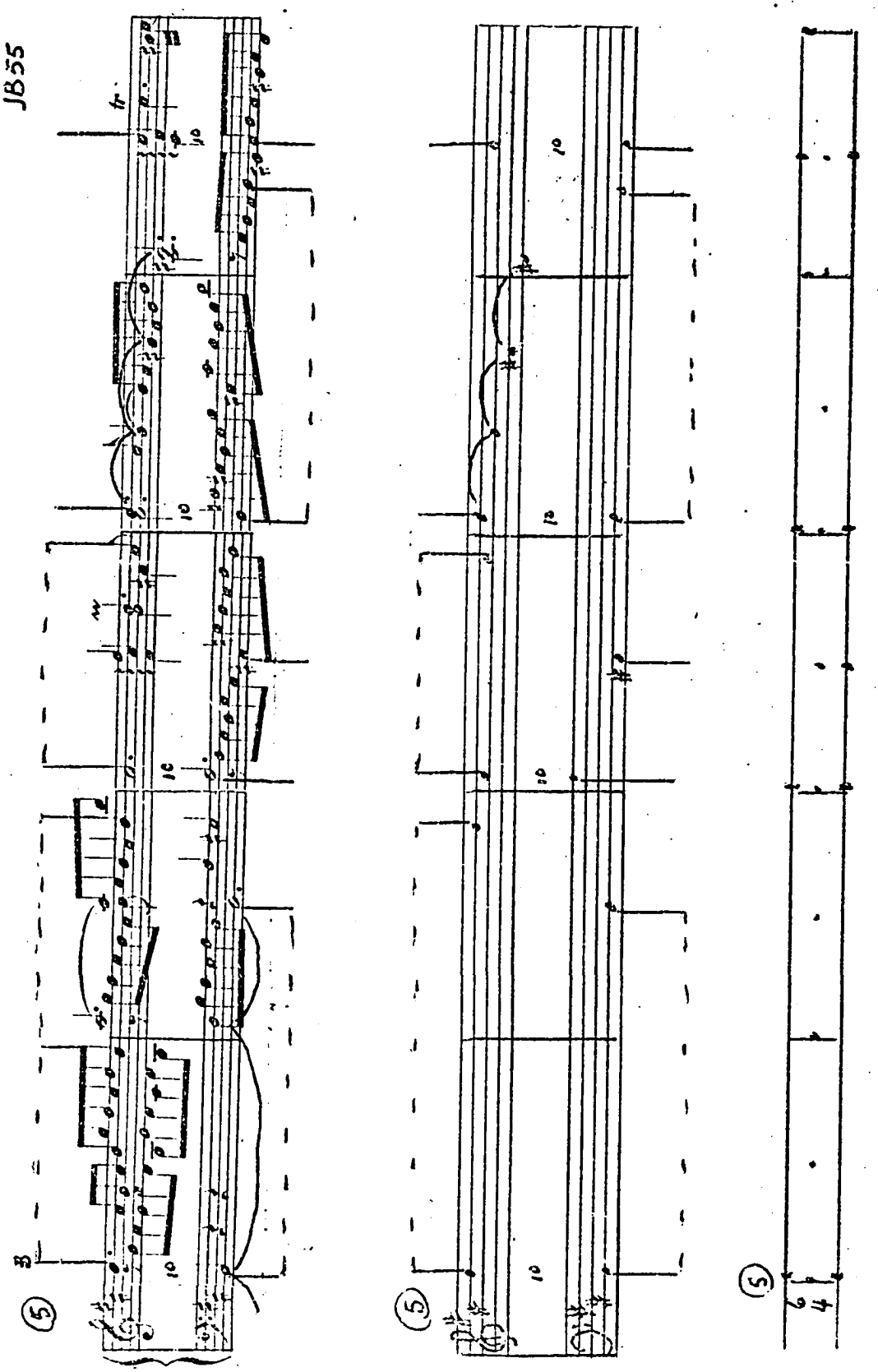
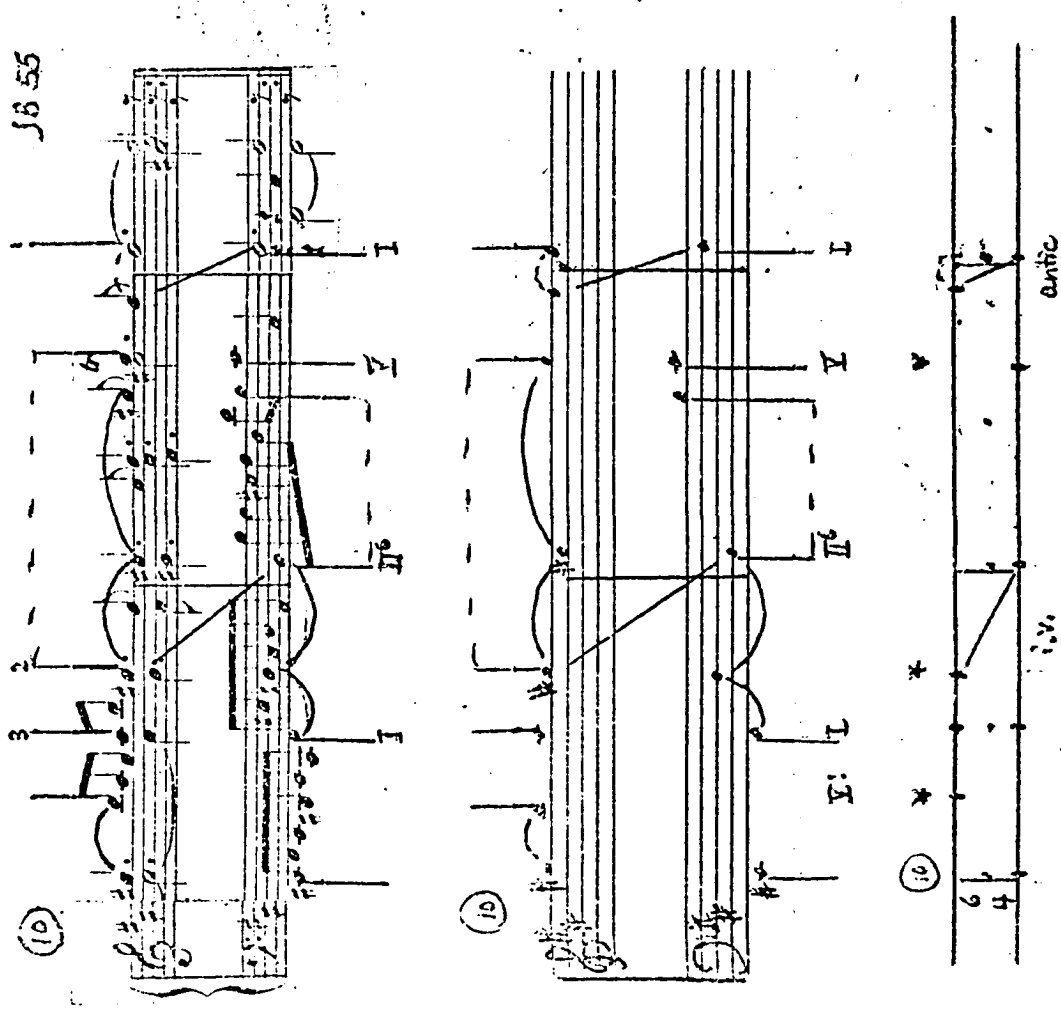

JB55
10
10
10



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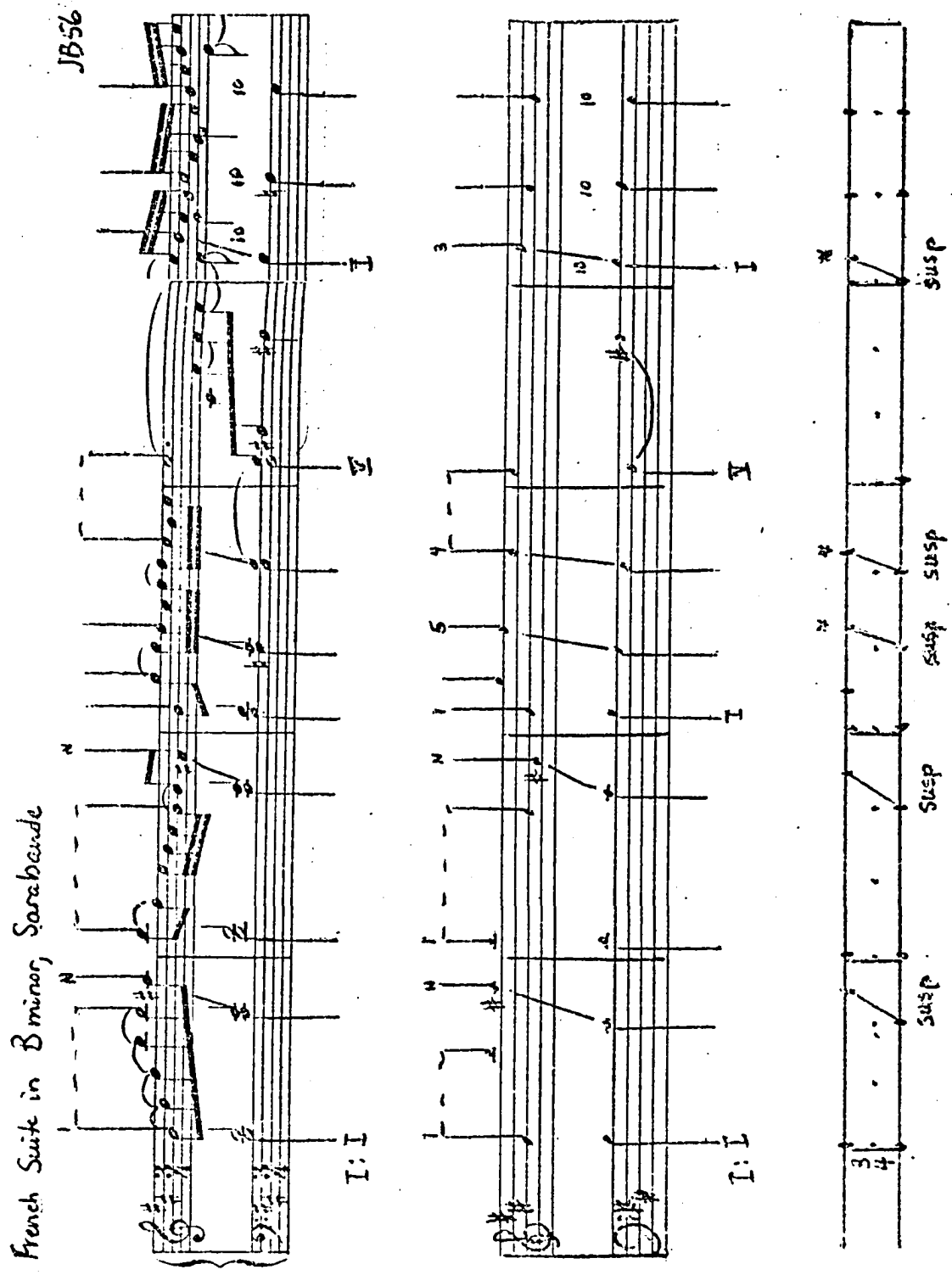

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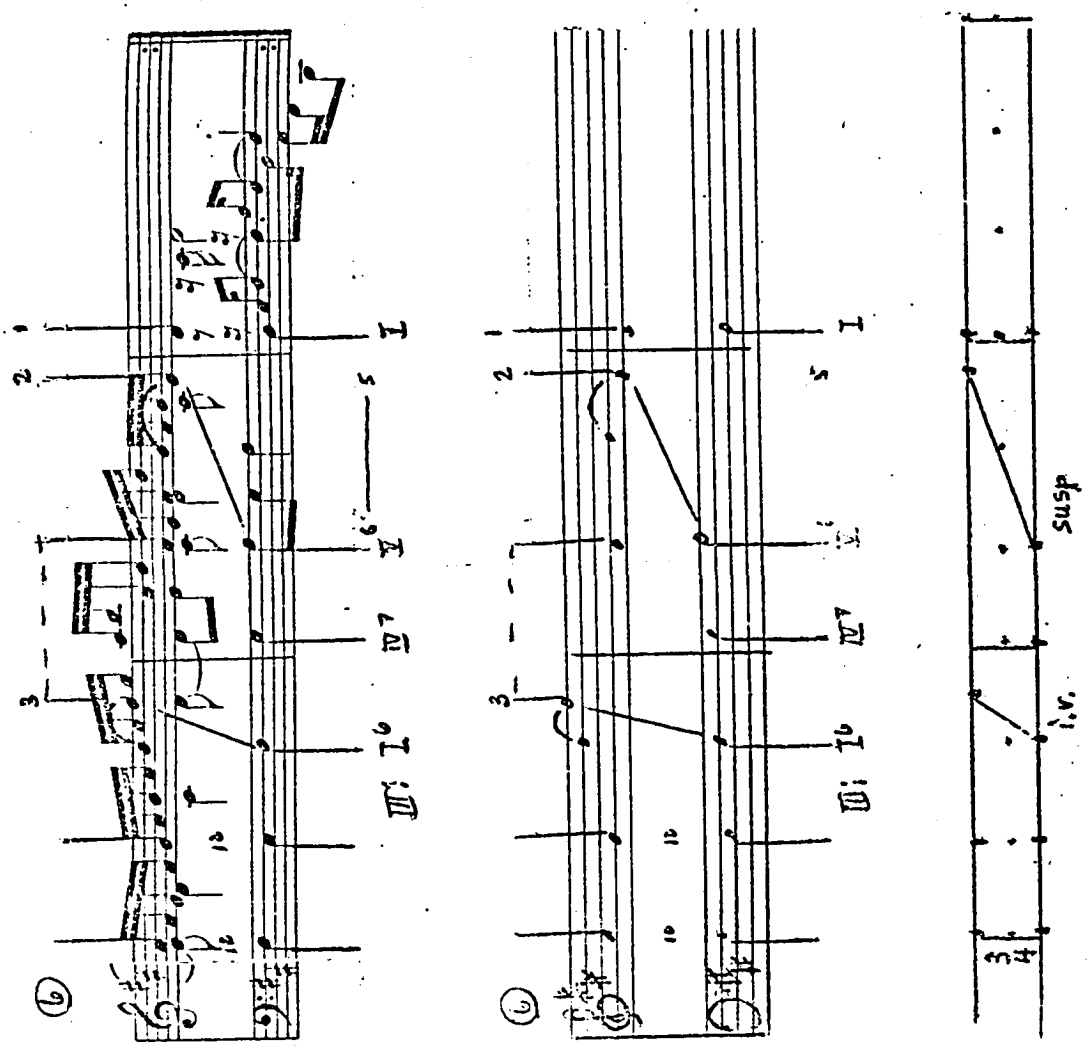

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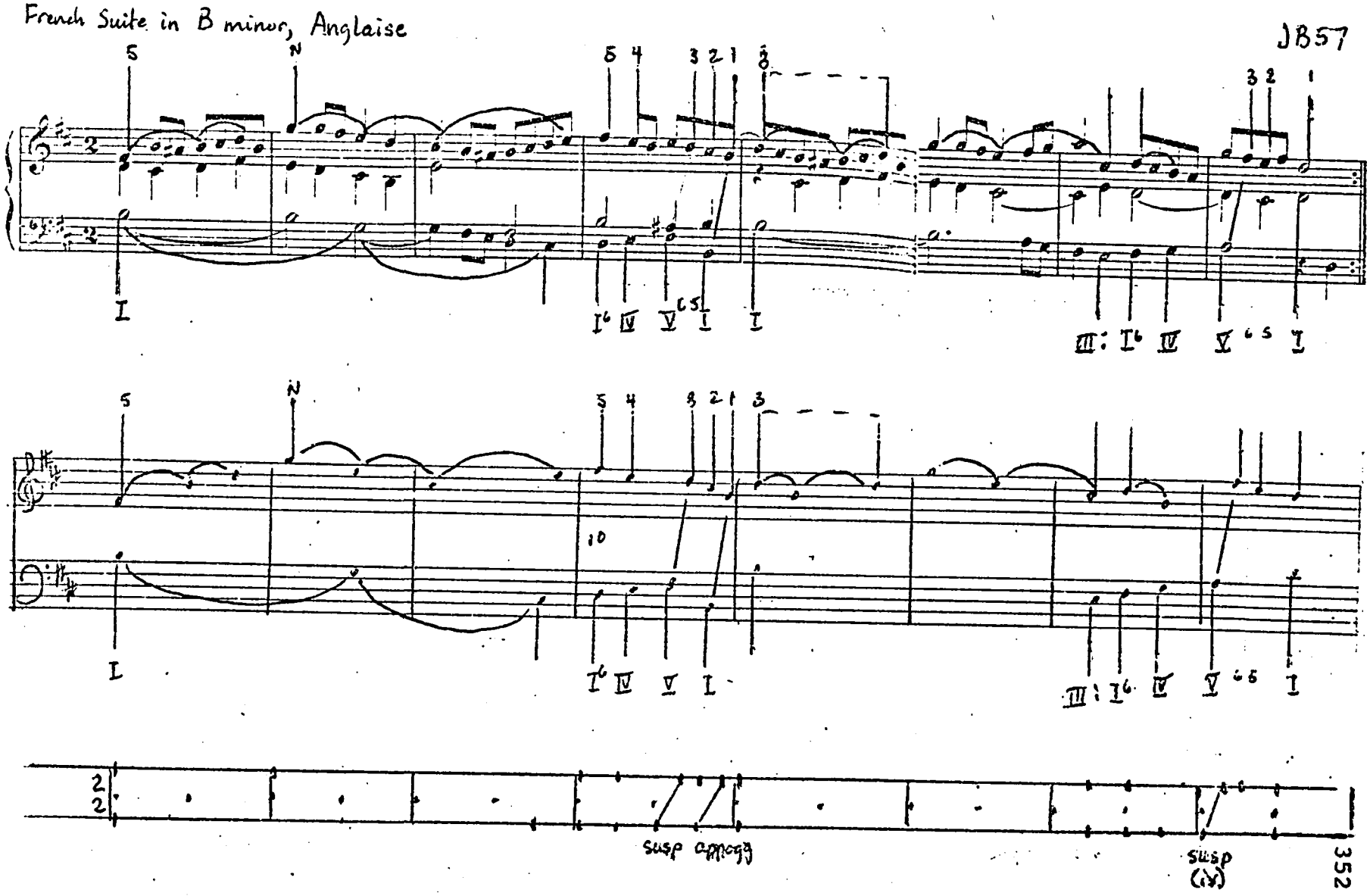

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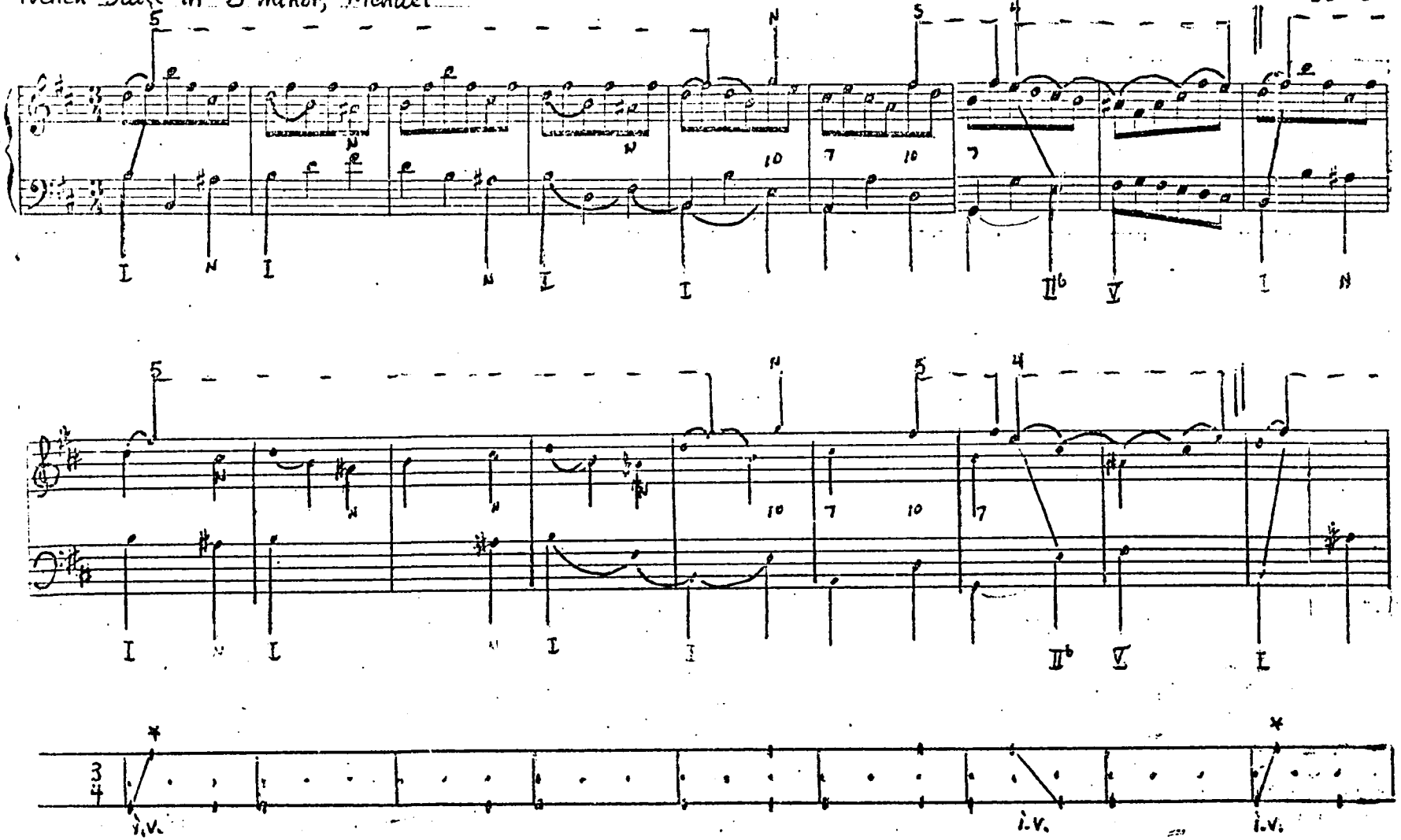
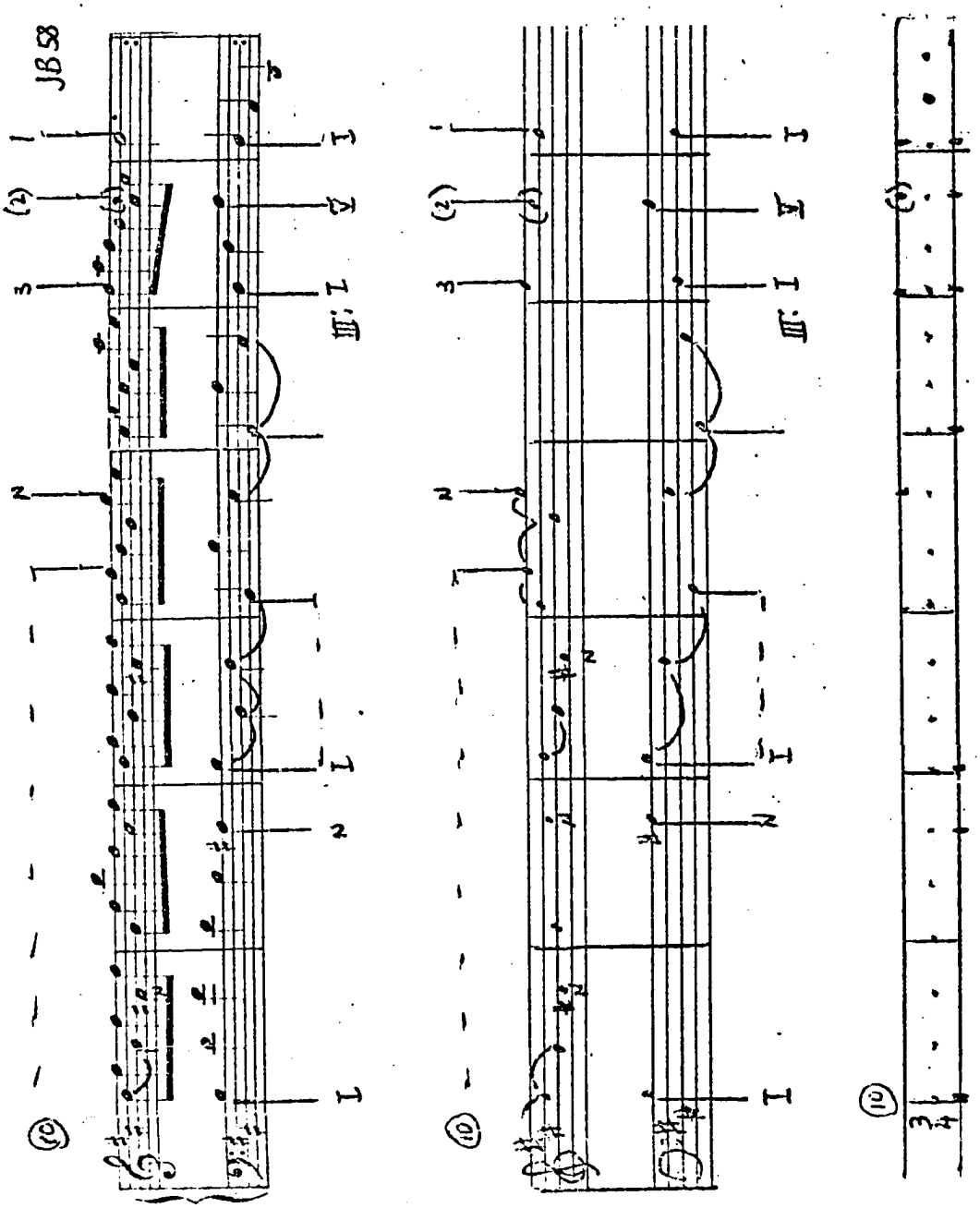
French Suite in B minor, Menuet

JB 58





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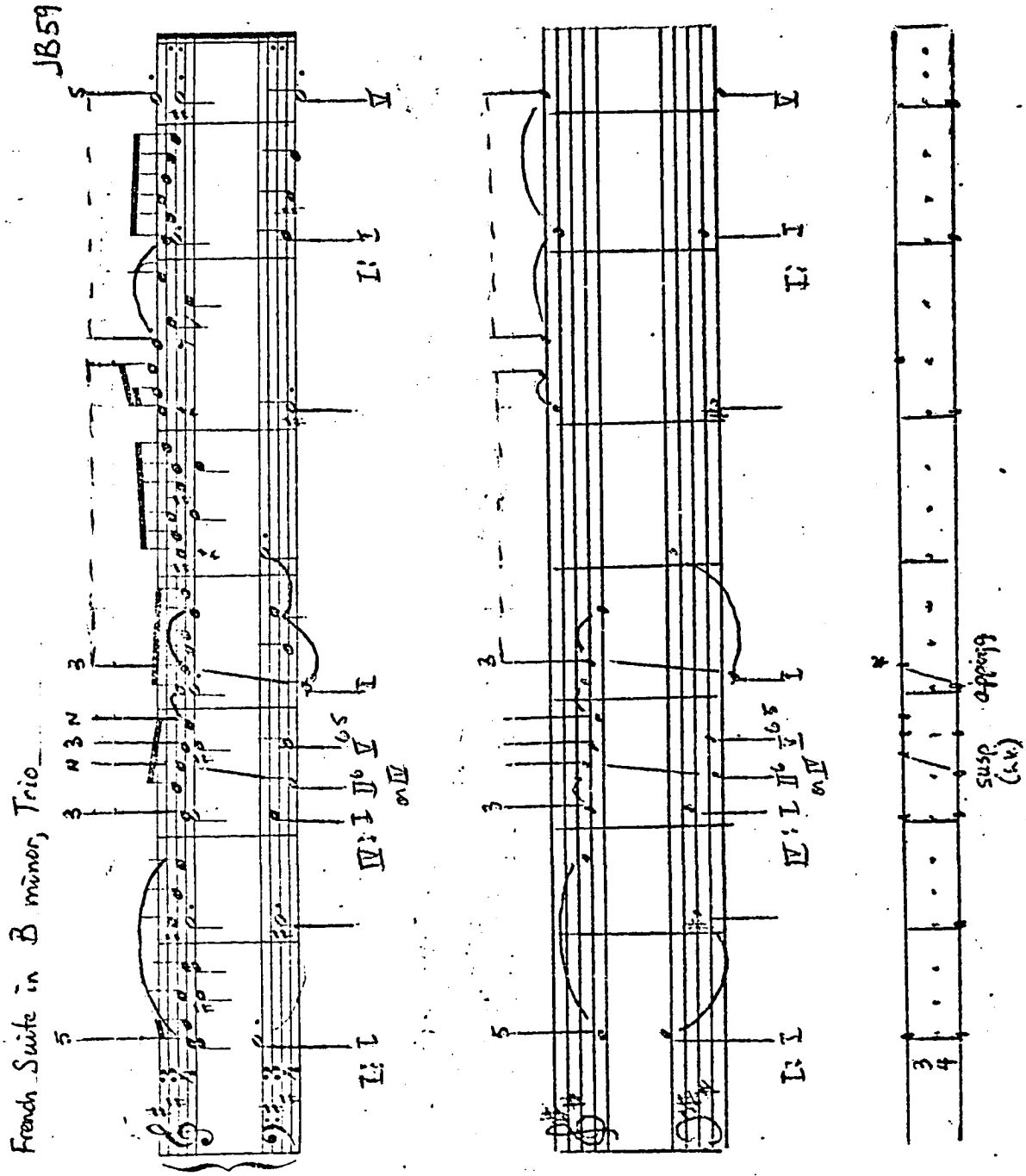

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French Suite in B minor, Gigue

1860

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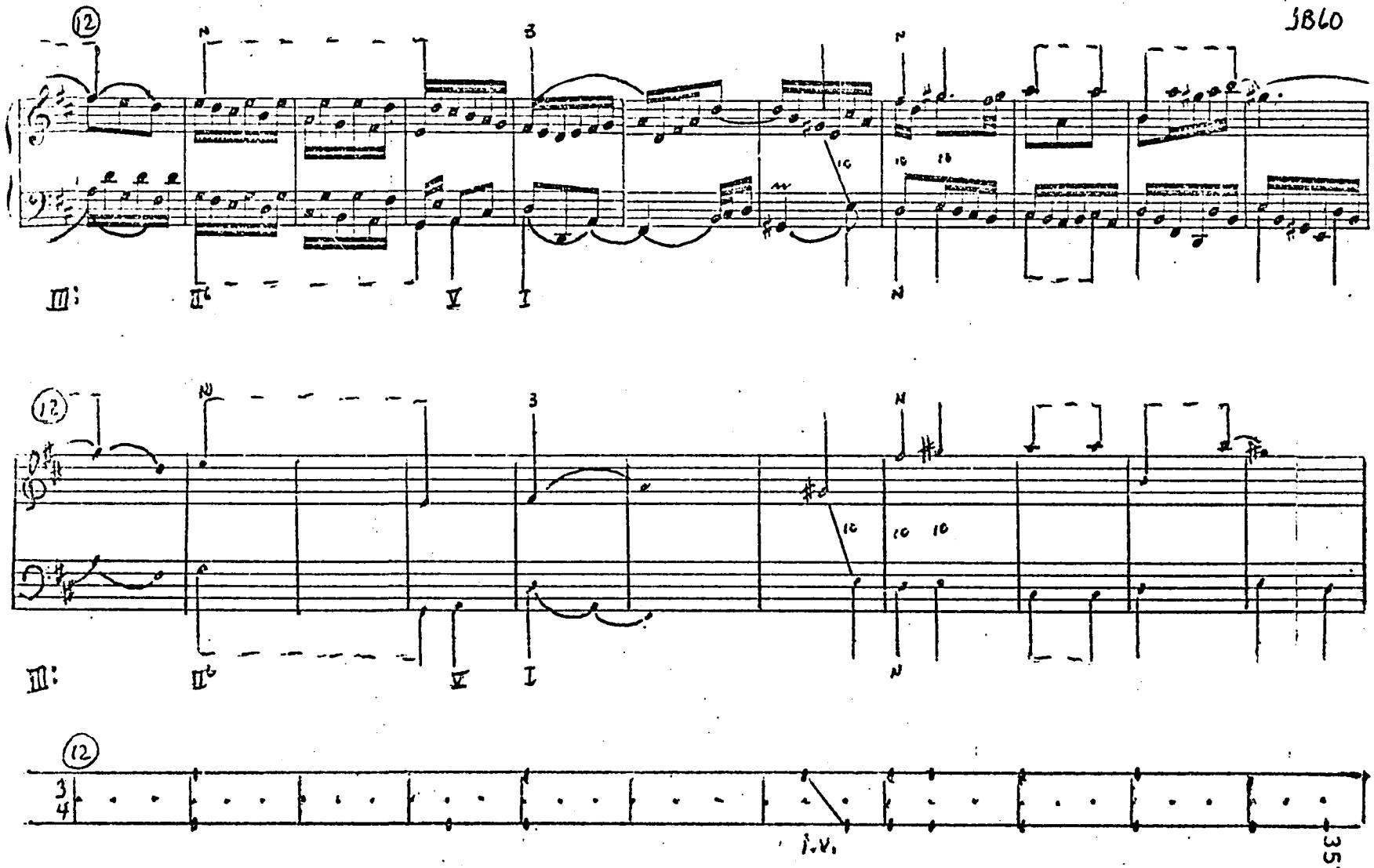

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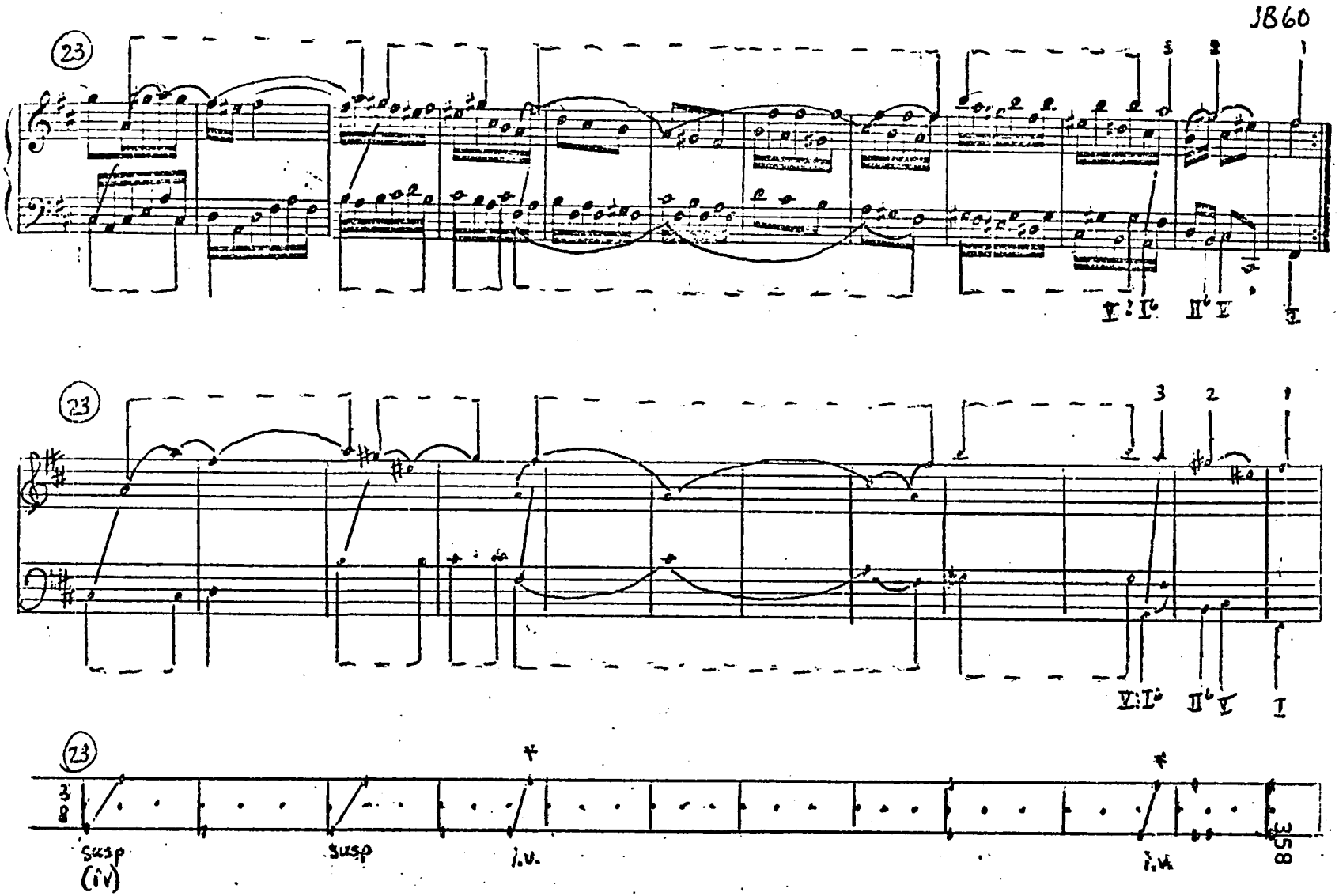

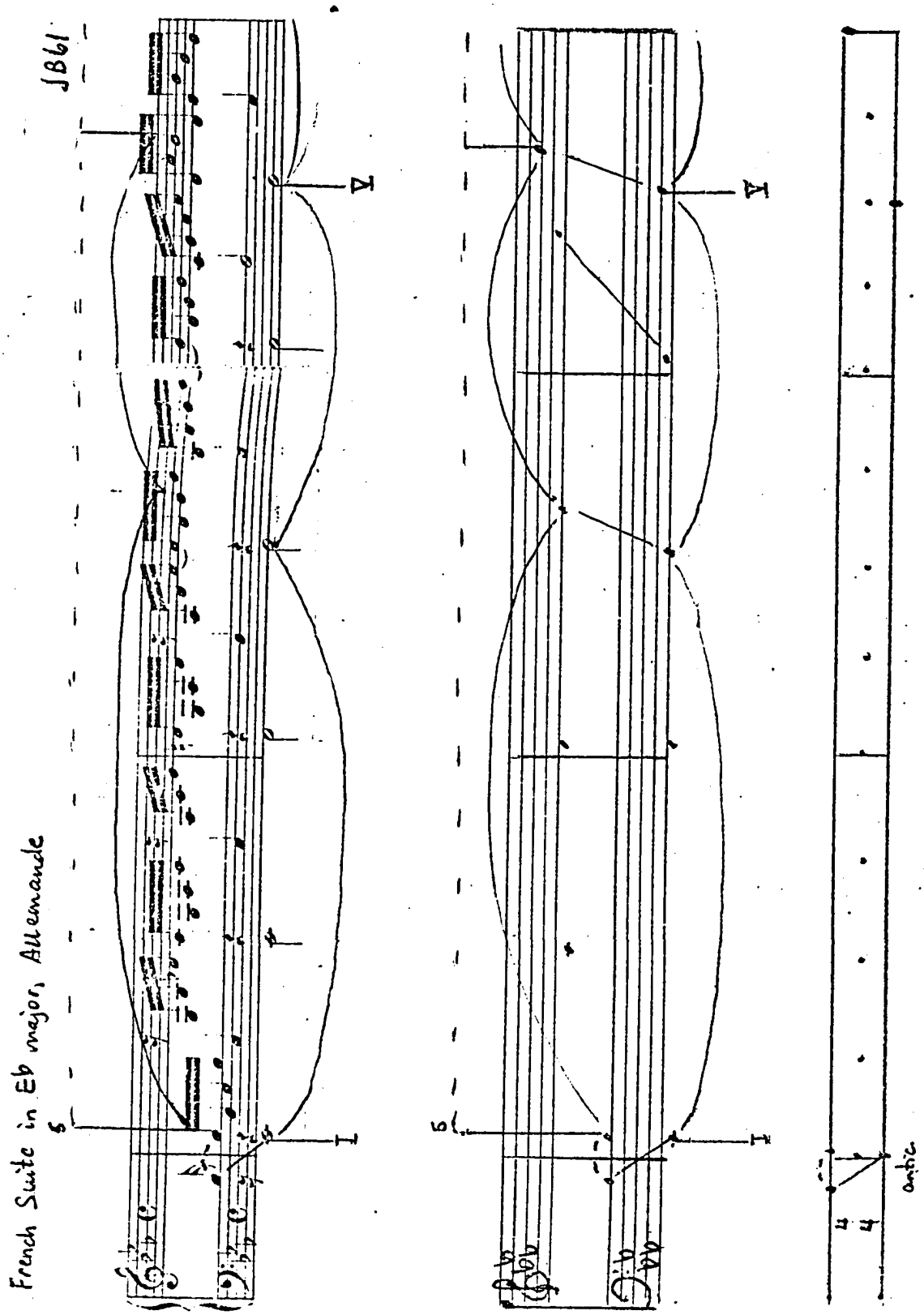

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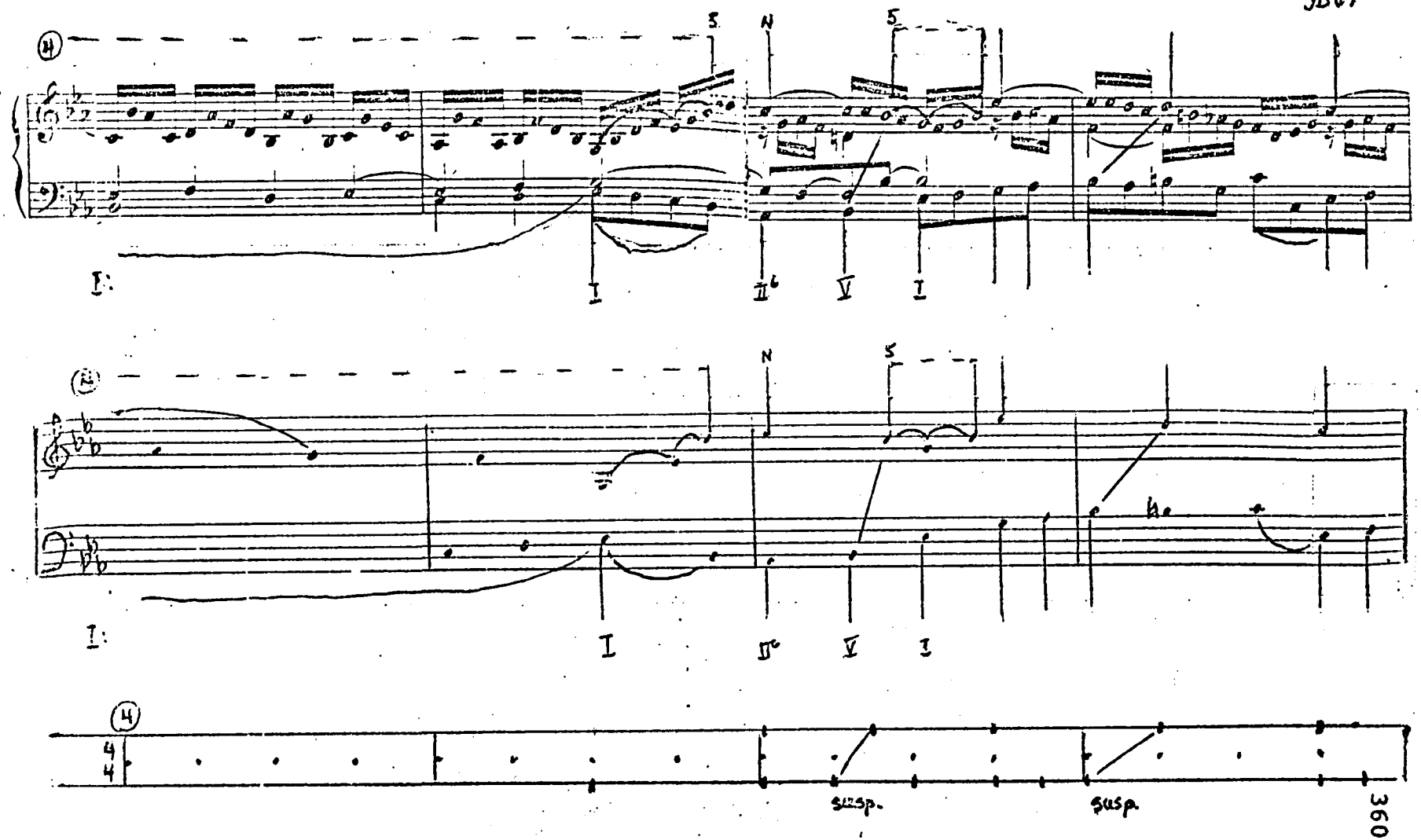

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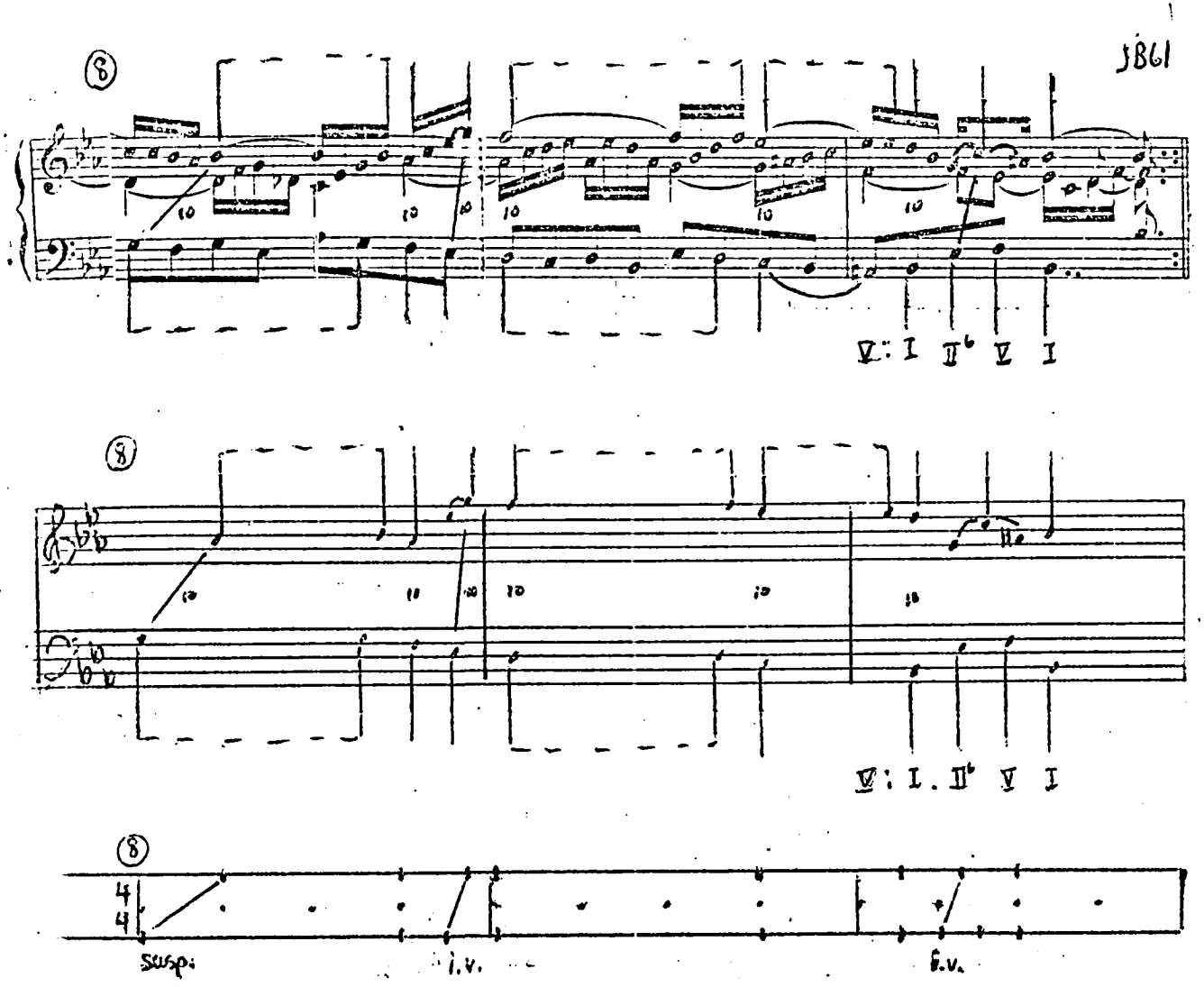

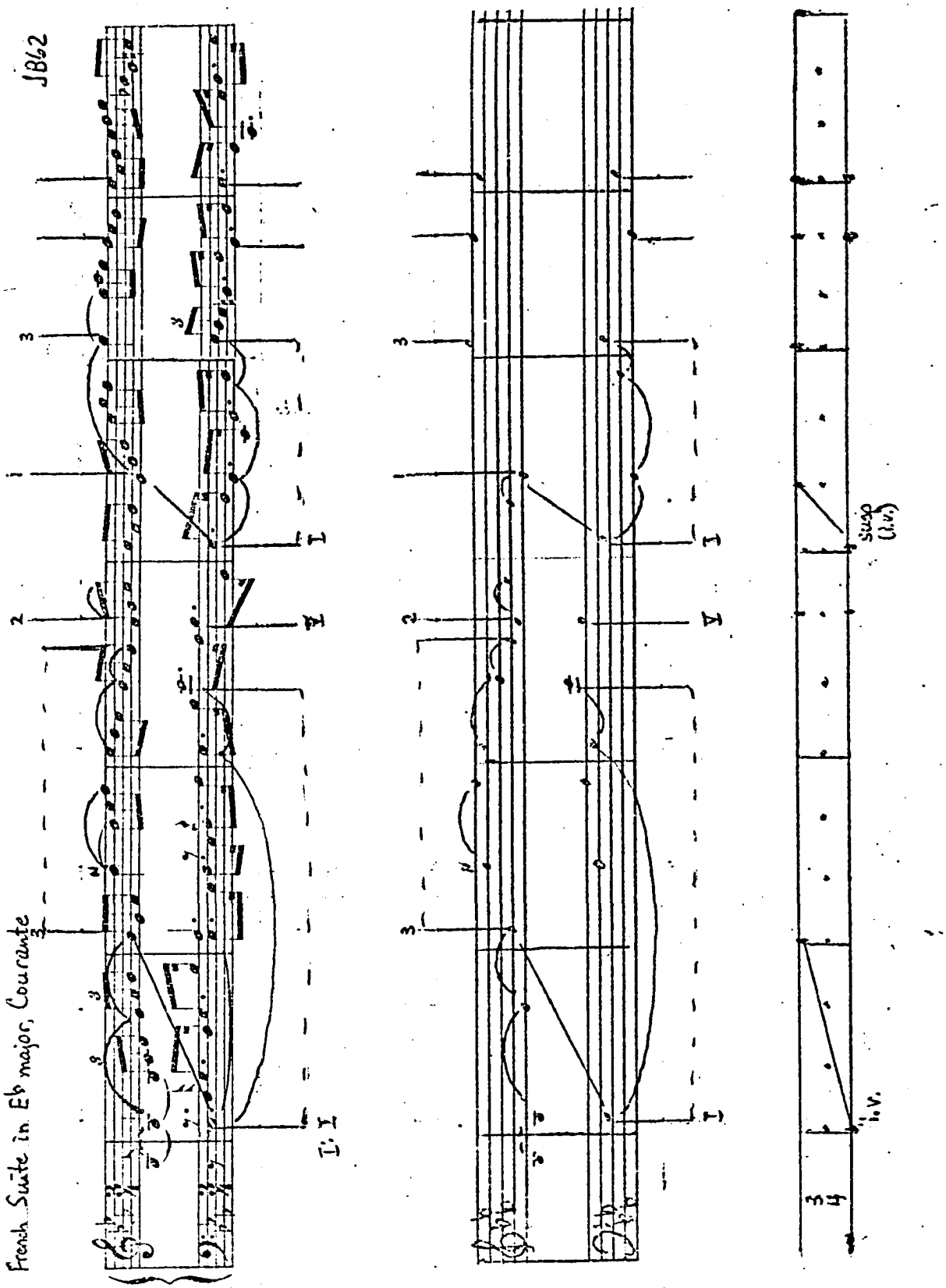

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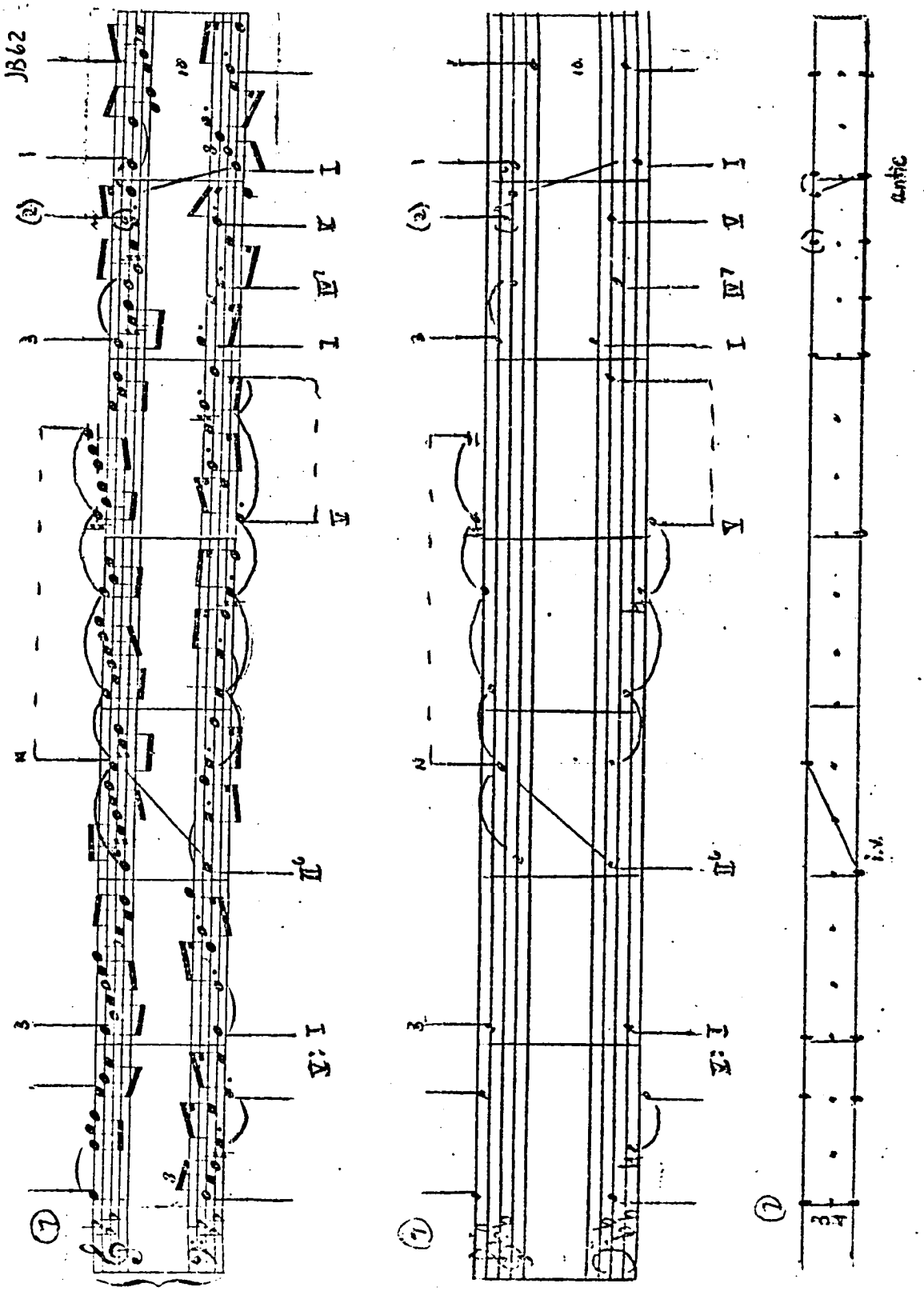

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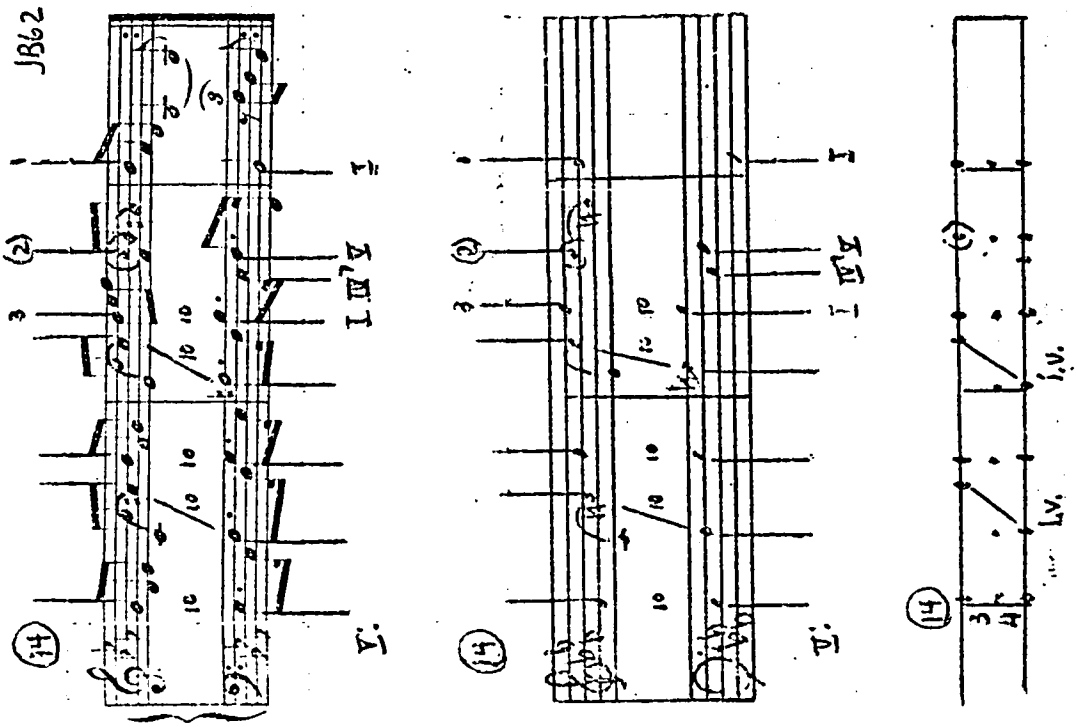

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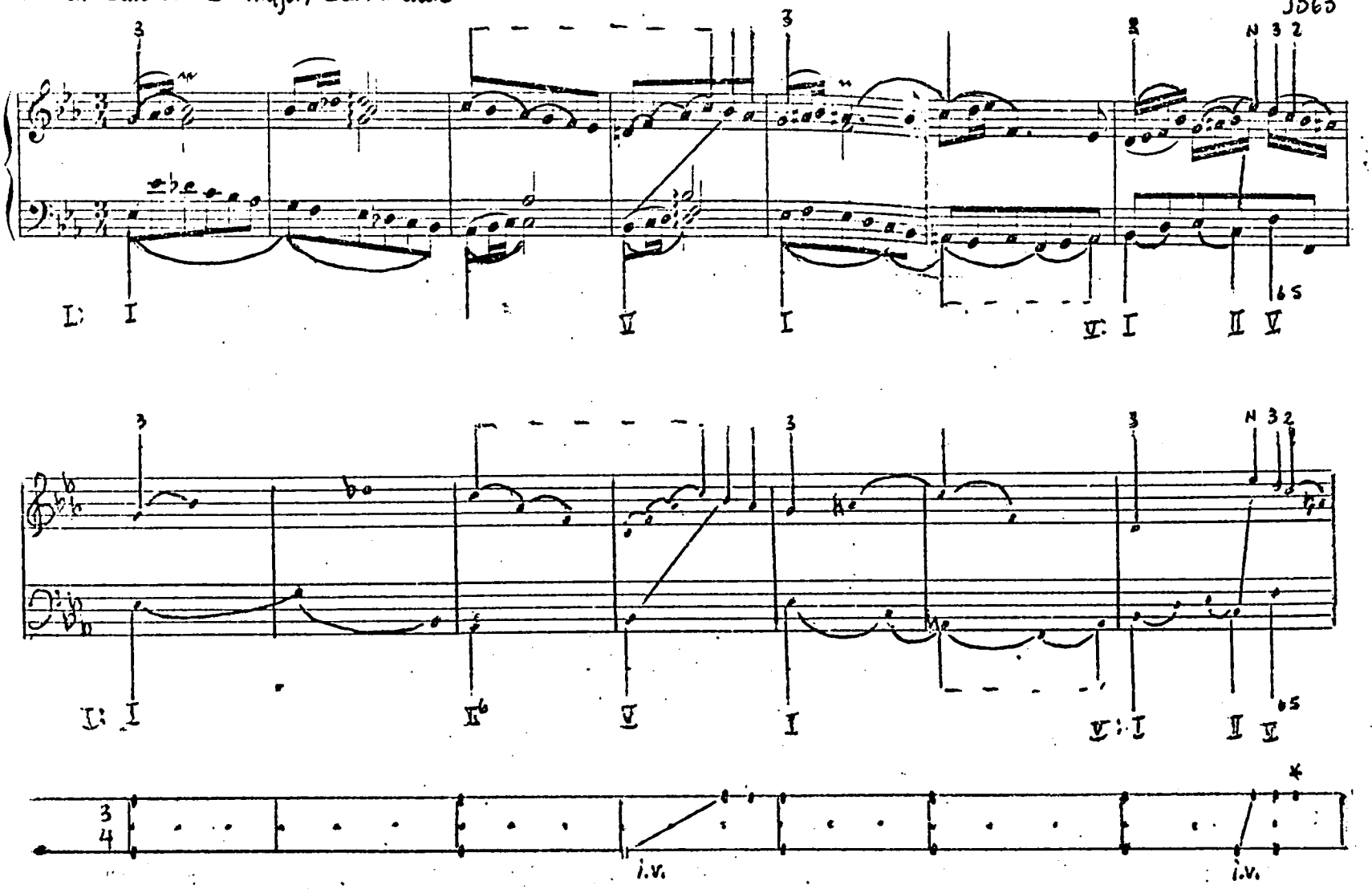
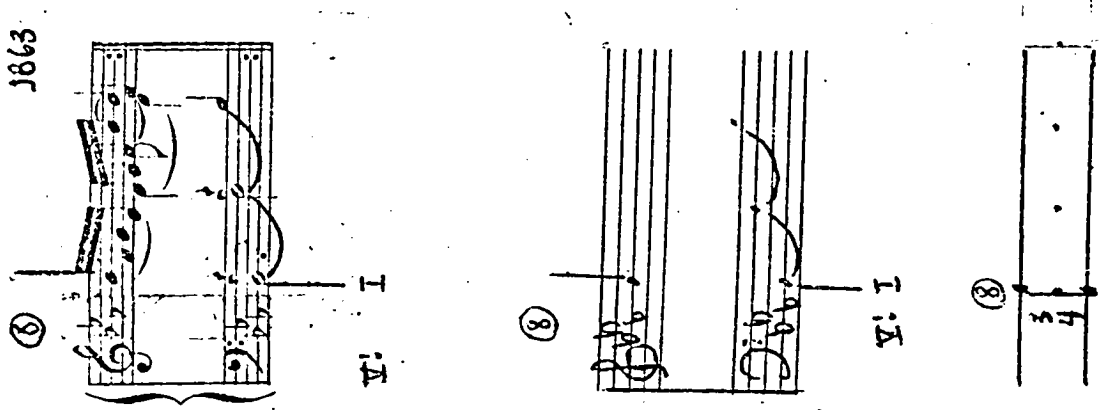
French Suite in Eb major, Sarabande

JB63





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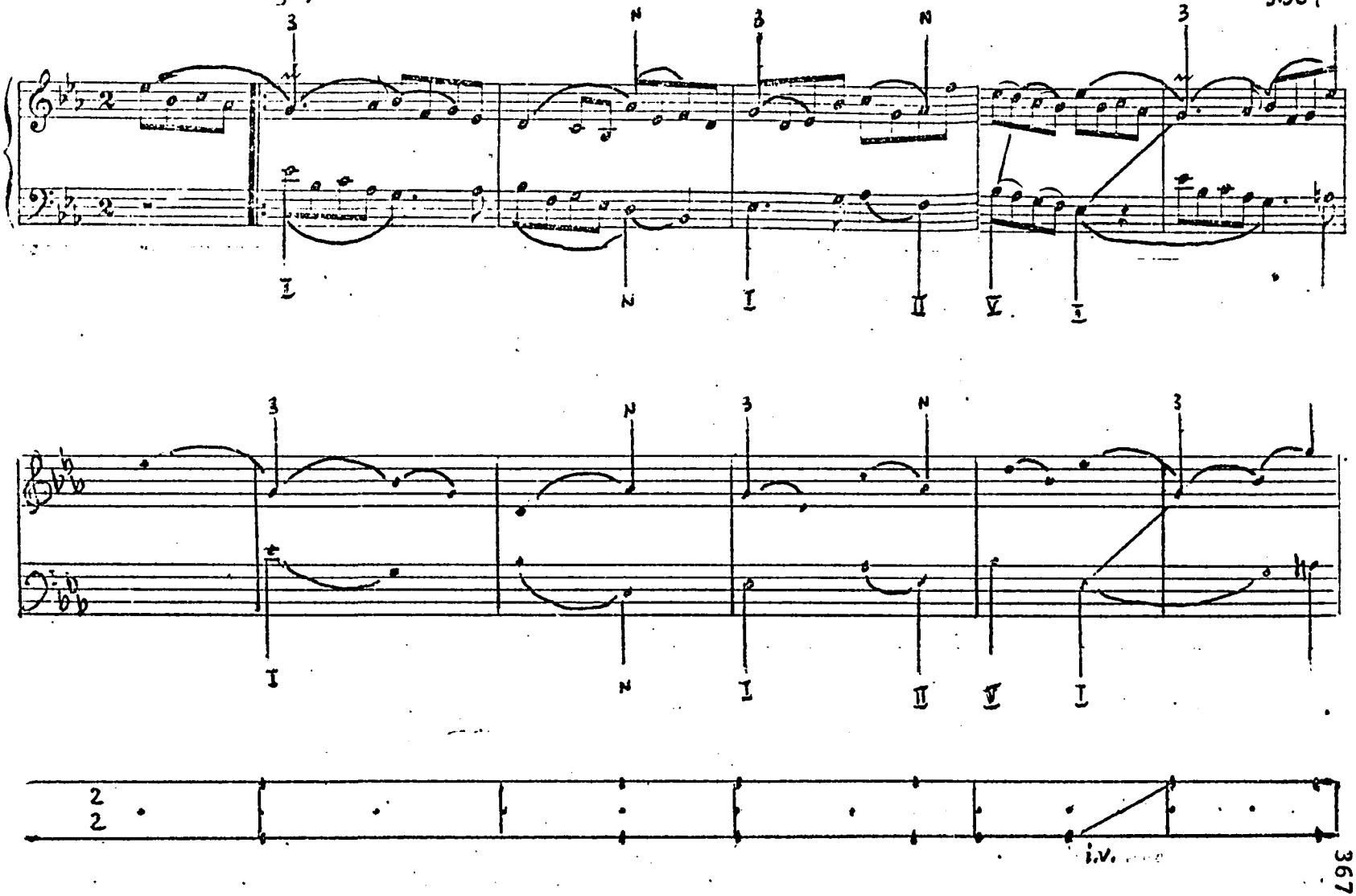
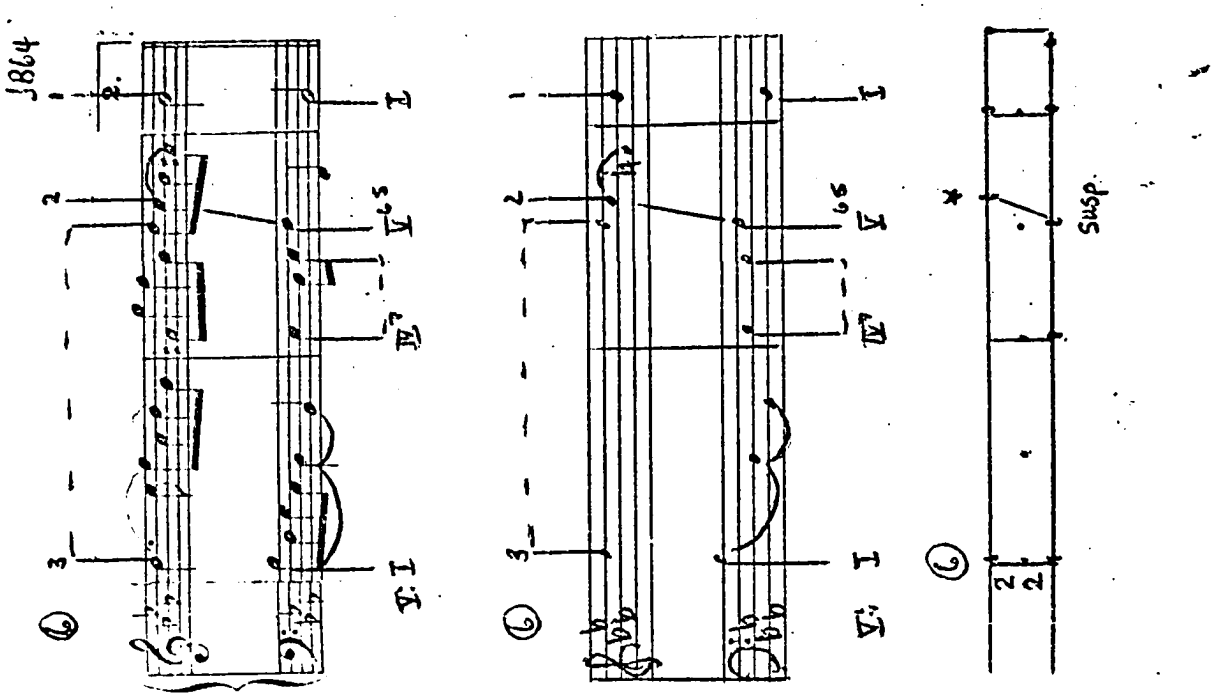
French Suite in Eb major, Gavotte

JB64





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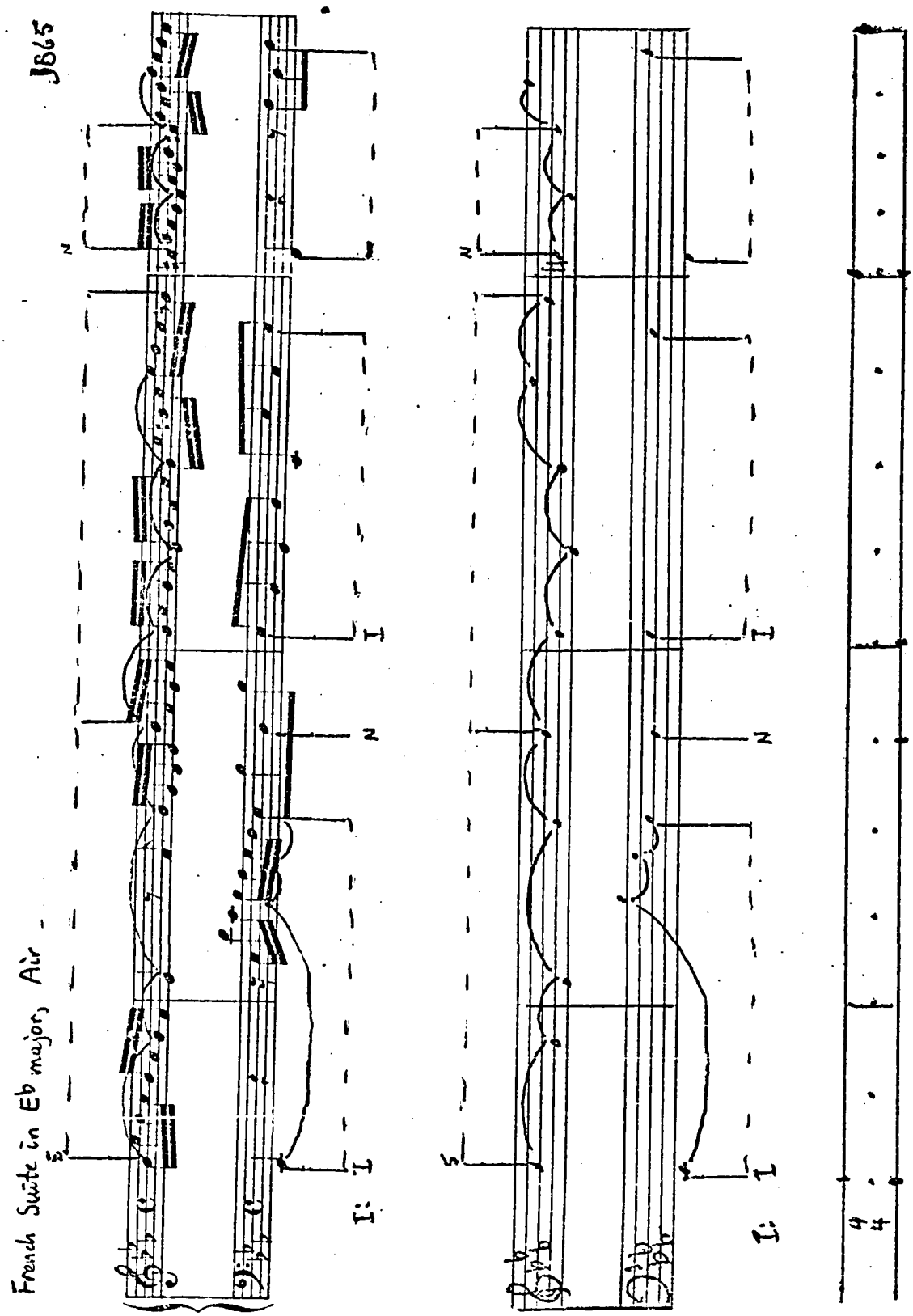

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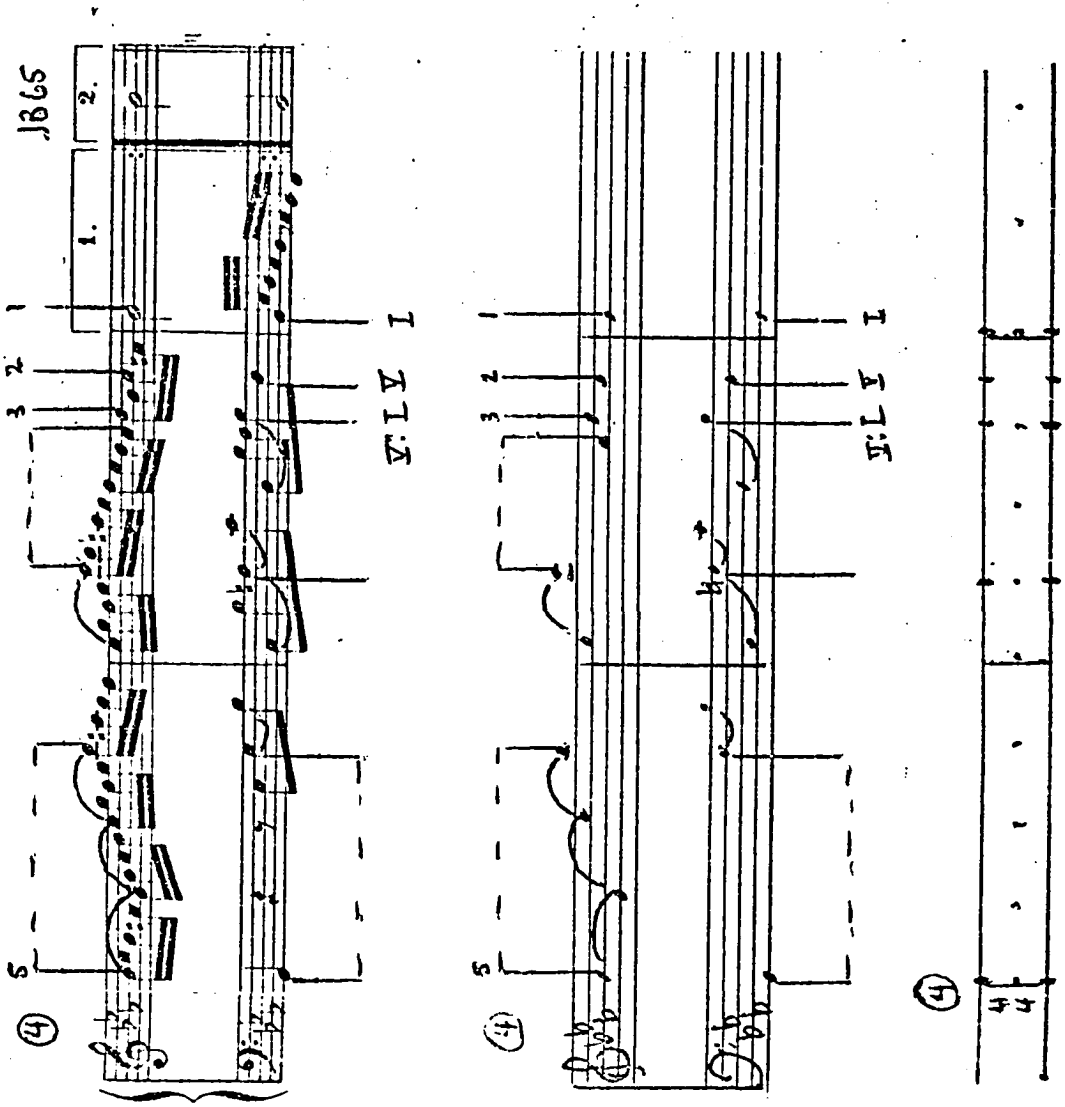

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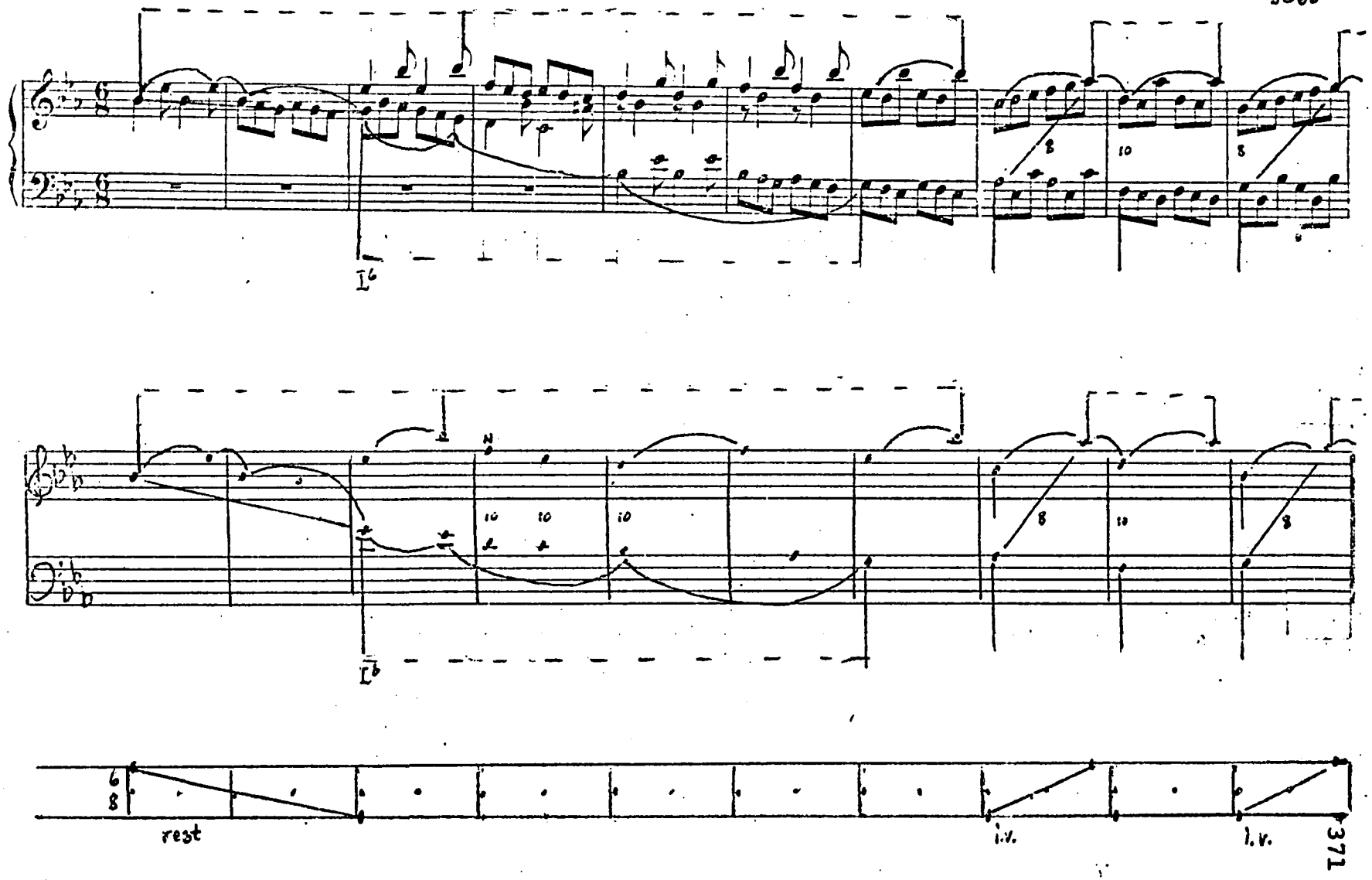
French Suite in Eb major, Gigue



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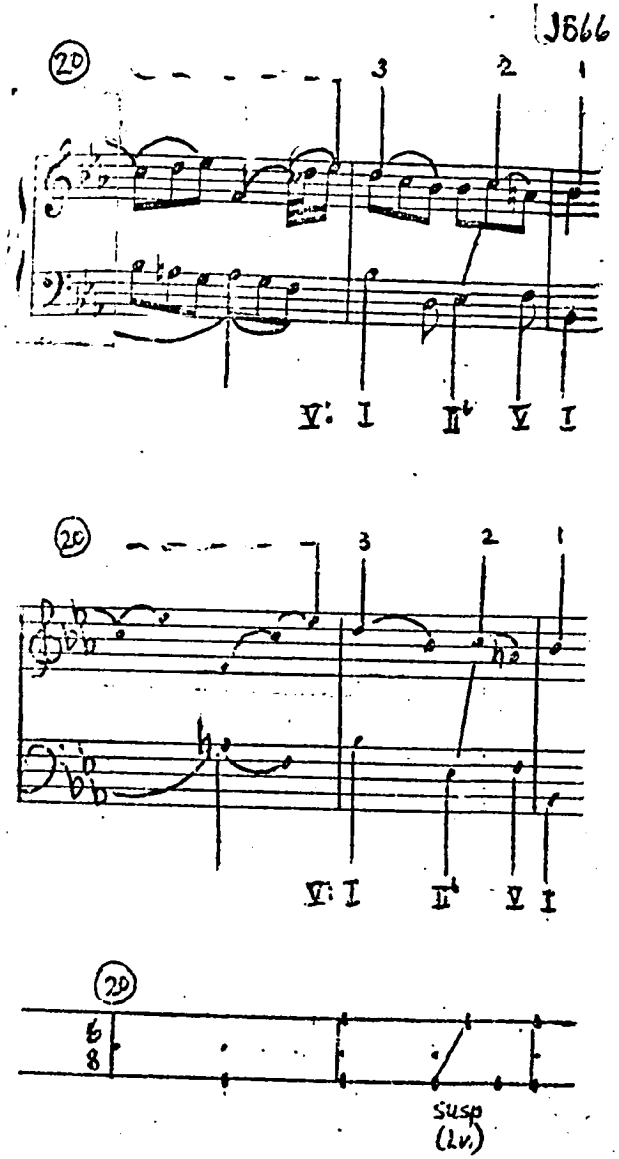

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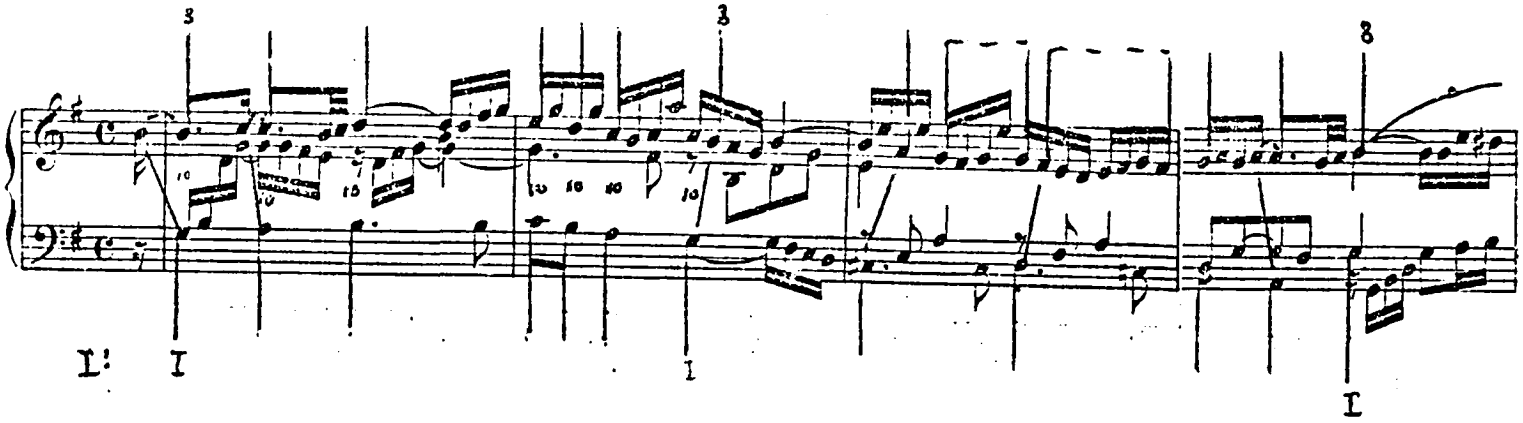
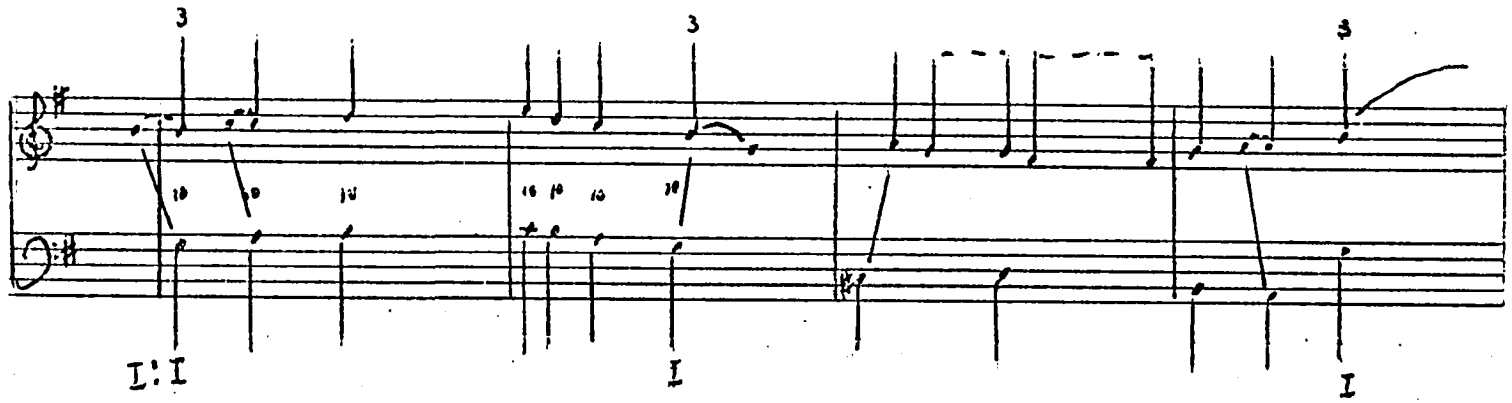
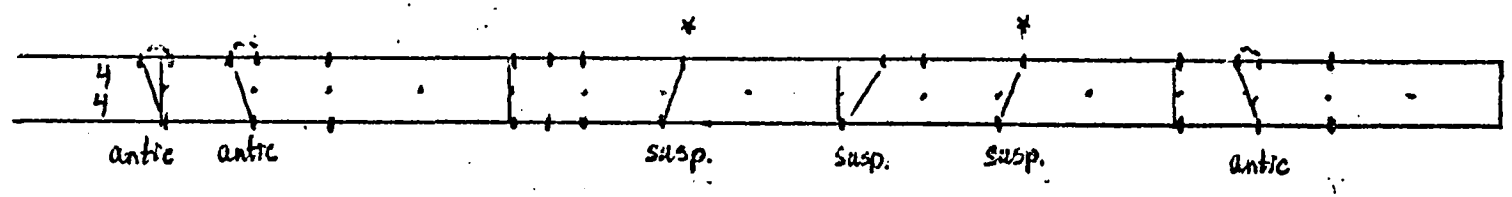
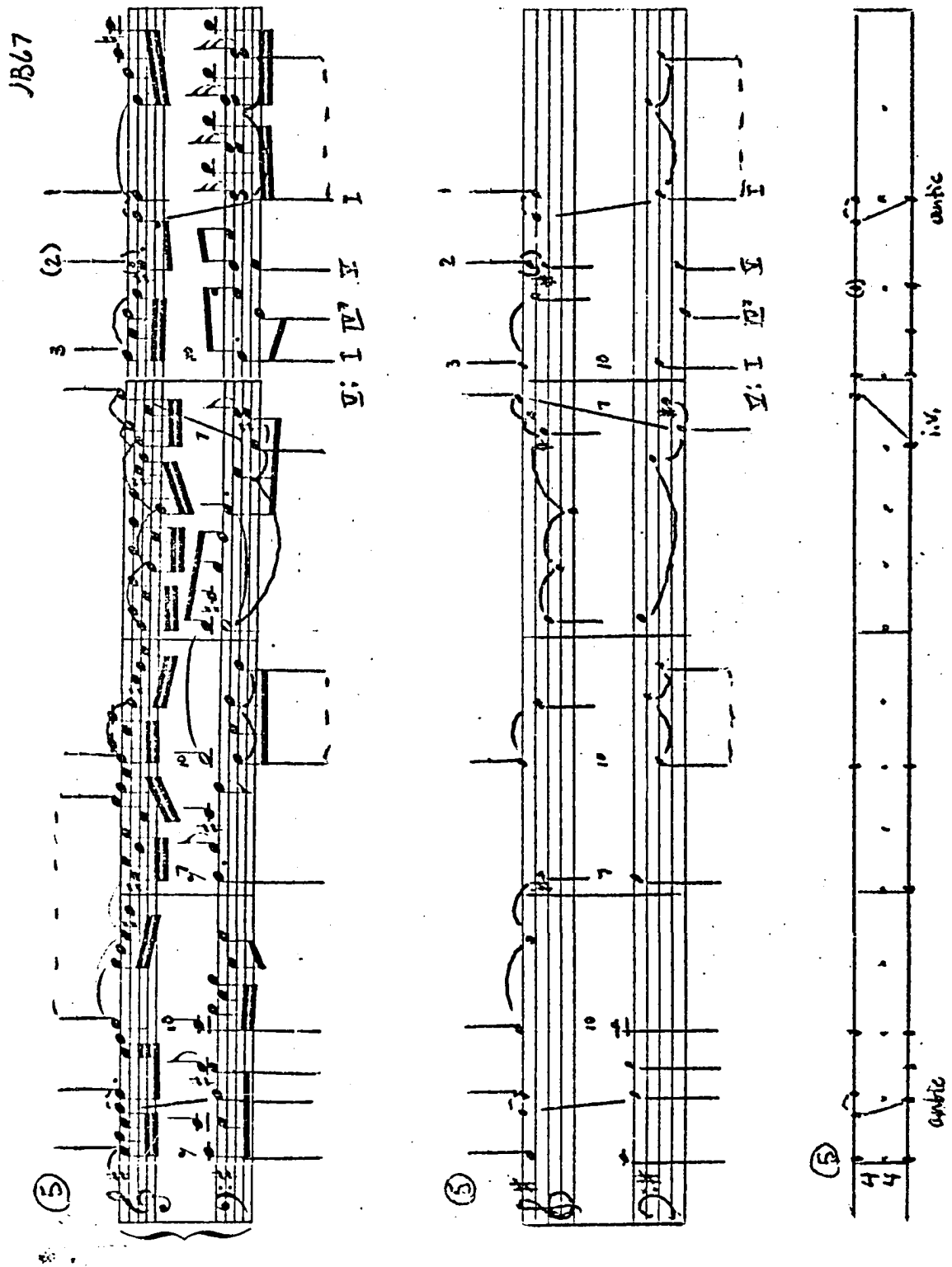
French Suite in G major Allemande

JB67









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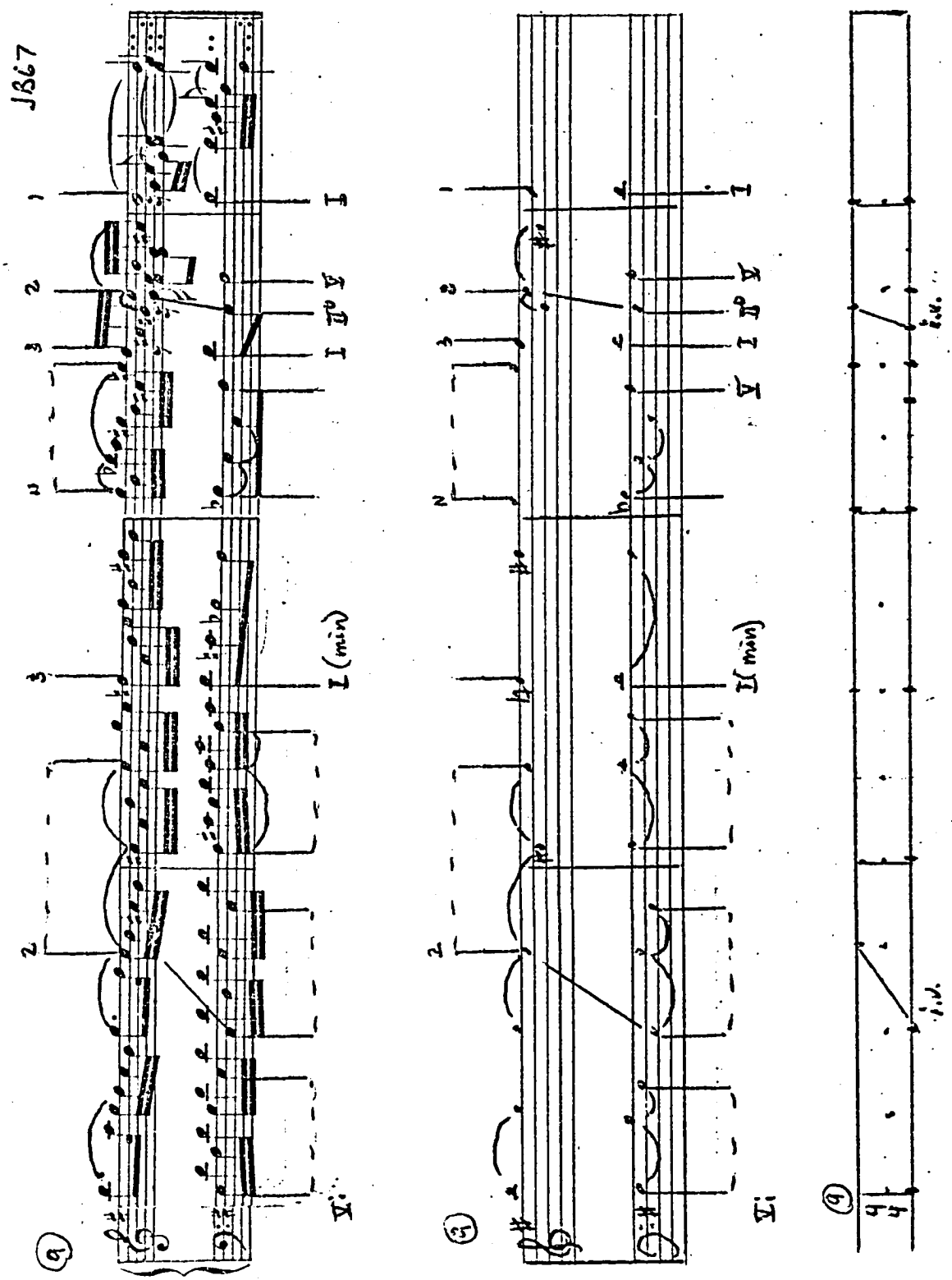

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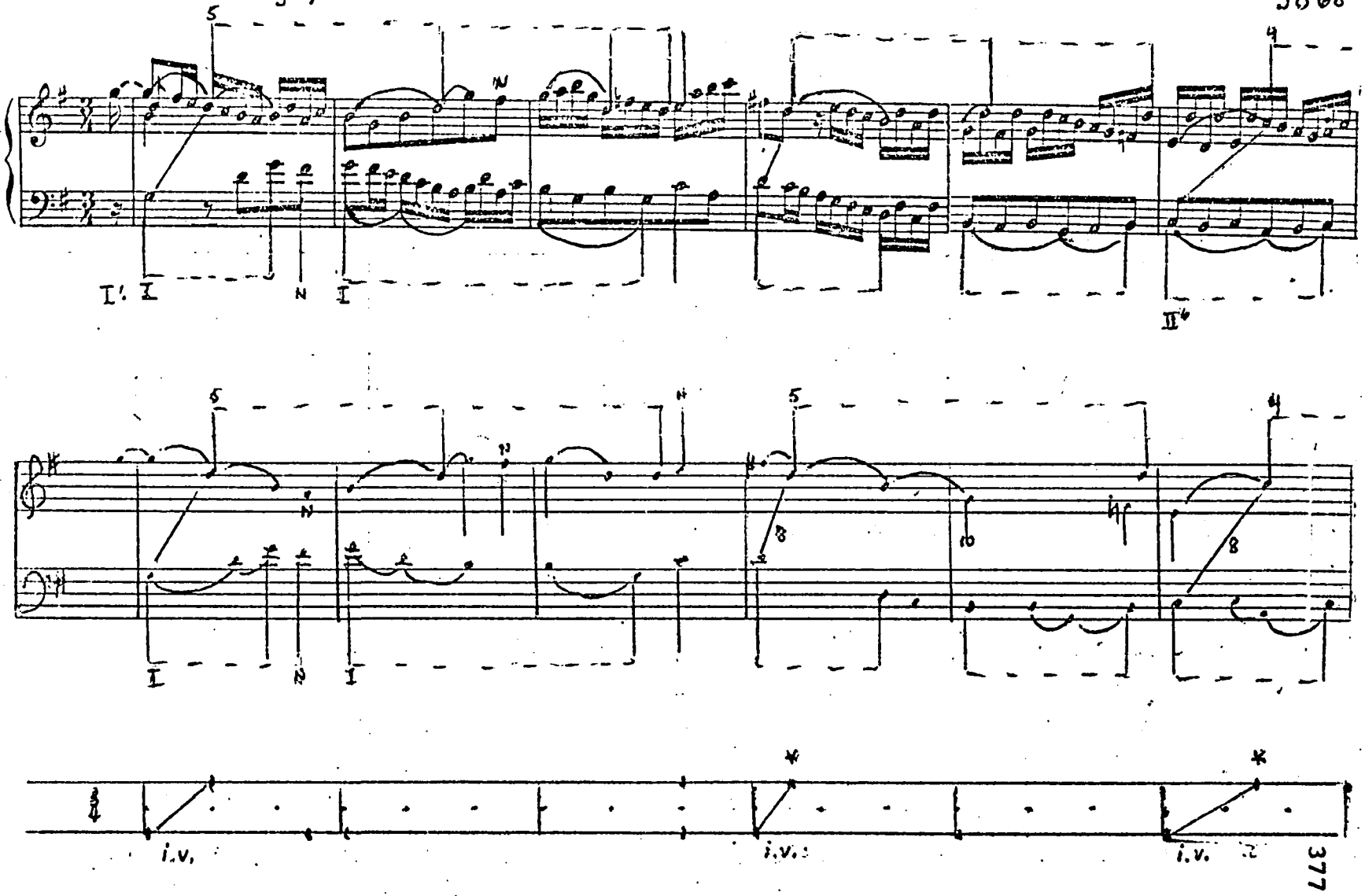
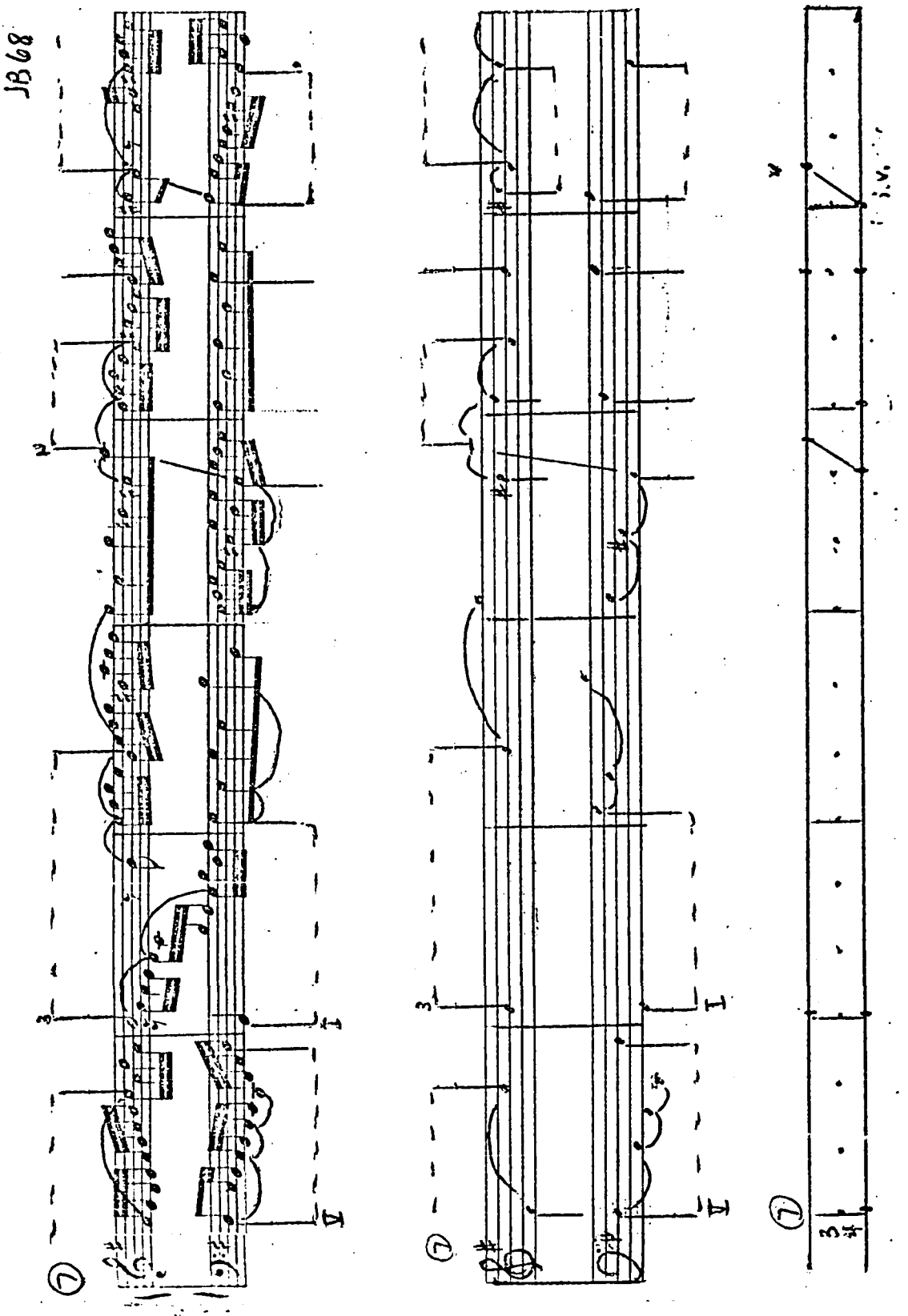
French Suite in G major, Courante

JB 68





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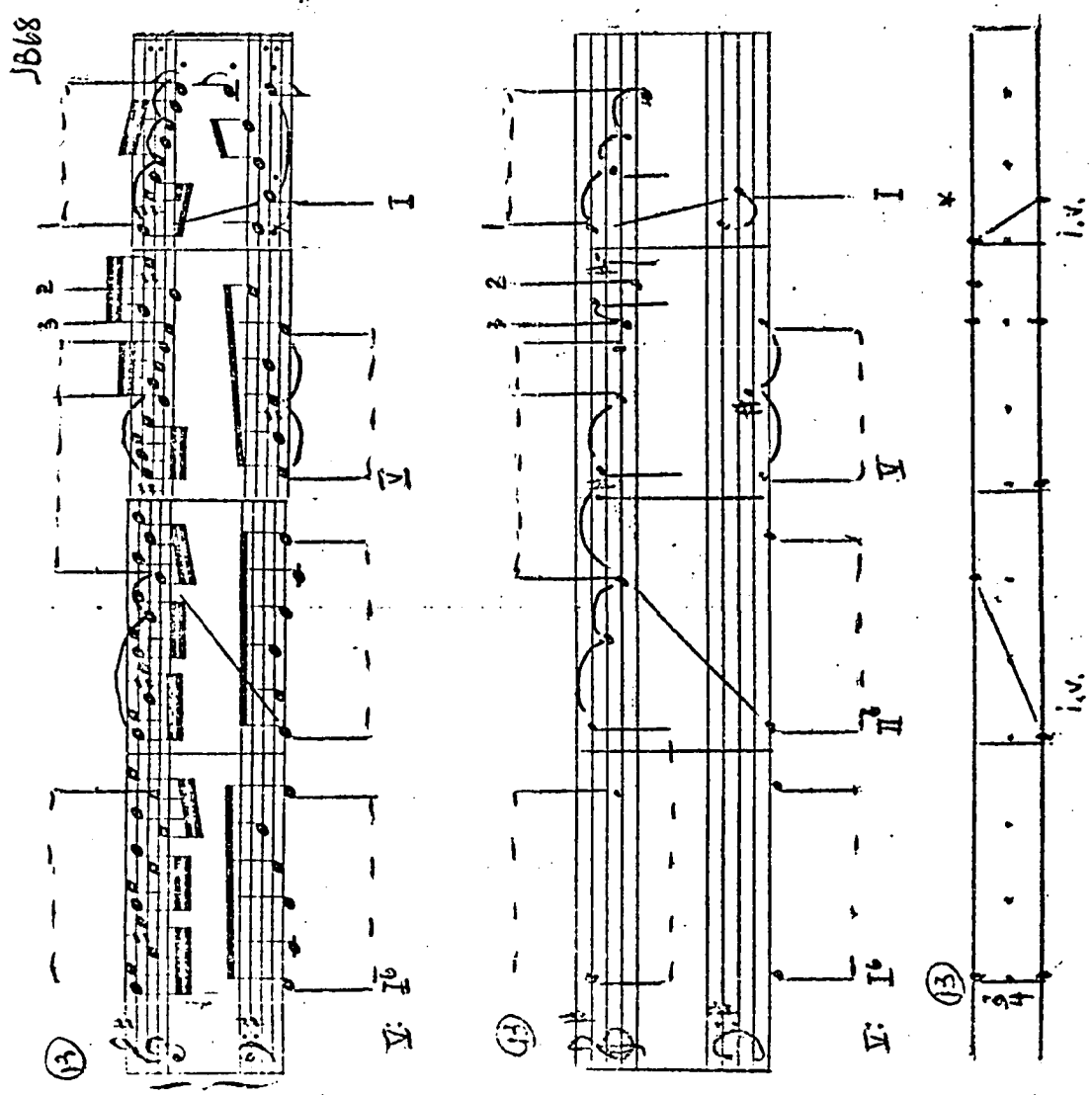

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French Suite in G major, Sarabande

JB69

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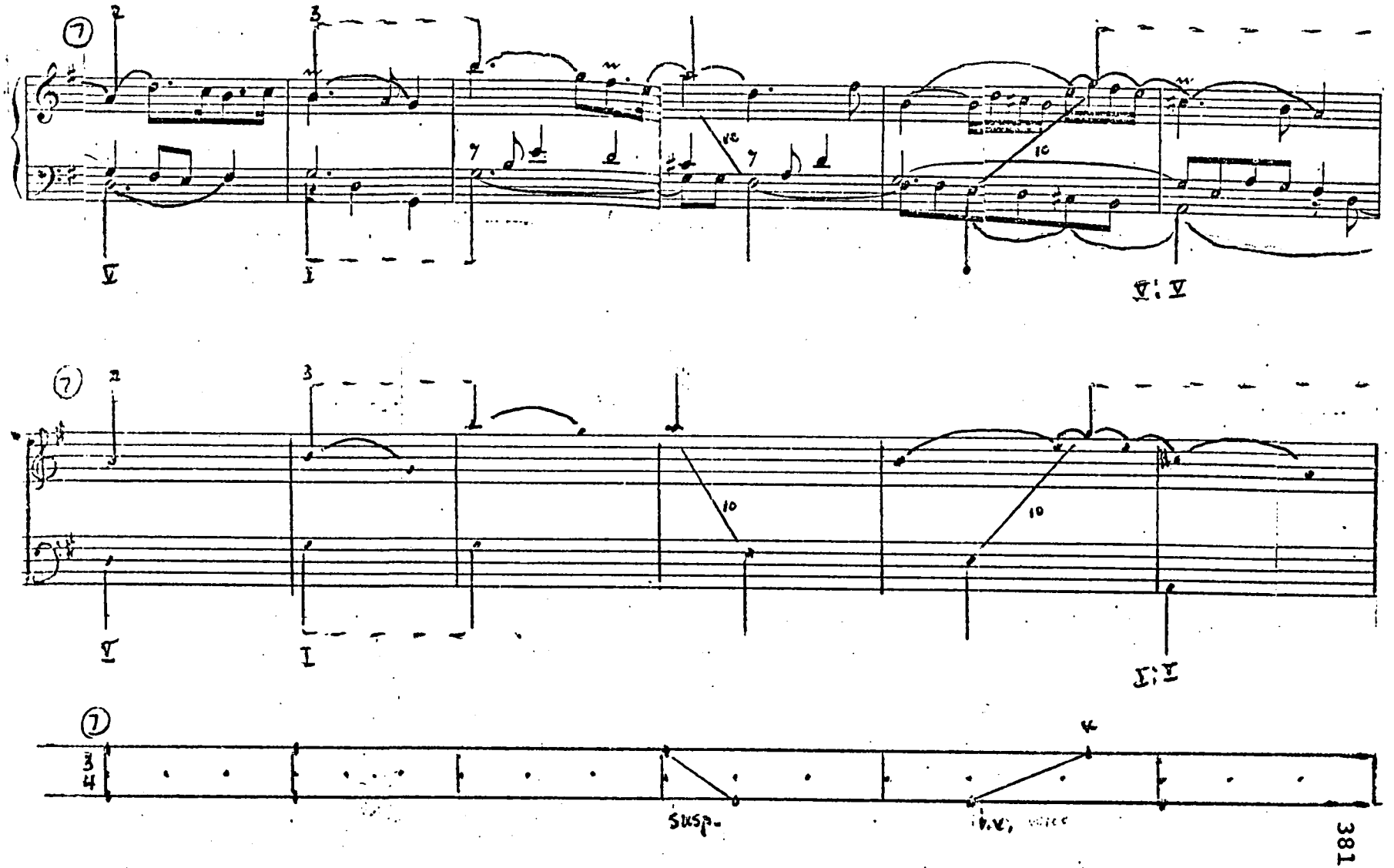

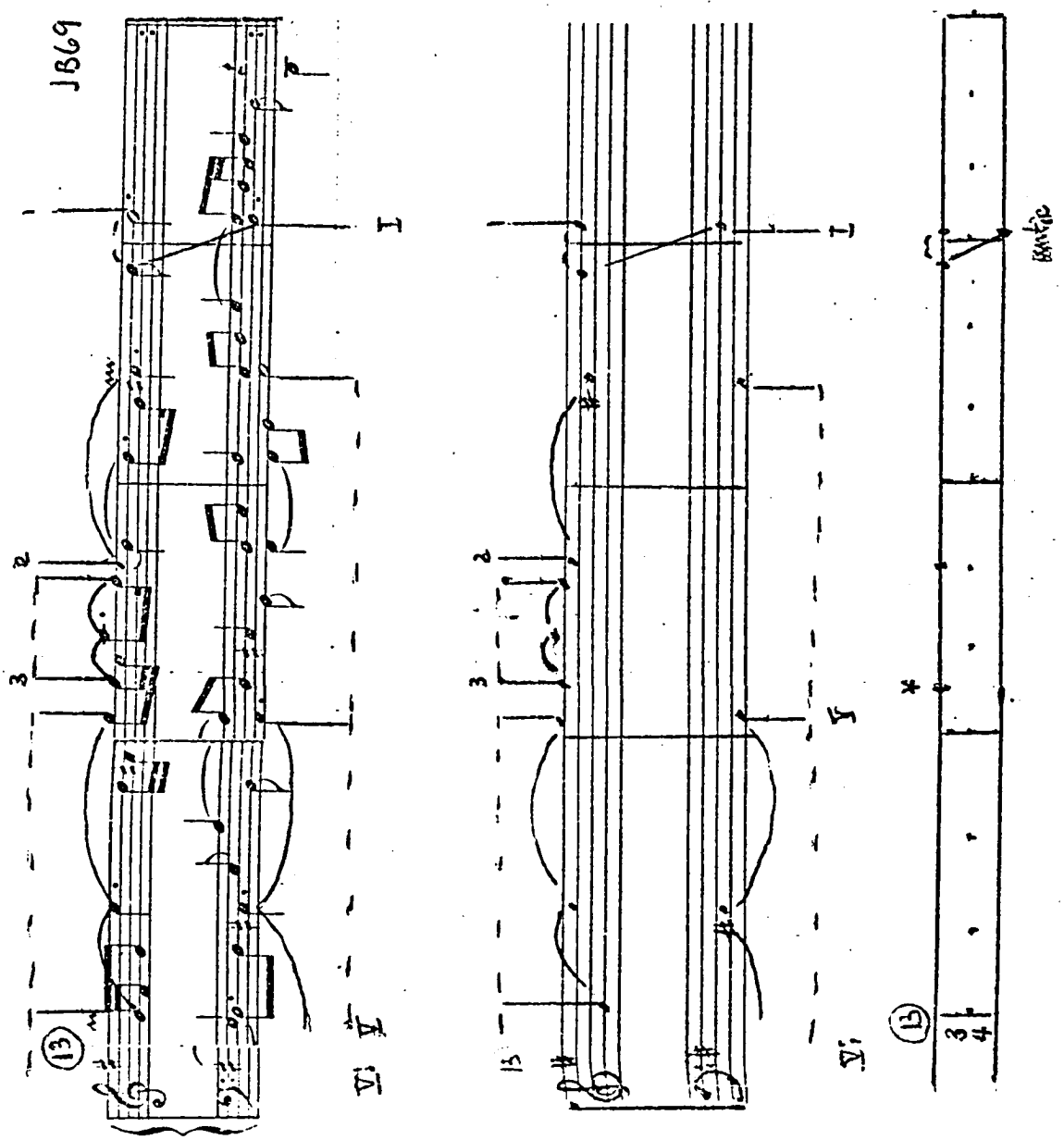

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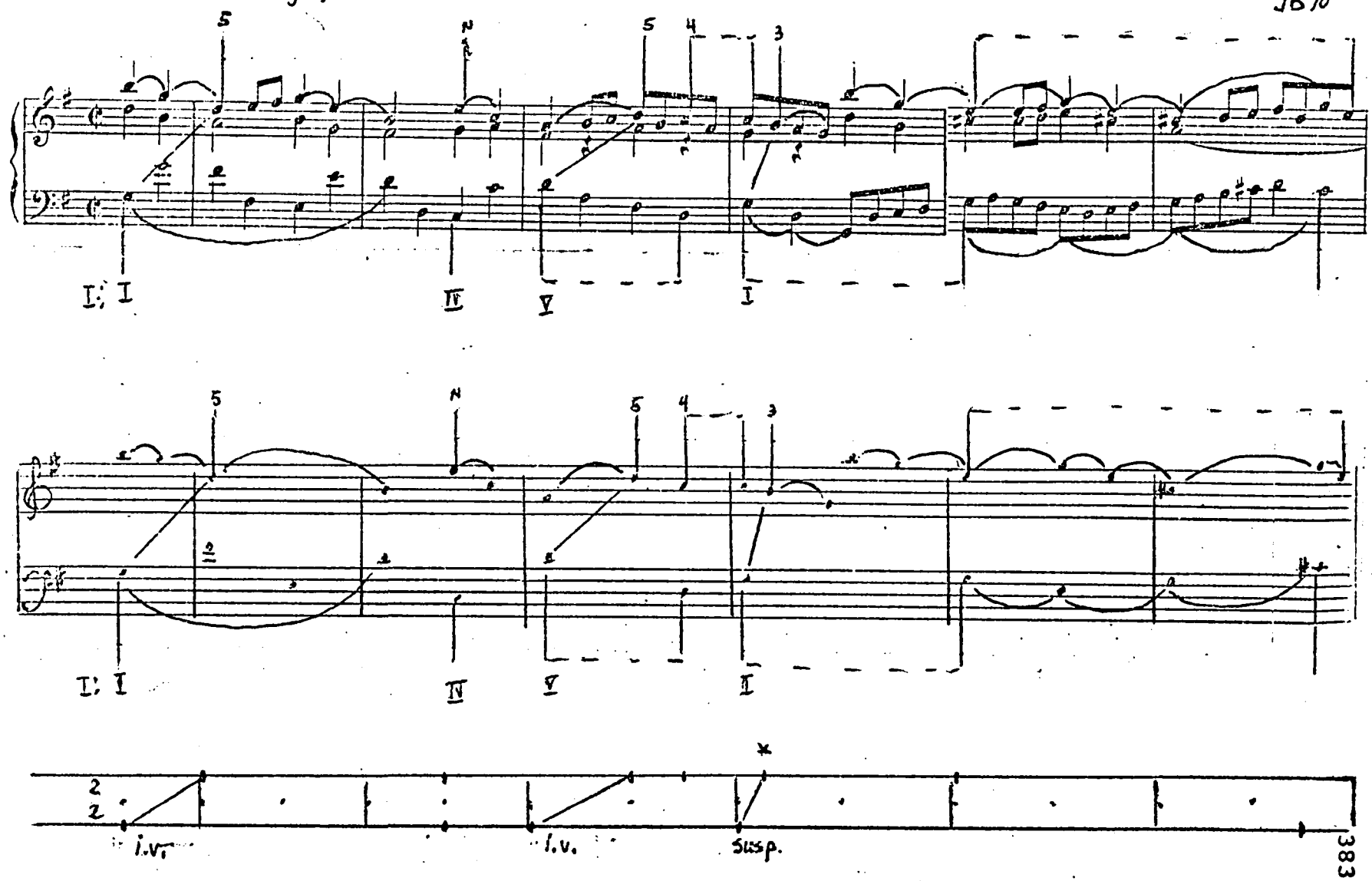
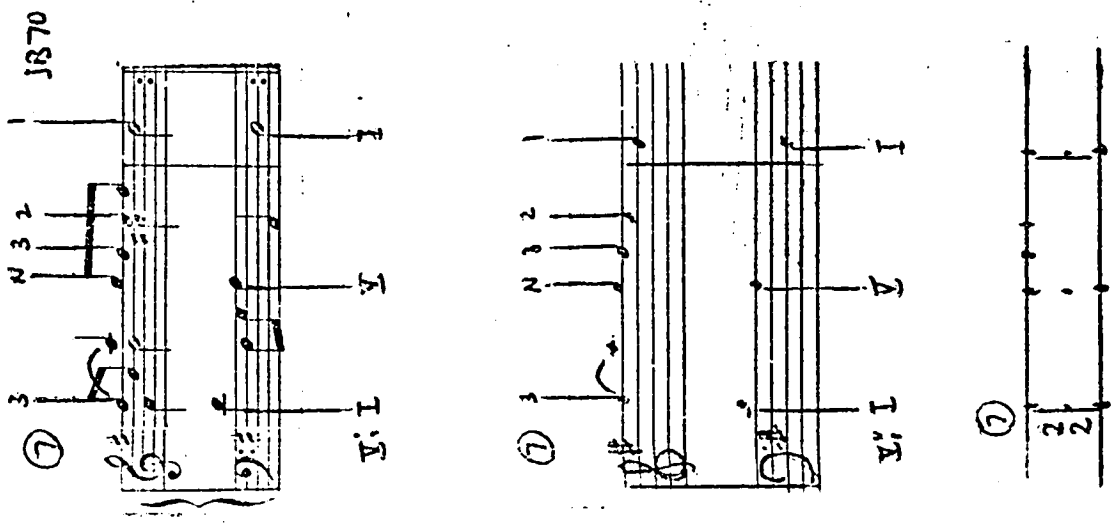
French Suite in G major, Gavotte

JB70





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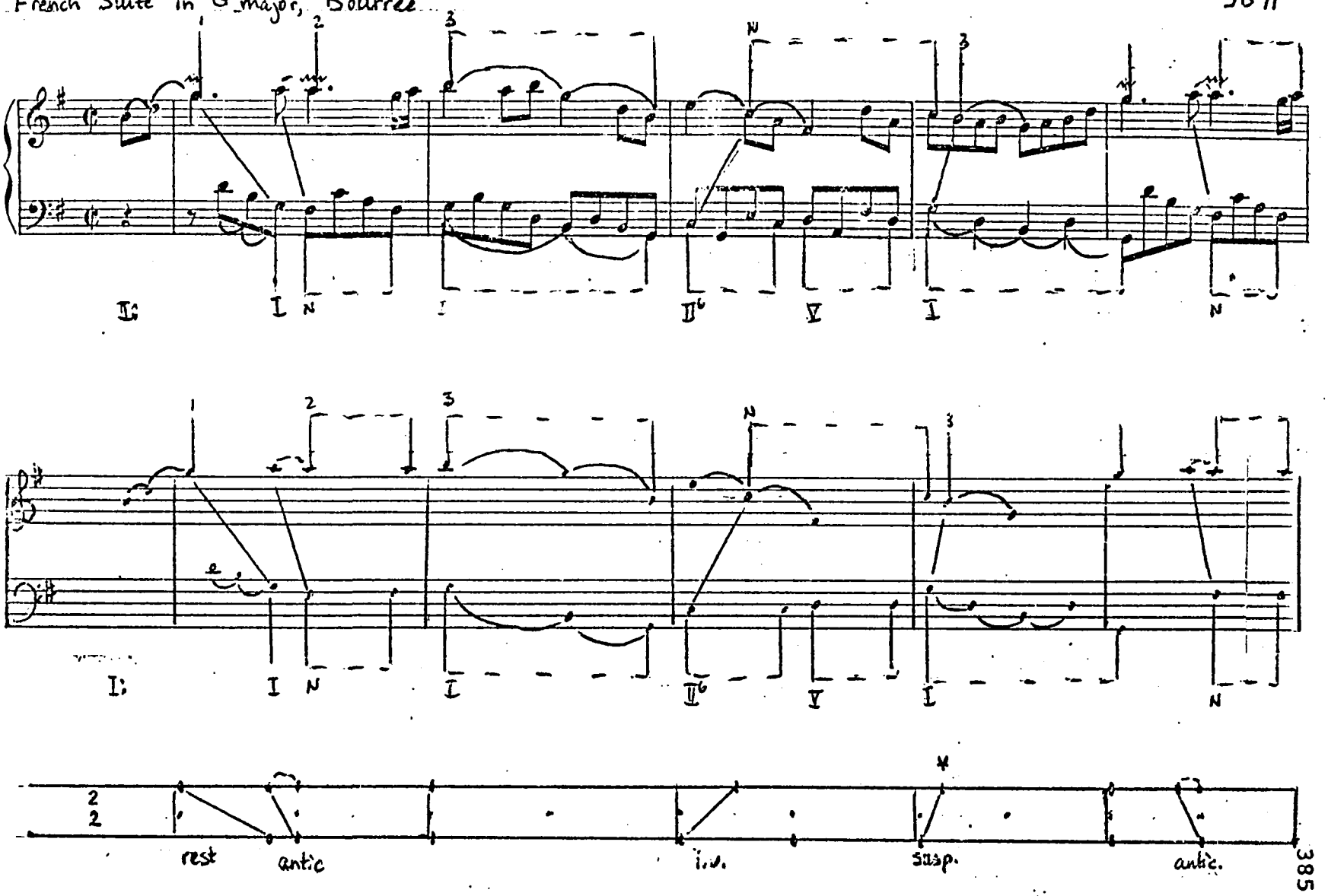
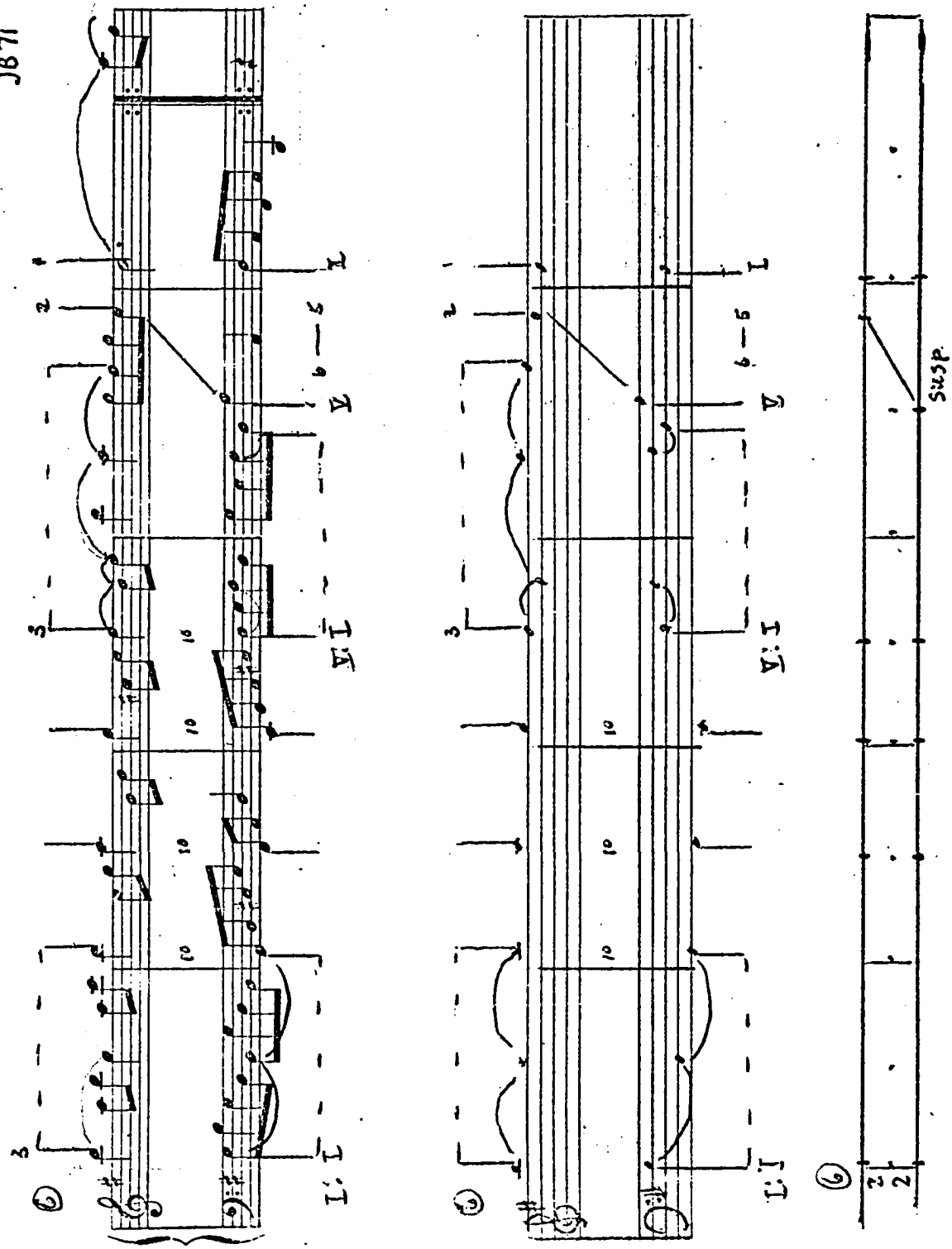
French Suite in G major, Bourrée

JB71





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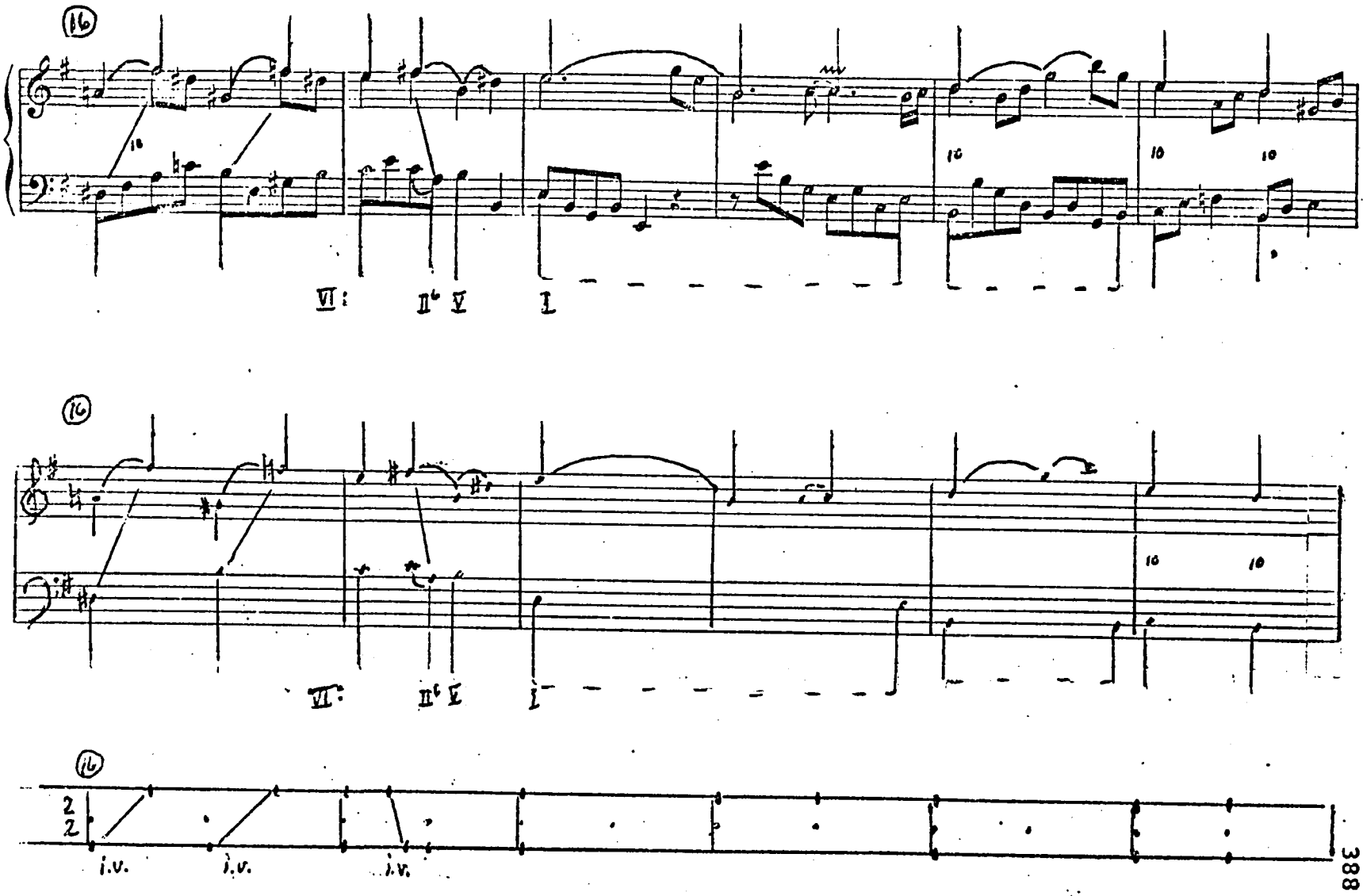

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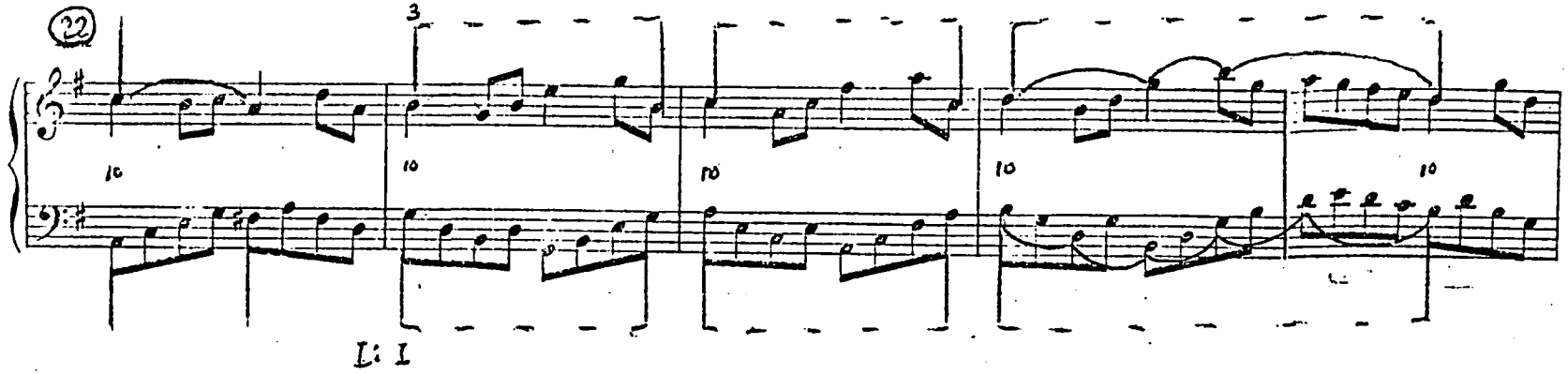

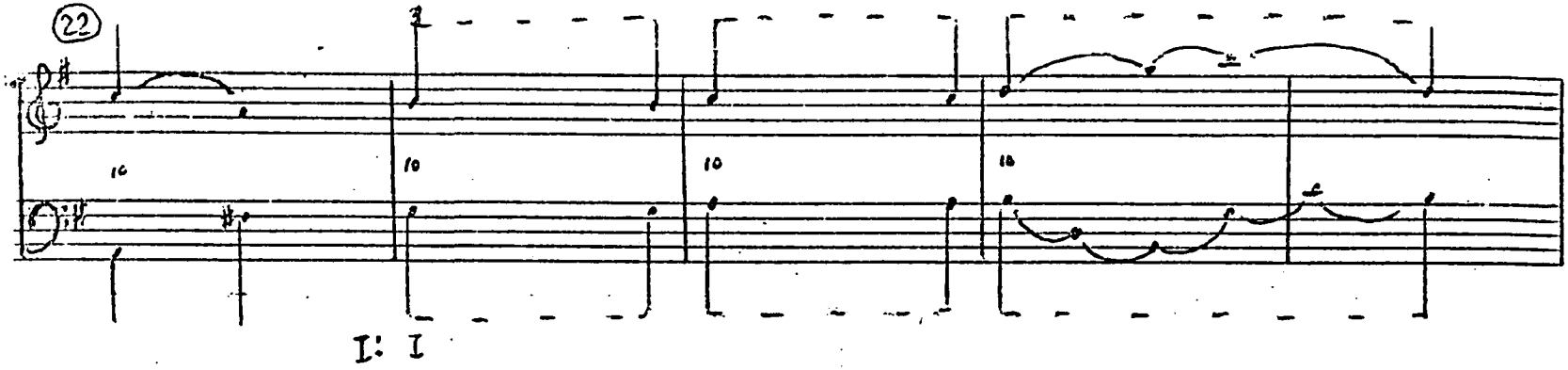

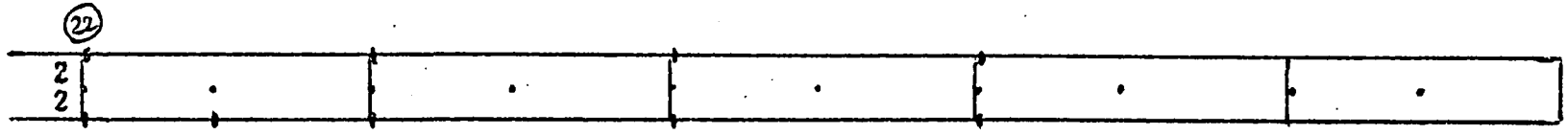

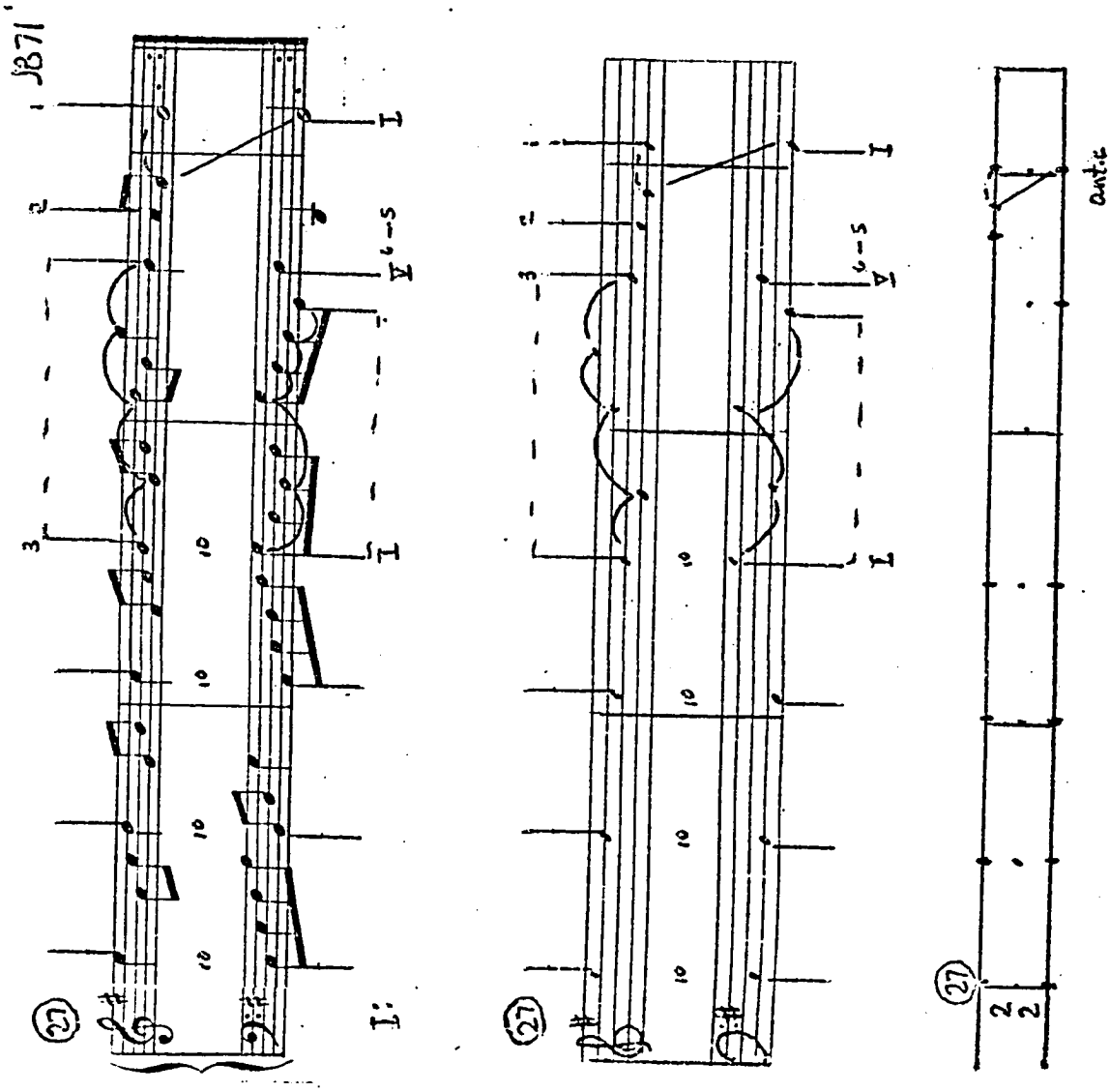

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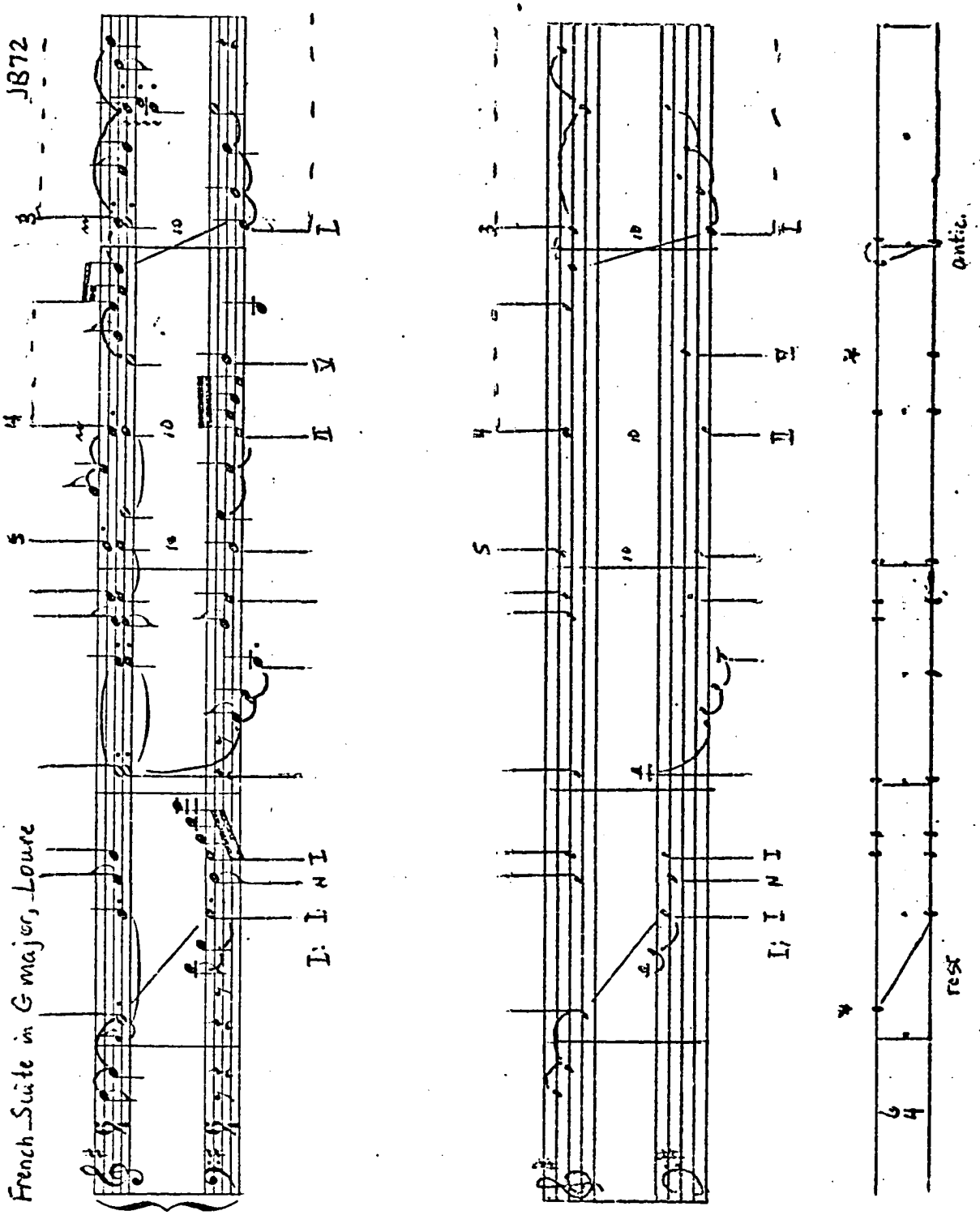

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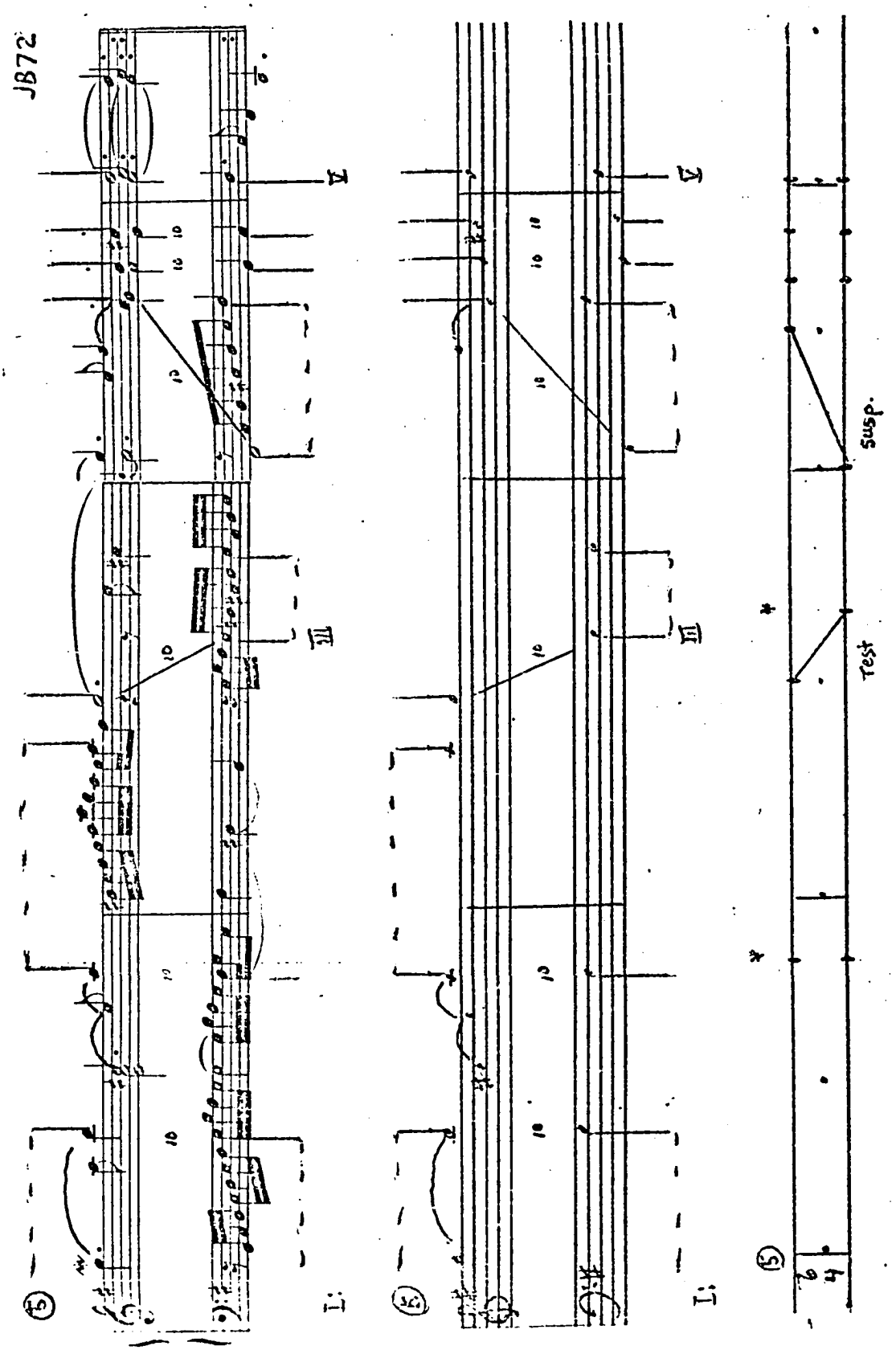

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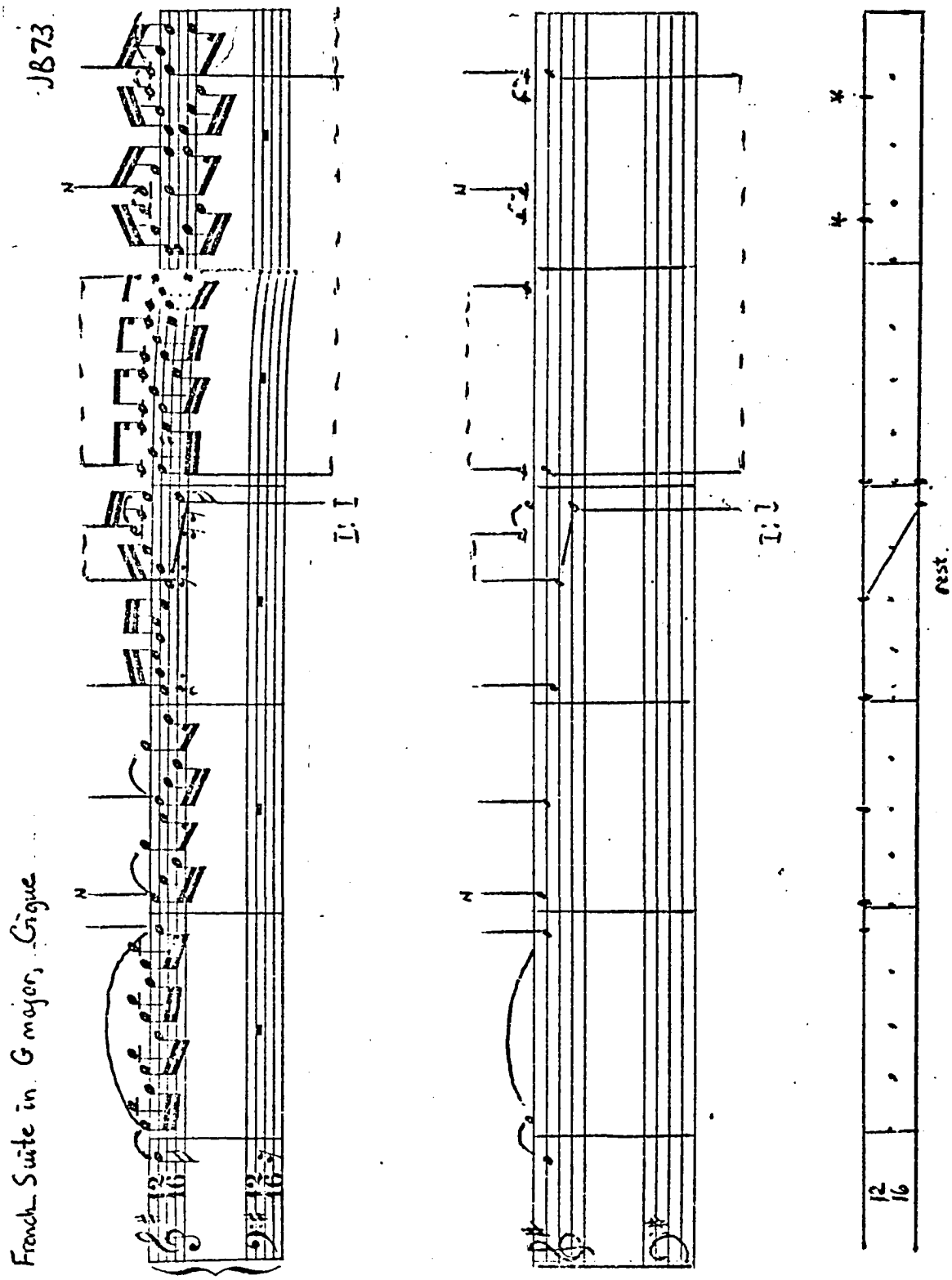

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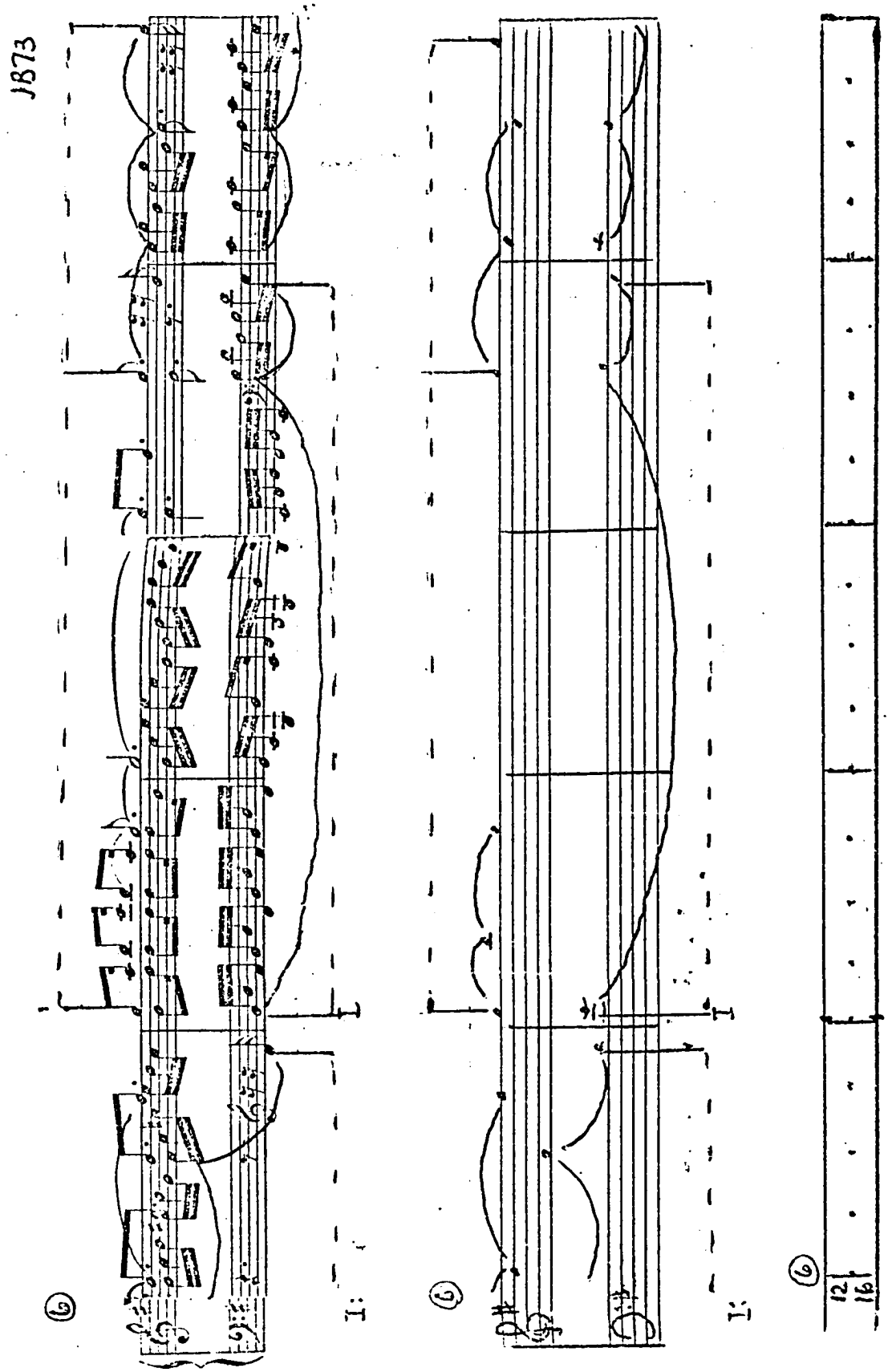

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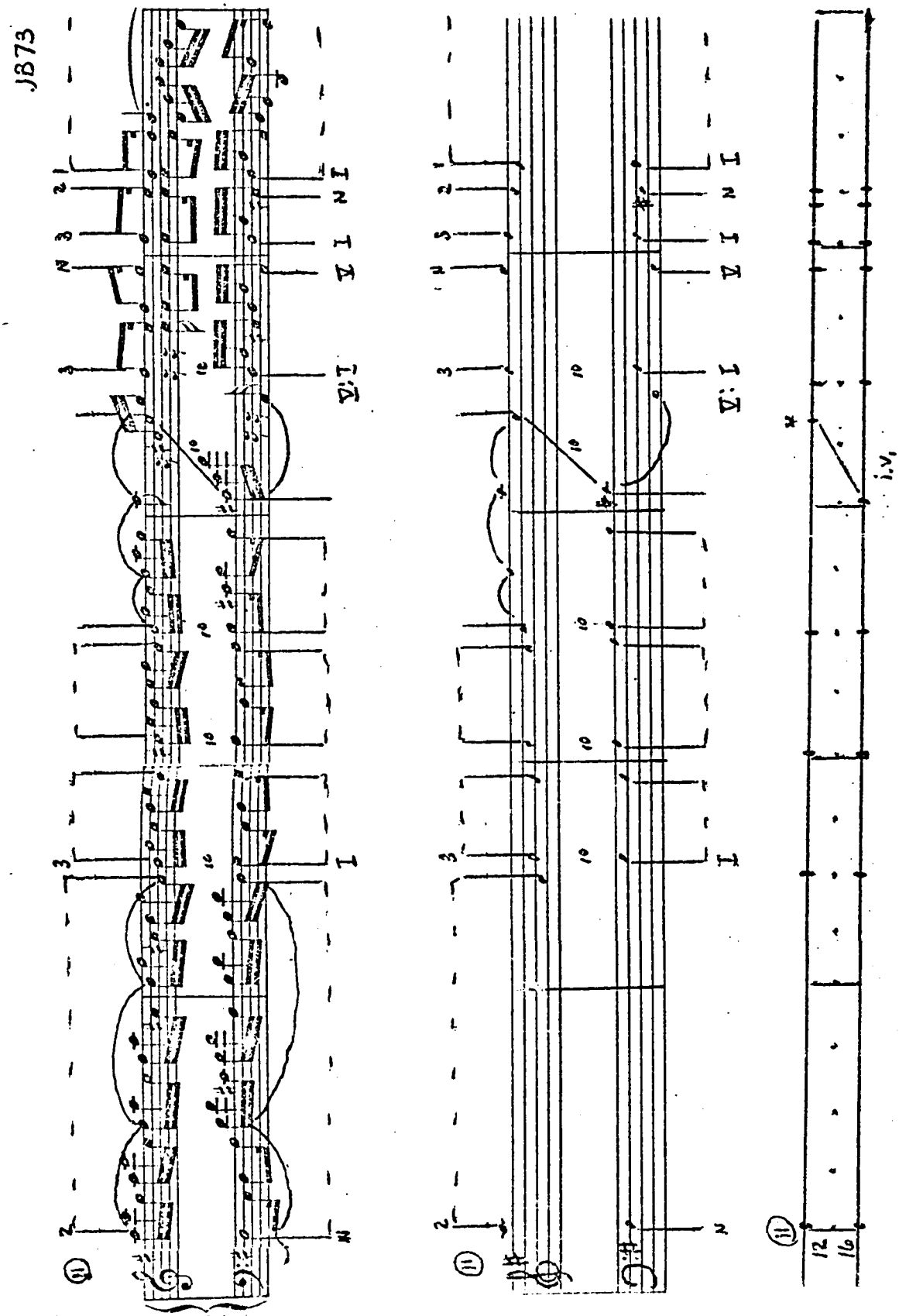

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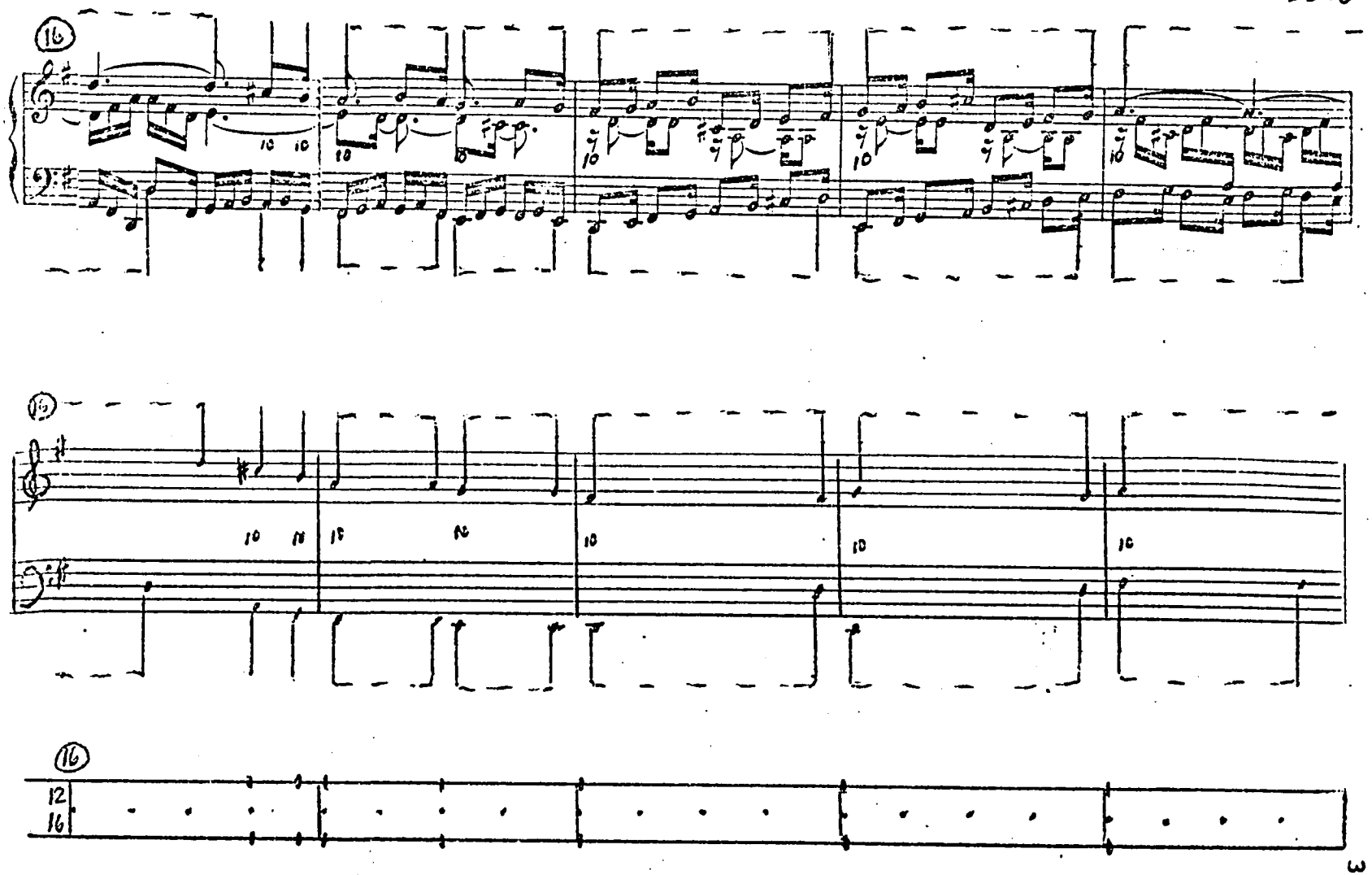

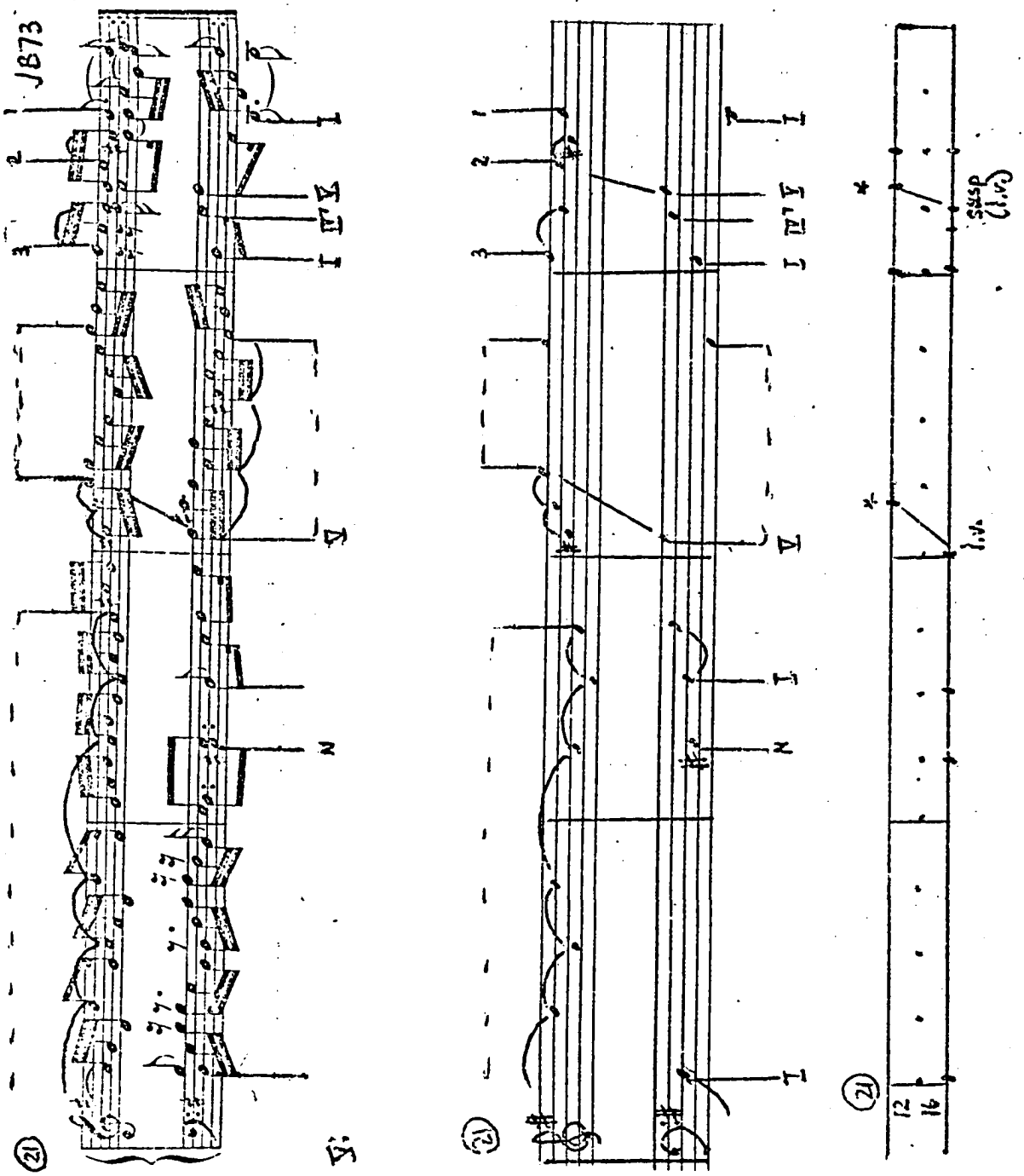

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French Suite in E major Allemande

JB 74

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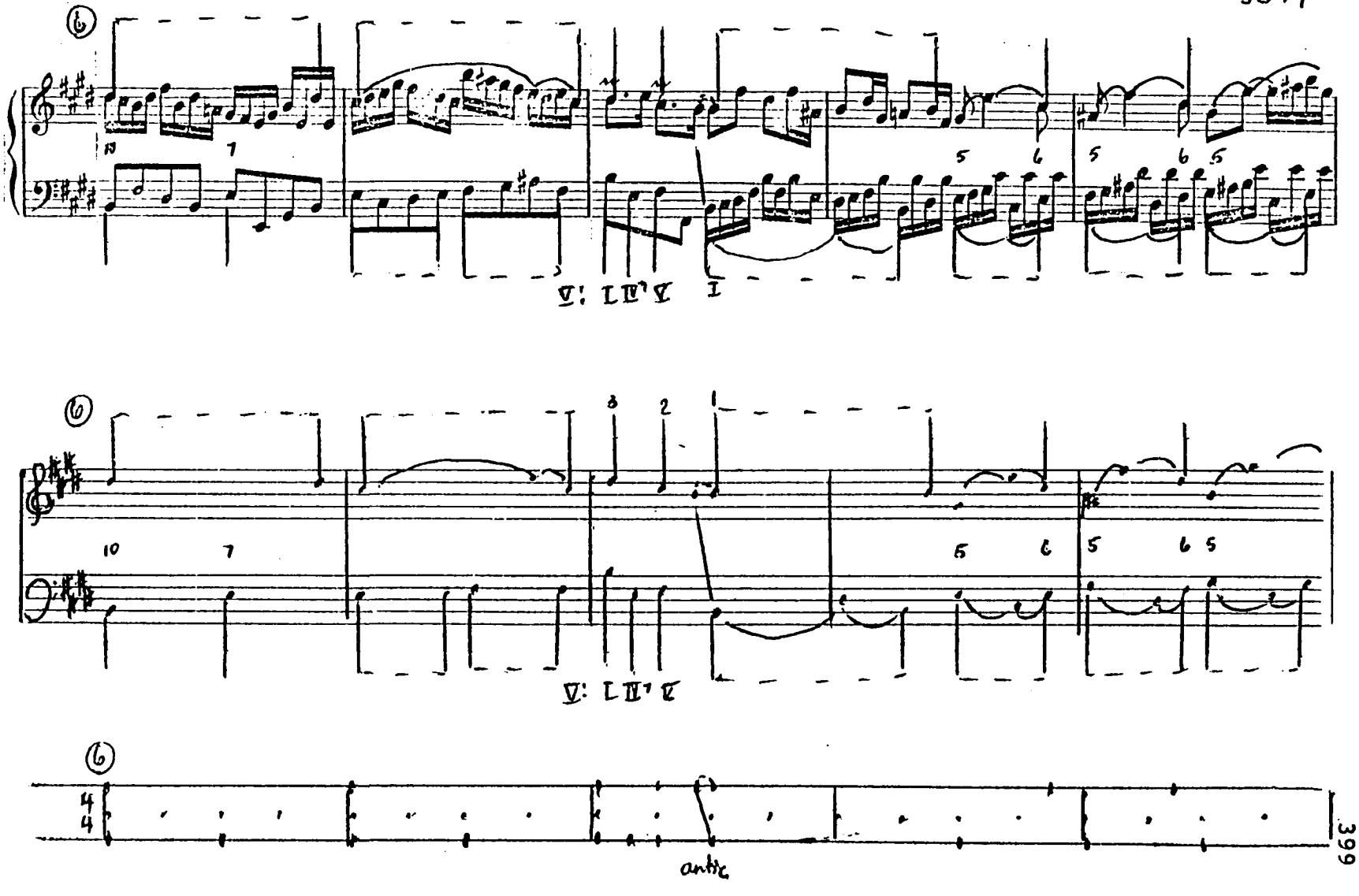

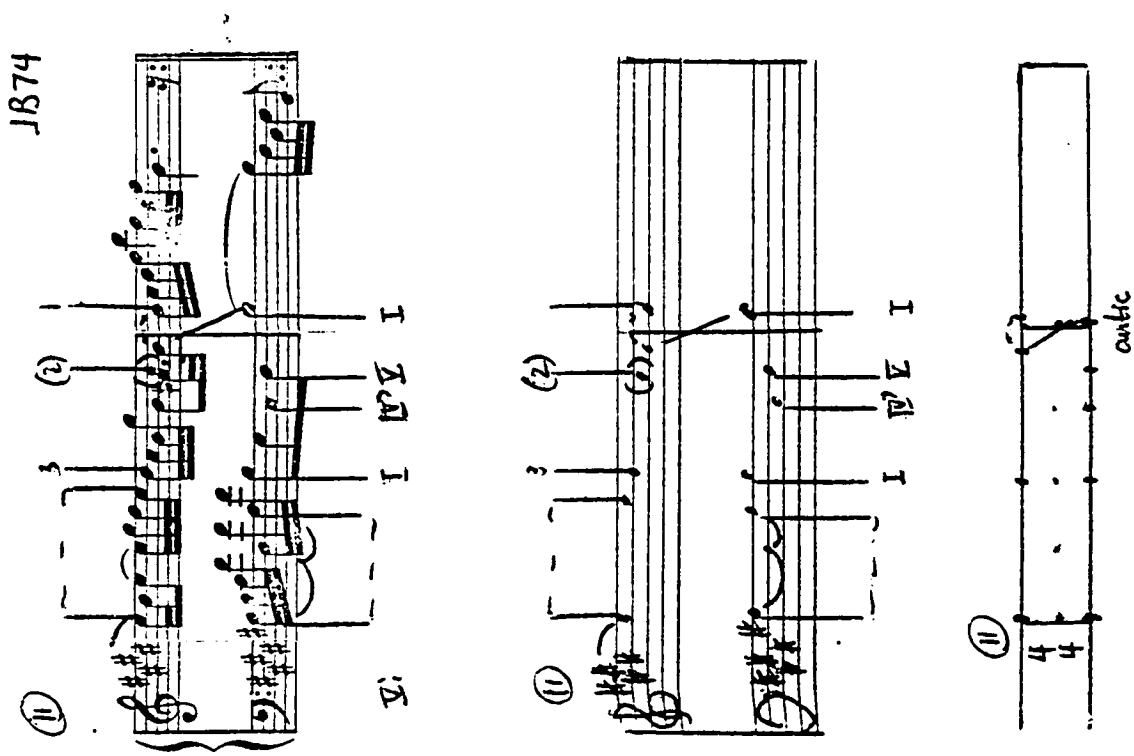

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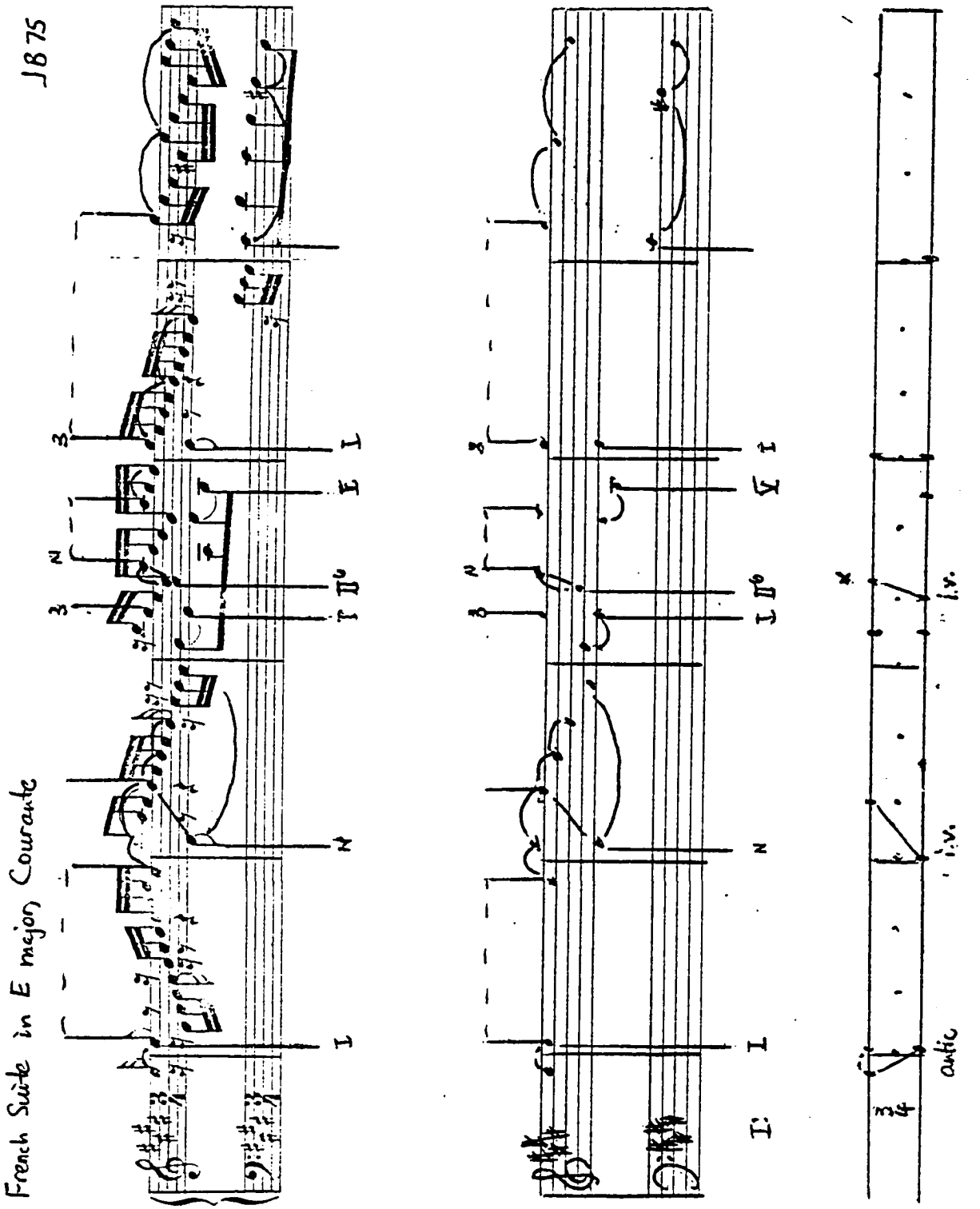
French Suite in E major Courante
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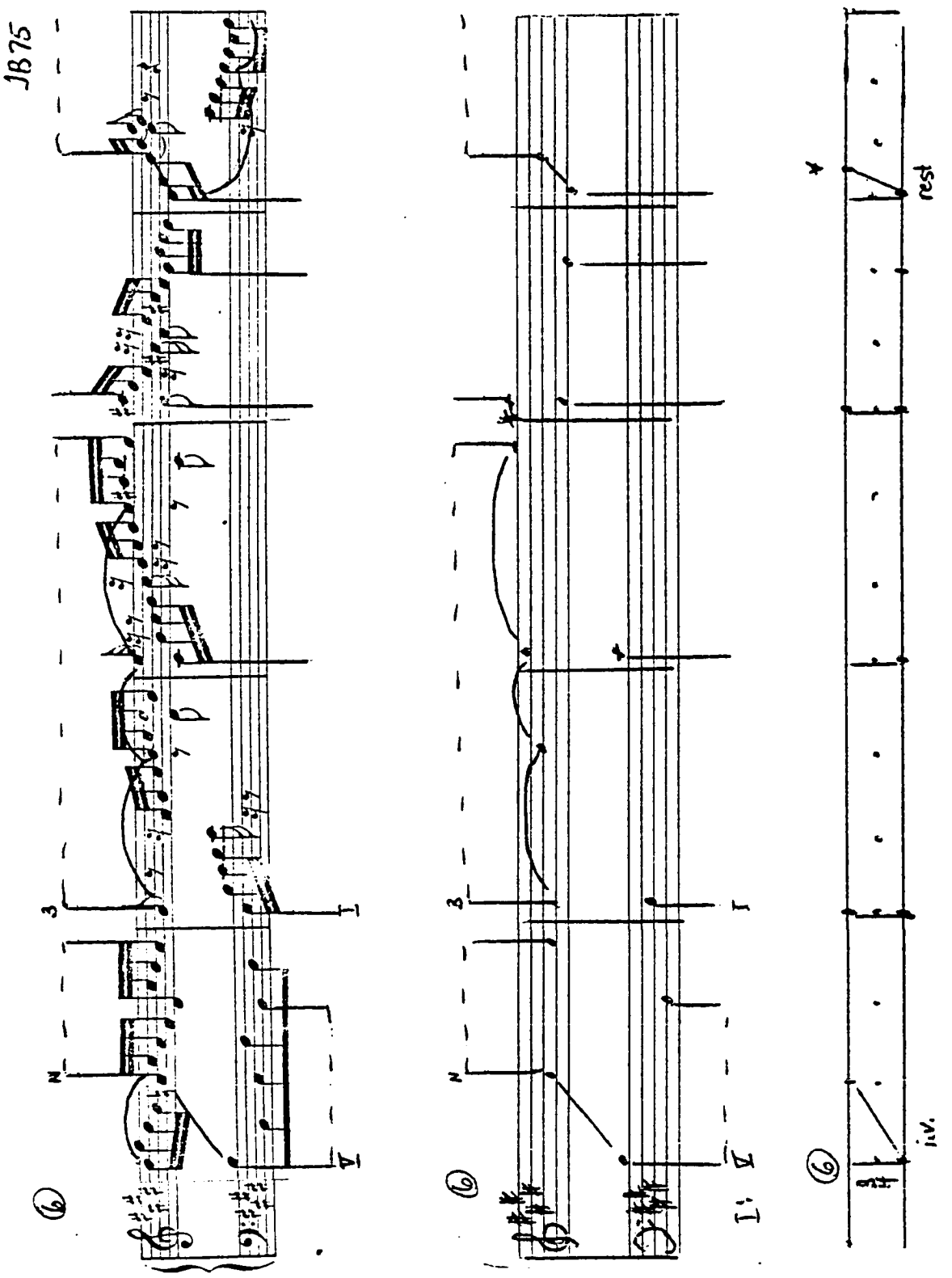

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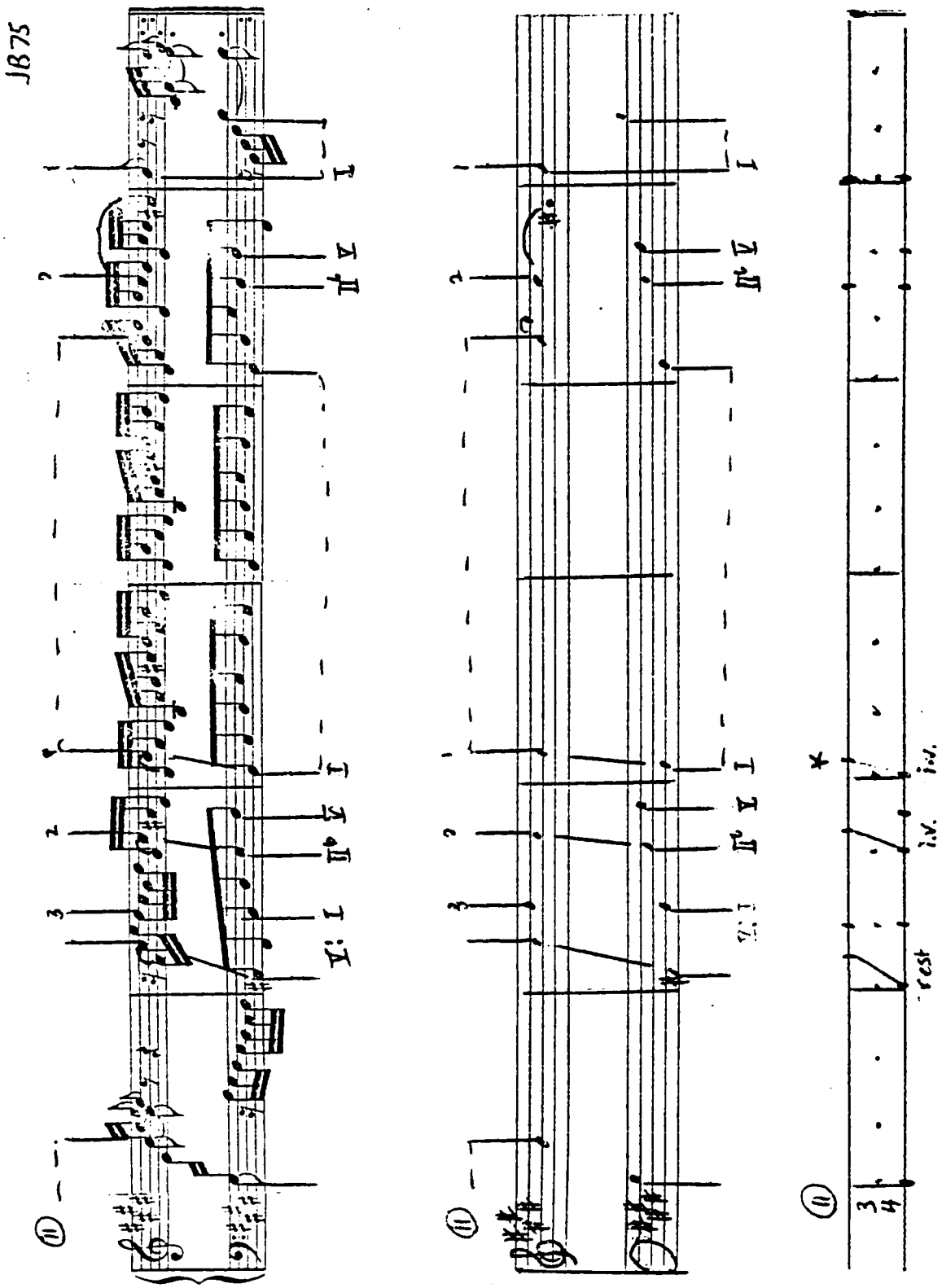

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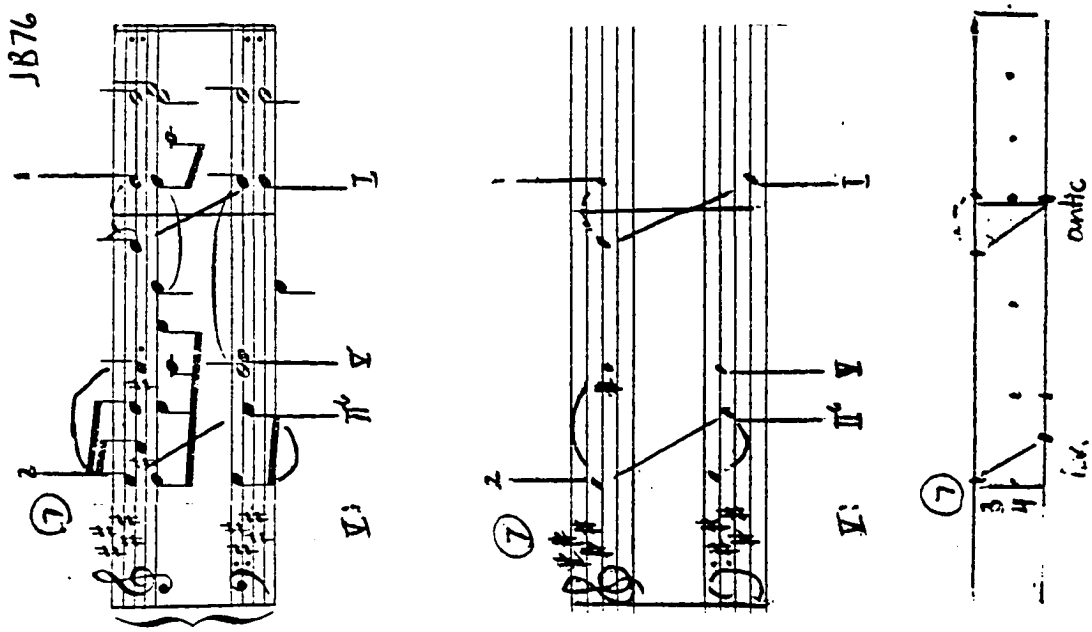
French Suite in E major, Sarabande

JB76



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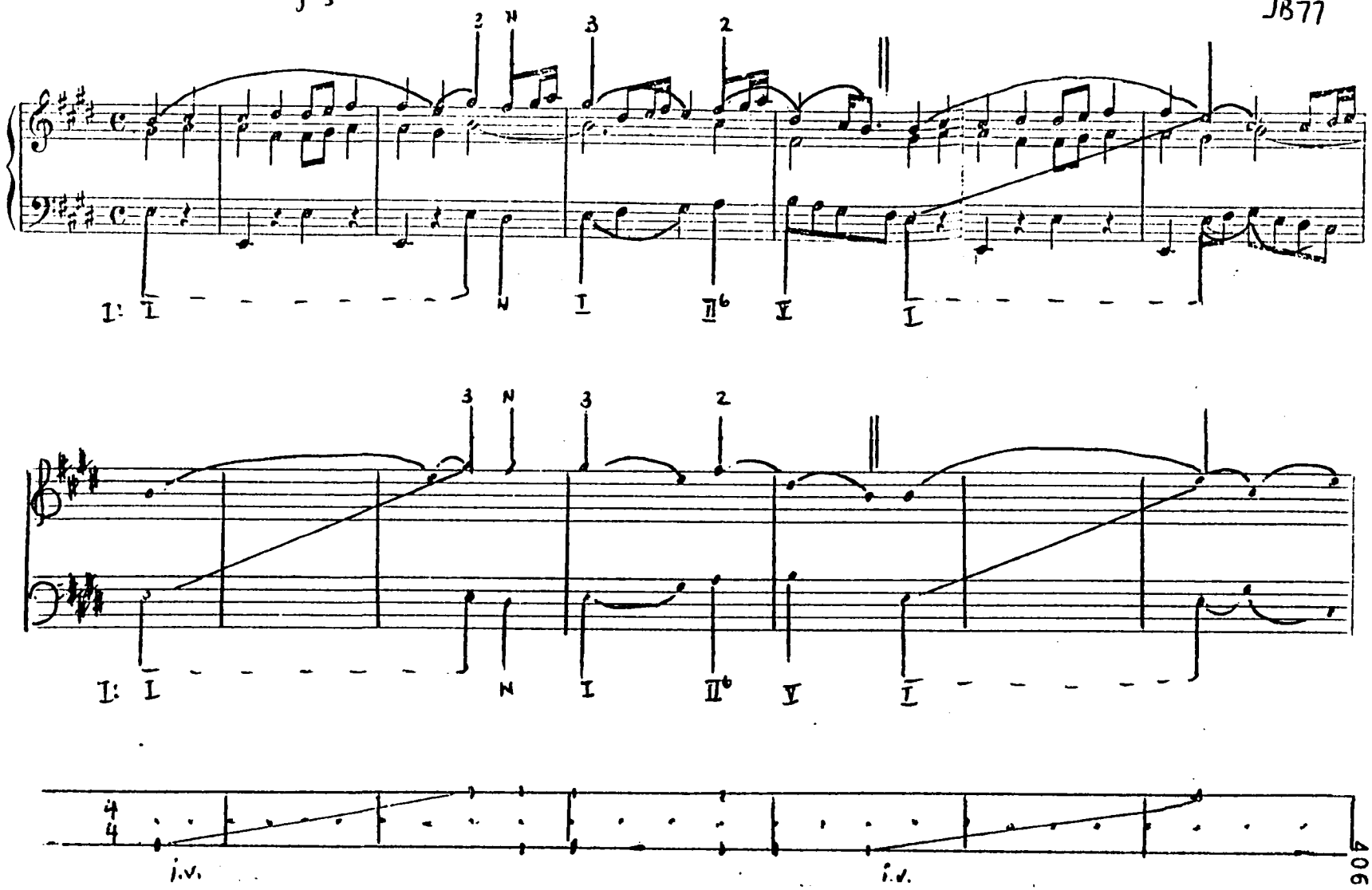
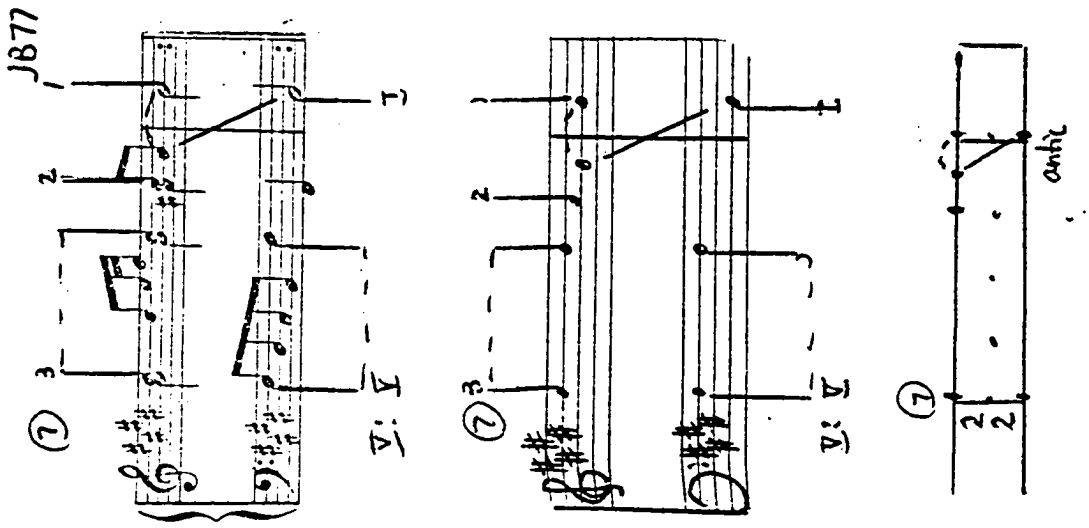
French Suite in E major, Gavotte

JB77





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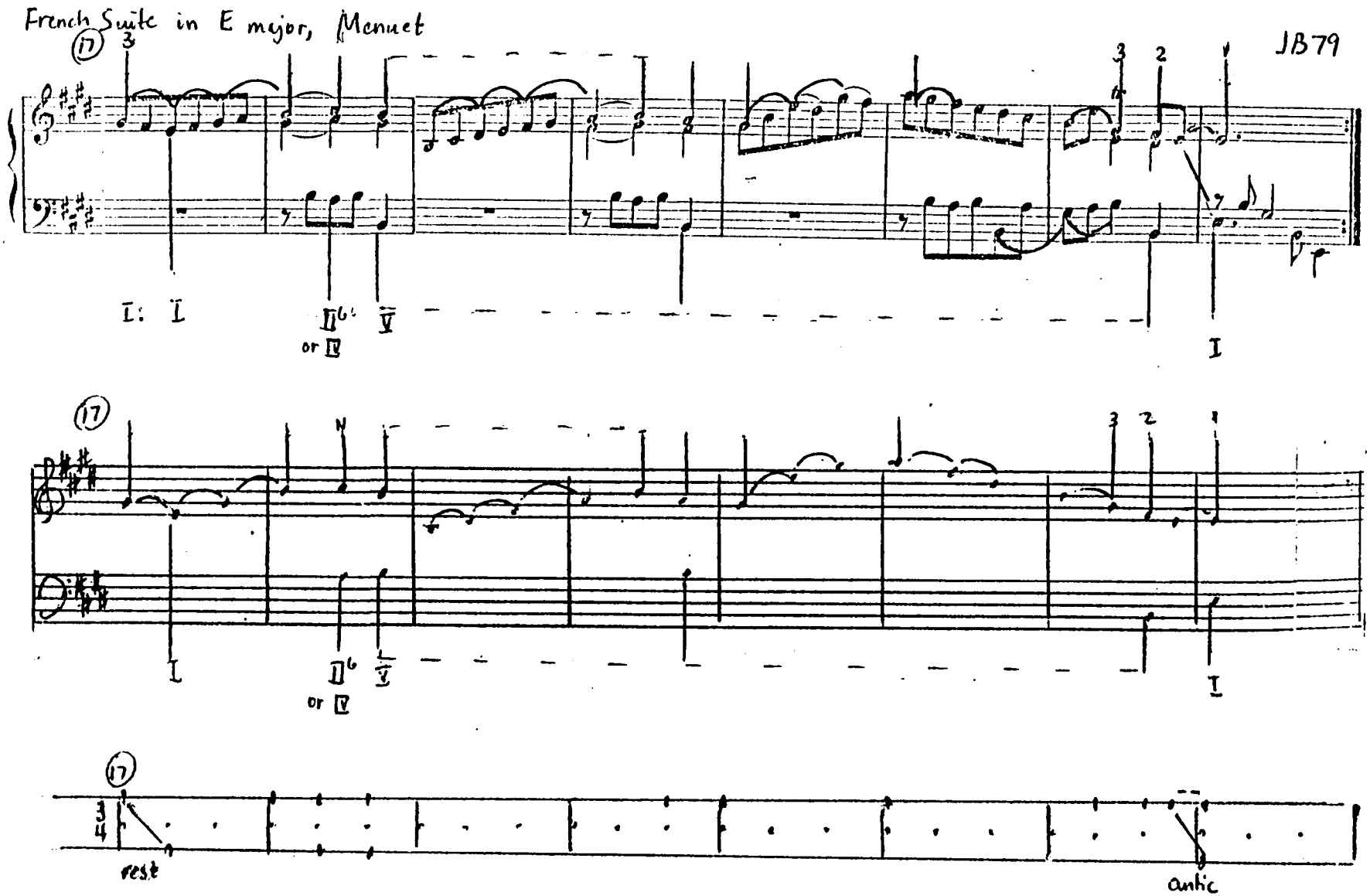

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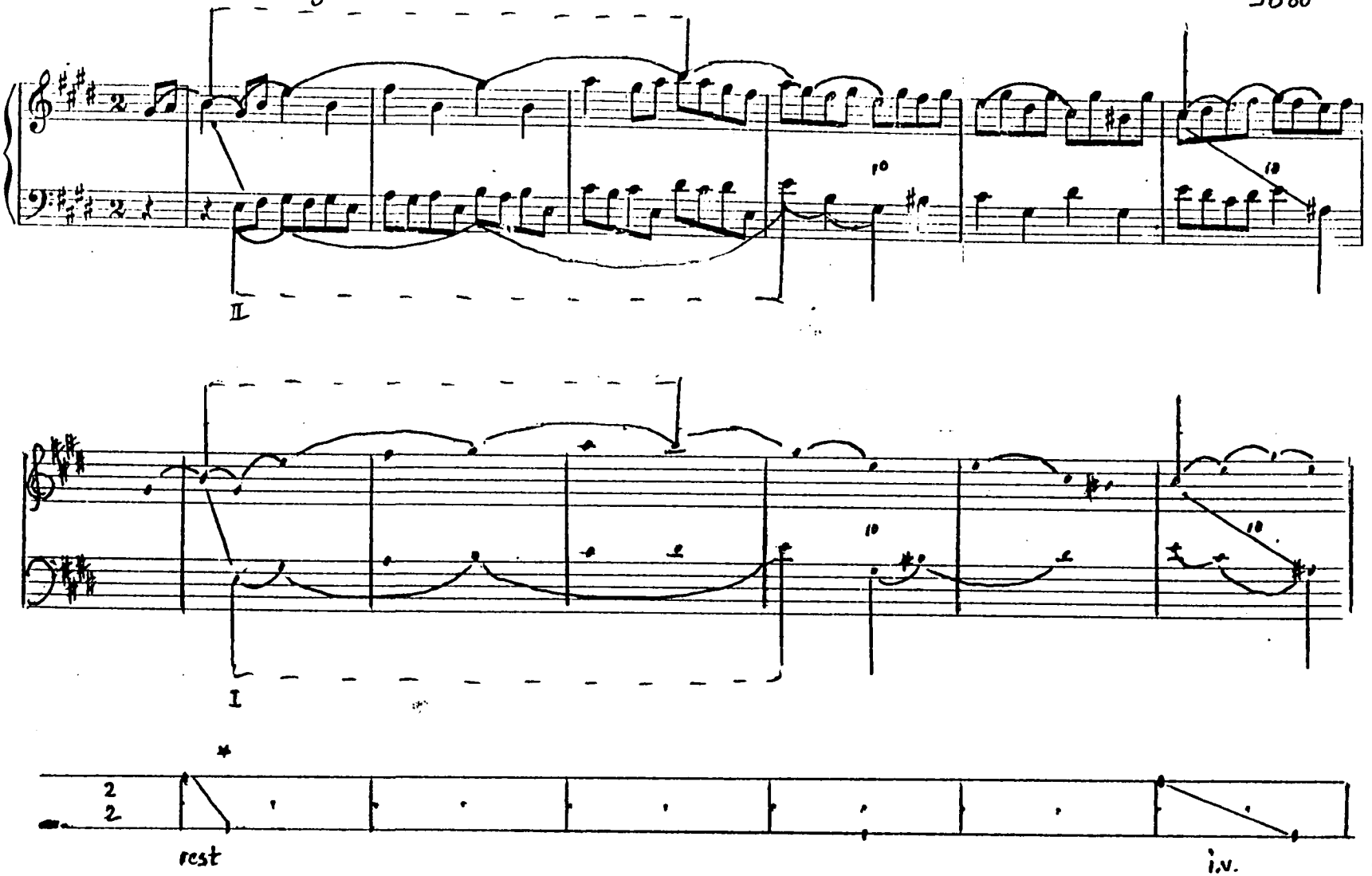
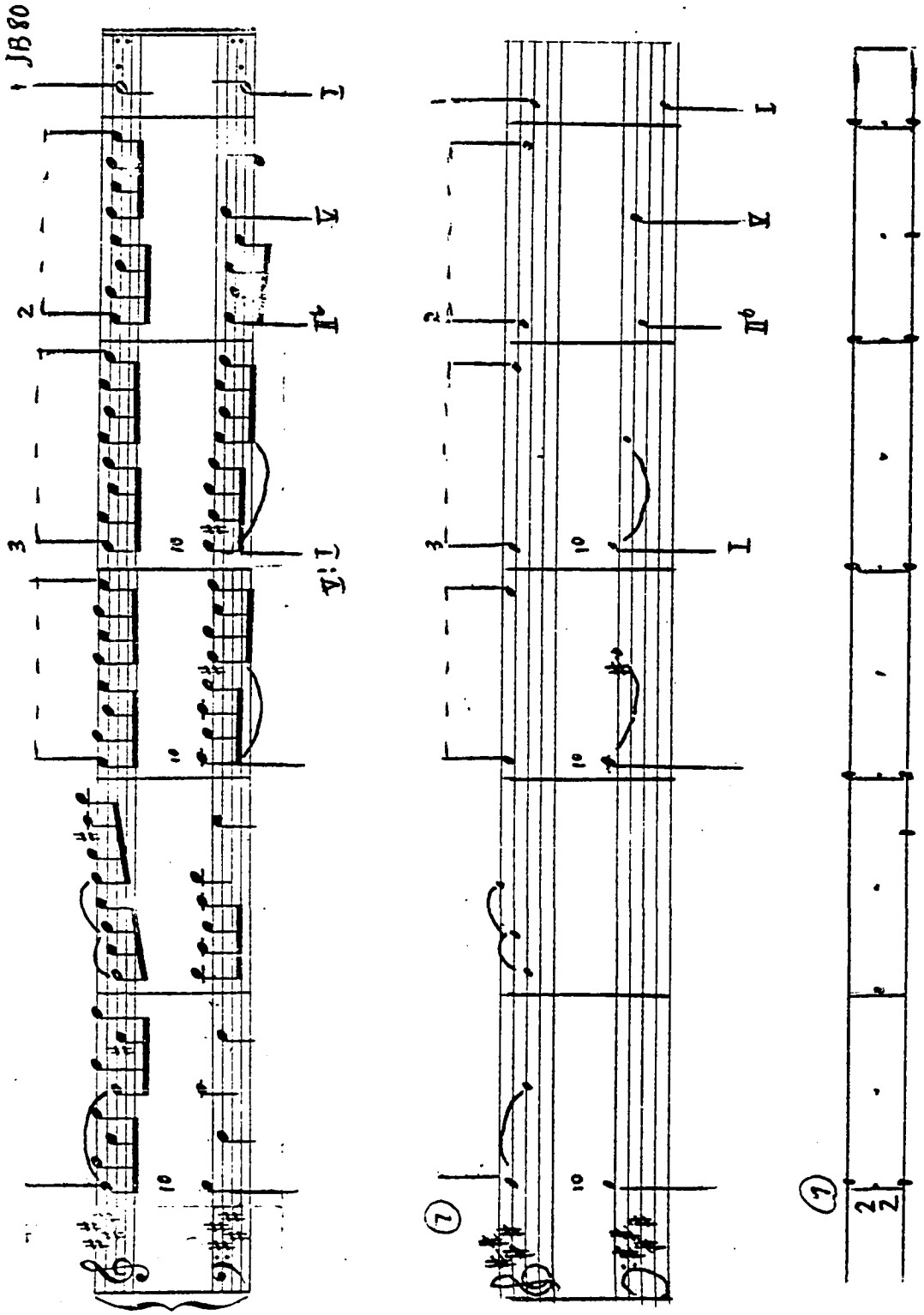
French Suite in E major, Bourrée

JB80





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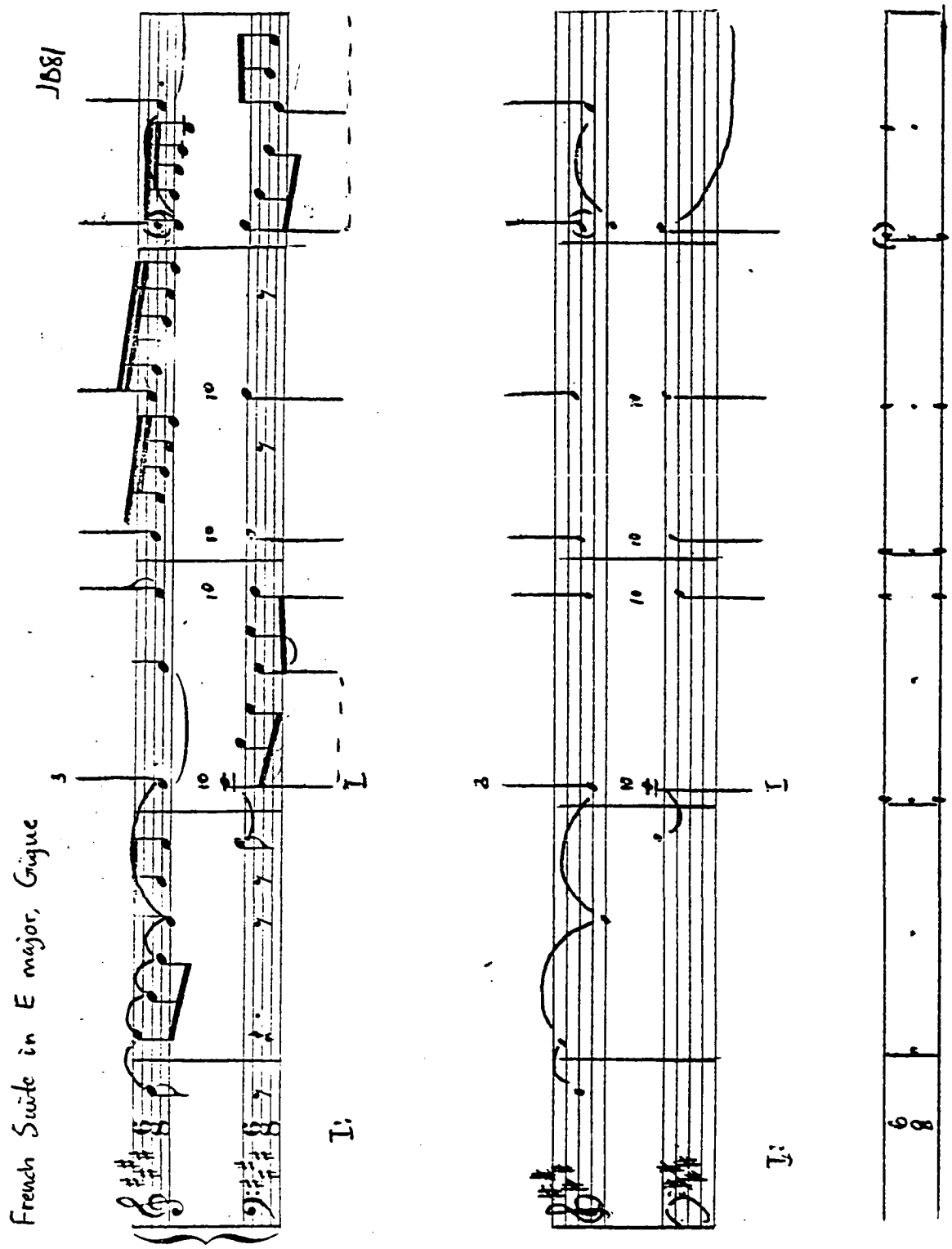

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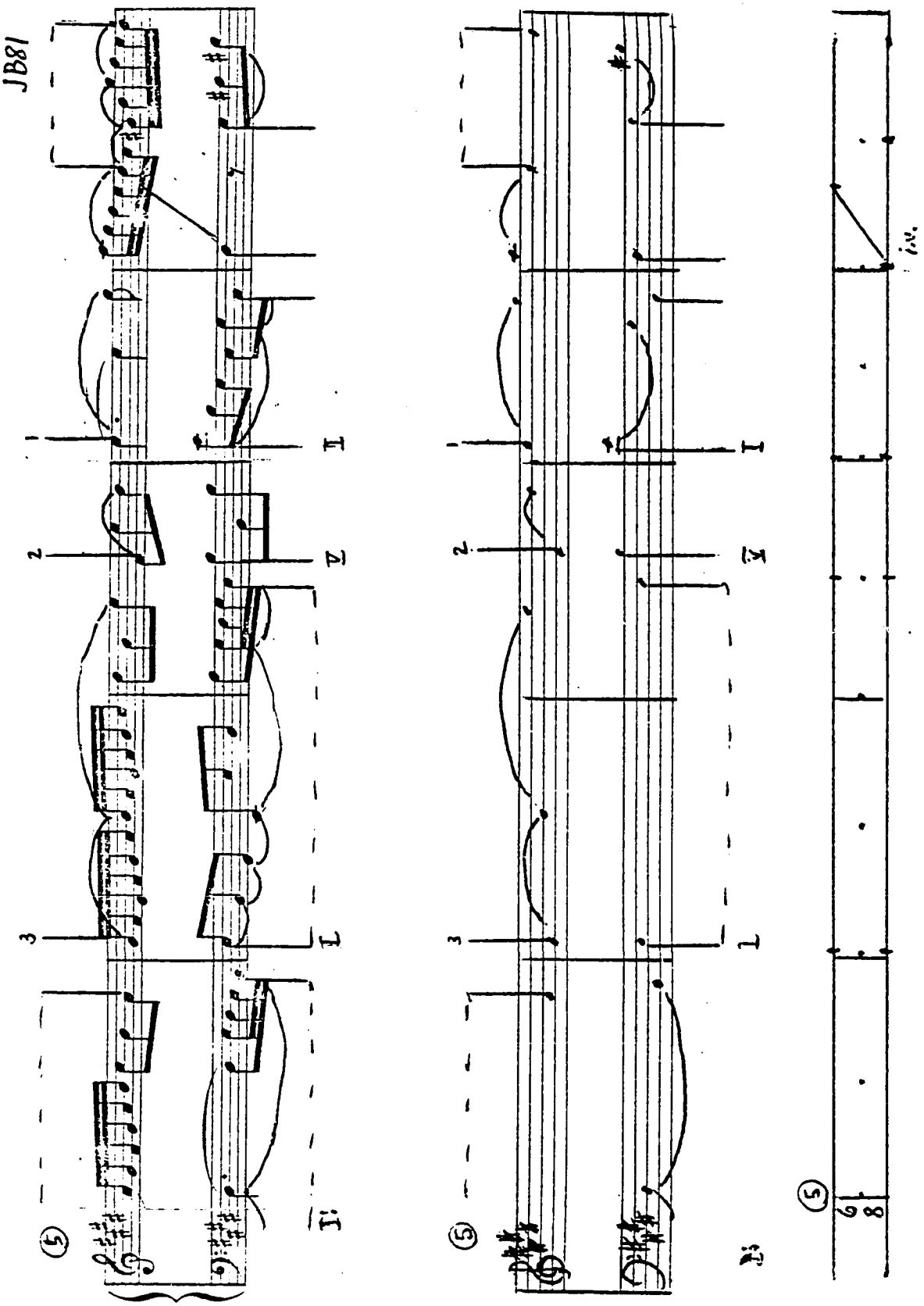

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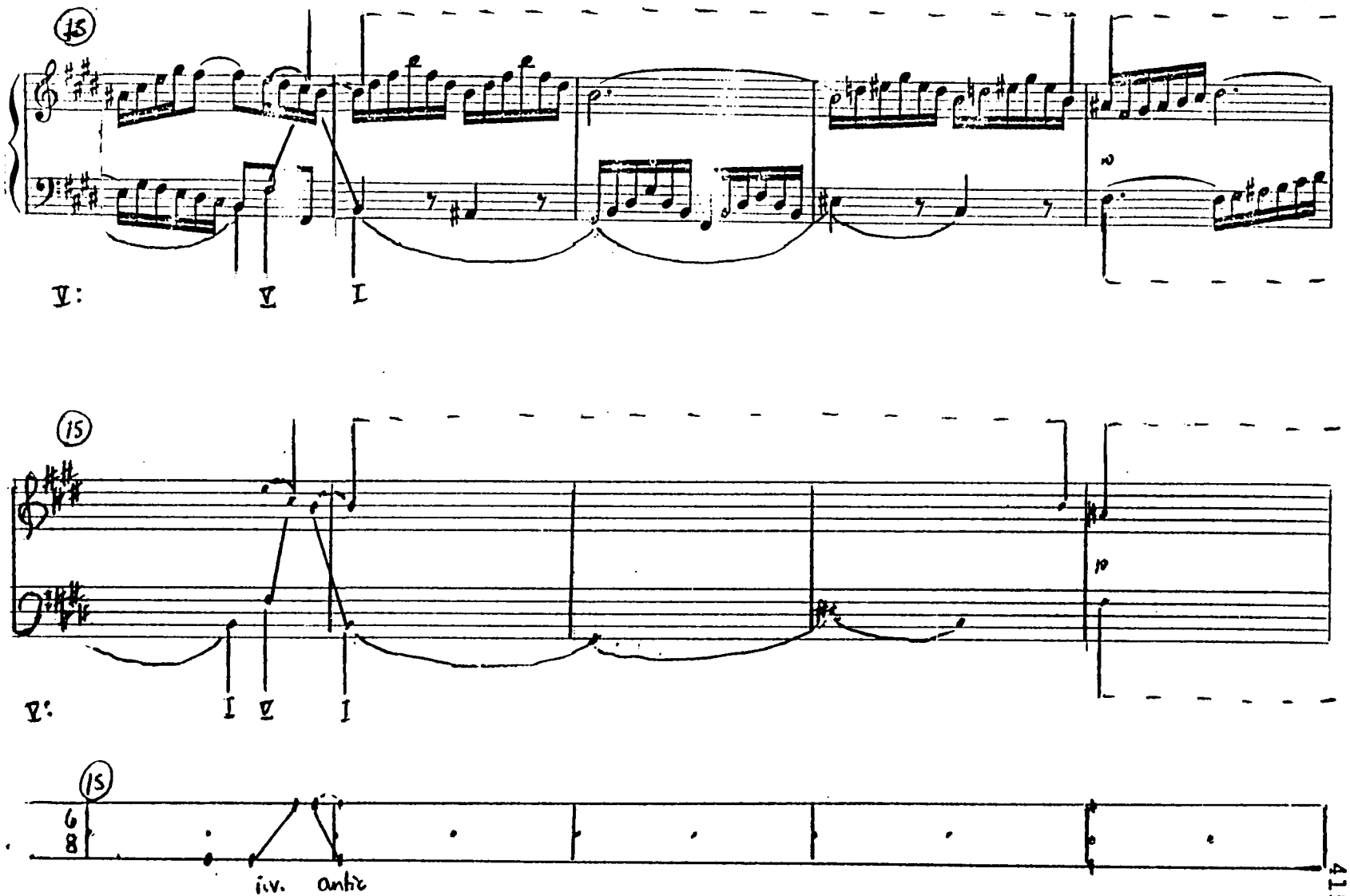

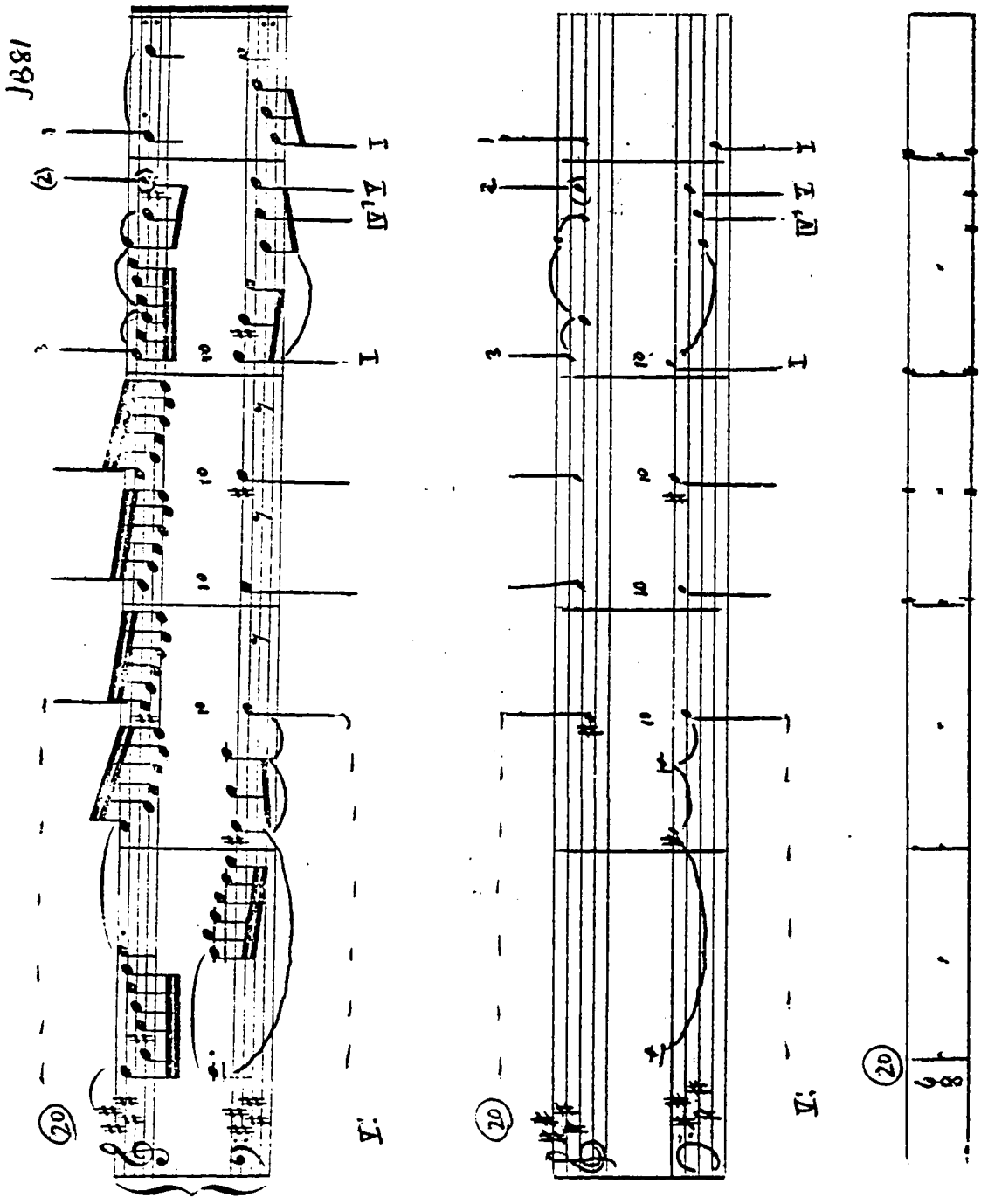

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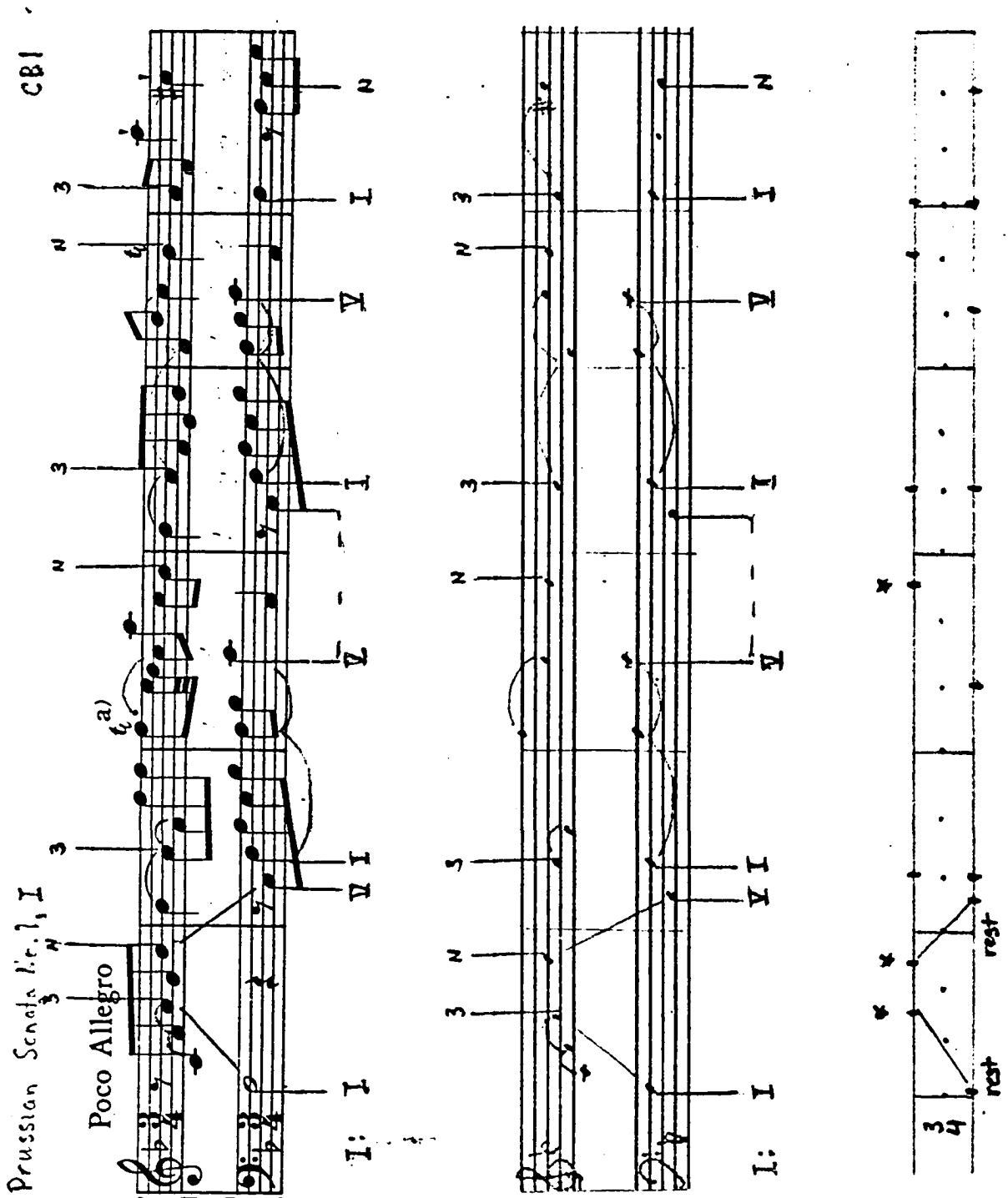

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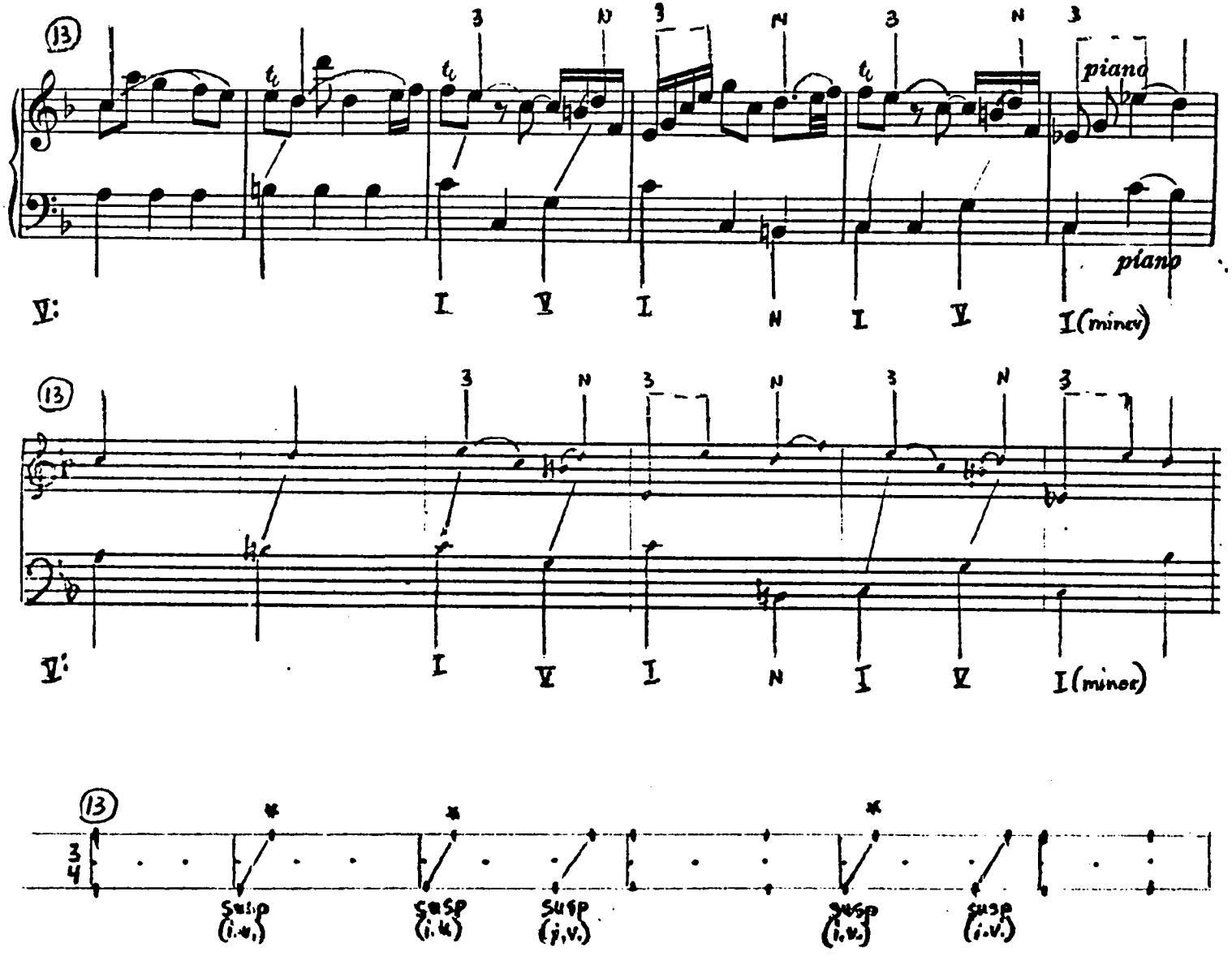

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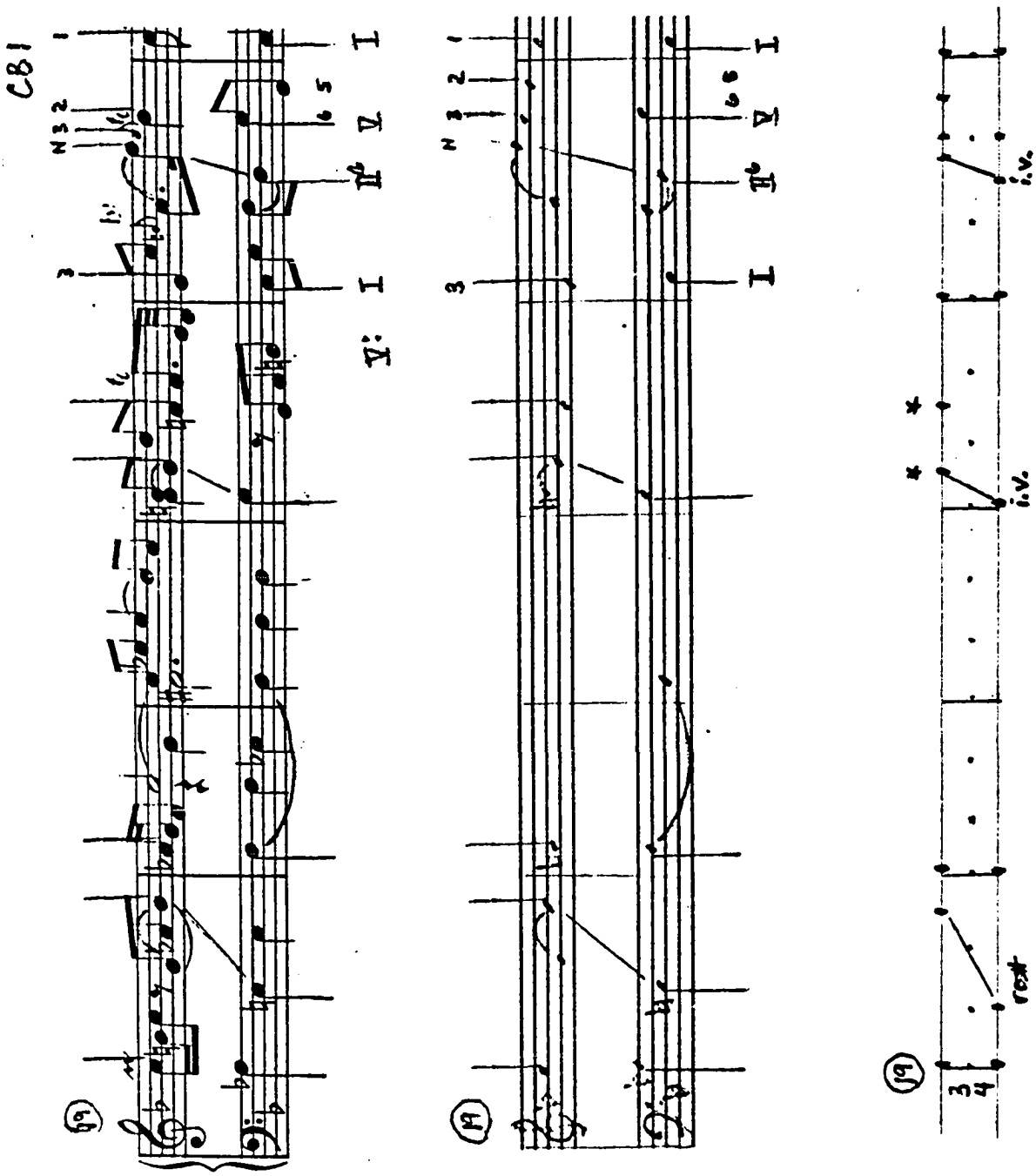

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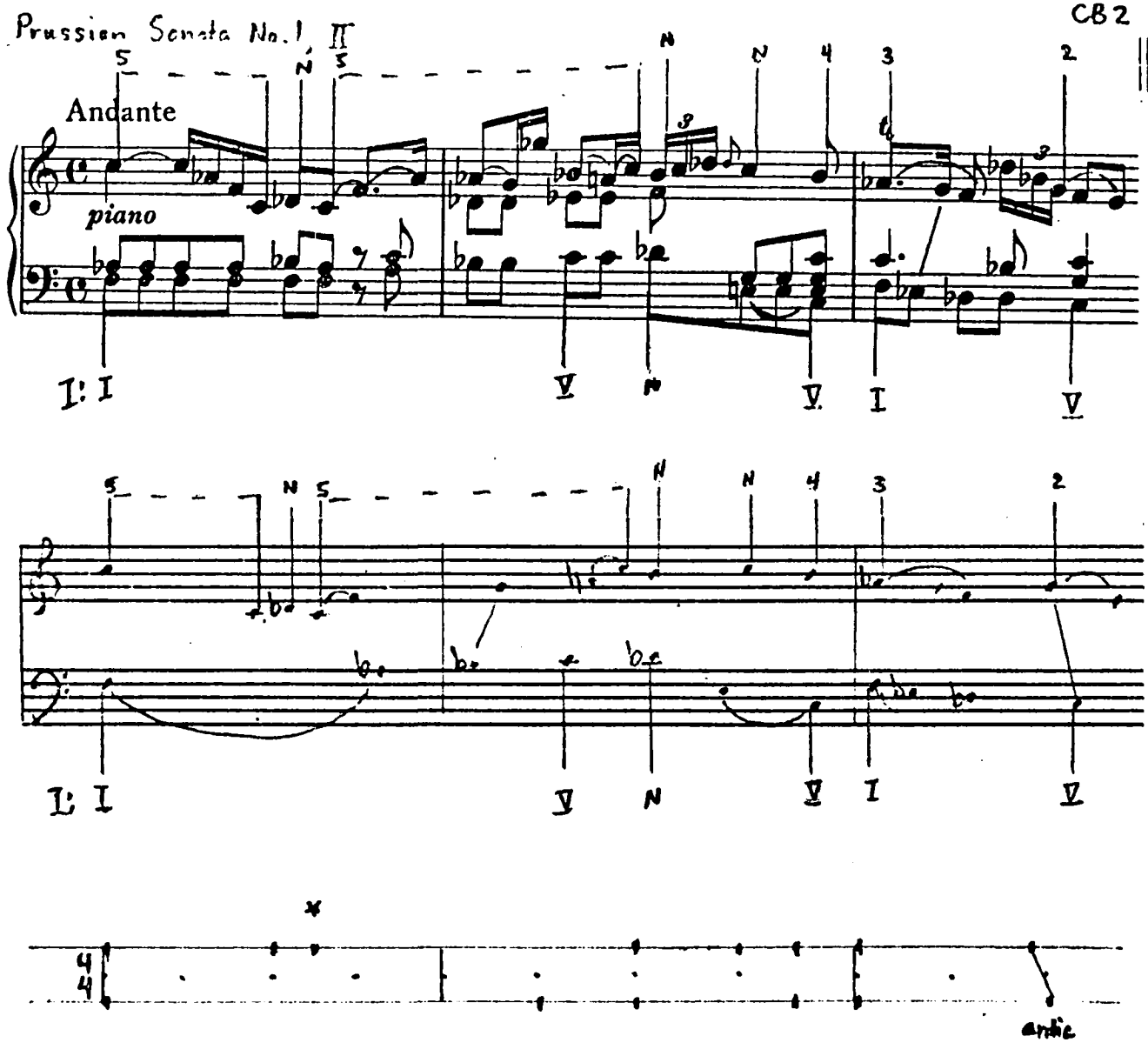

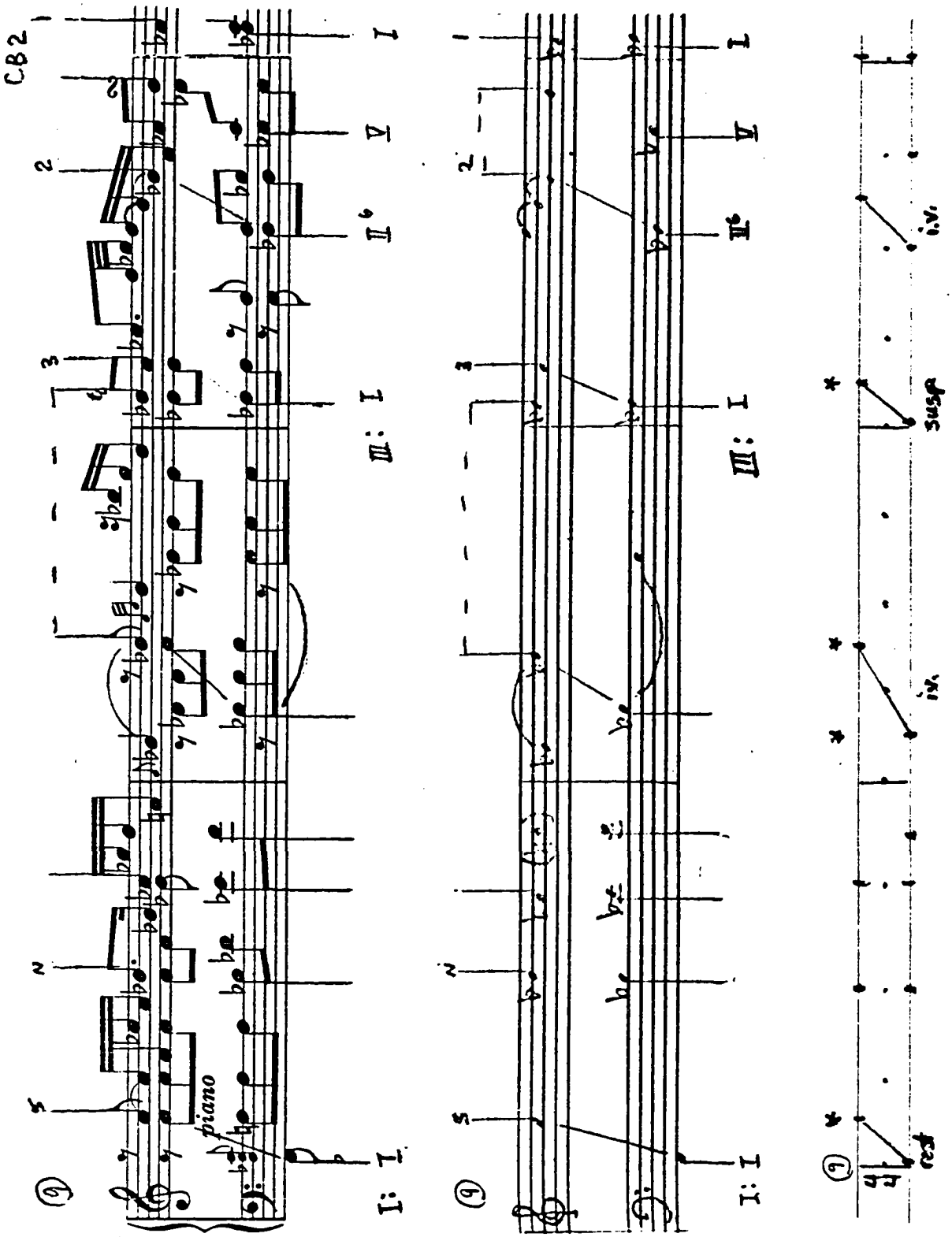

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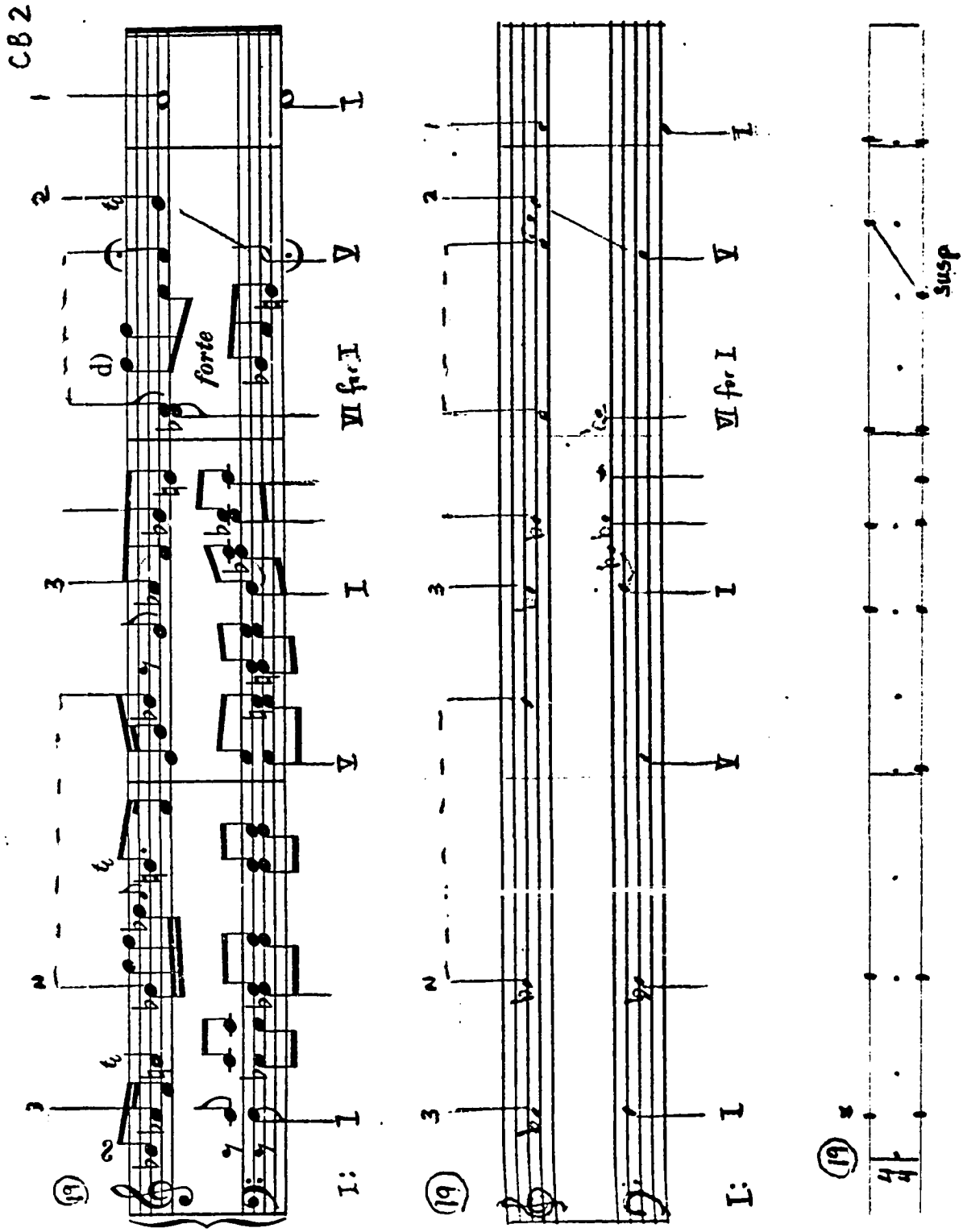

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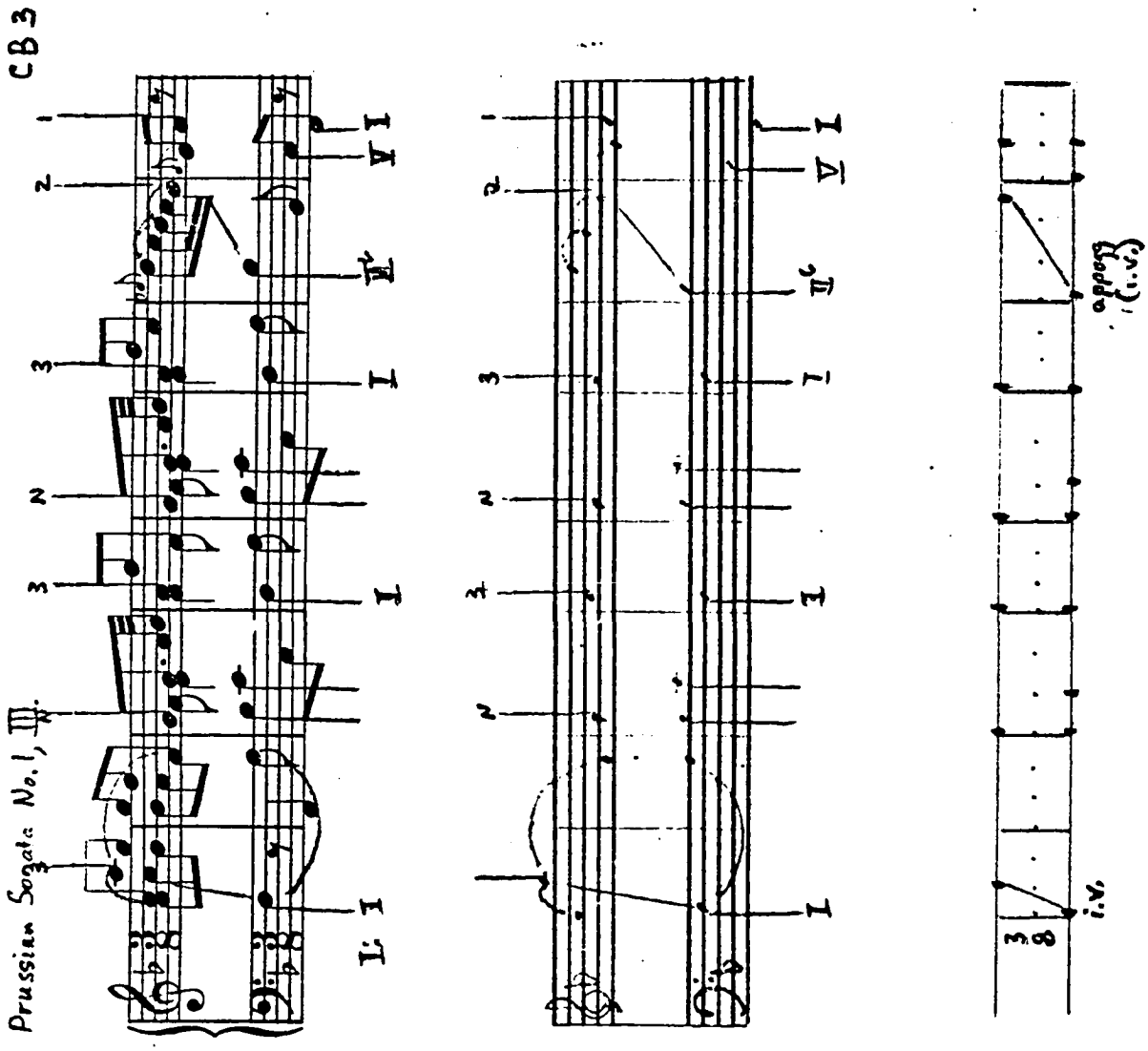
CB 3
Prussian Sonata No. 1, III.
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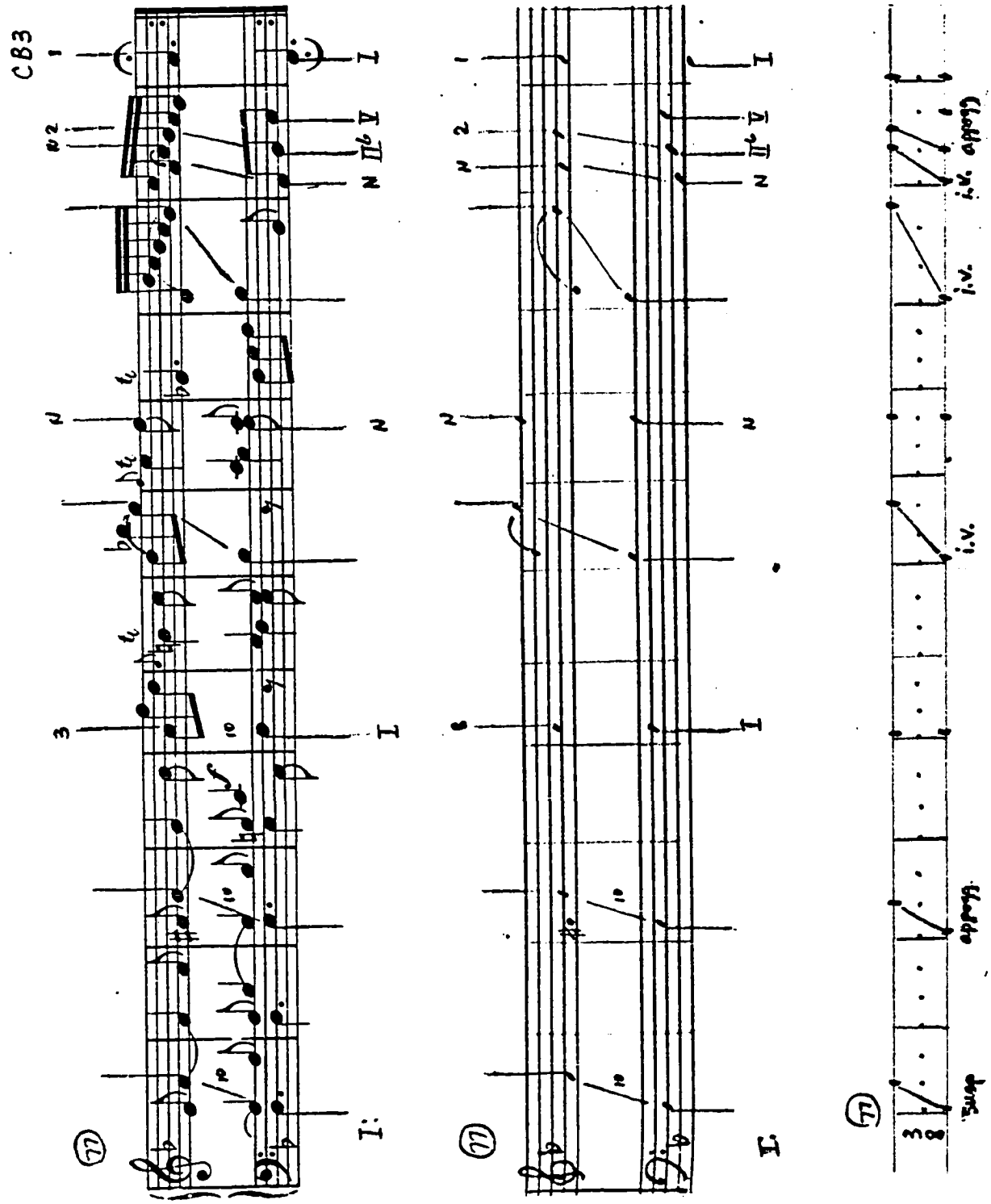

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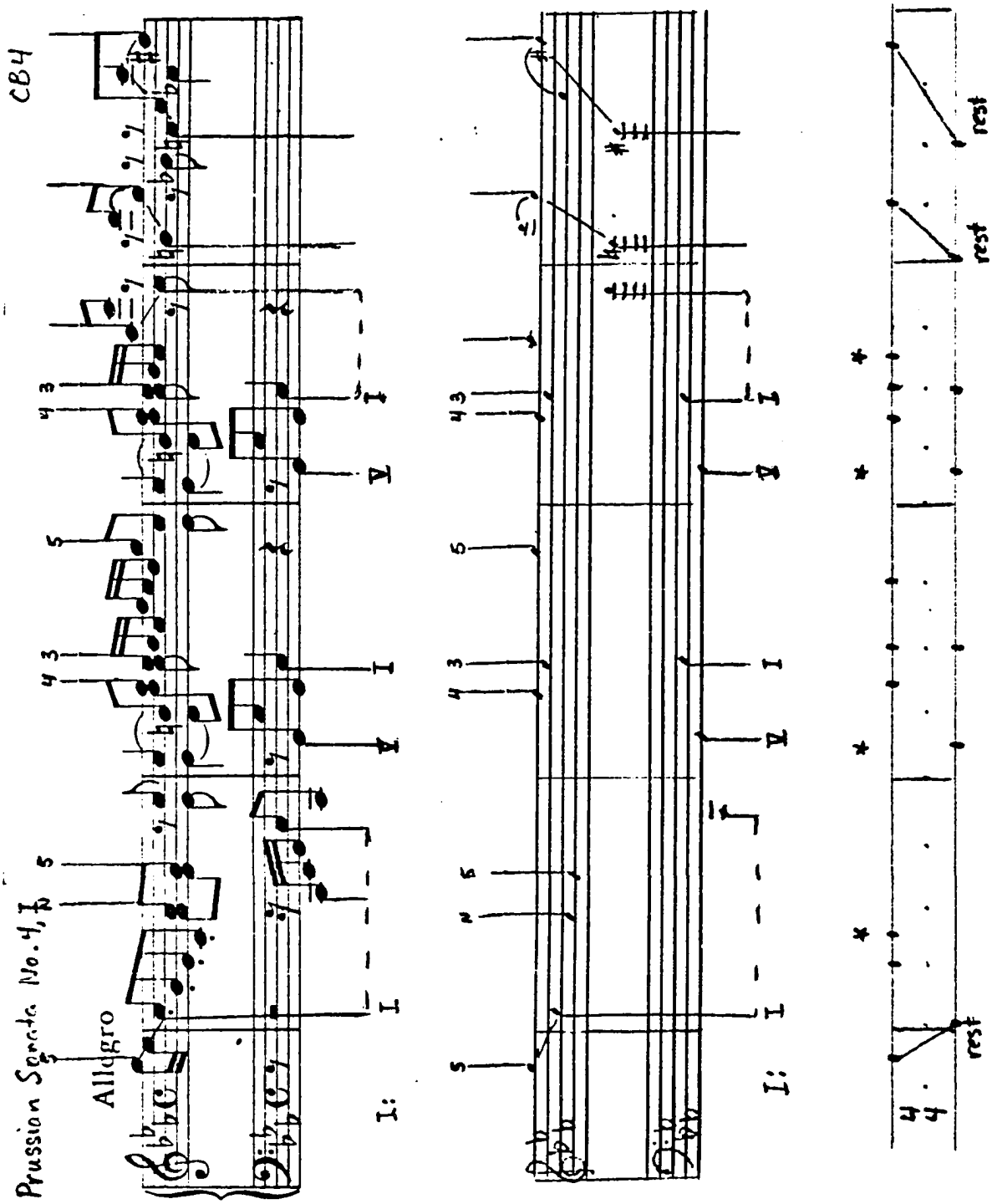

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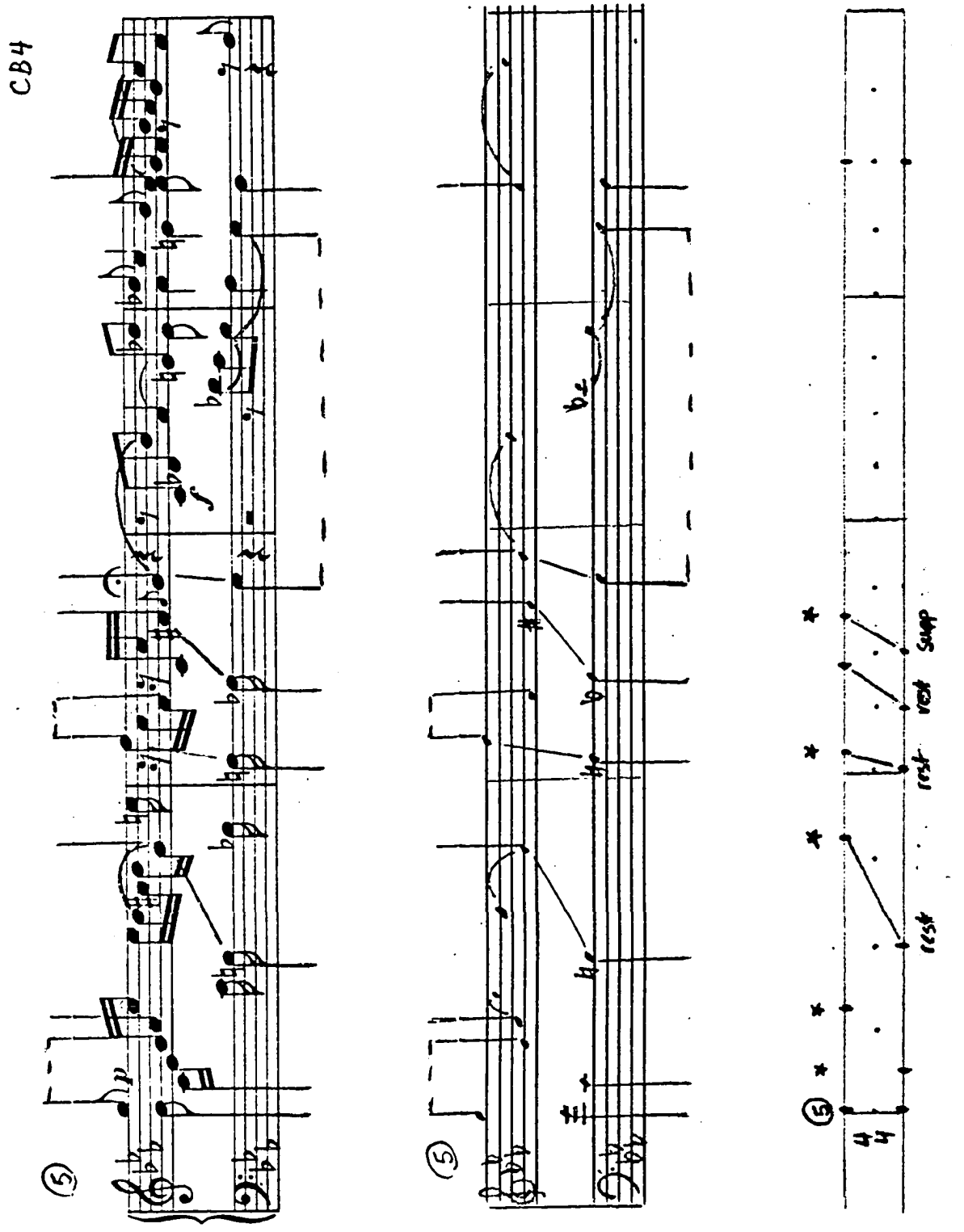

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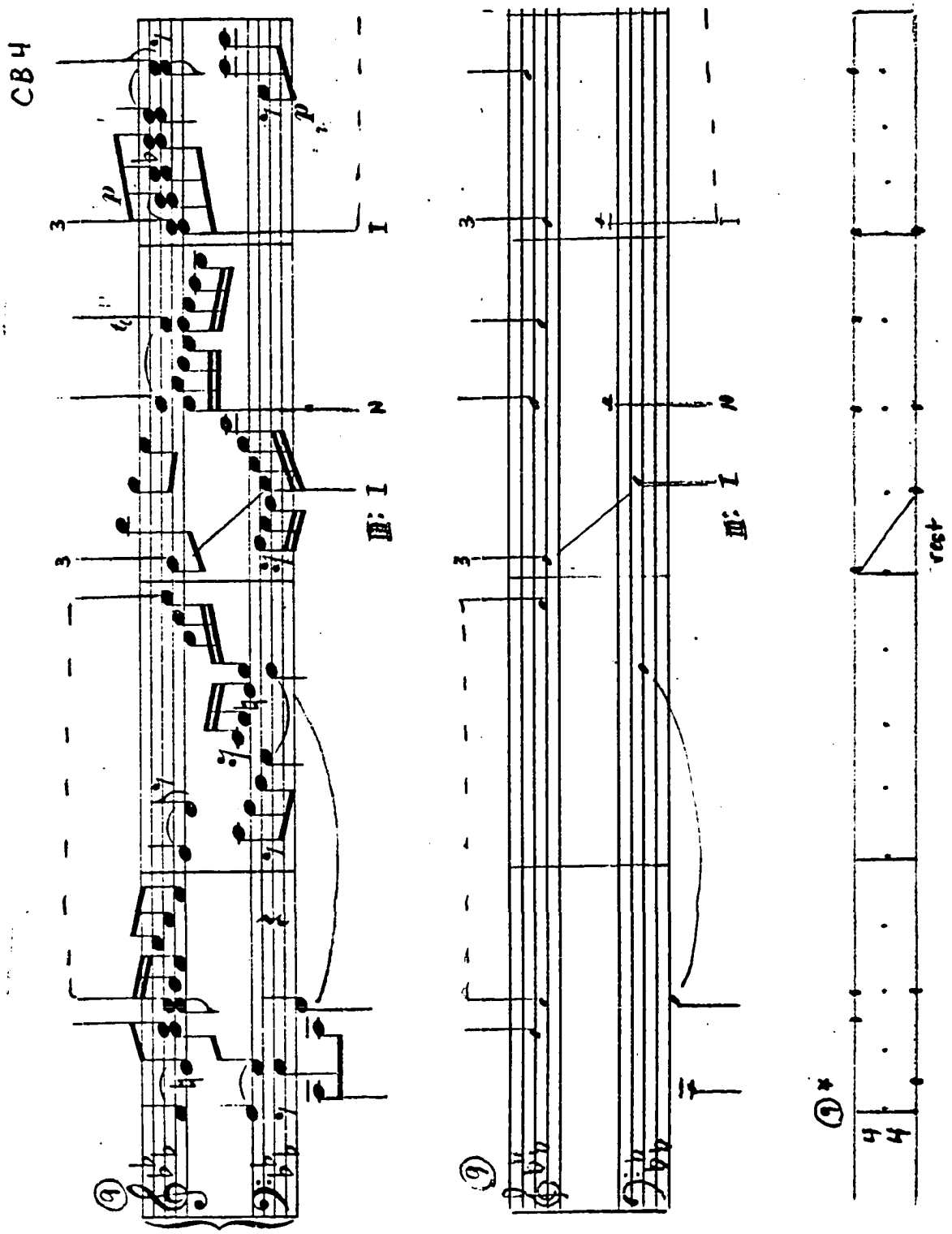

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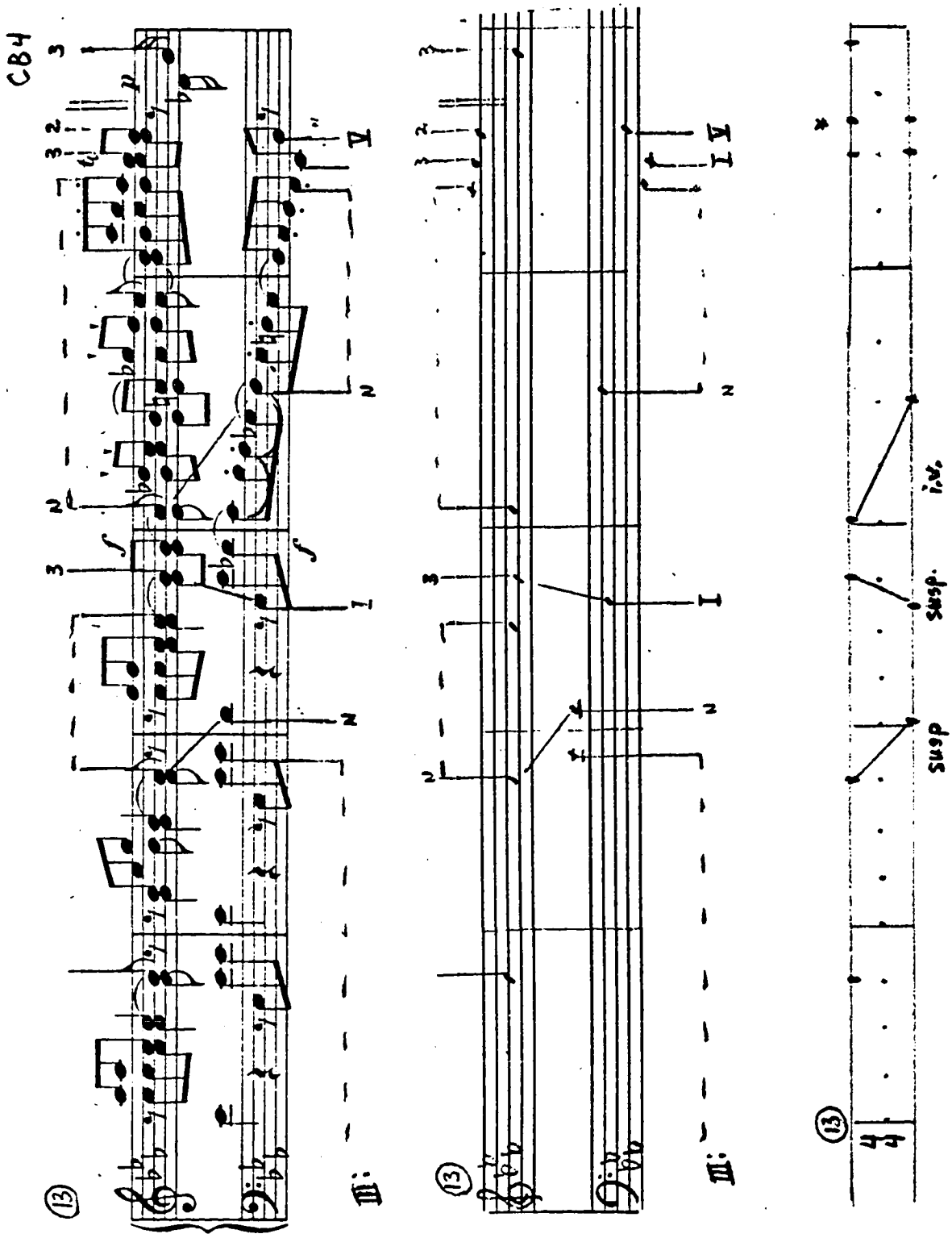

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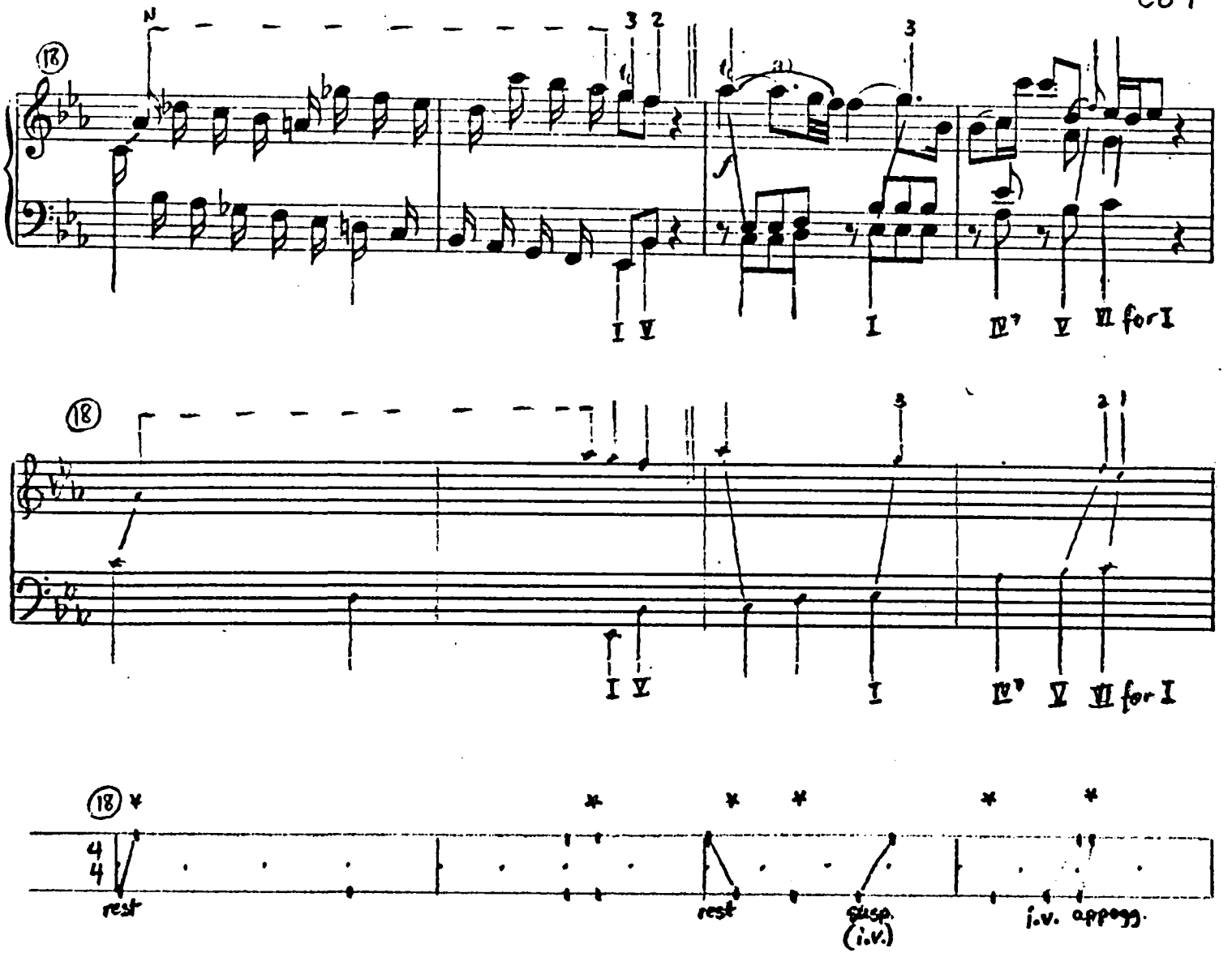

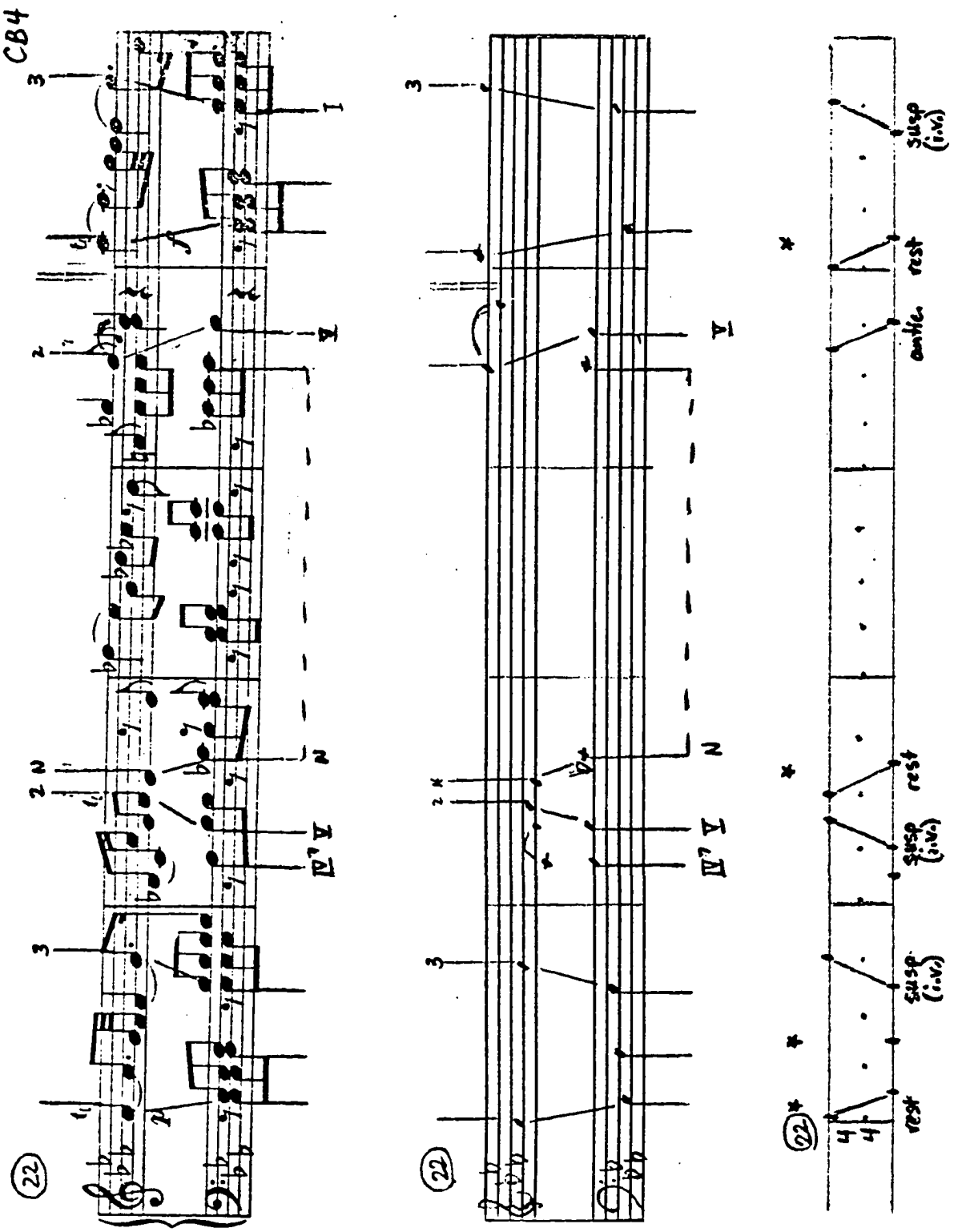

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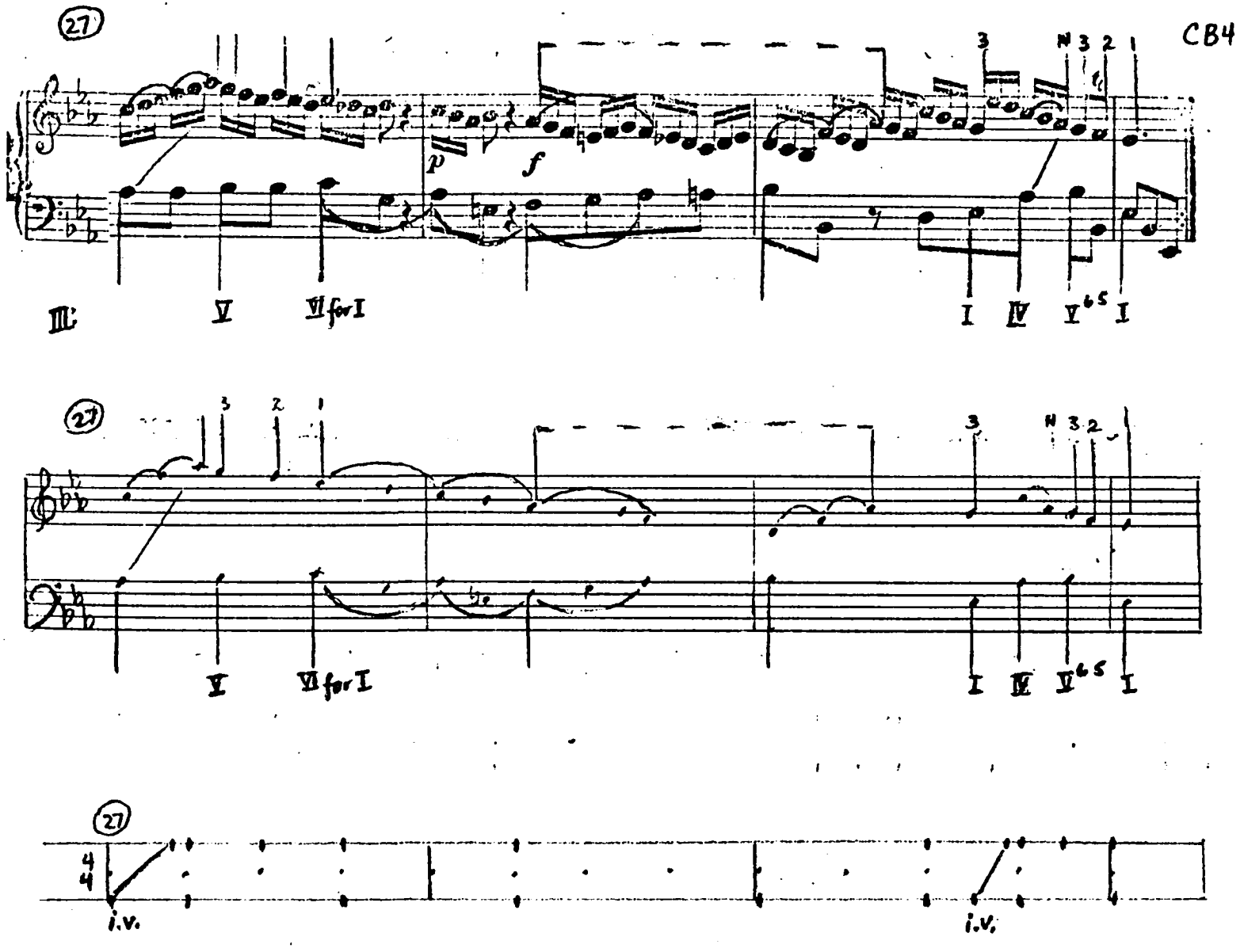

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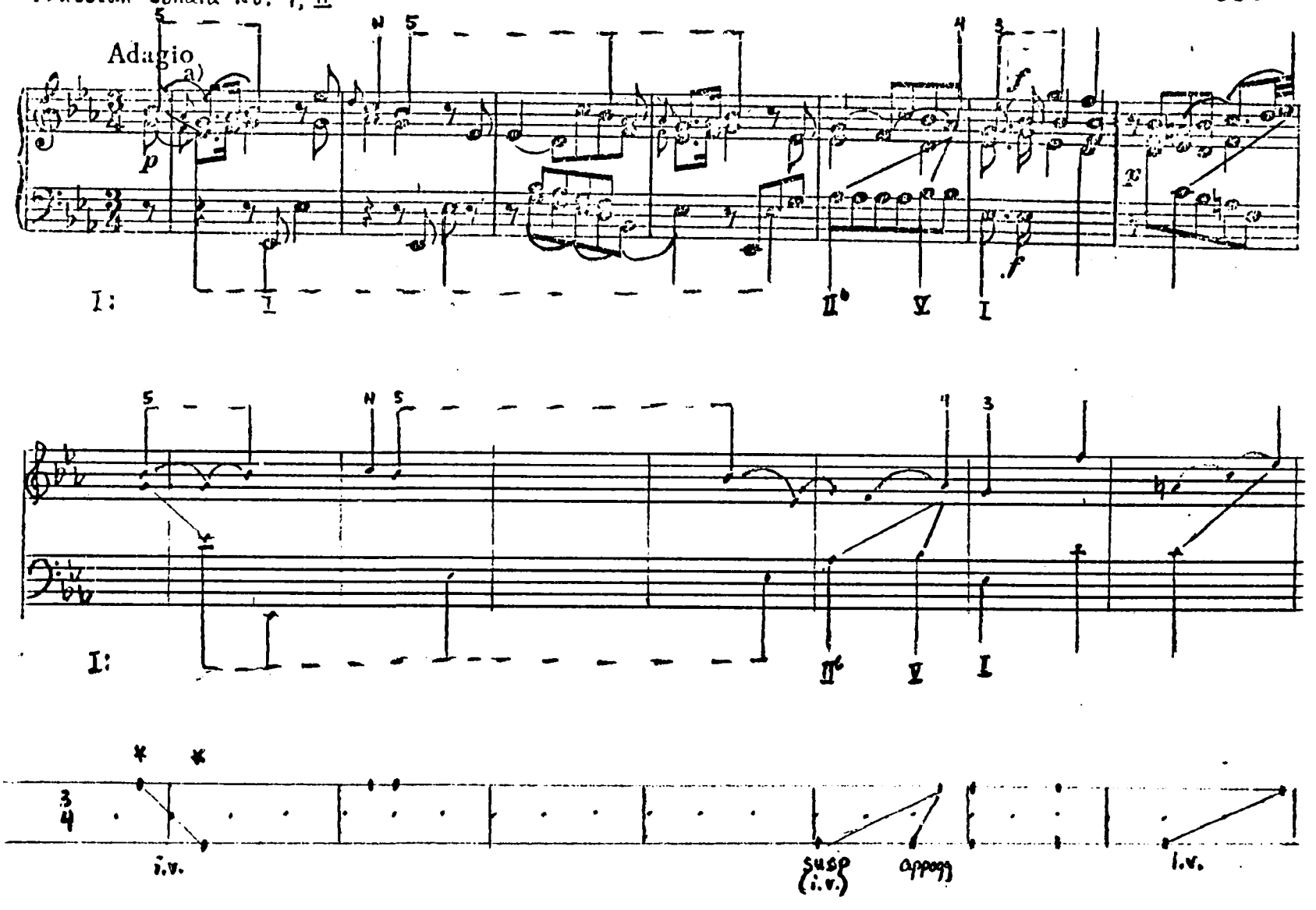
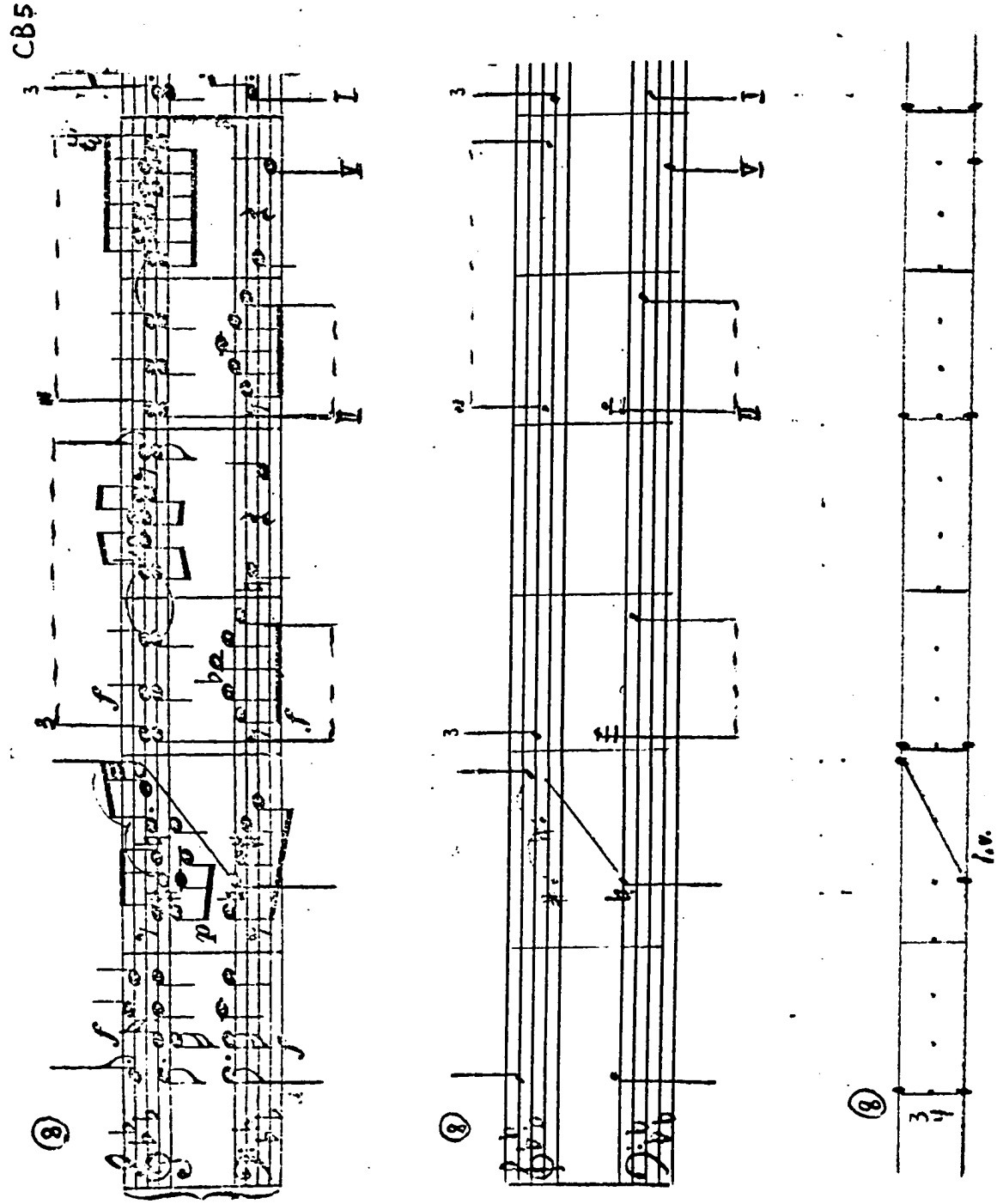
Prussian Sonata No. 4, II

CB5





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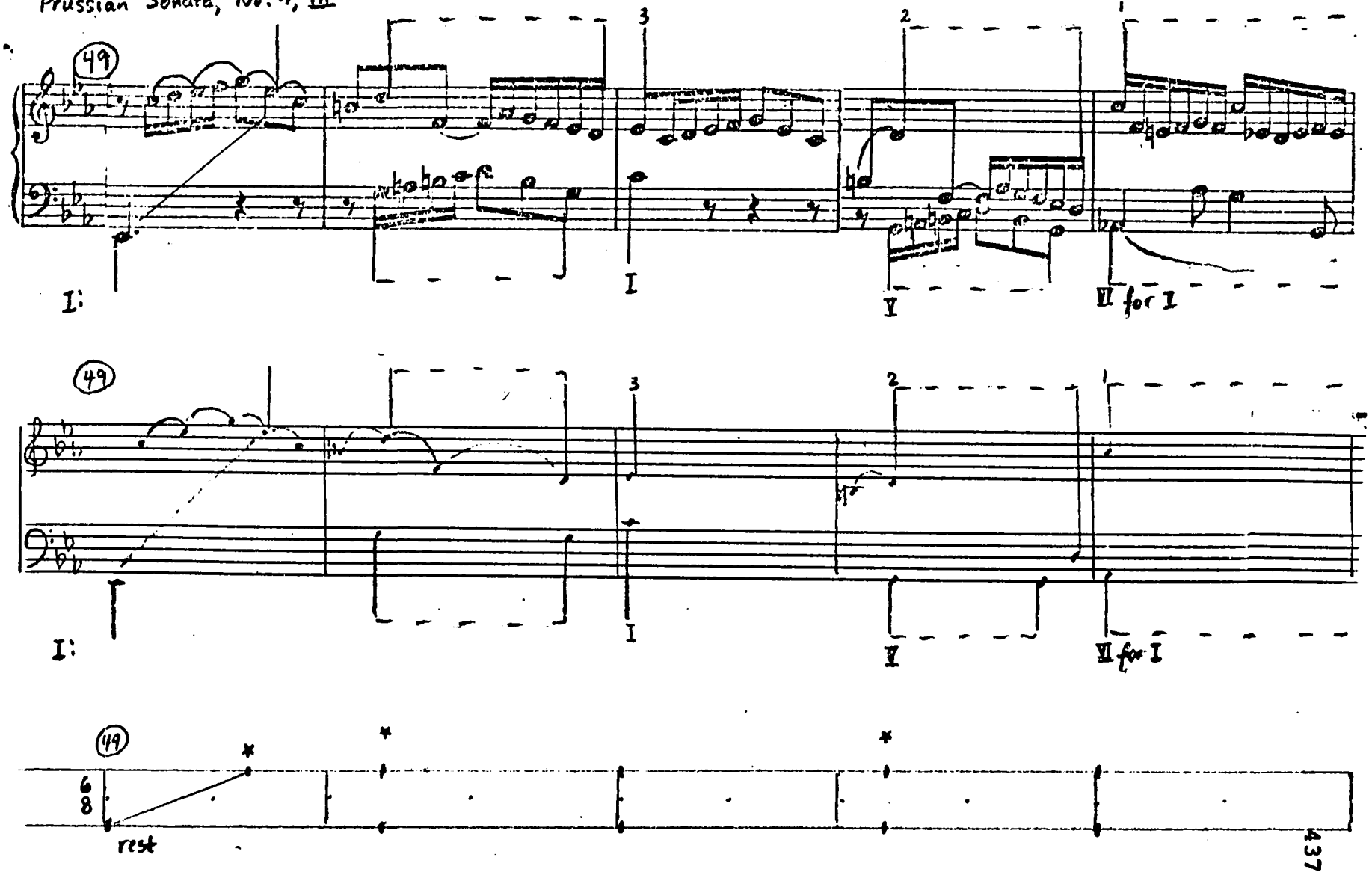
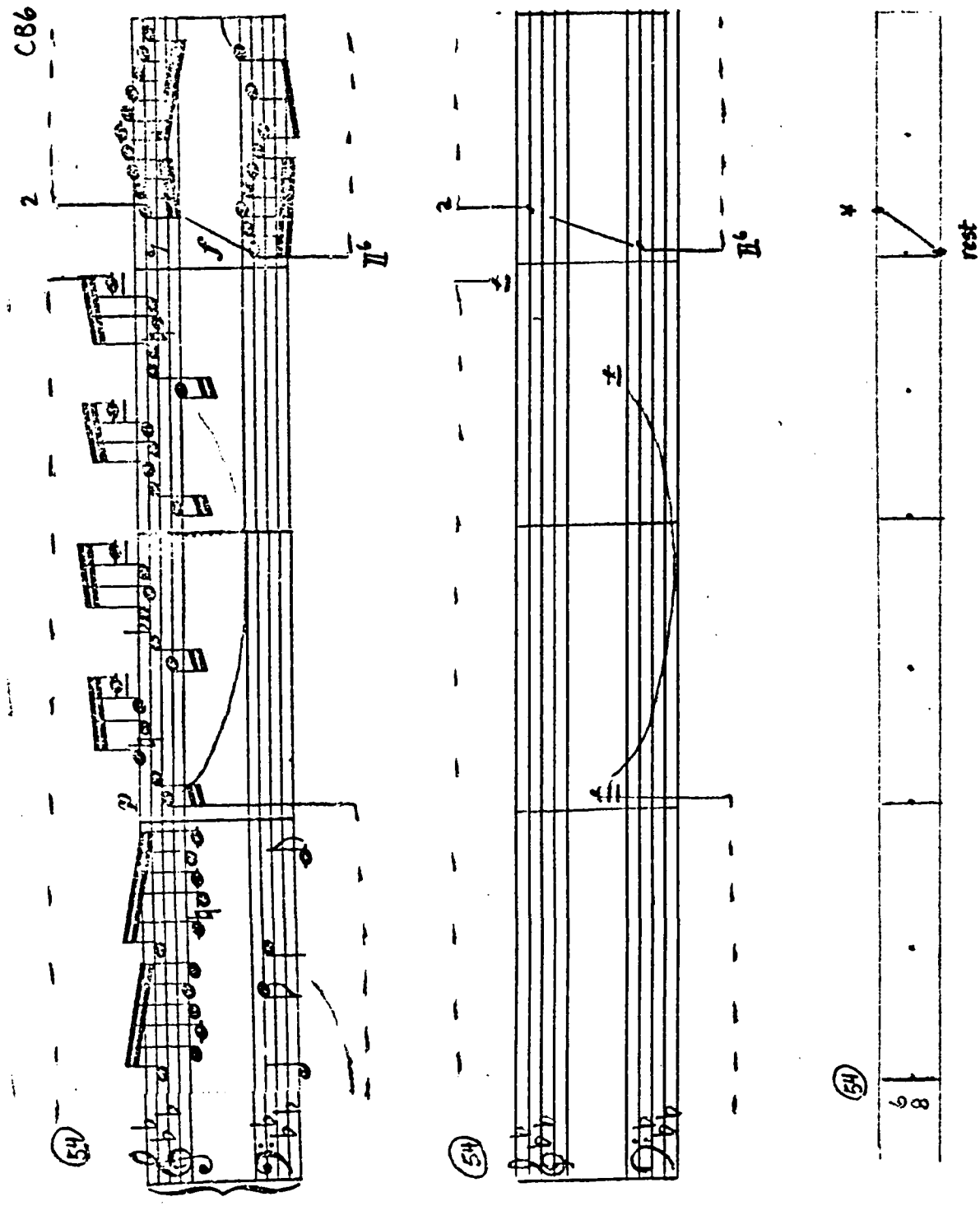
Prussian Sonata, No. 4, III

CB6





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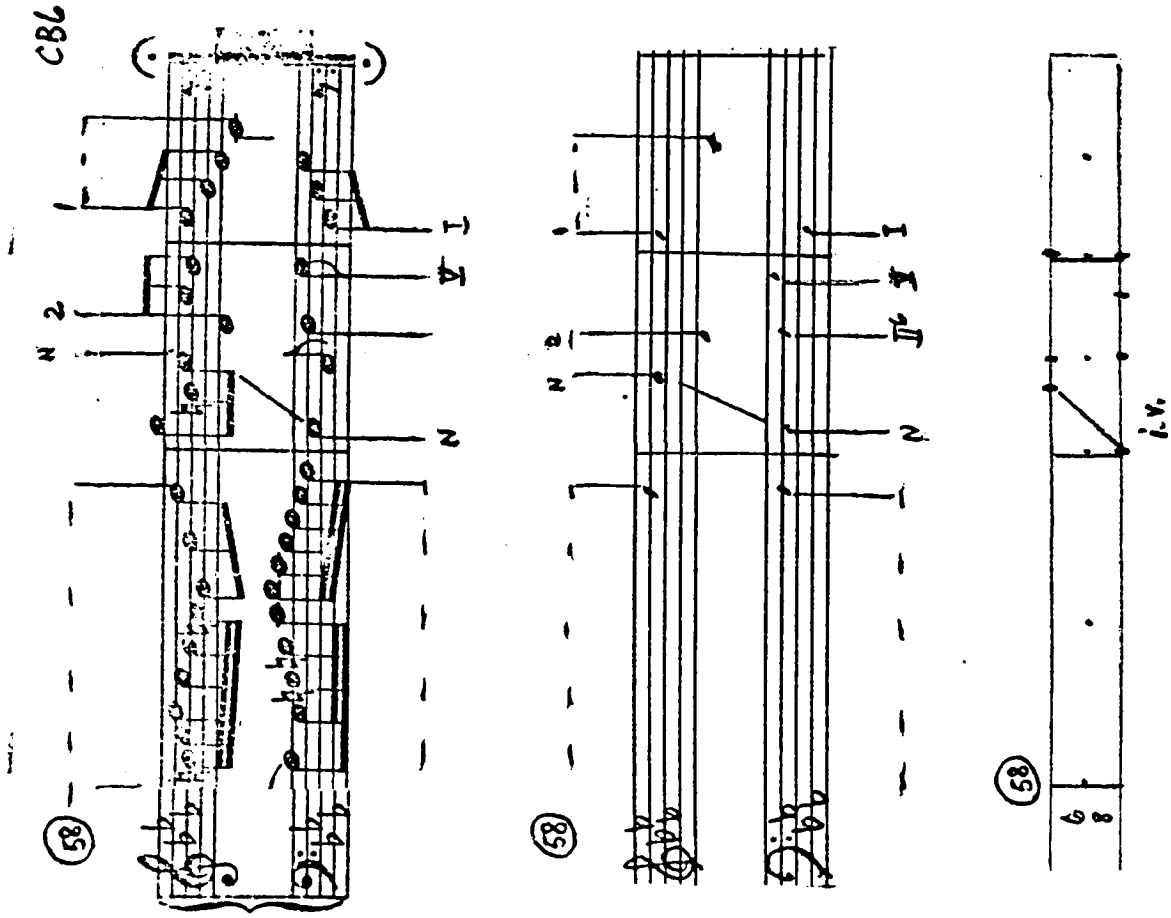

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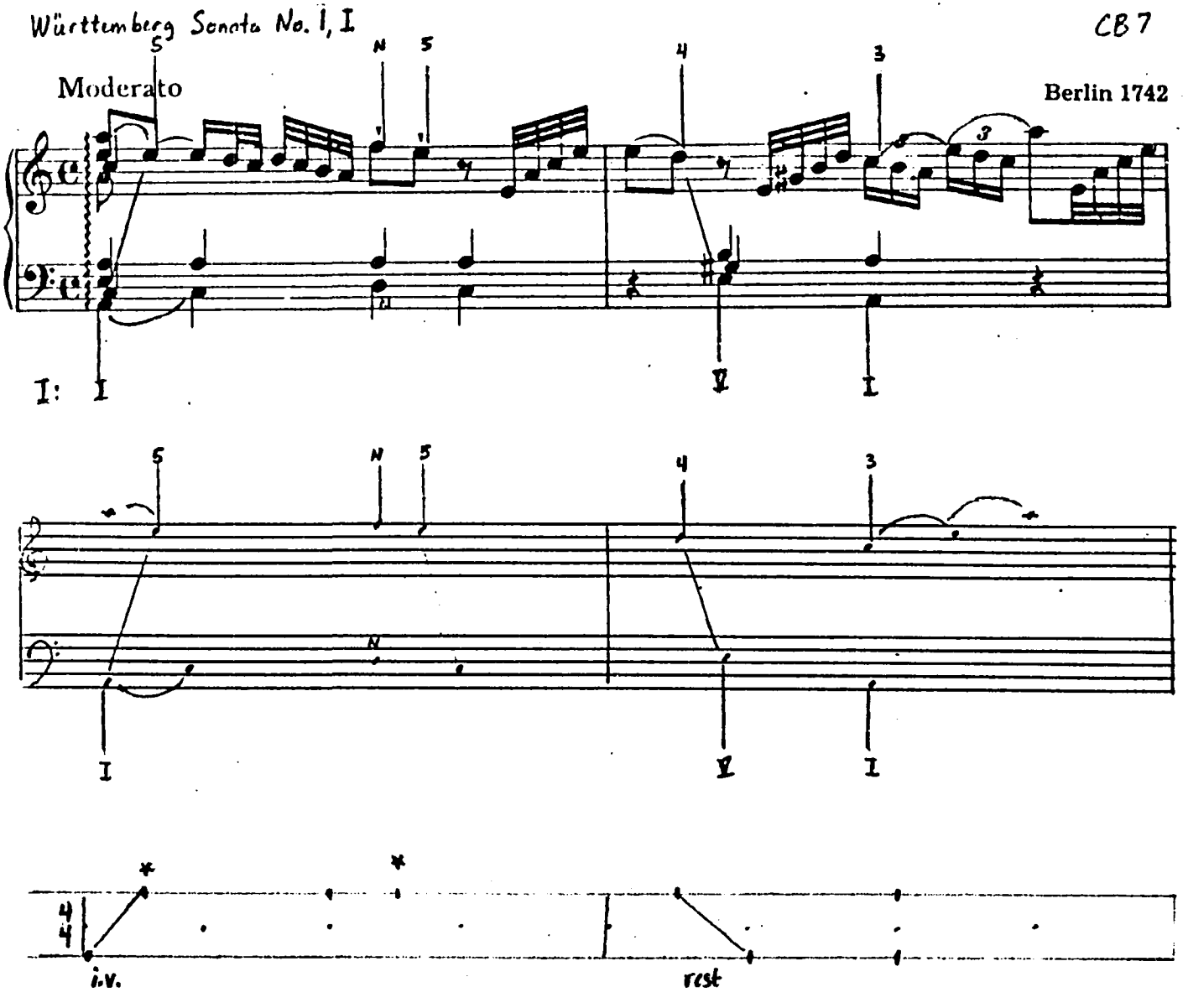

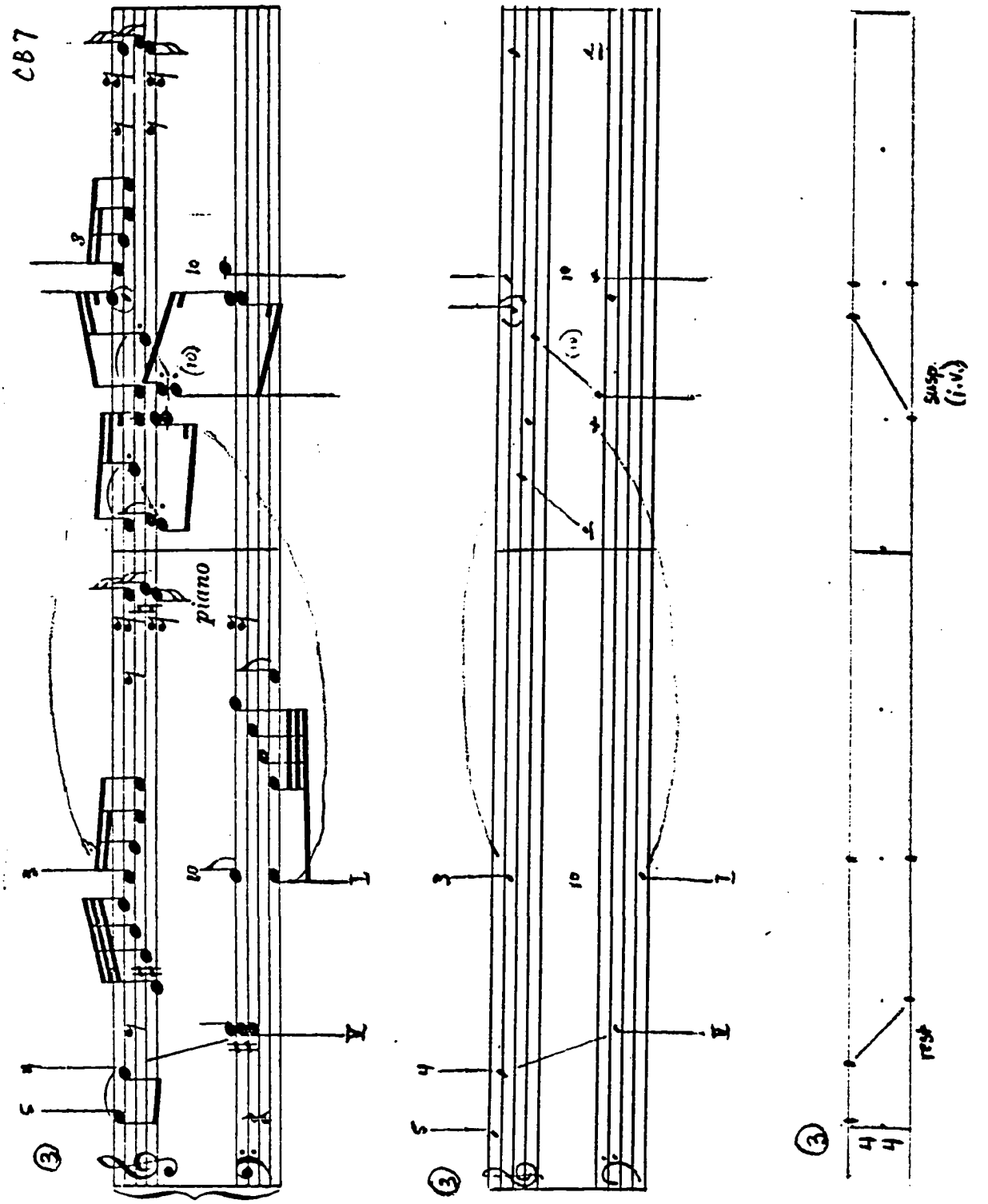

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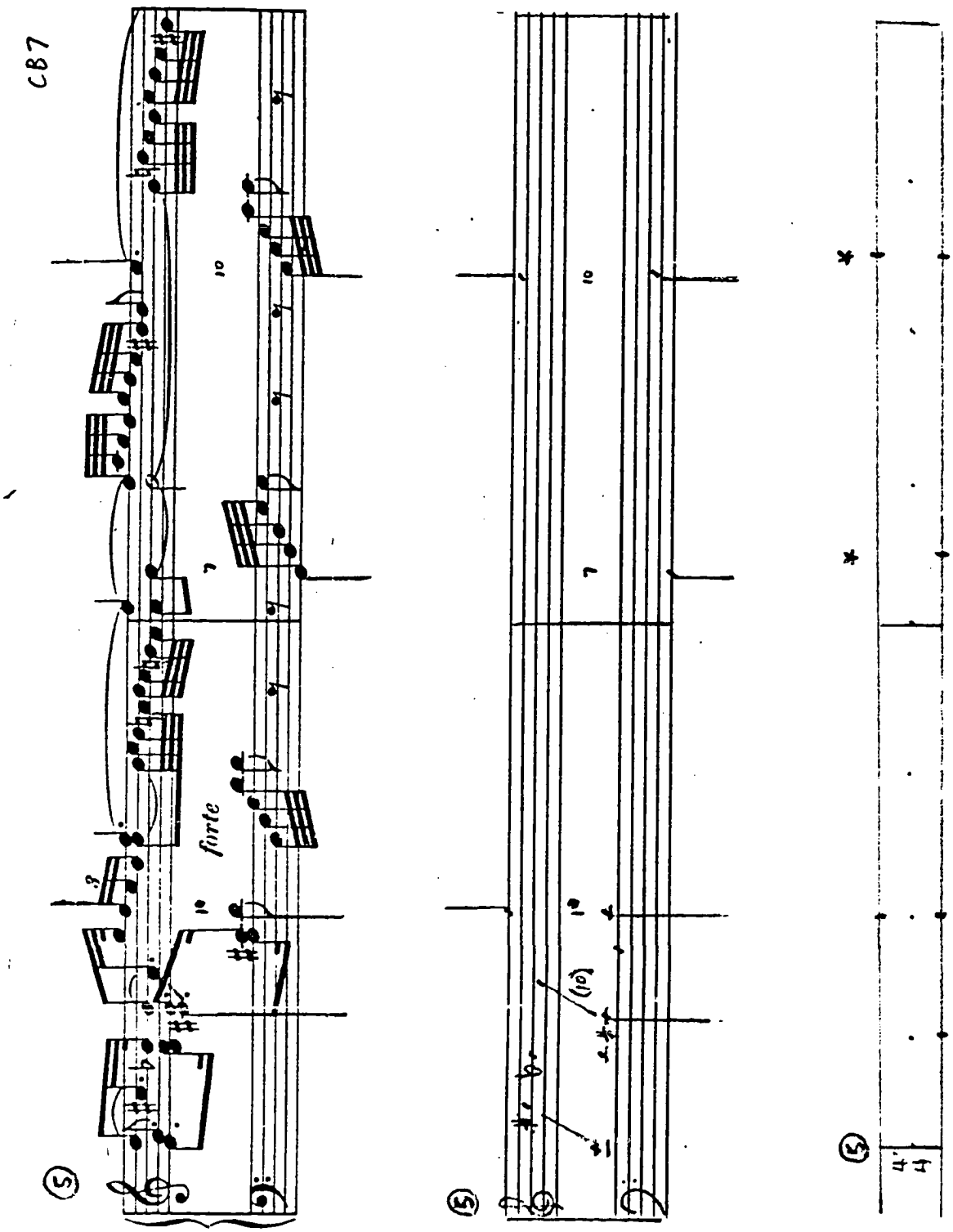

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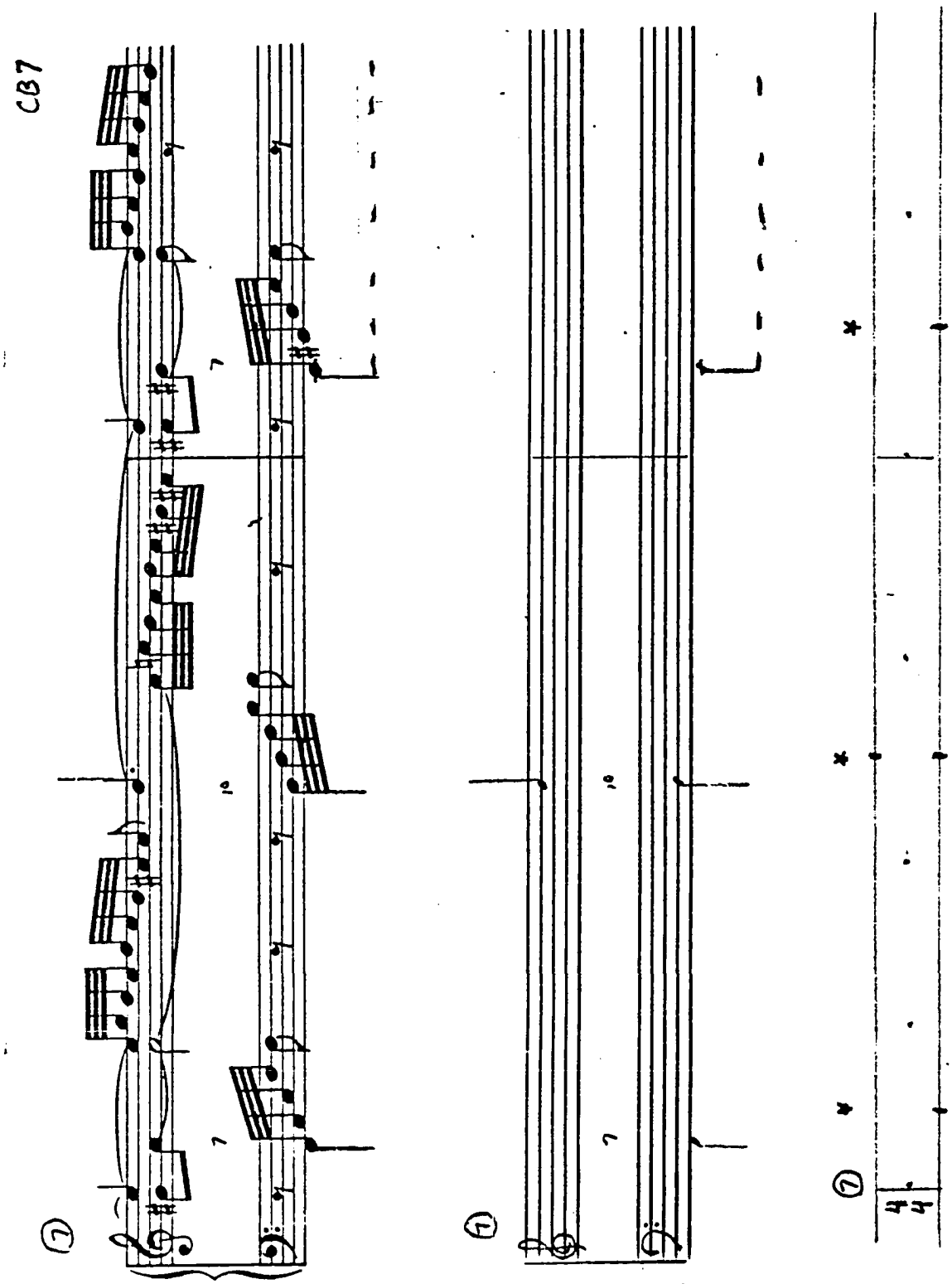

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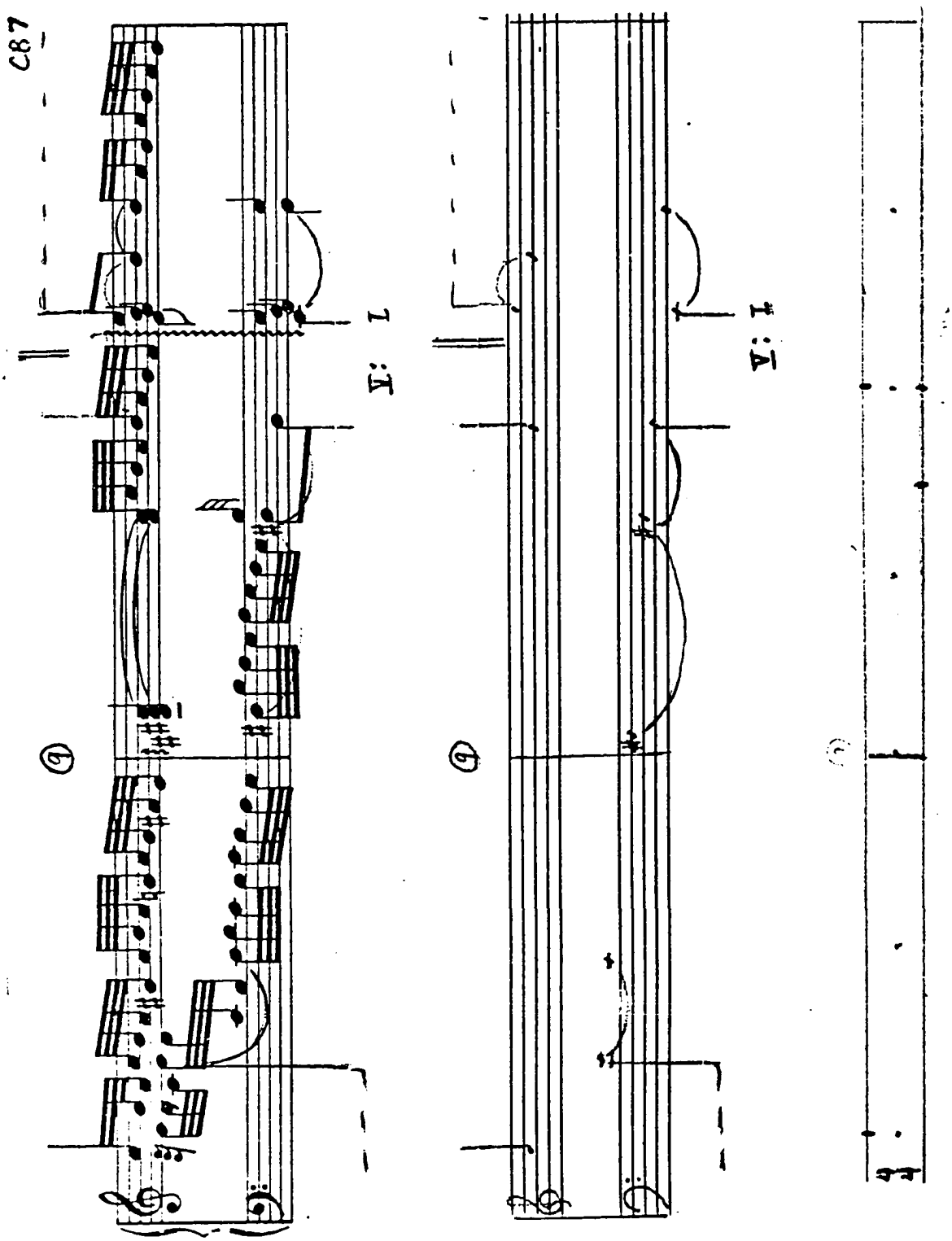

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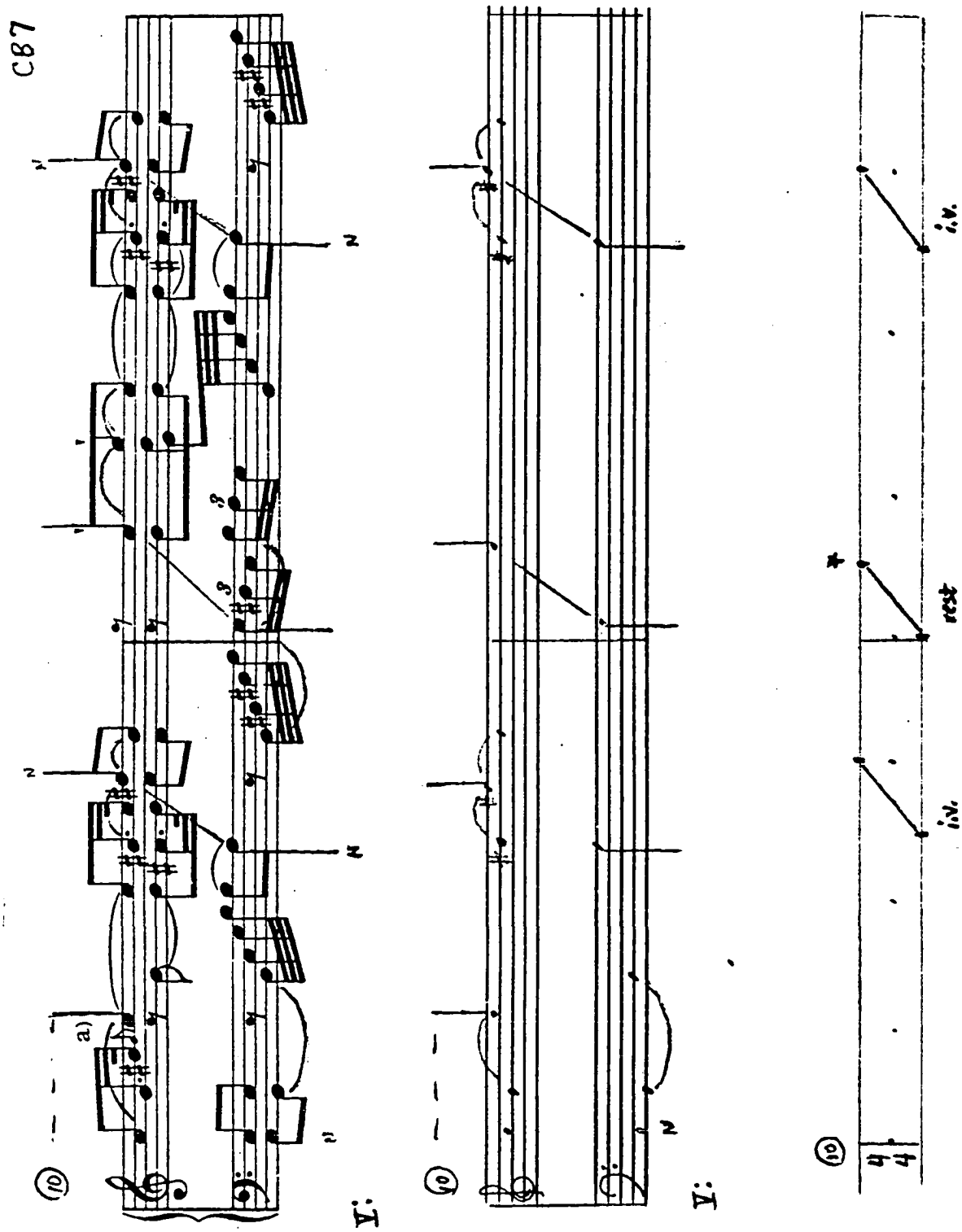

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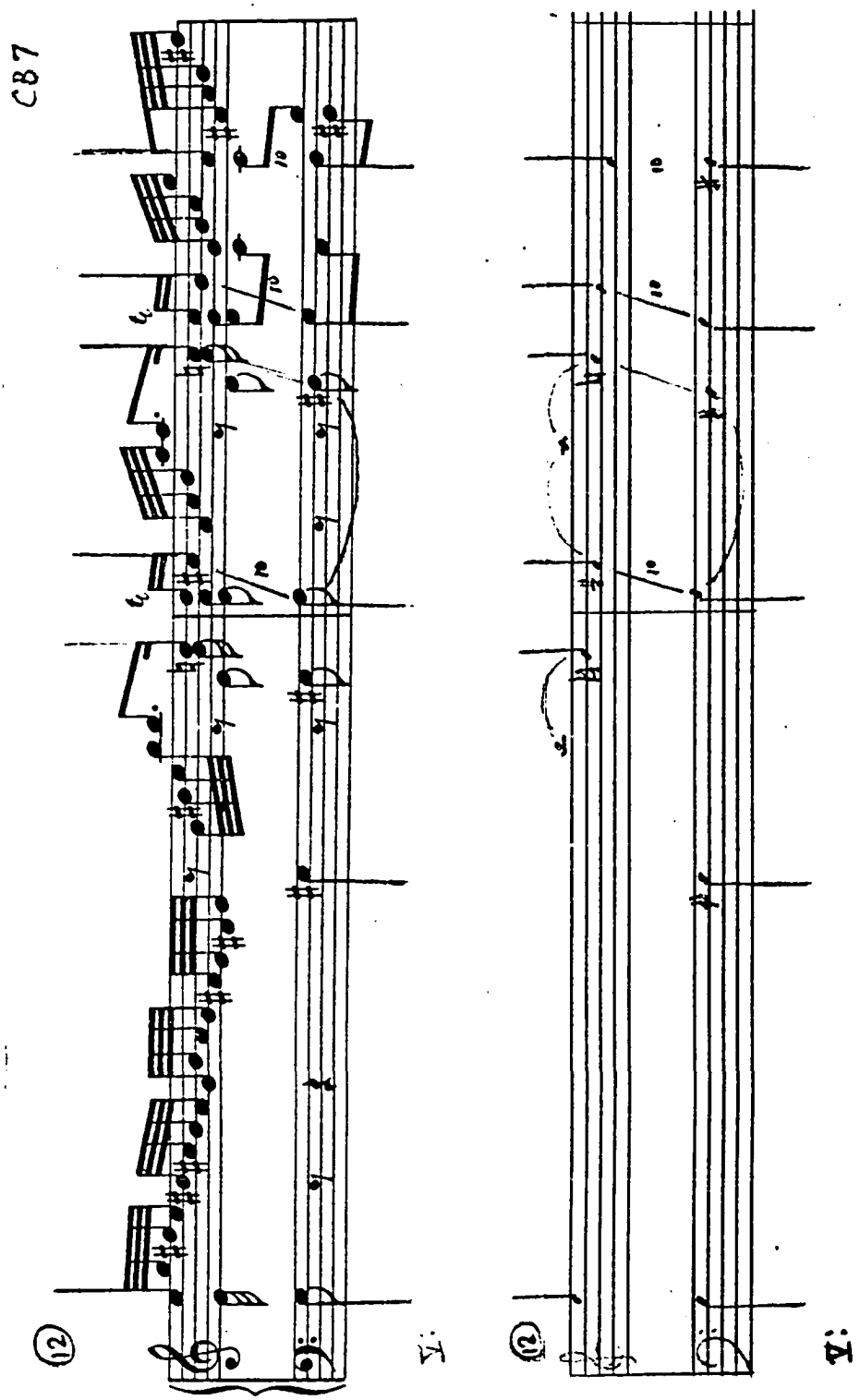

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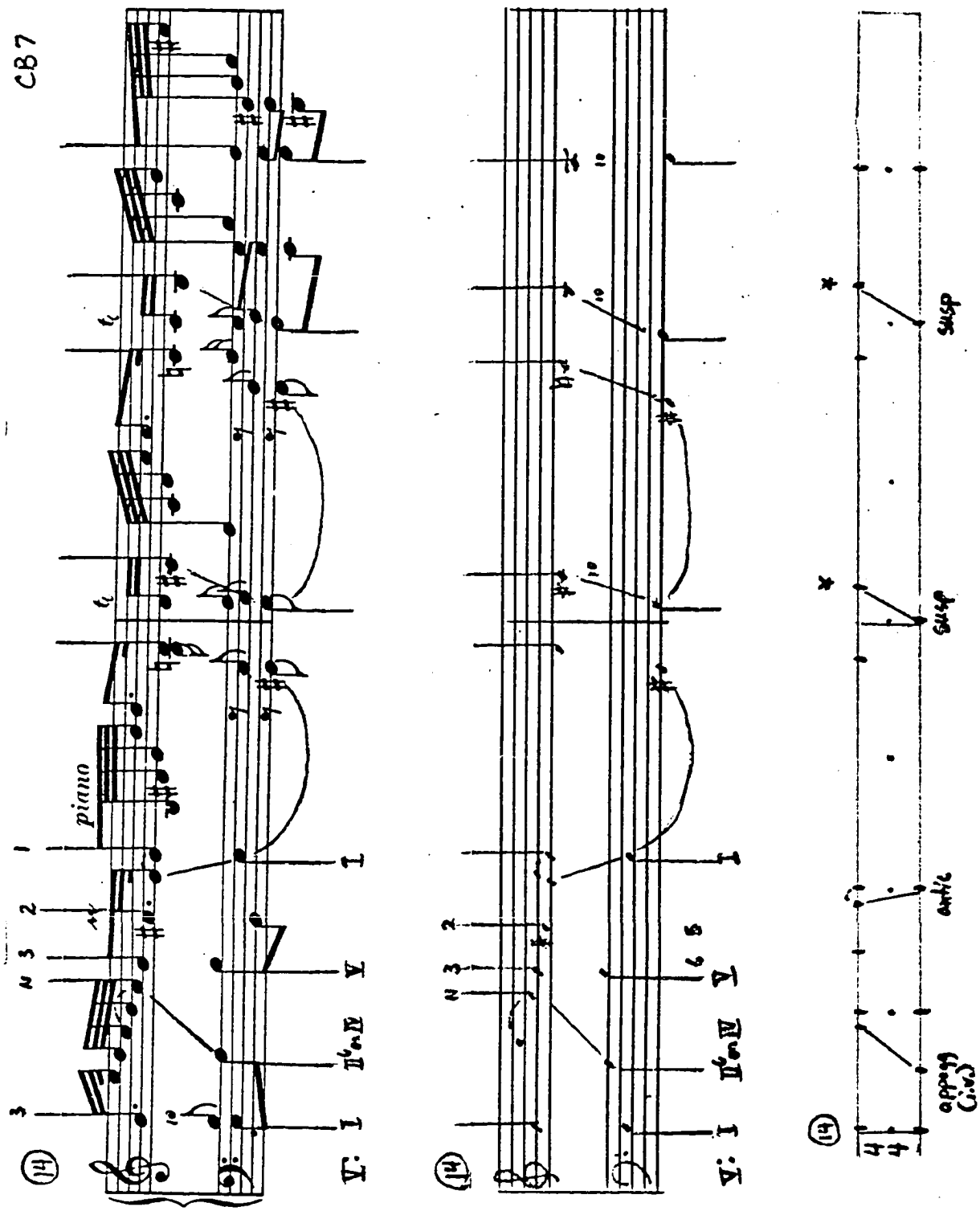

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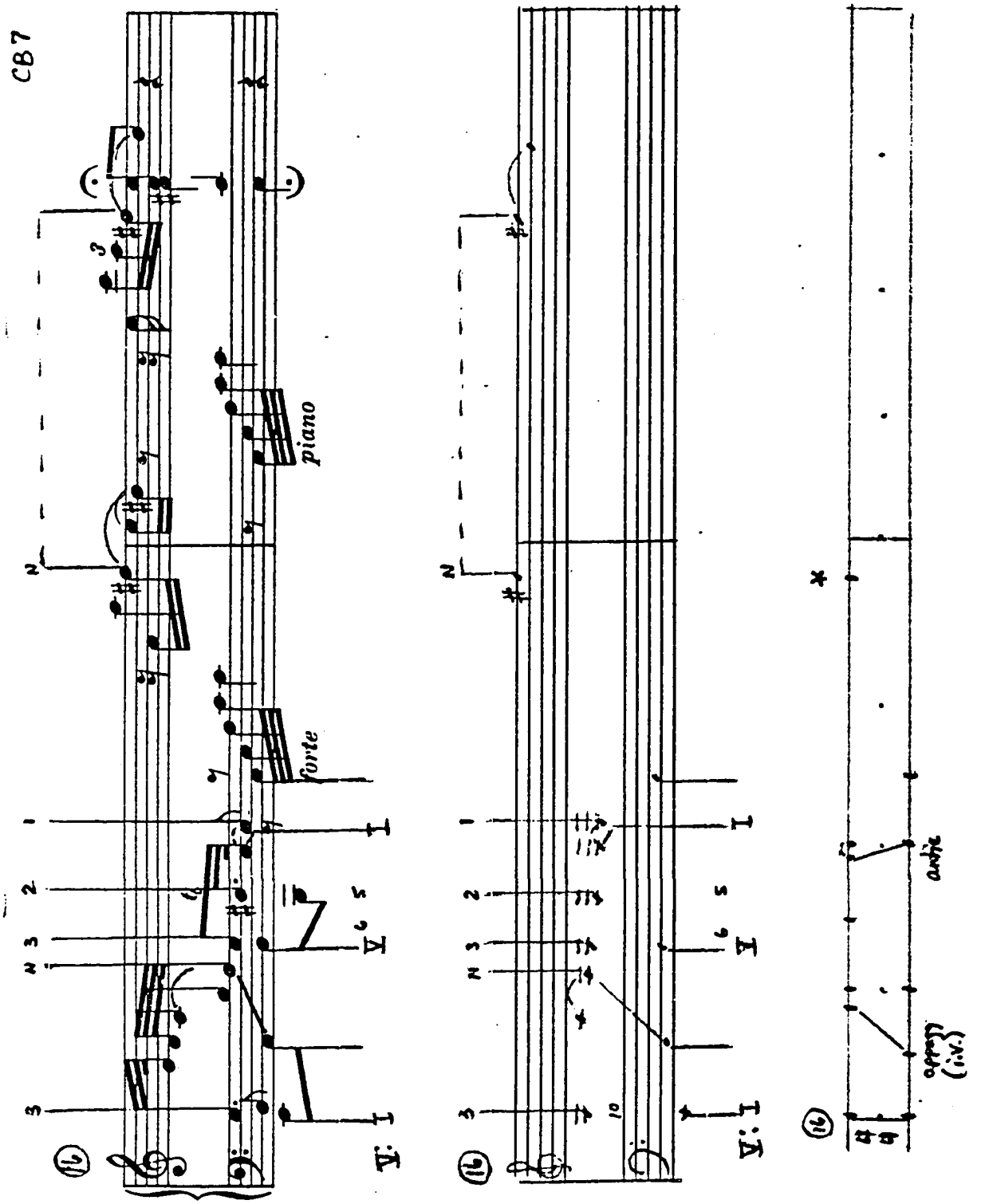

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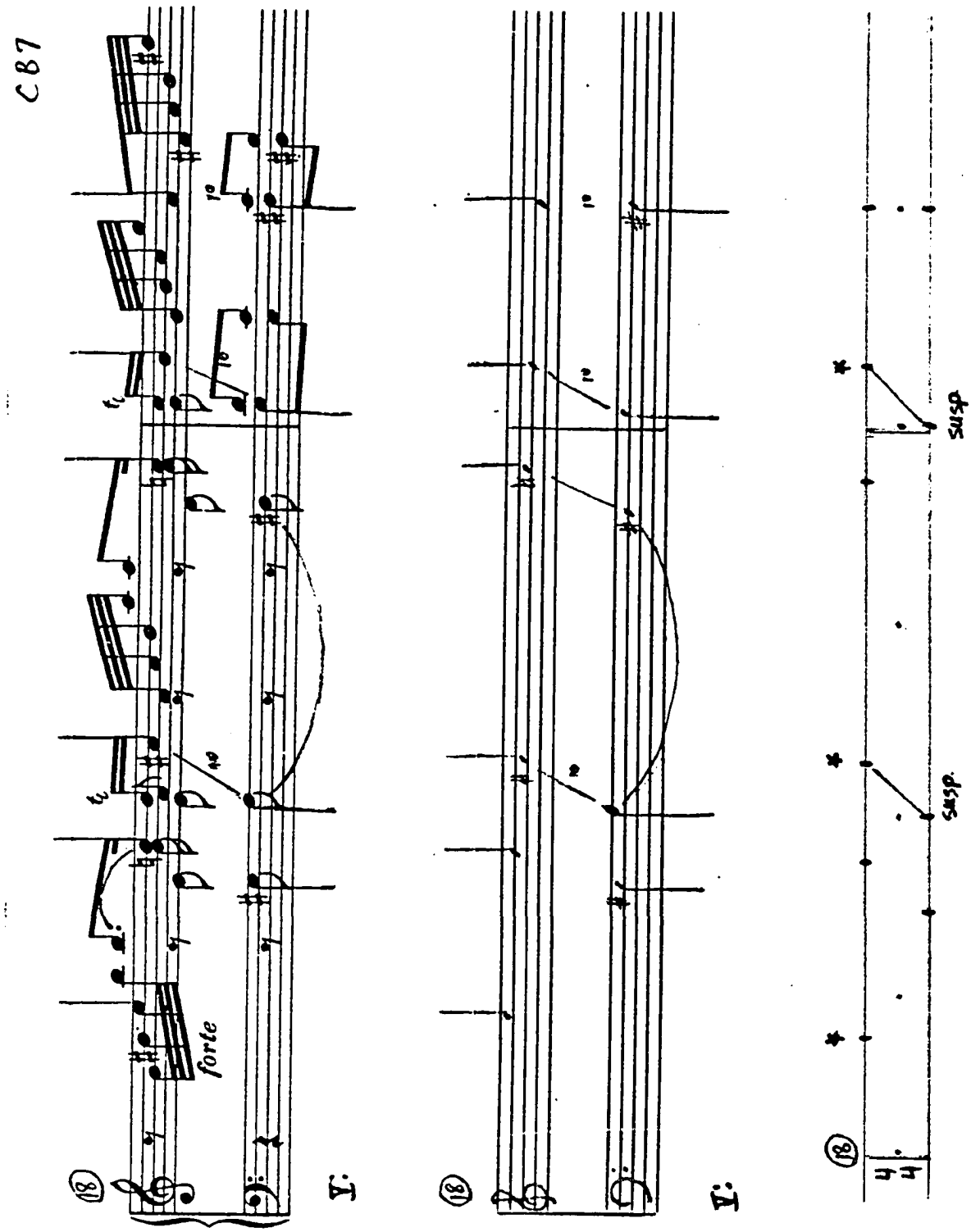

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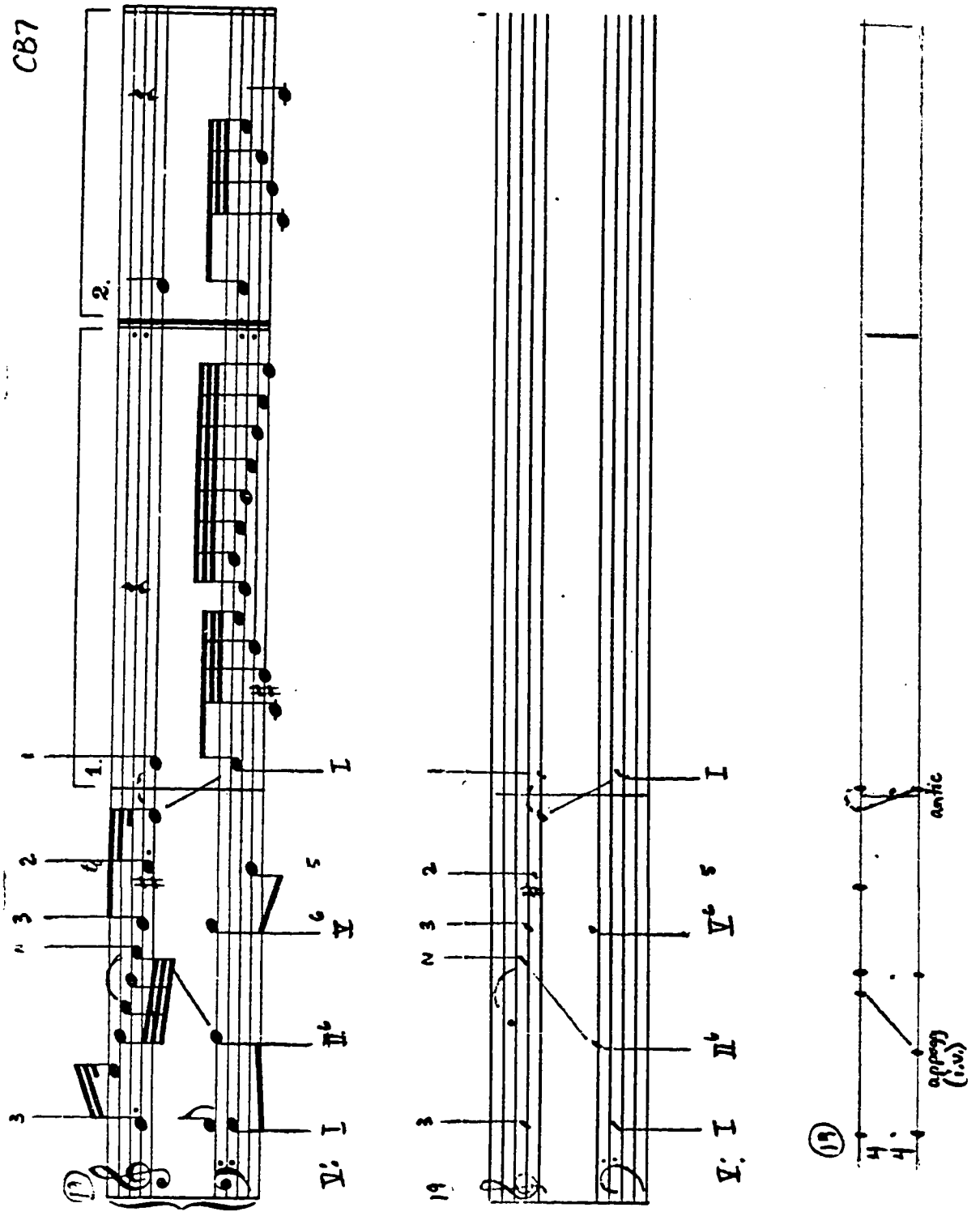

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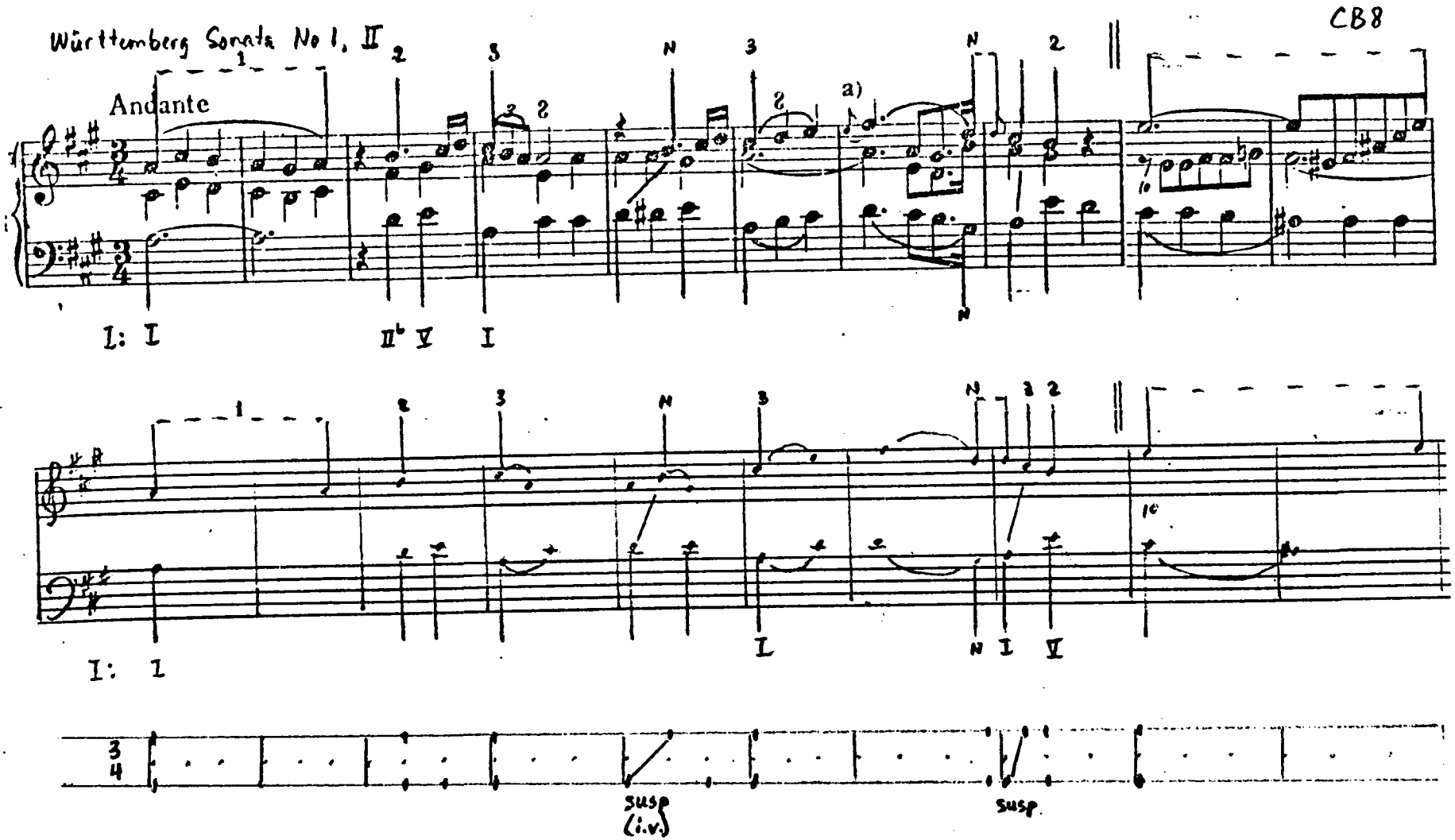

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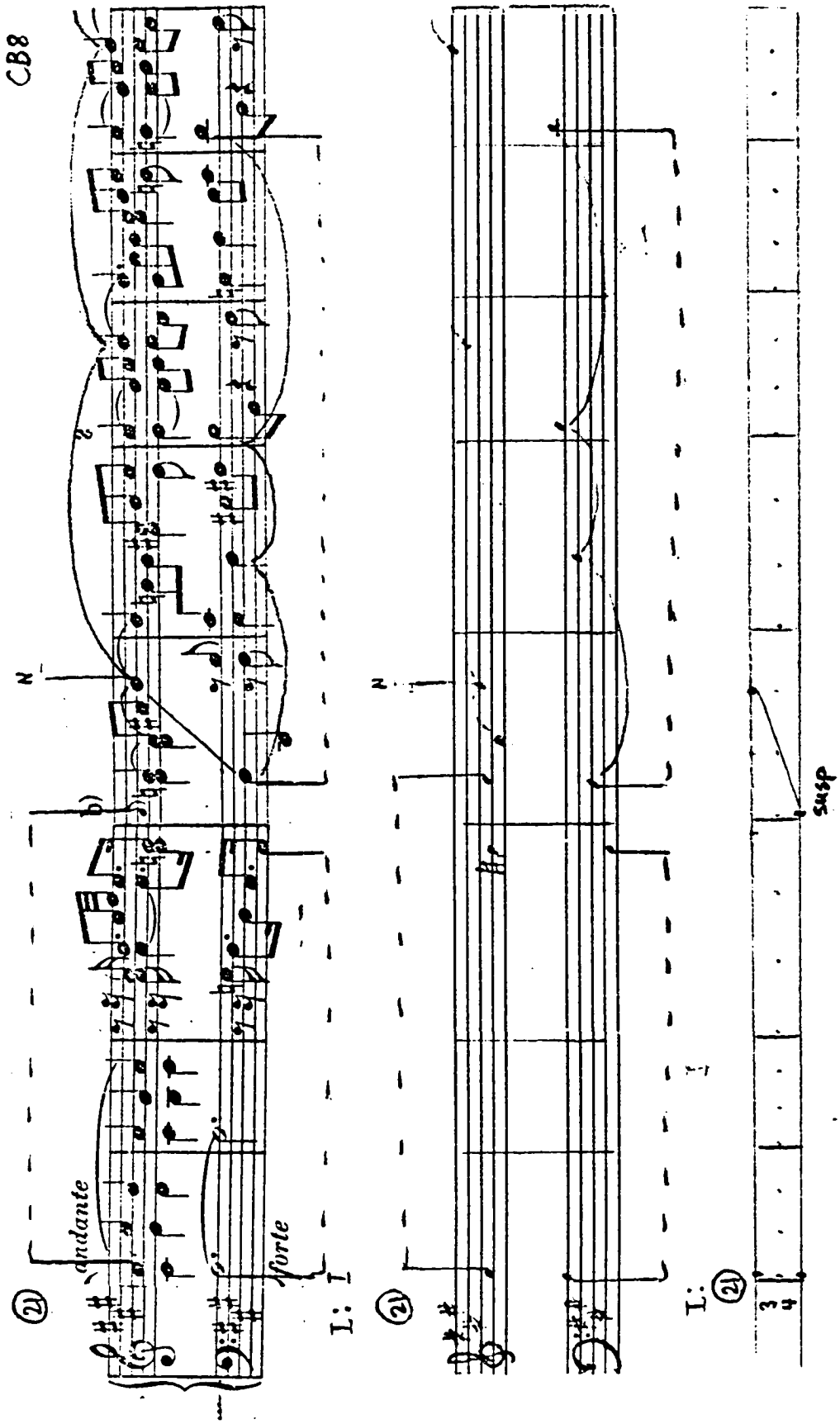

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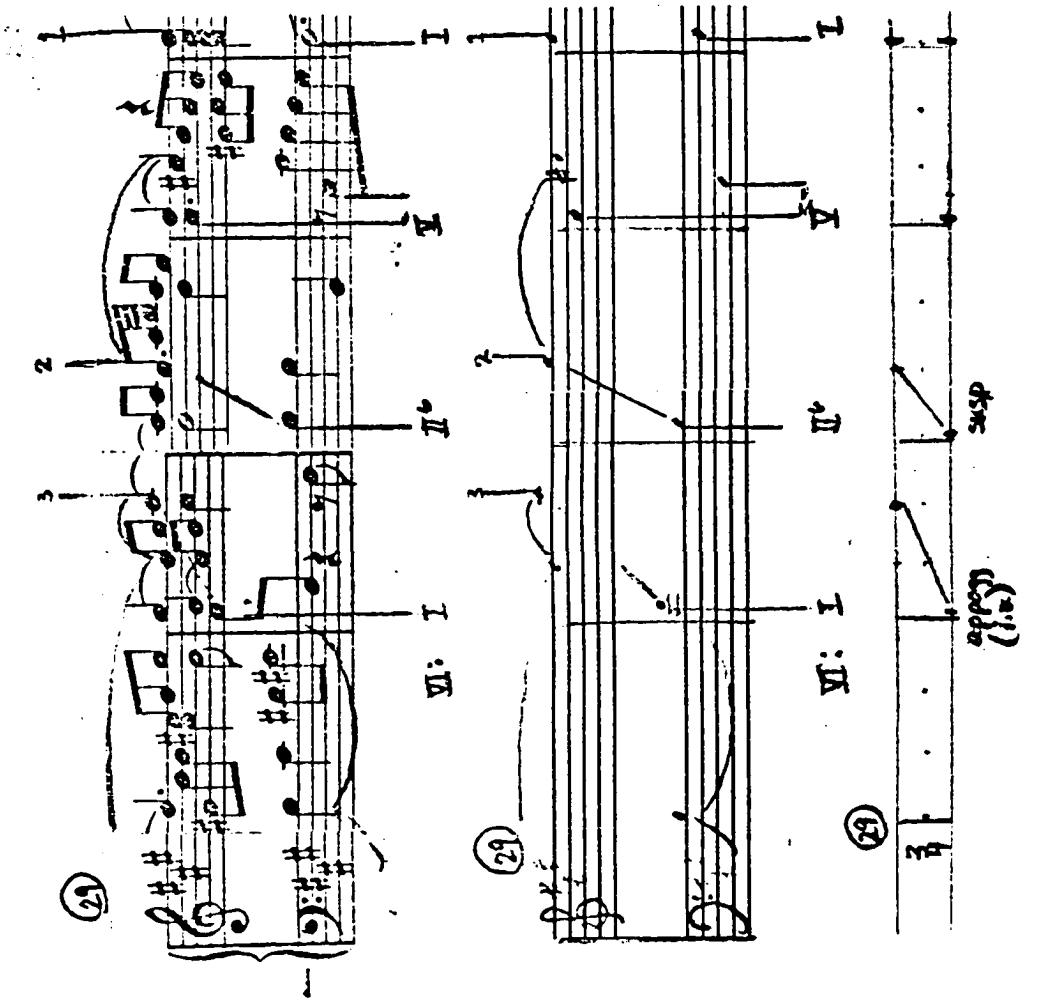

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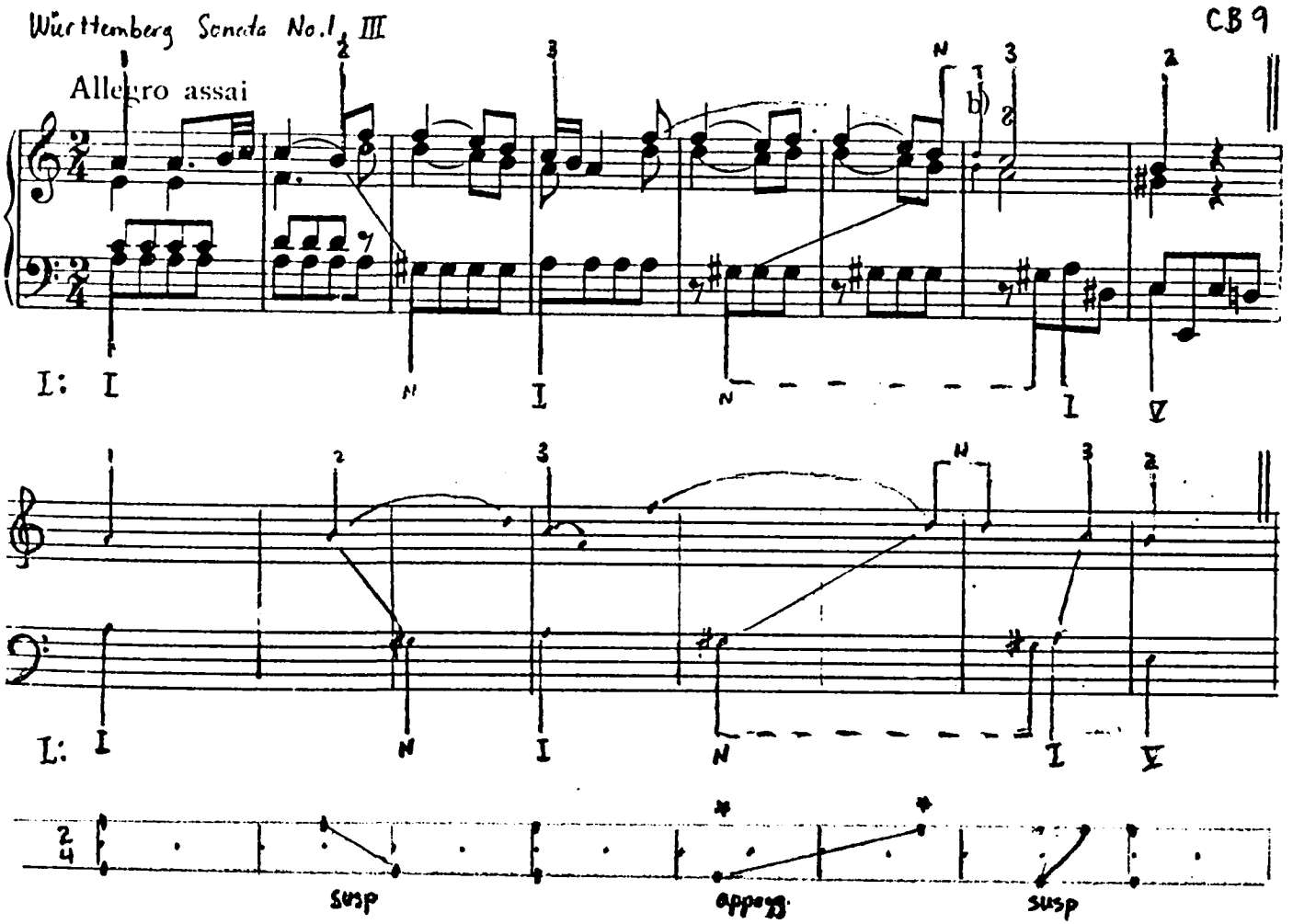

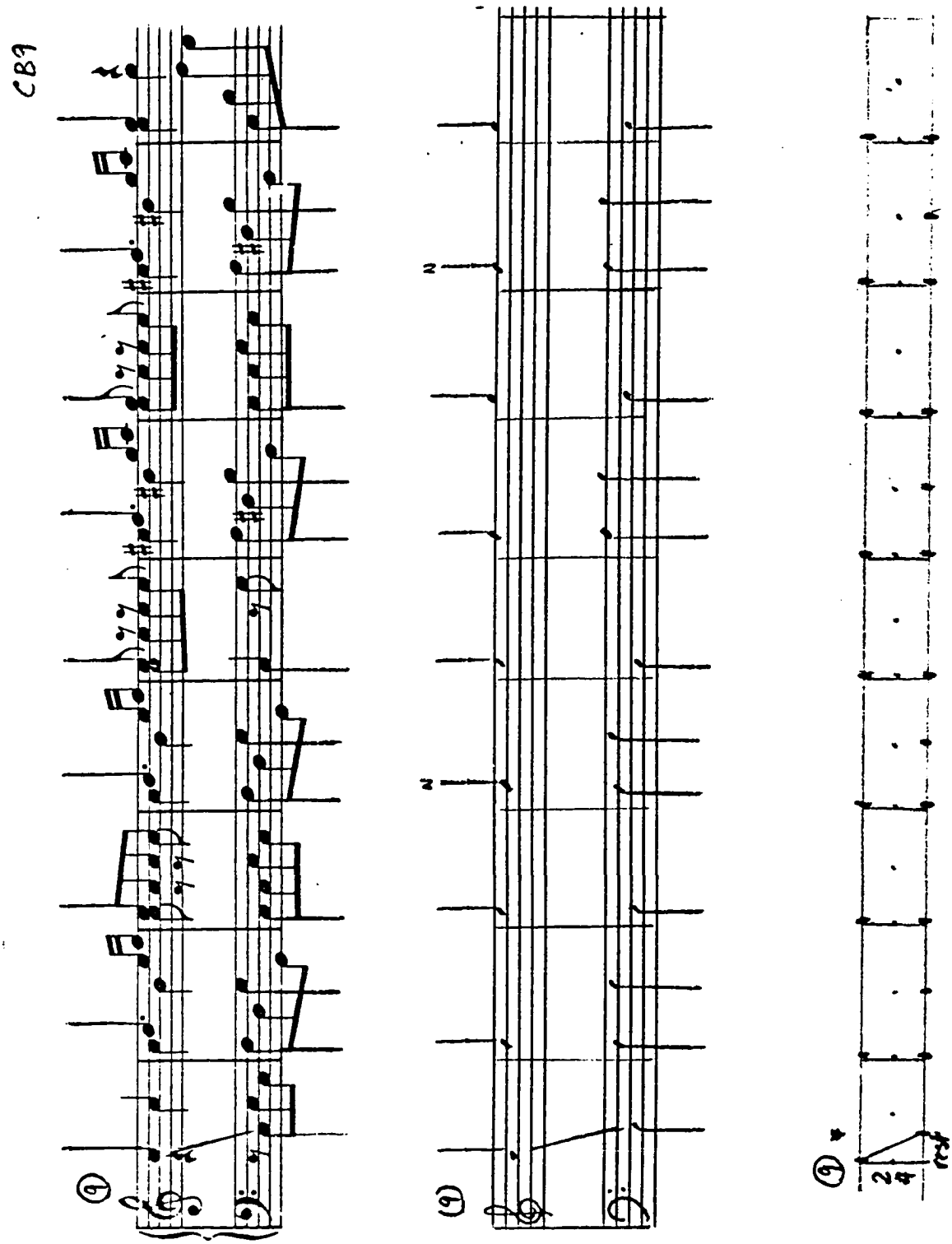

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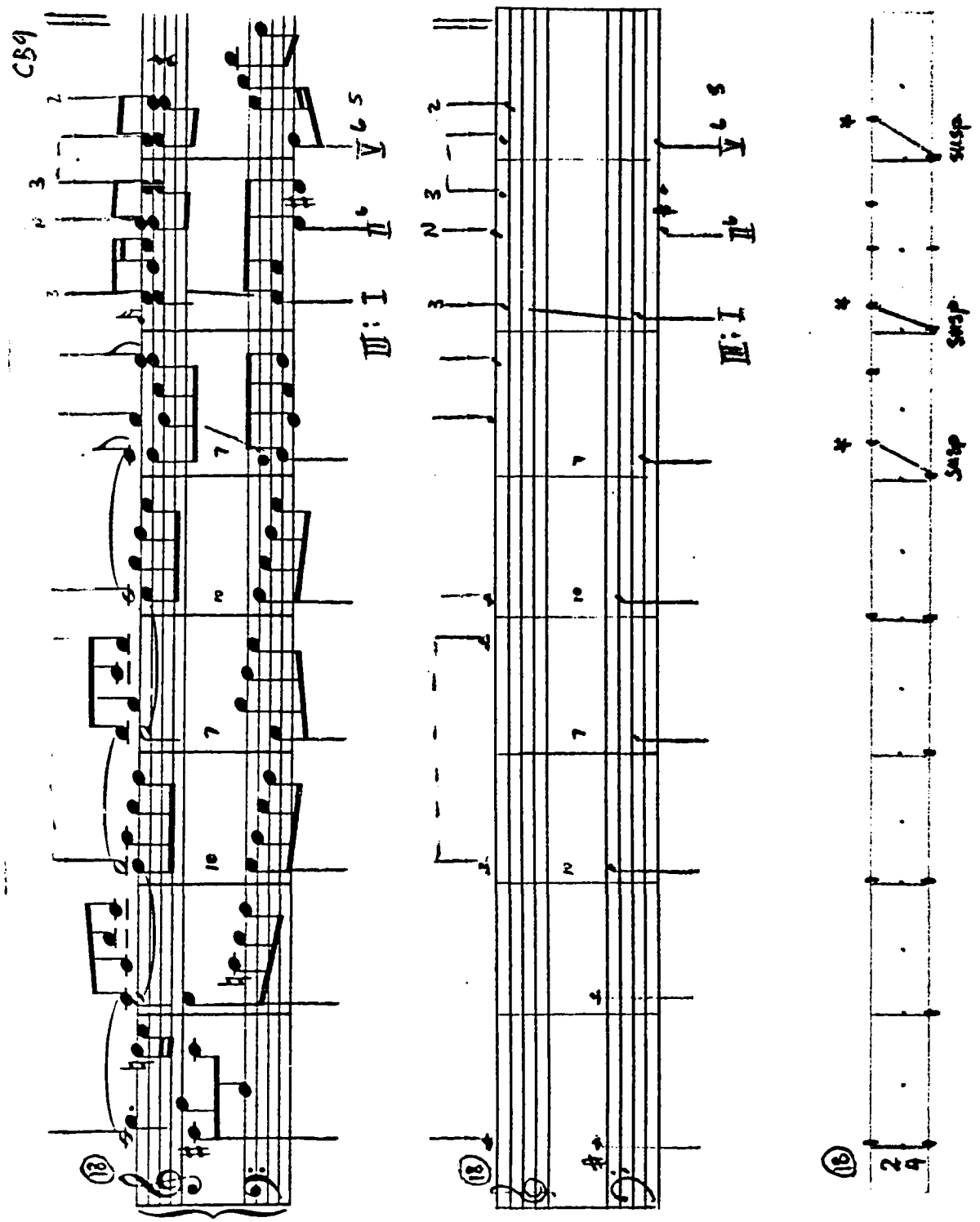

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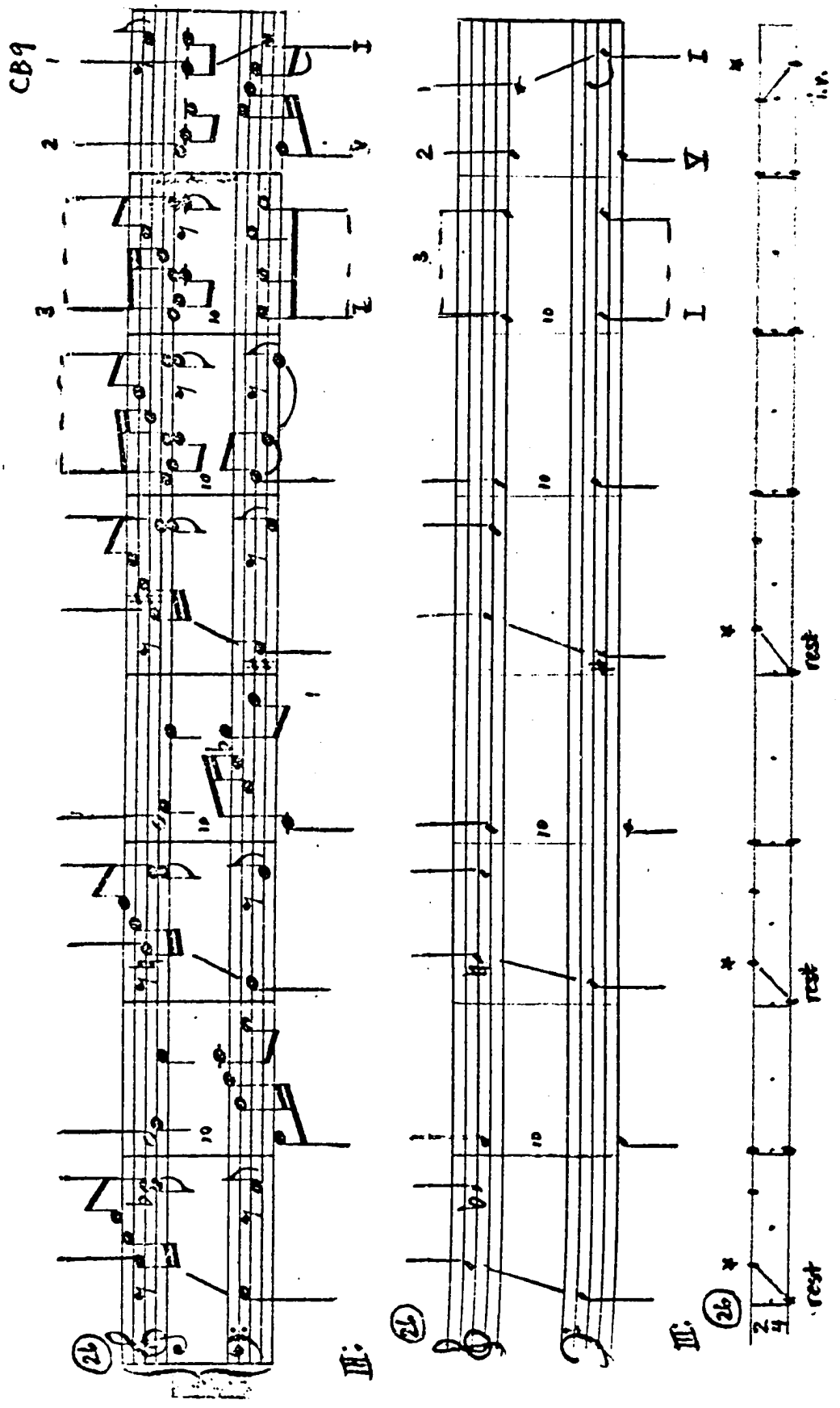

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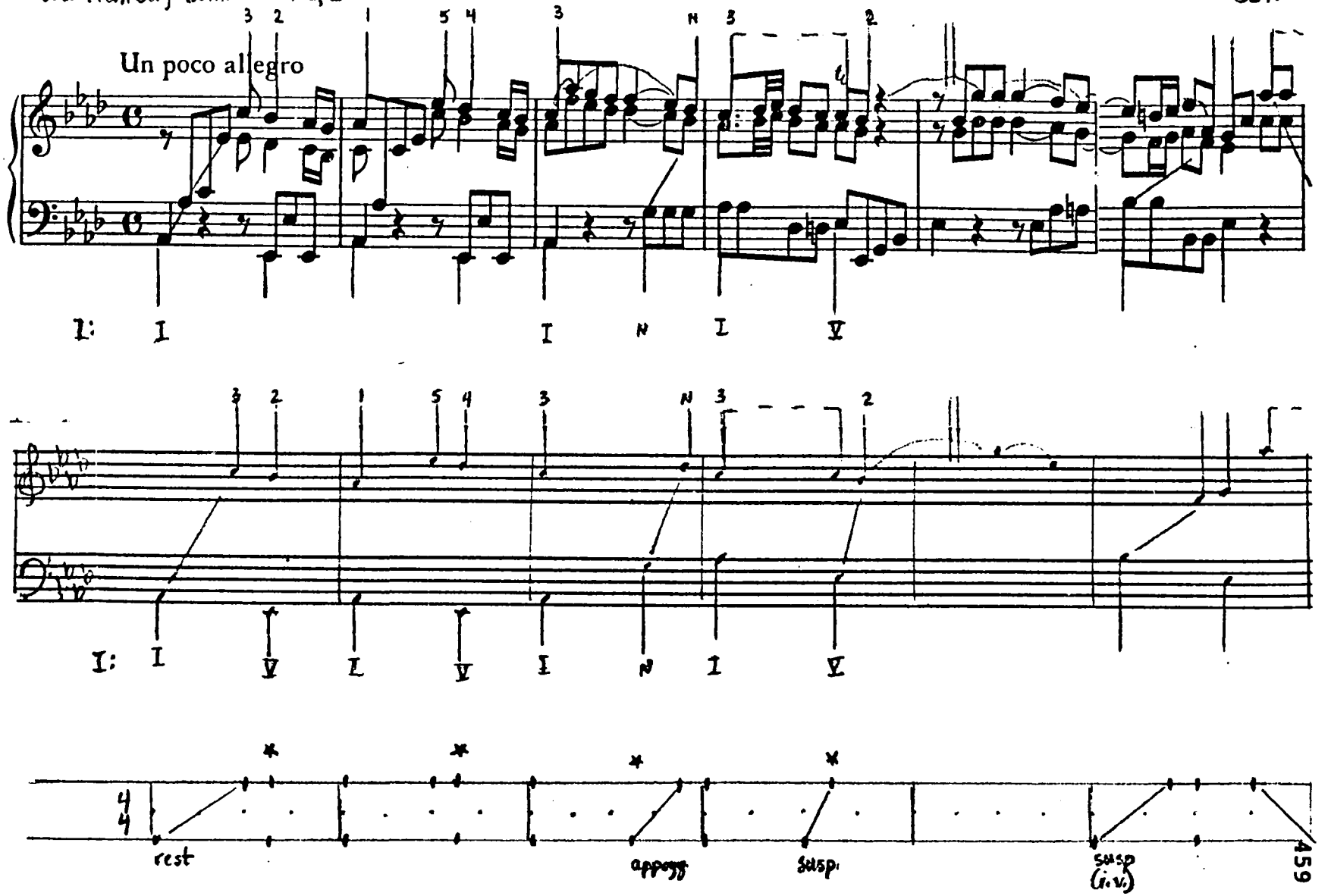
Württemburg Sonata No. 2, I

CB10

Un poco allegro



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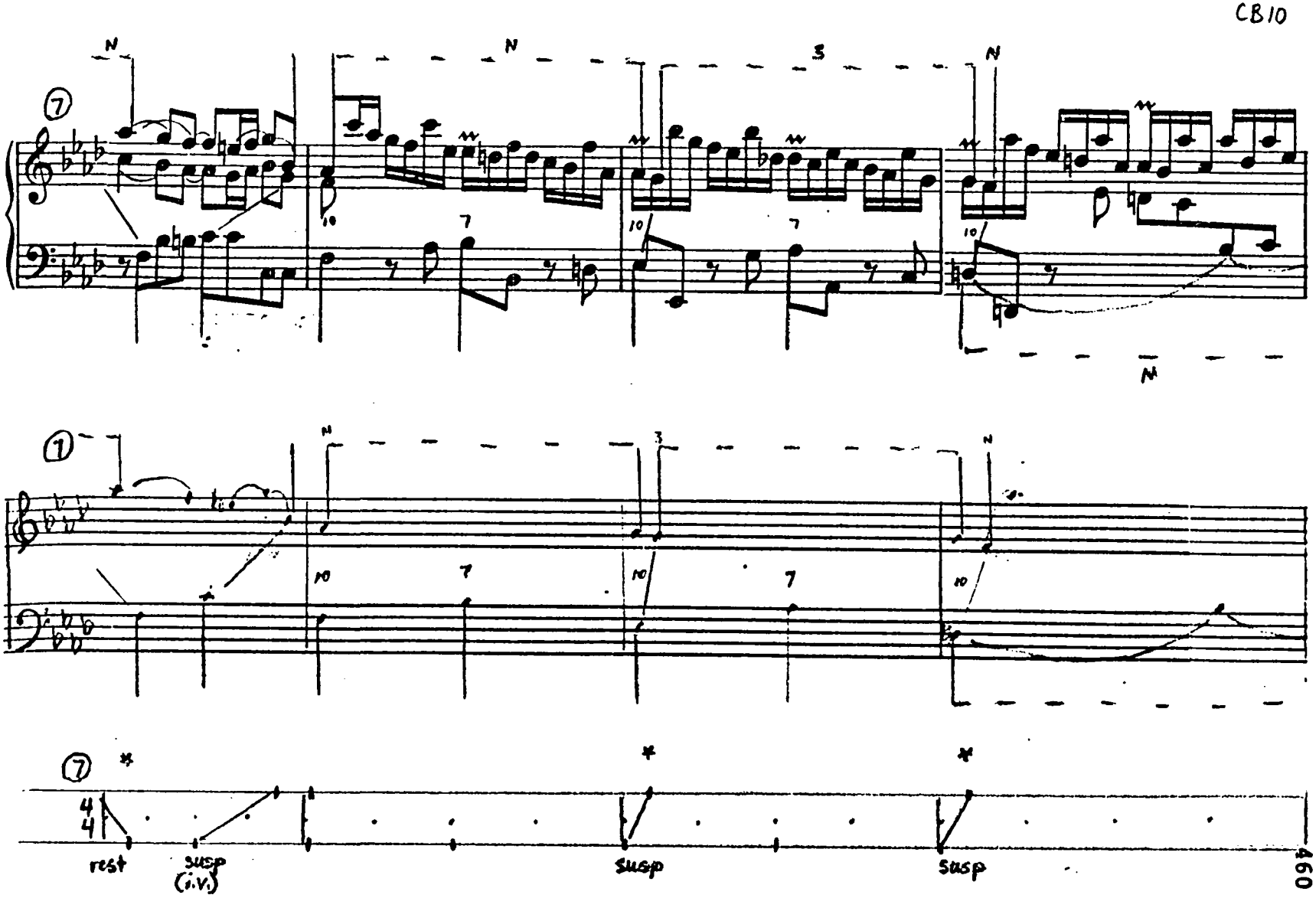

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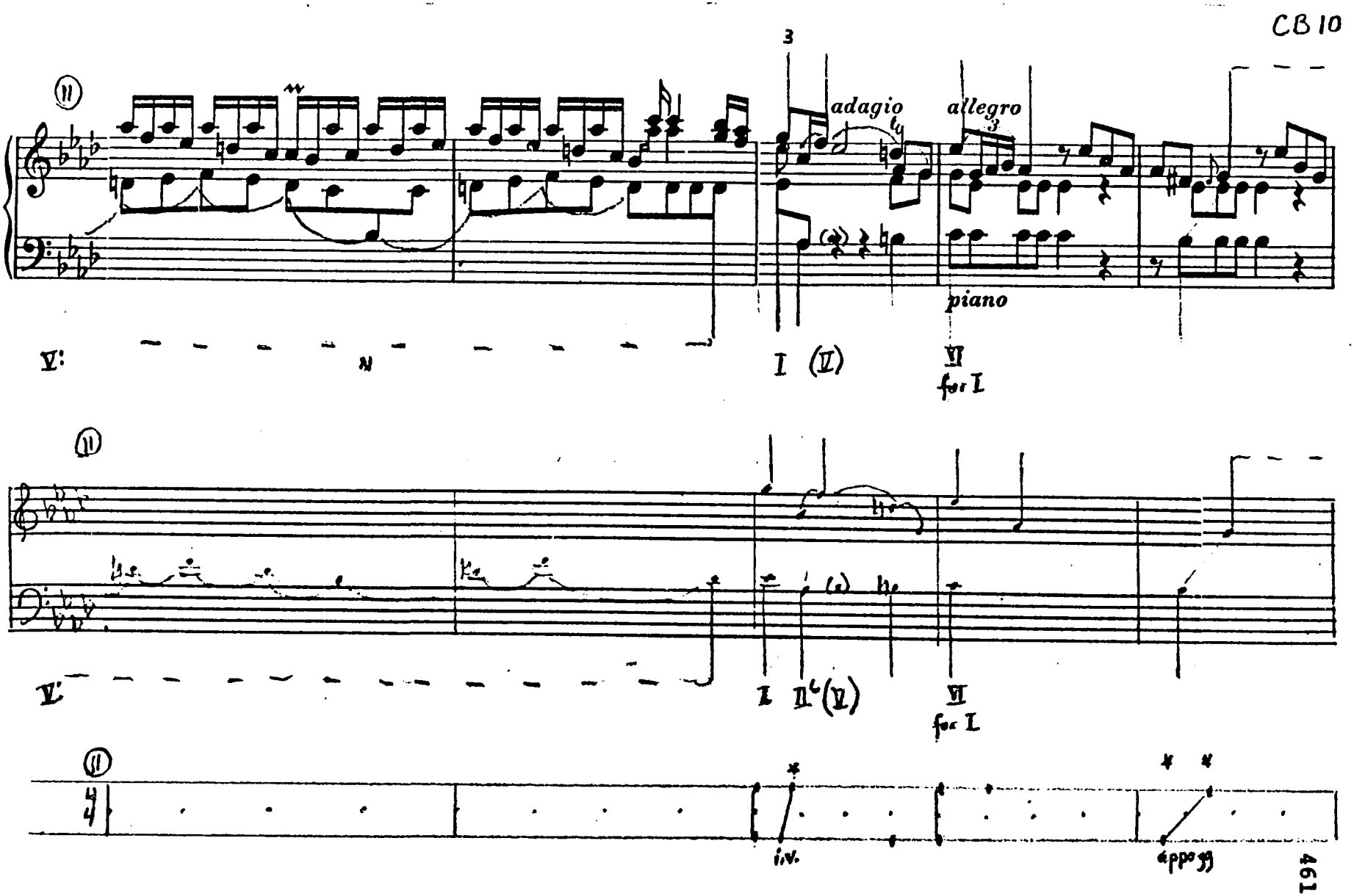

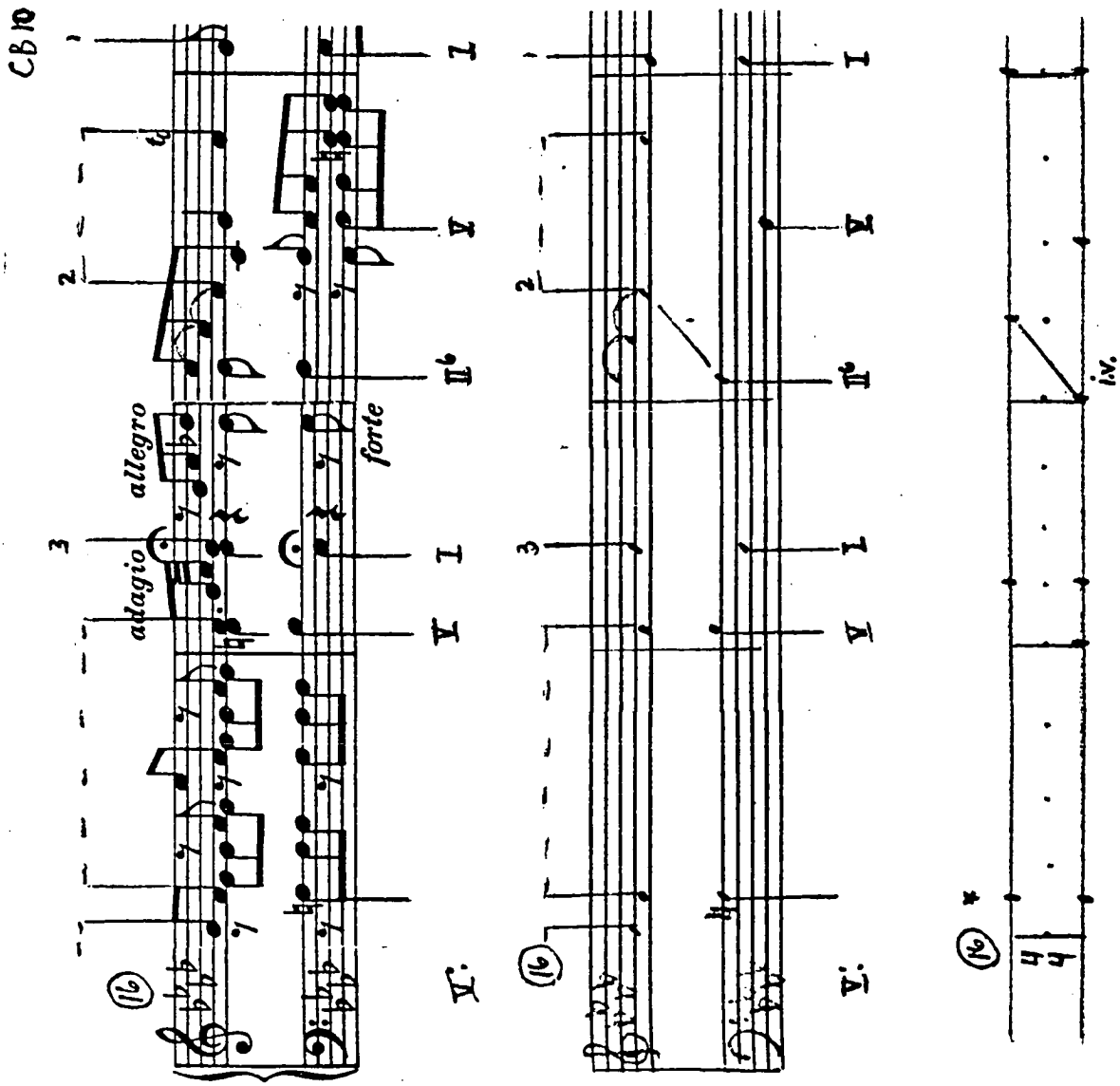

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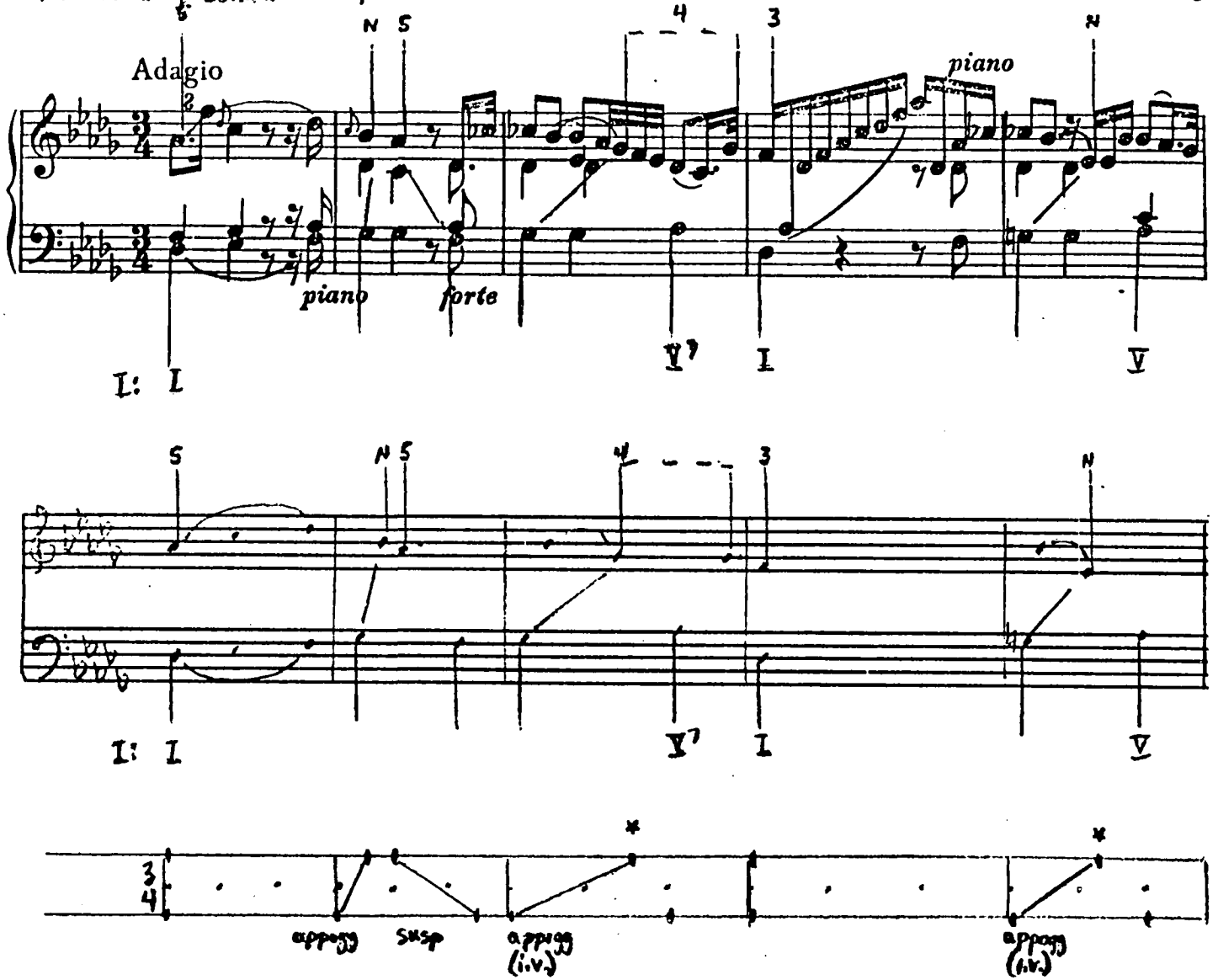
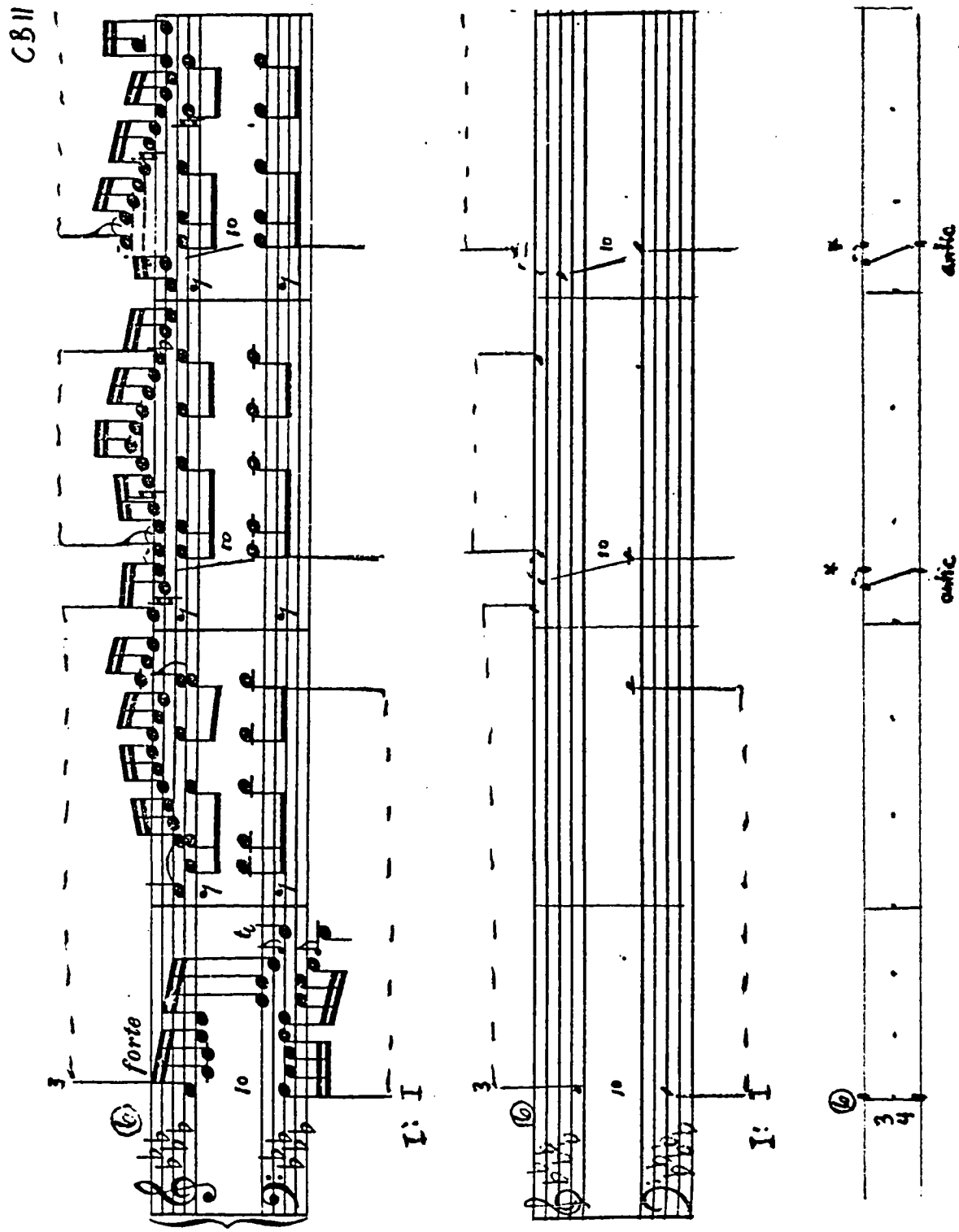
Württemberg Sonata No. 2, II

CB II





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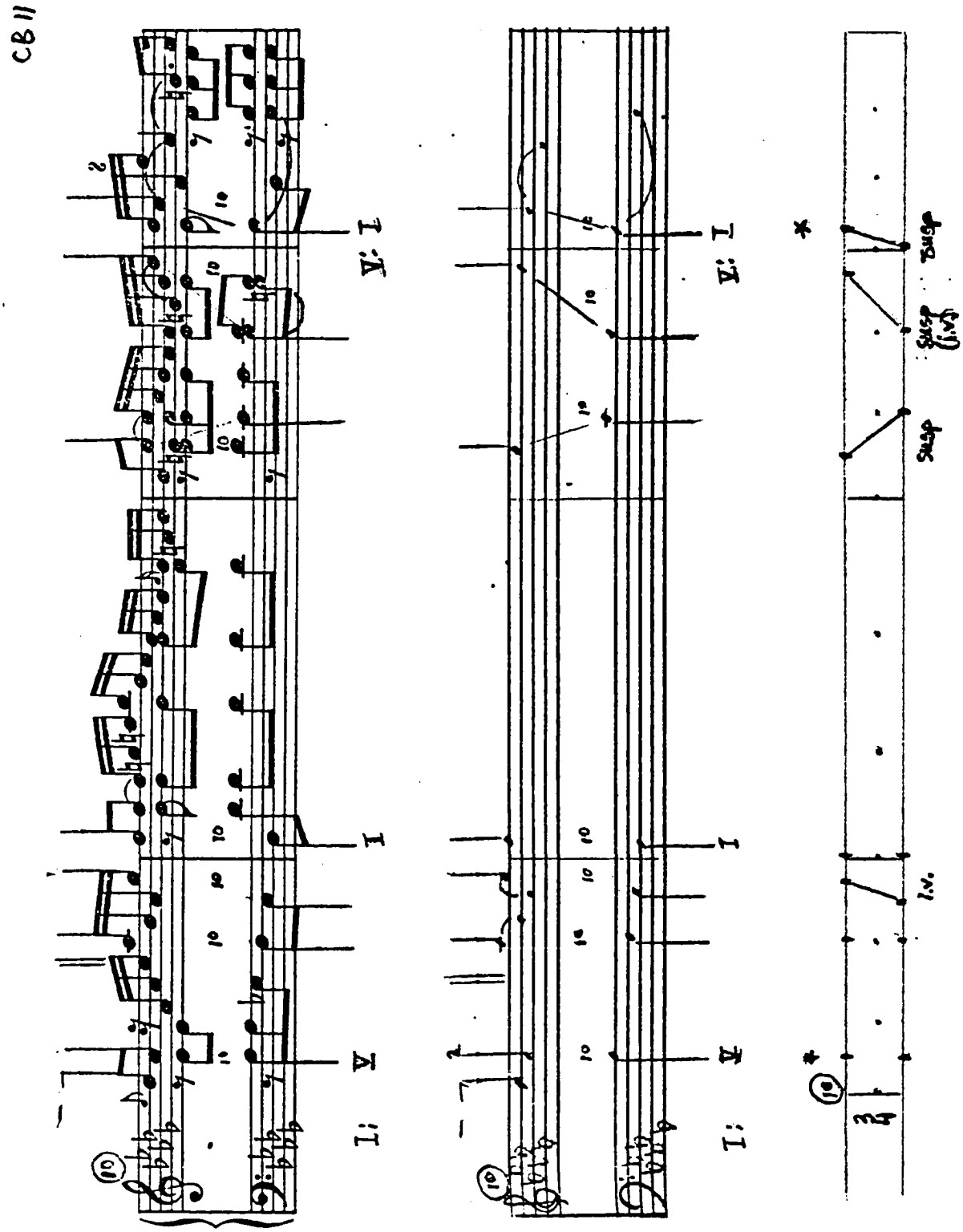

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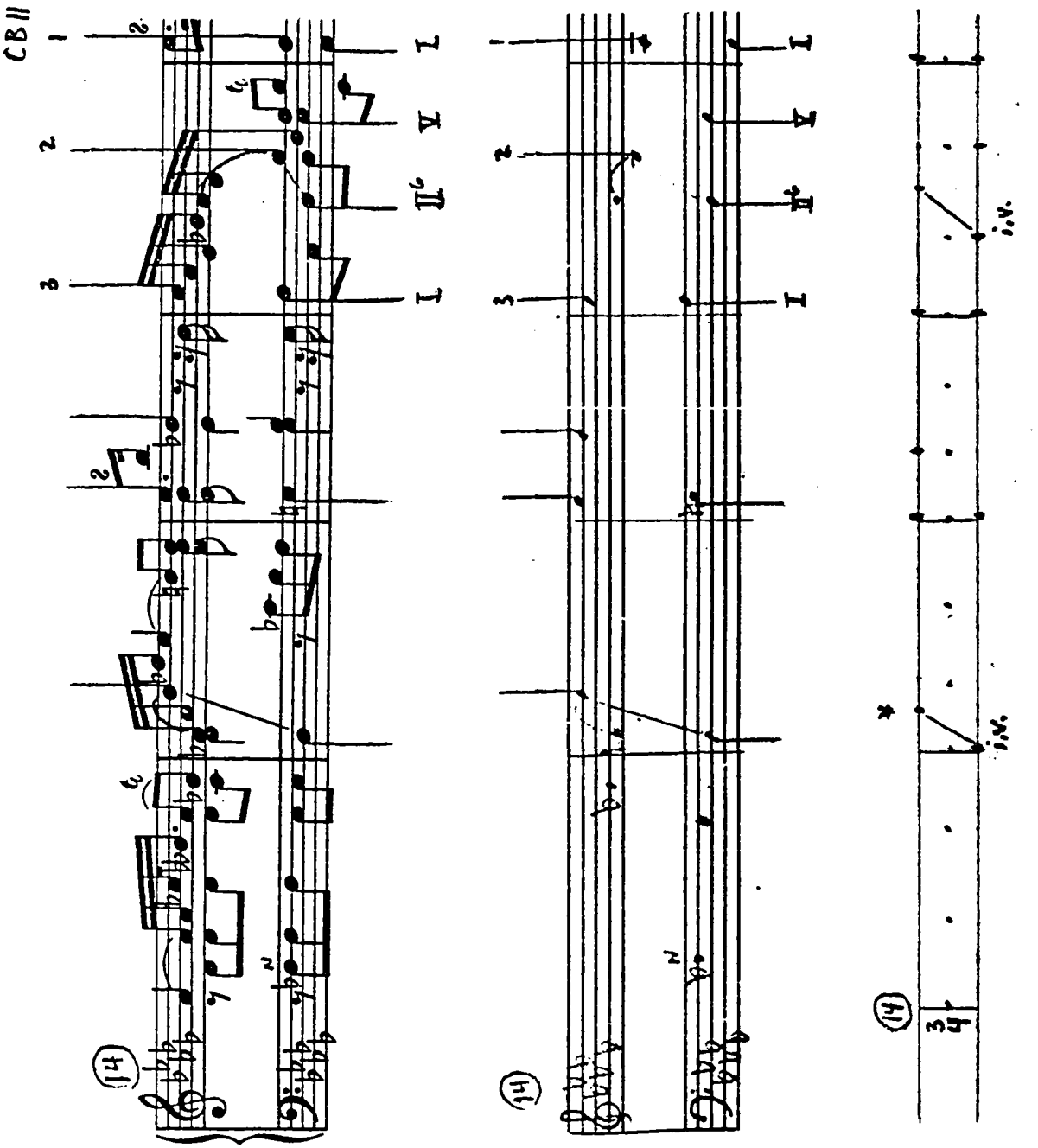

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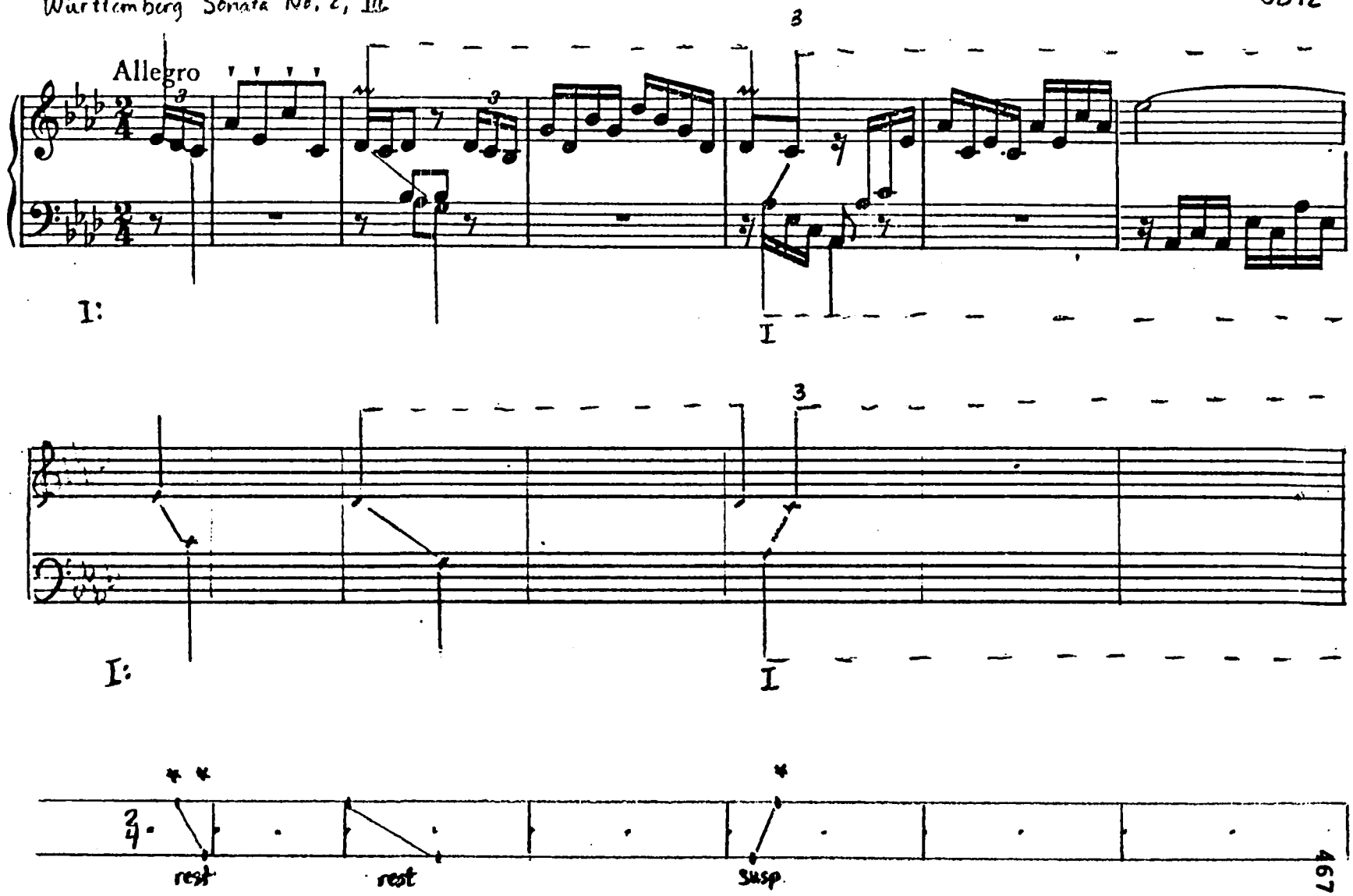
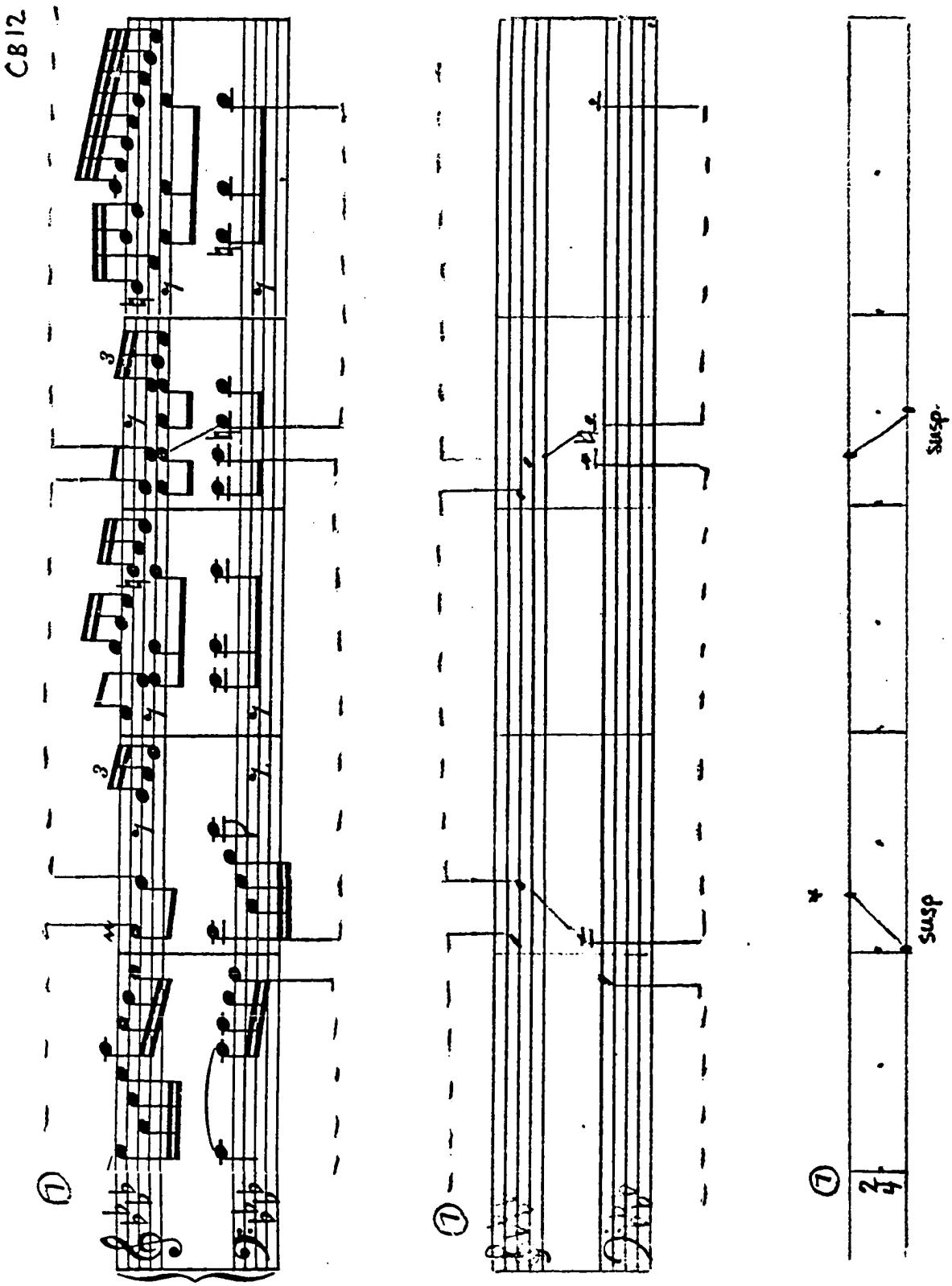
Württemberg Sonata No. 2, III

CB 12





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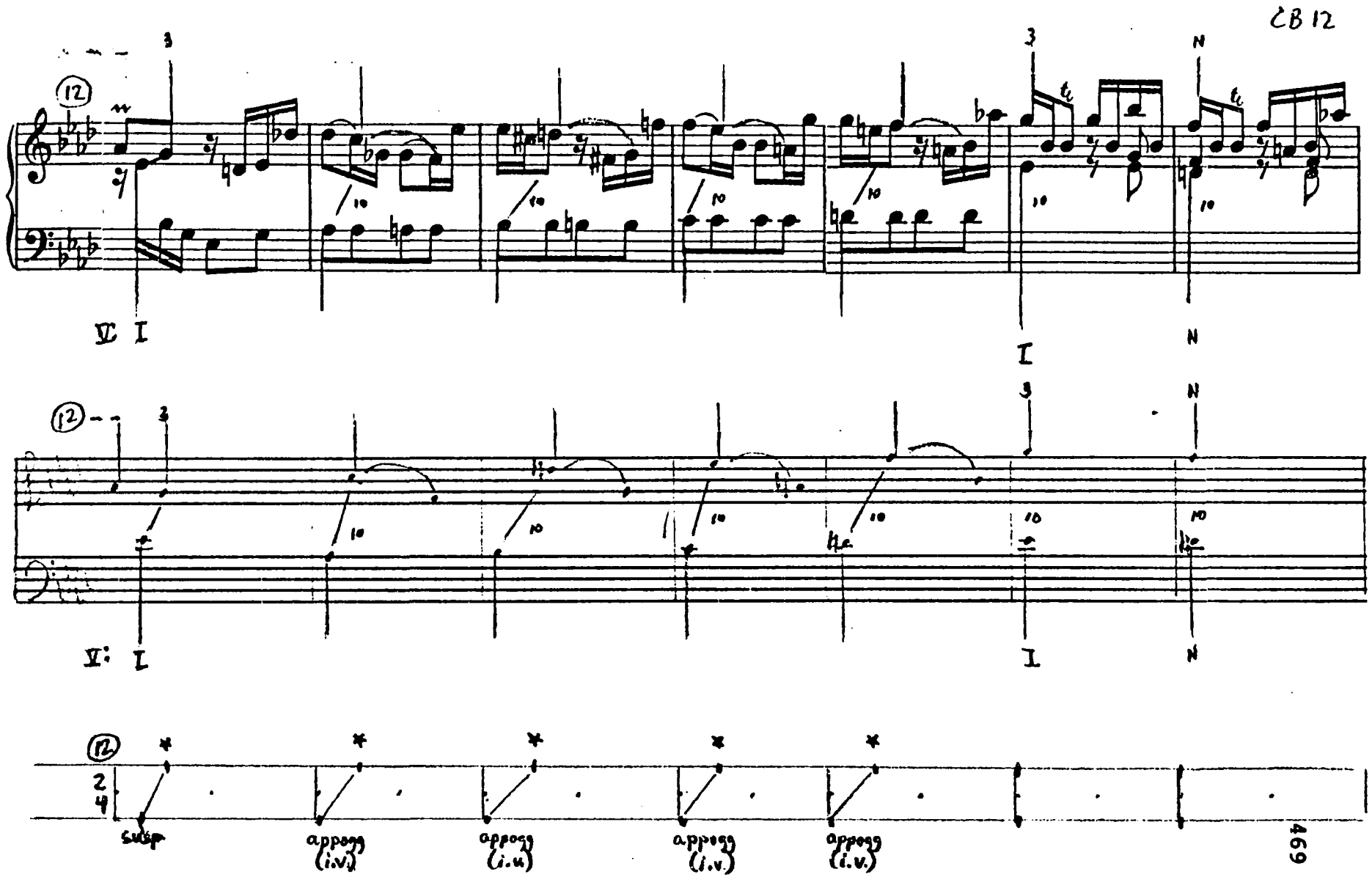

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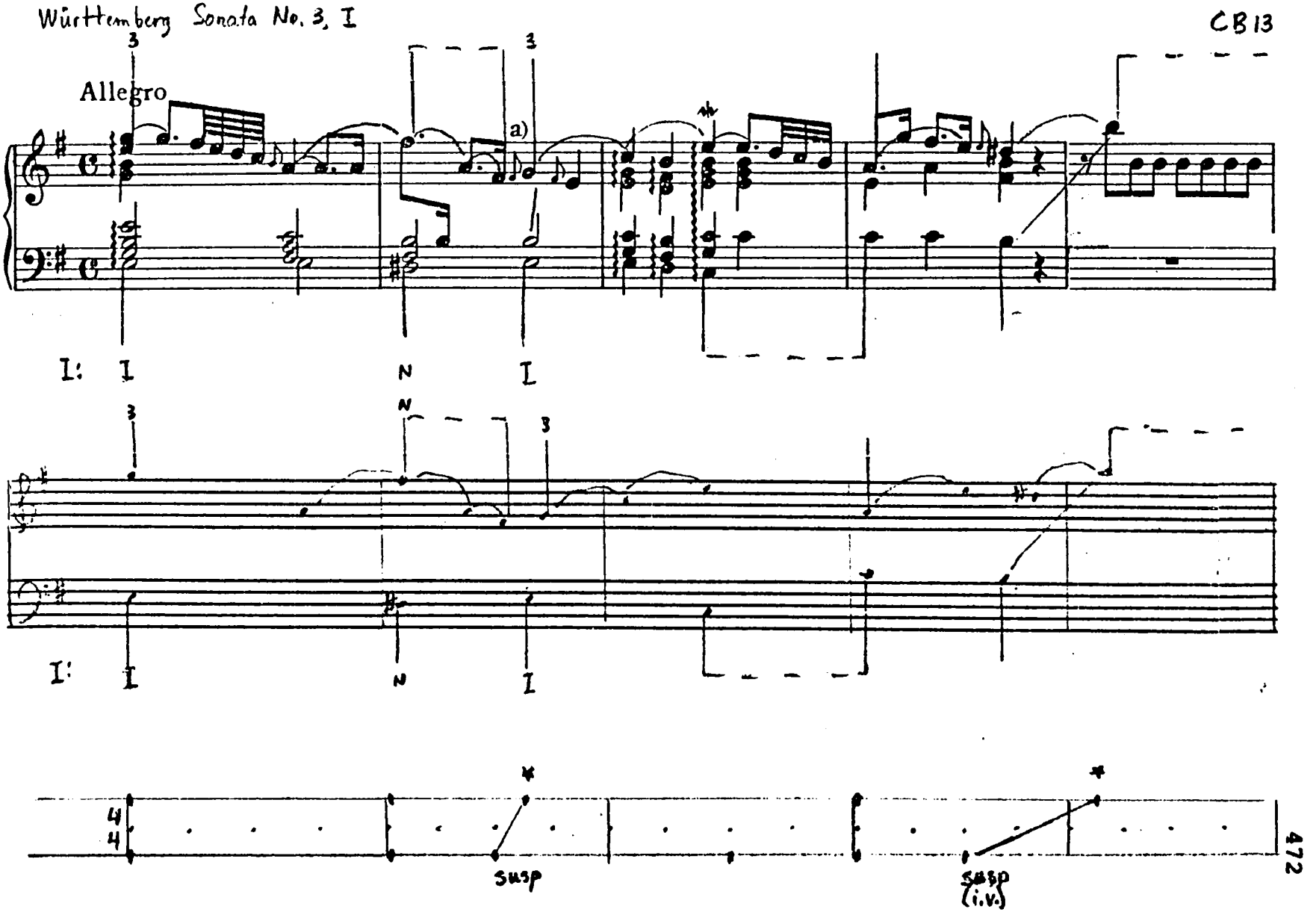

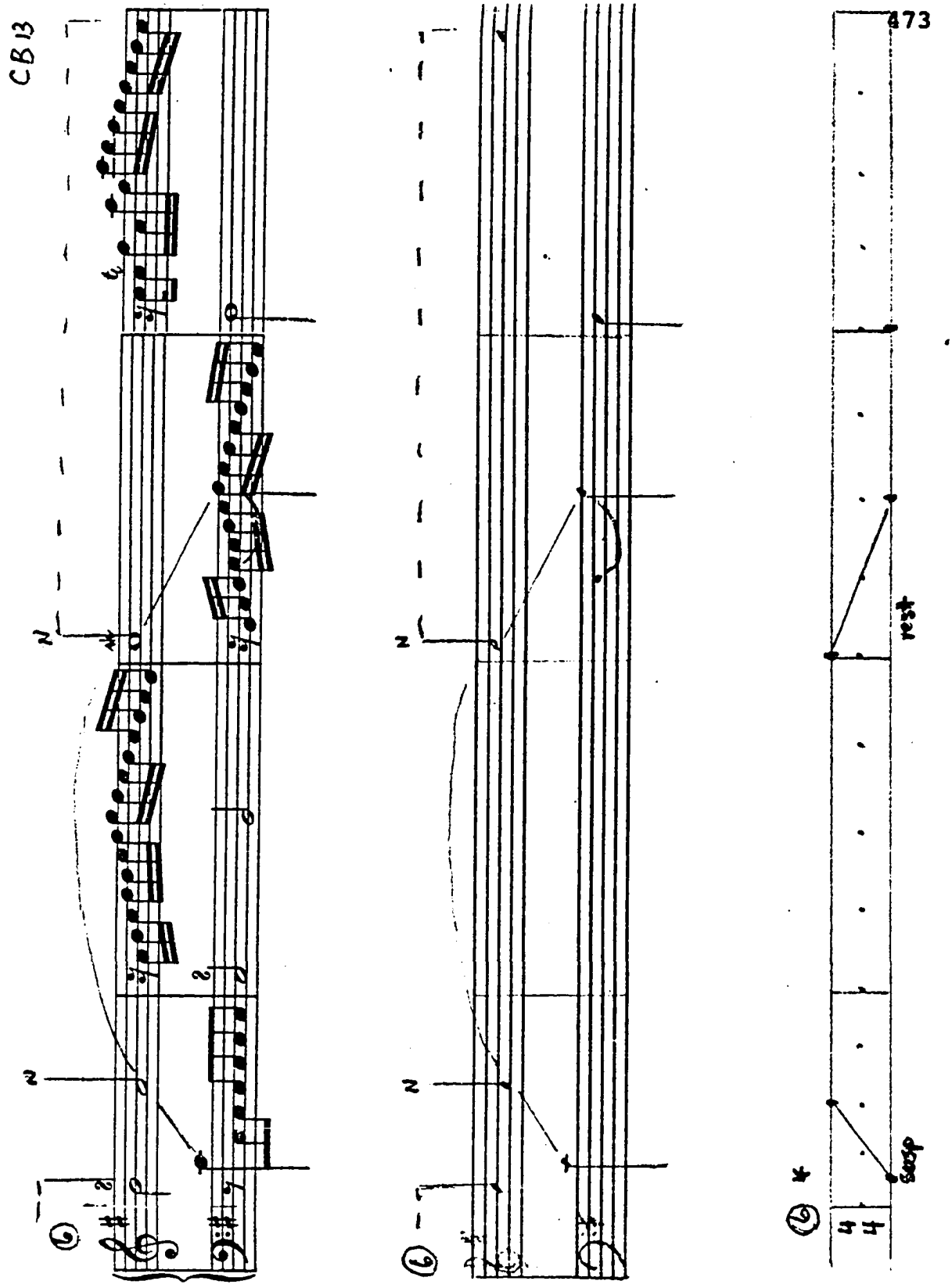

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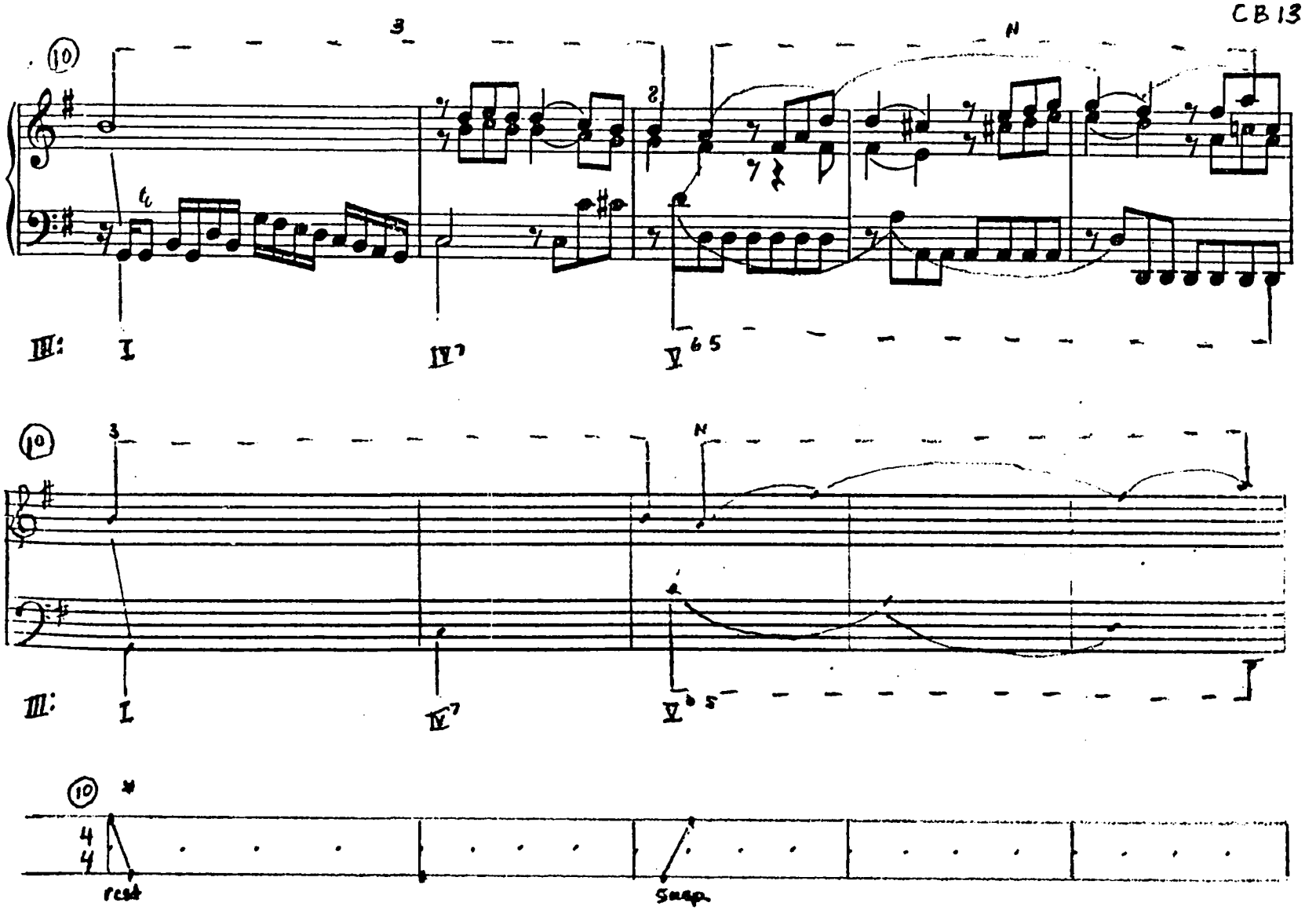

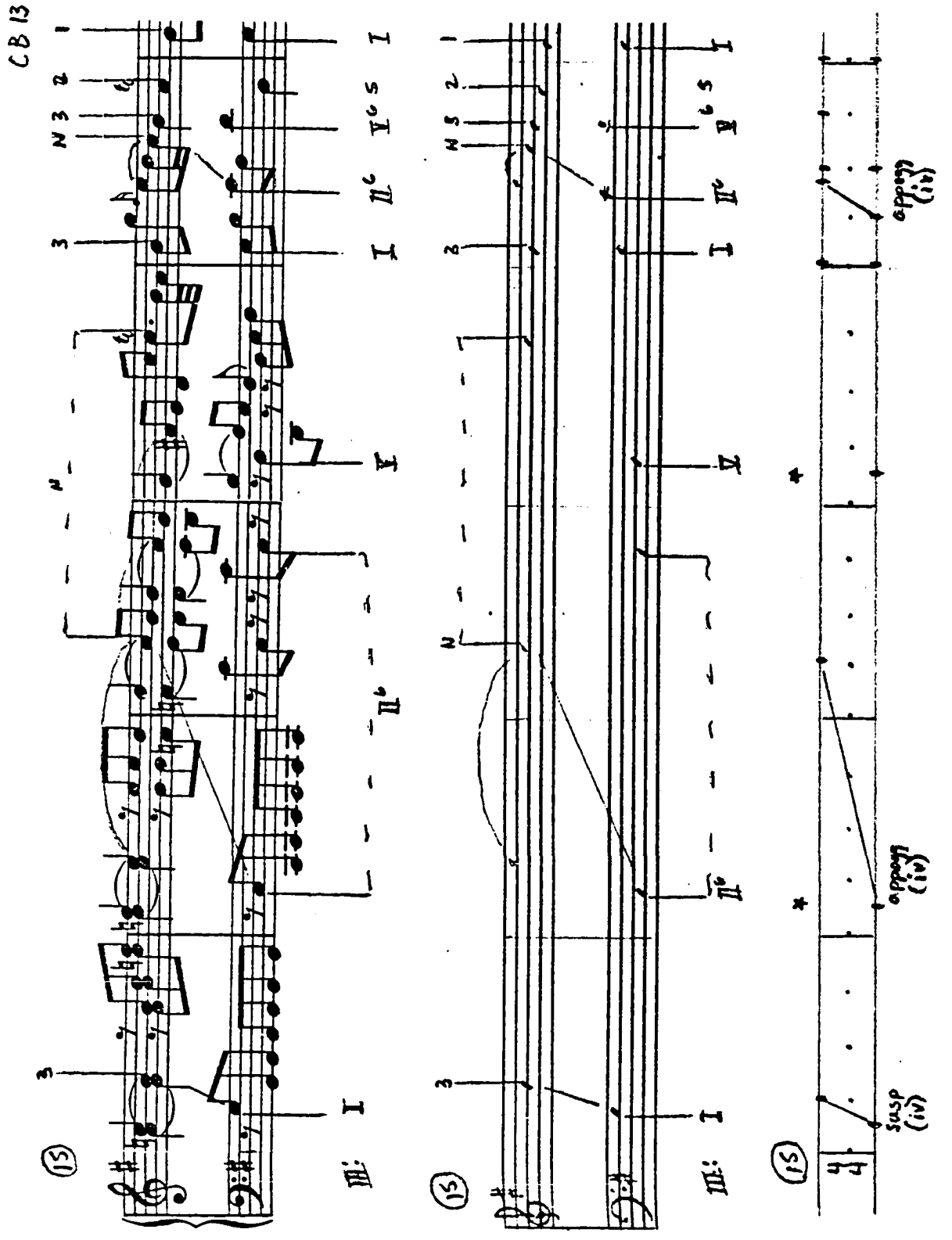

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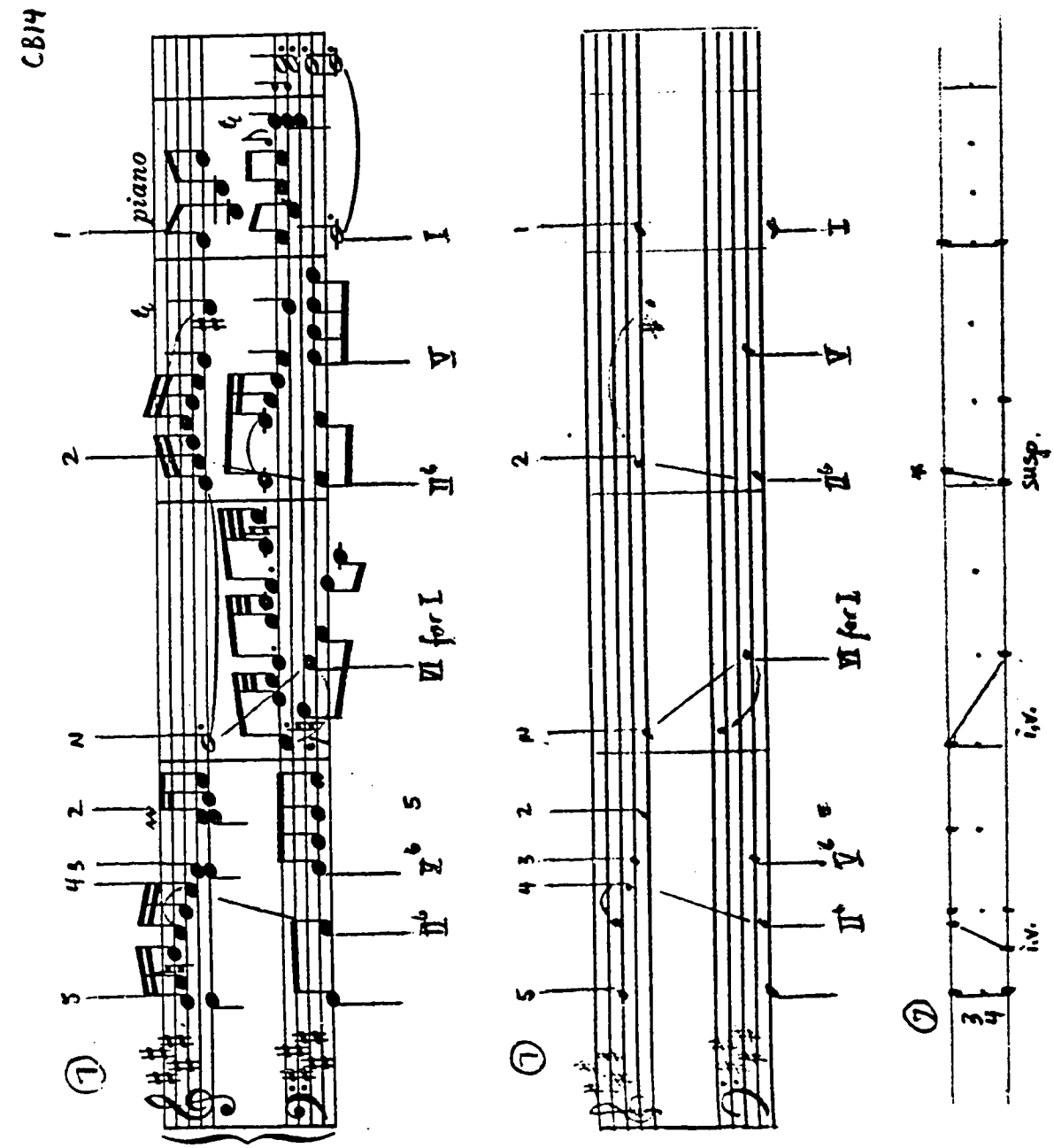

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Württemberg Sonata No. 3, III

CB15

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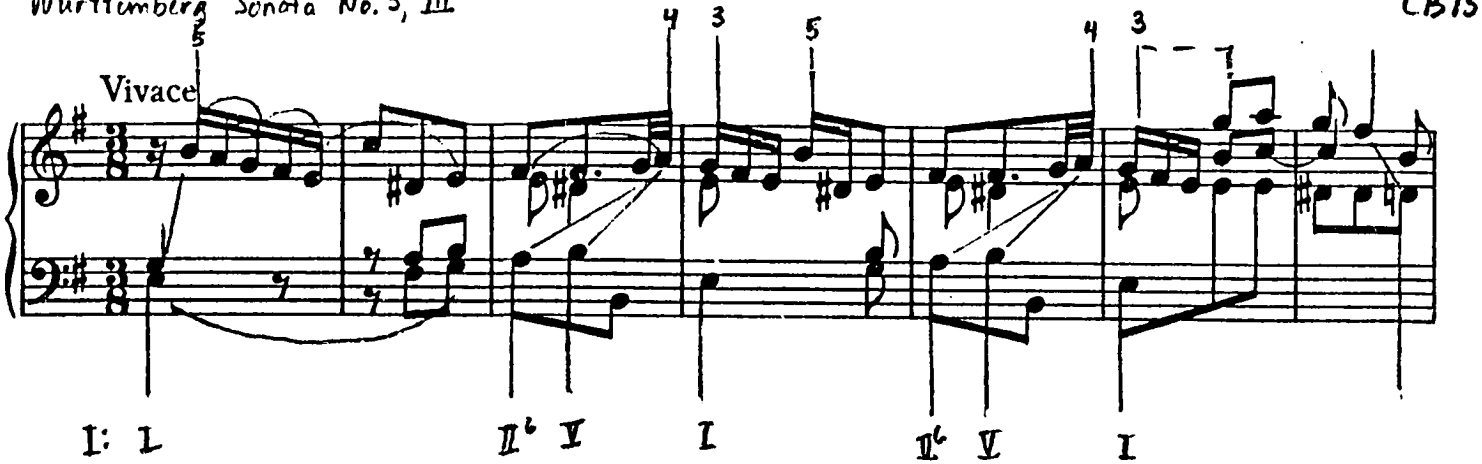

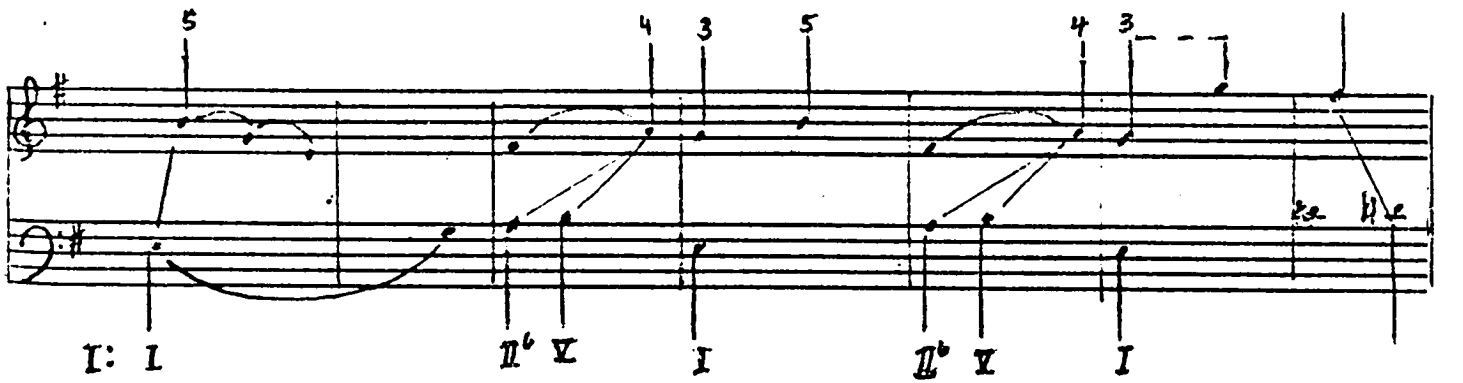

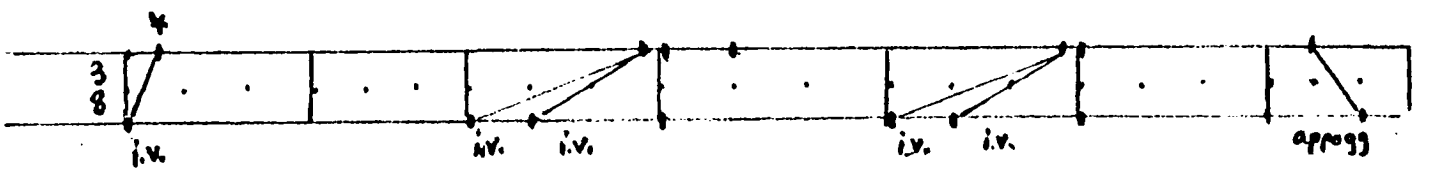

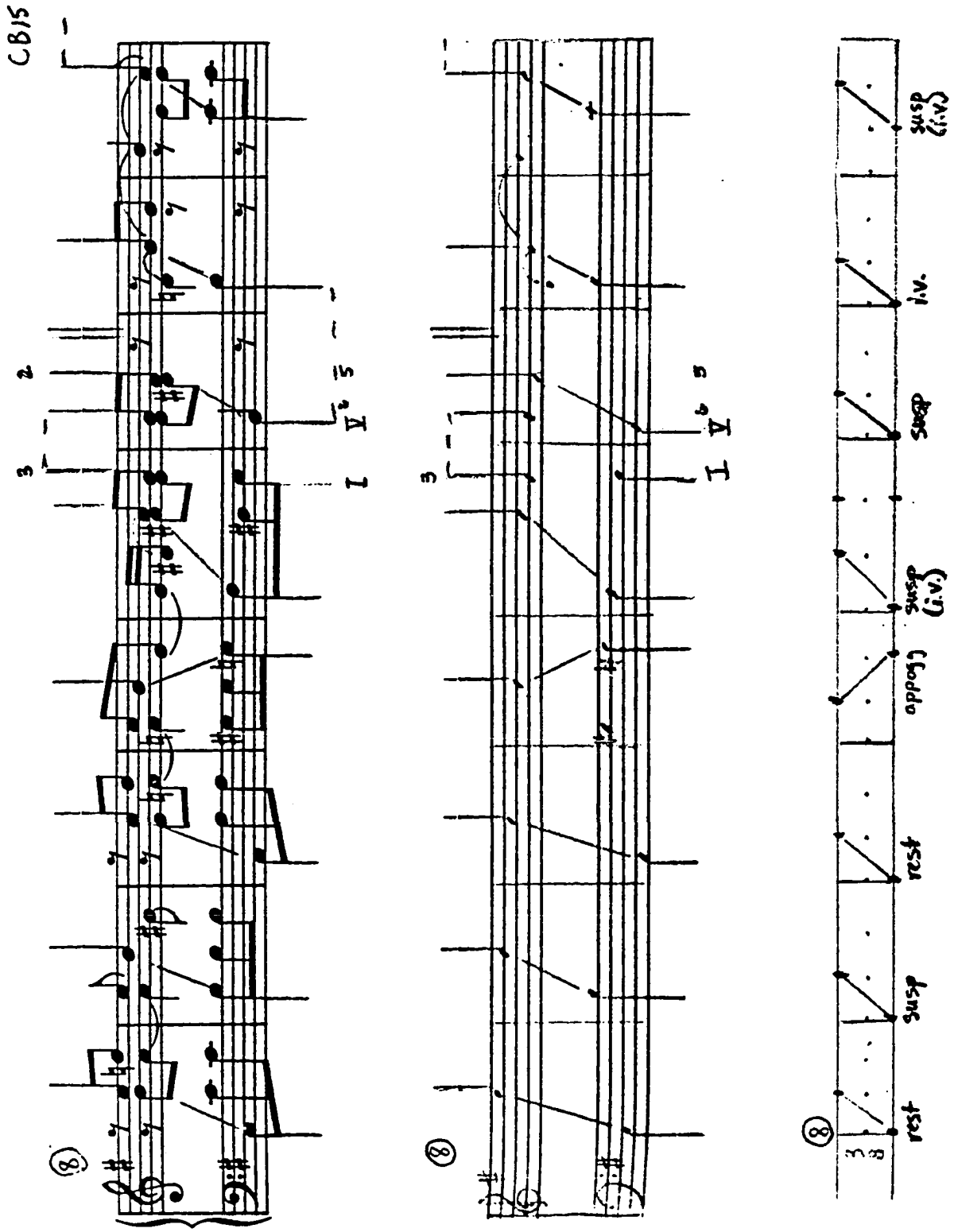

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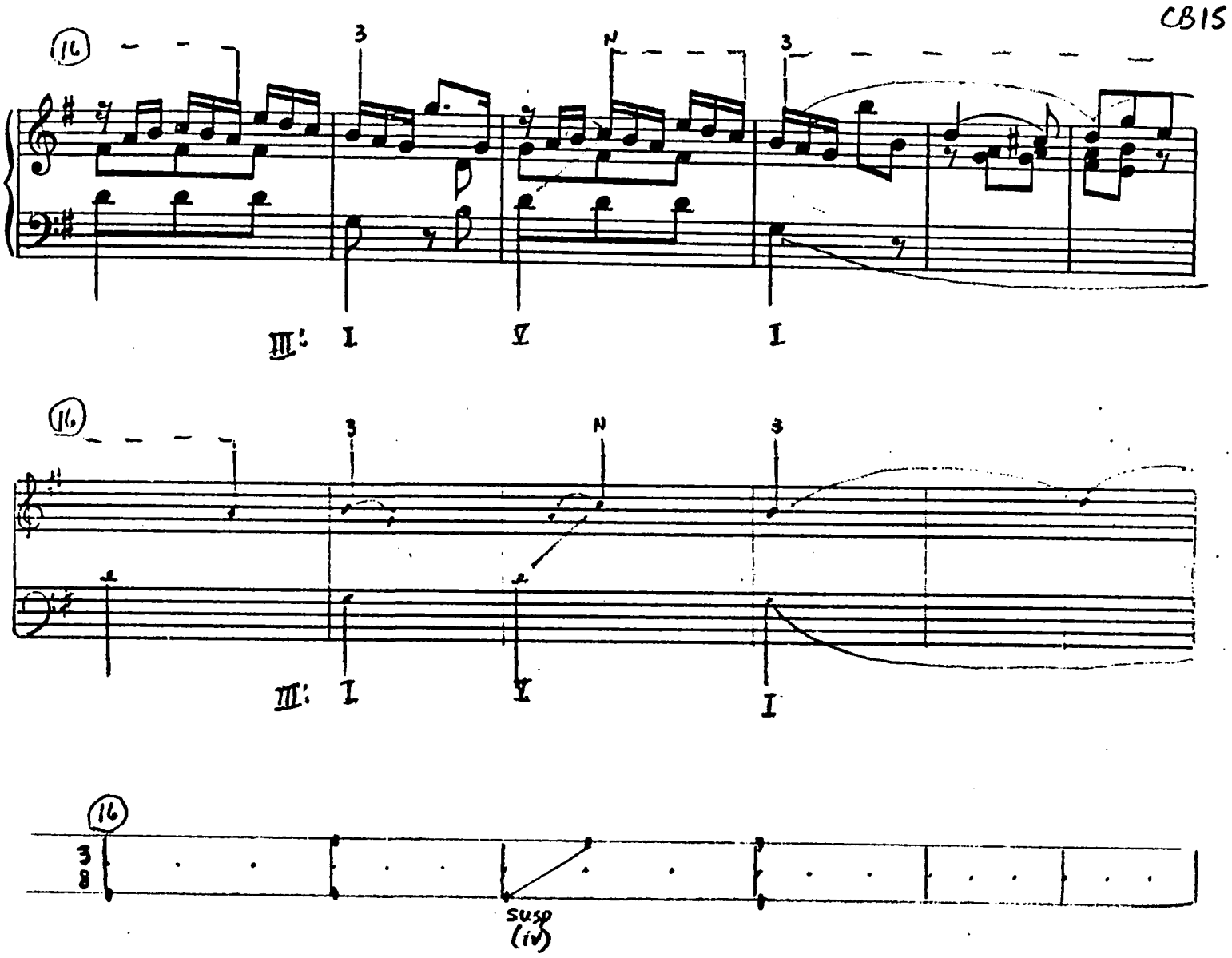

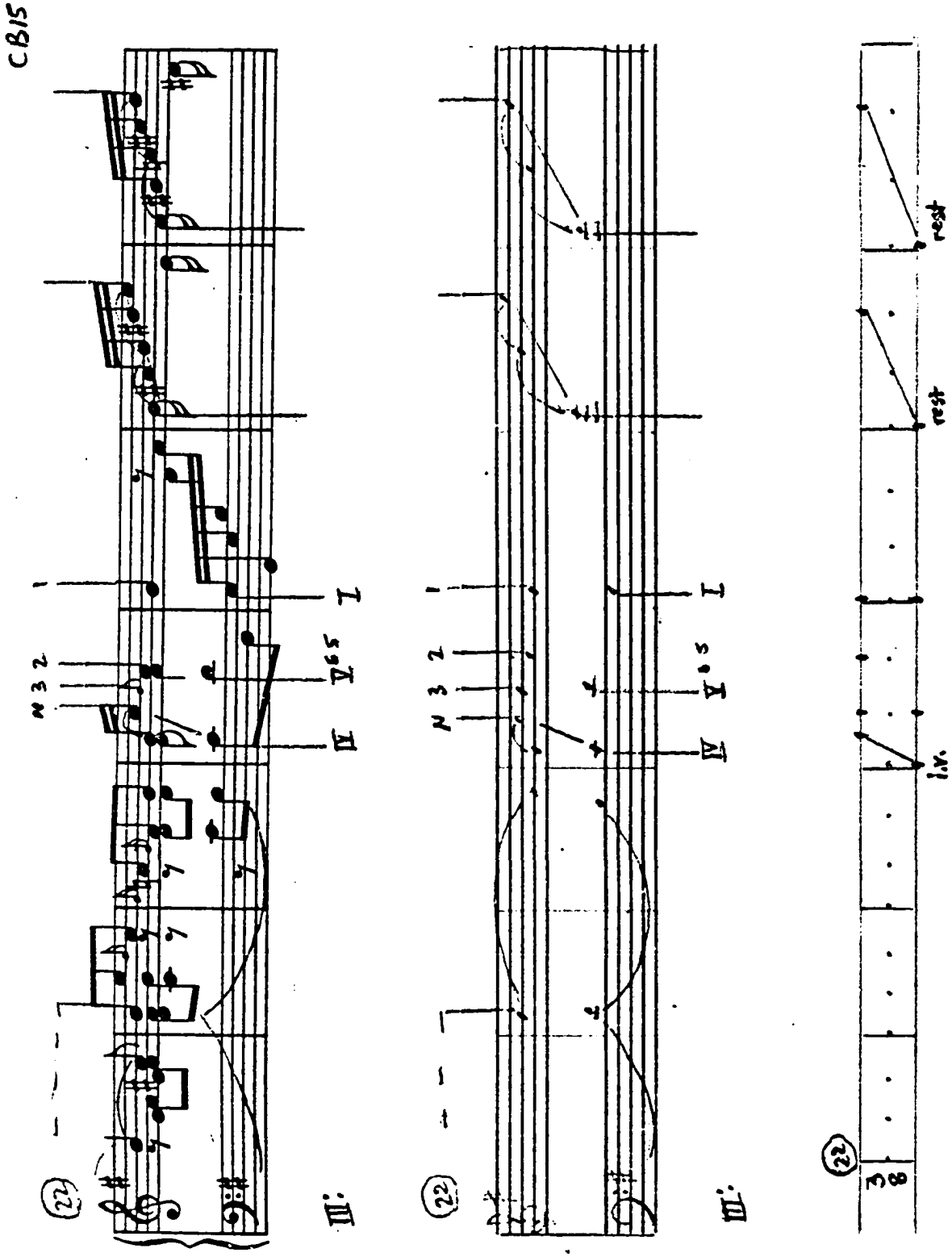

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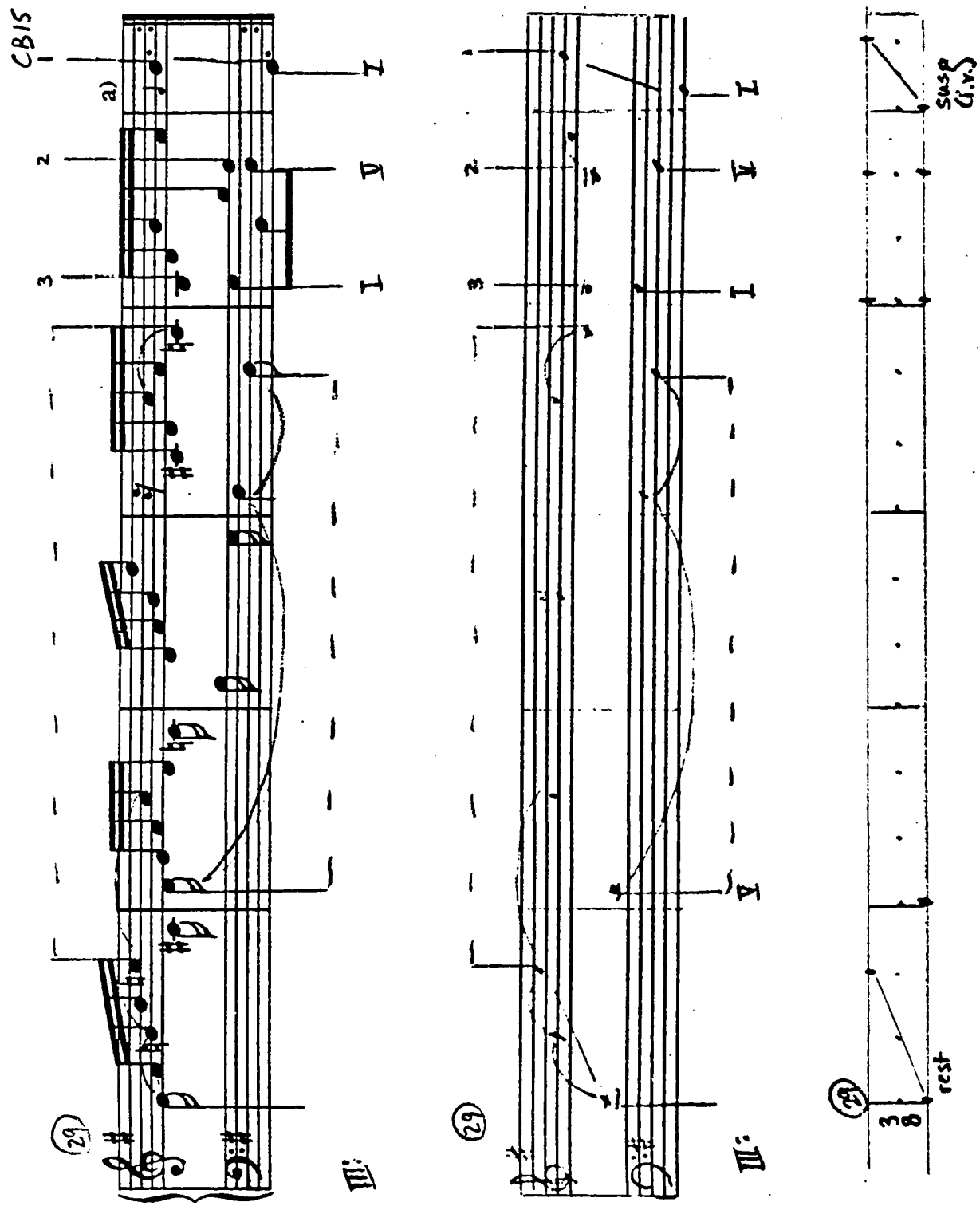

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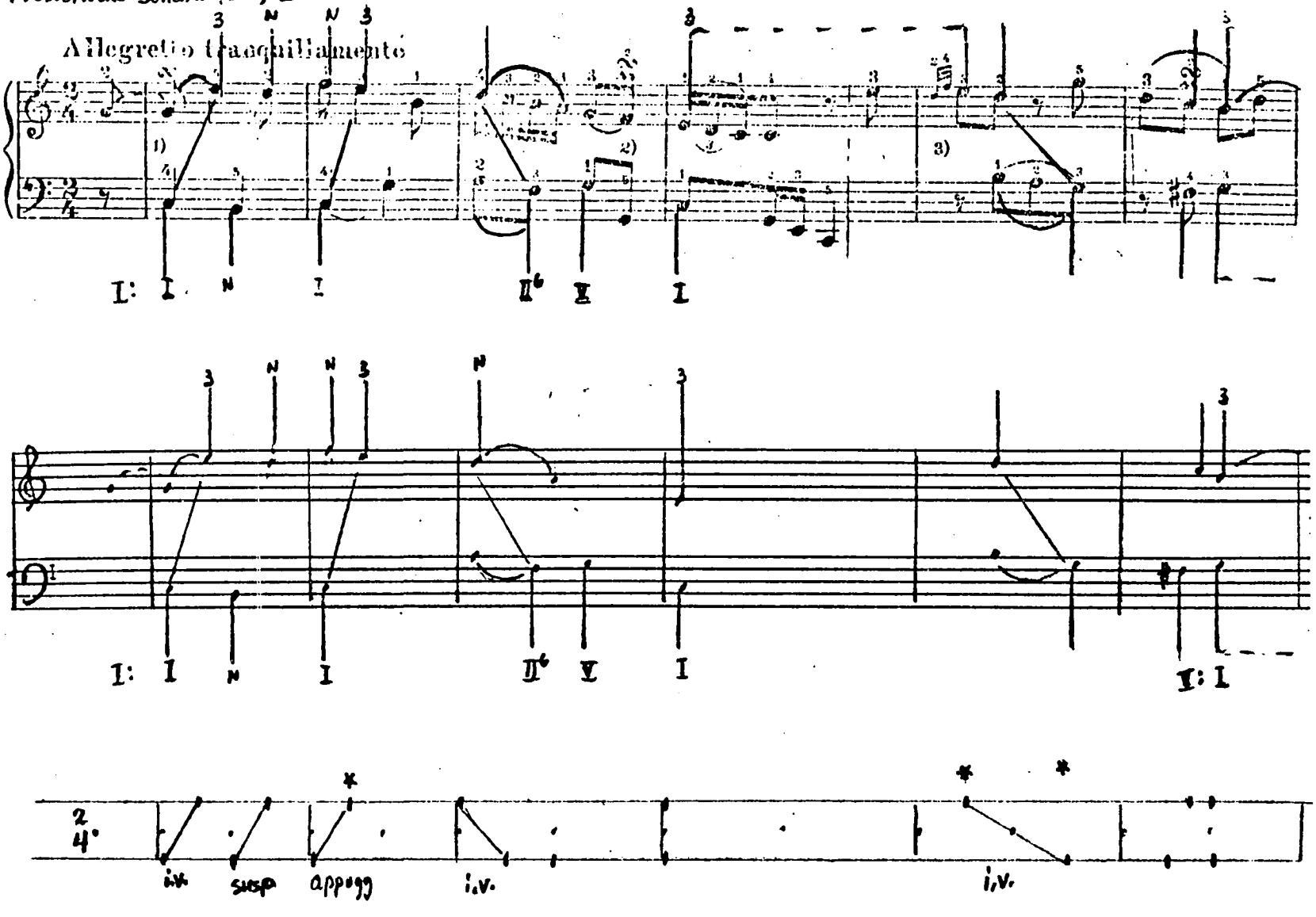
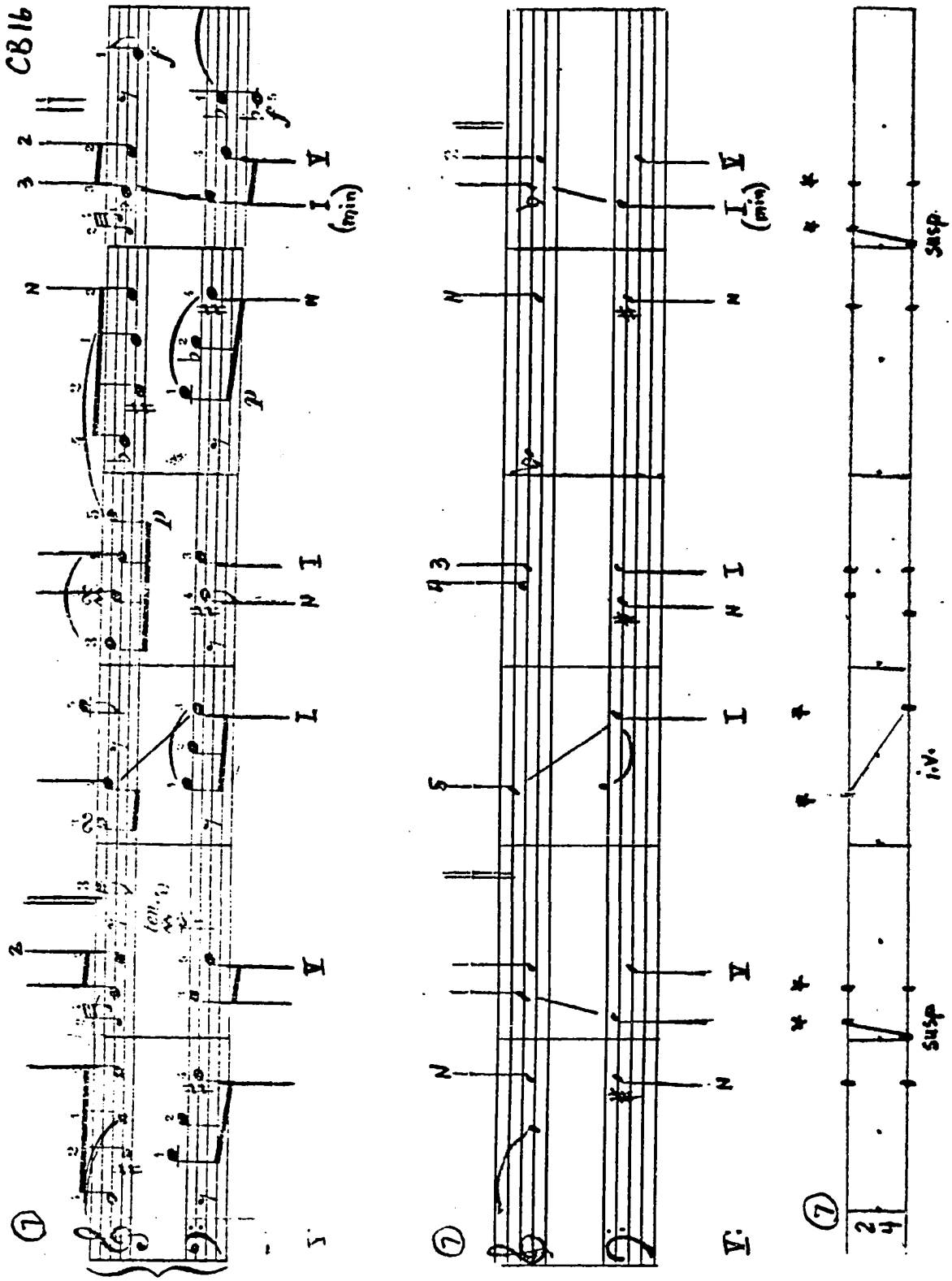
Probestücke Sonata No. 1, I





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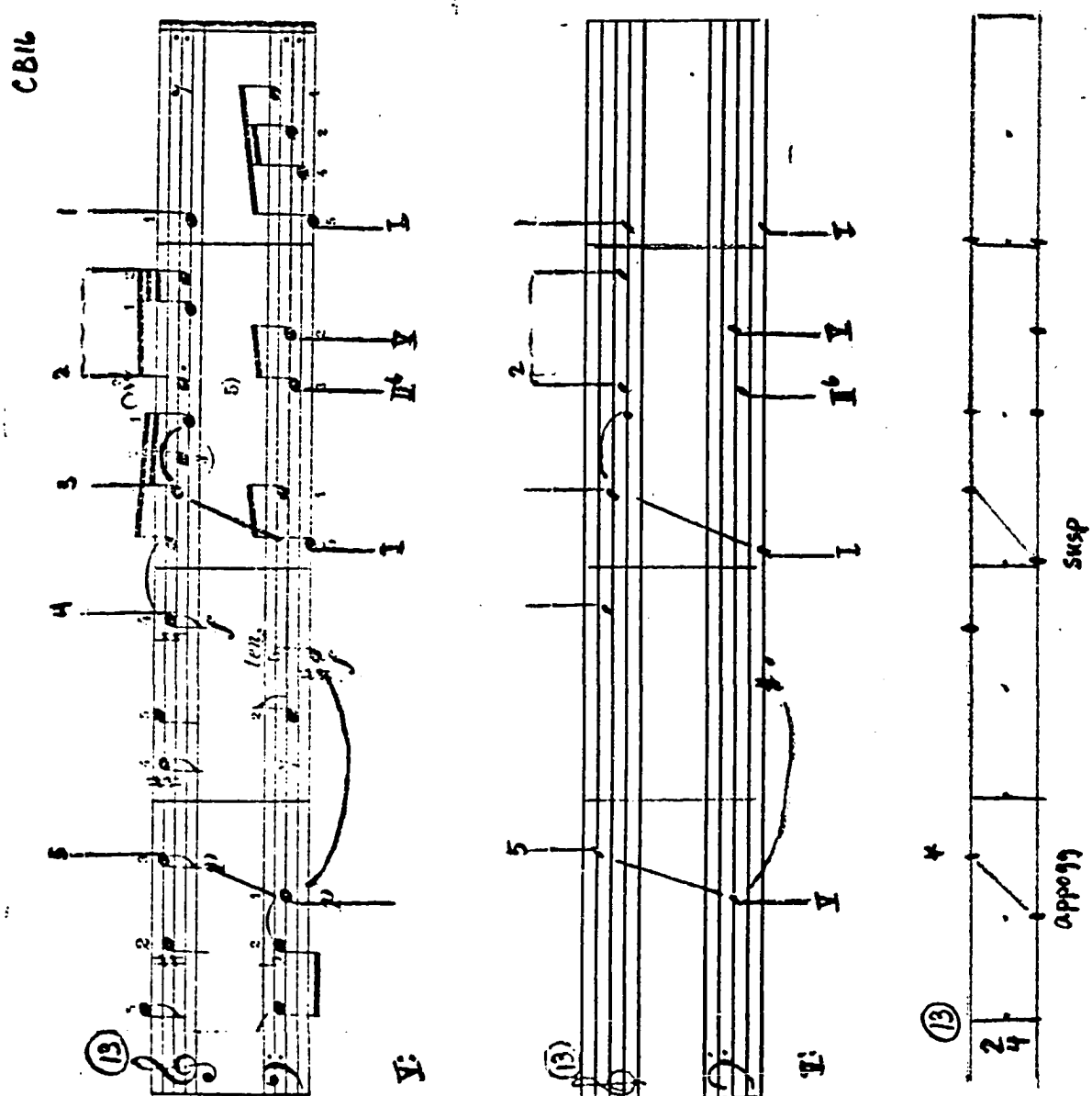

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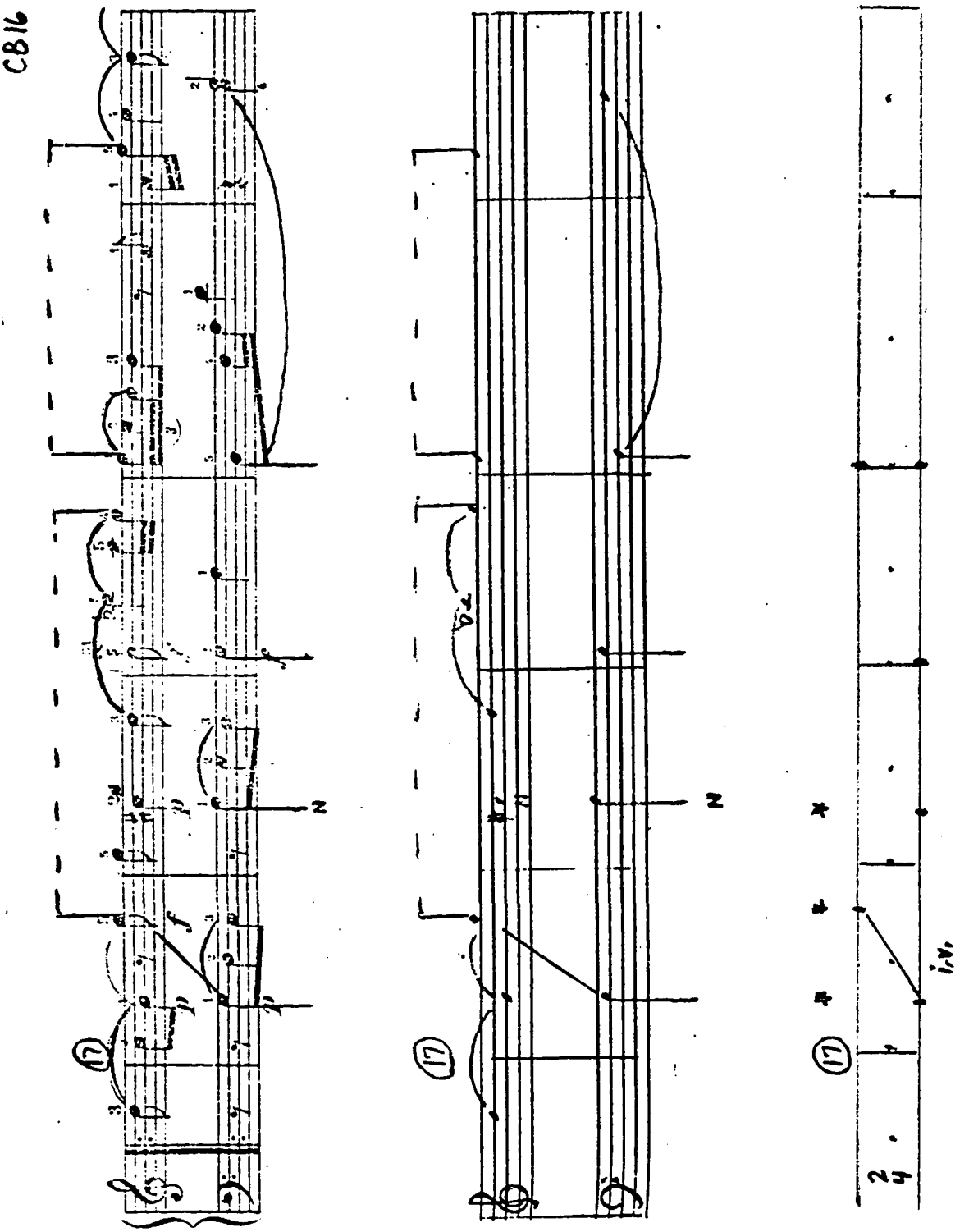

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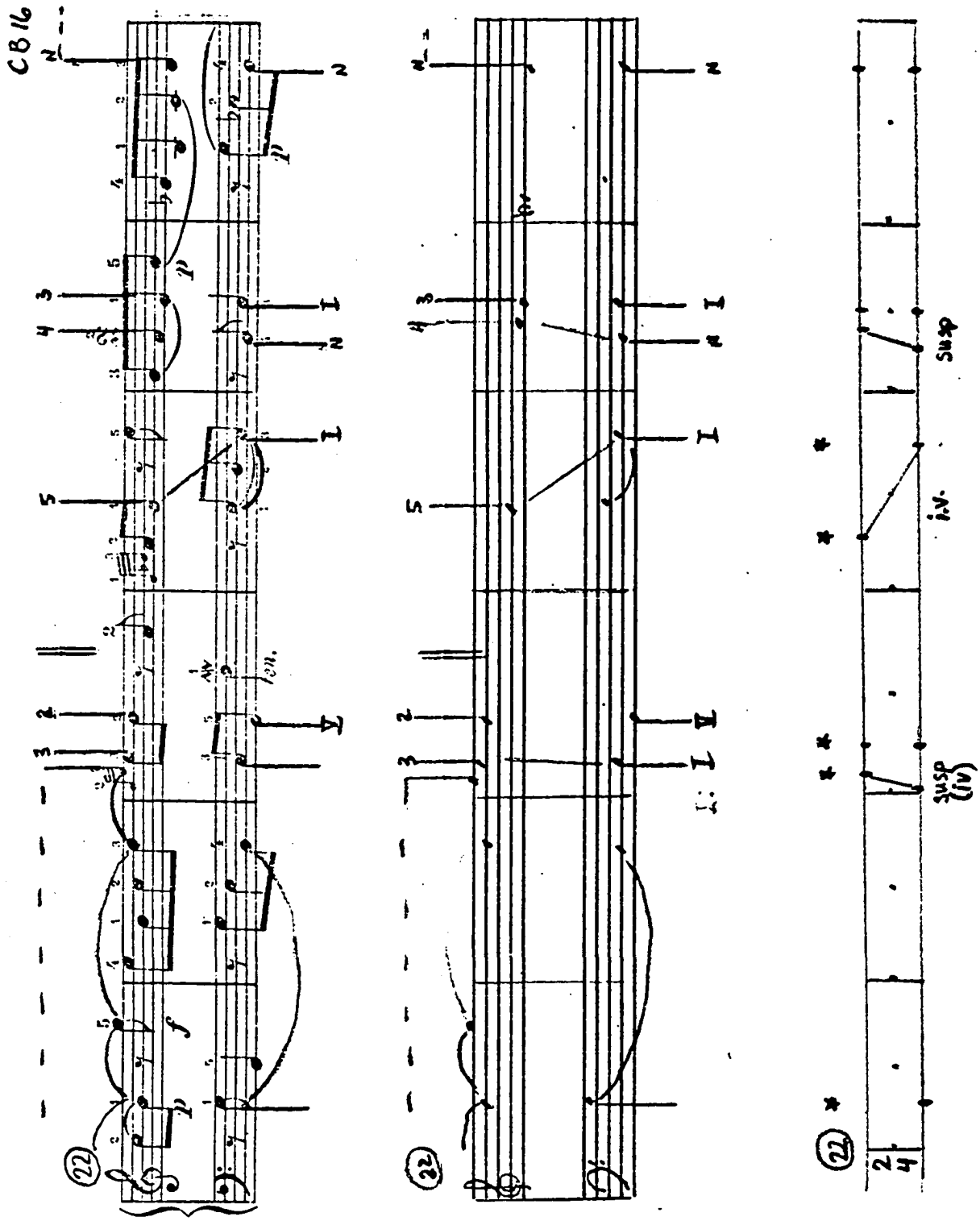

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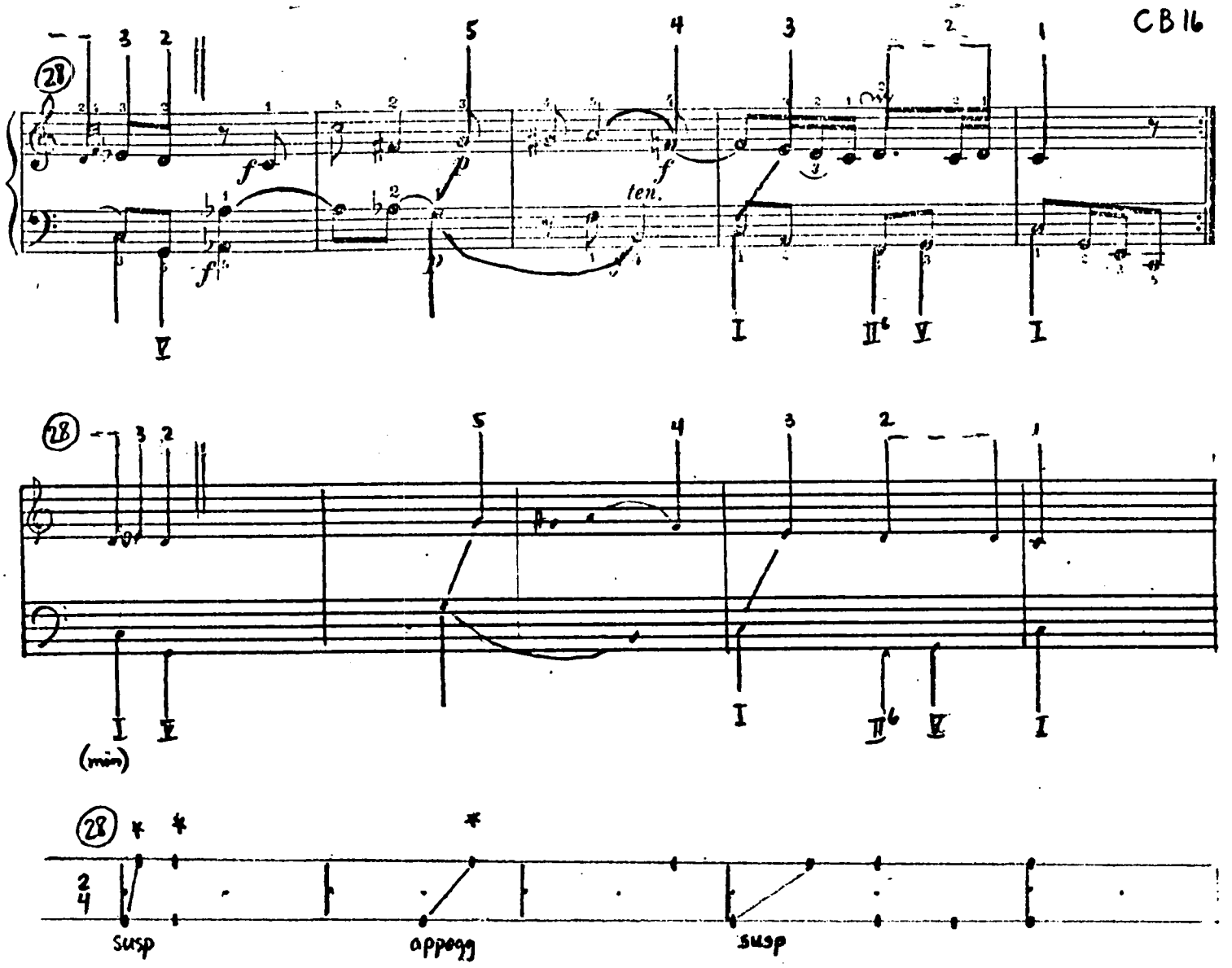

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Probestücke Sonata No. I, II

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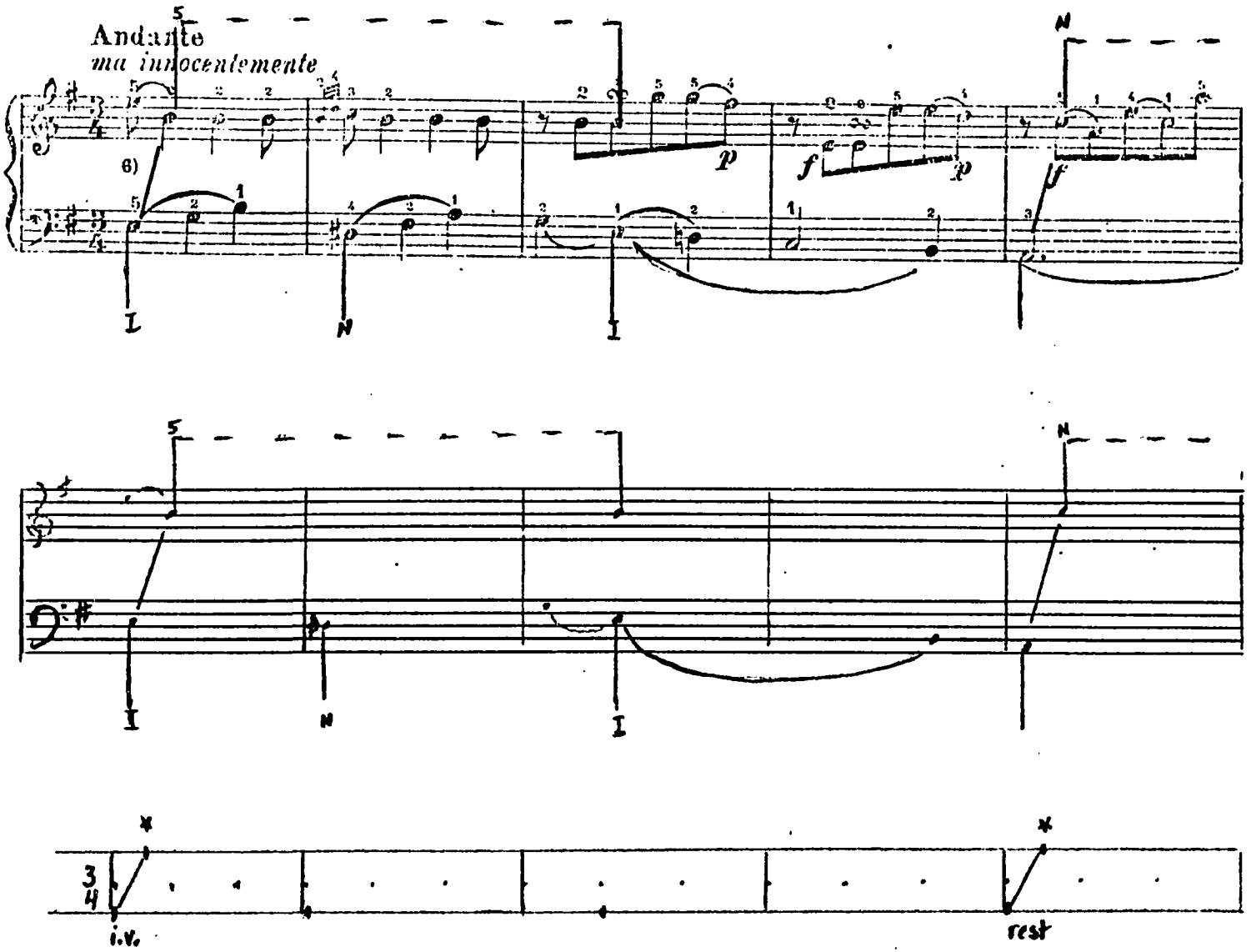

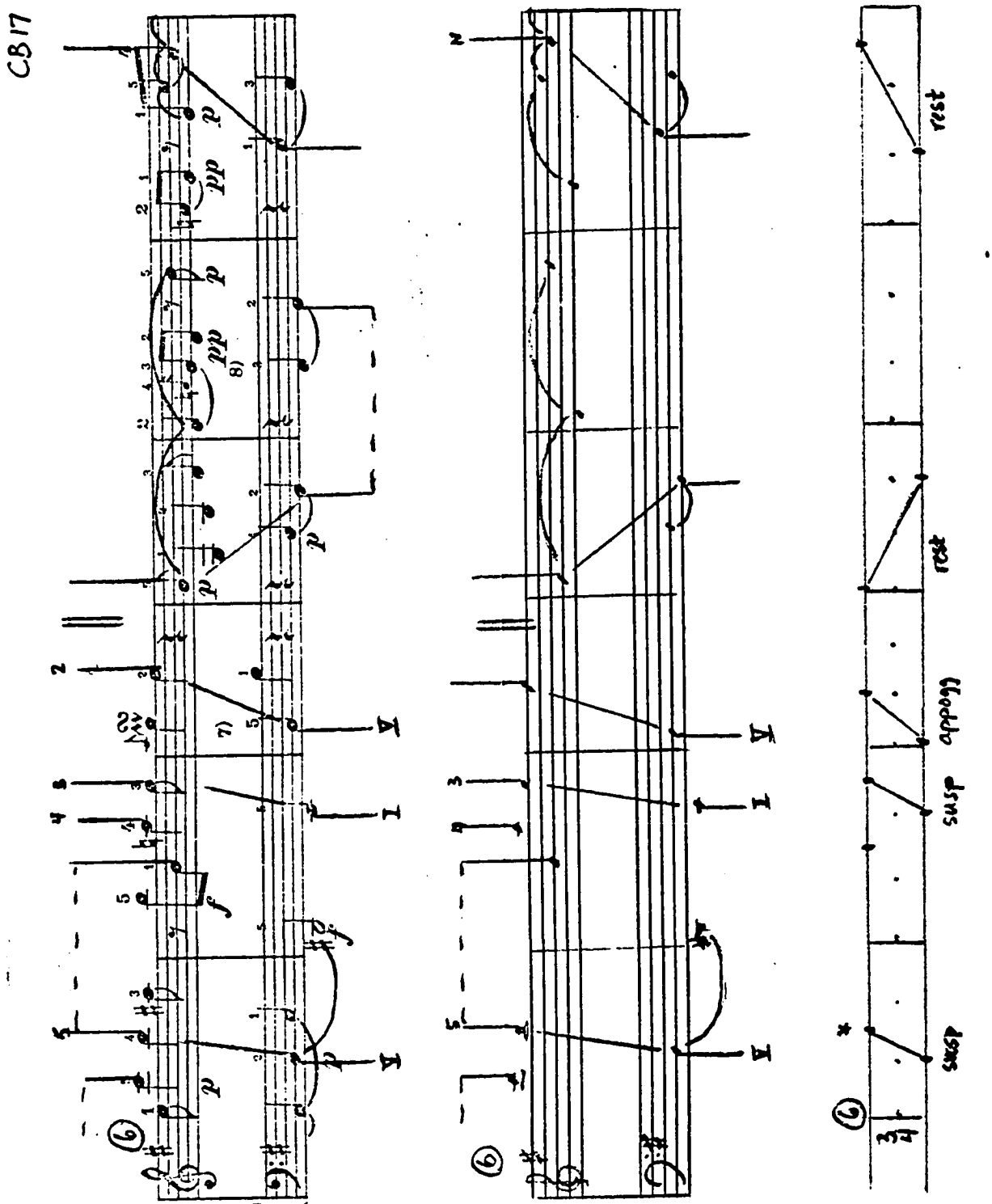

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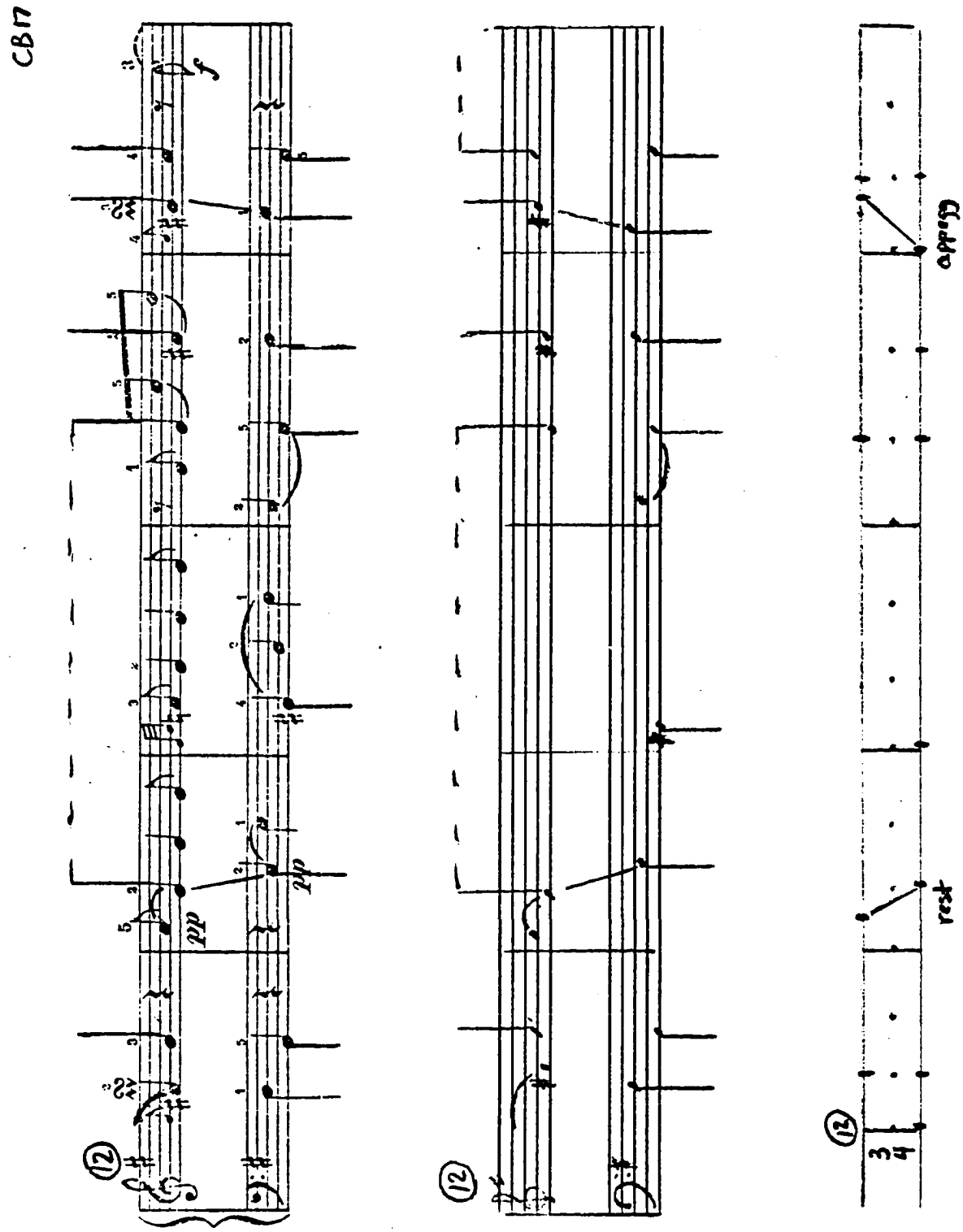

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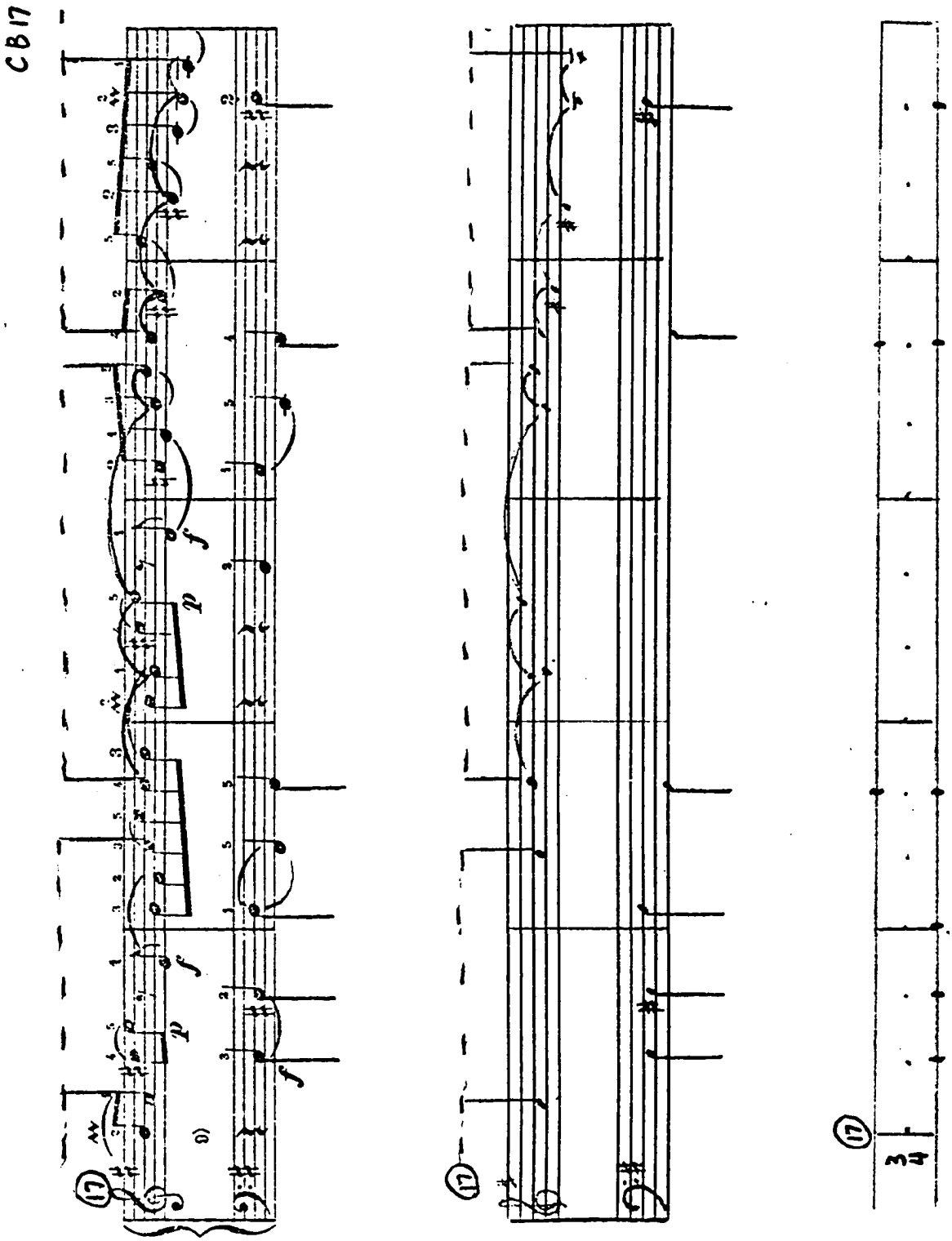

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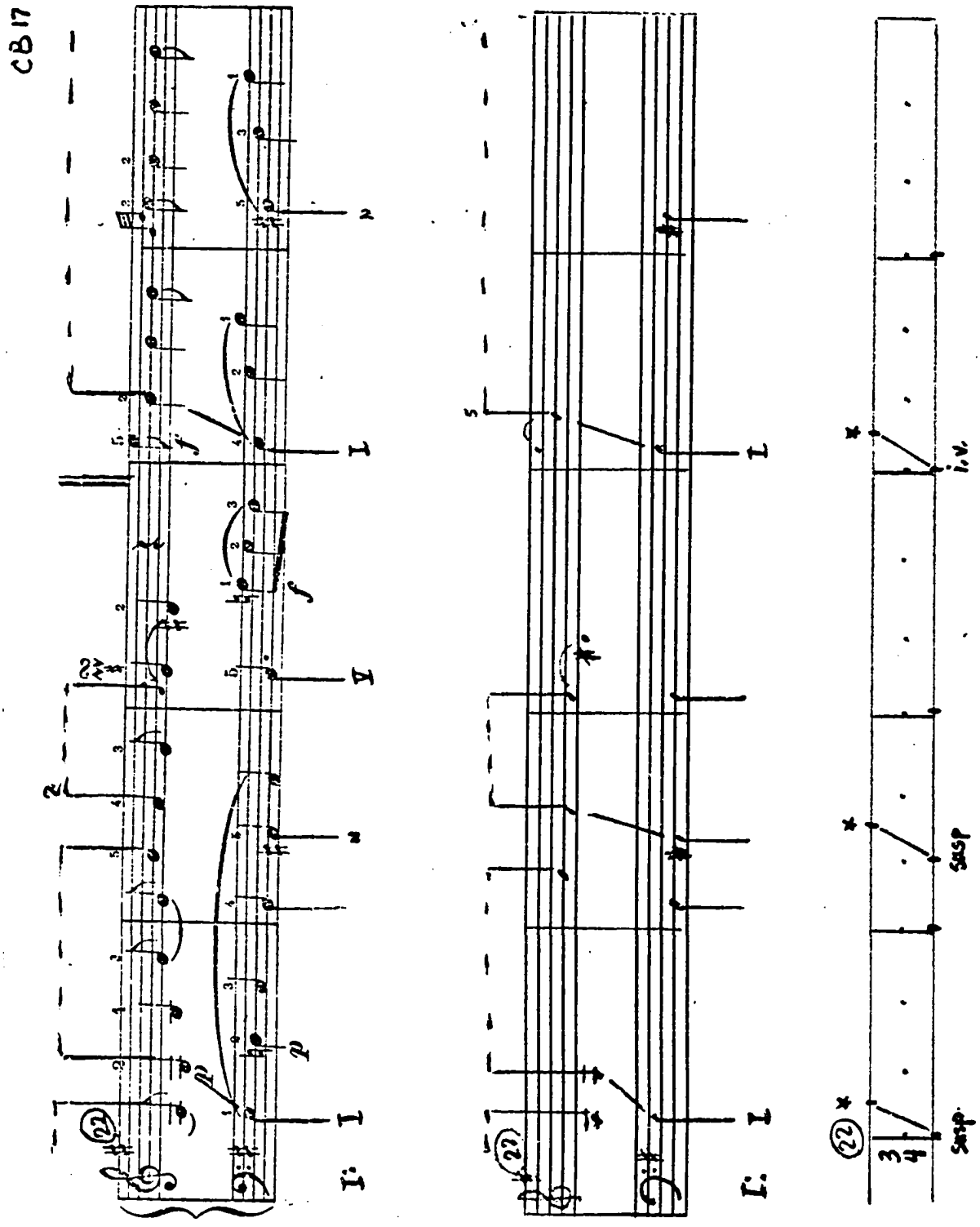

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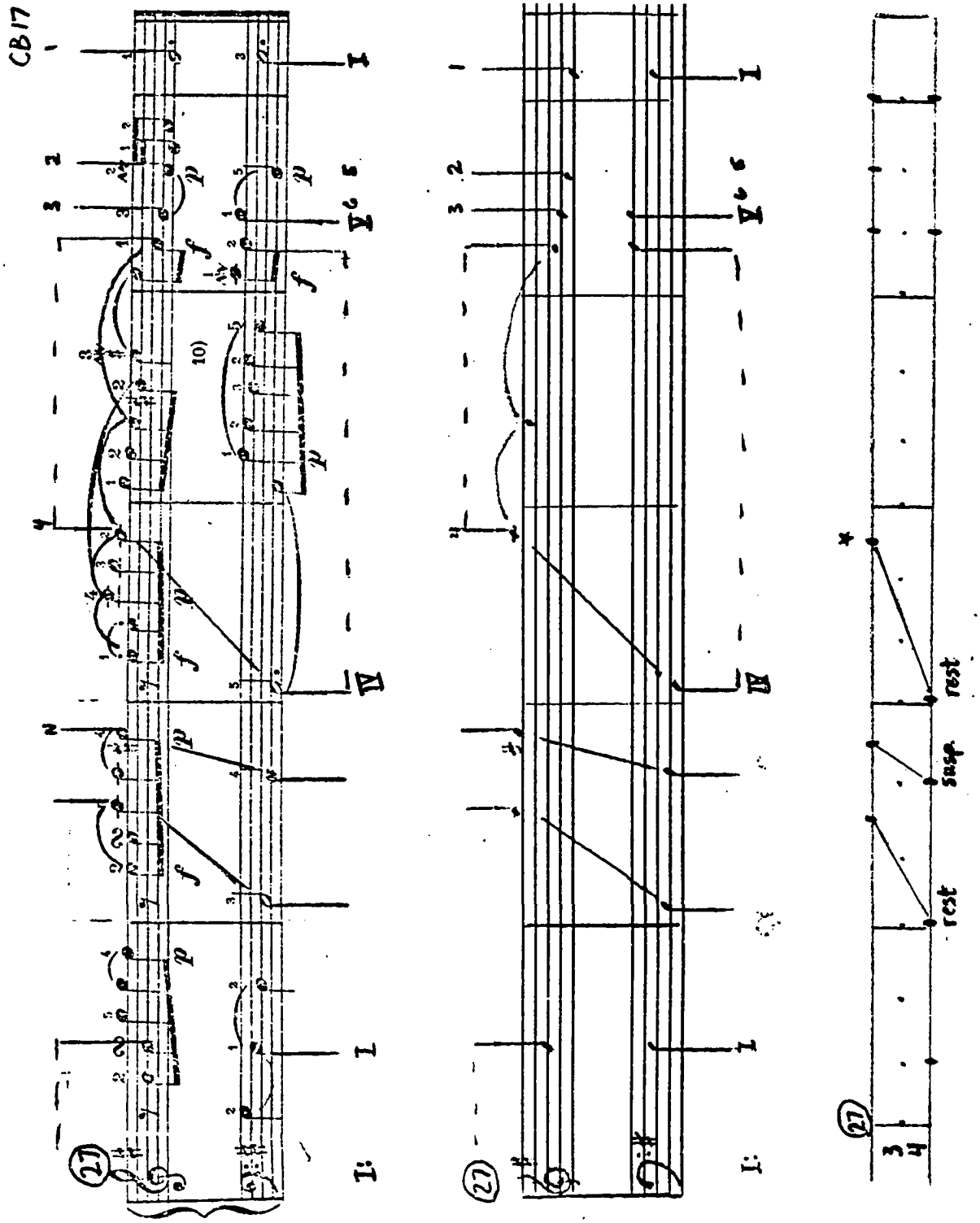

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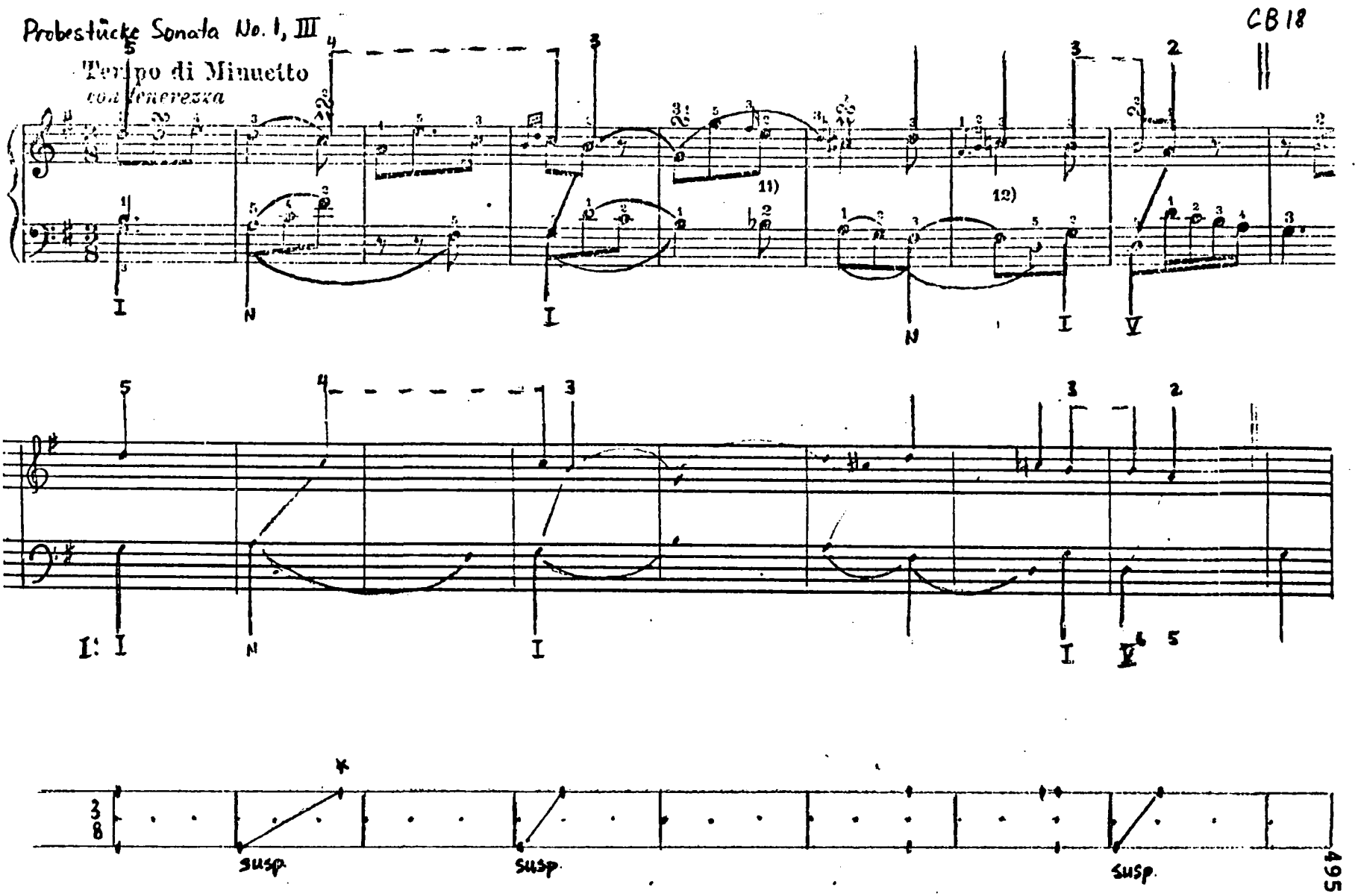

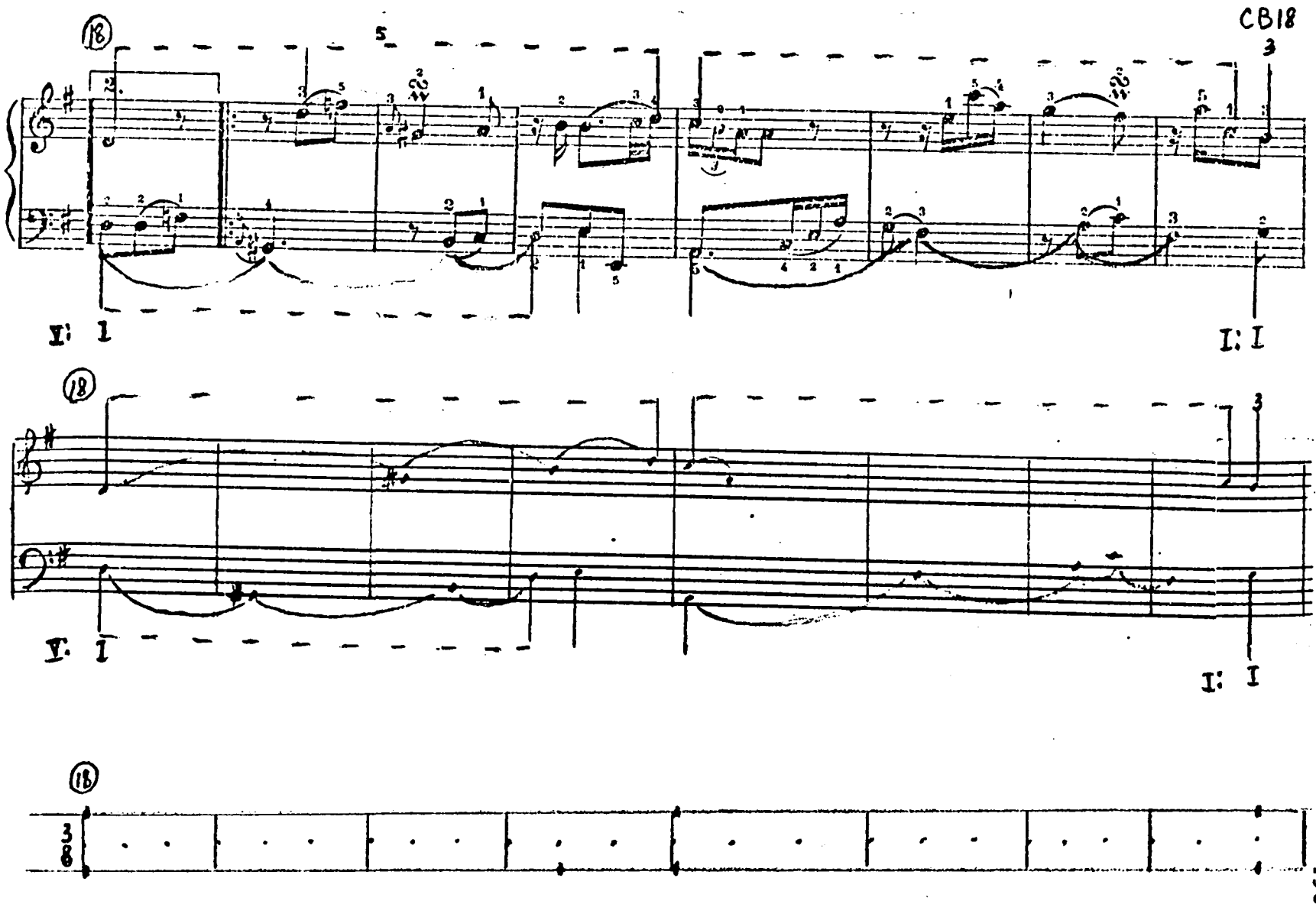

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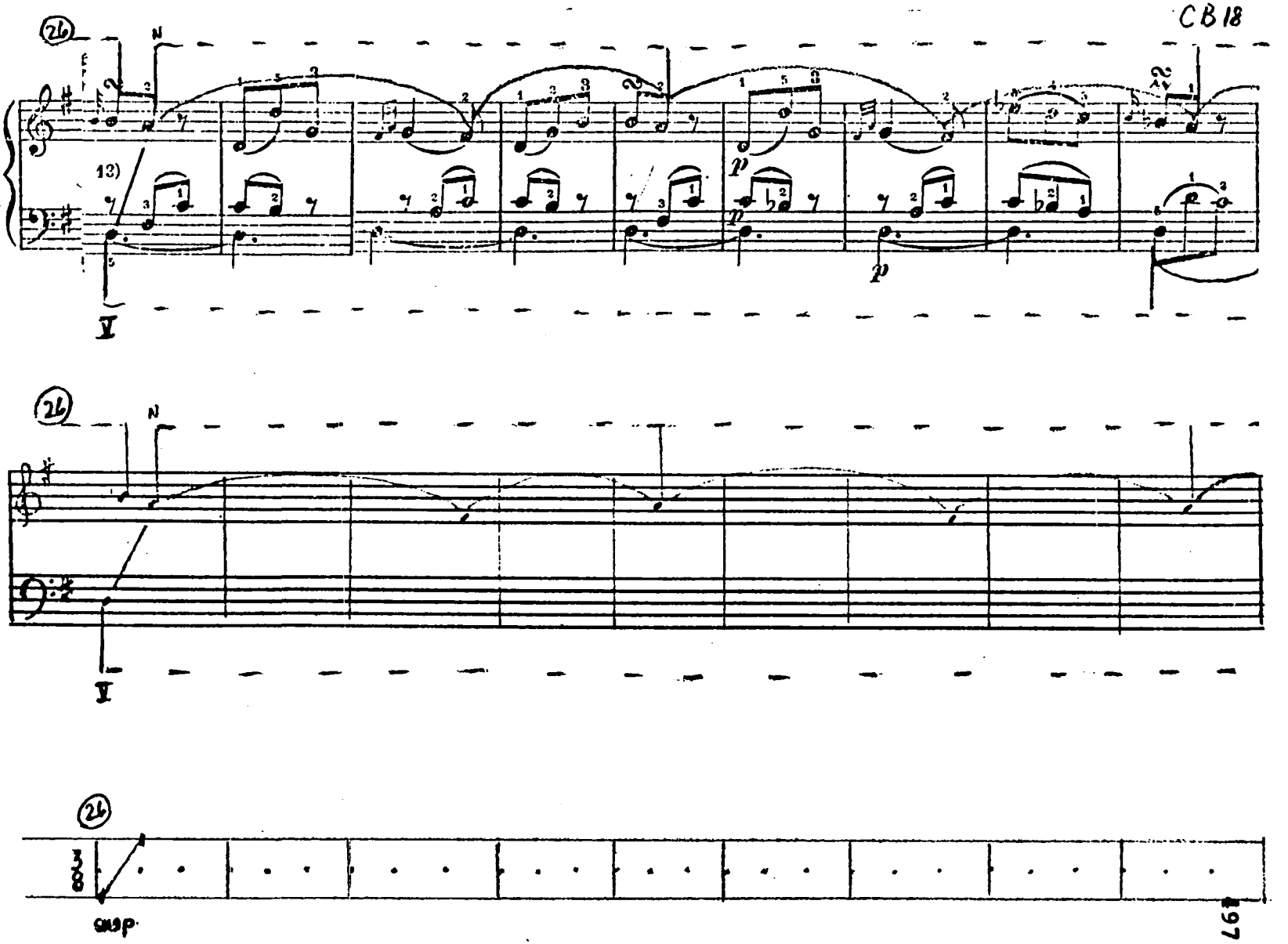

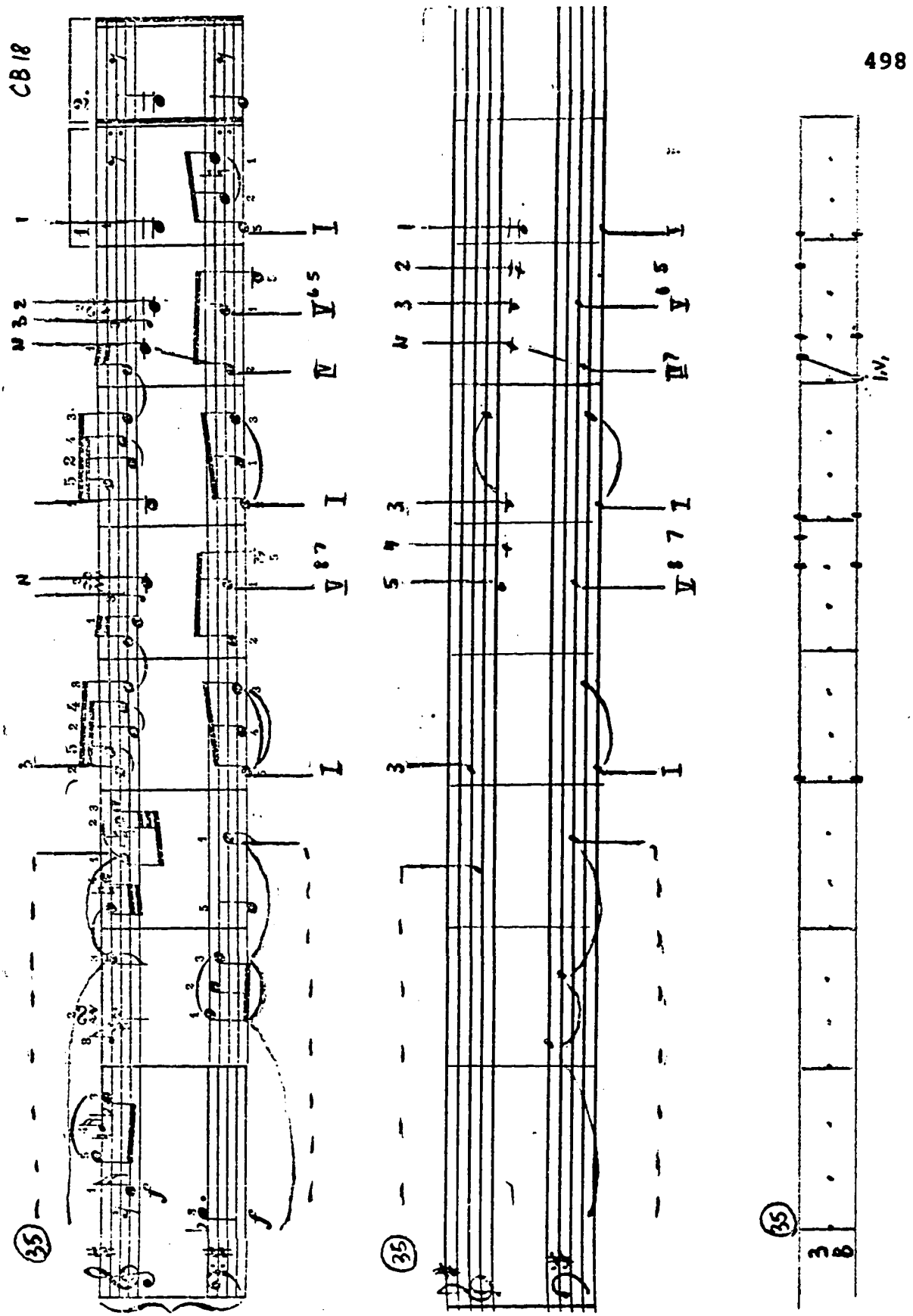

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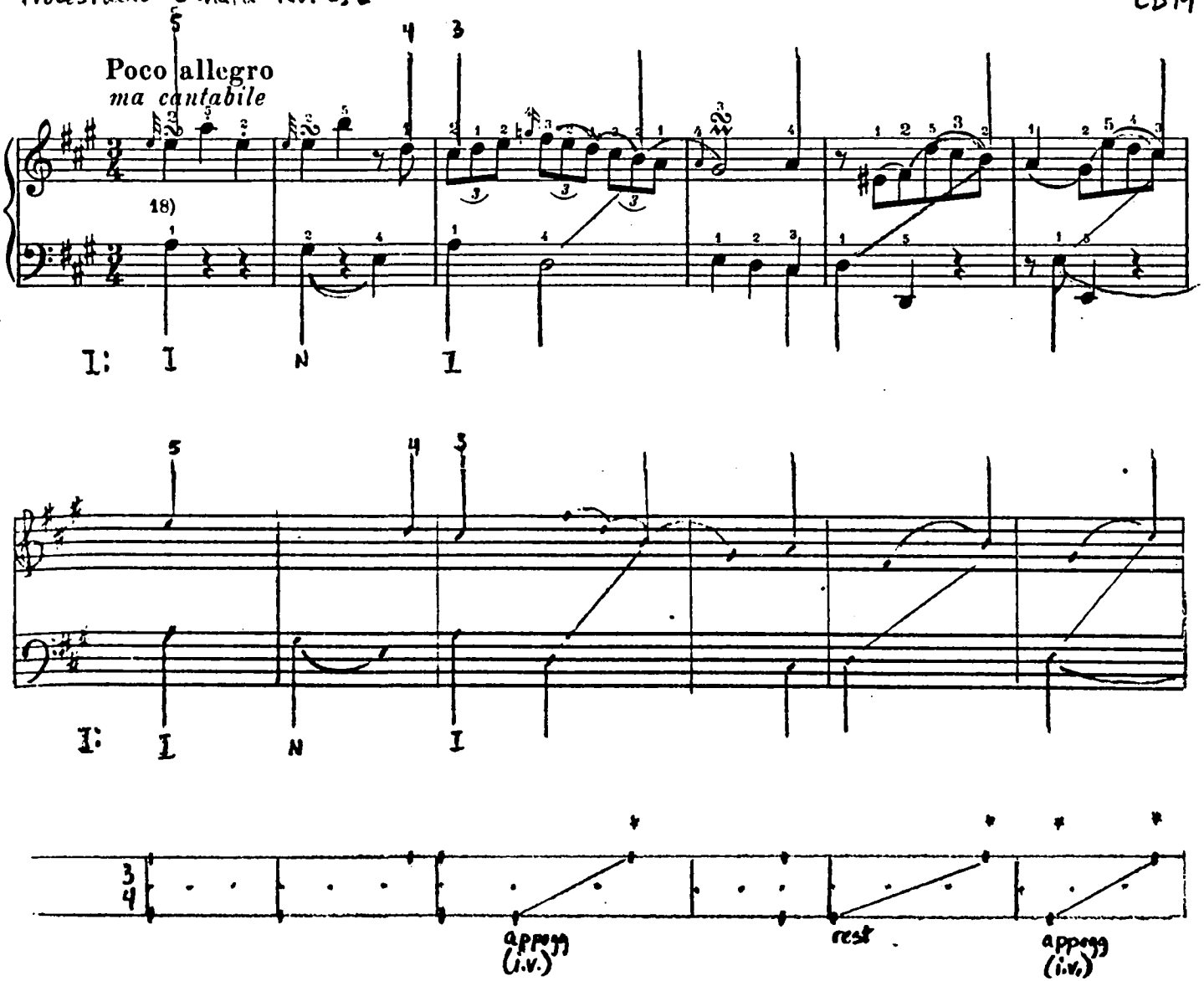
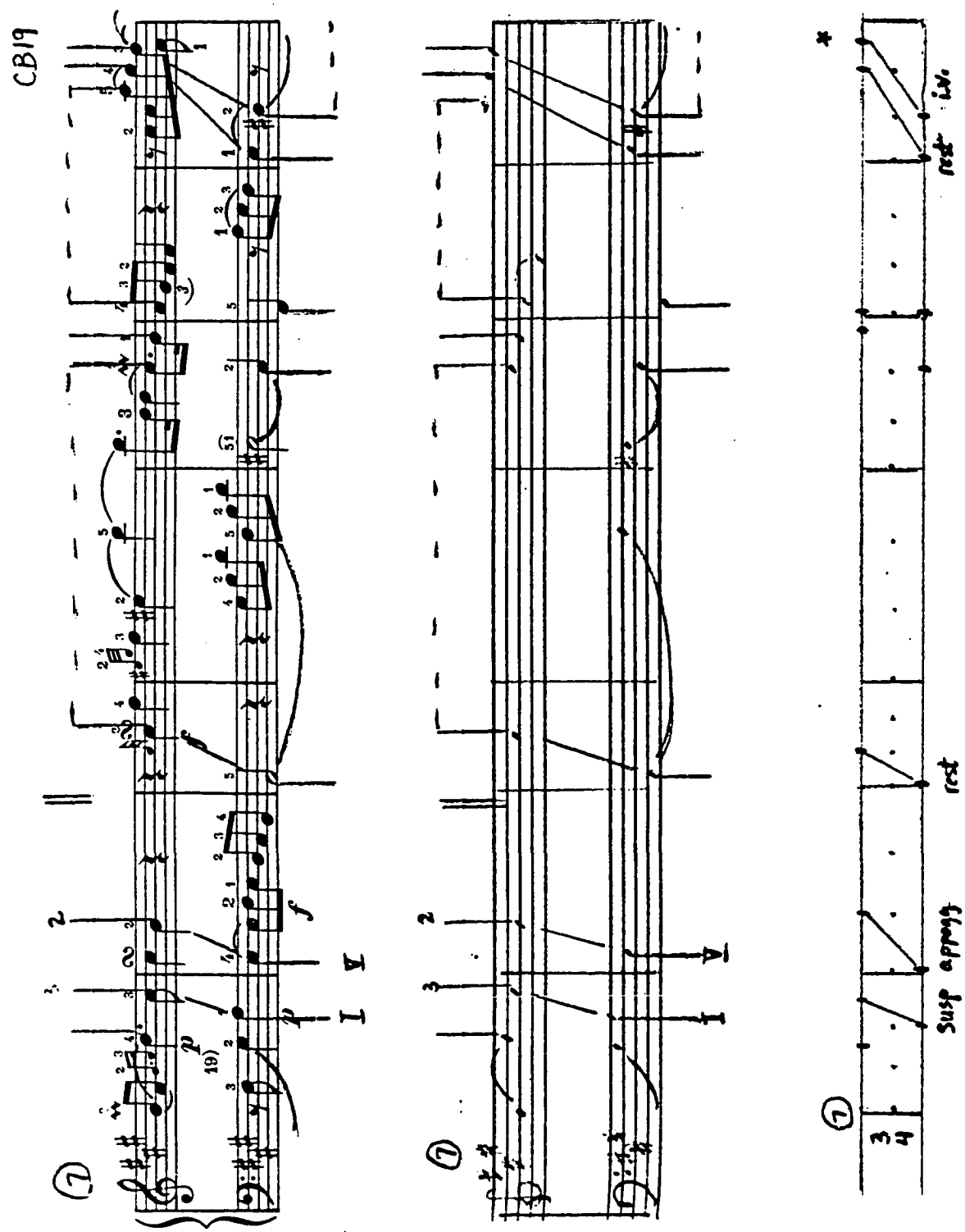
Probestücke Sonata No. 3, I

CB 19





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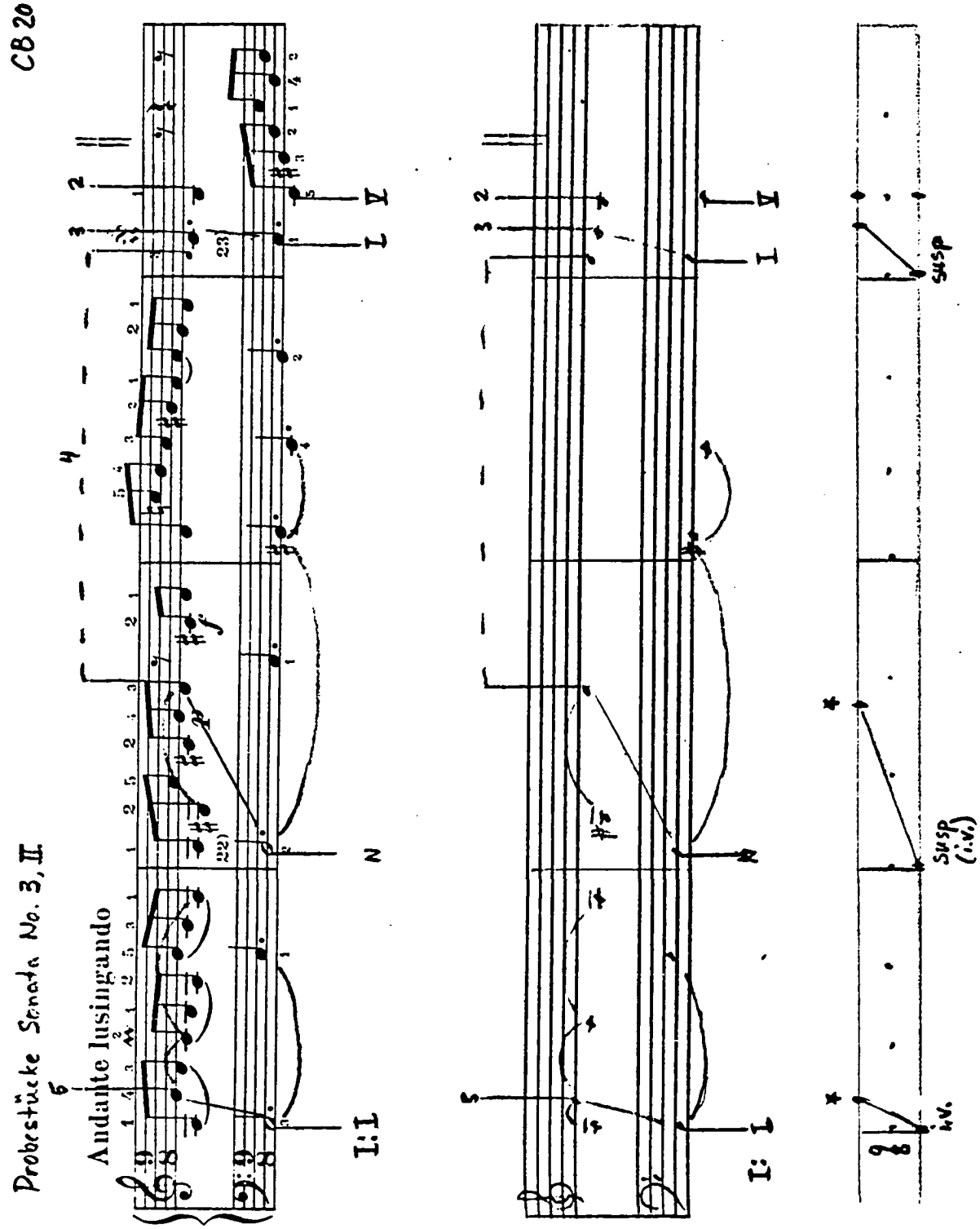

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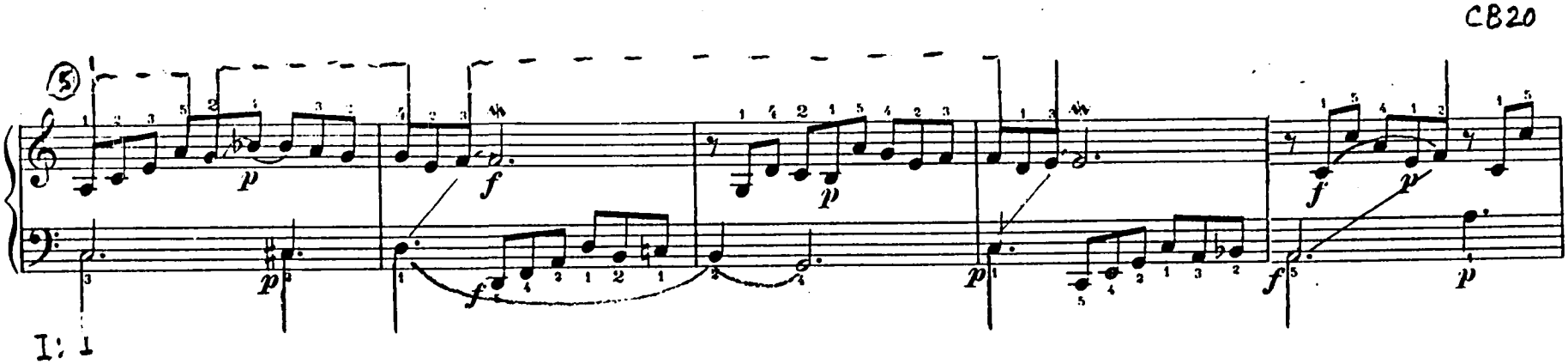

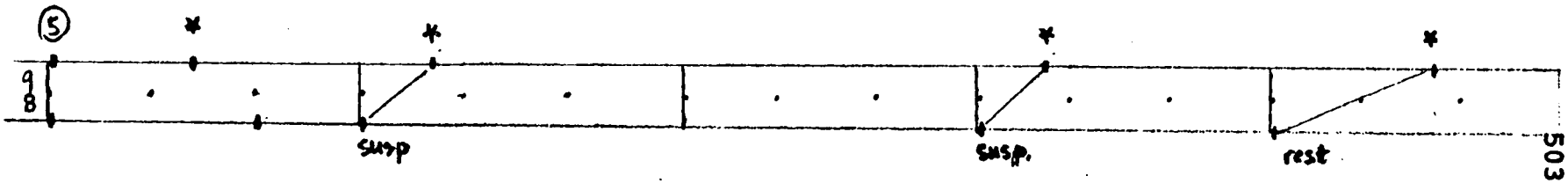

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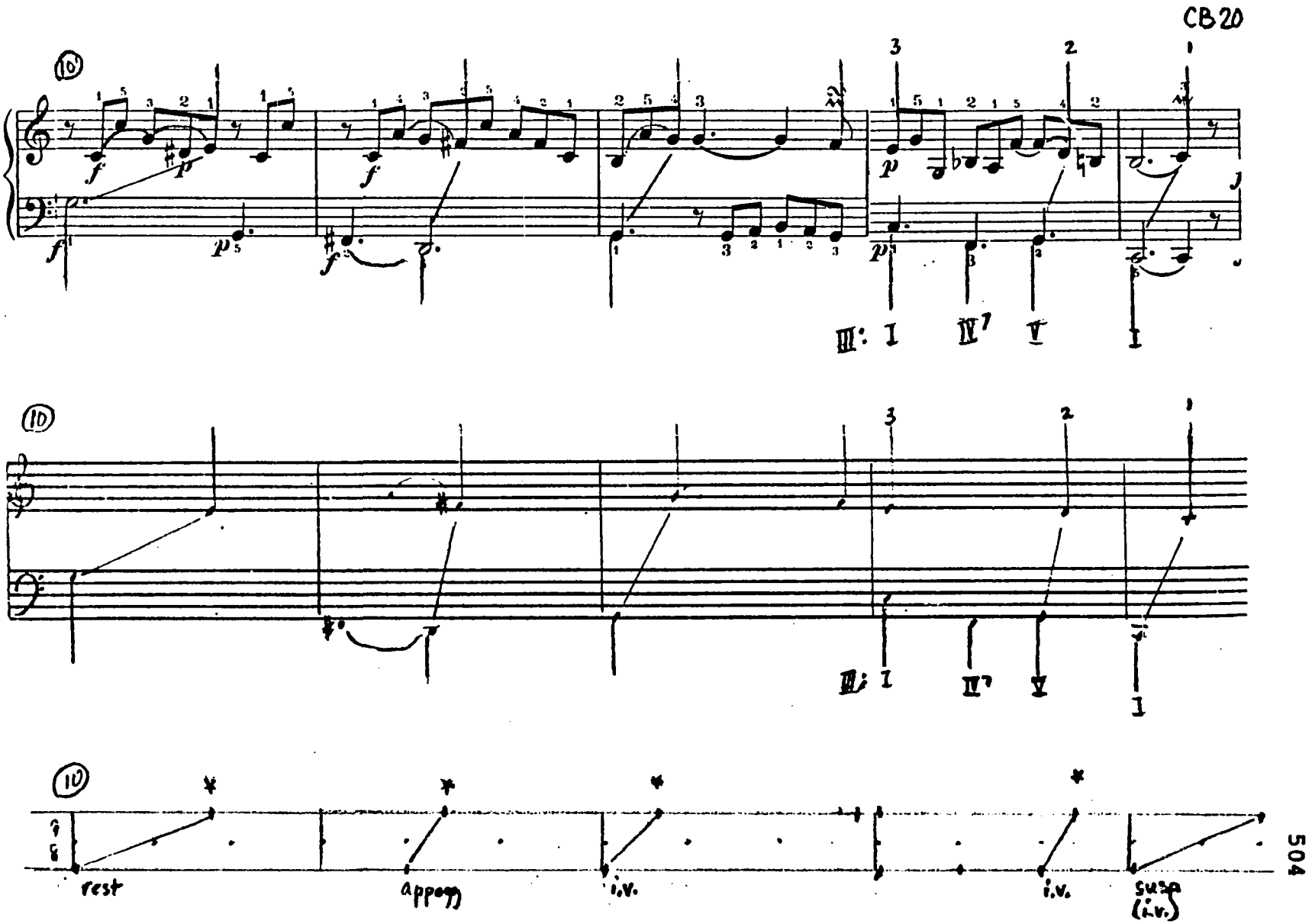

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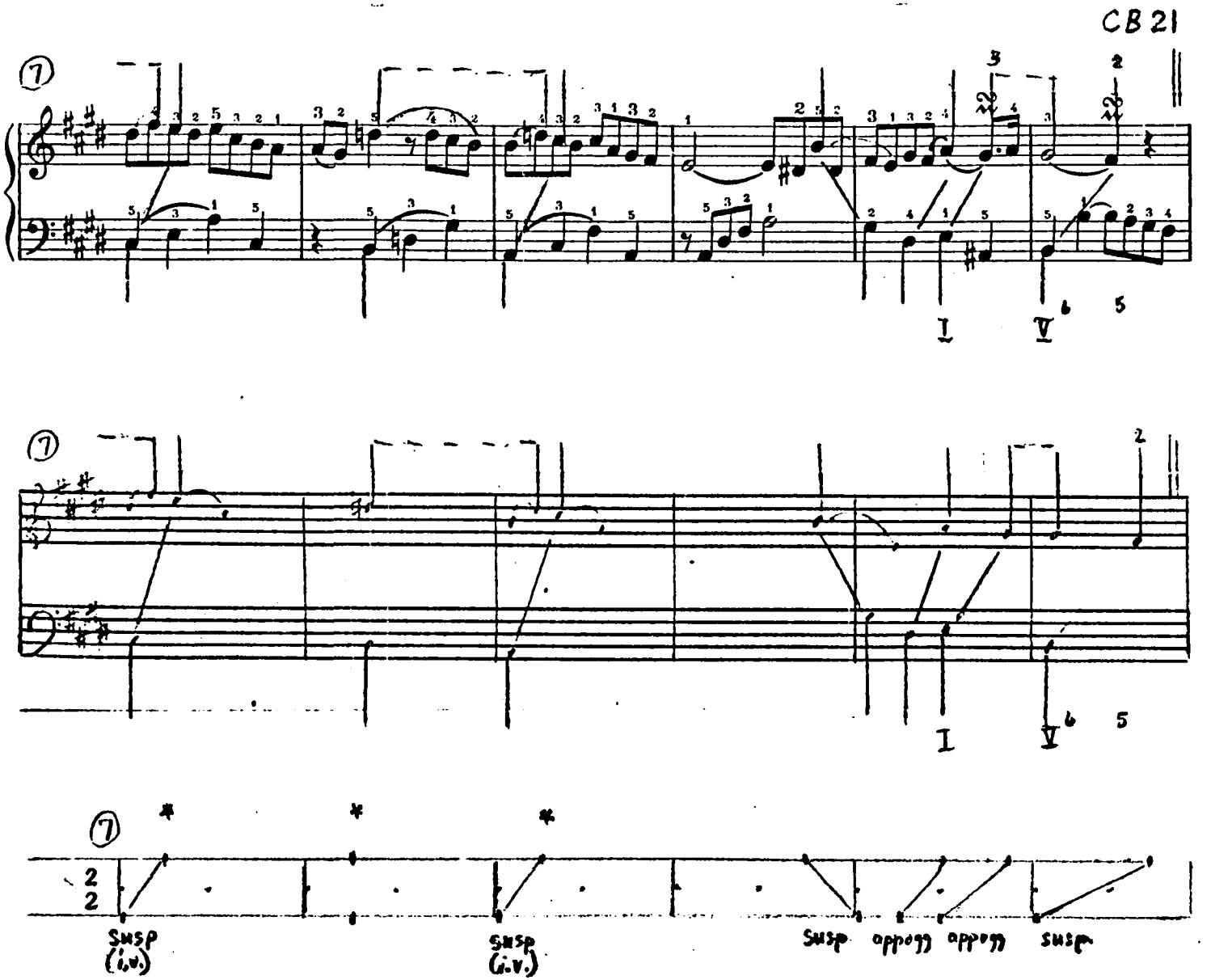

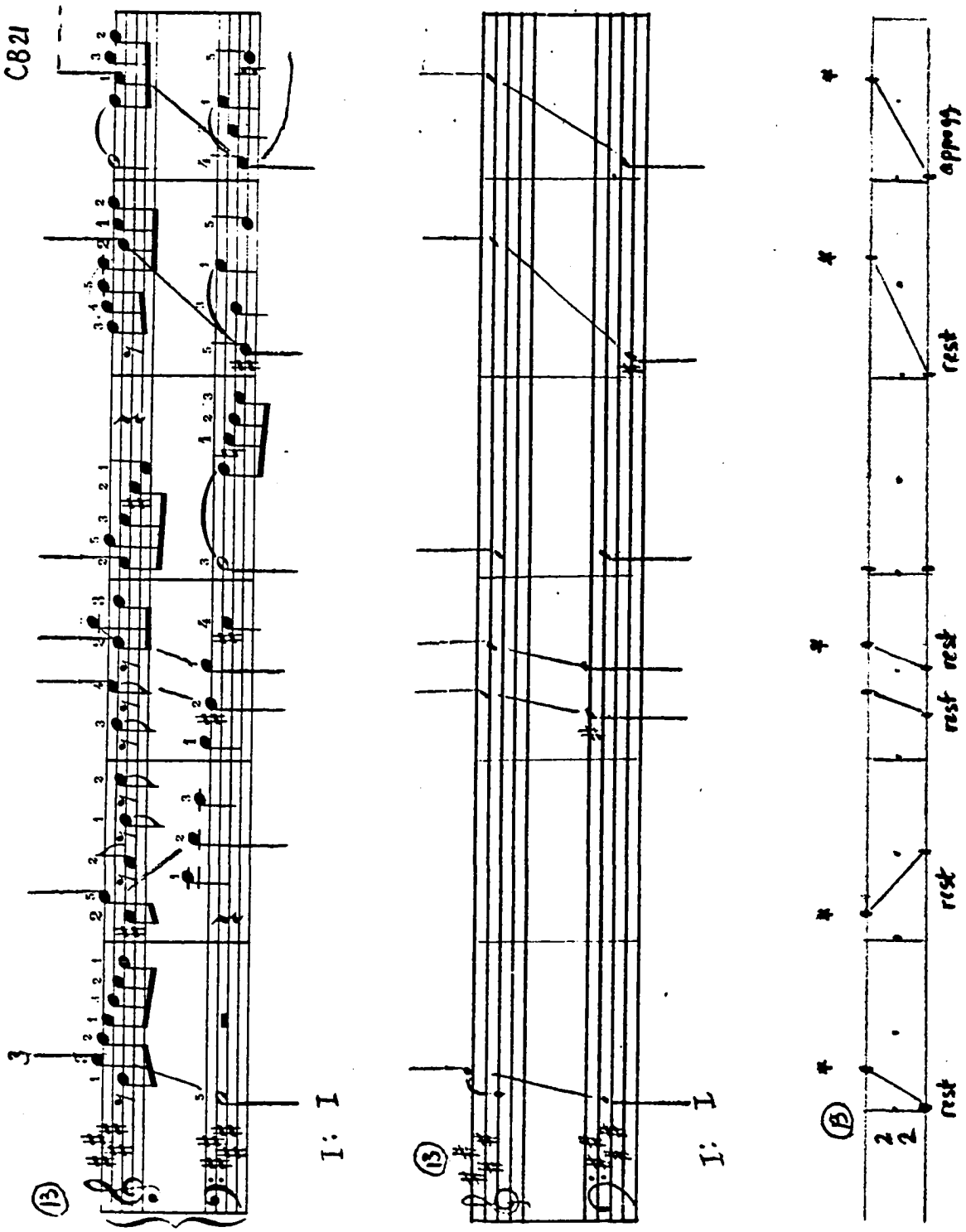

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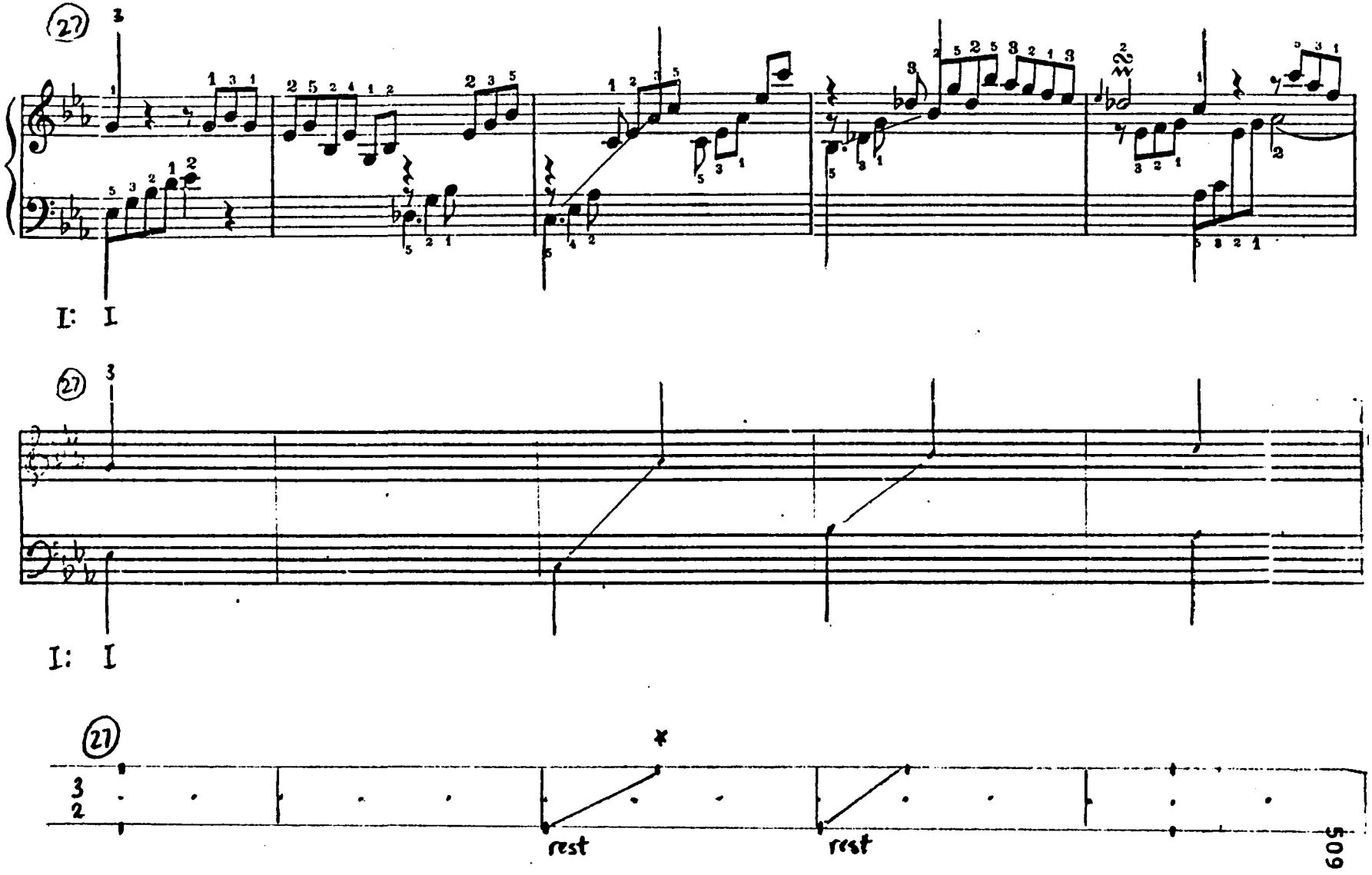

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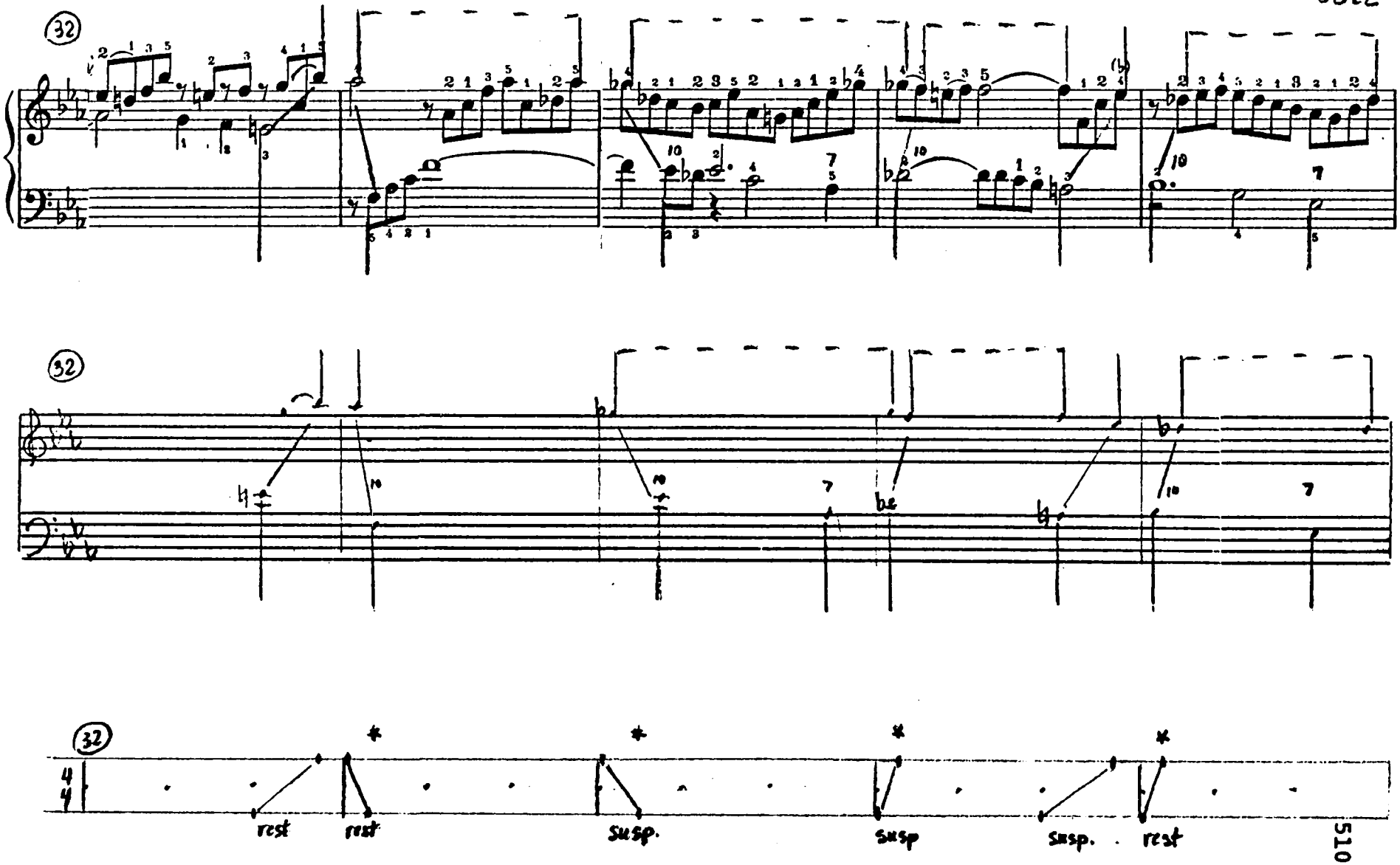

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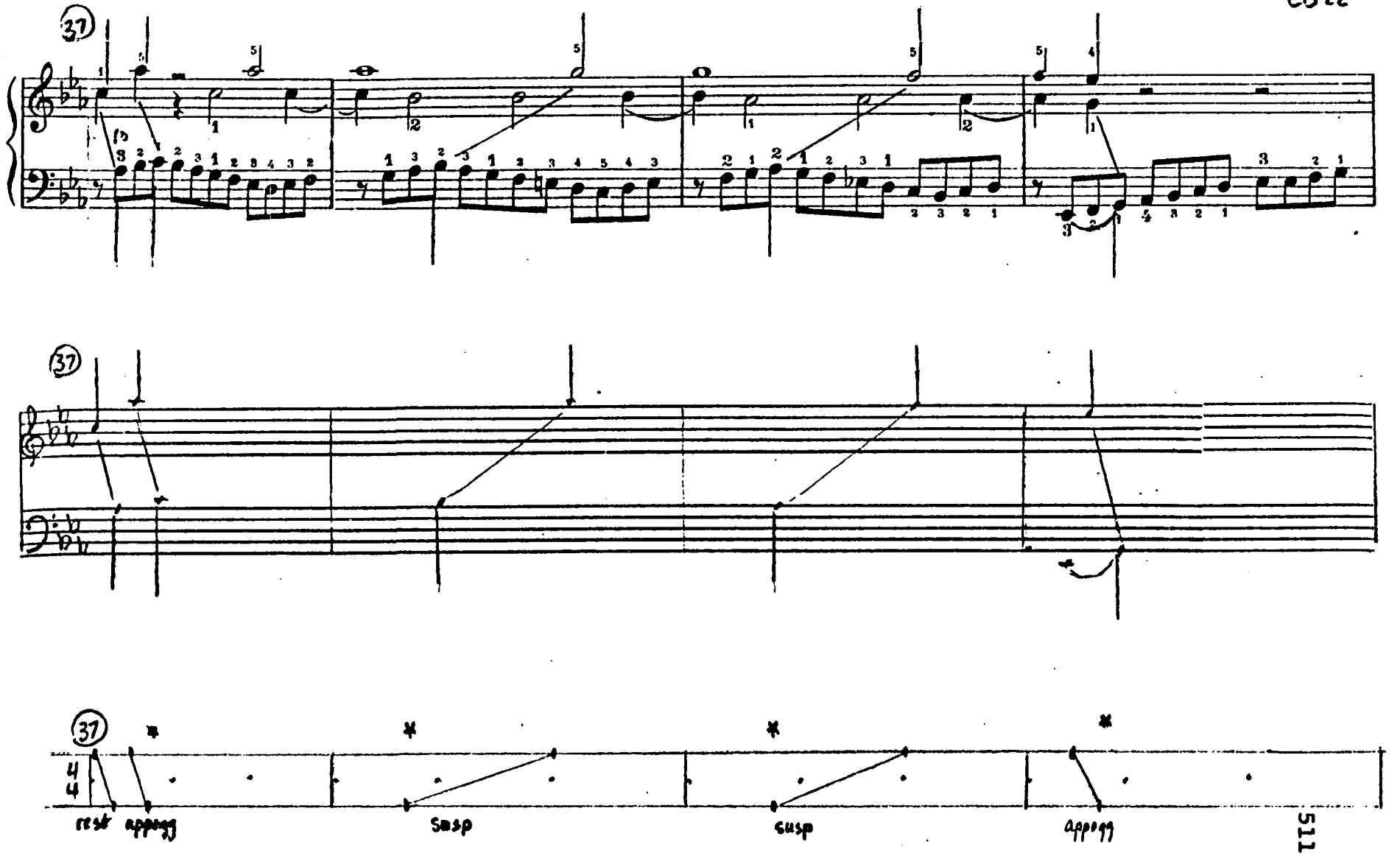

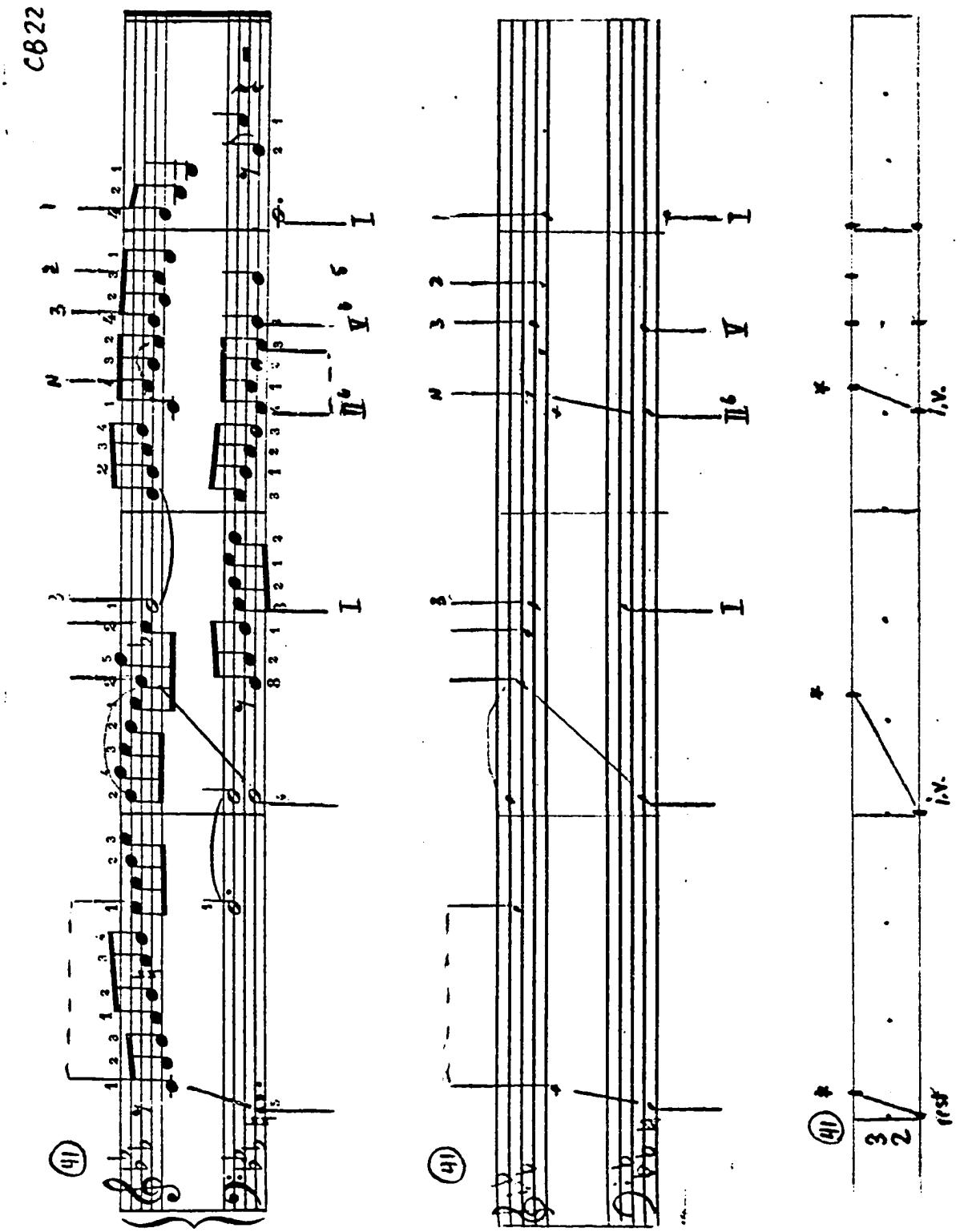

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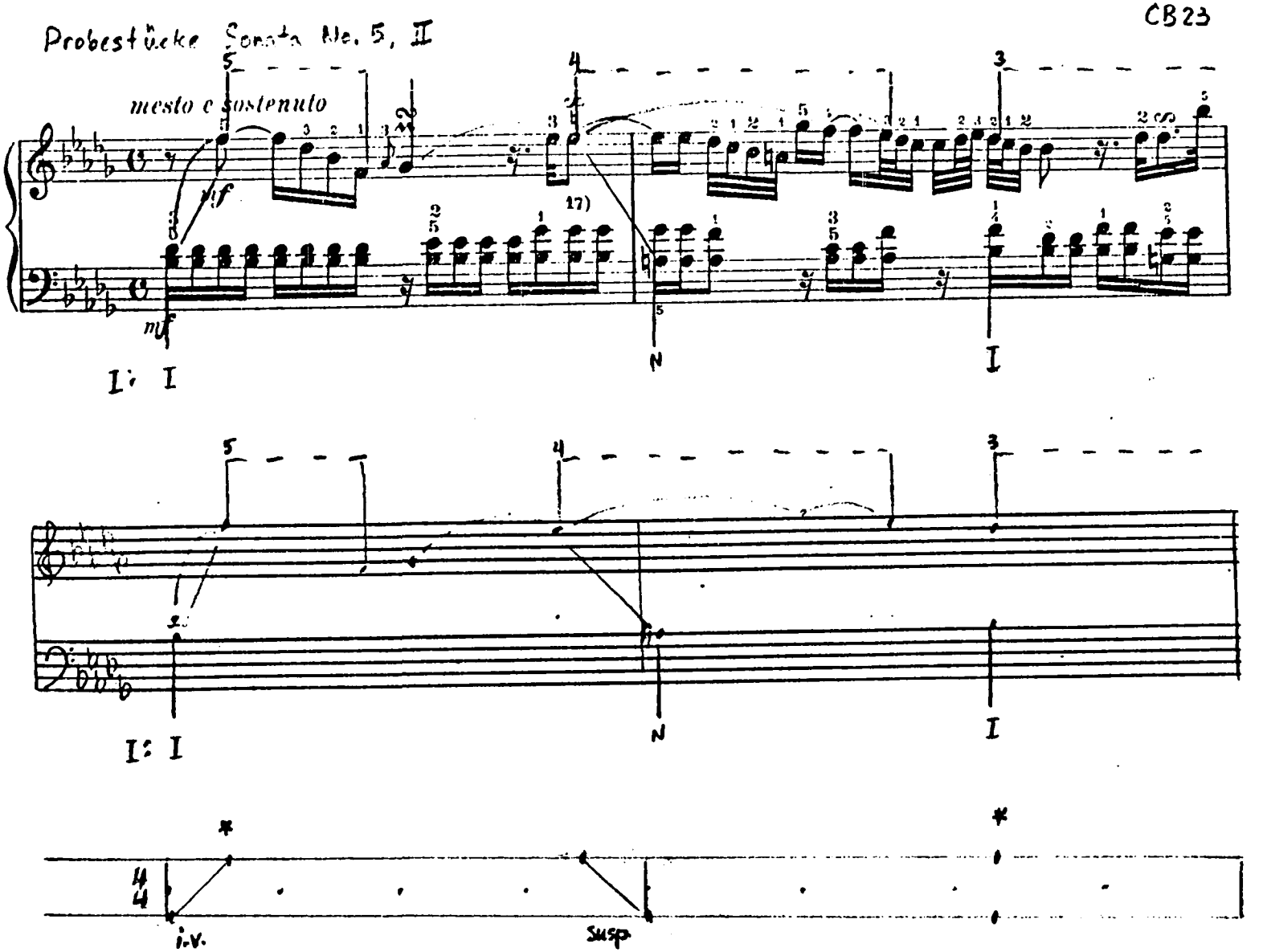

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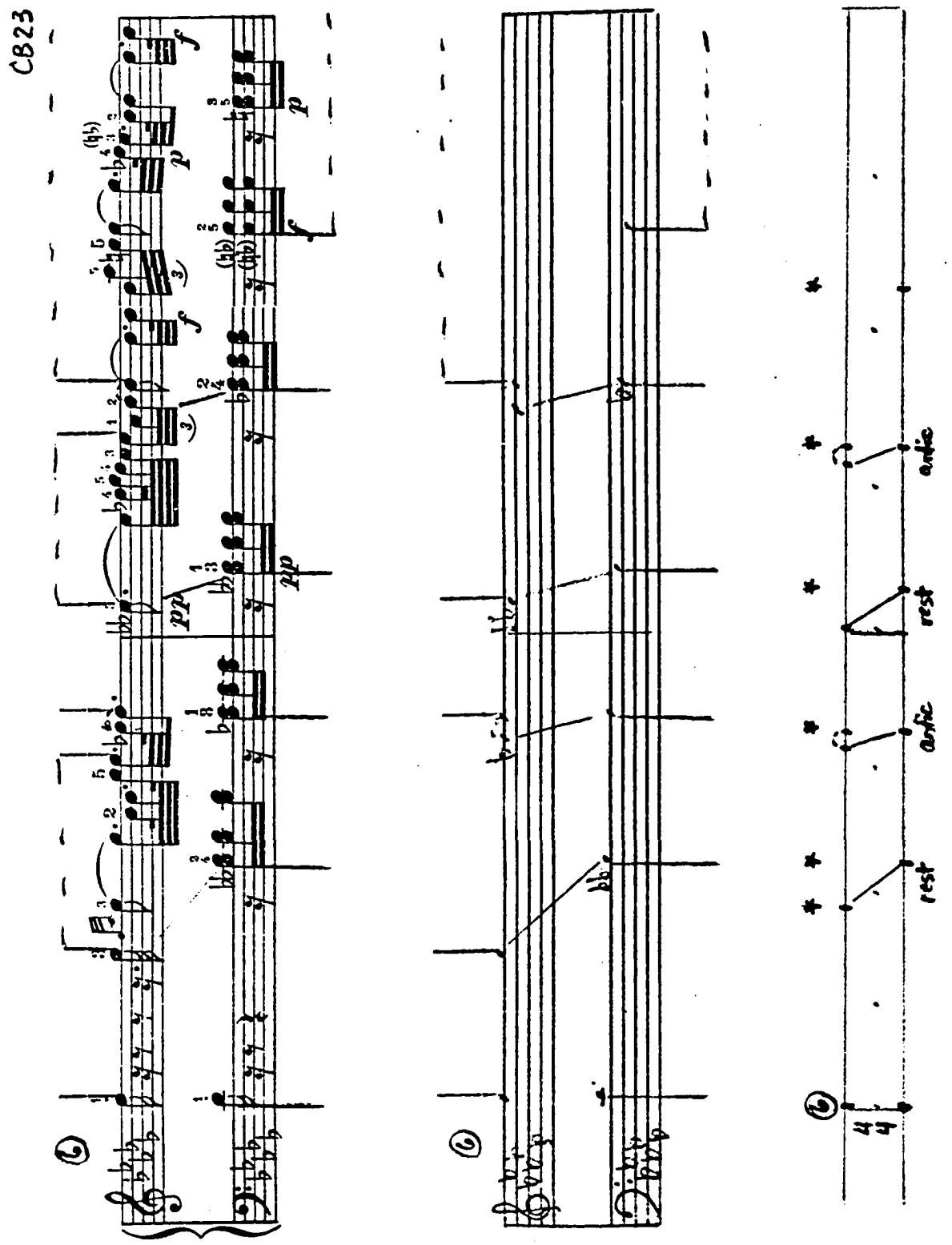

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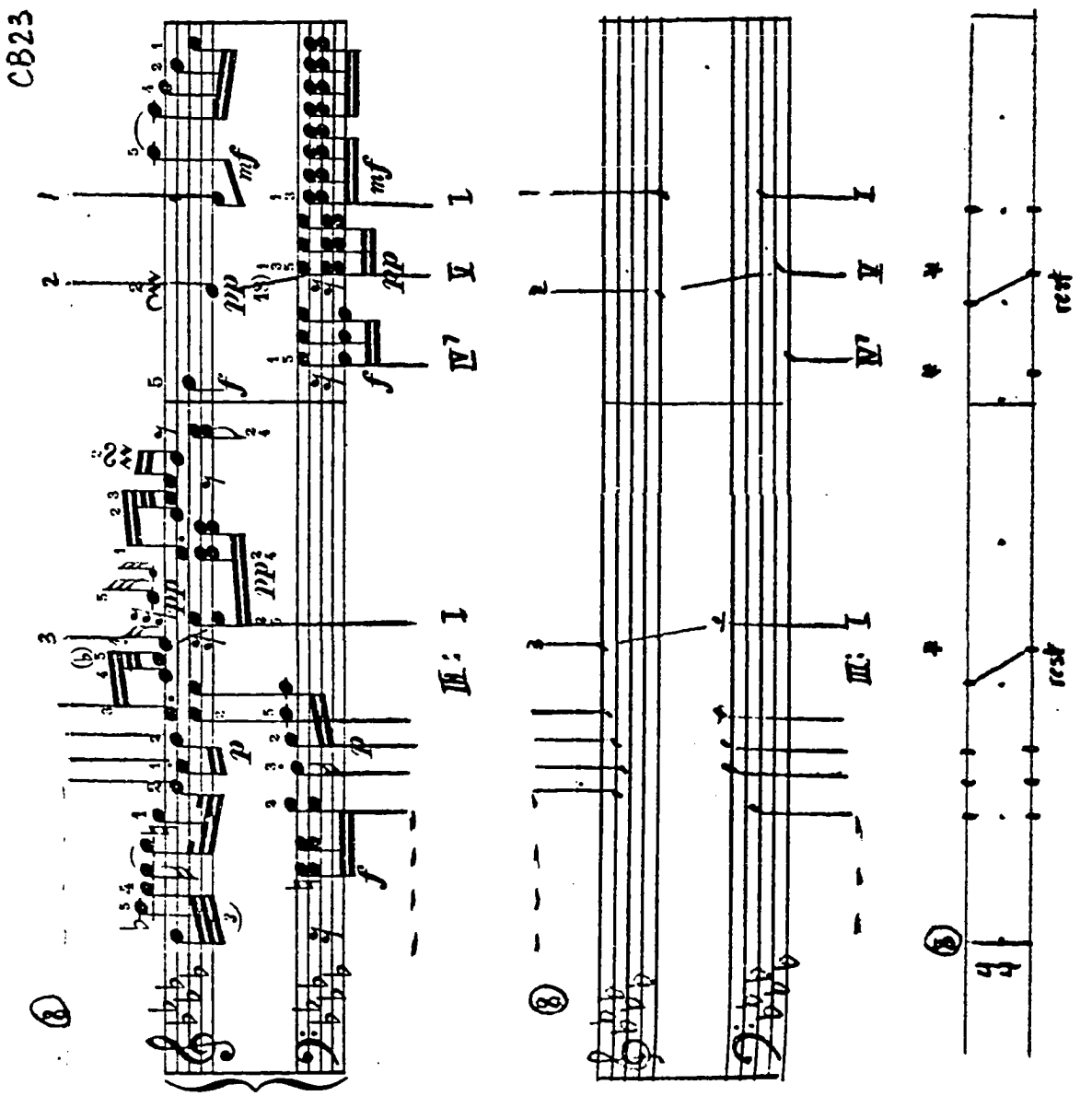

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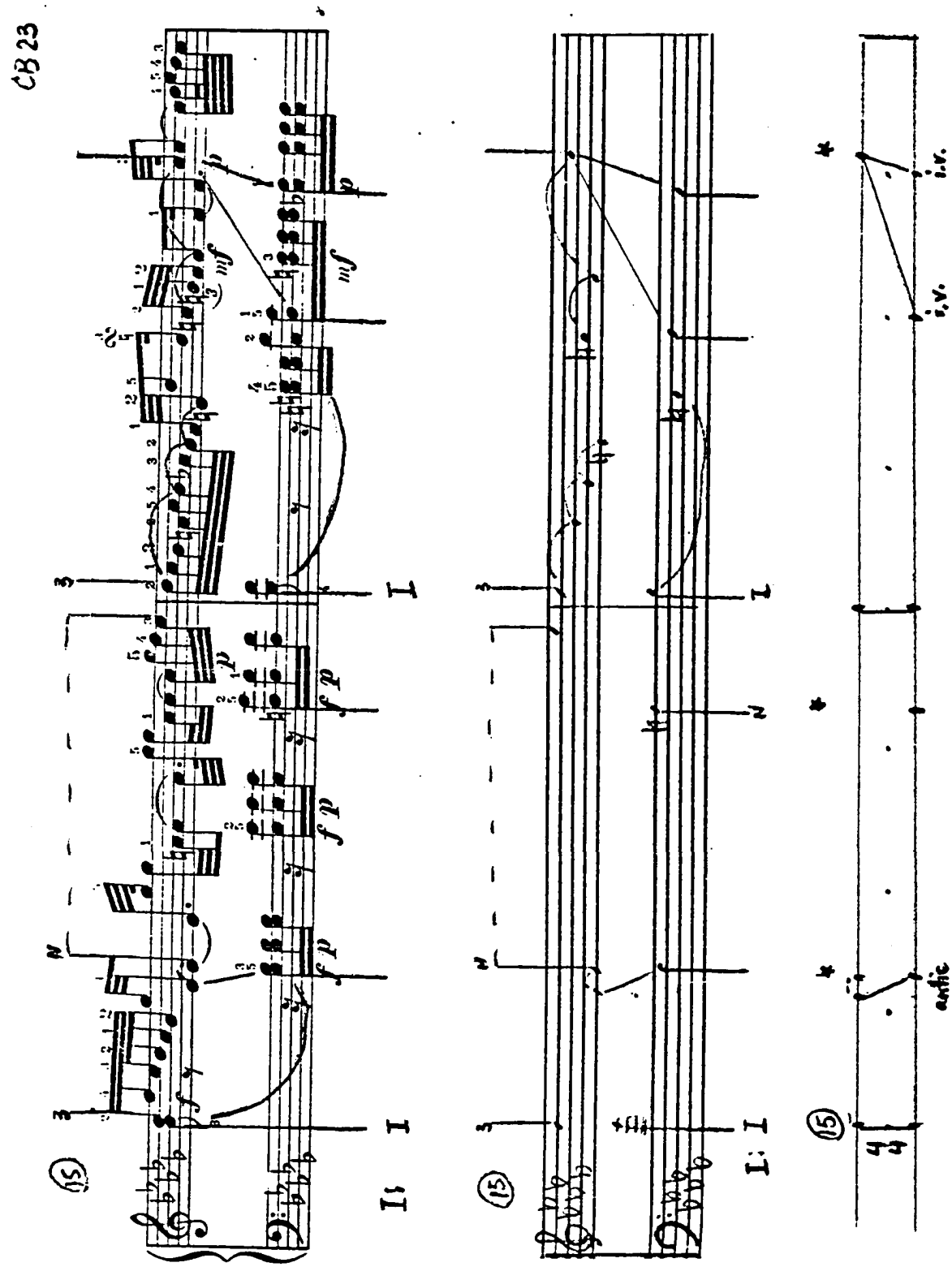

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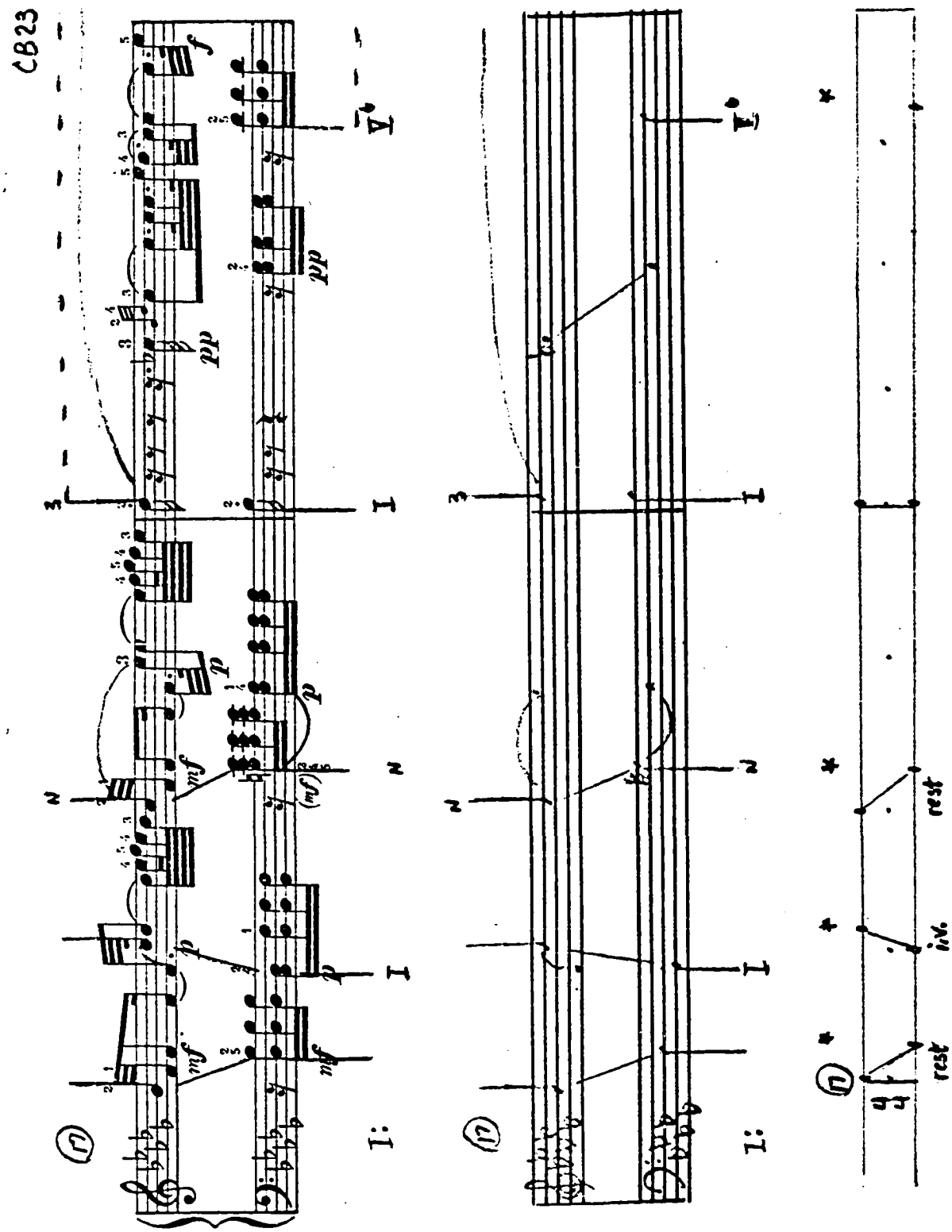

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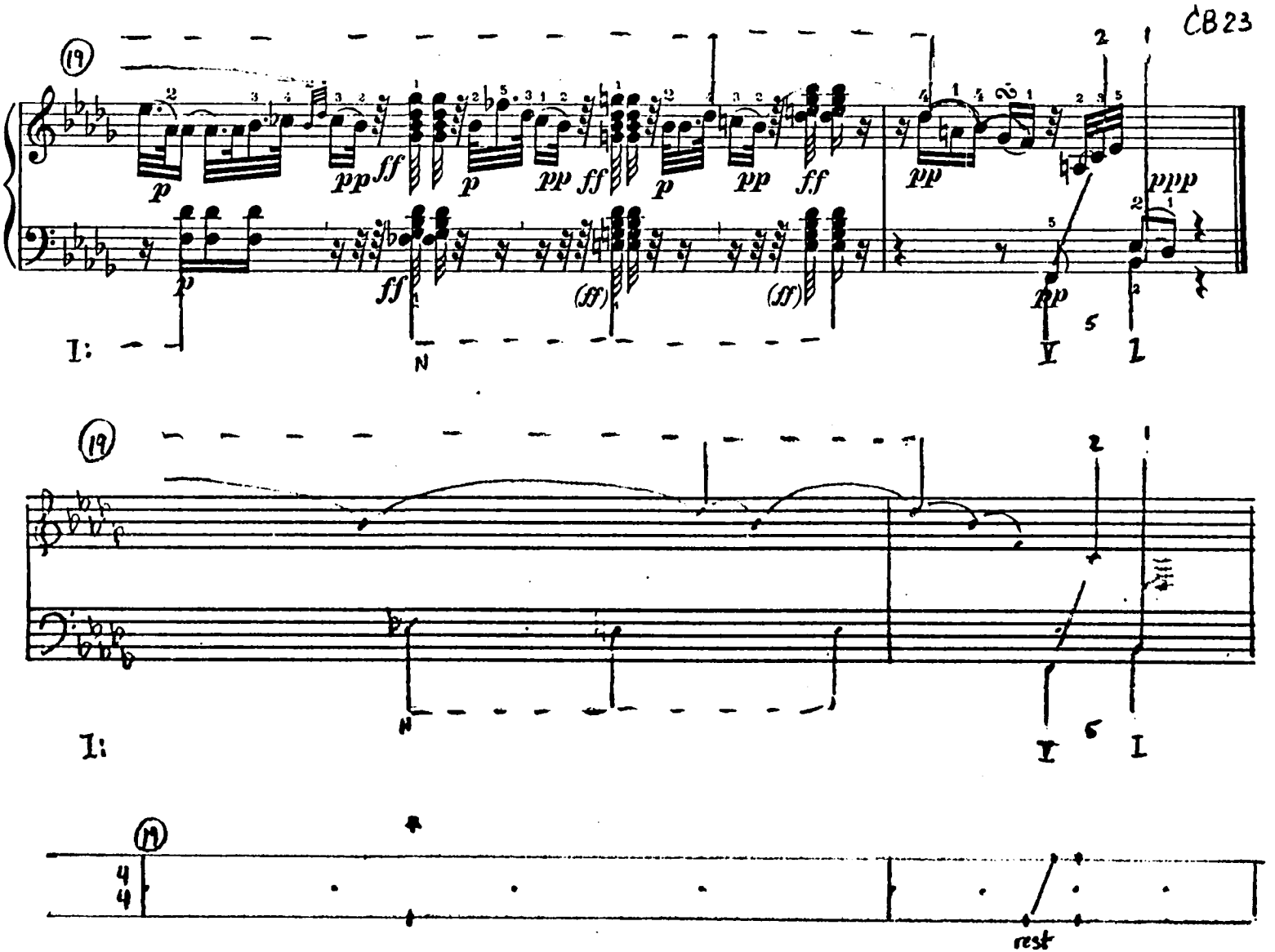

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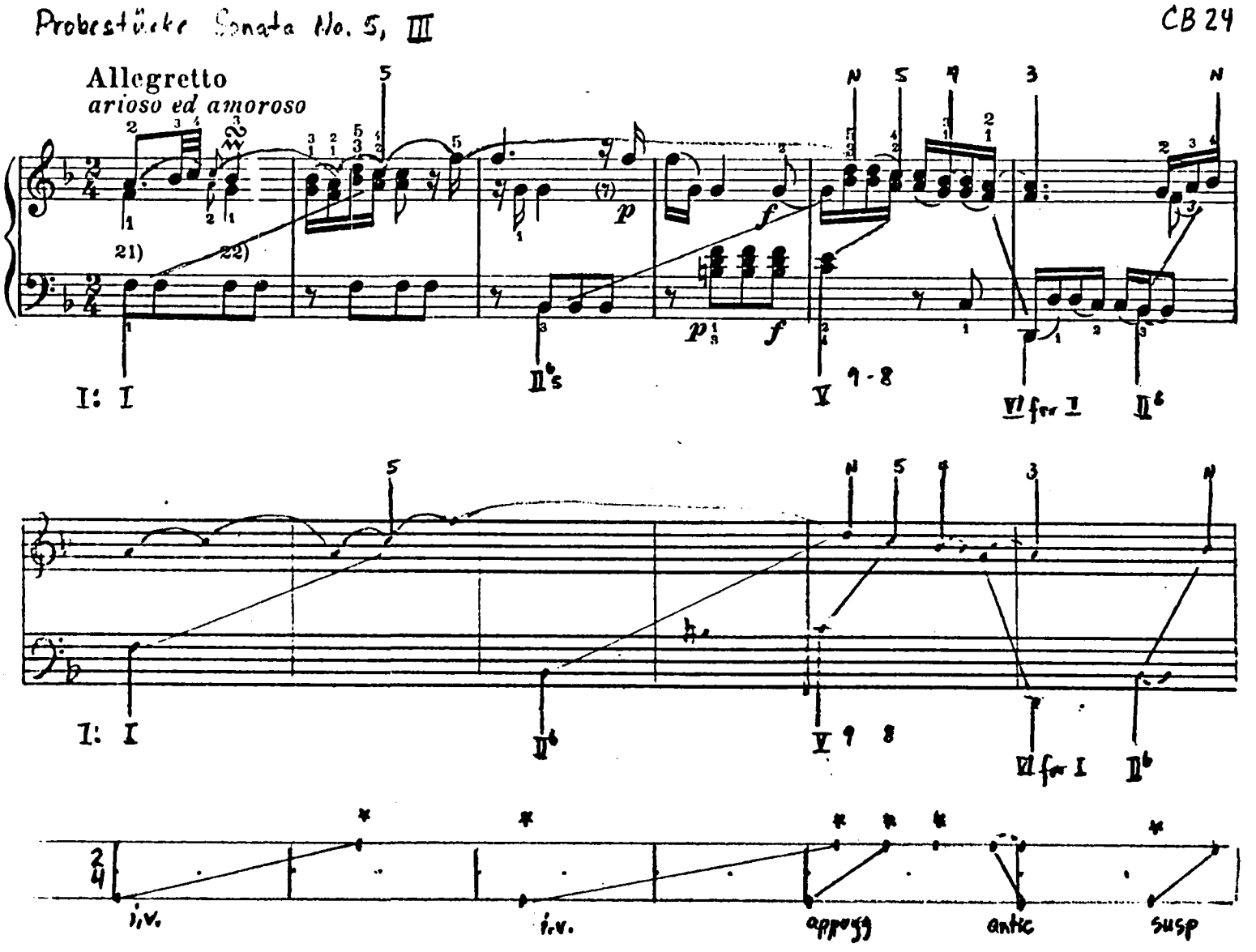

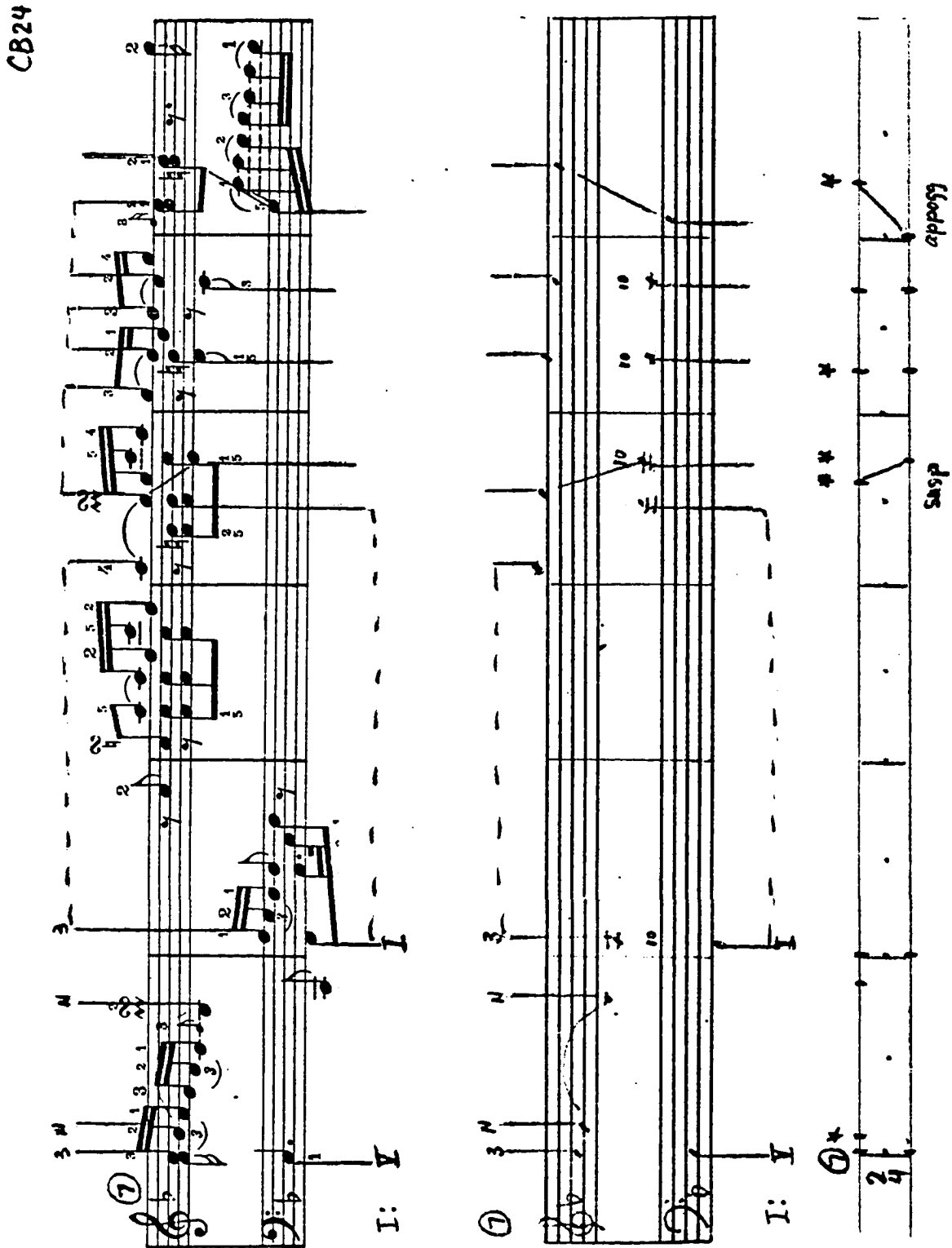

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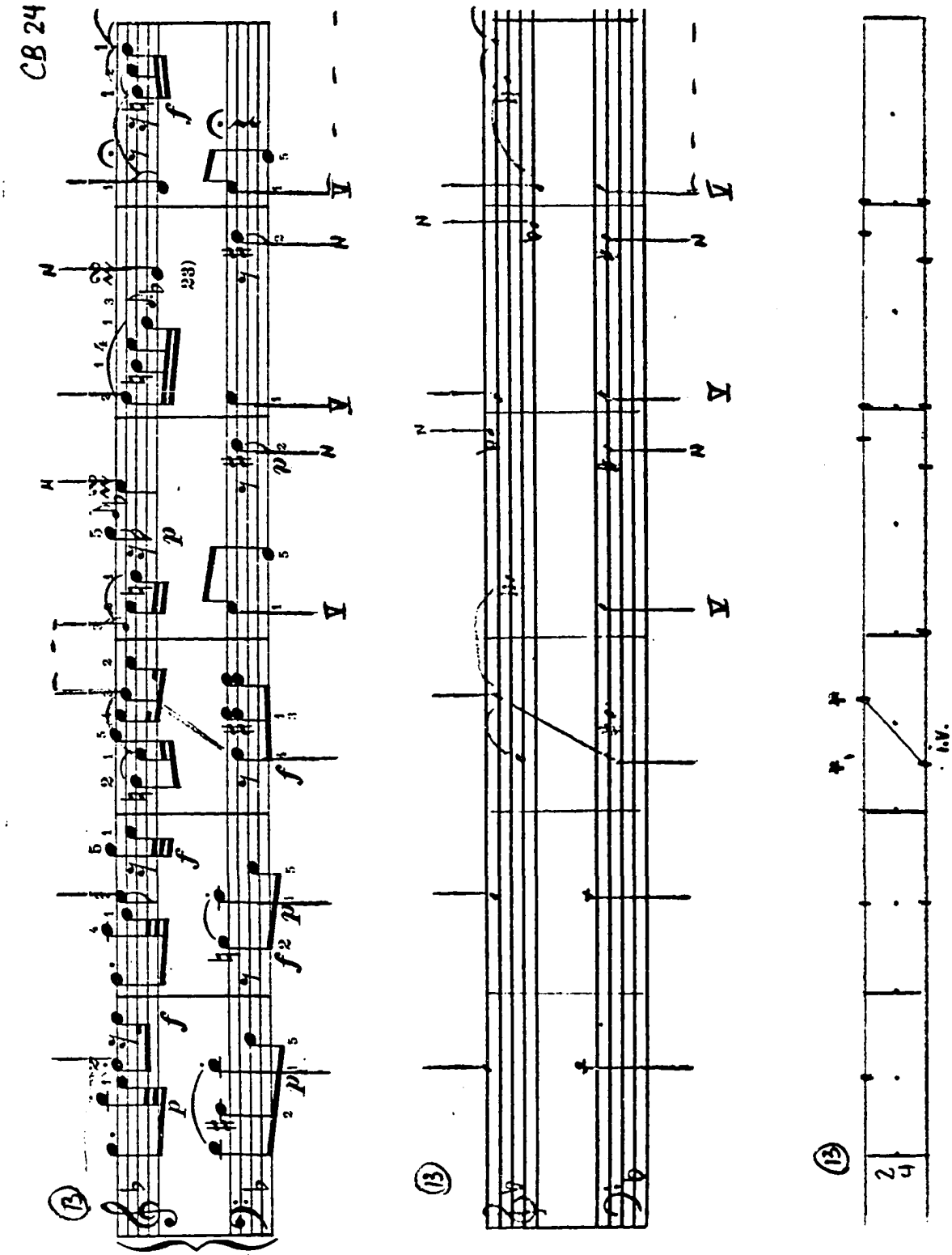

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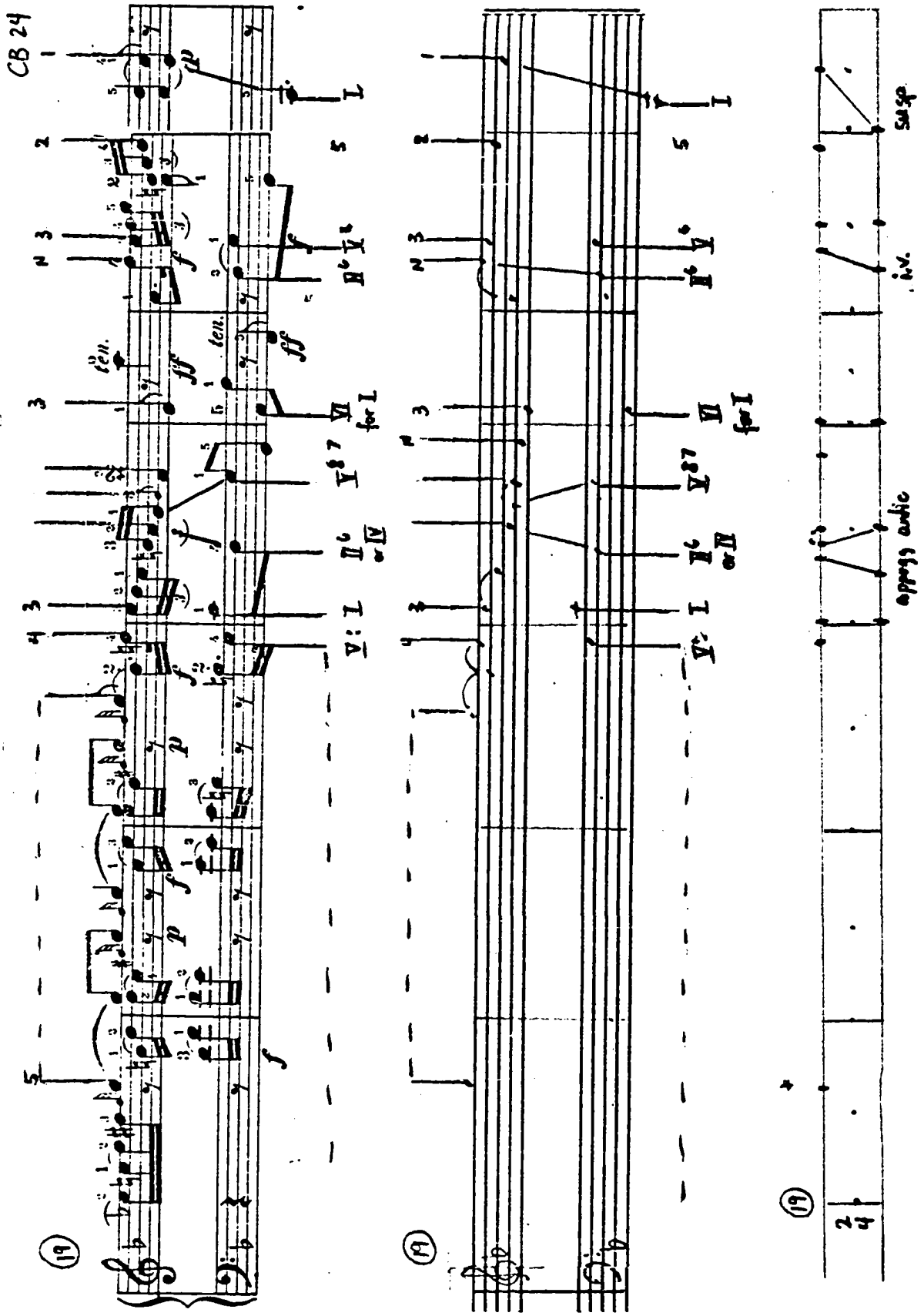

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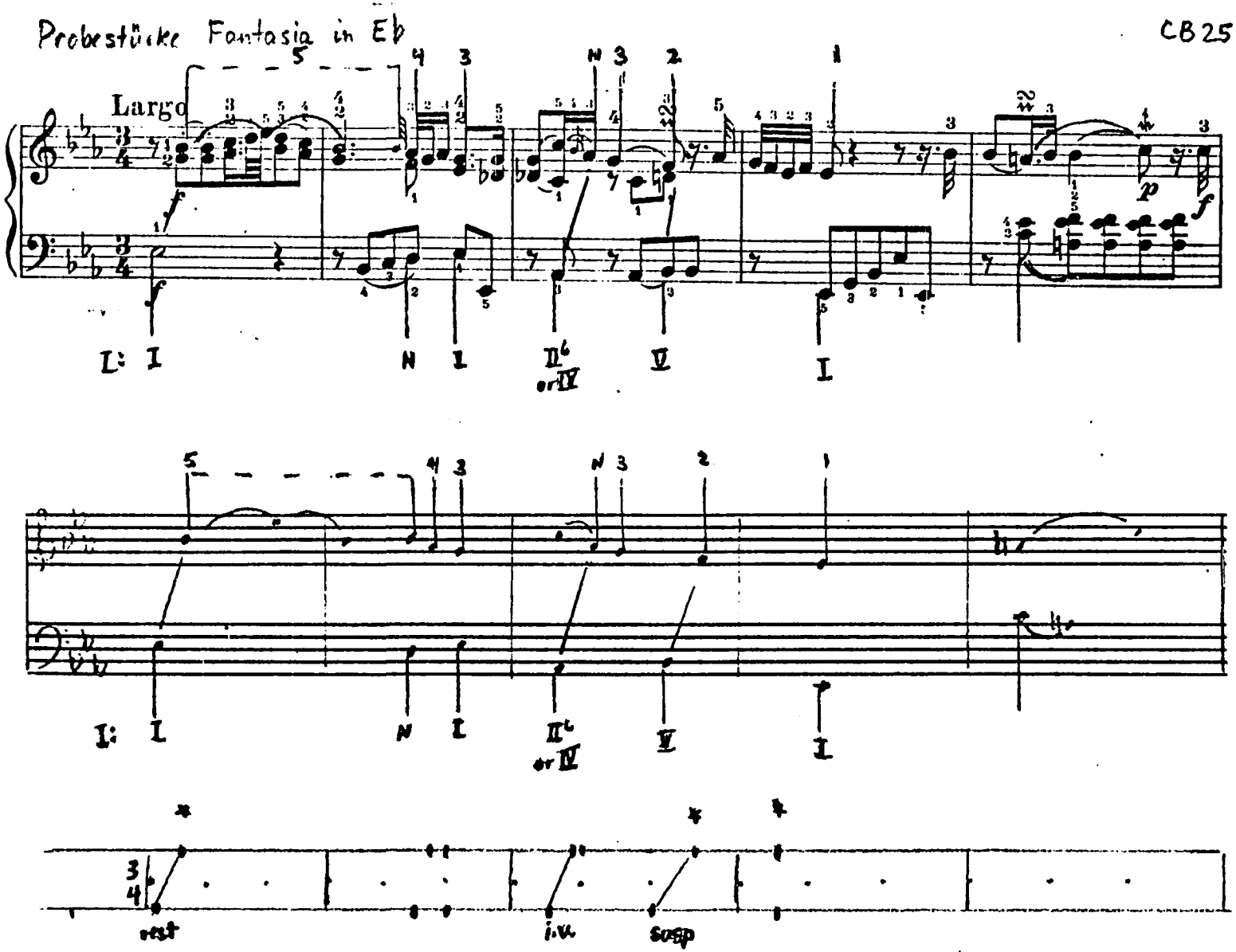

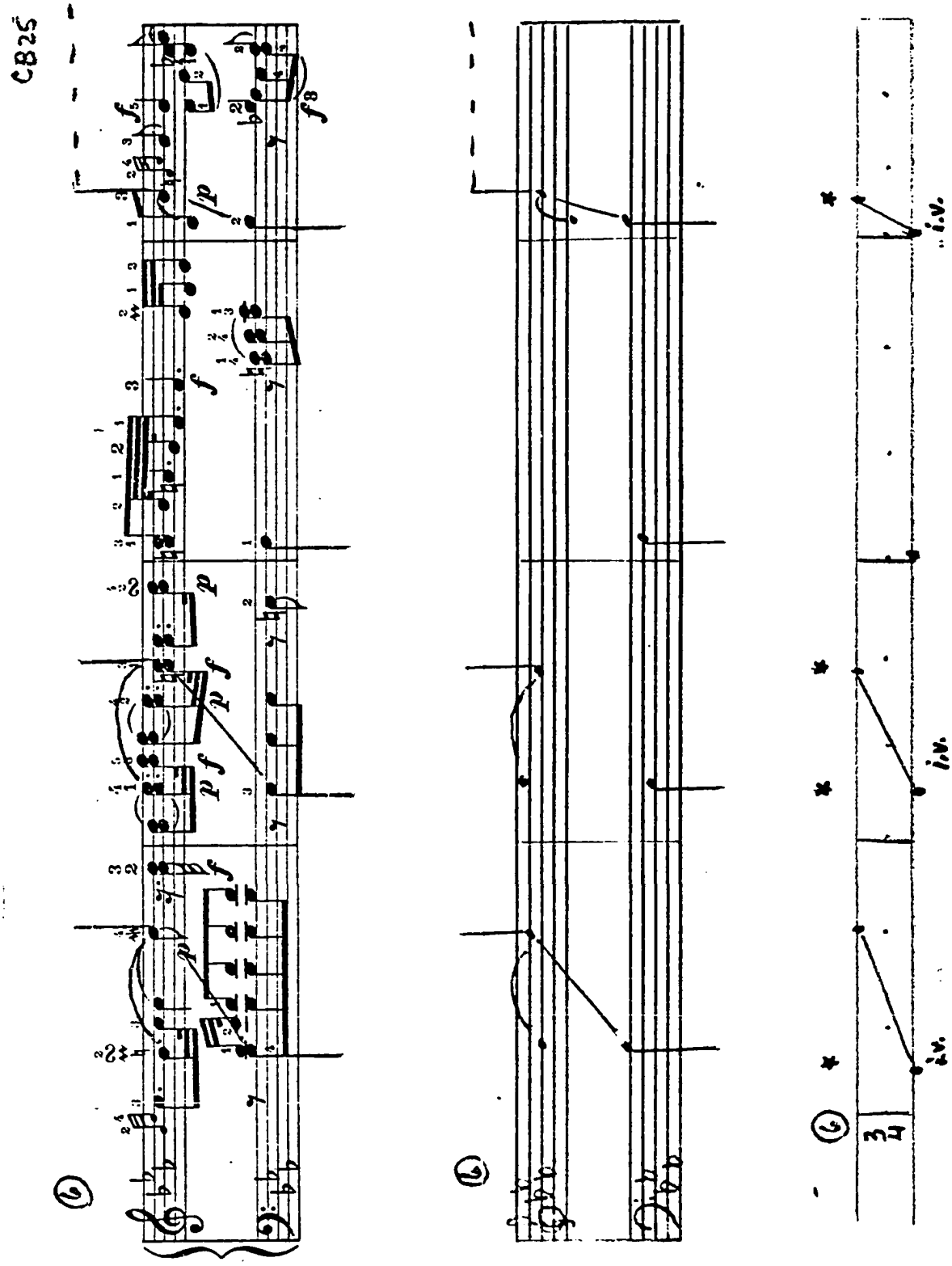

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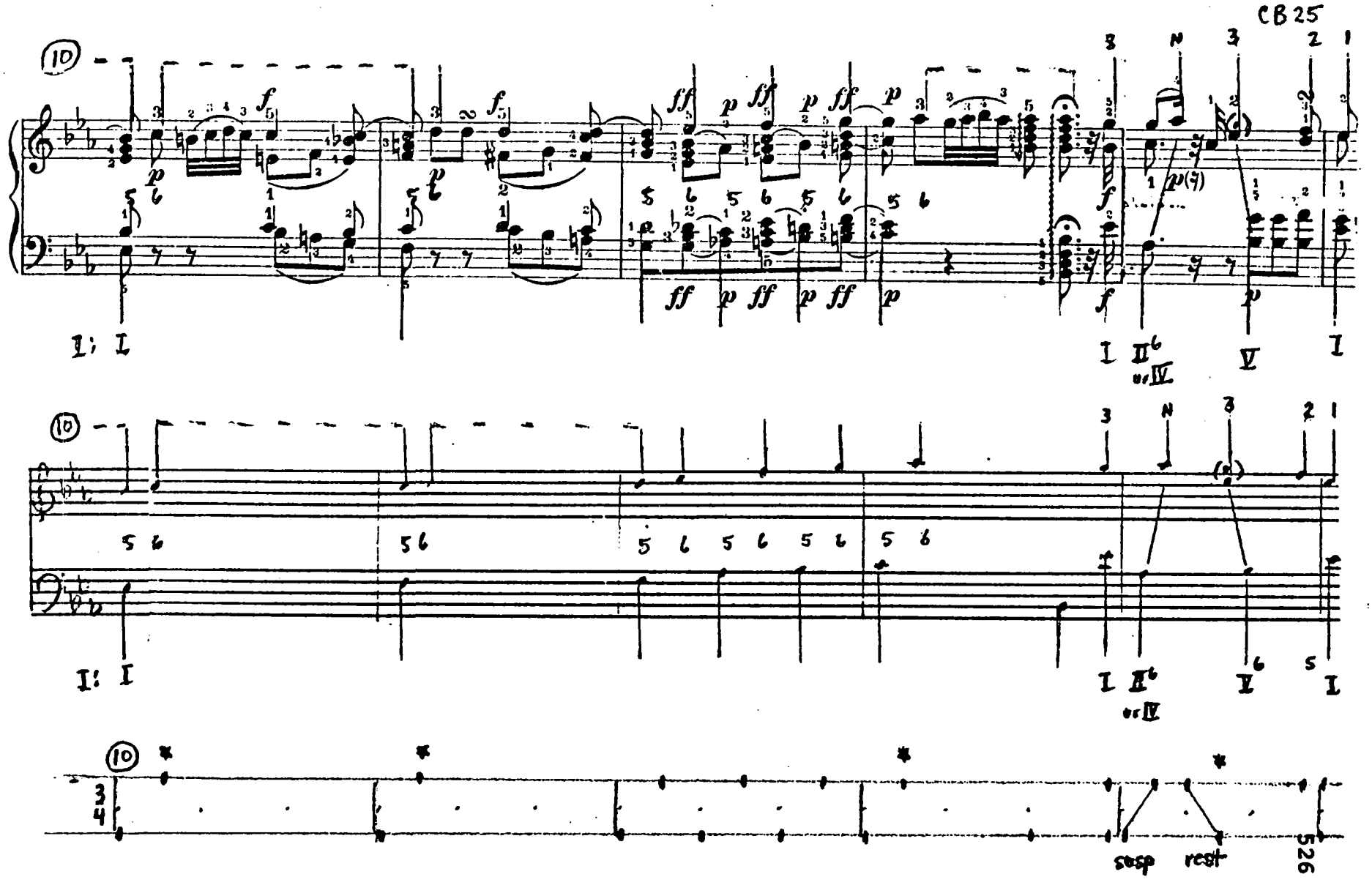

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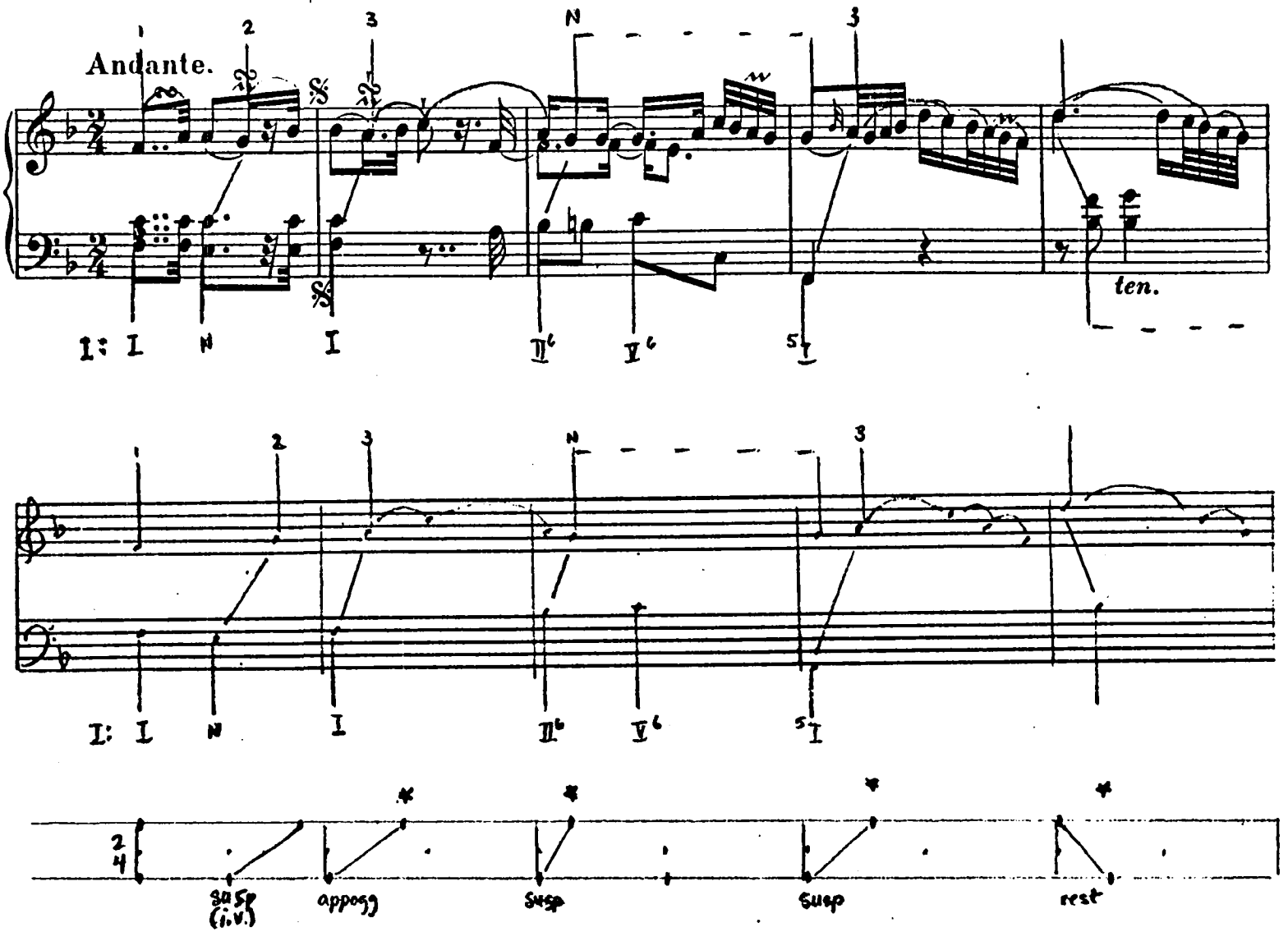

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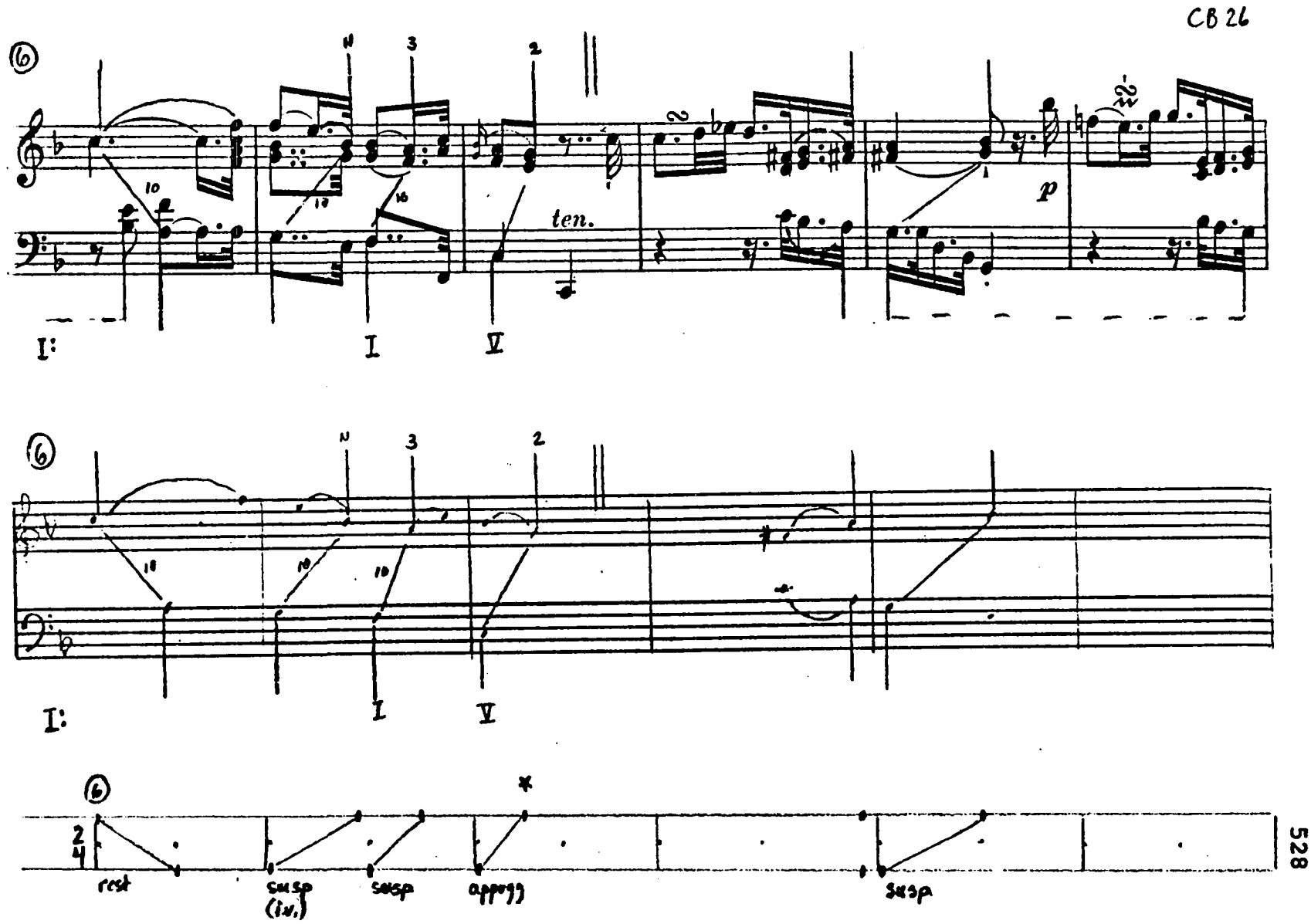

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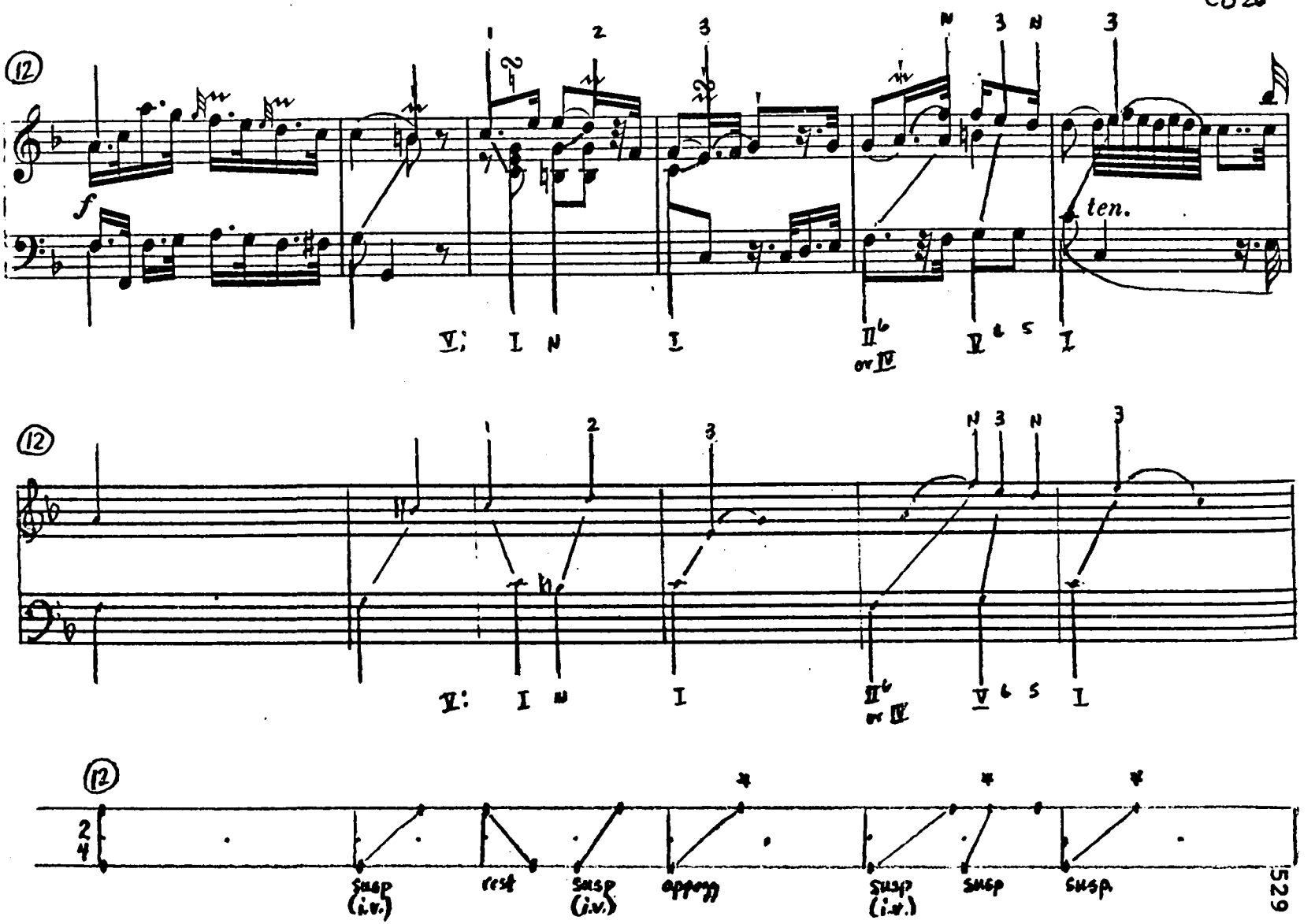

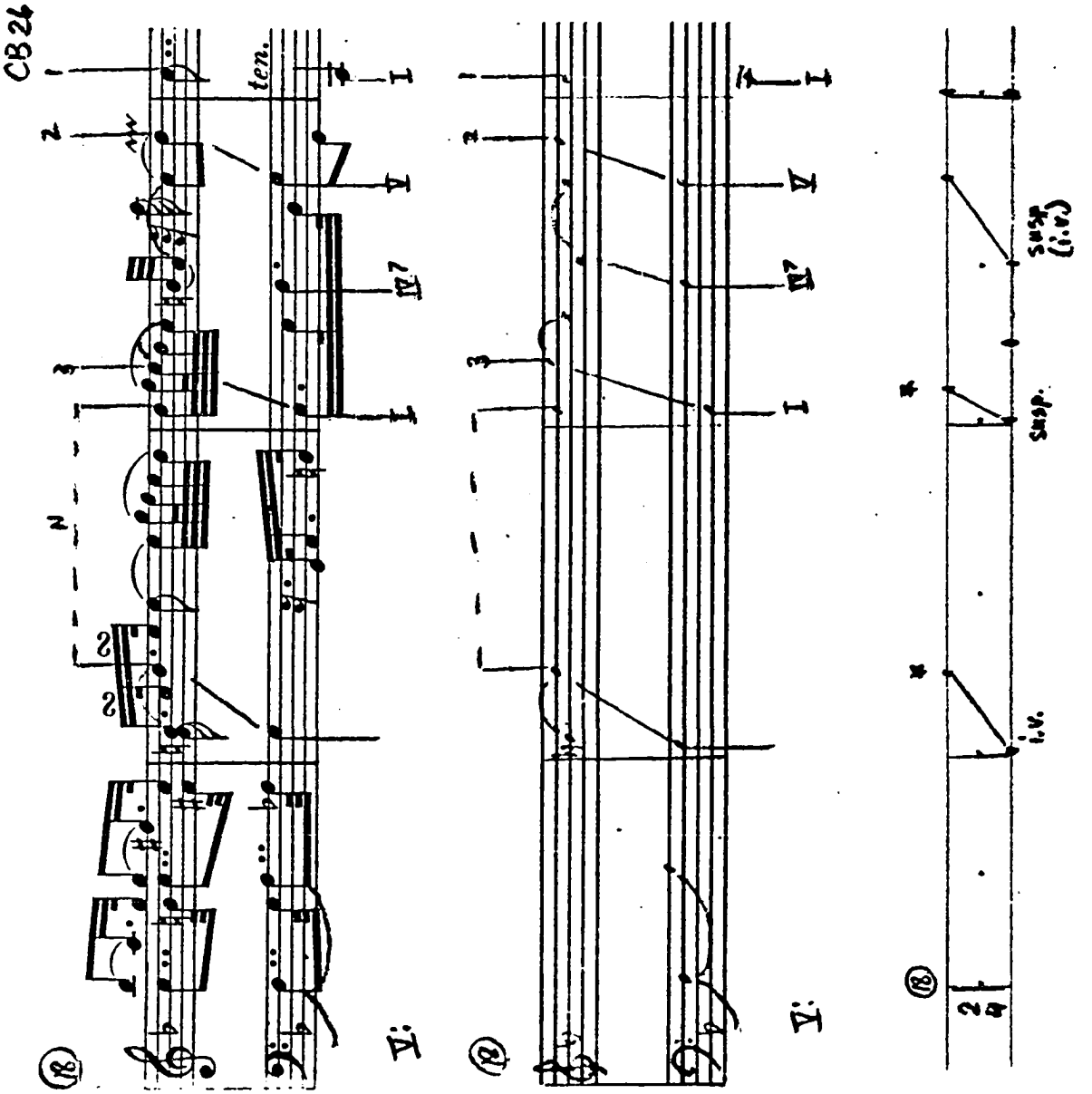

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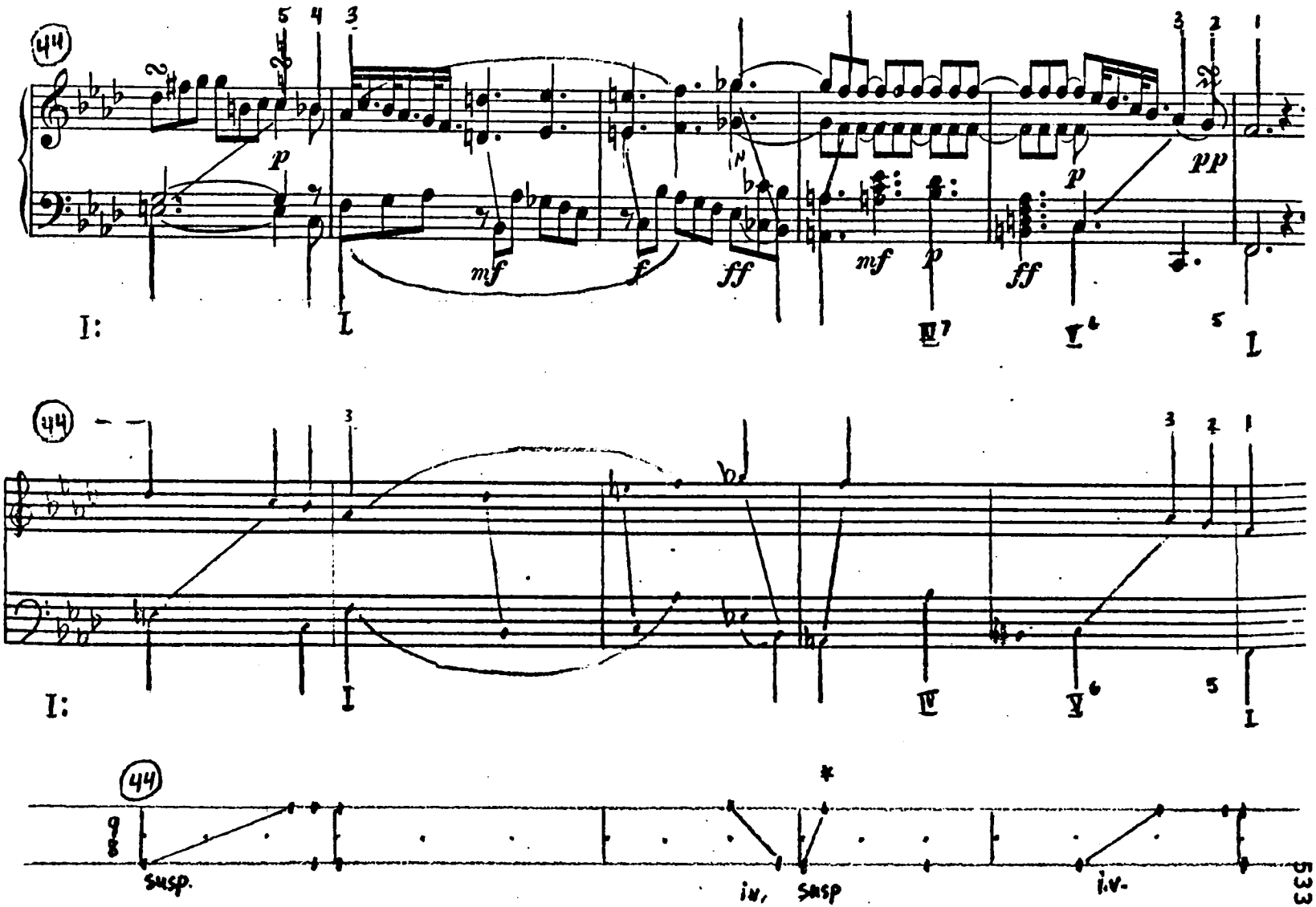

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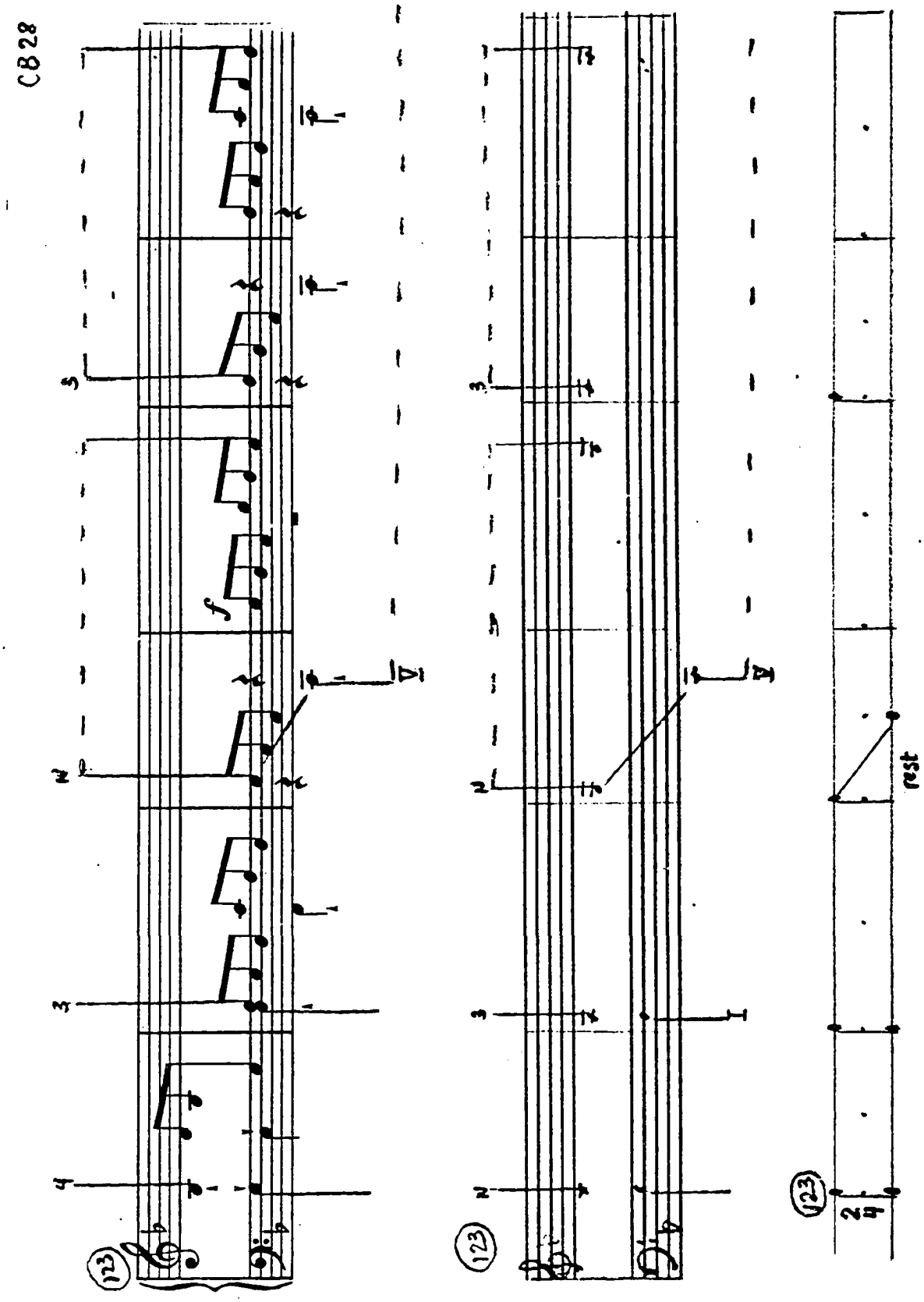

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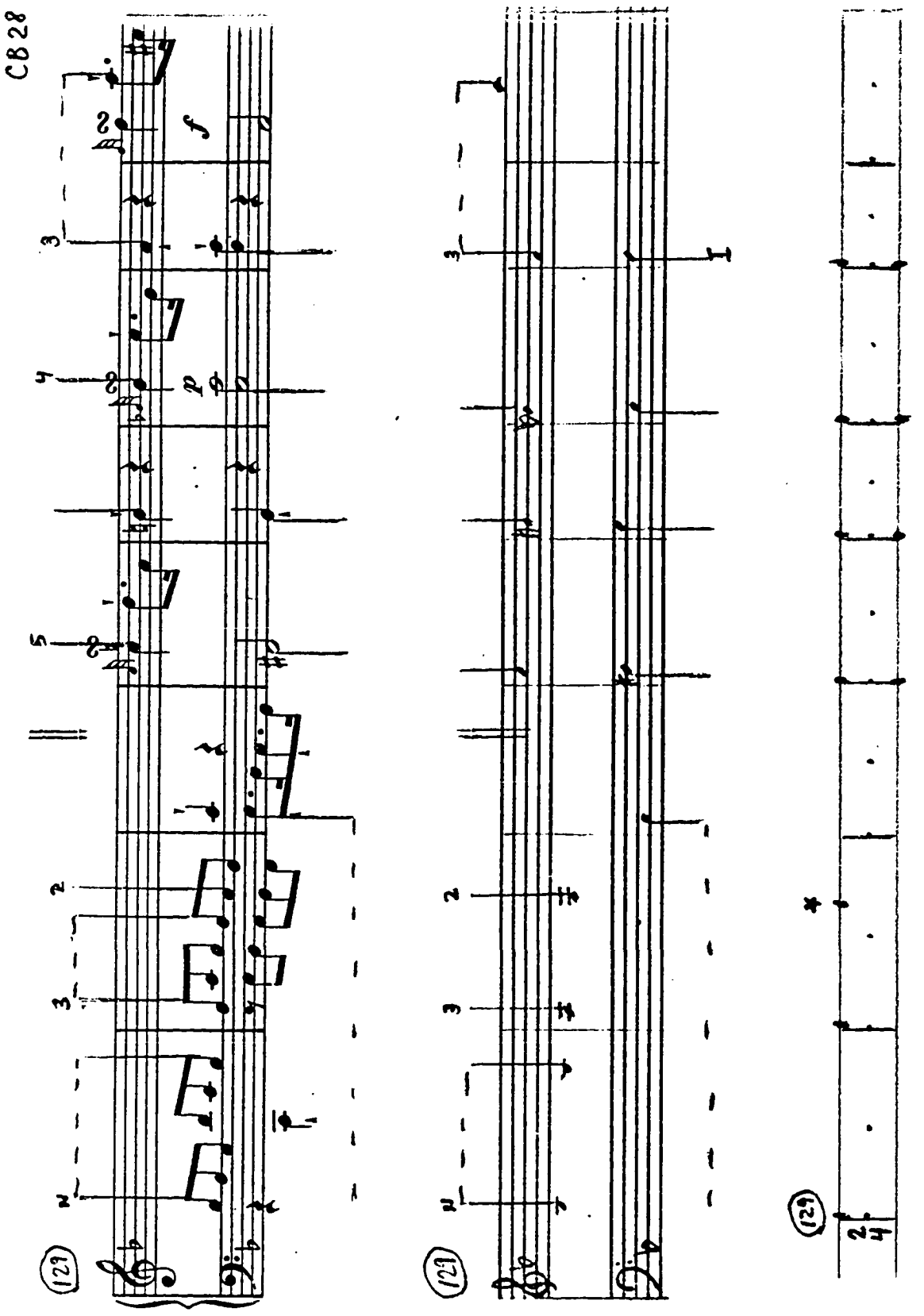

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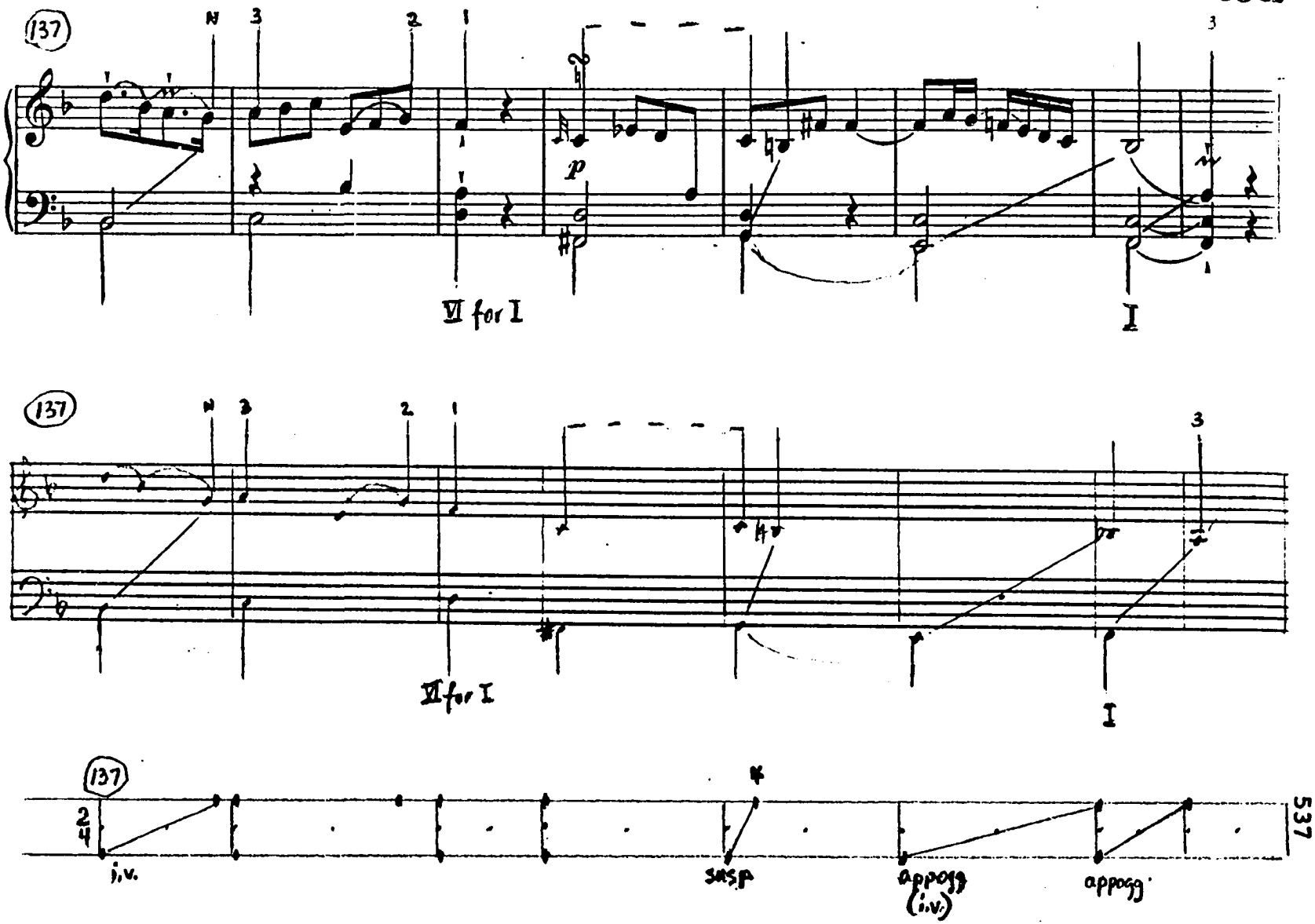

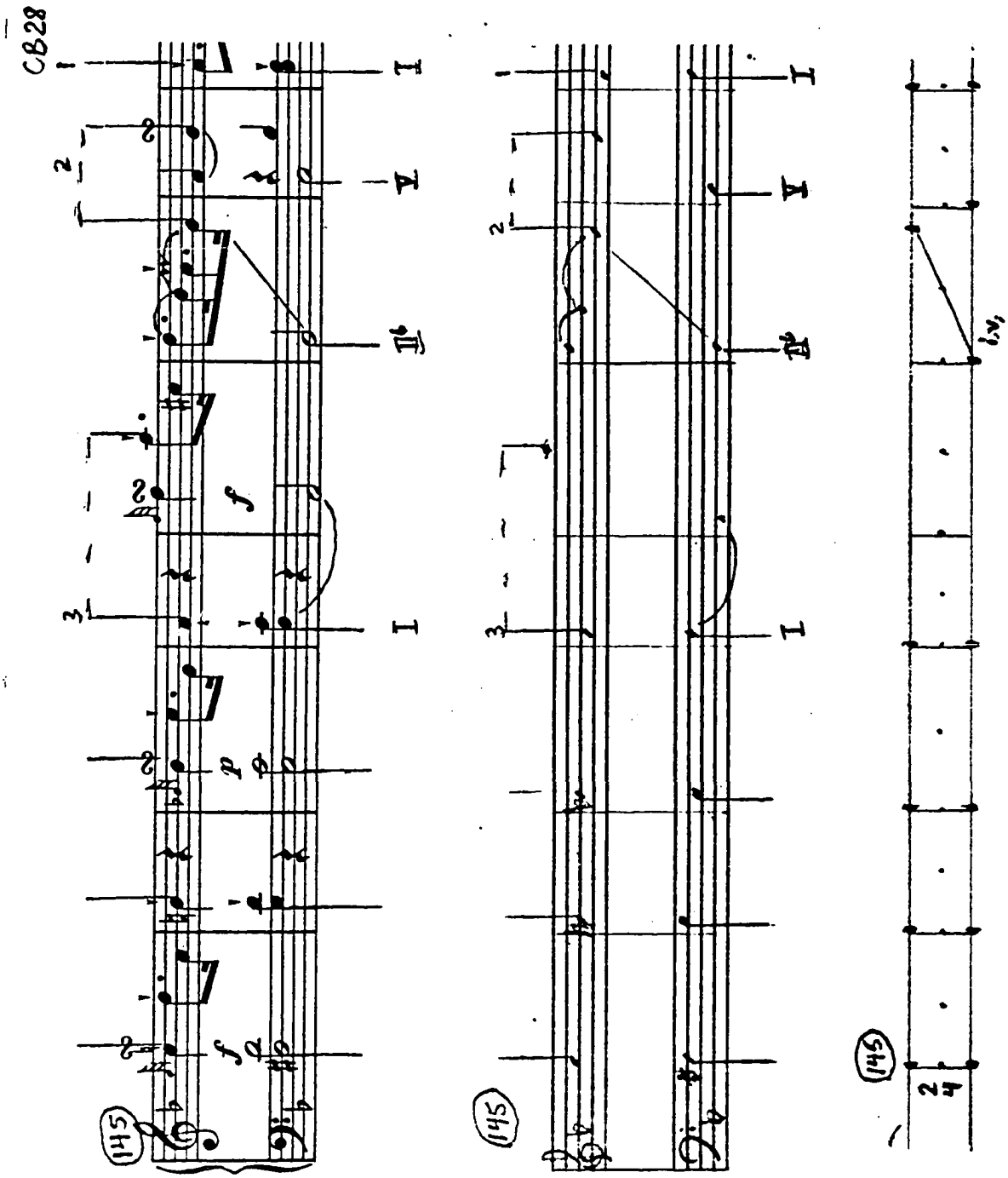

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I Sonata VI

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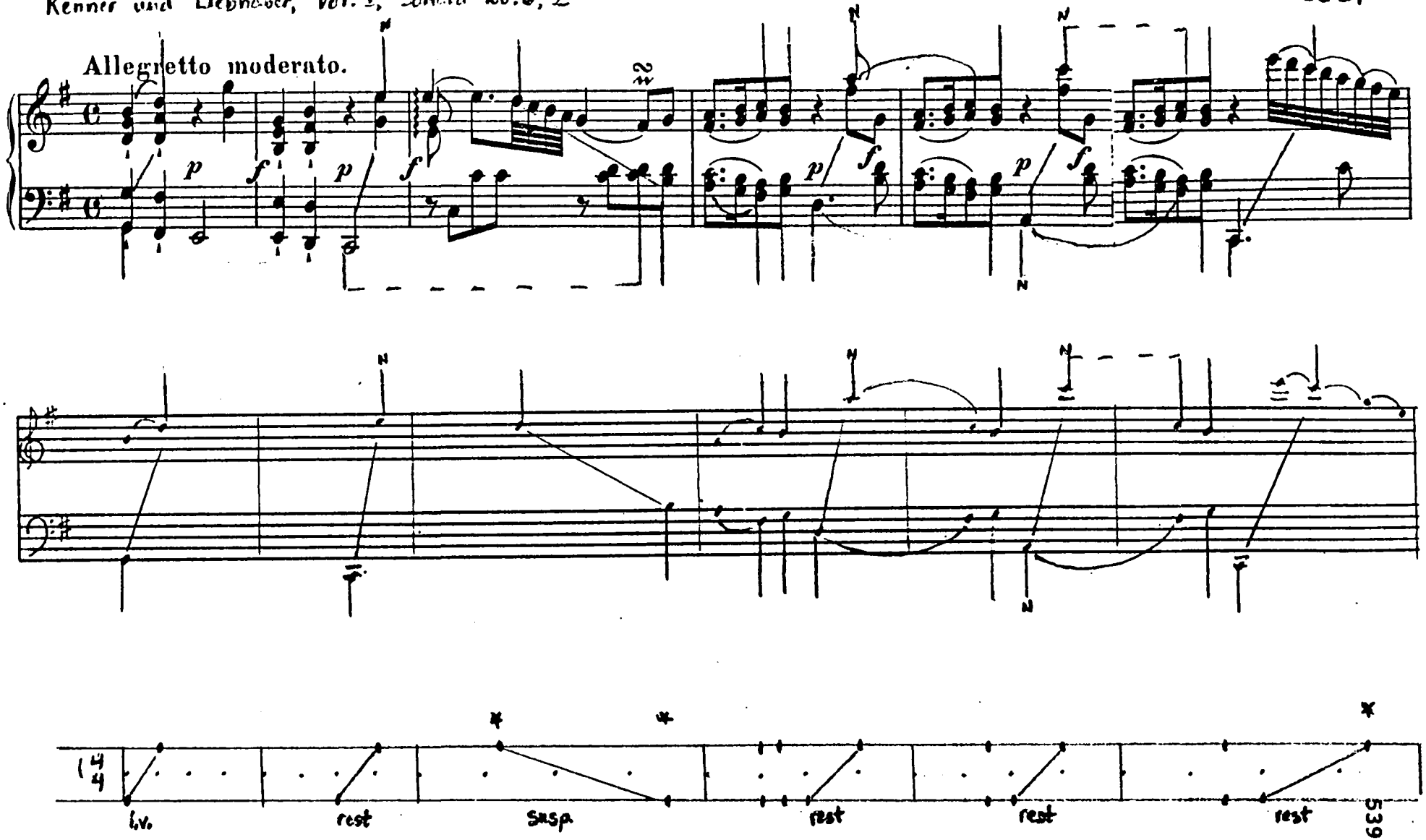

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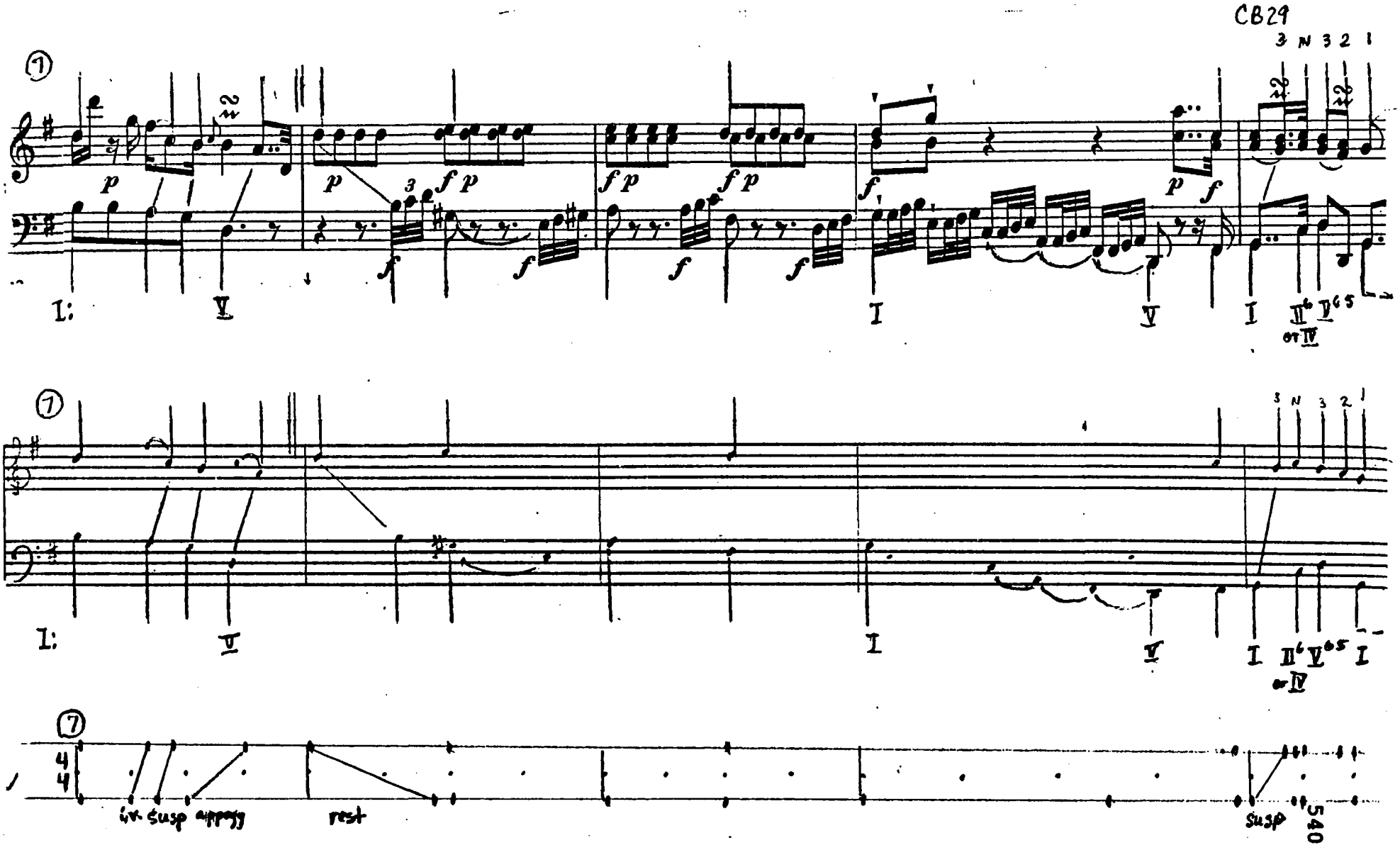

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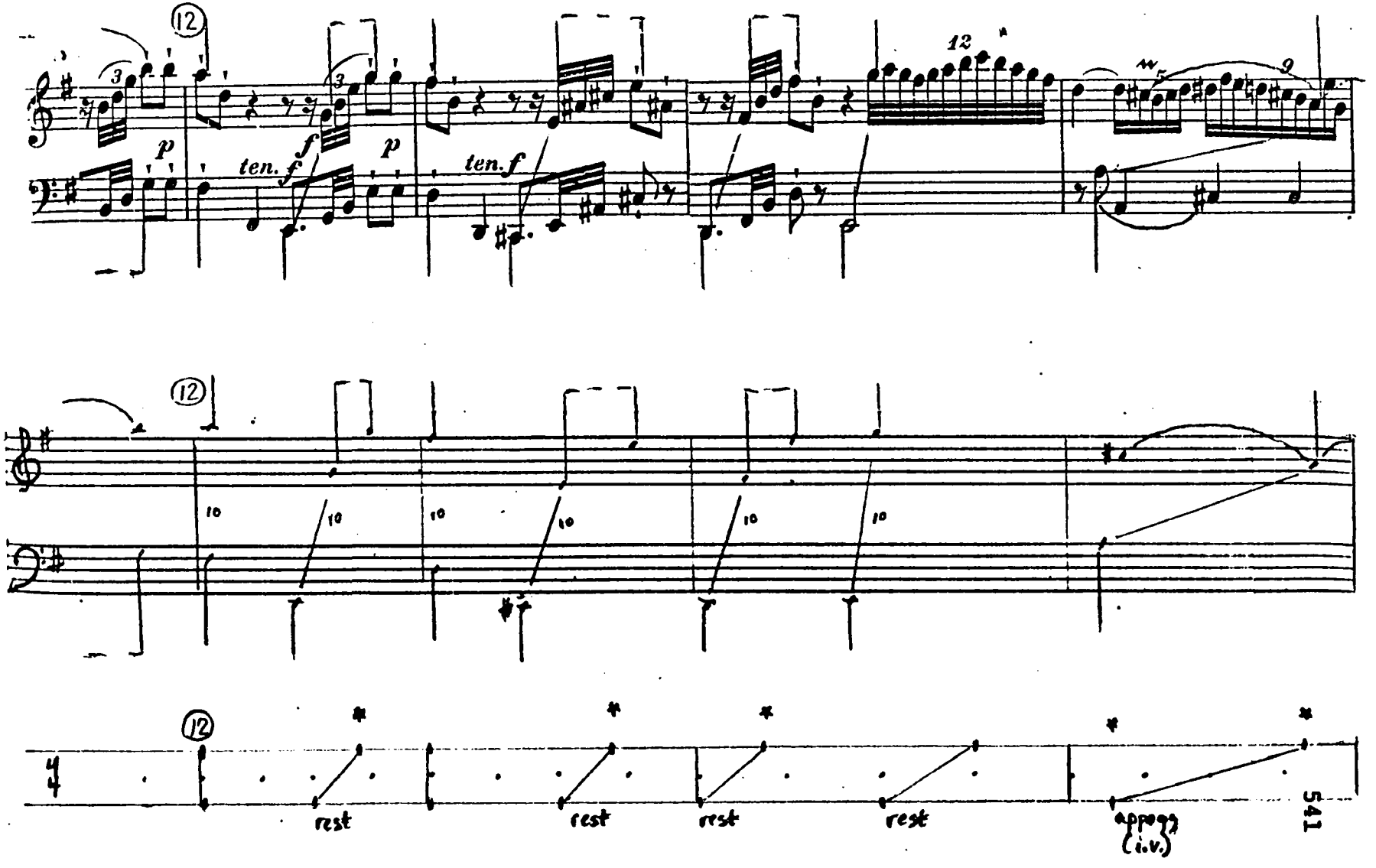

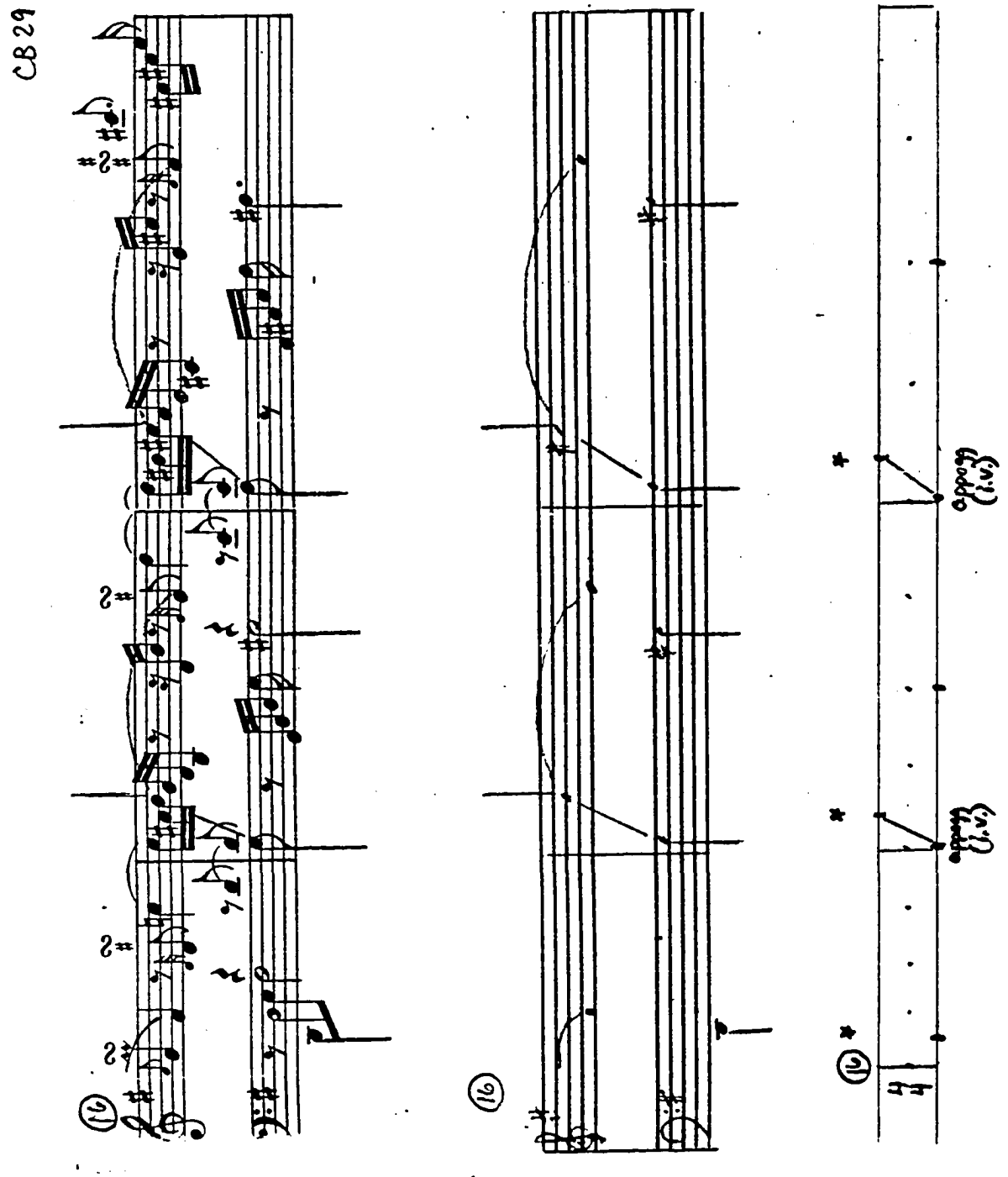

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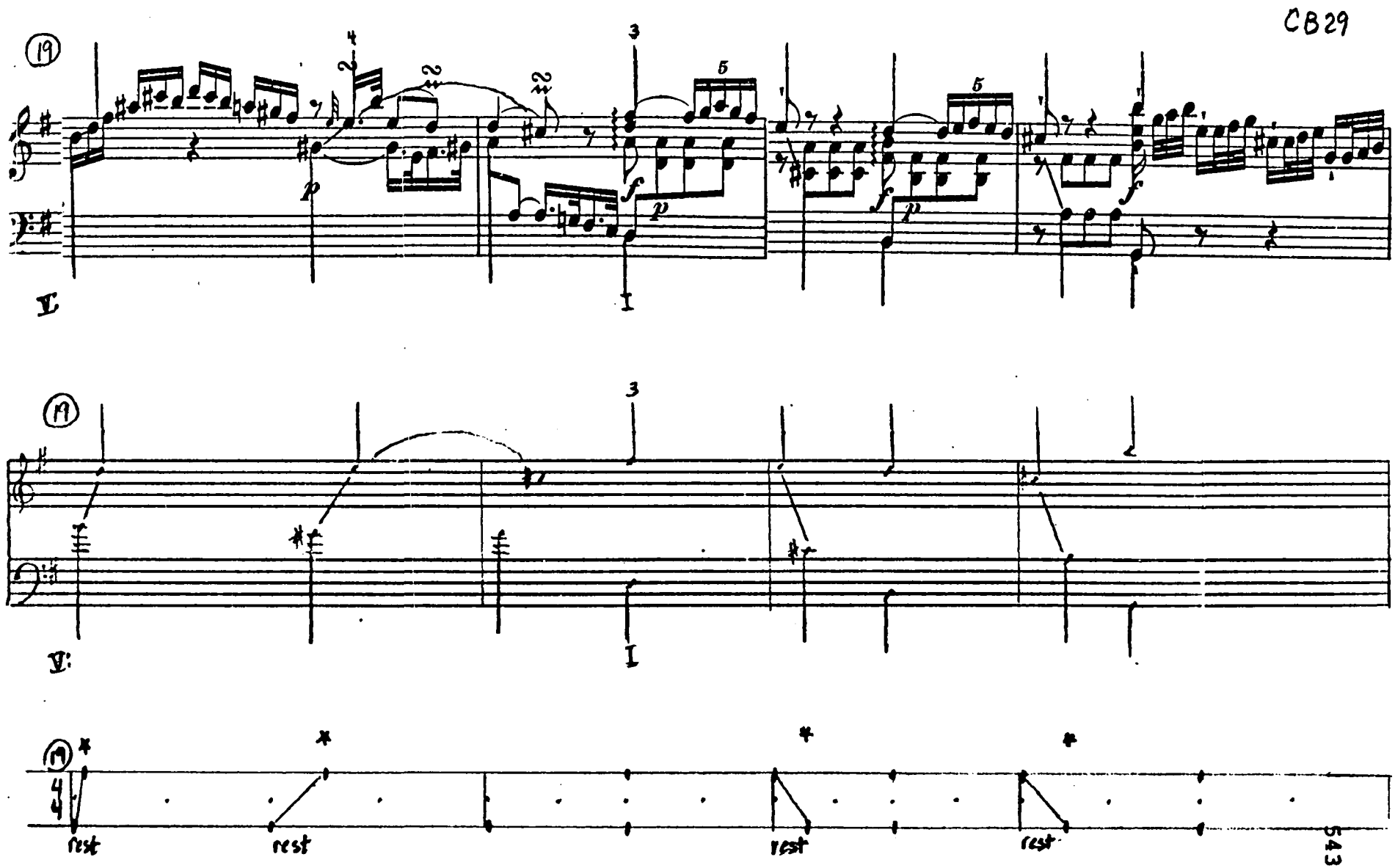

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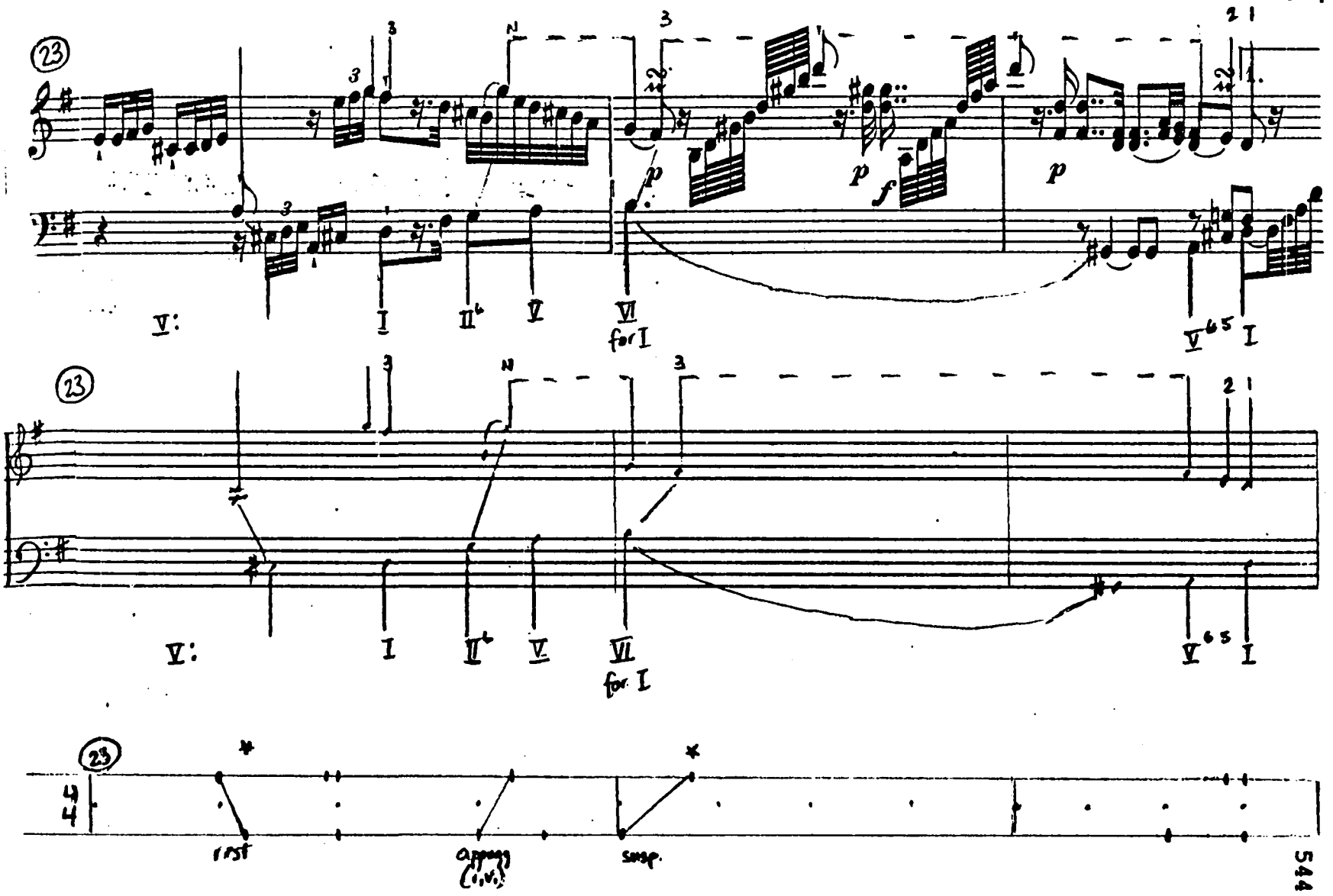

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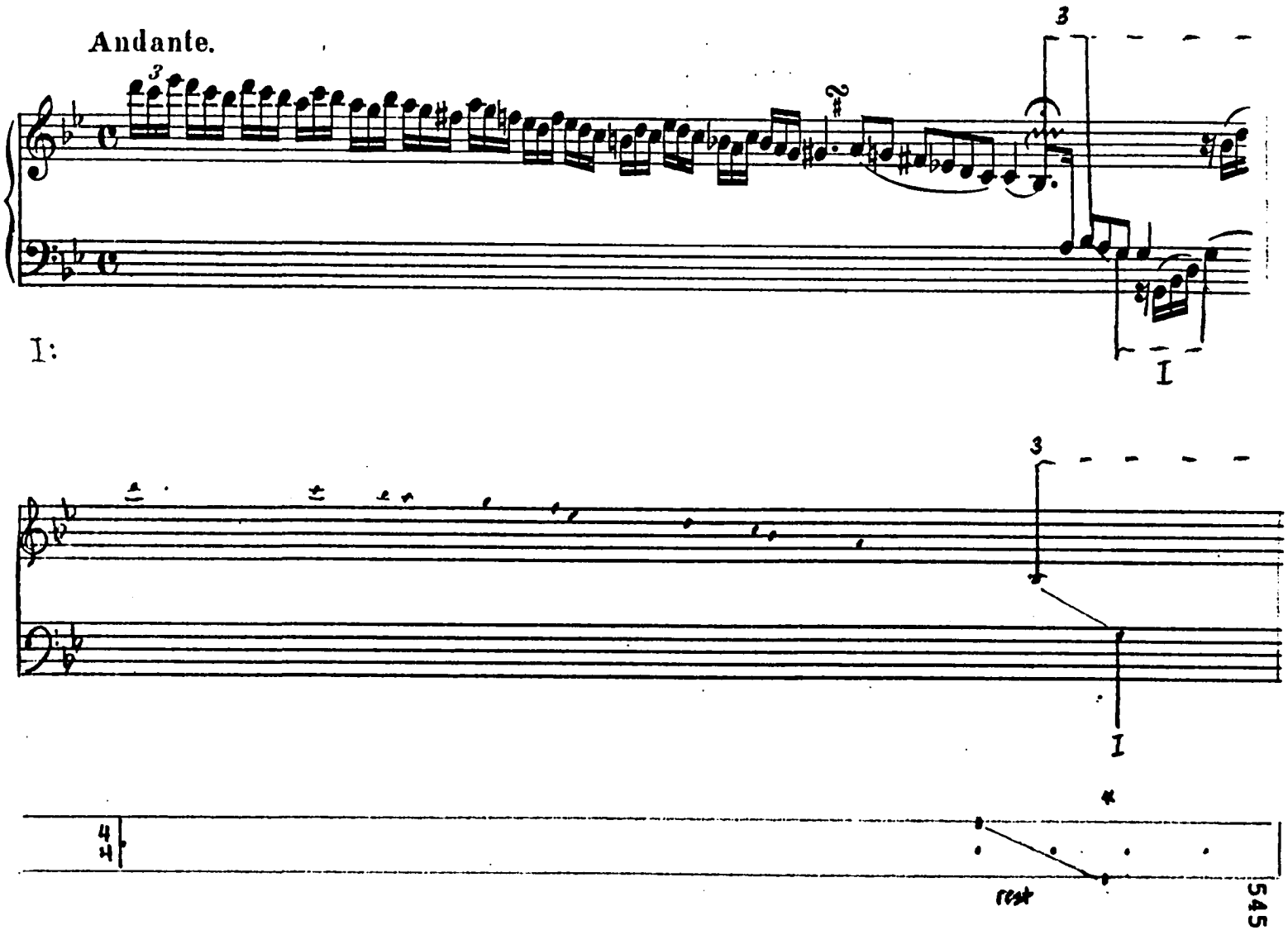
Andante.



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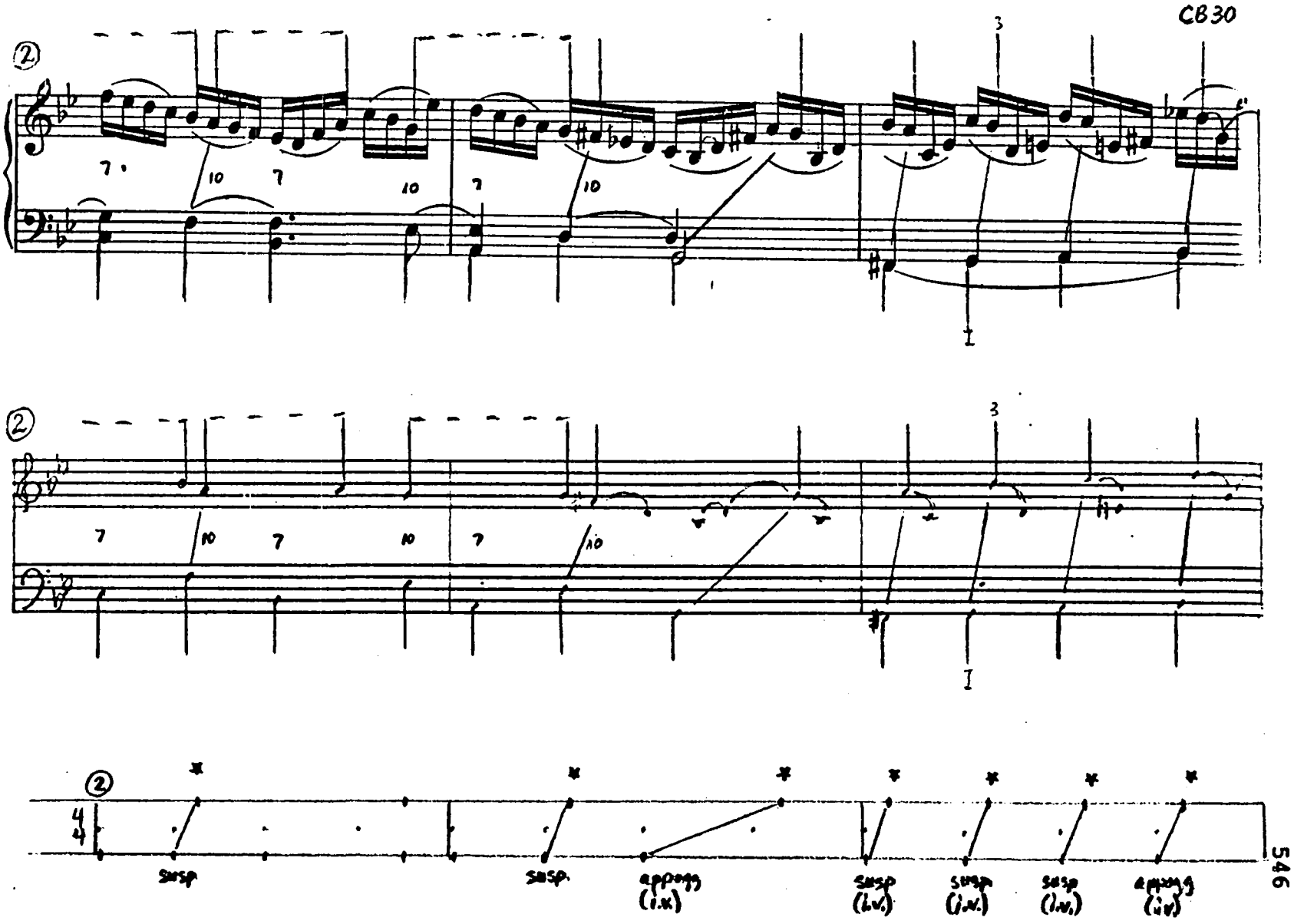

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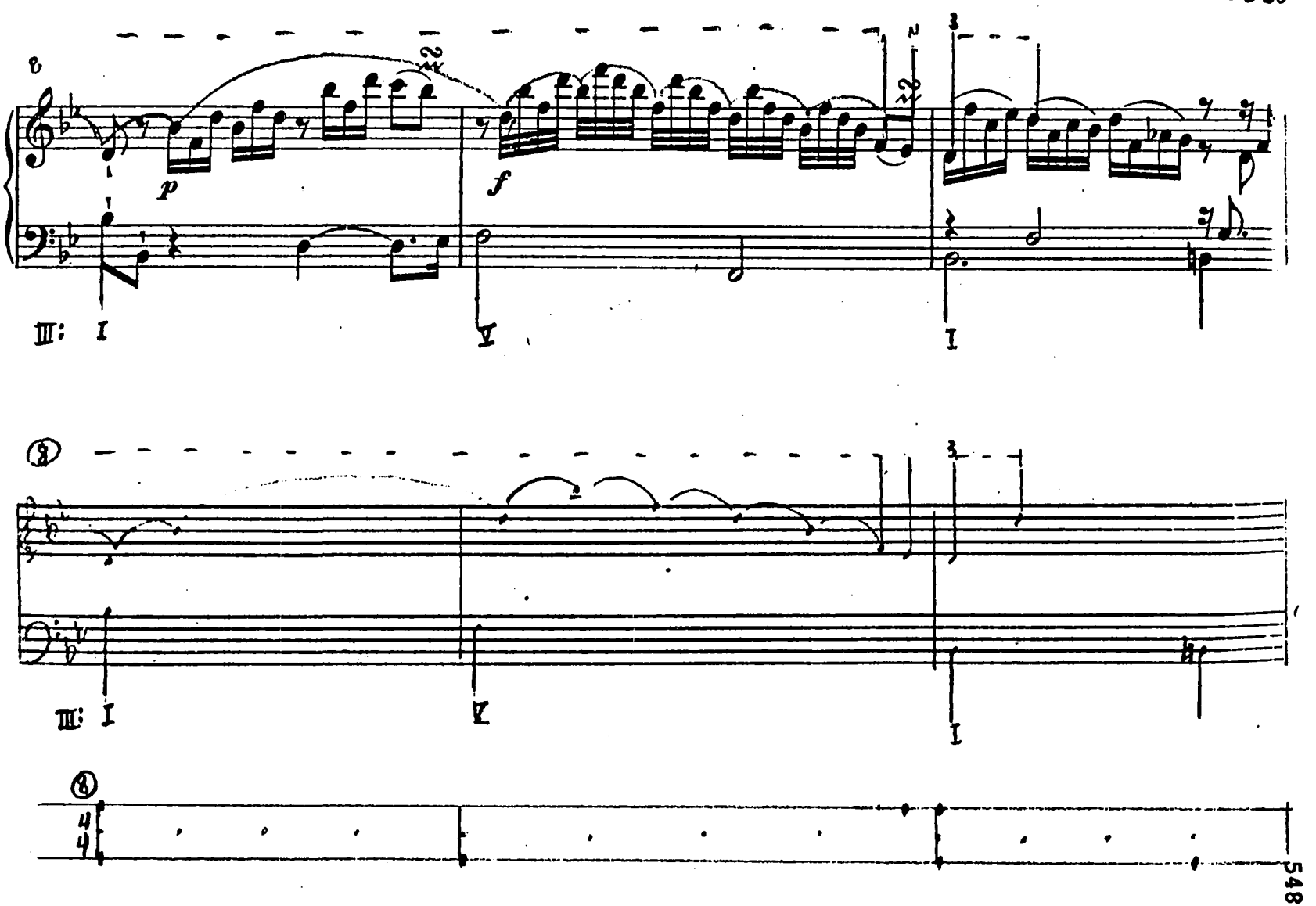

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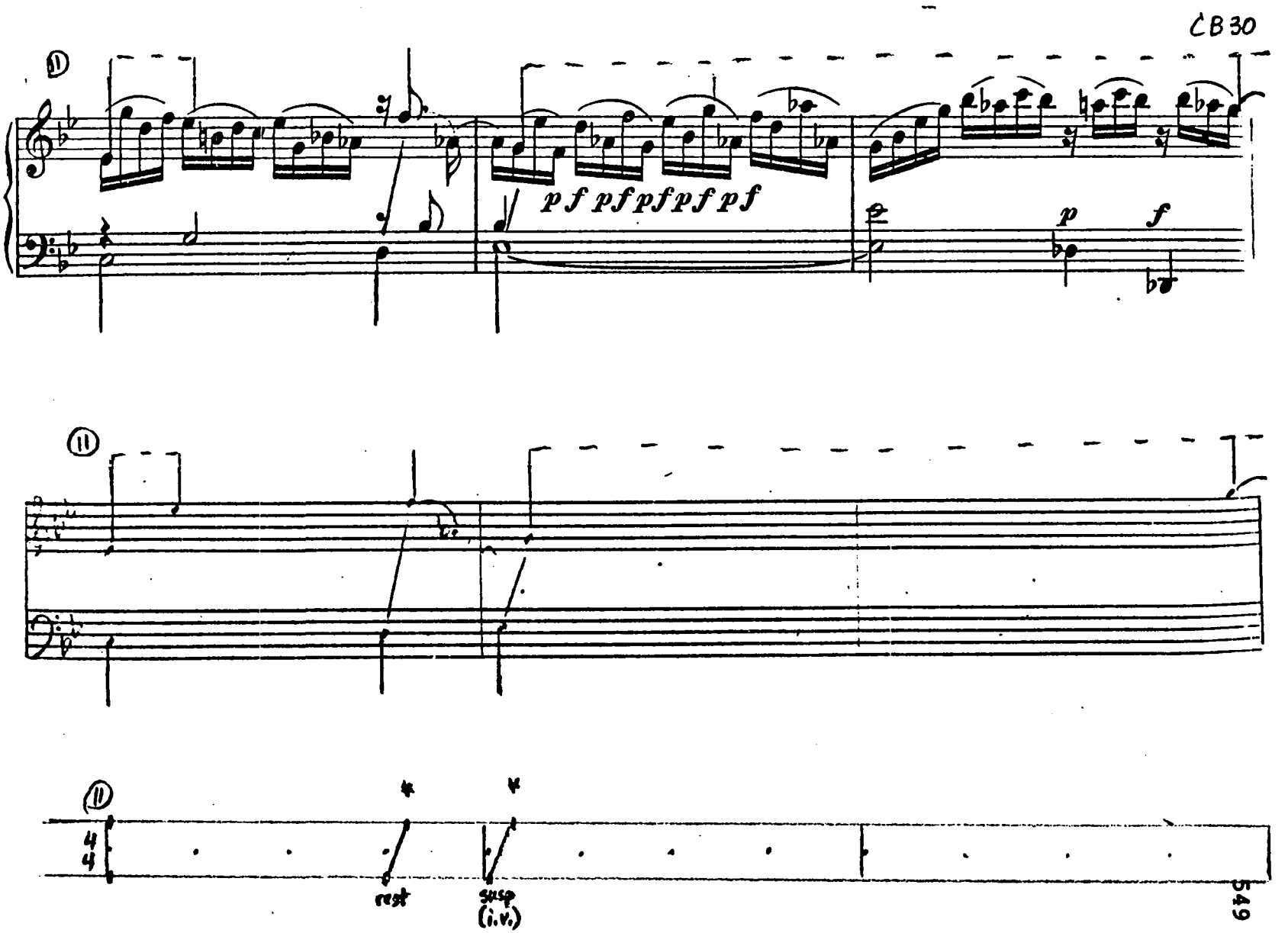

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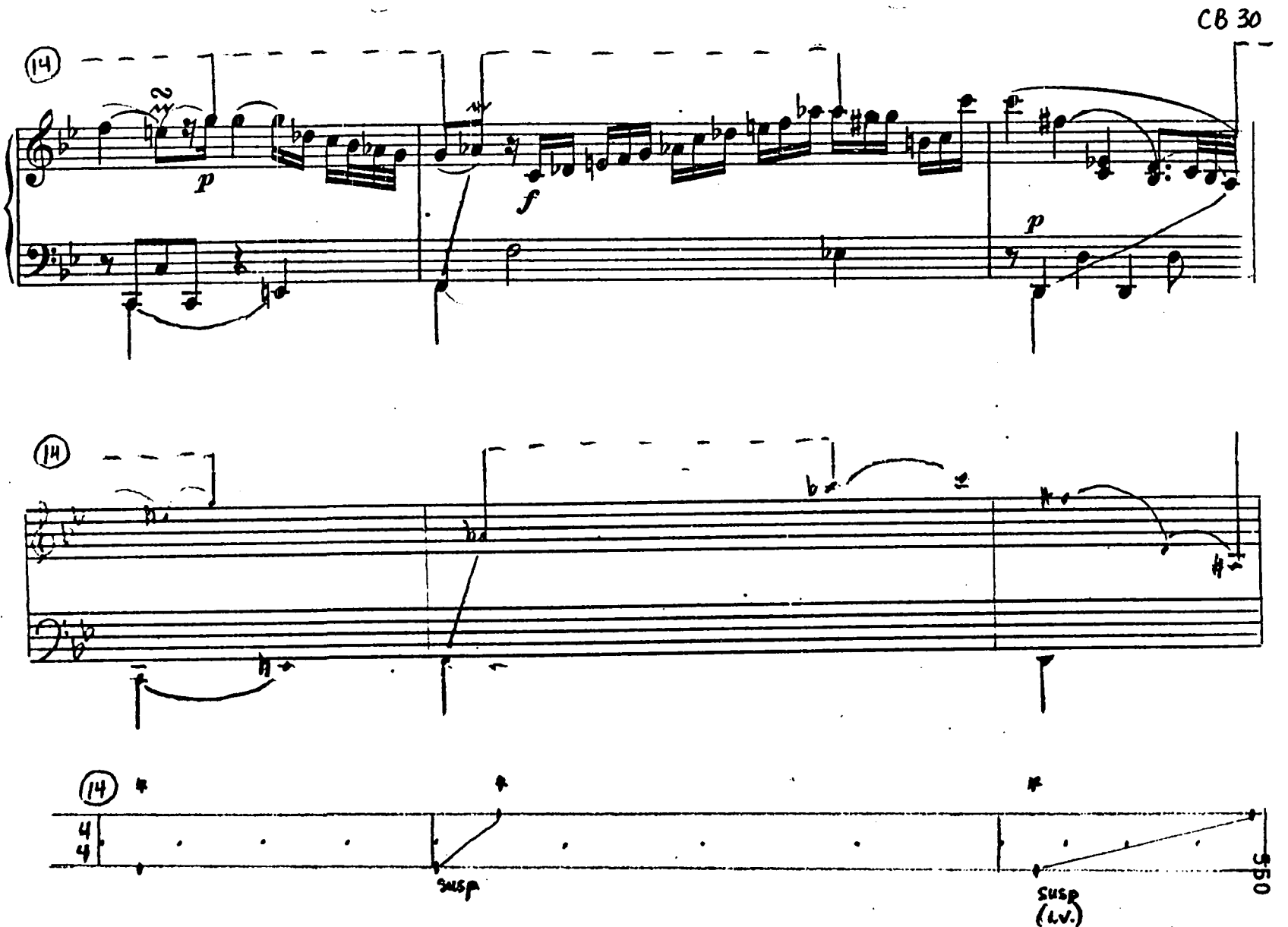

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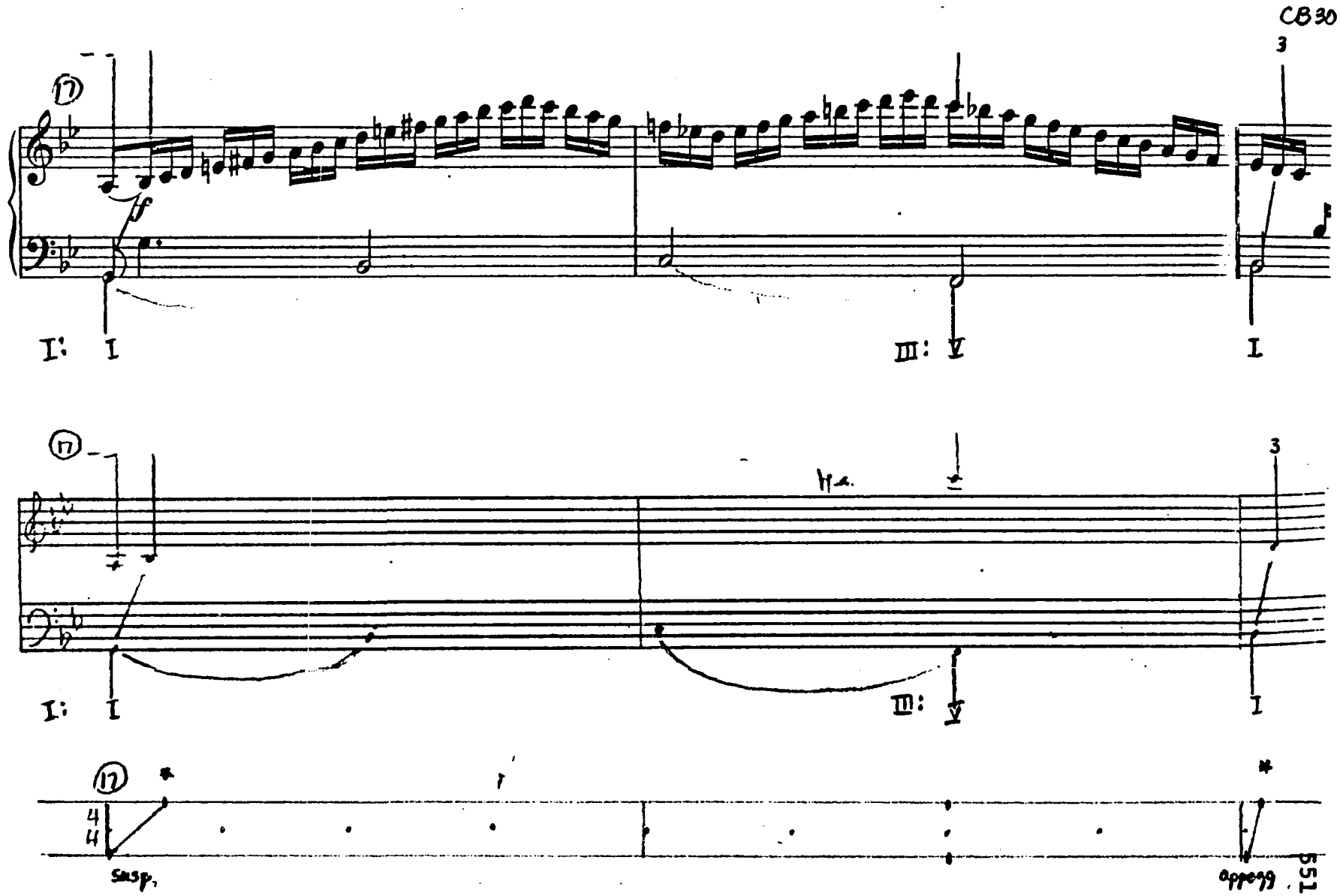

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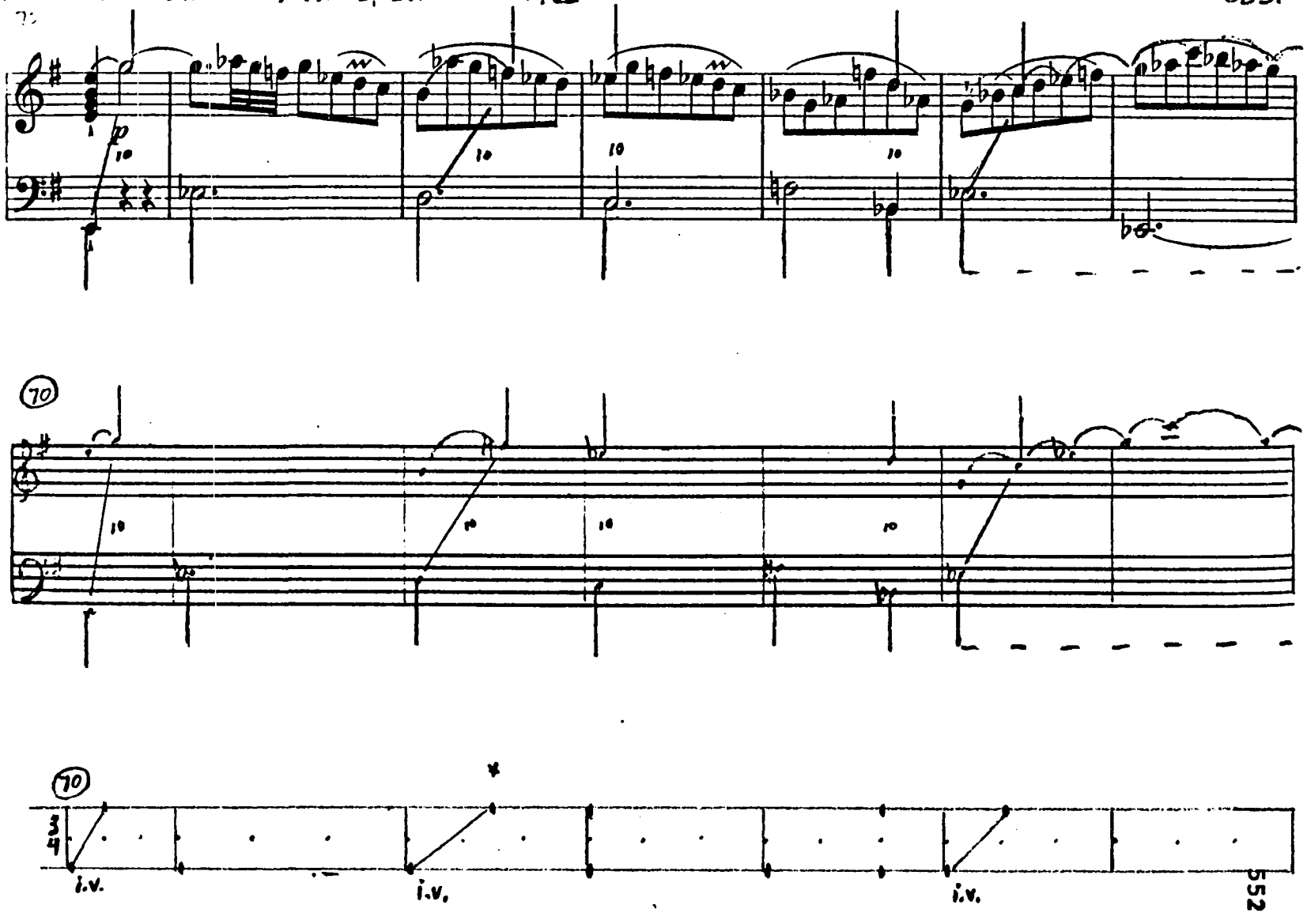

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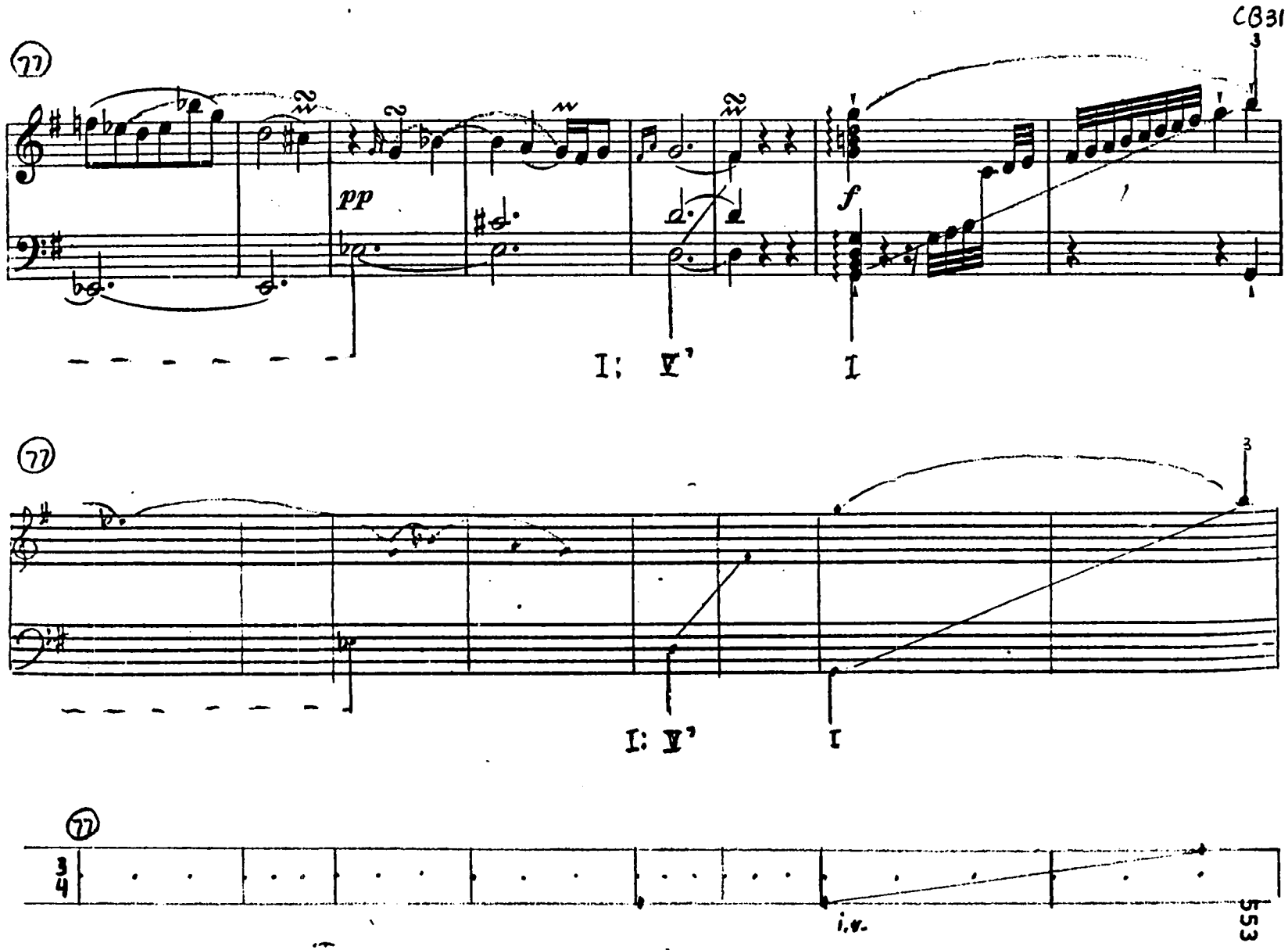

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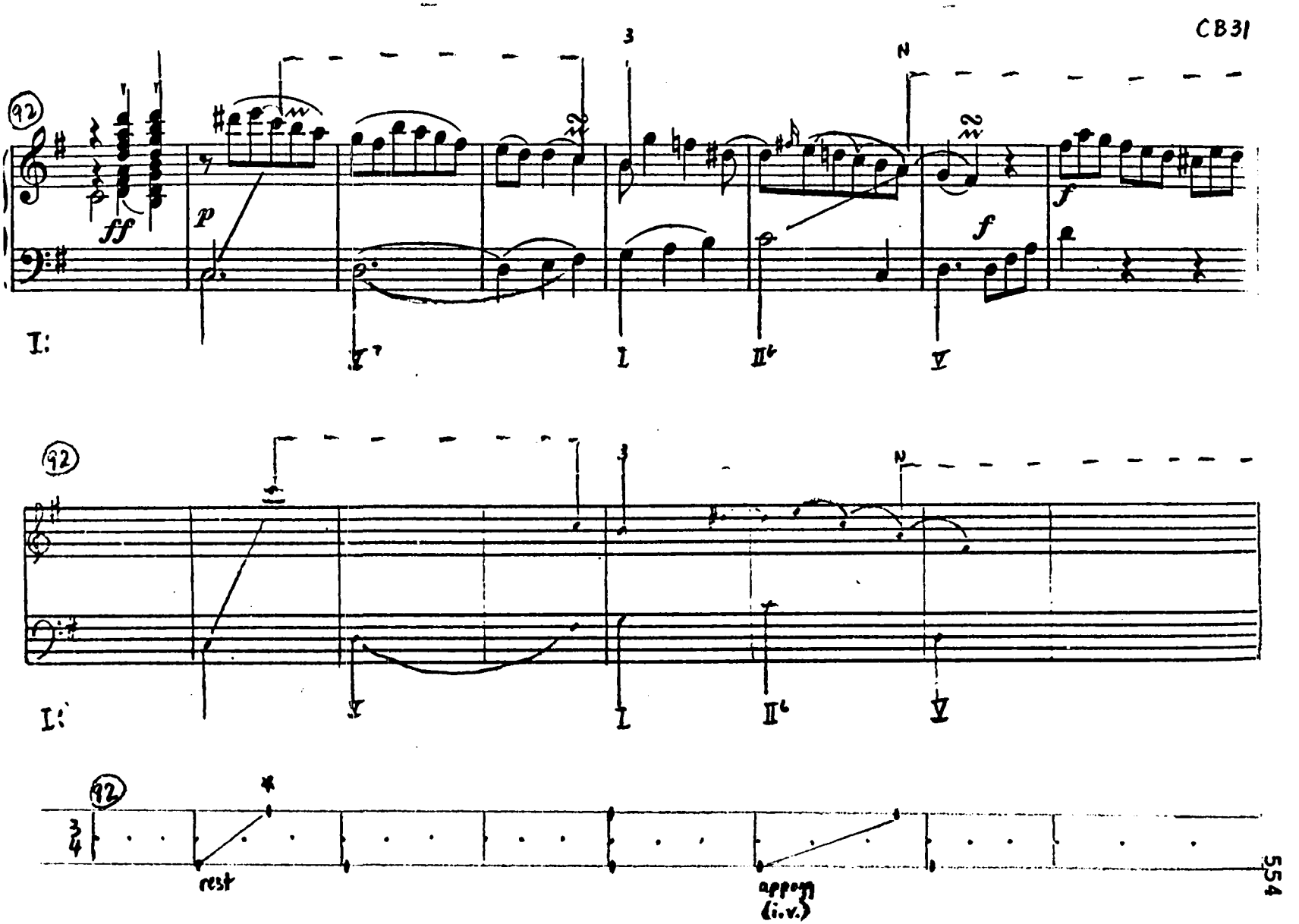

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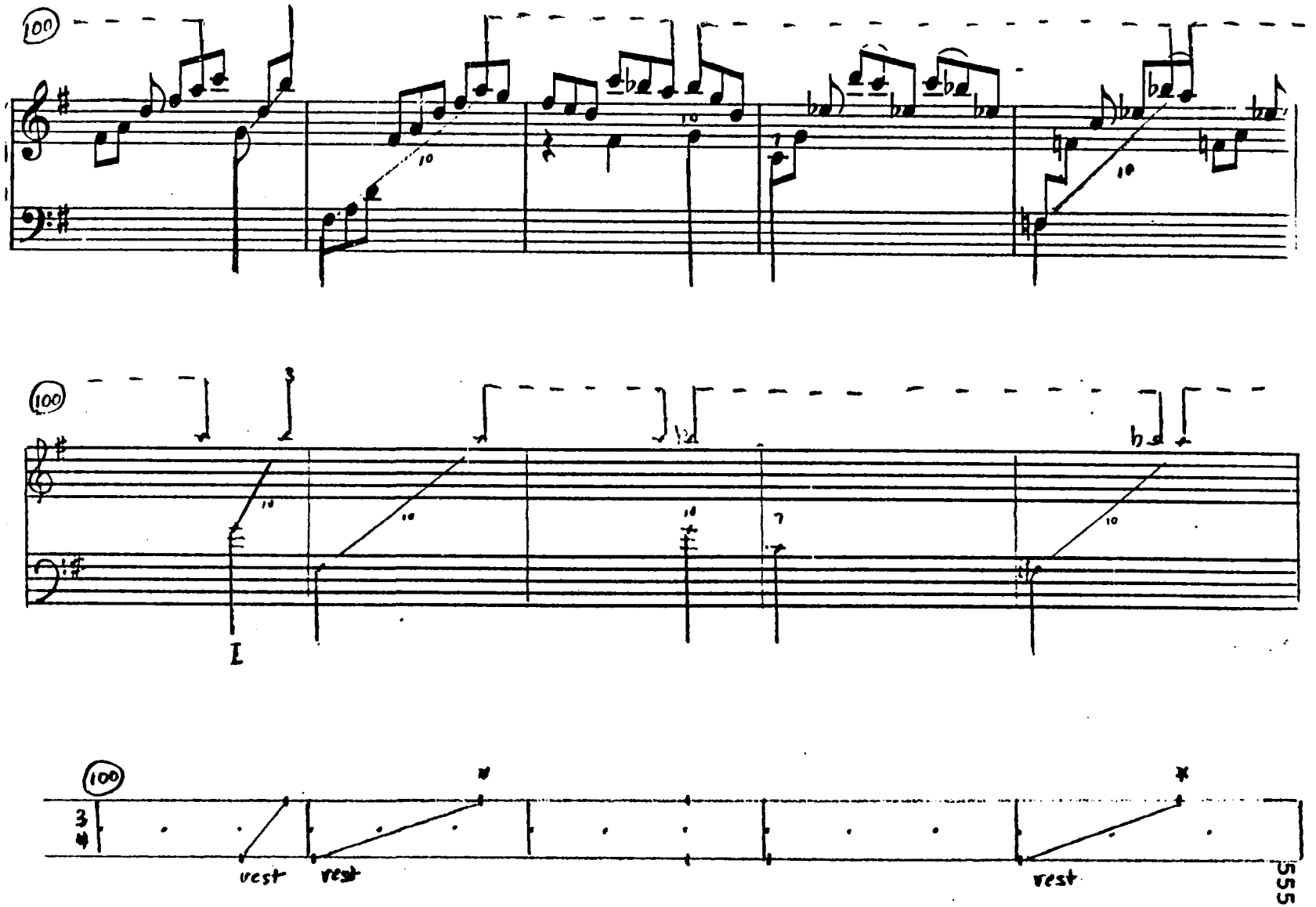

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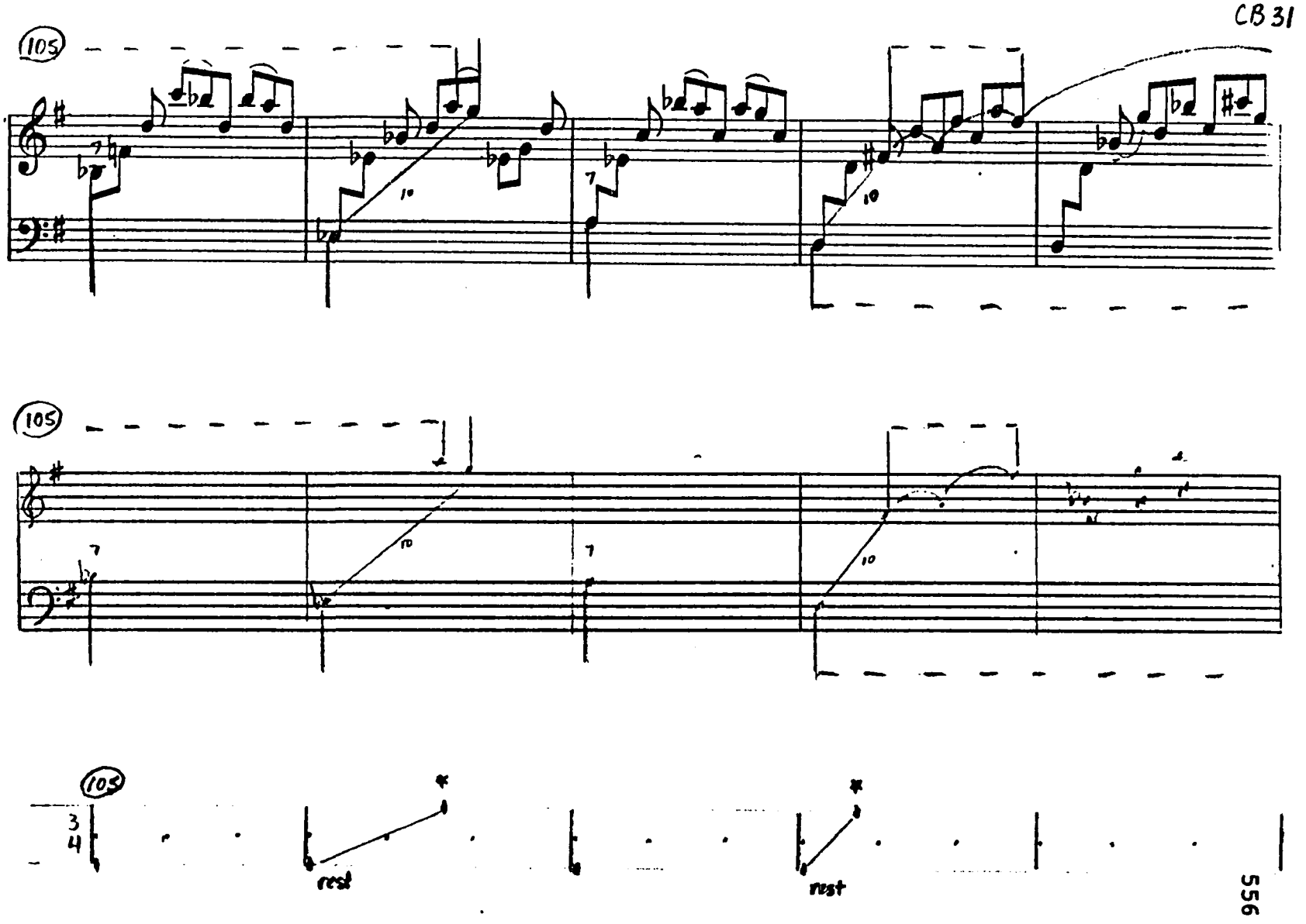

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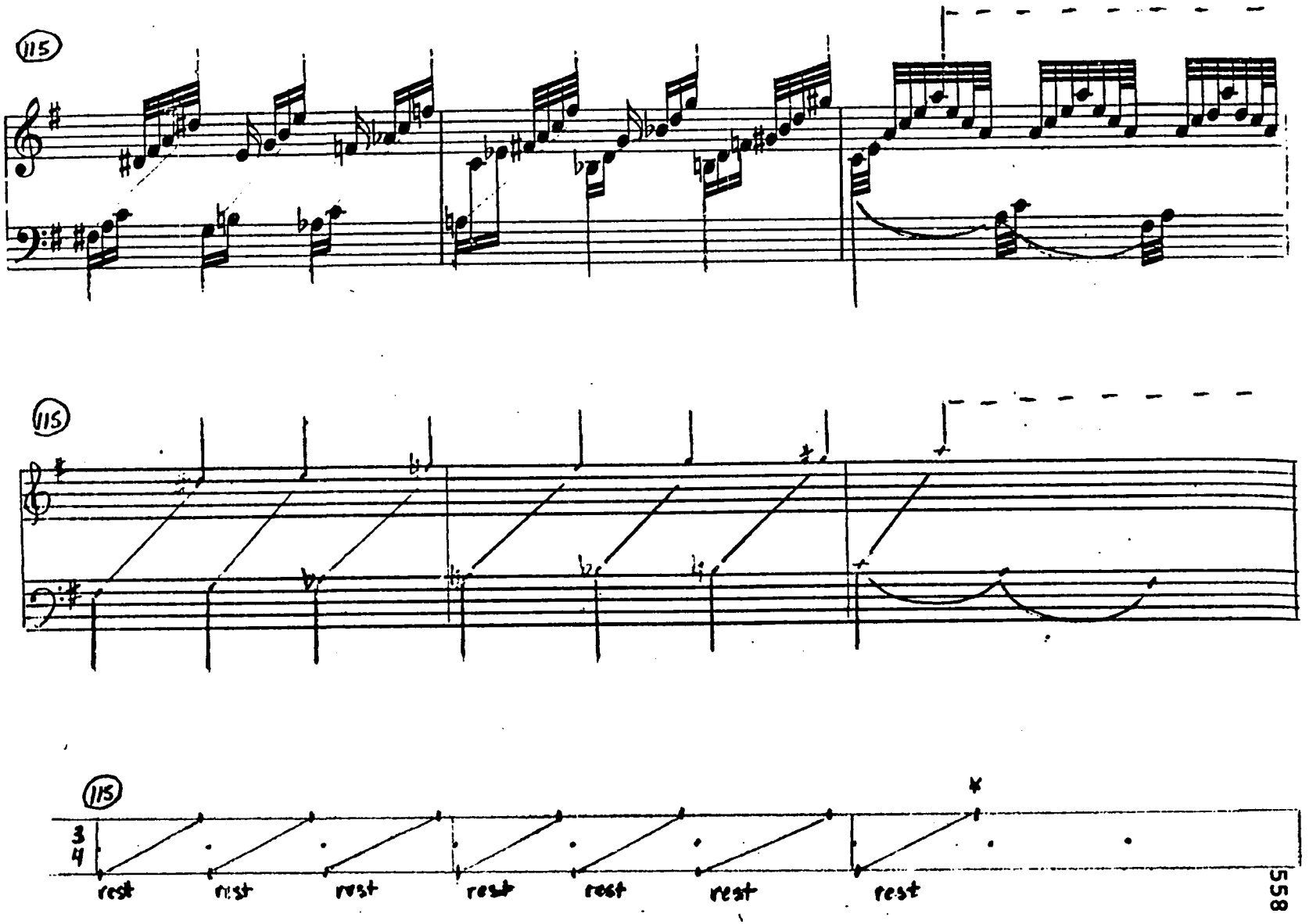

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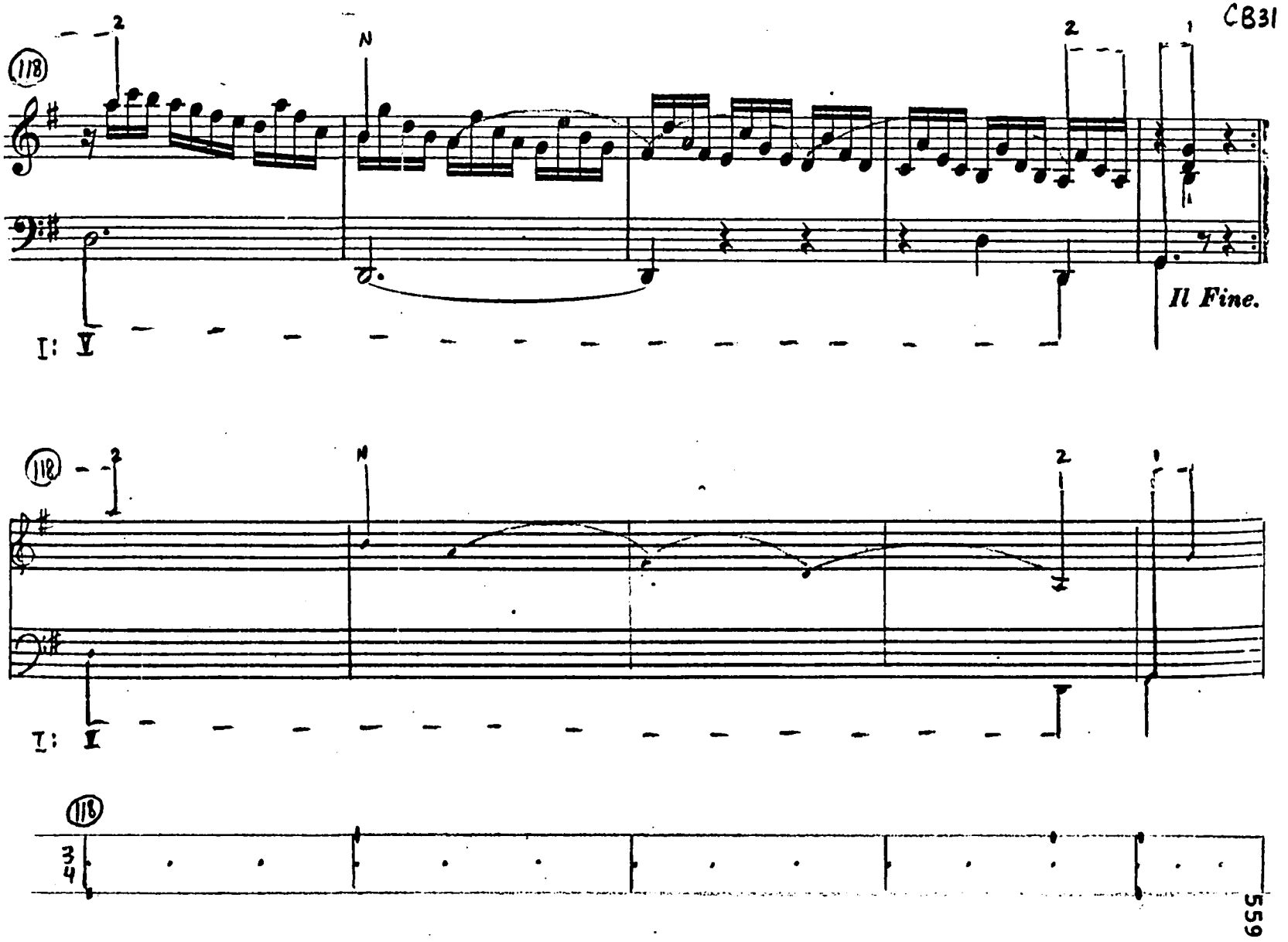

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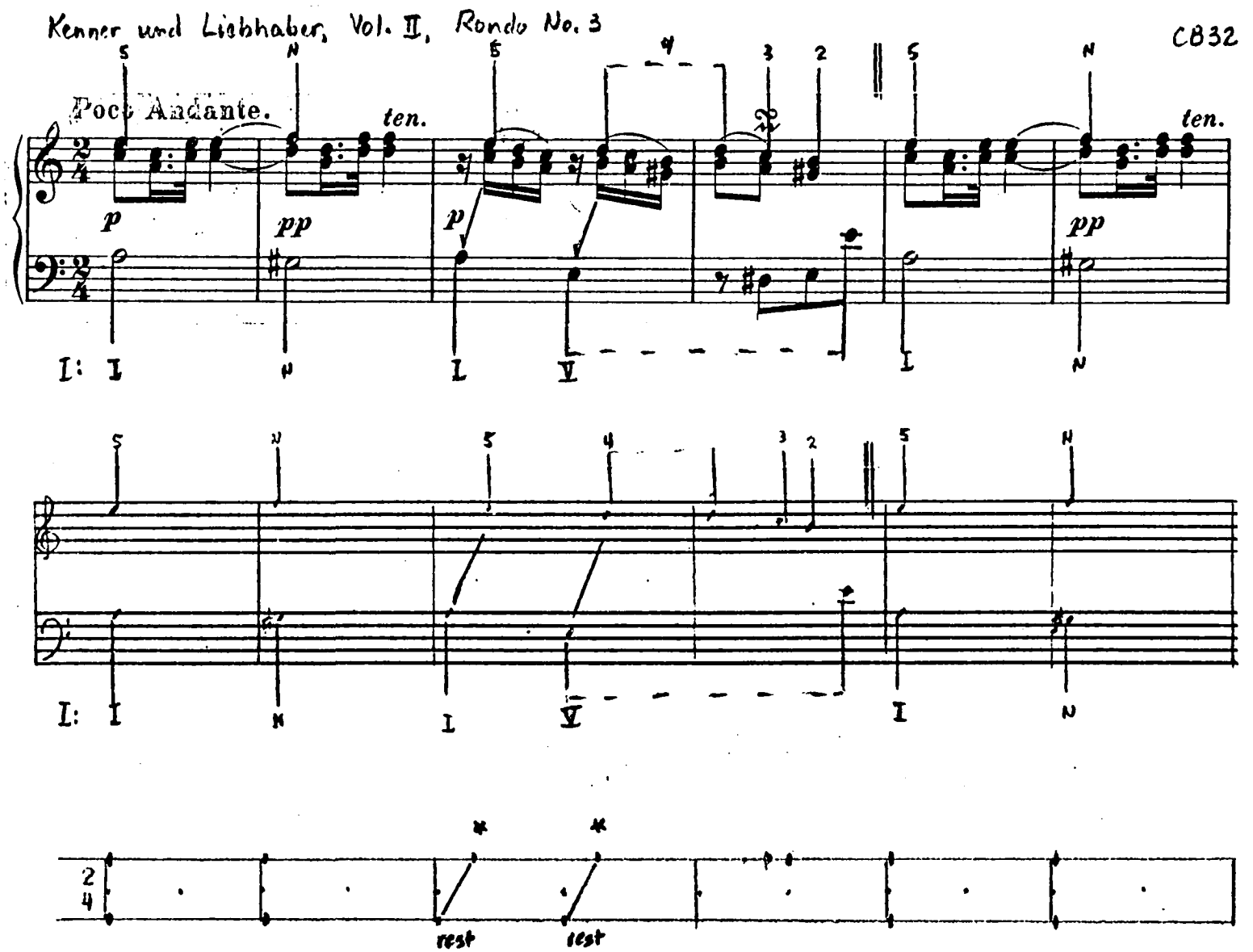

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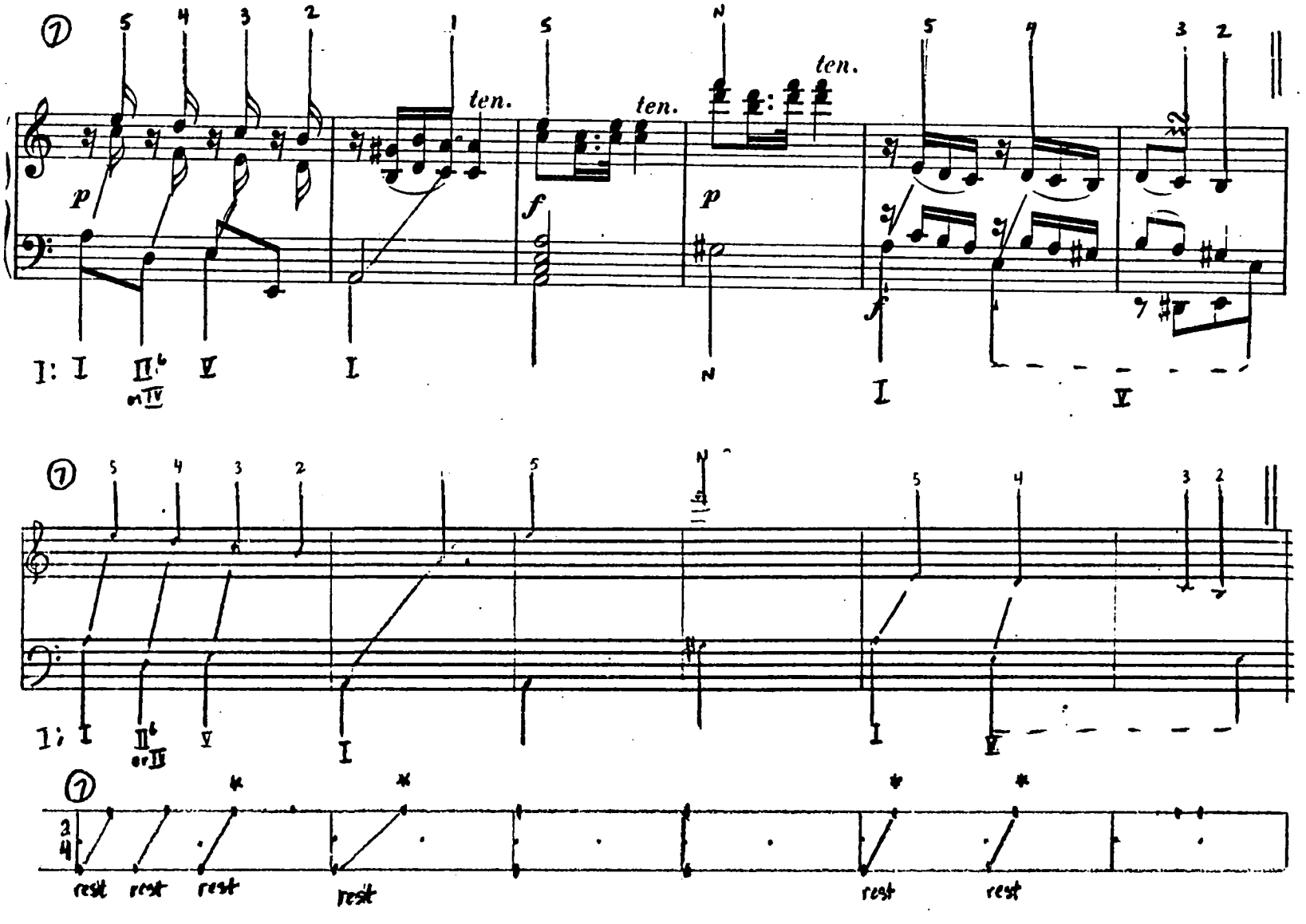

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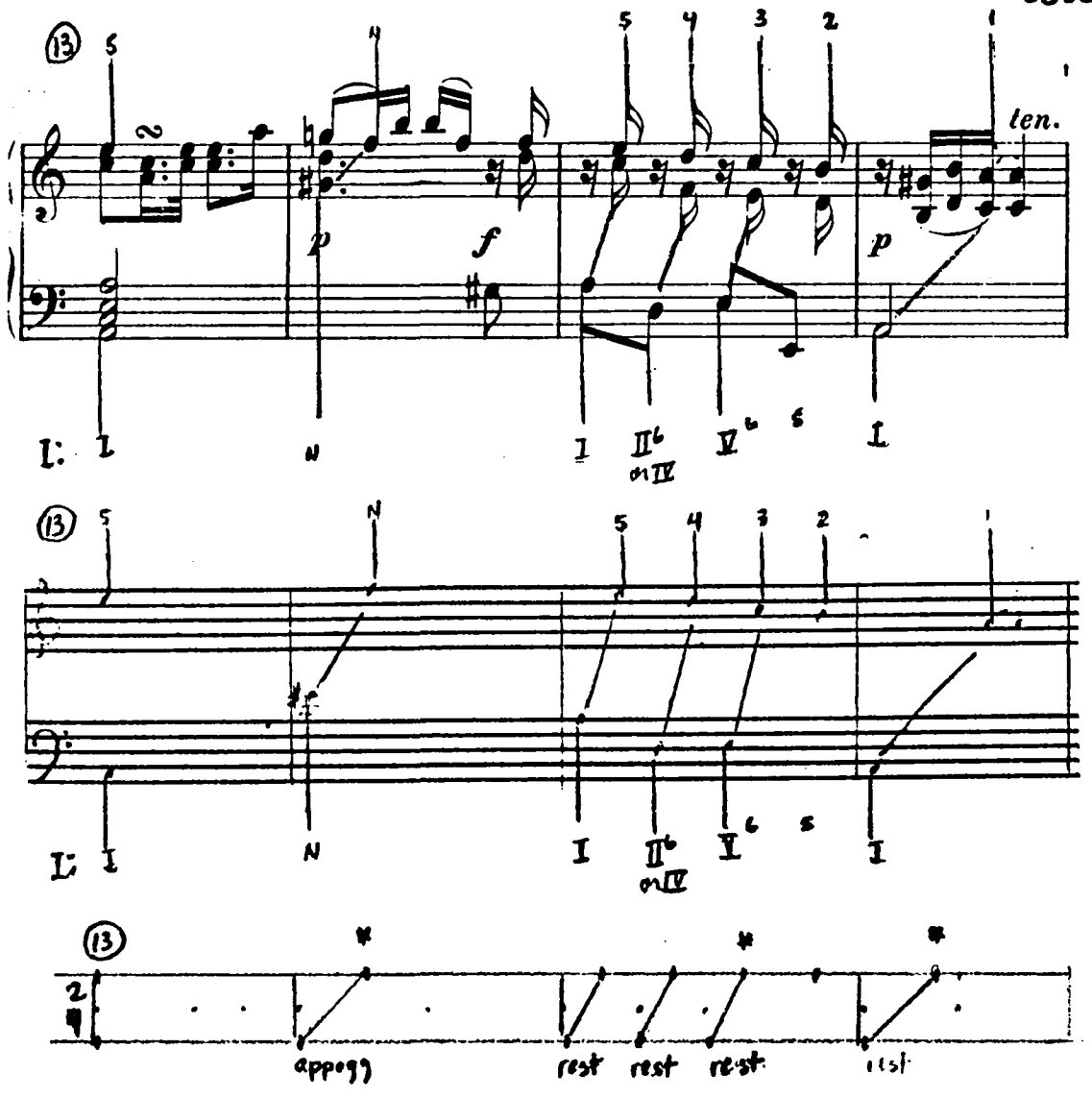

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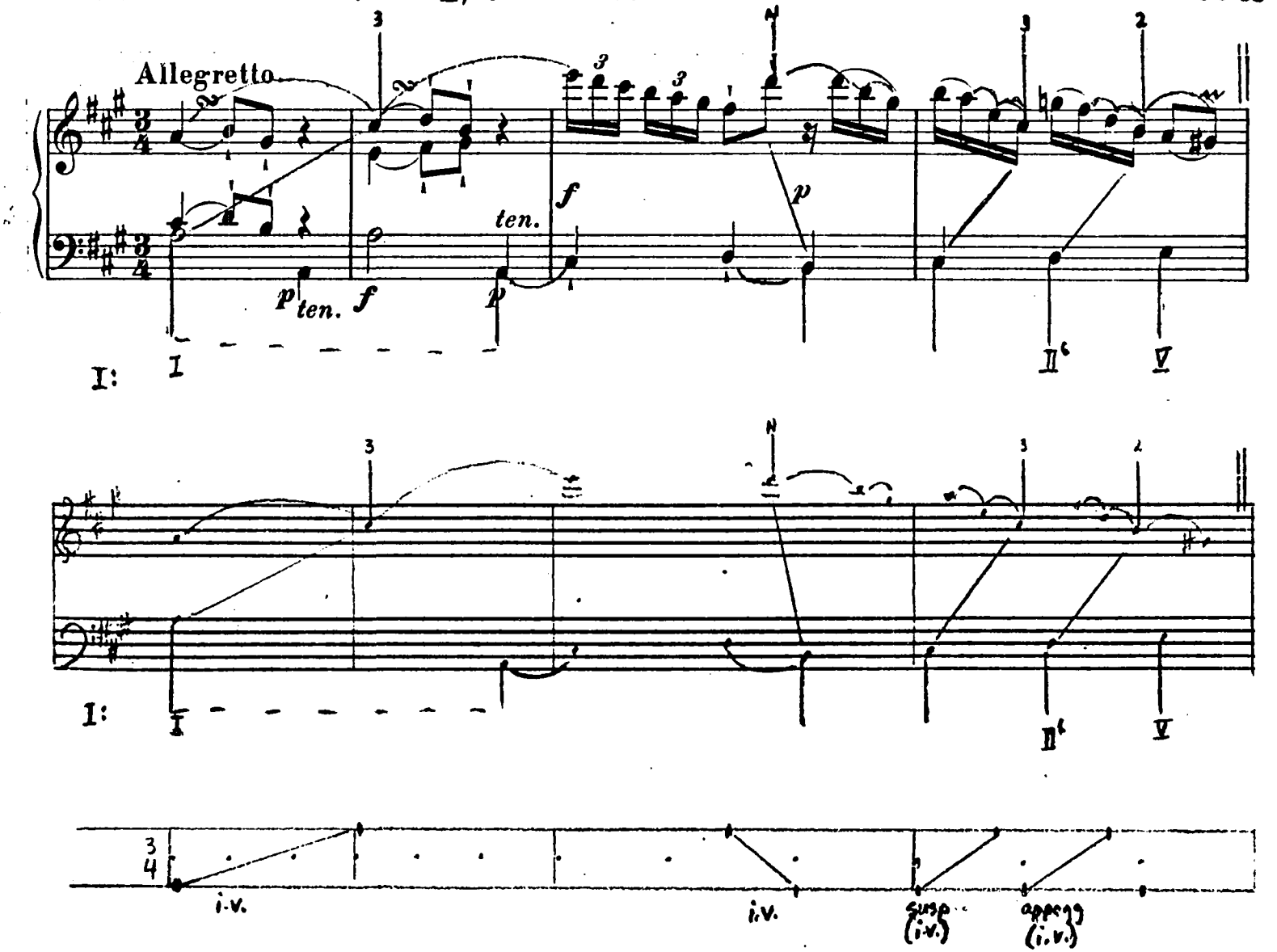

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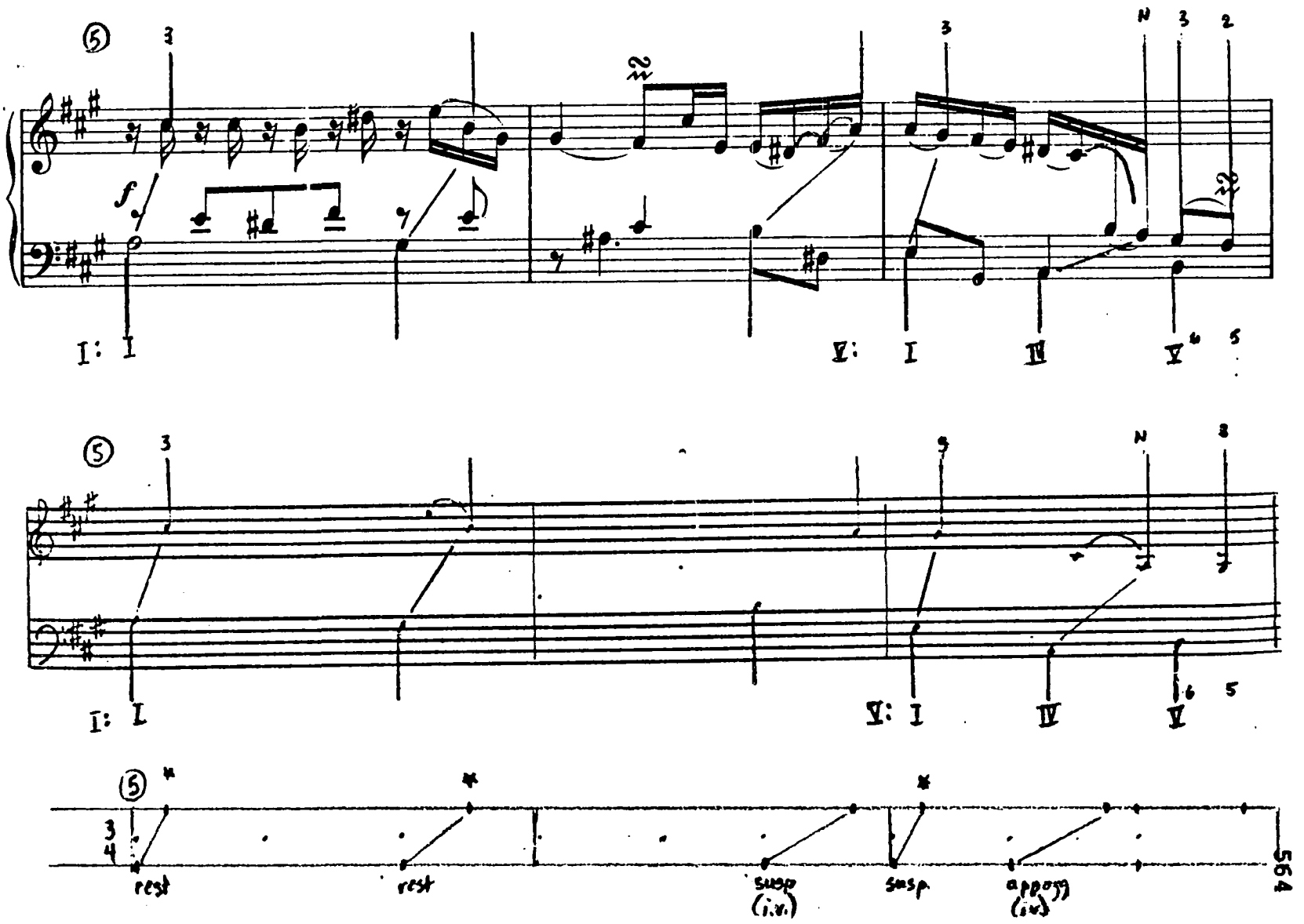

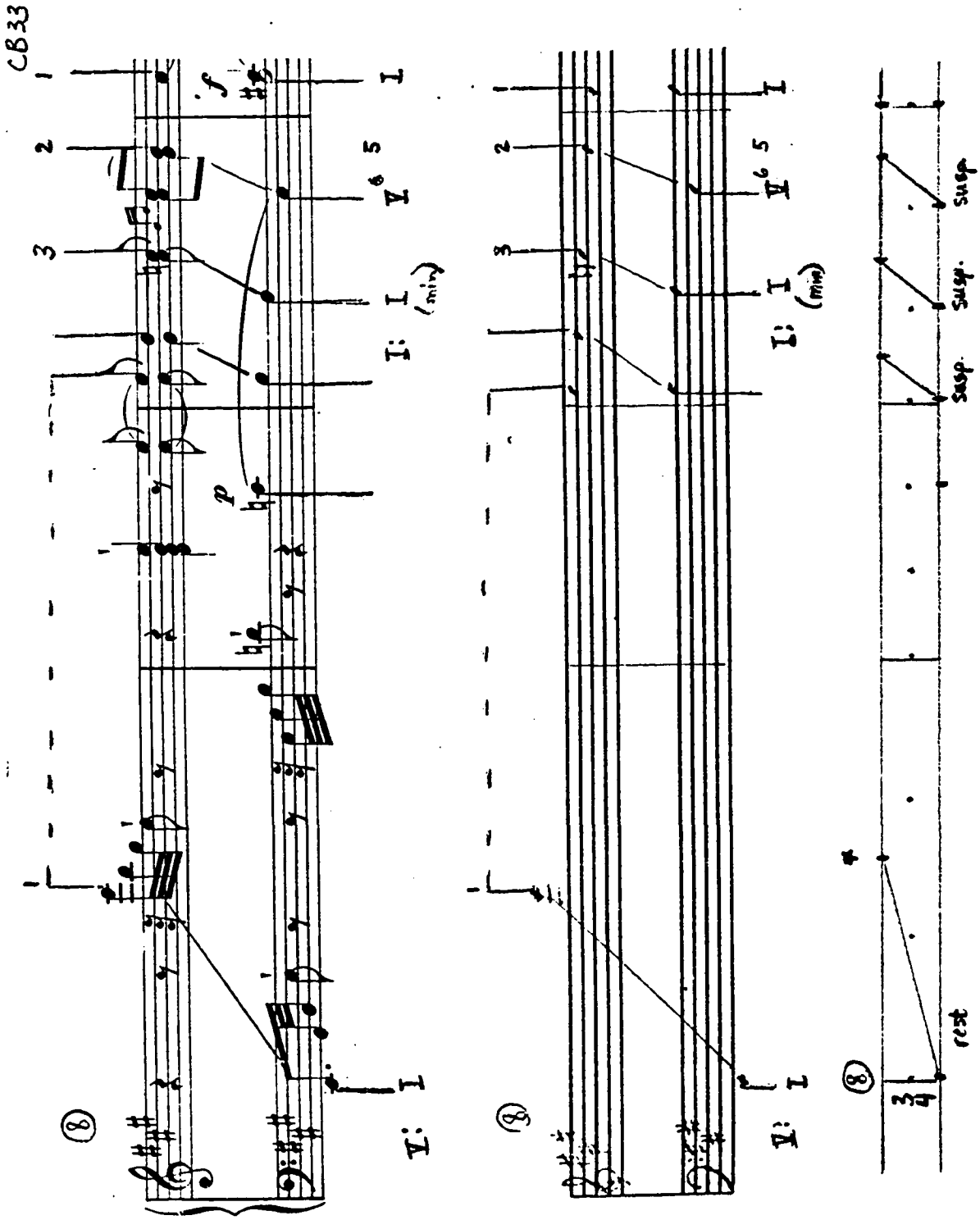

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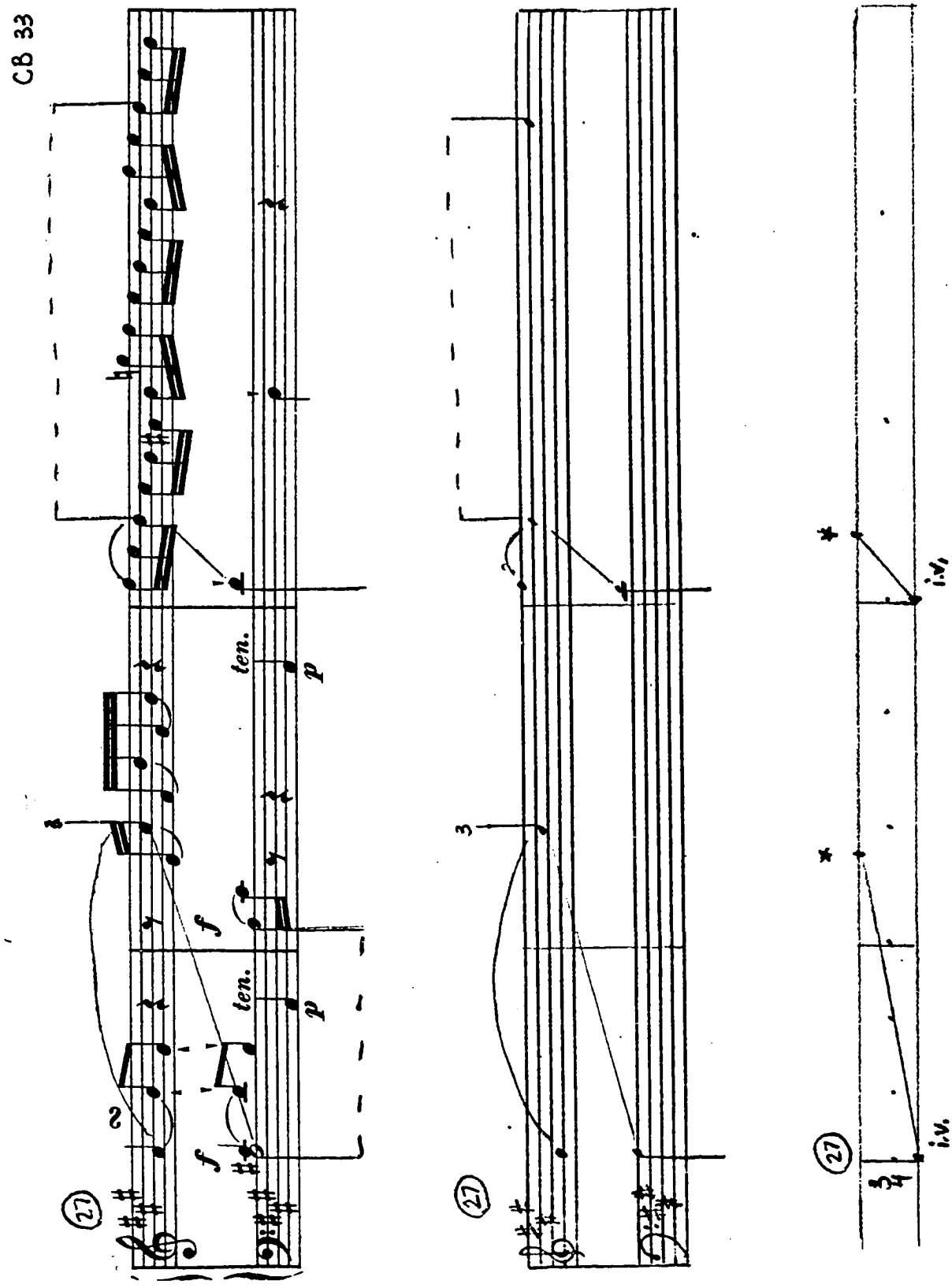

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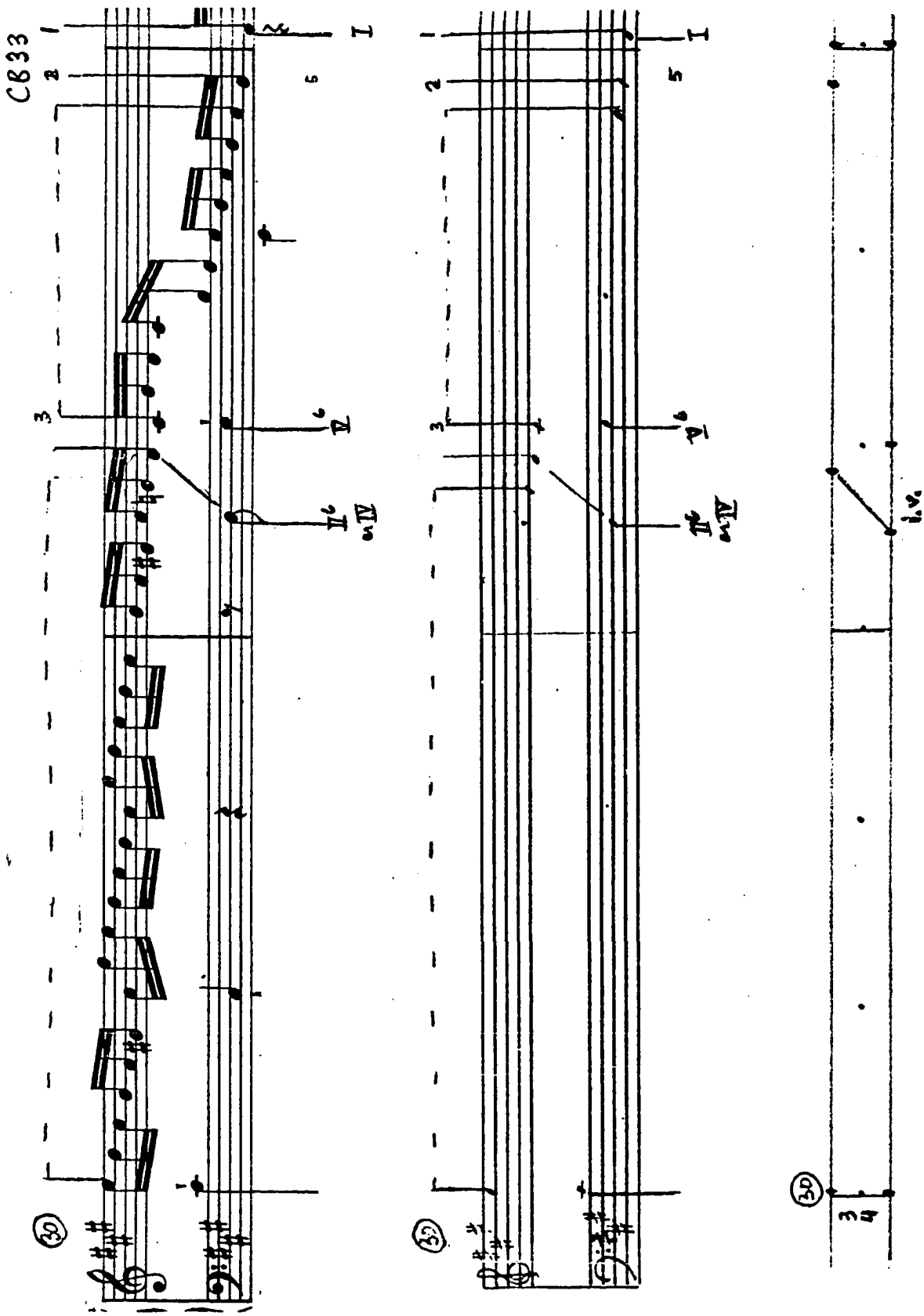

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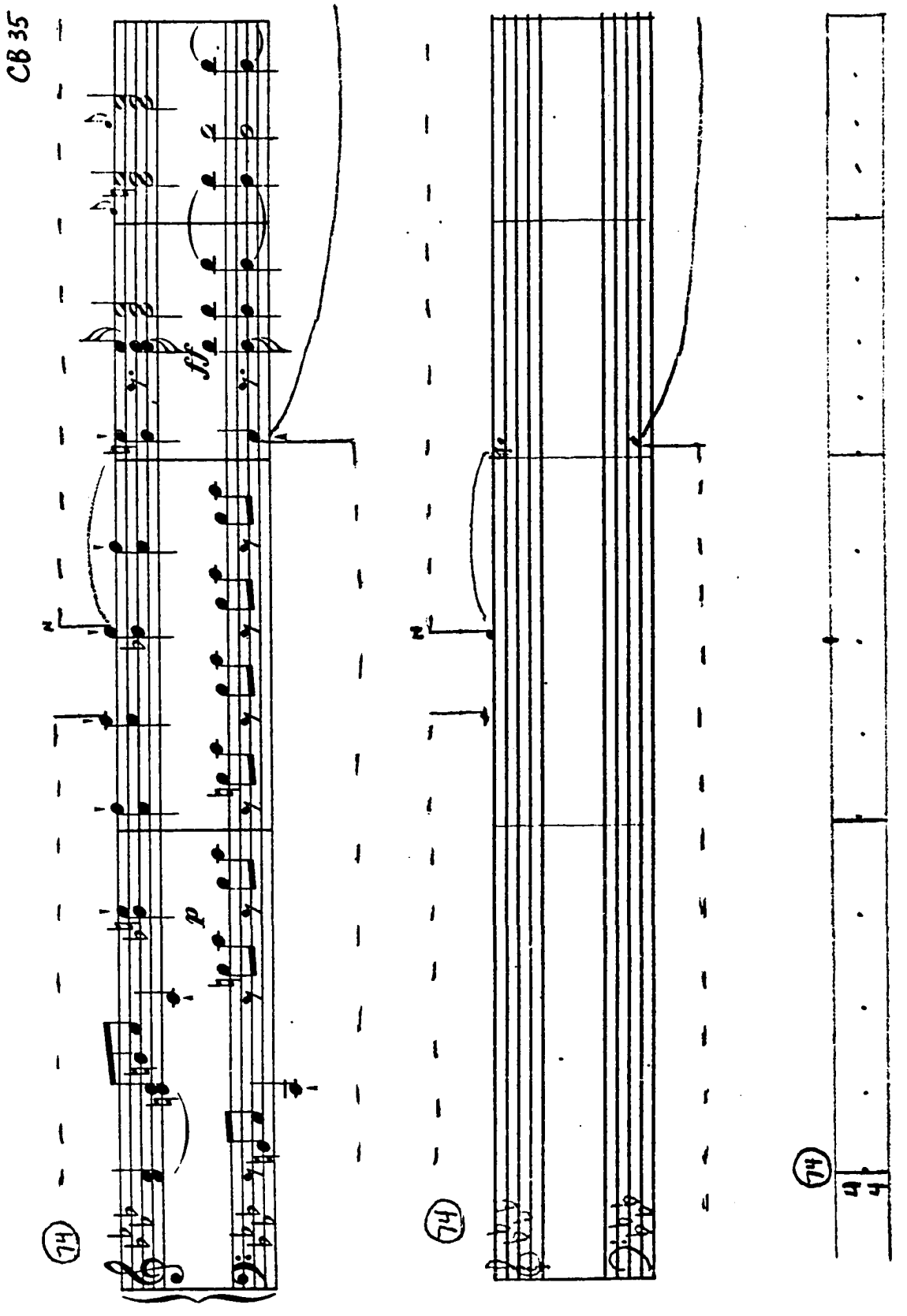

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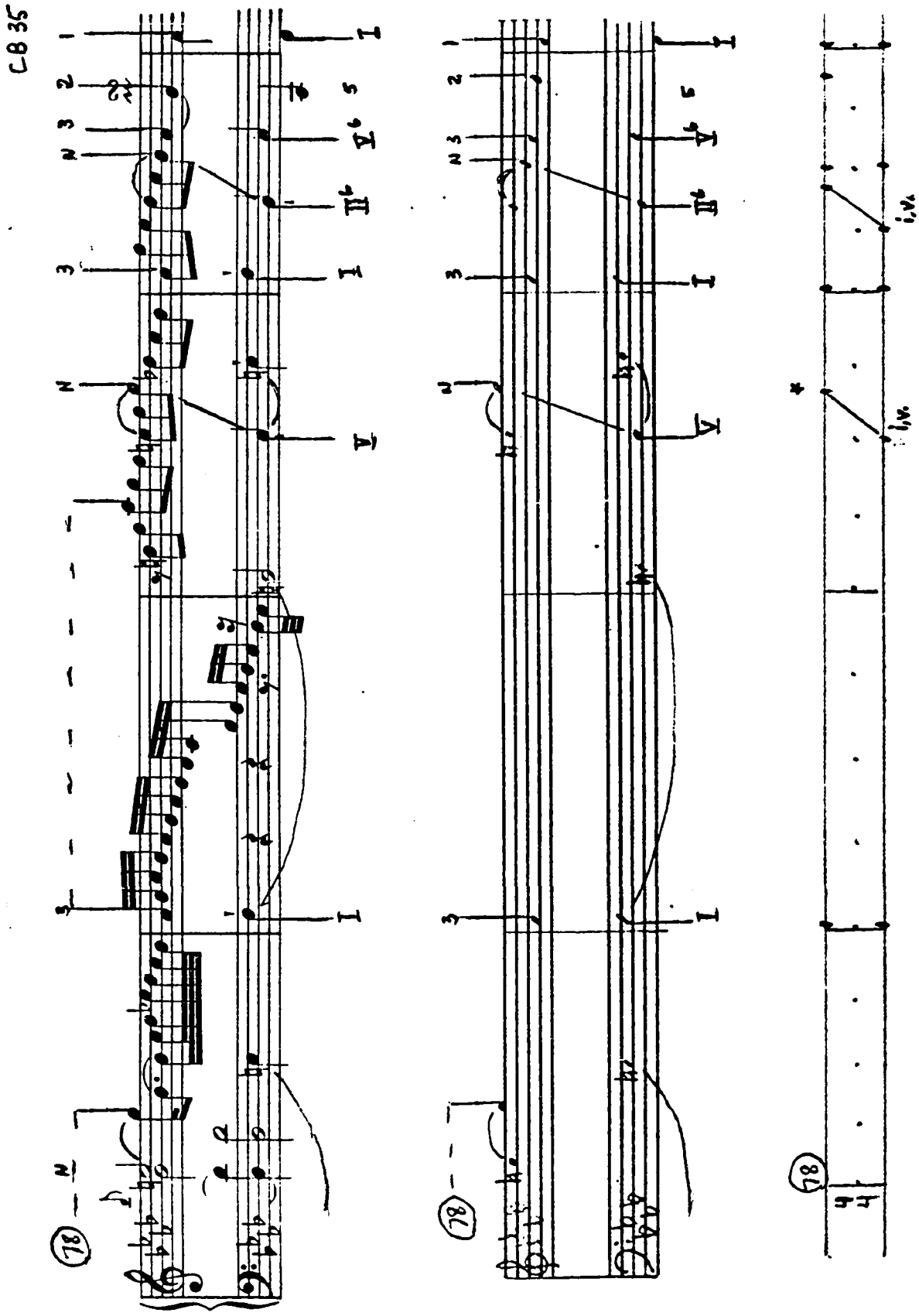

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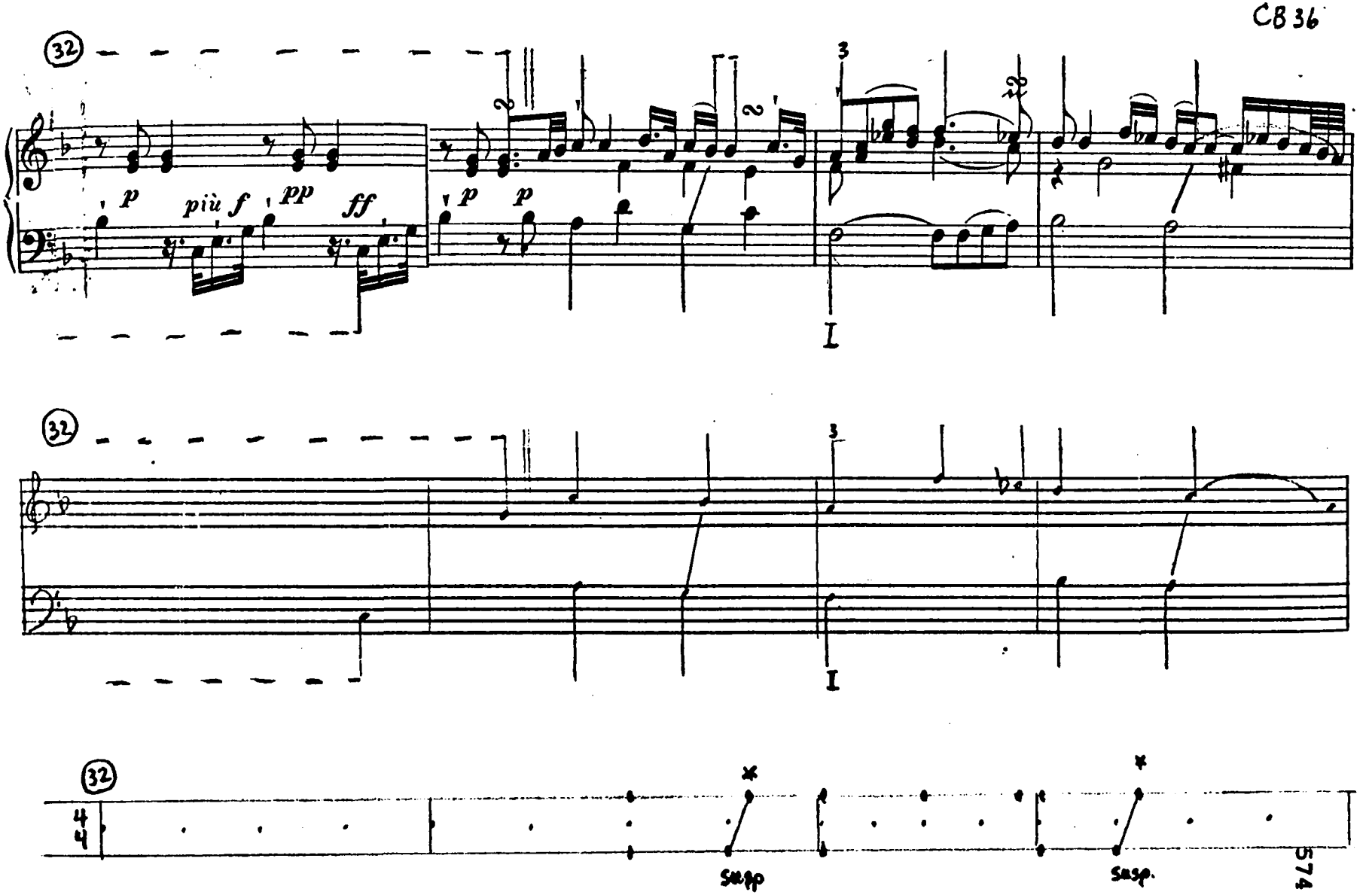

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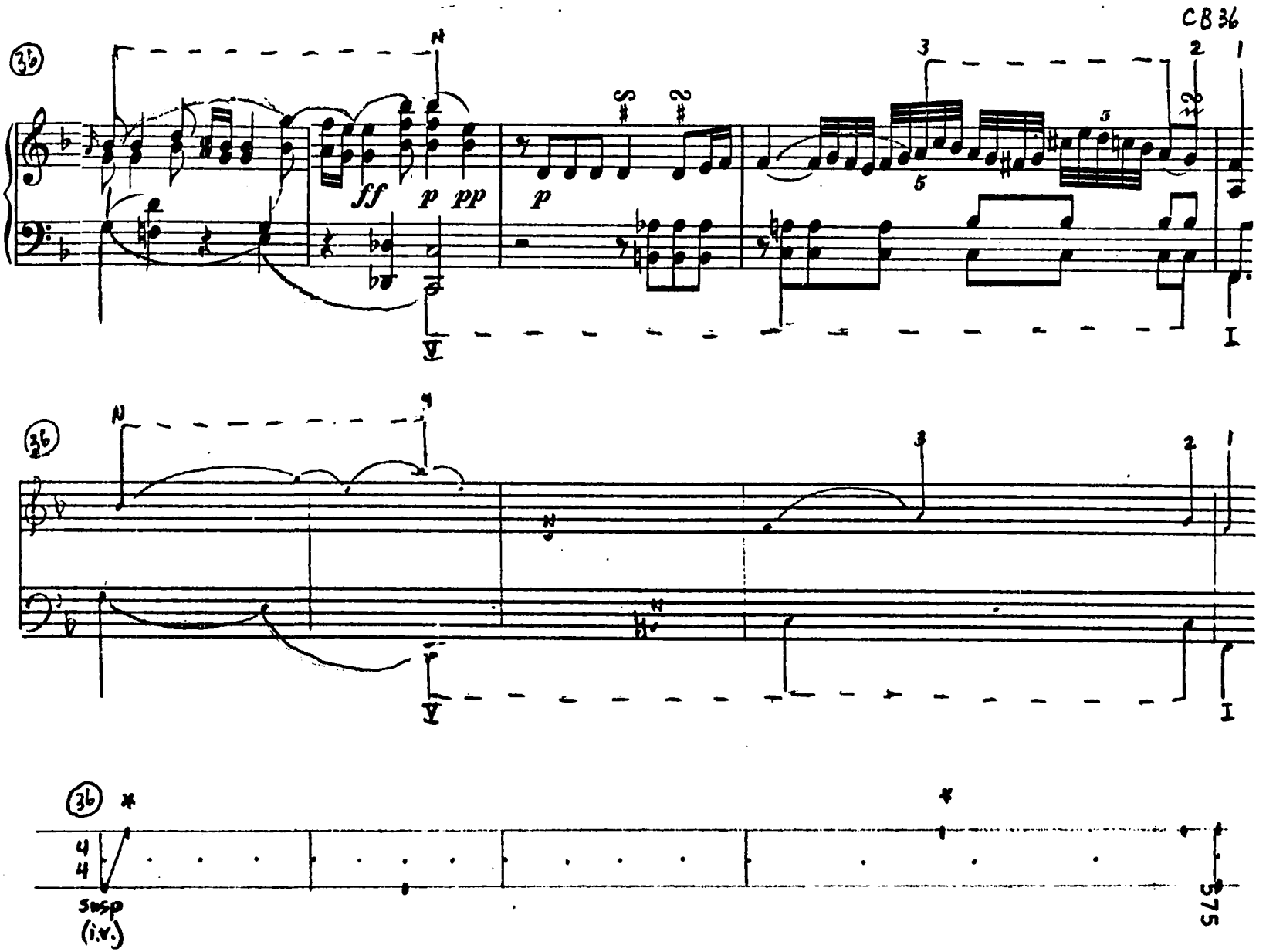

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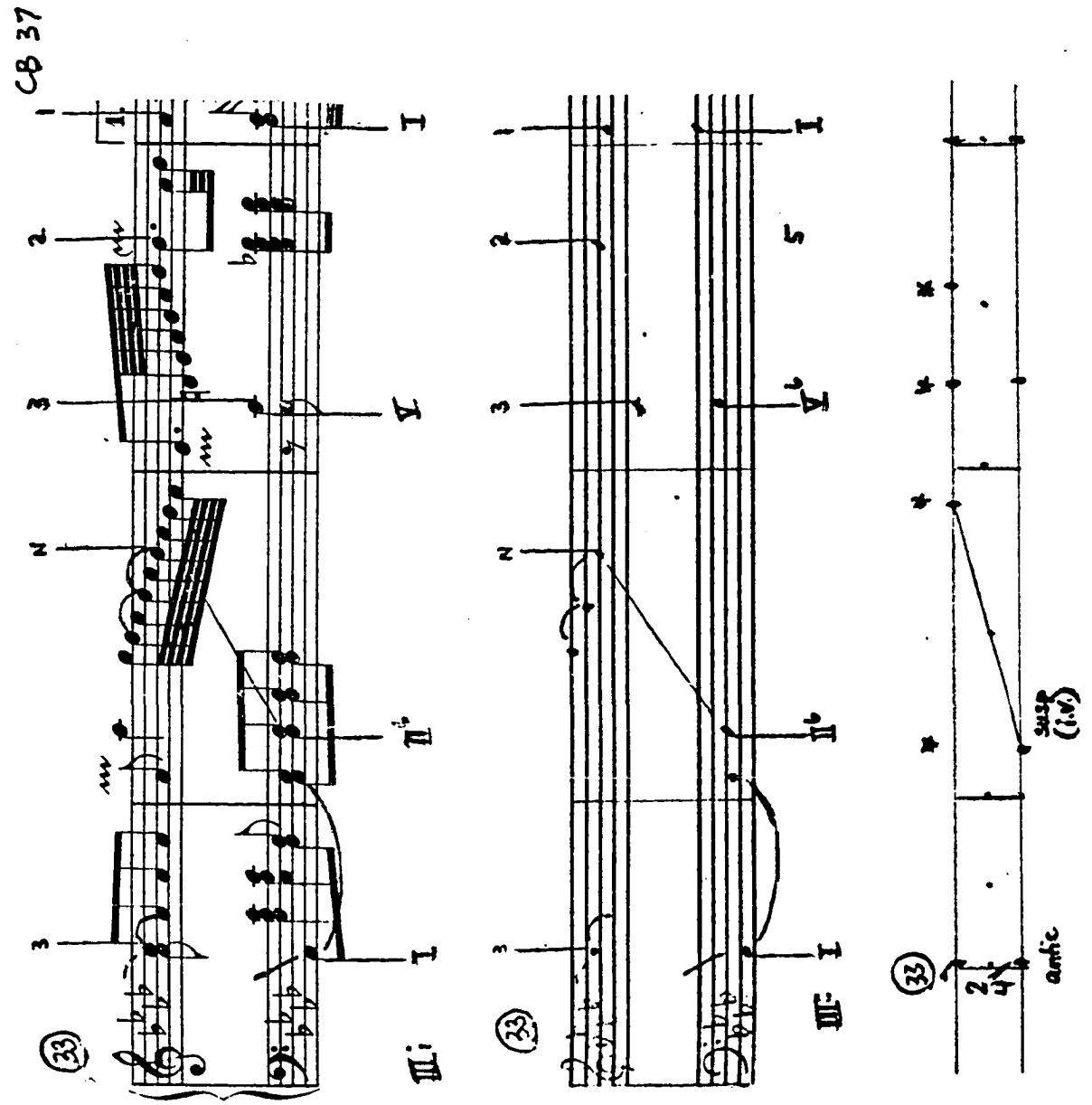

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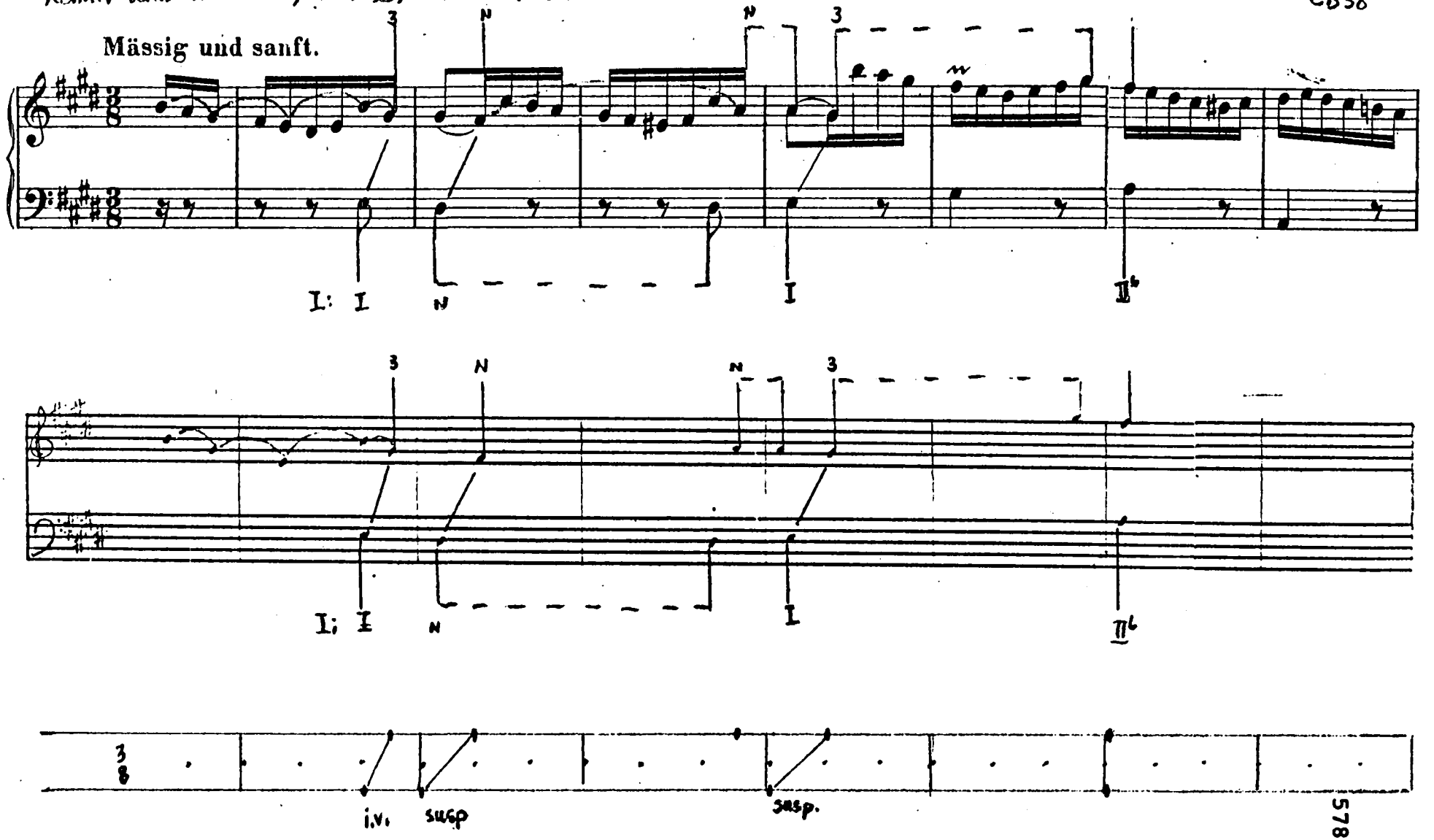
CB38

Mässig und sanft.



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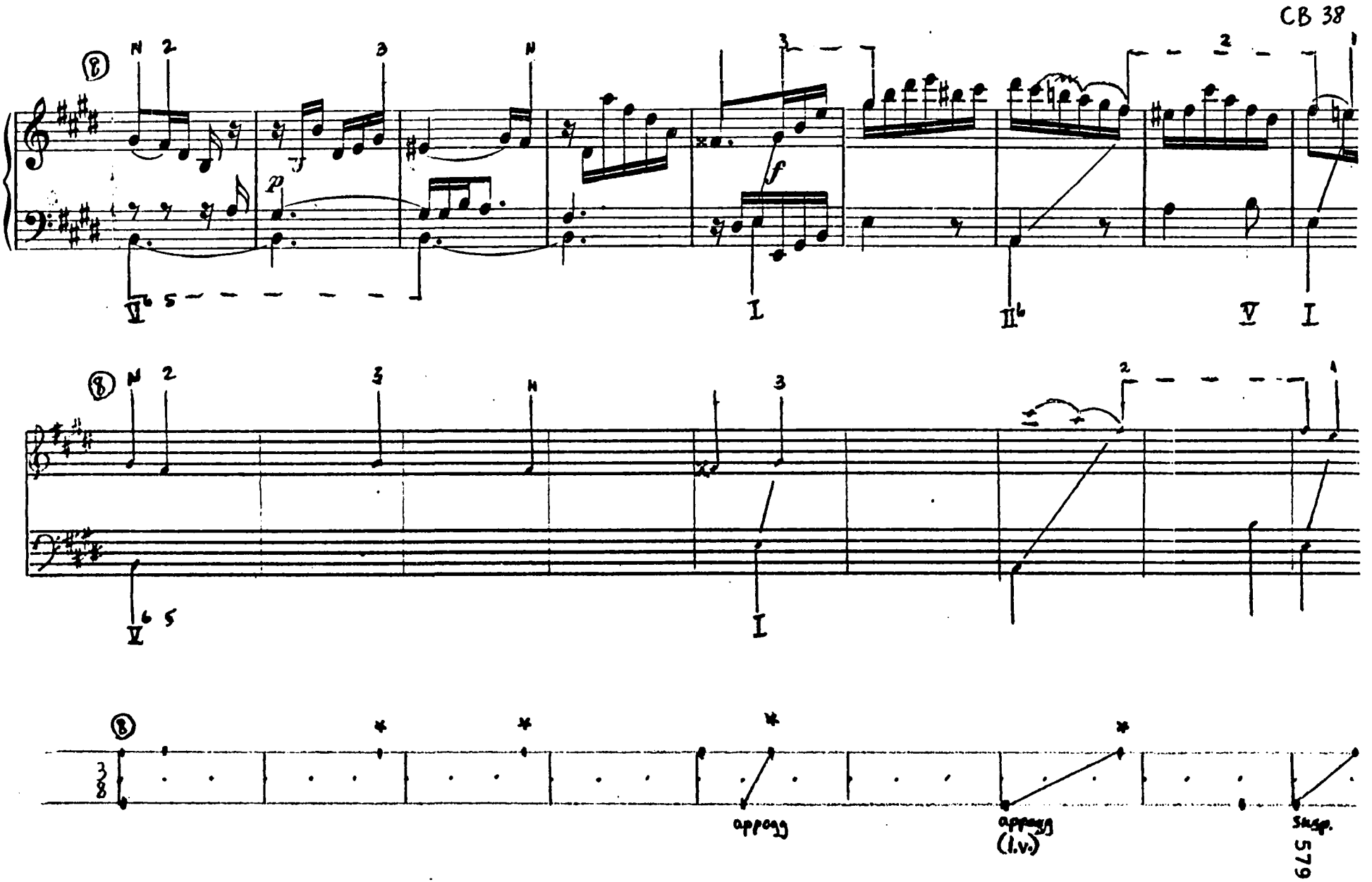

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Kenner und Liebhaber, Vol. III, Sonata No. 2, I

CB 39

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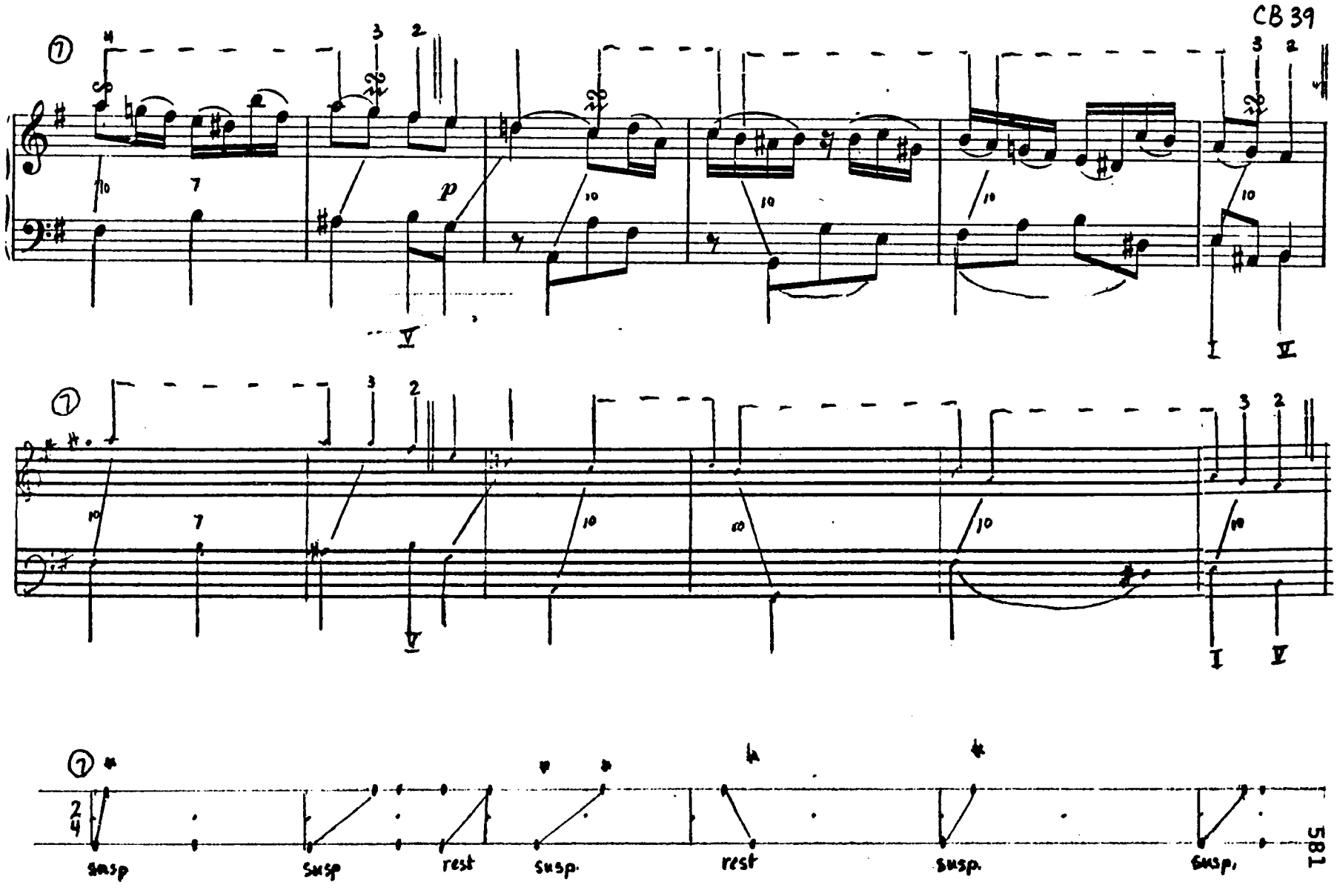

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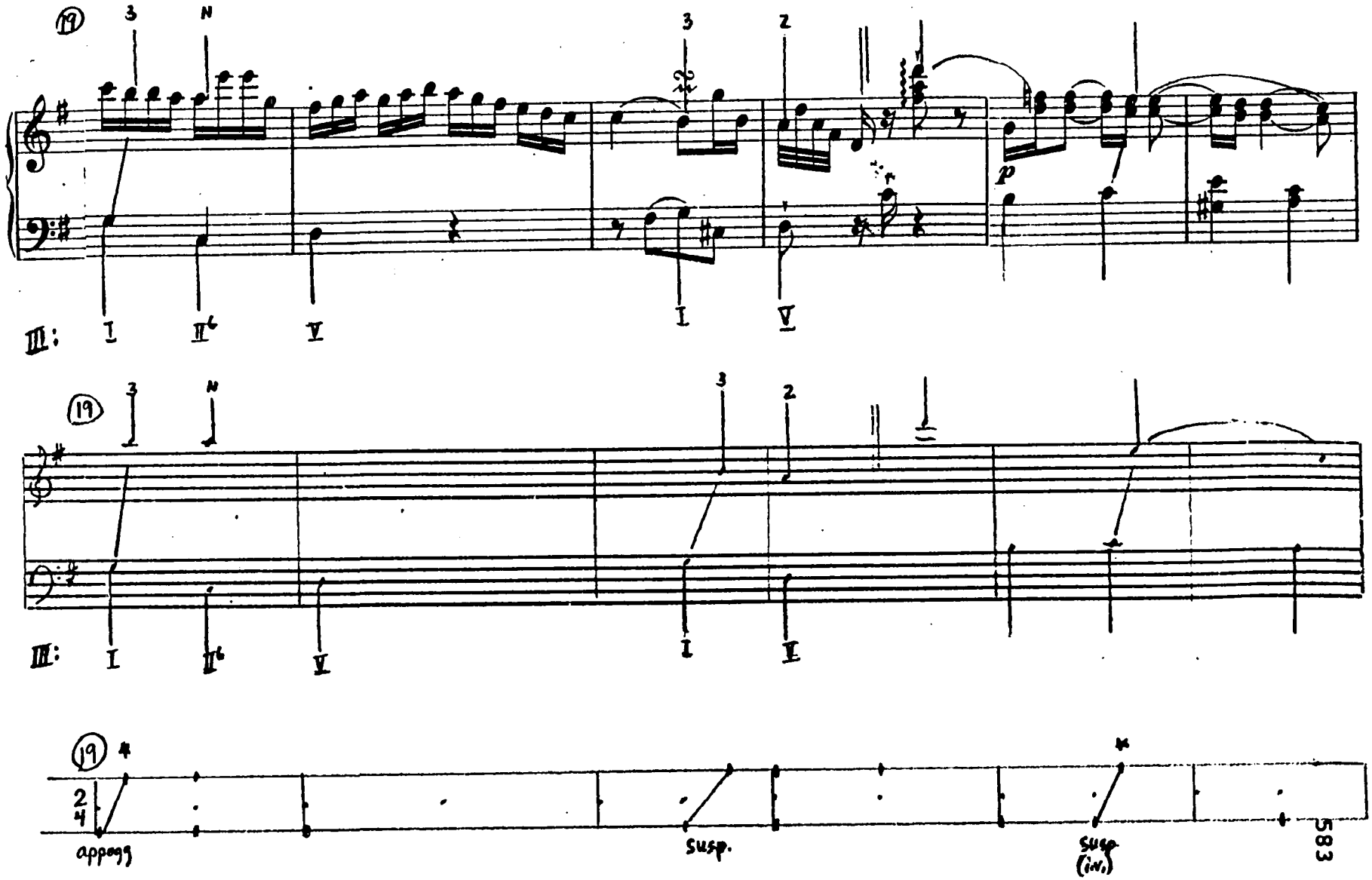

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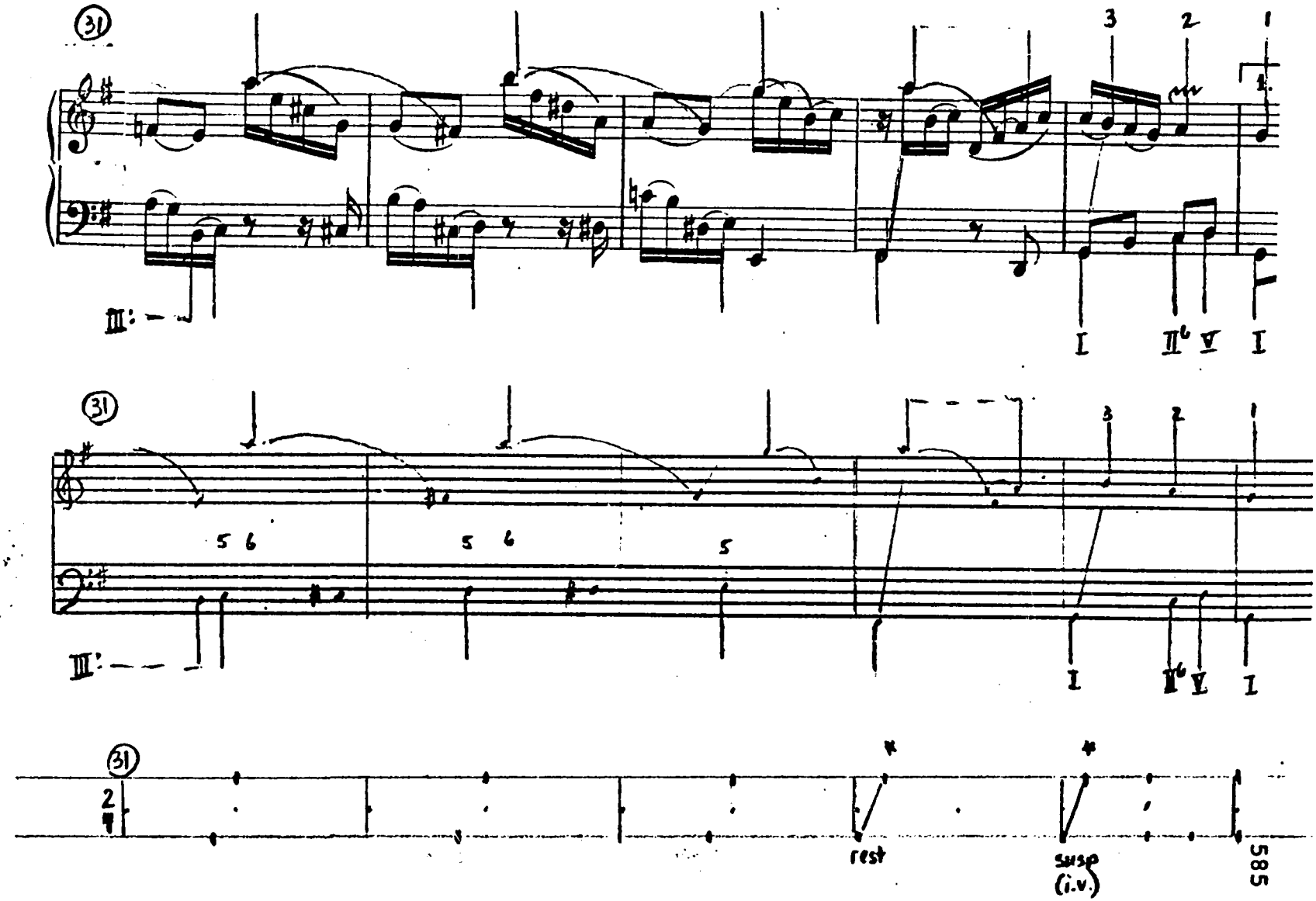

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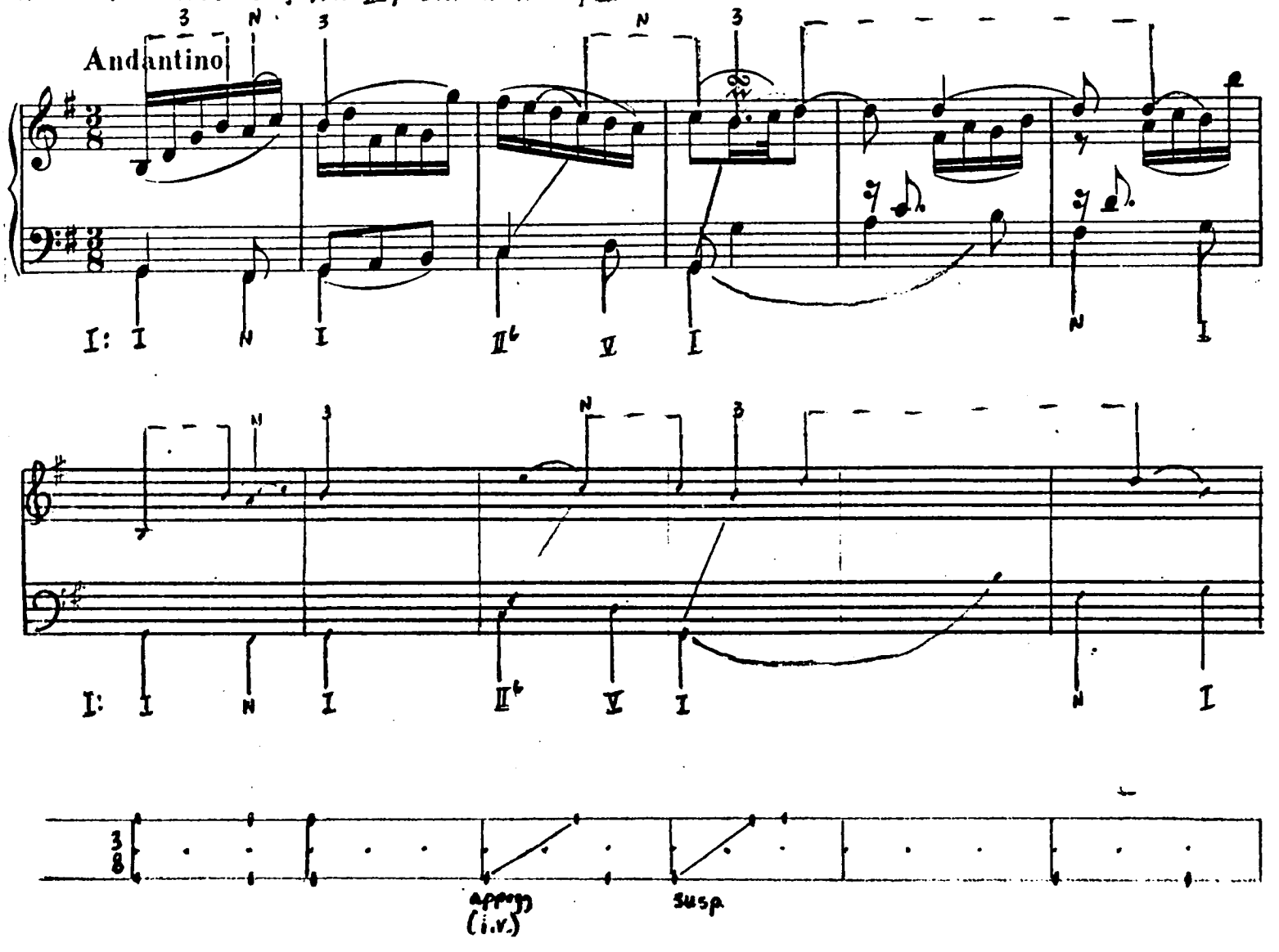
CB40



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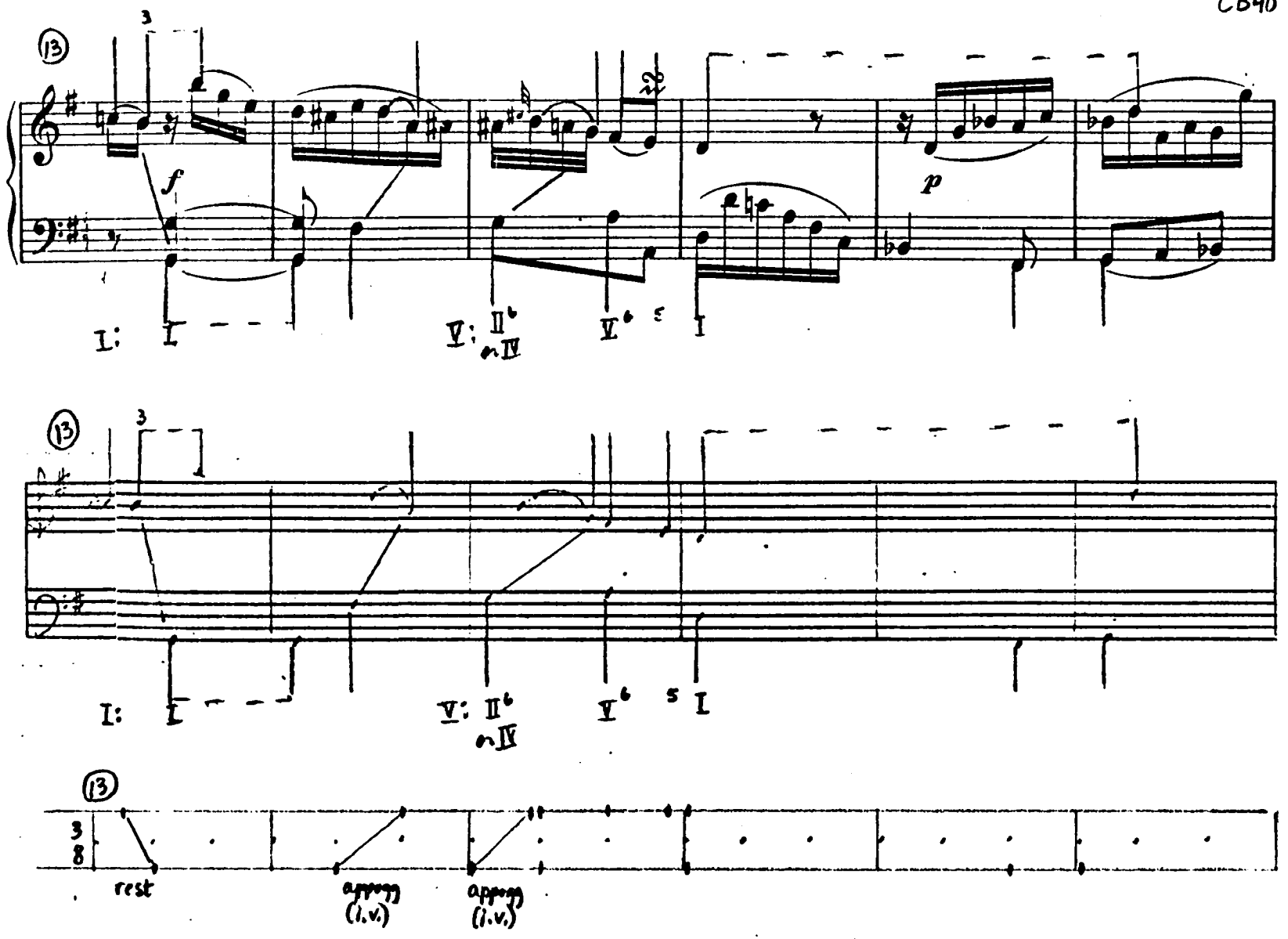

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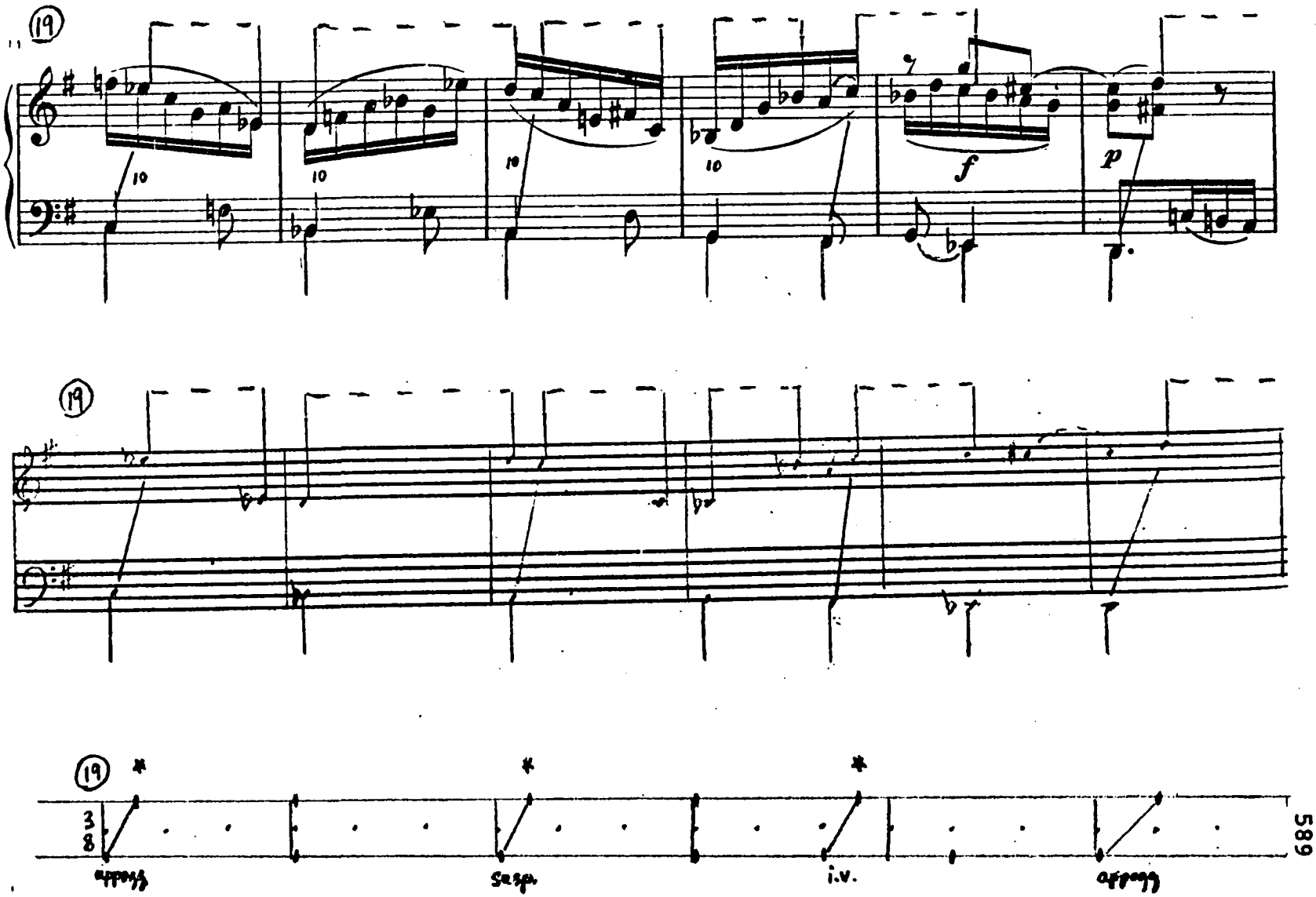

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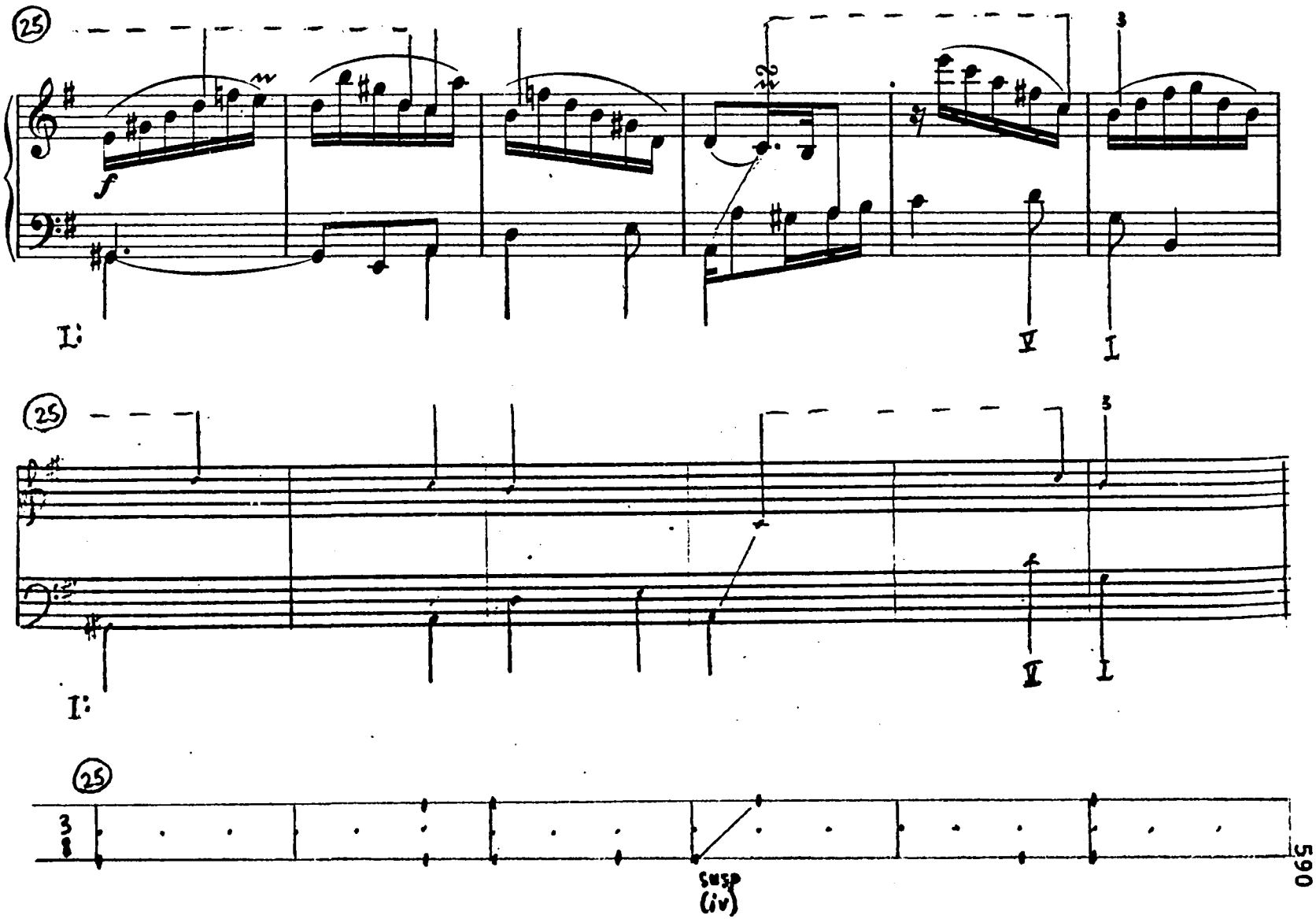

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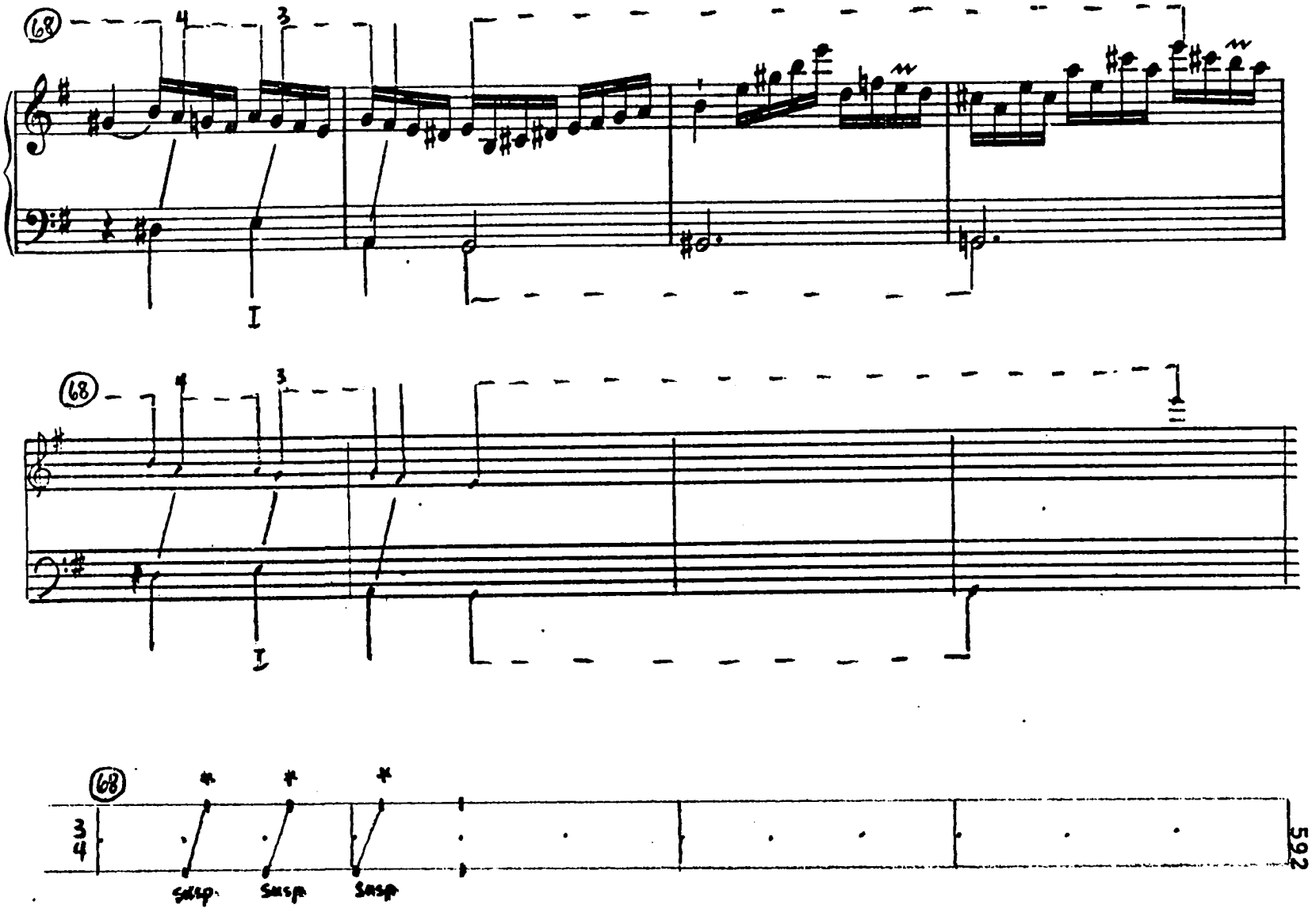

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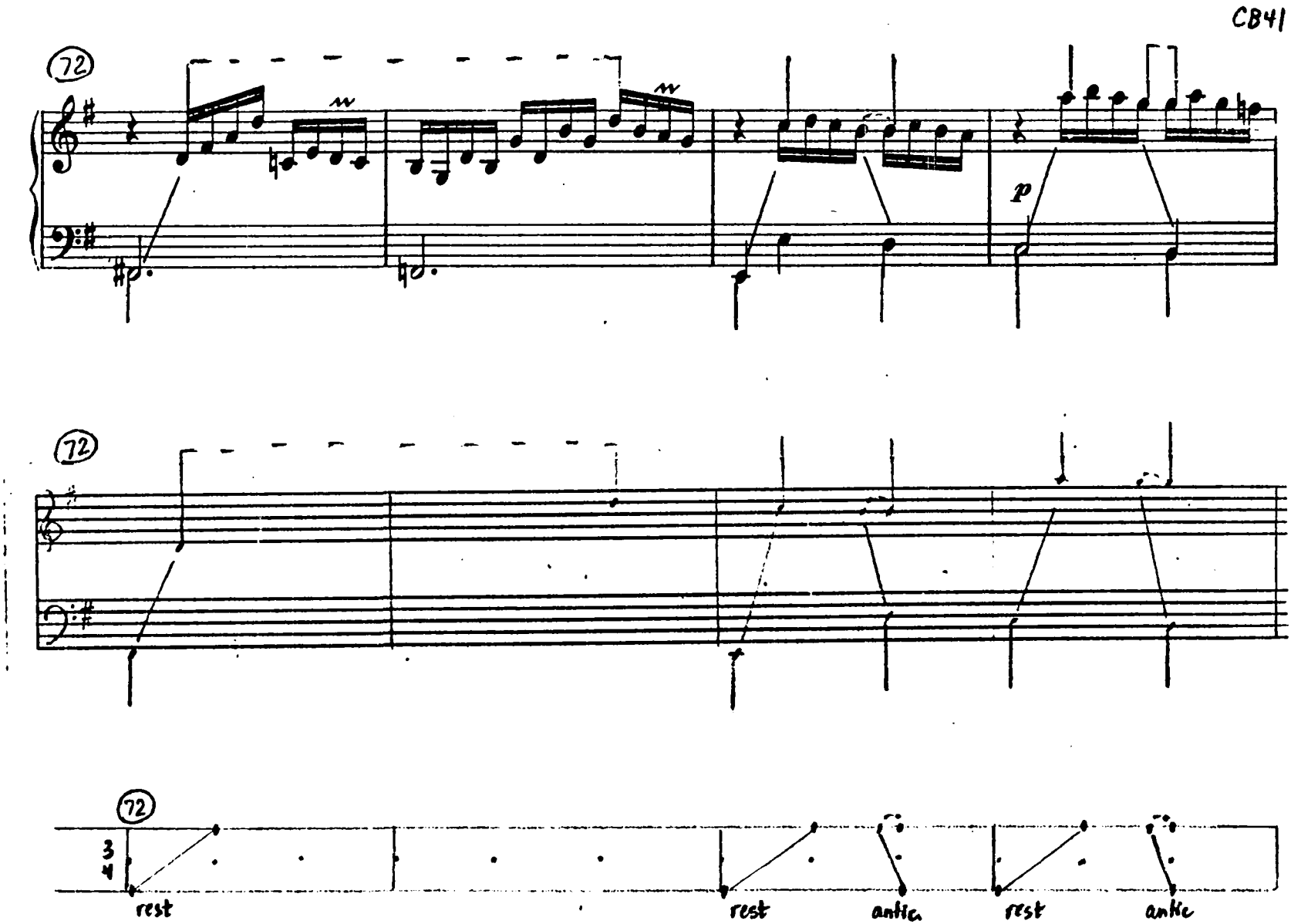

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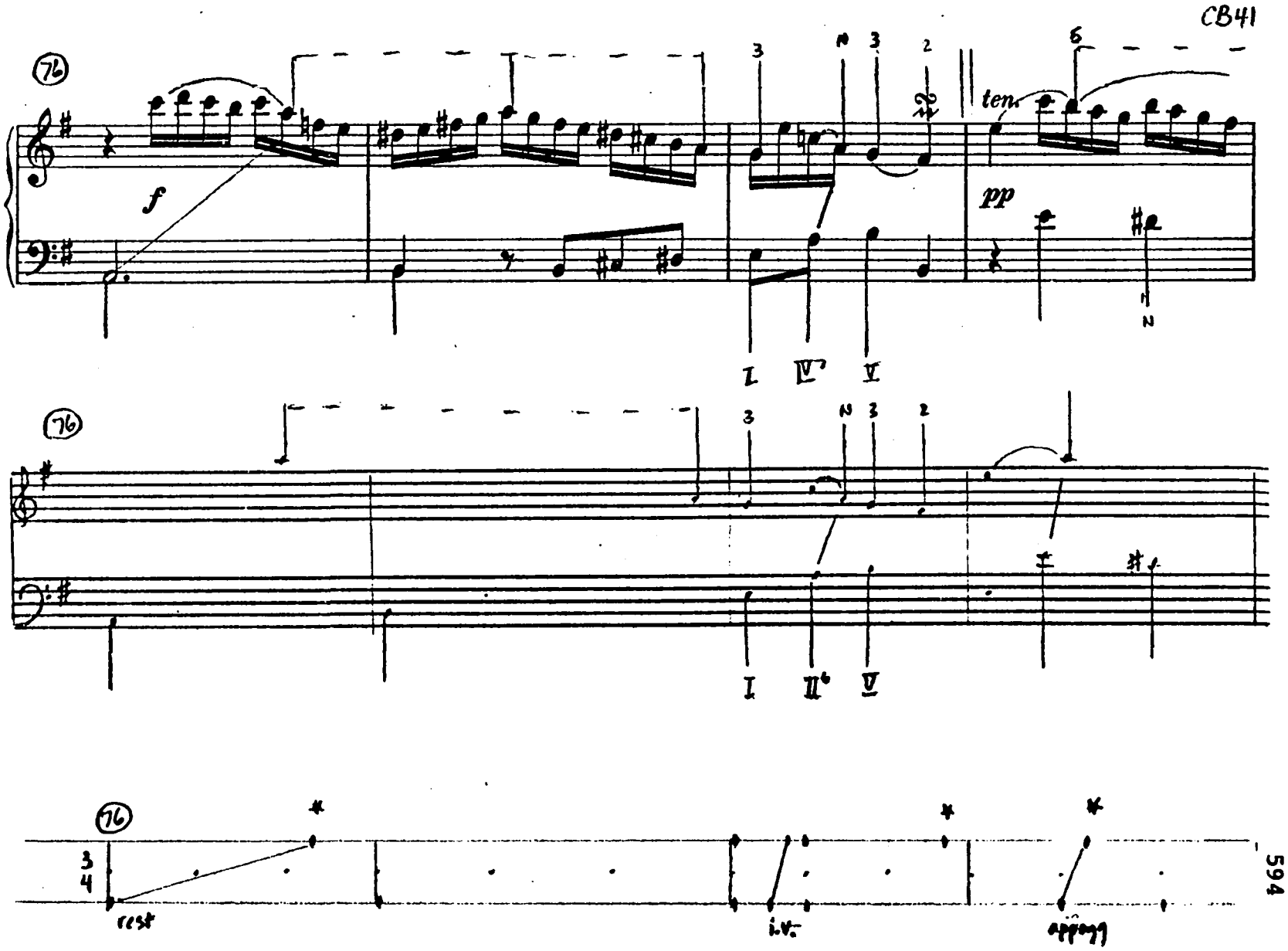

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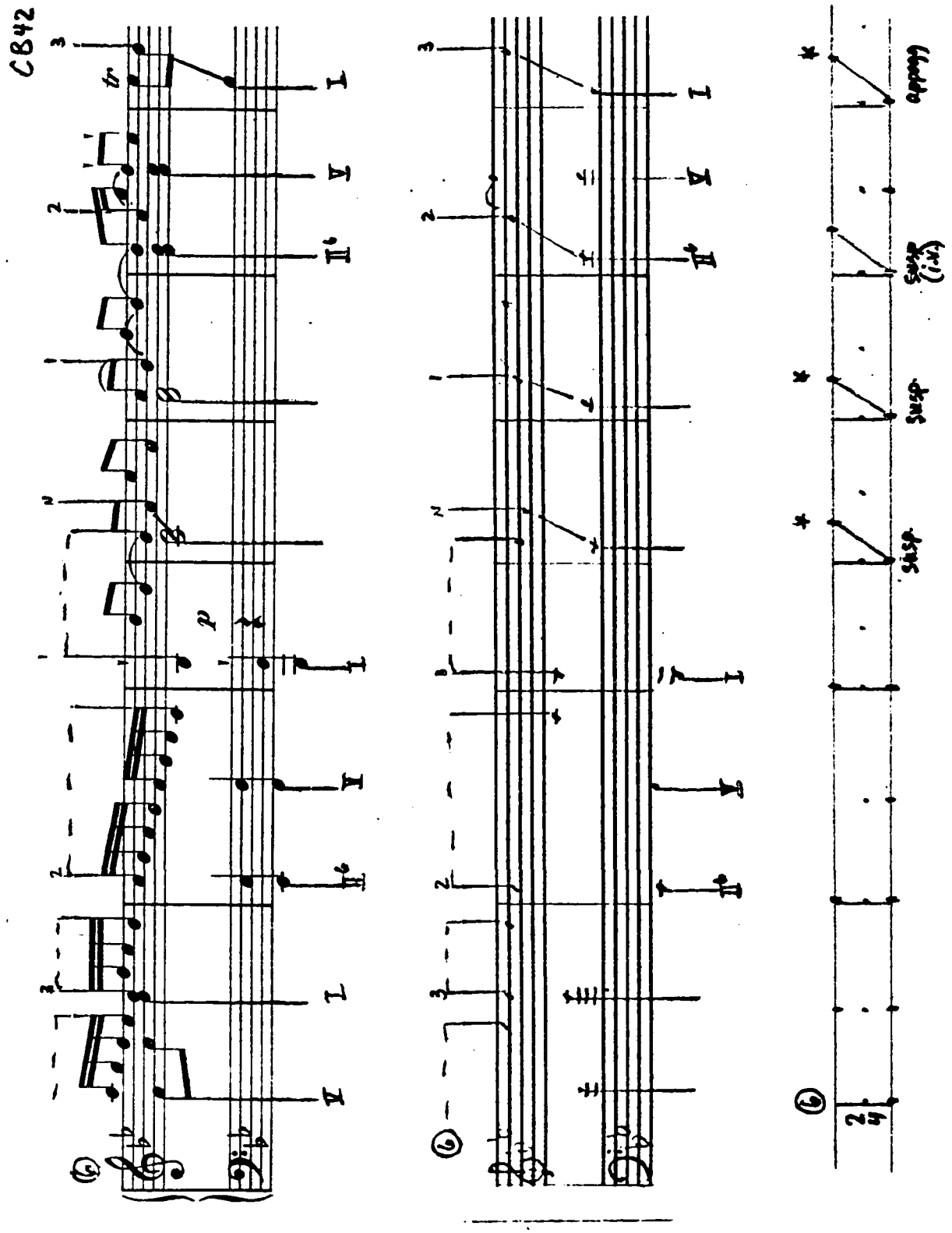
Kenner und Liebhaber, Vol. IV, Rondo No. 3

CB42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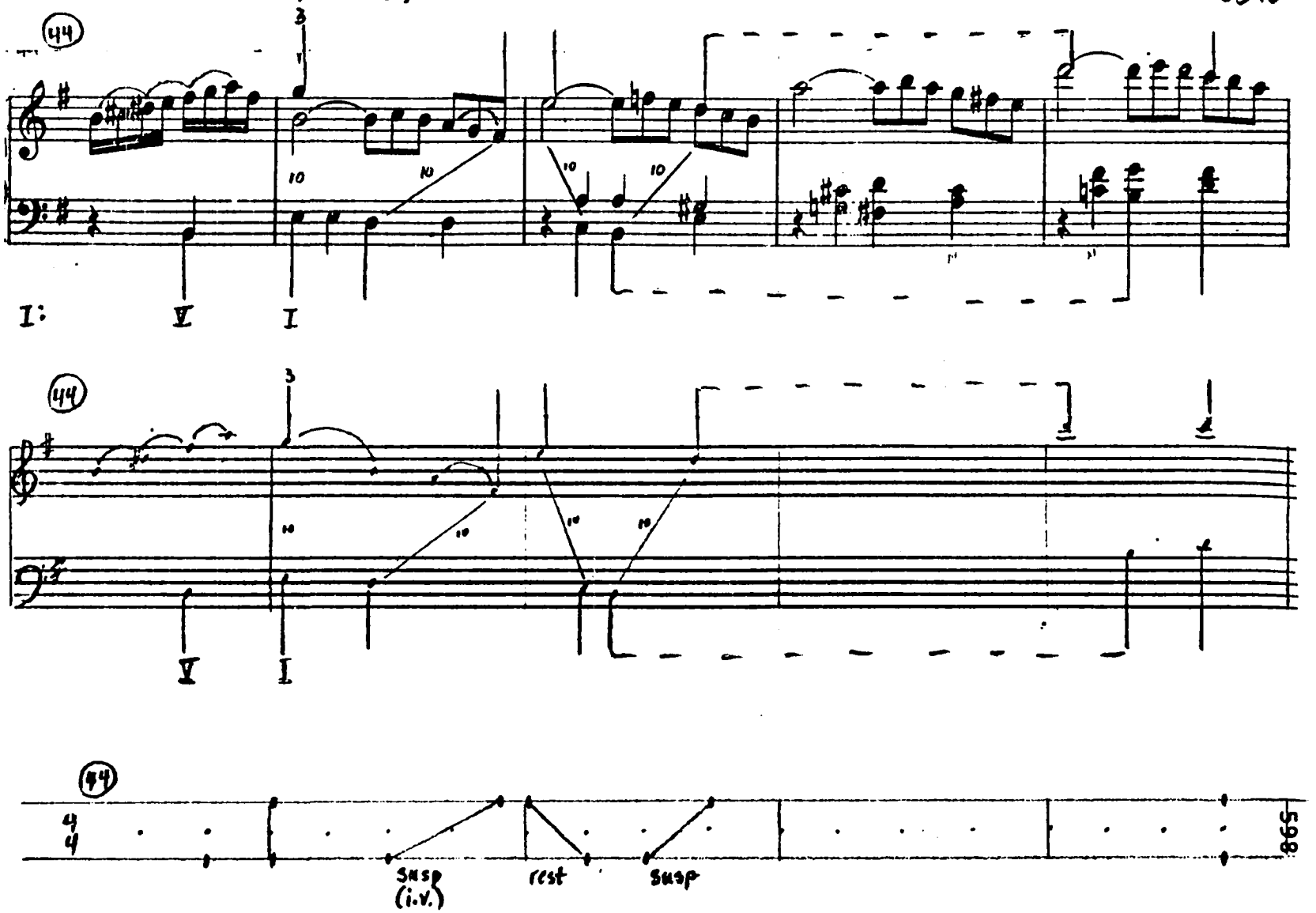

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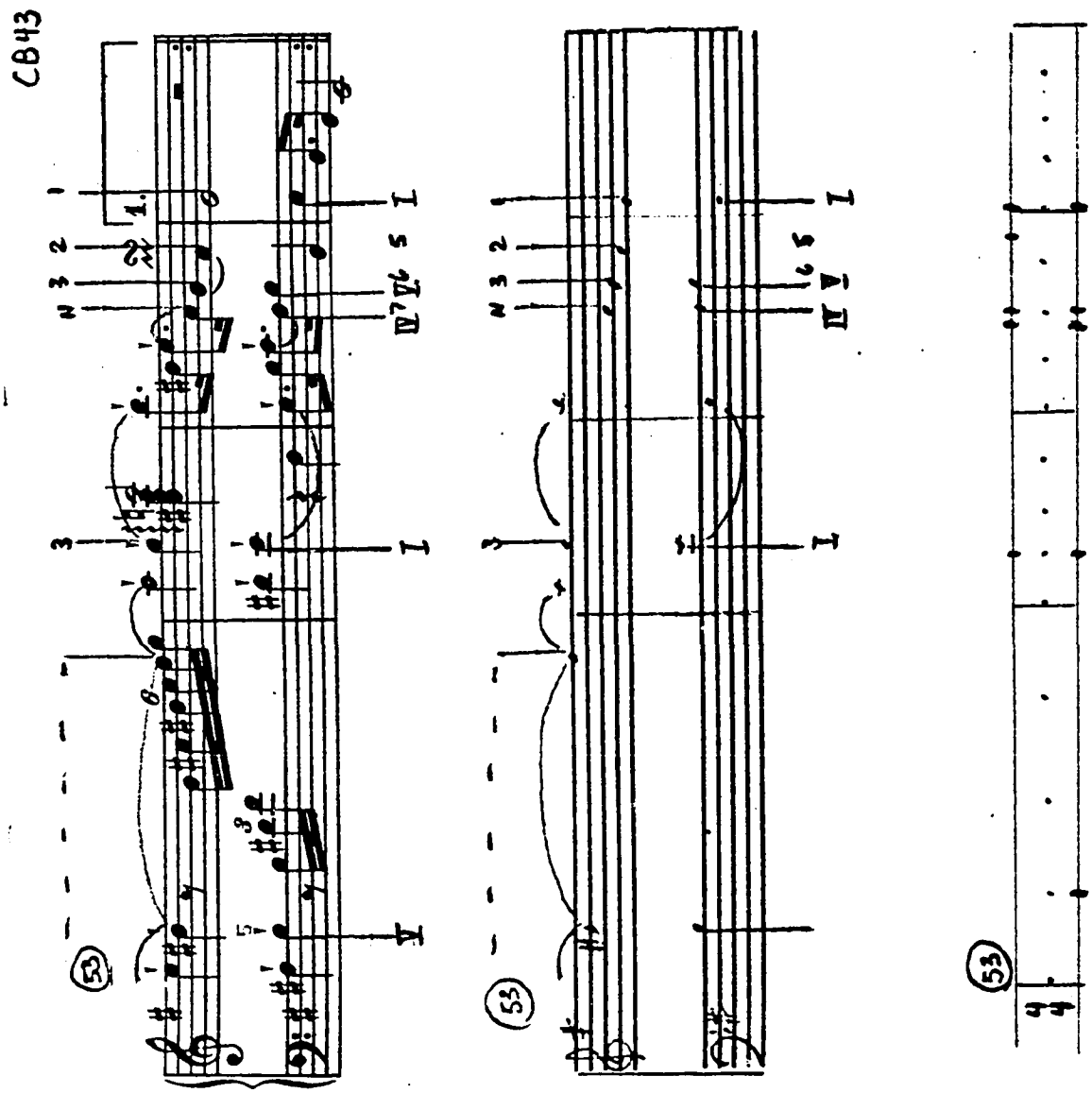

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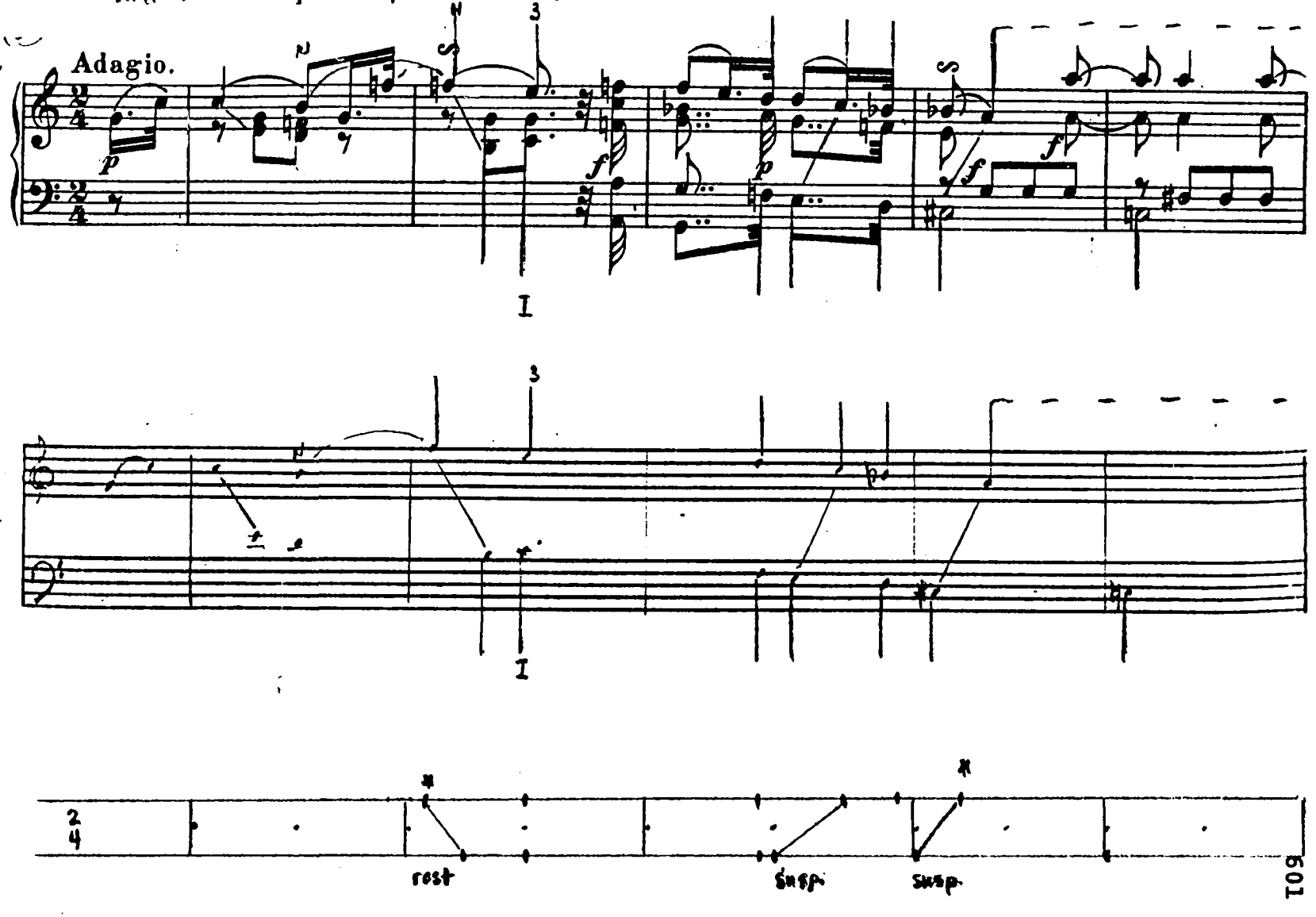
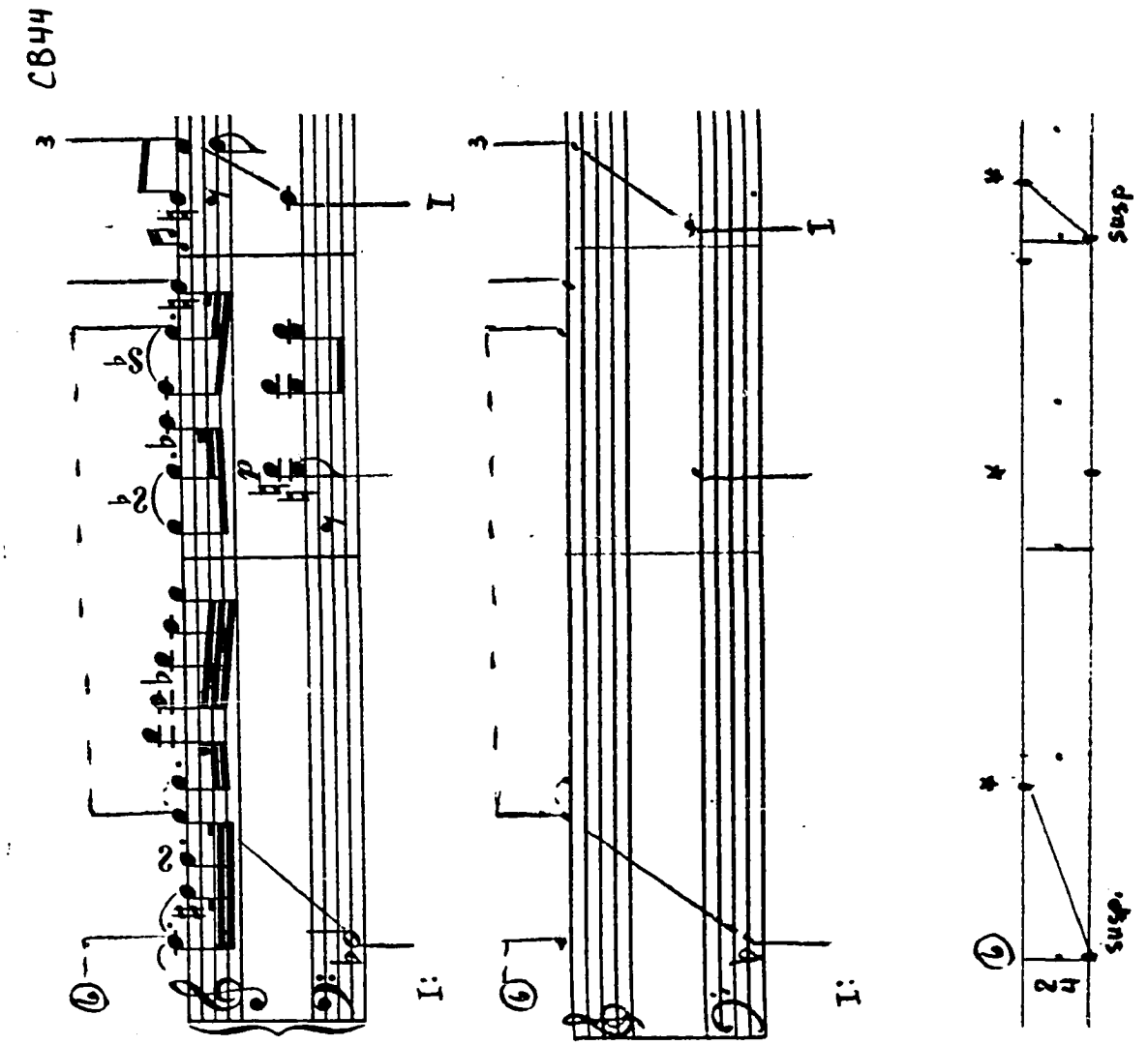
CB44





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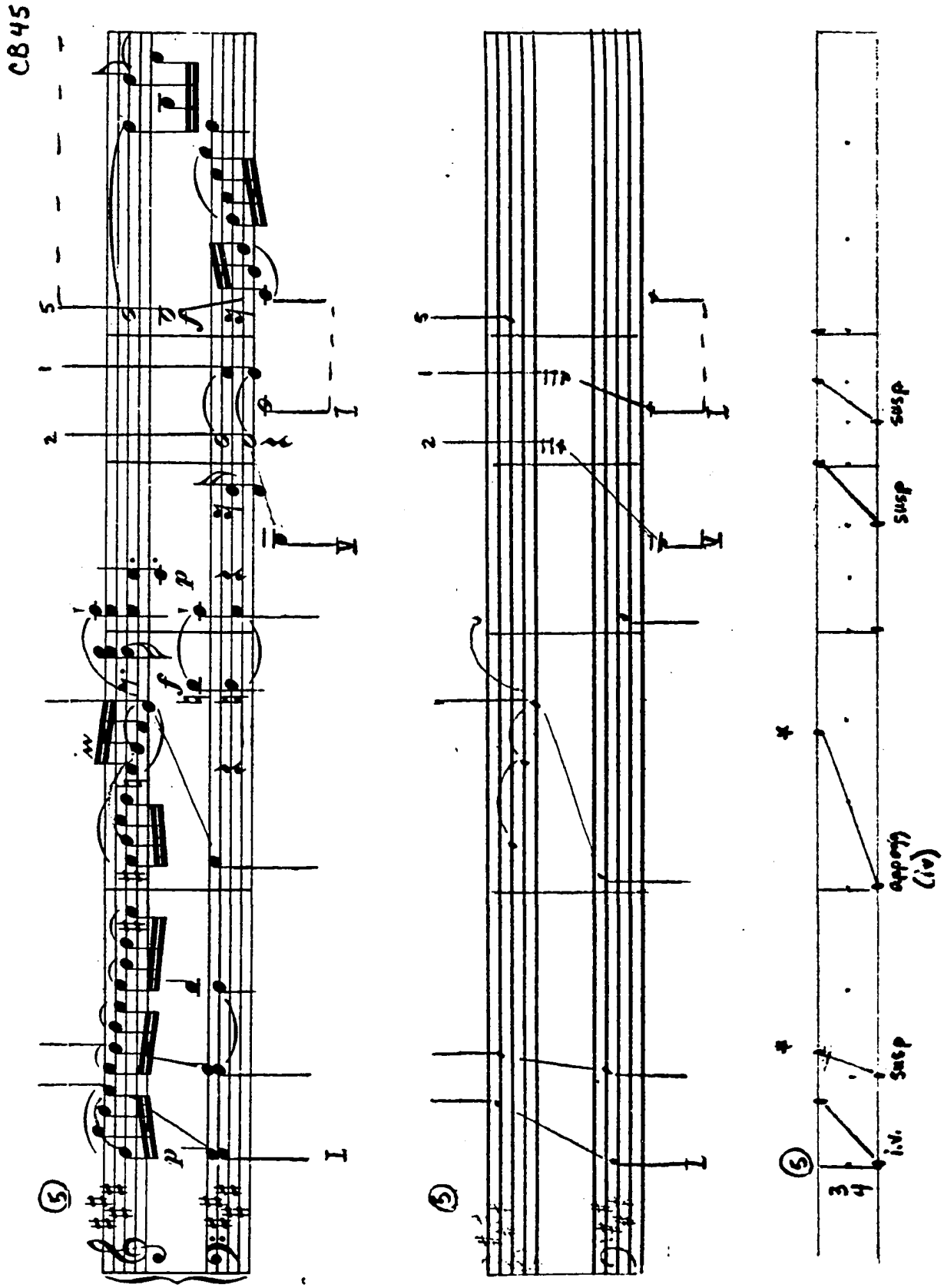
CB 45



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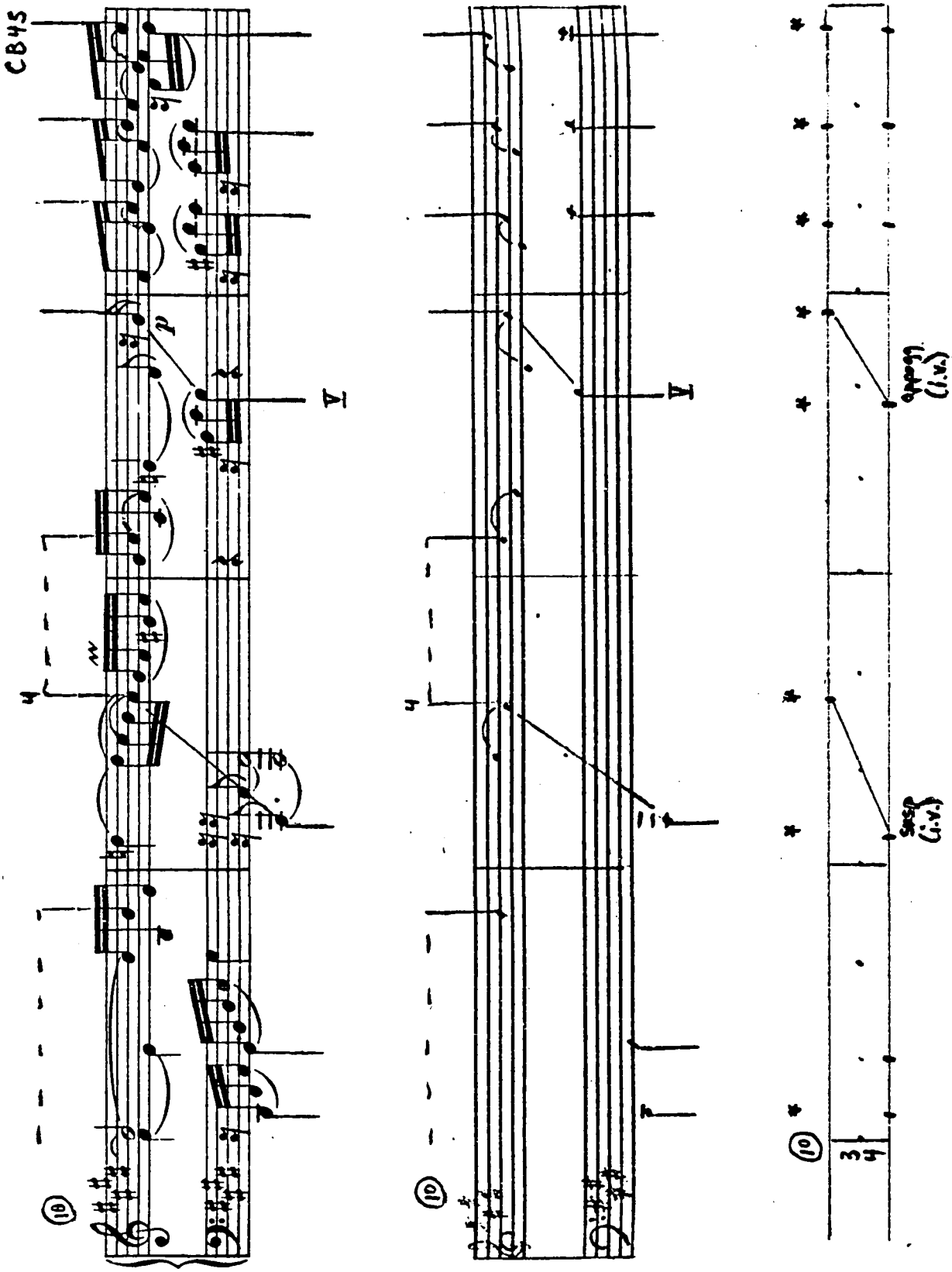

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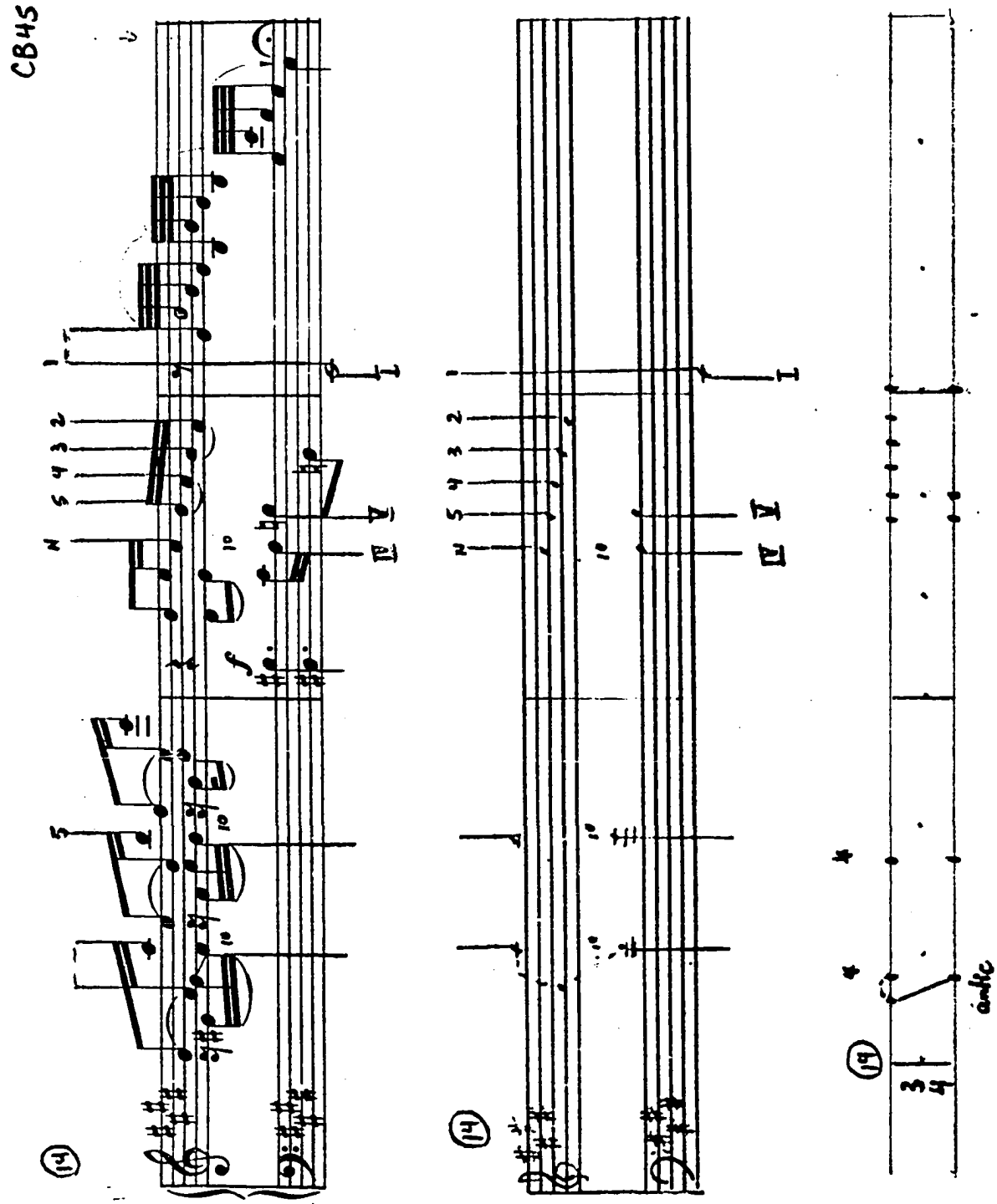

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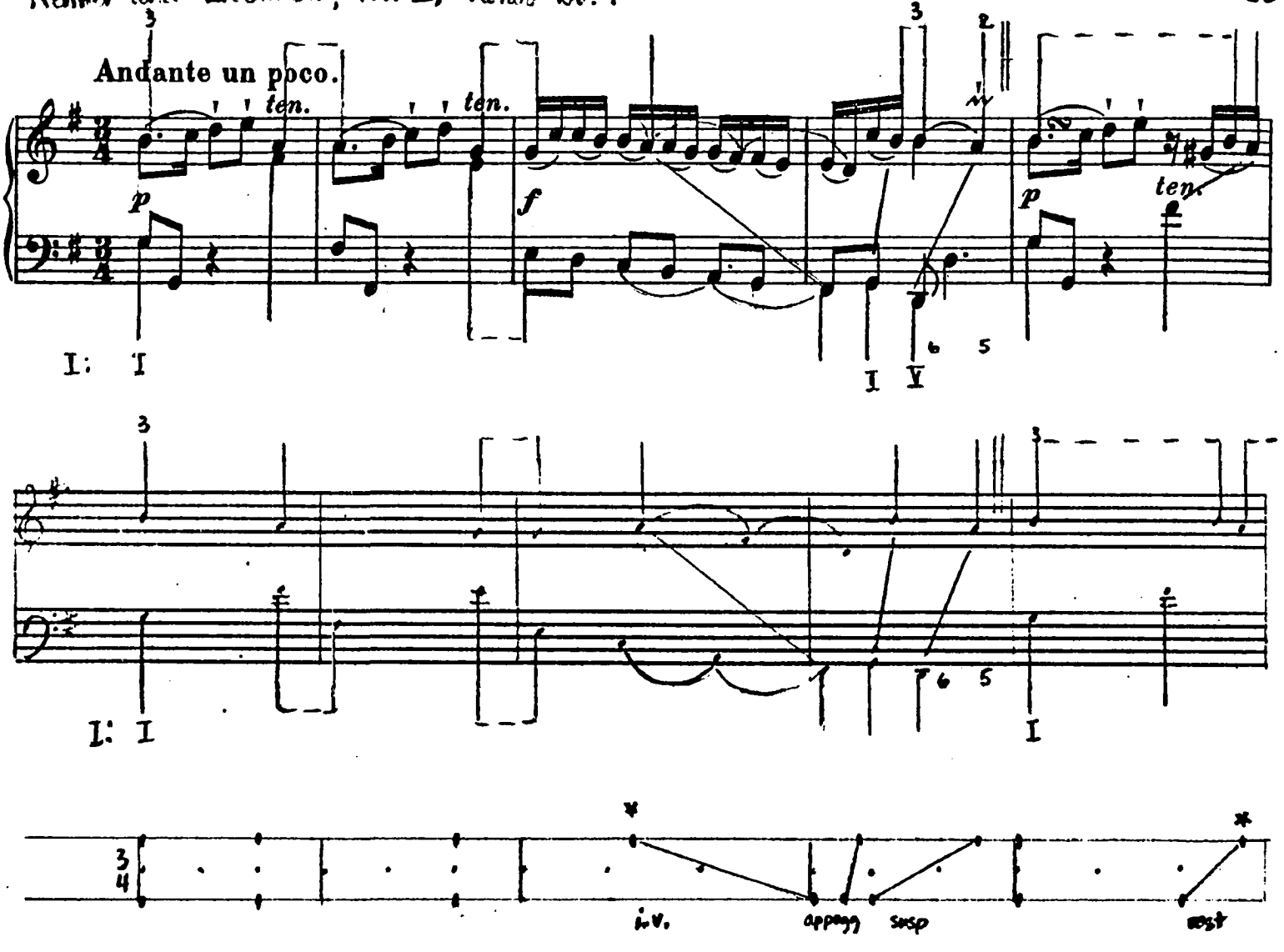

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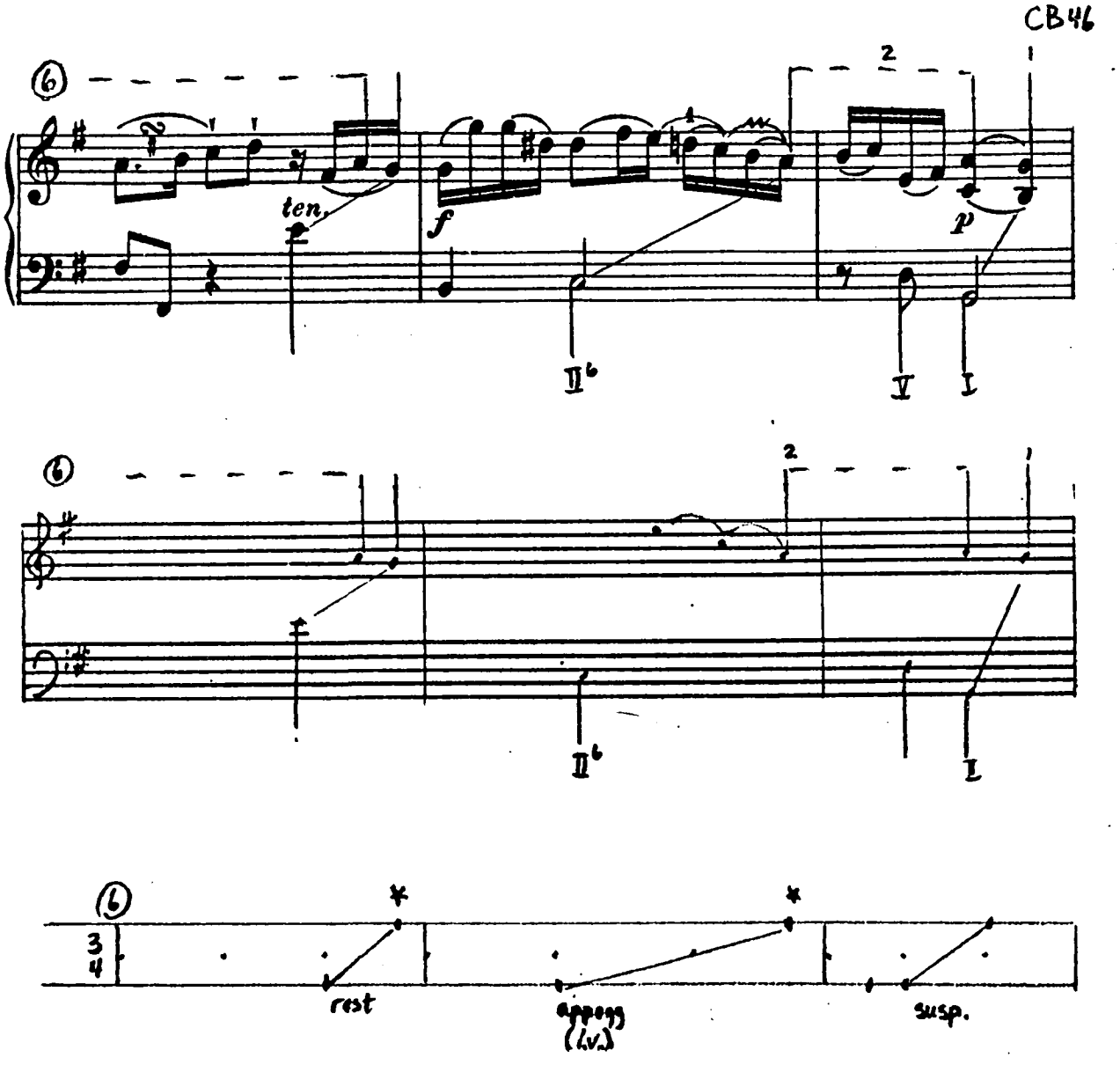

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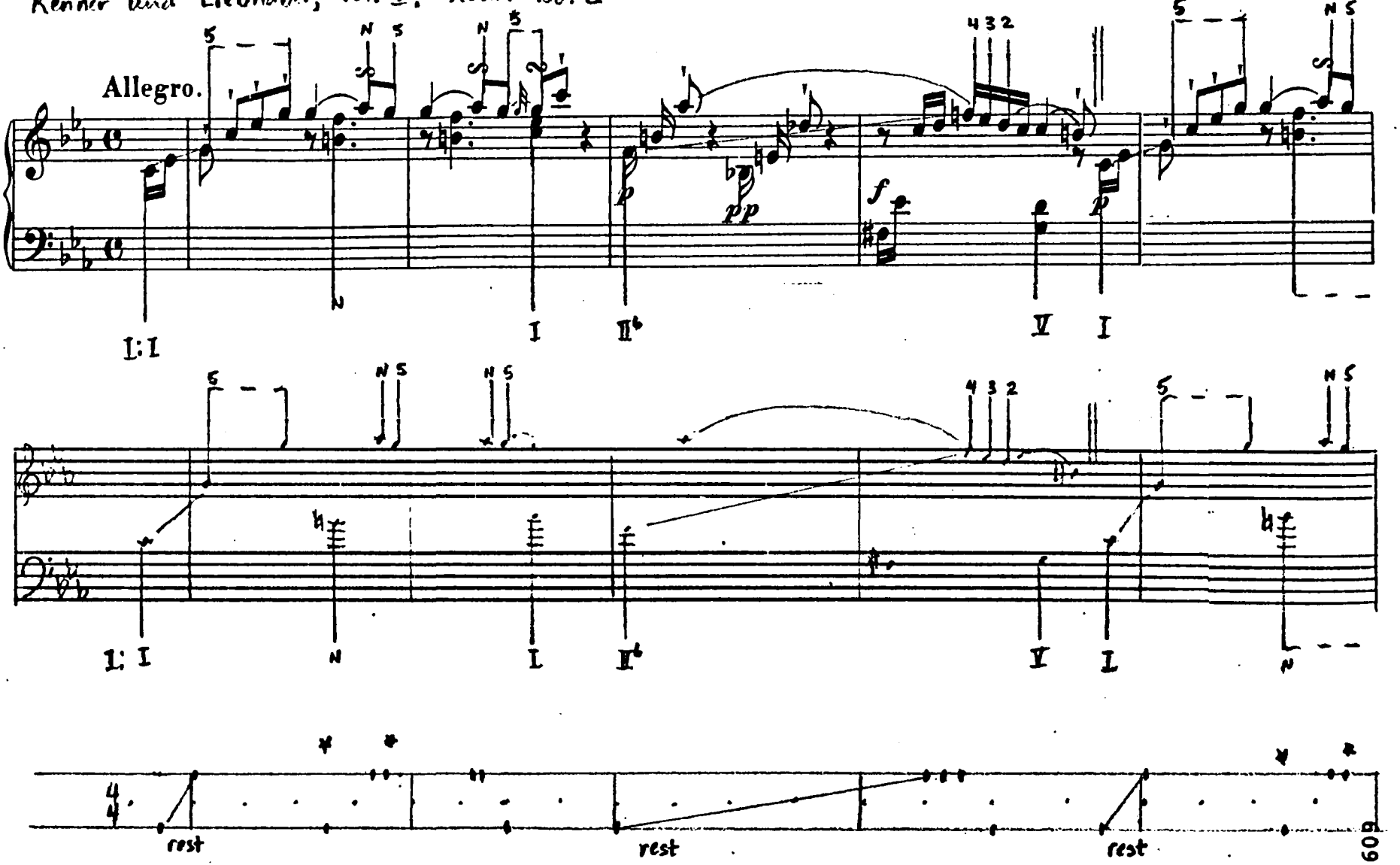
V. Rondo 6

CB47

Kenner und Liebhaber, Vol. V. Rondo No. 2



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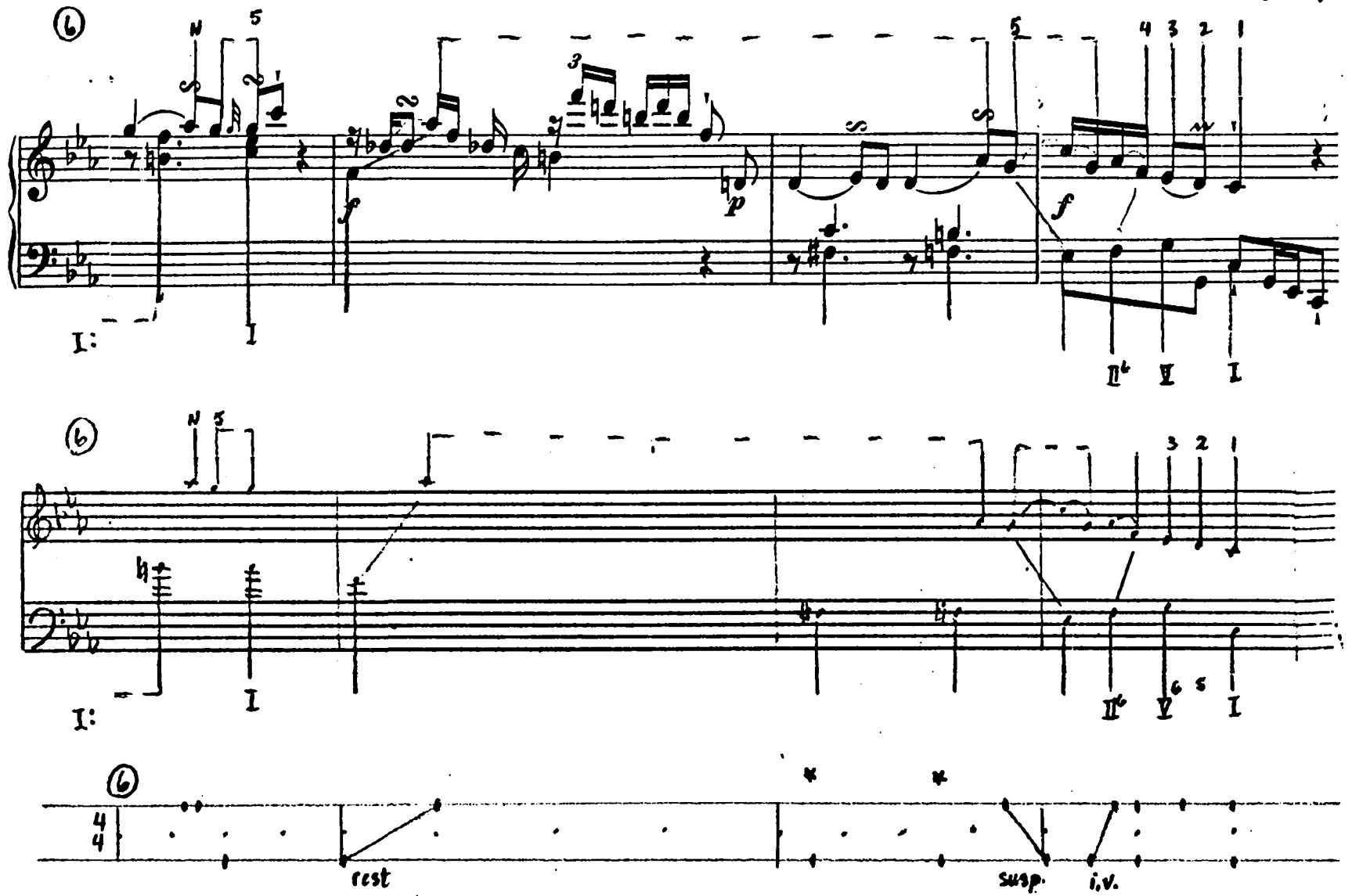

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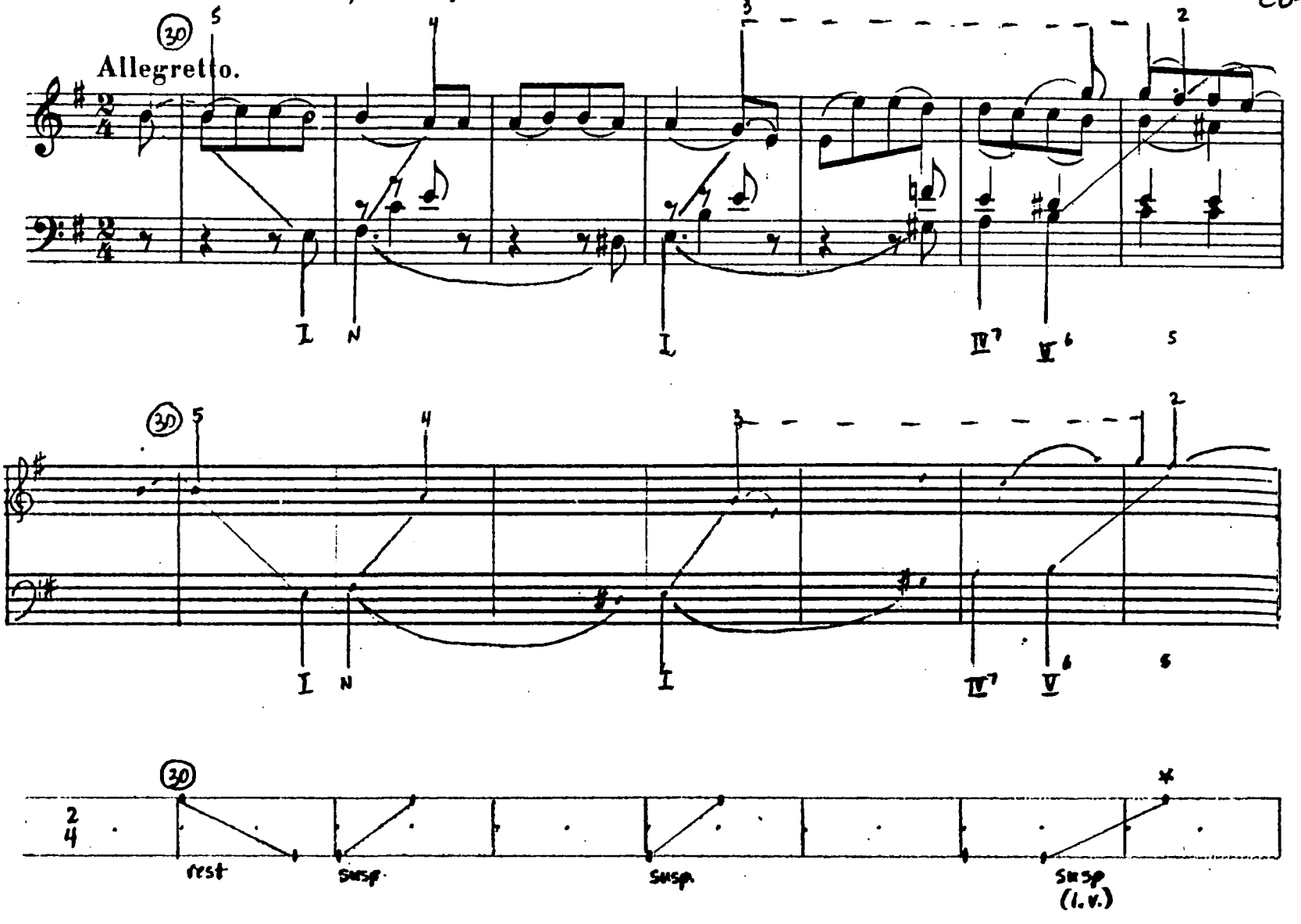
Kenner und Liebhaber, Vol. V, Fantasia No. 2

CB48



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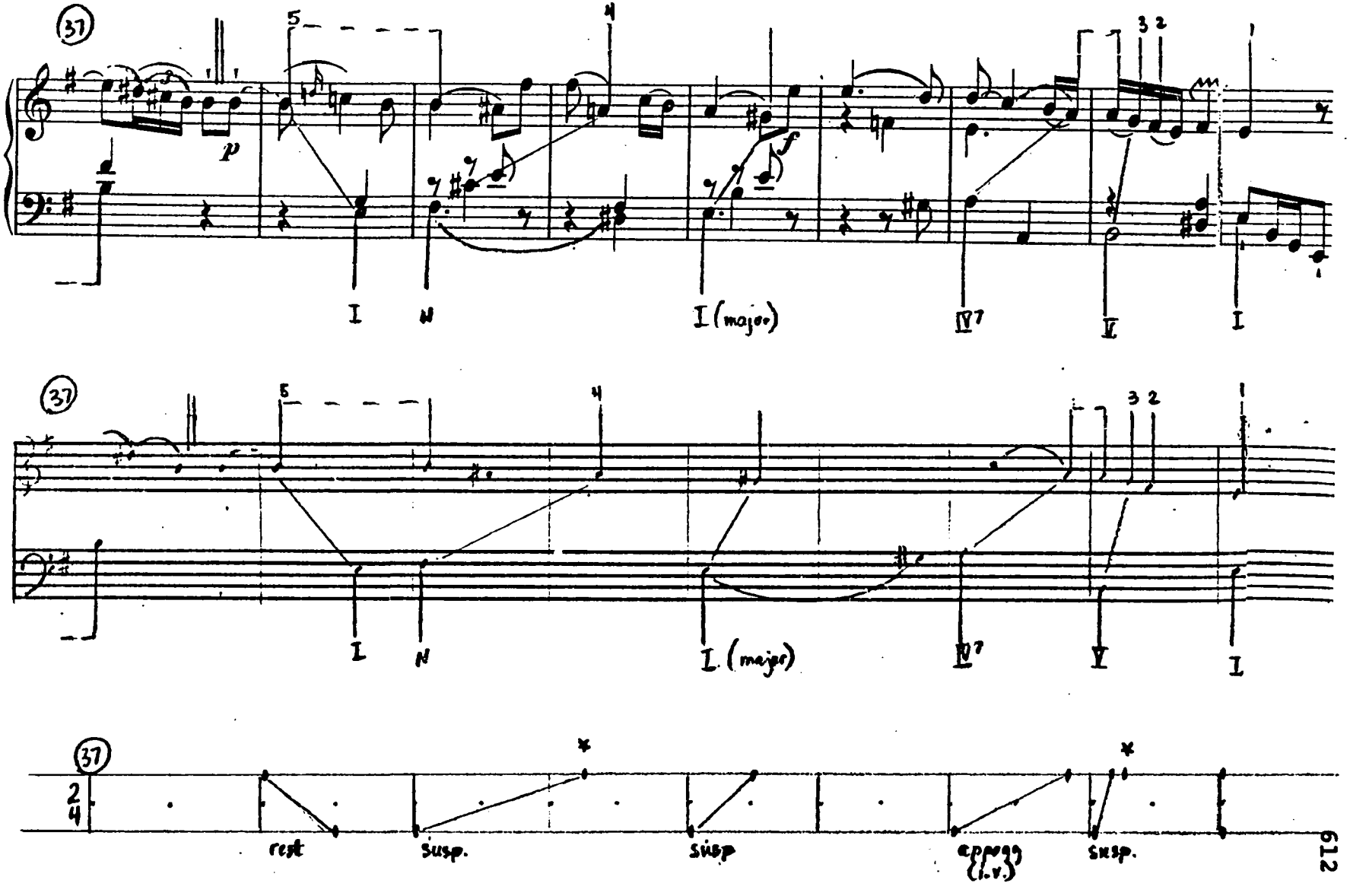

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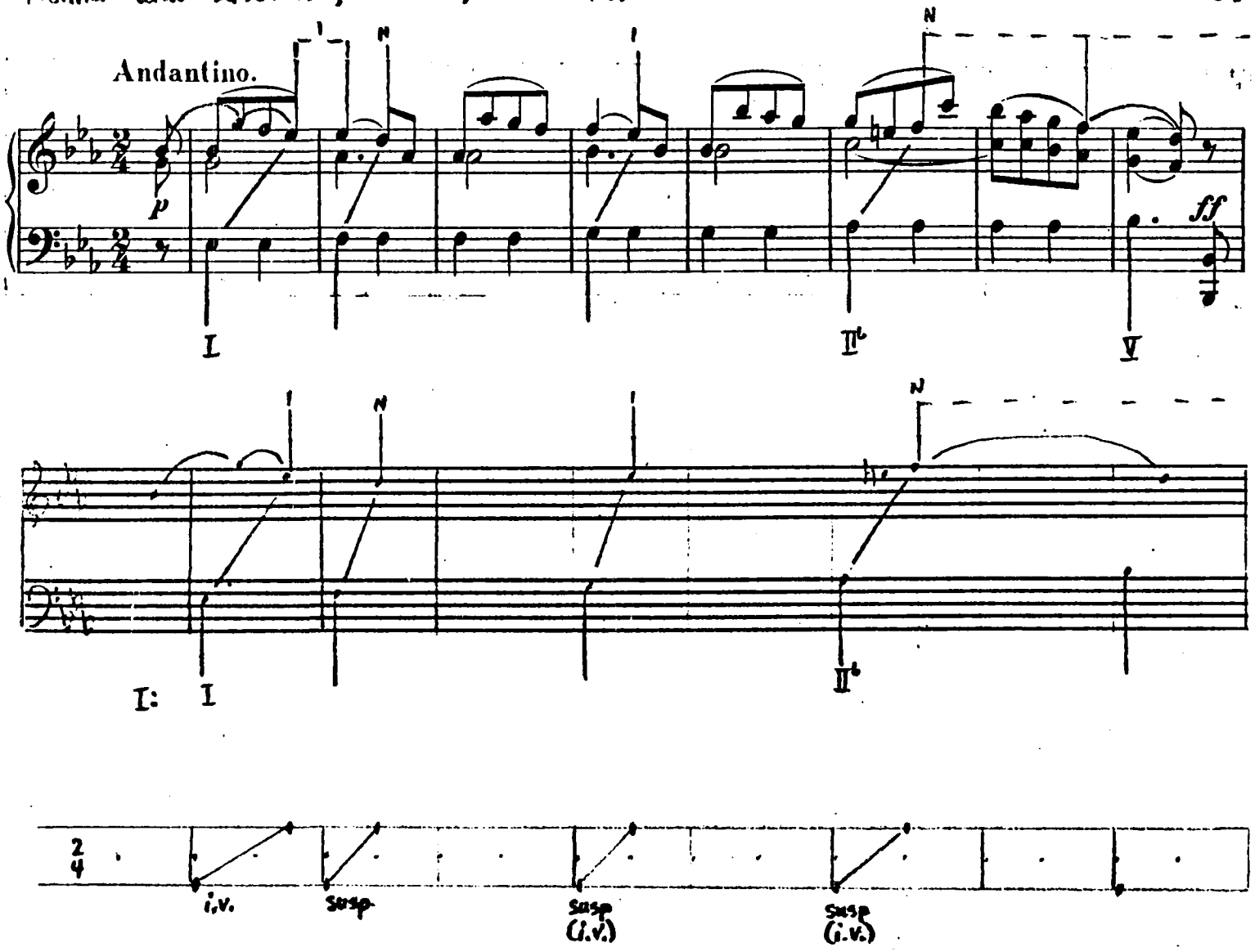

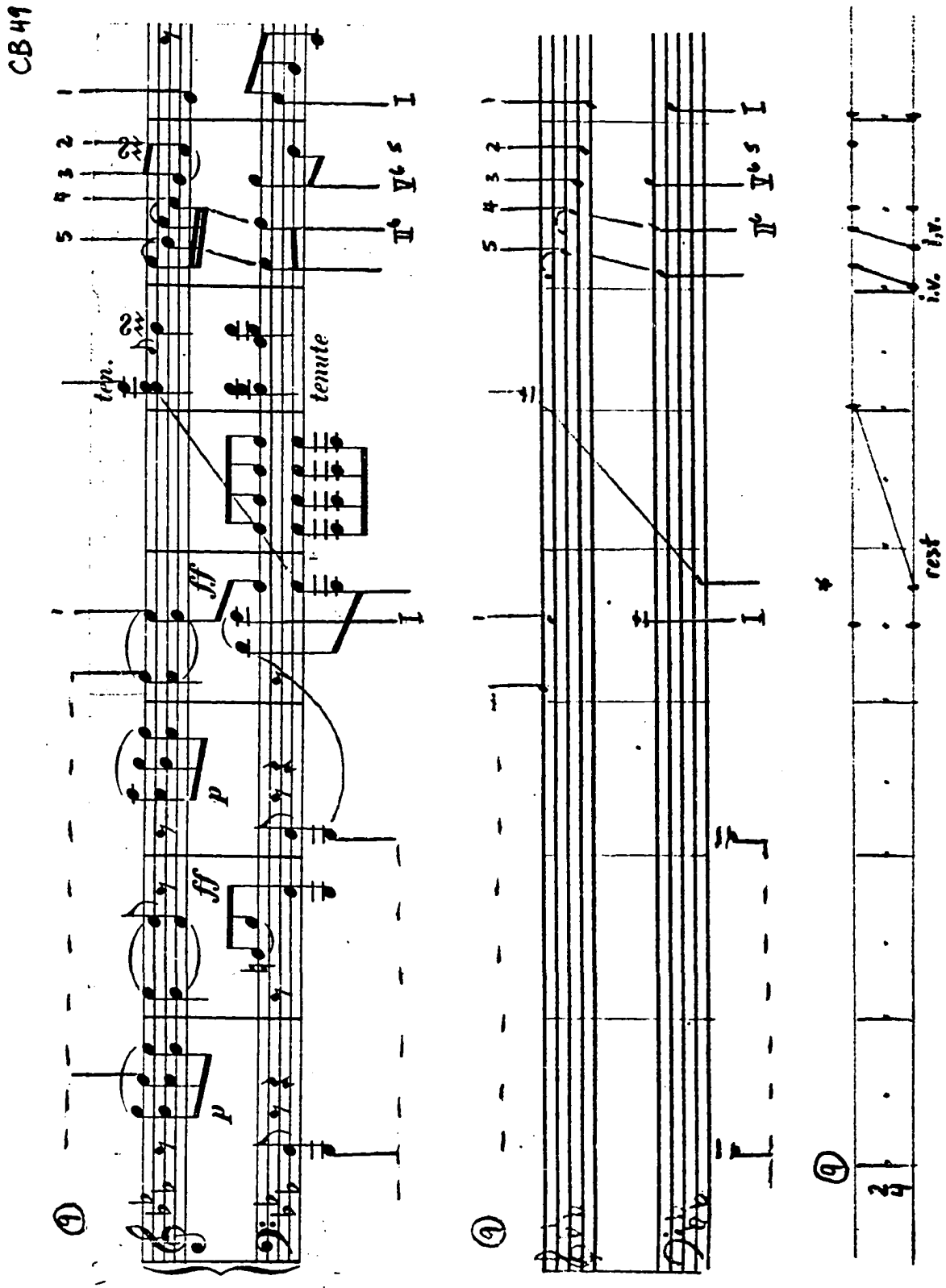

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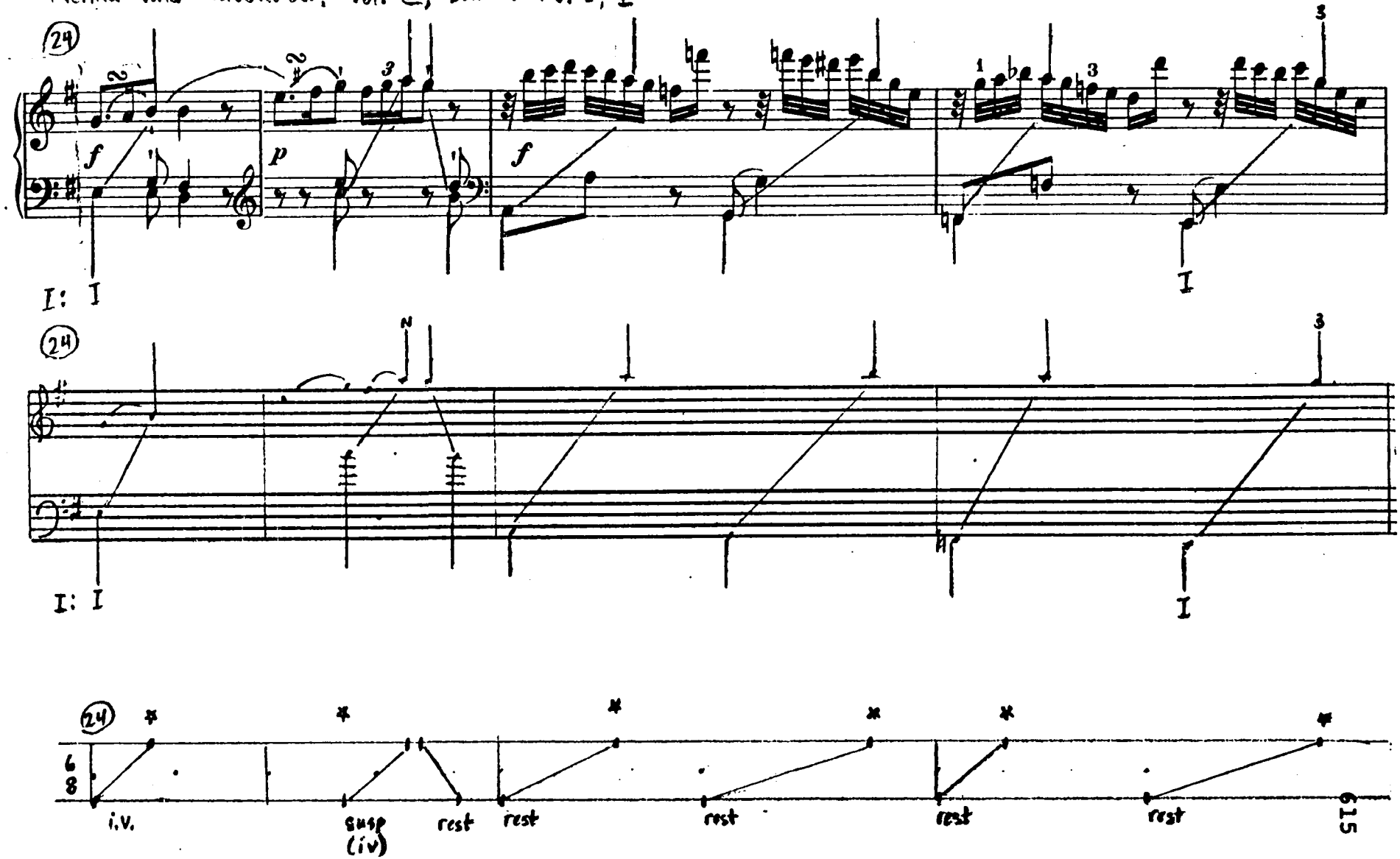

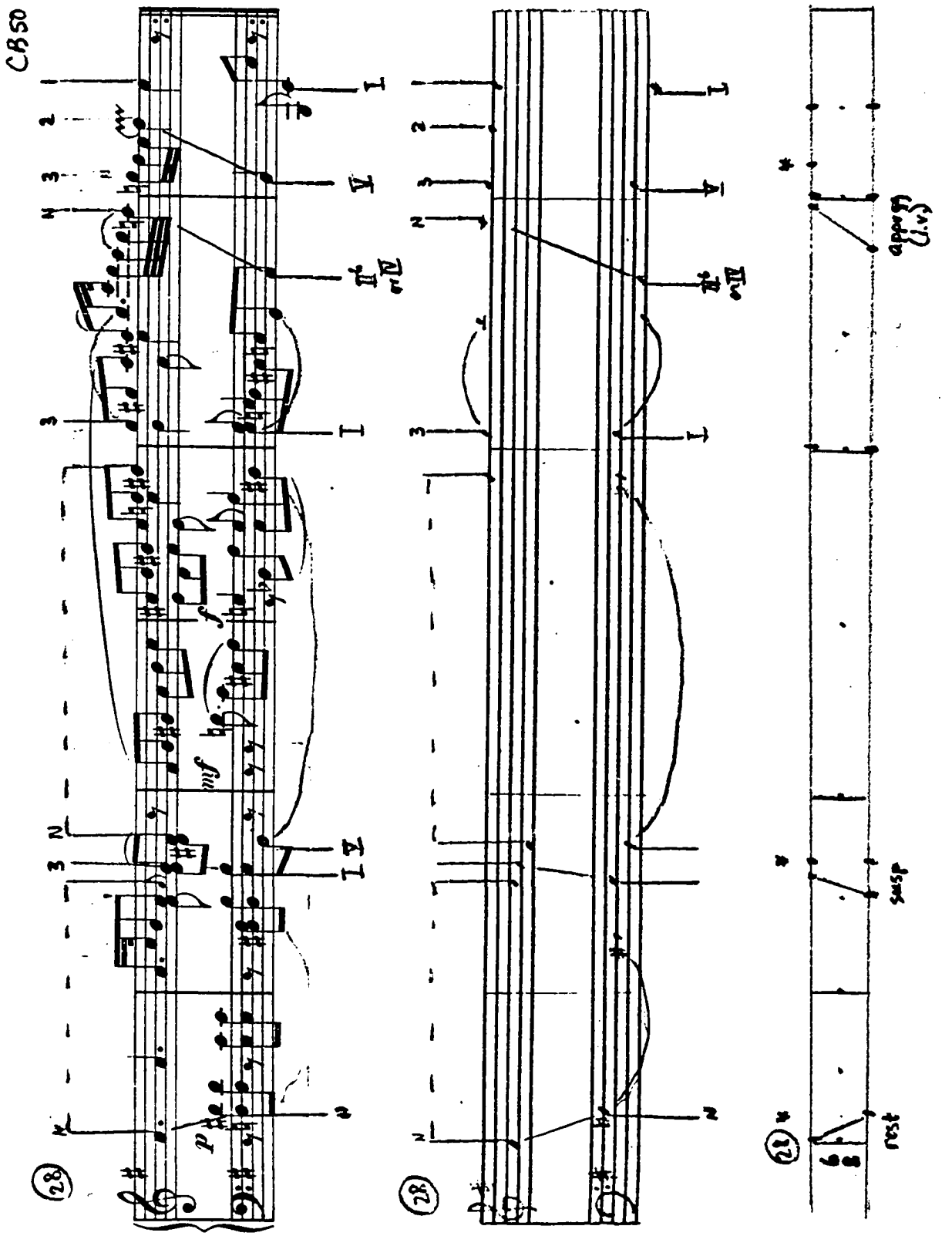

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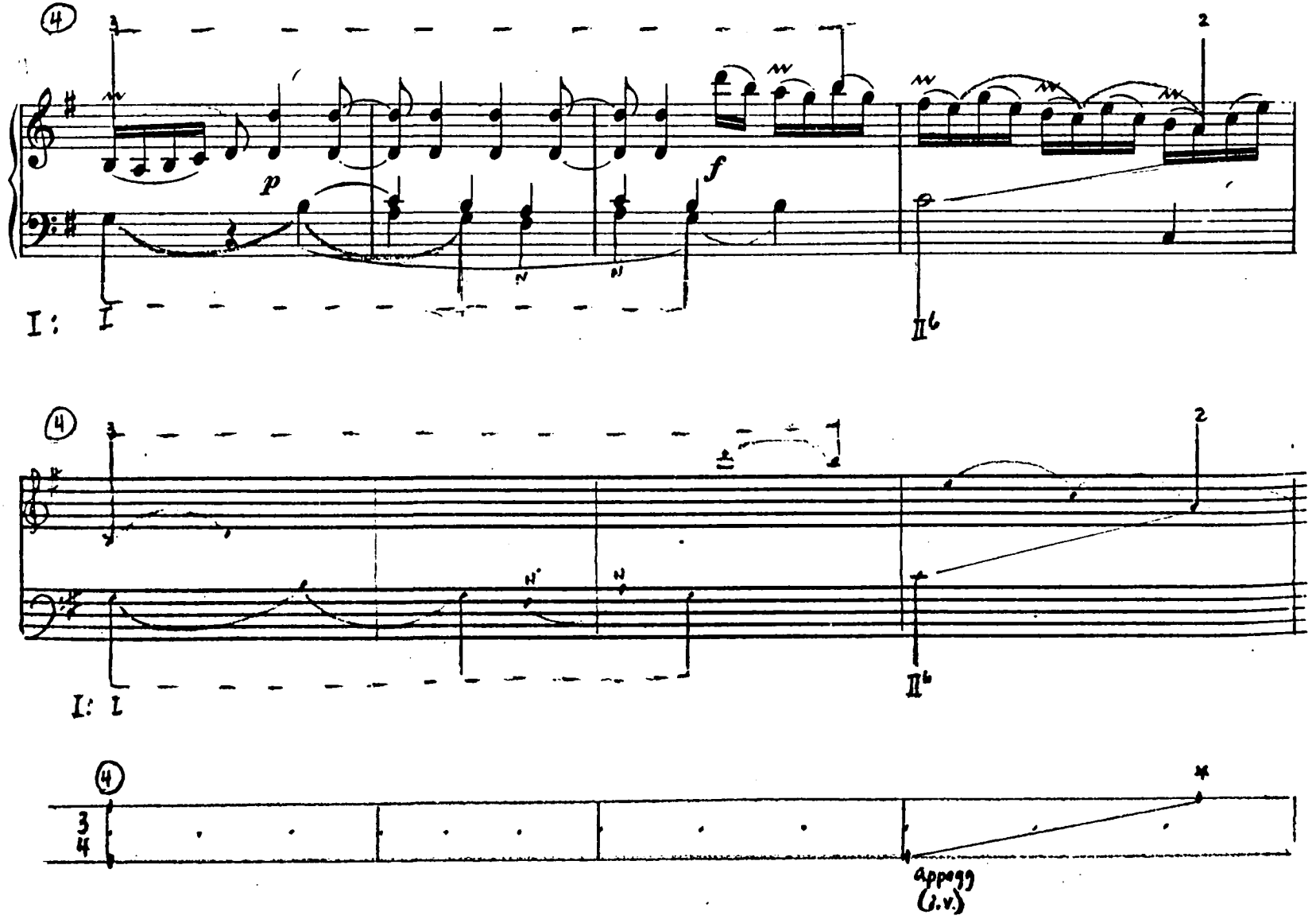

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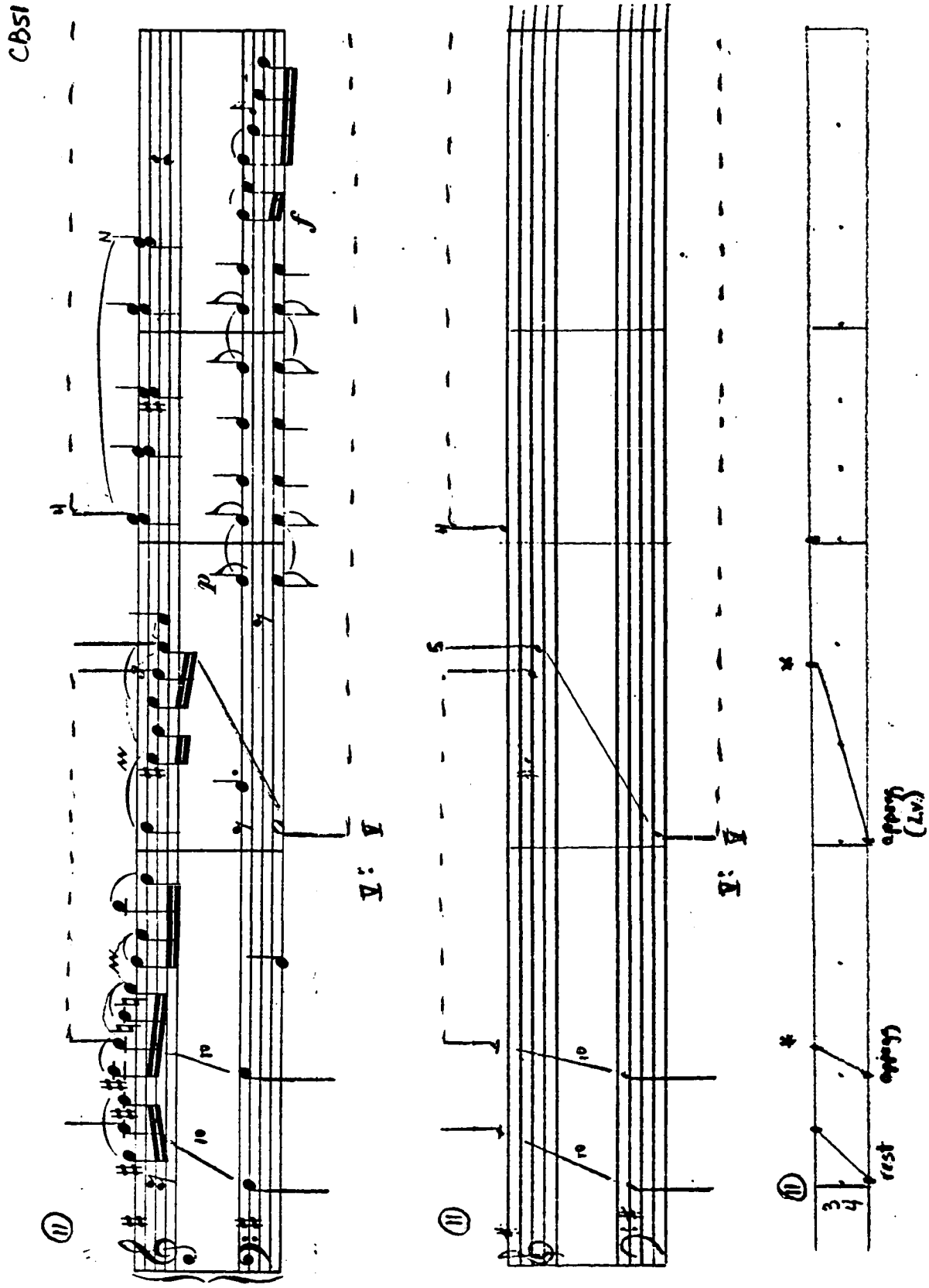

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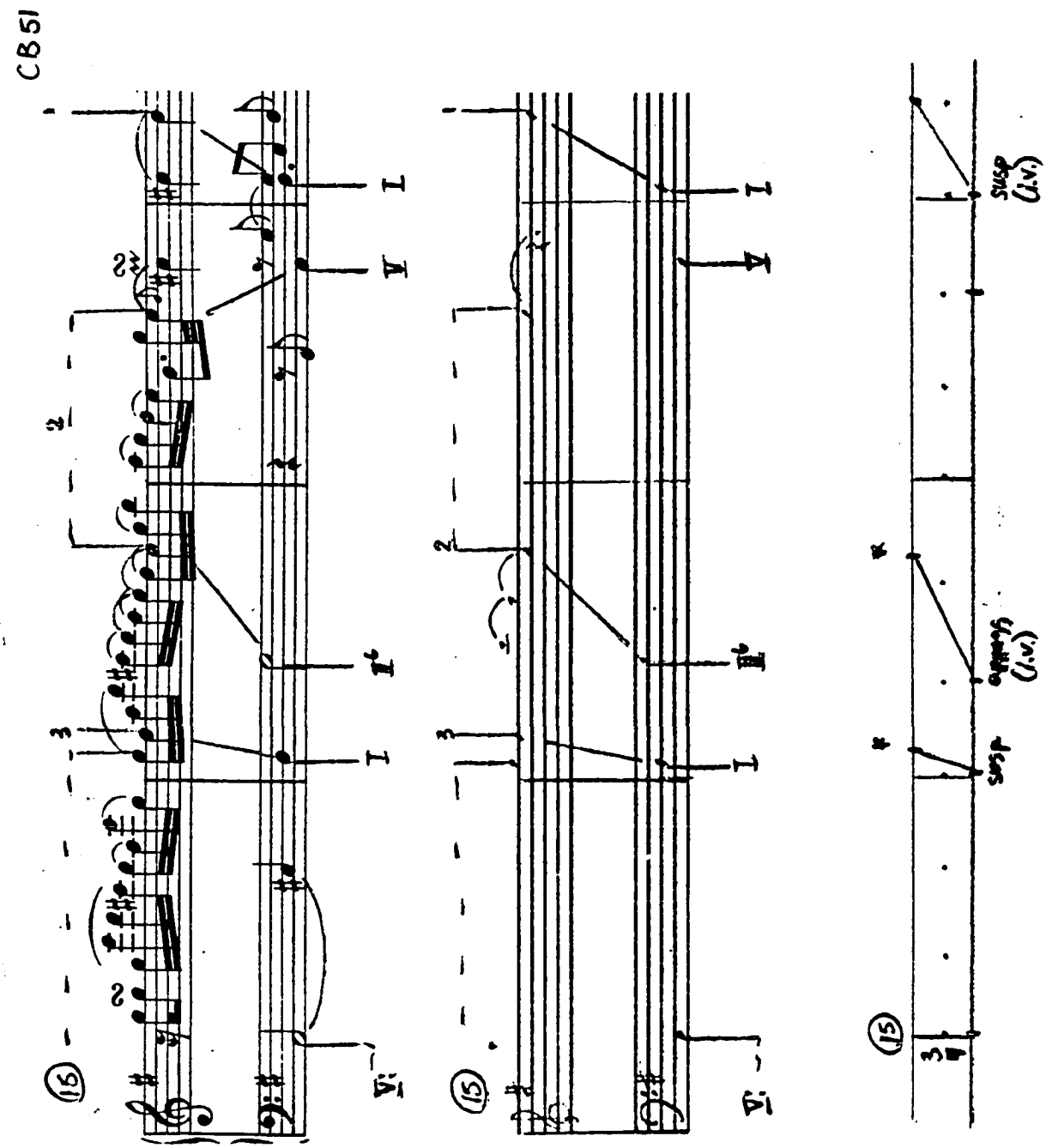

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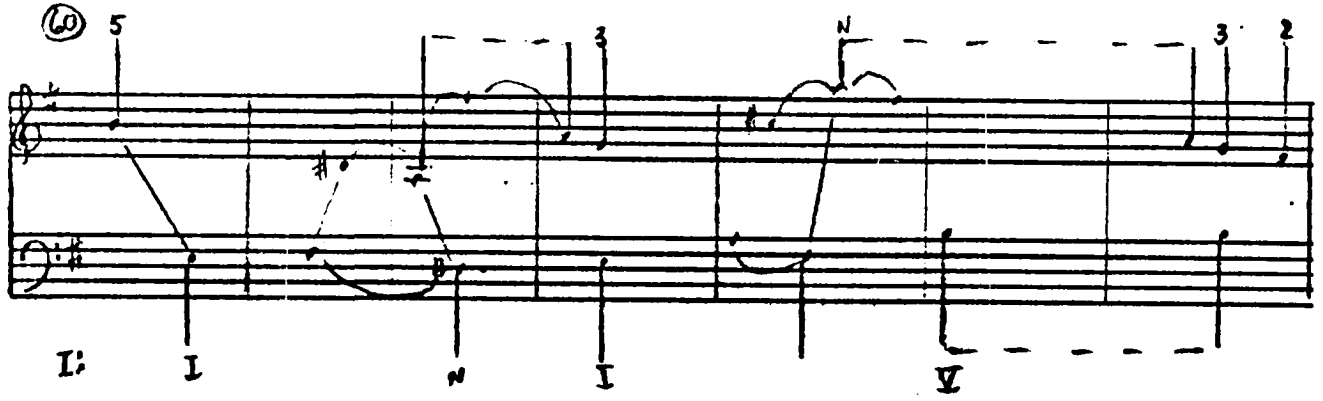

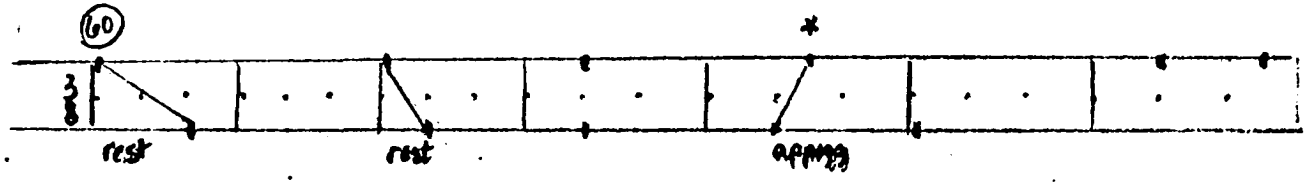

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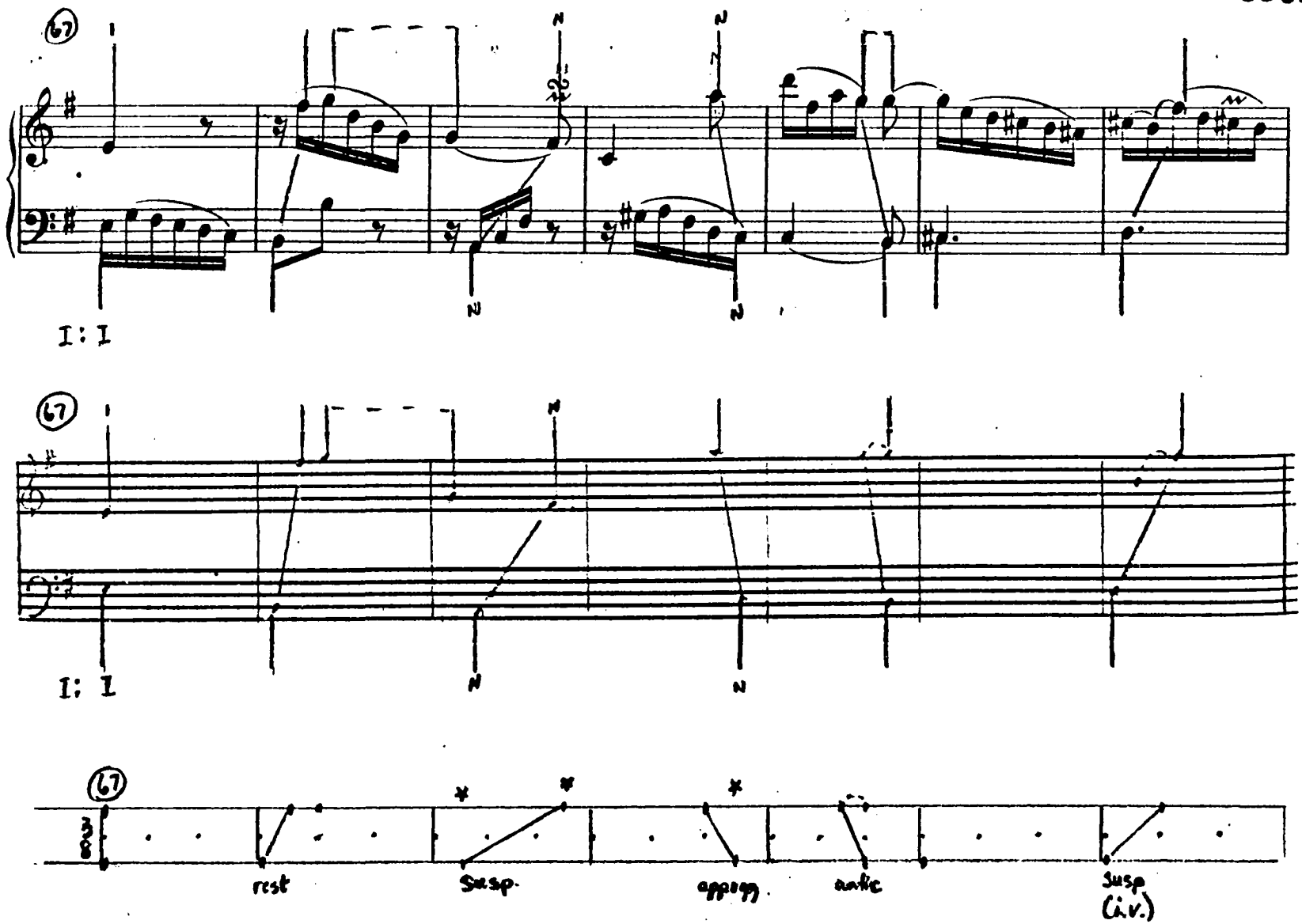

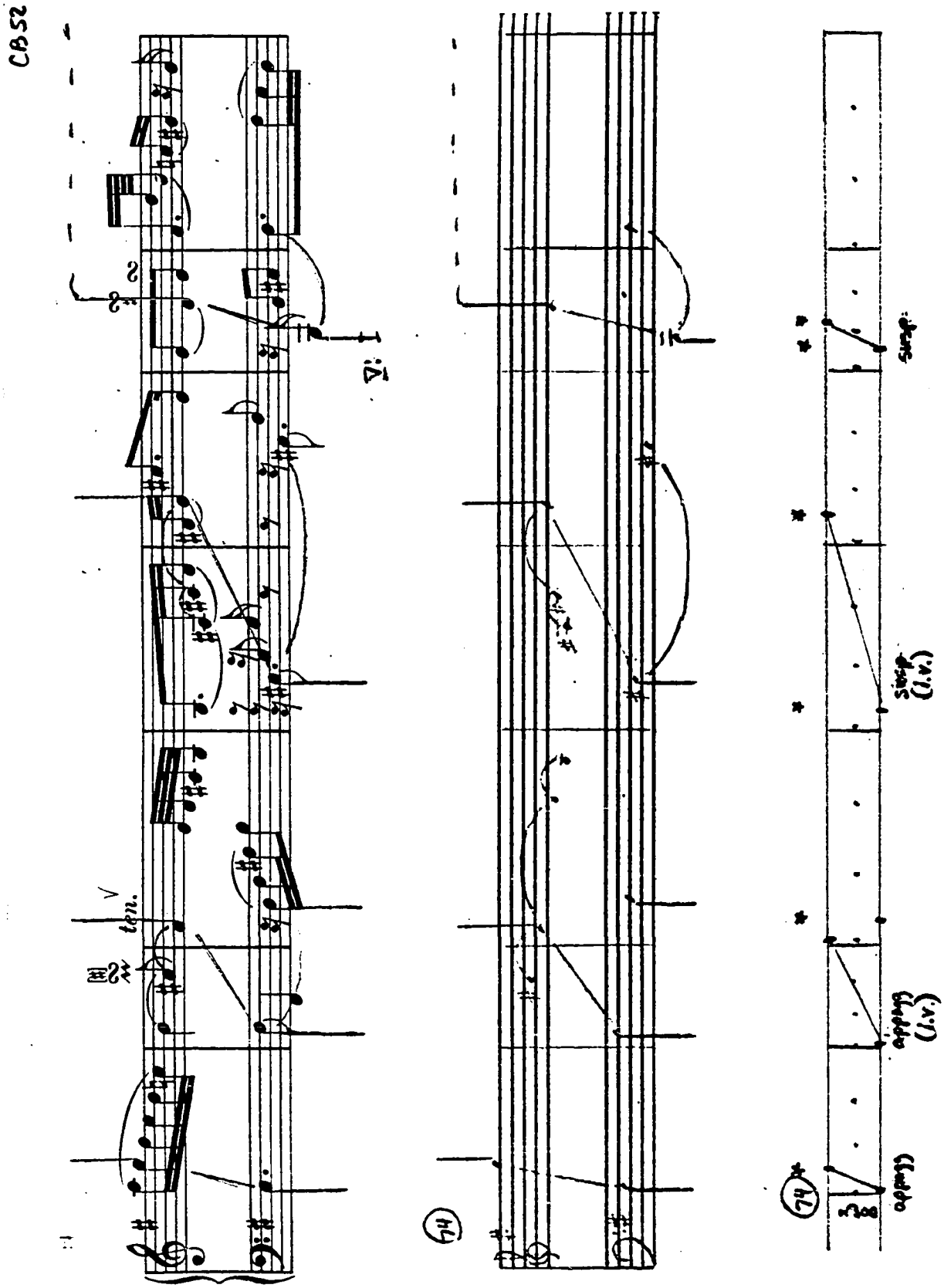

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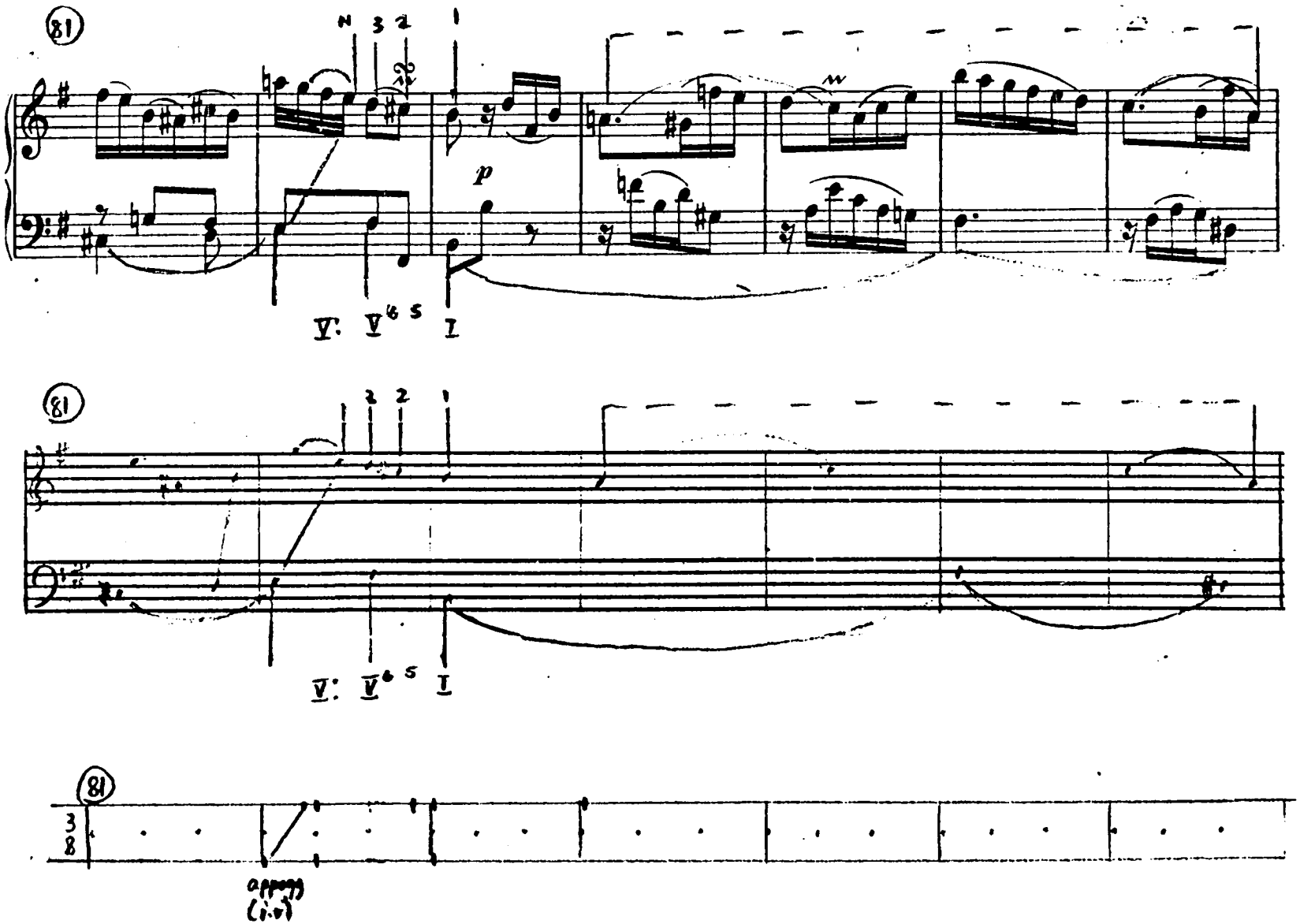

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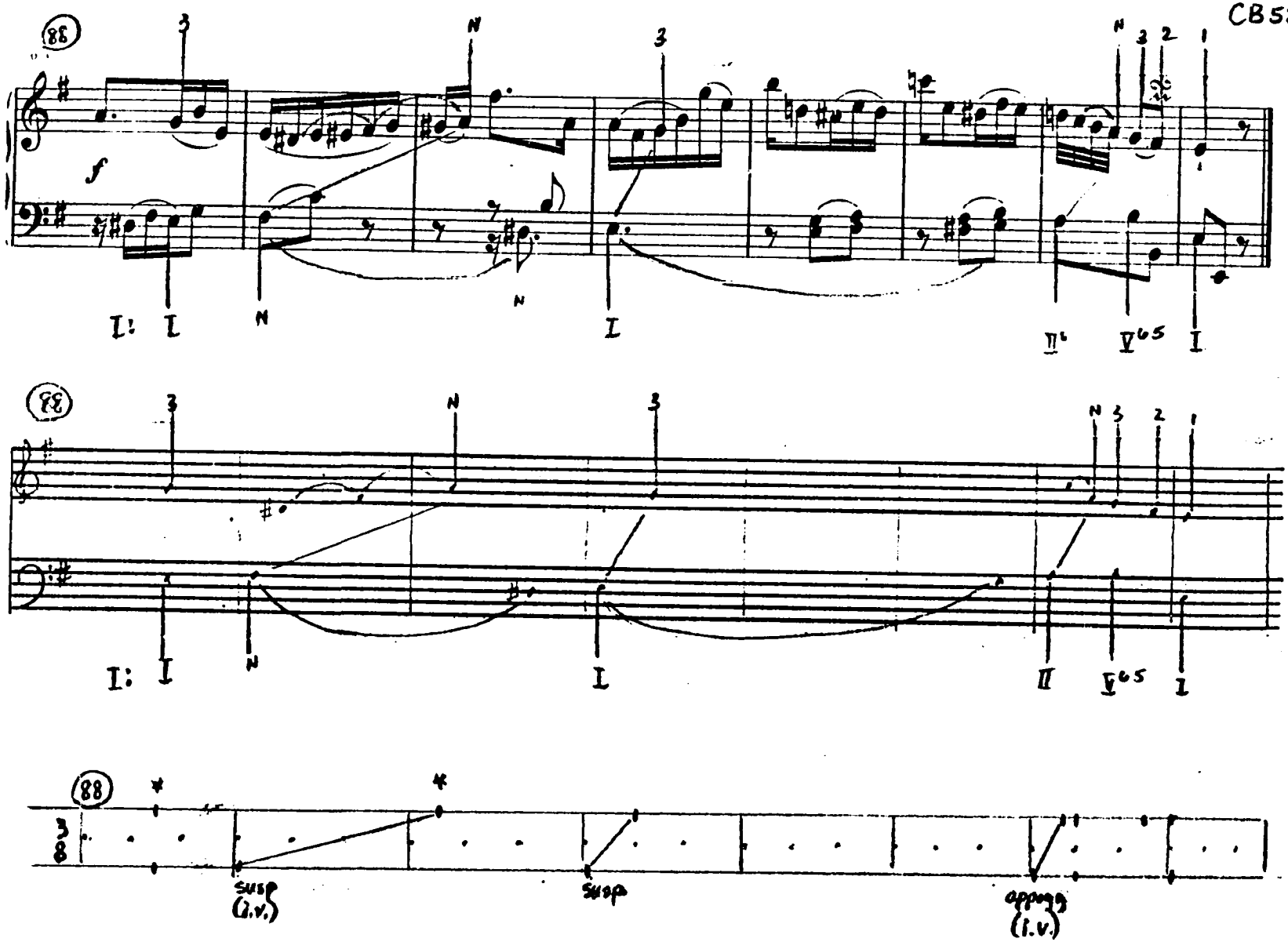

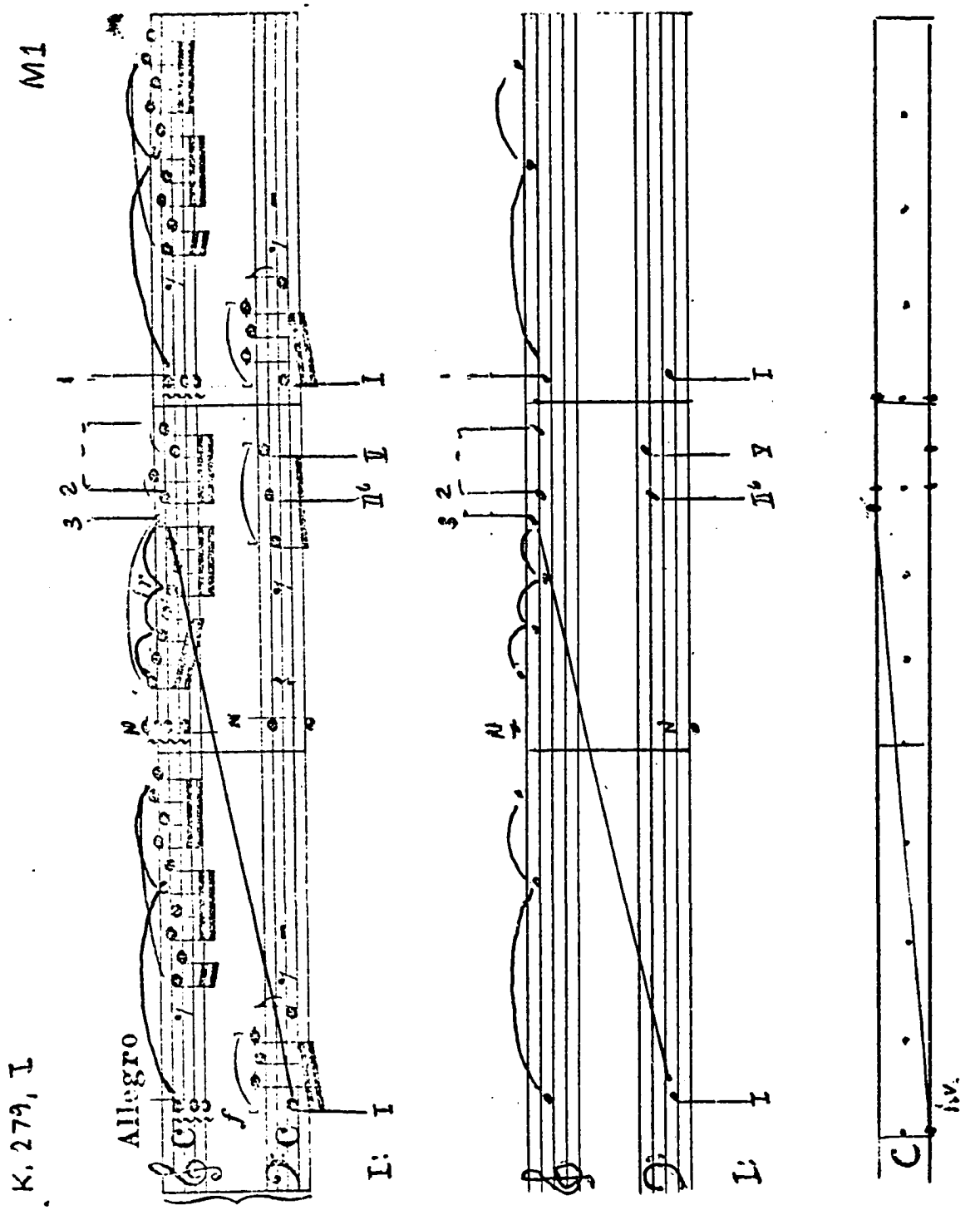

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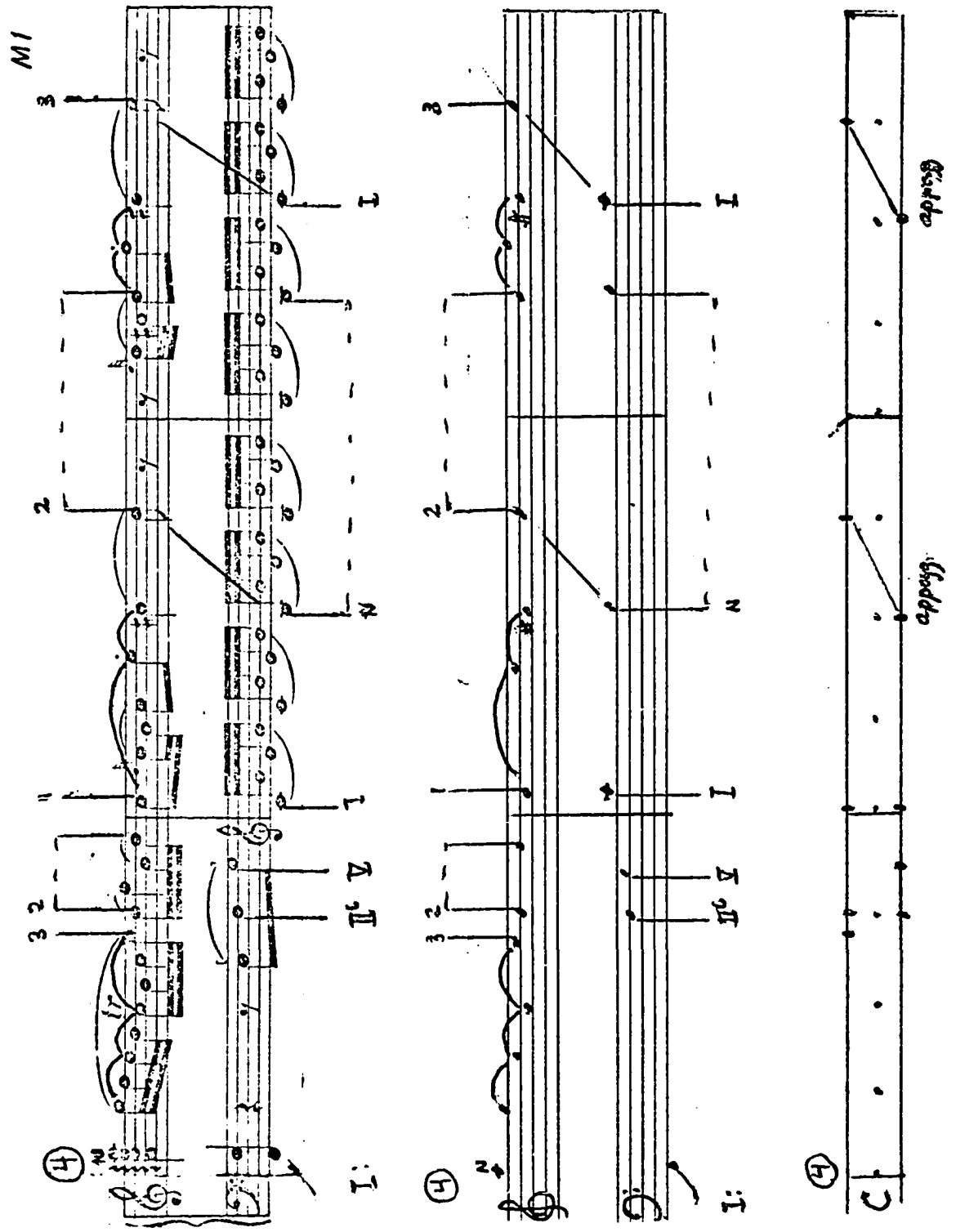

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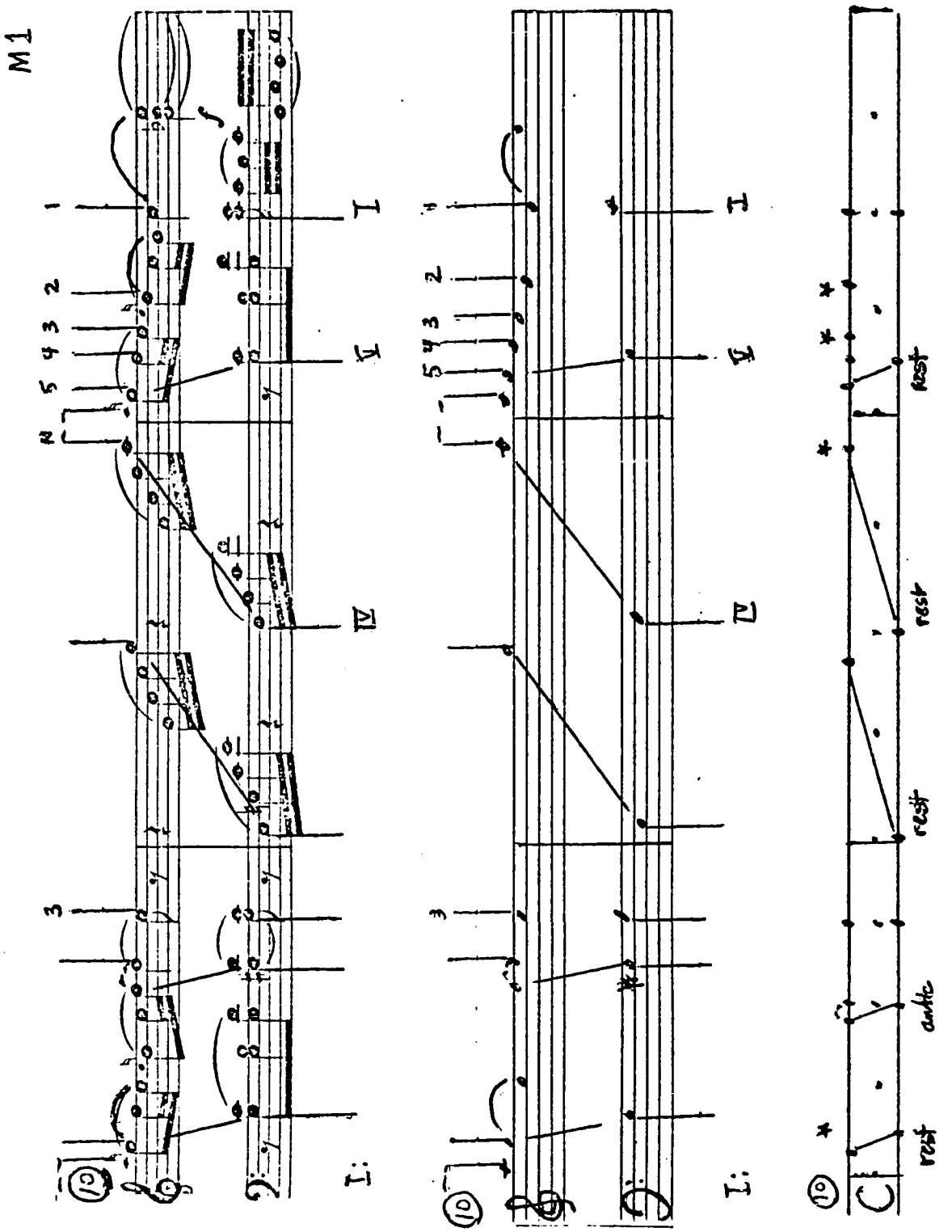

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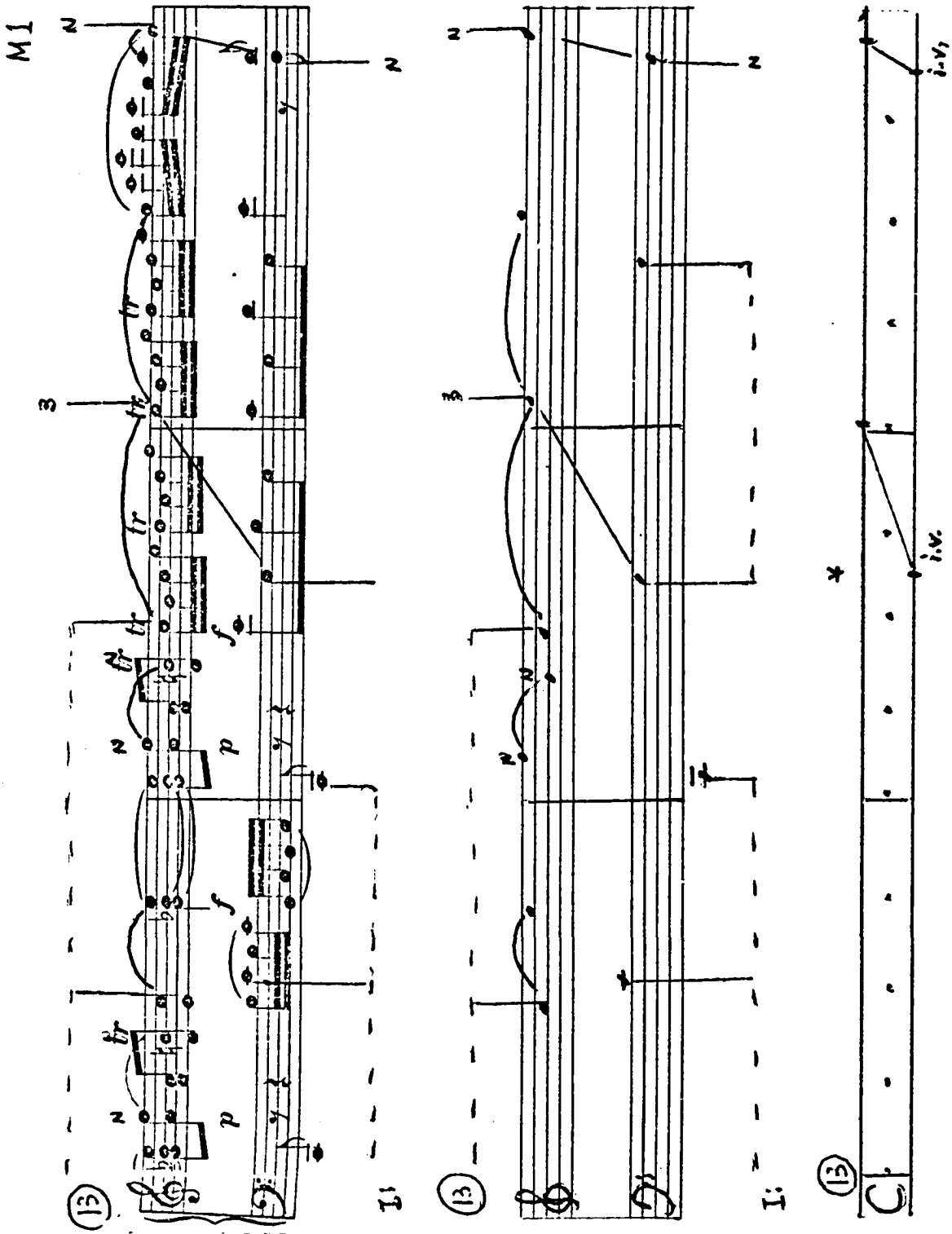

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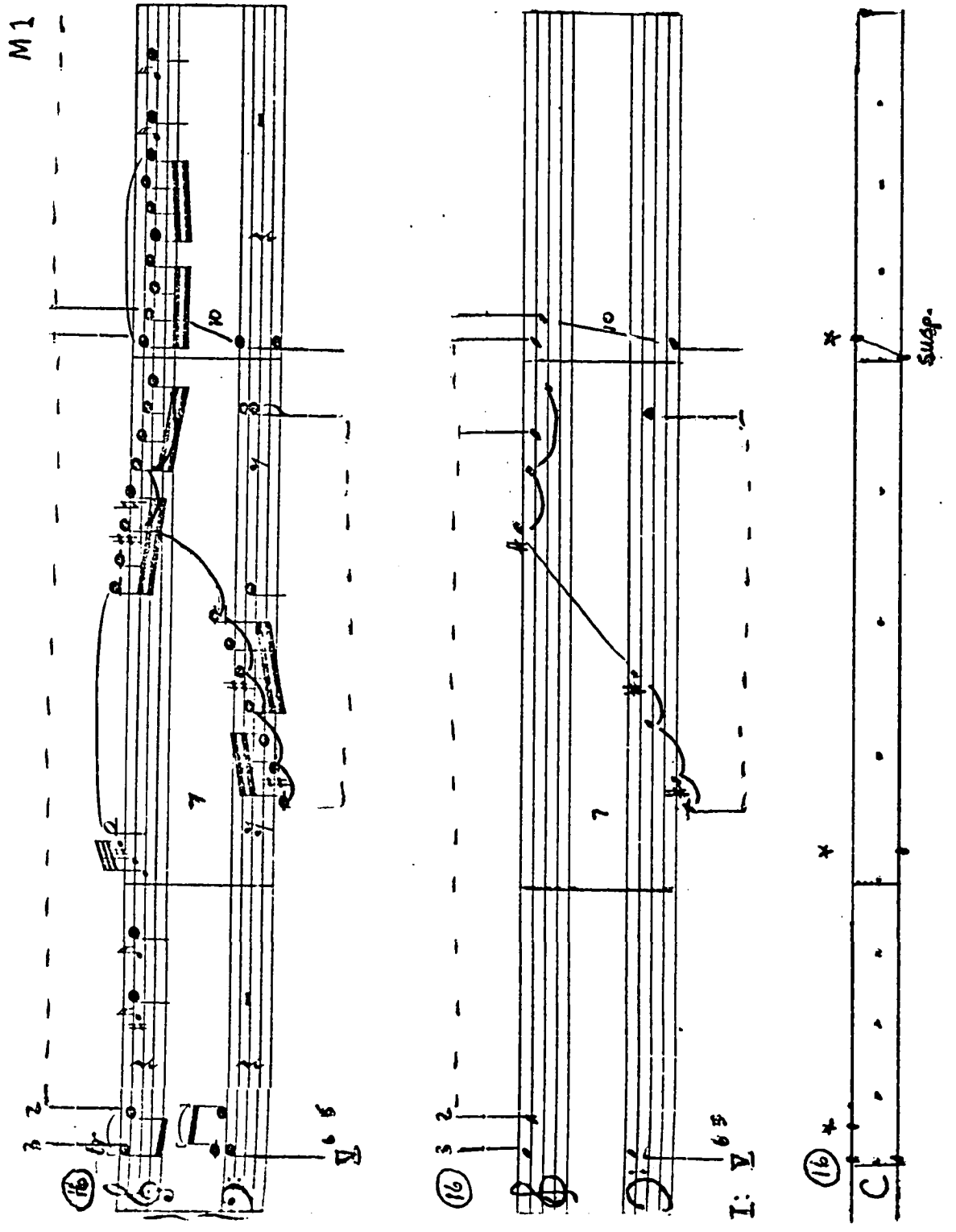

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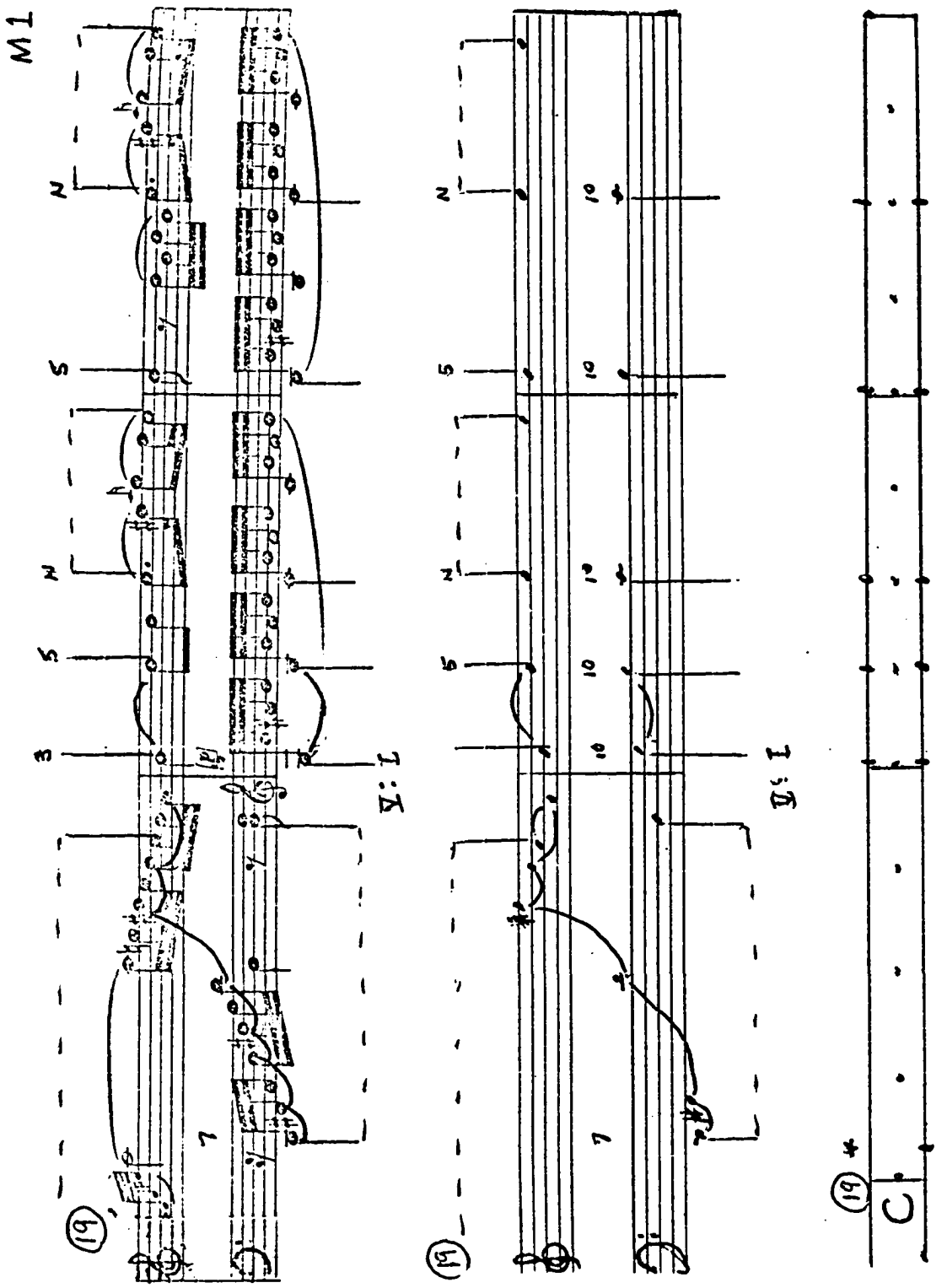

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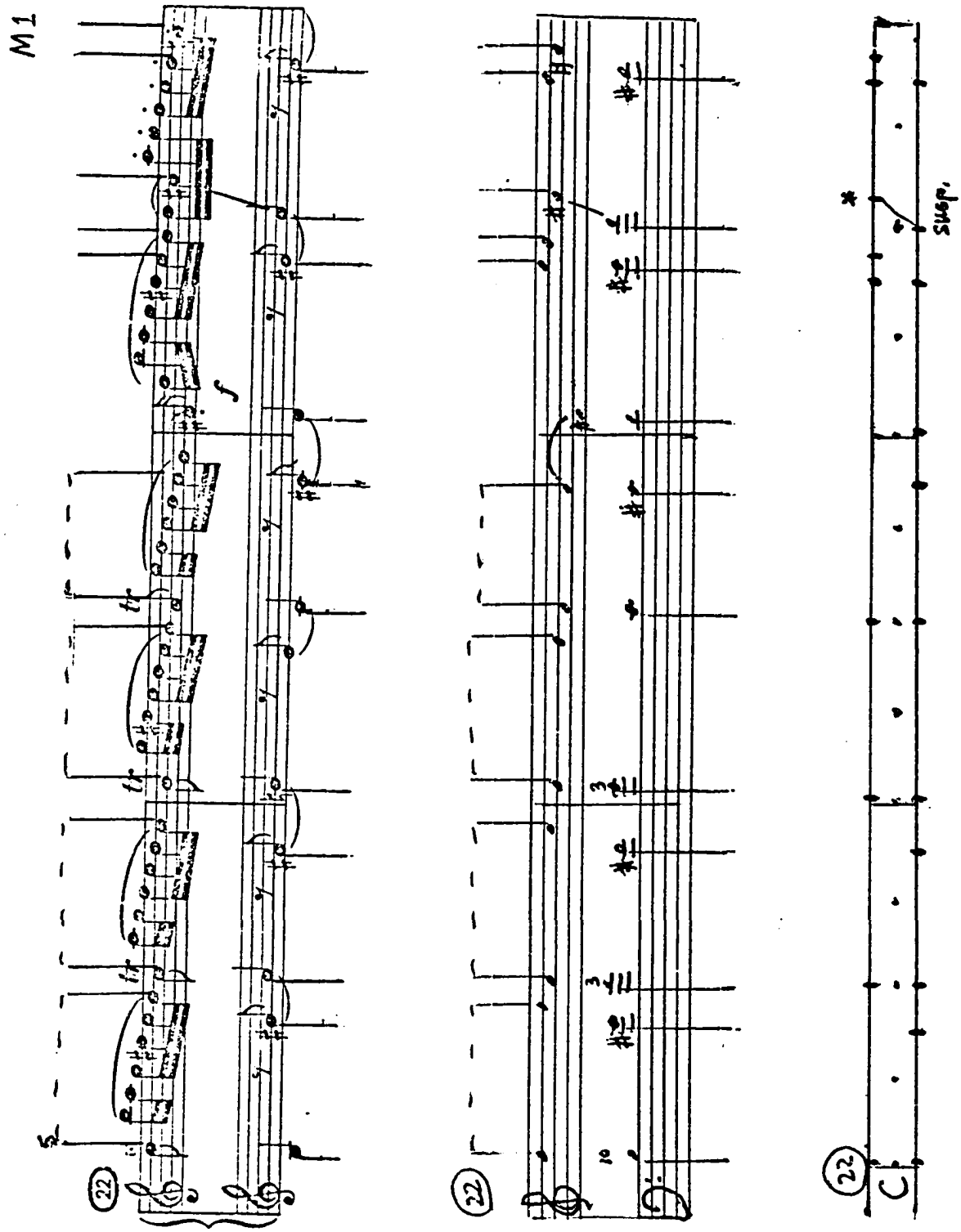

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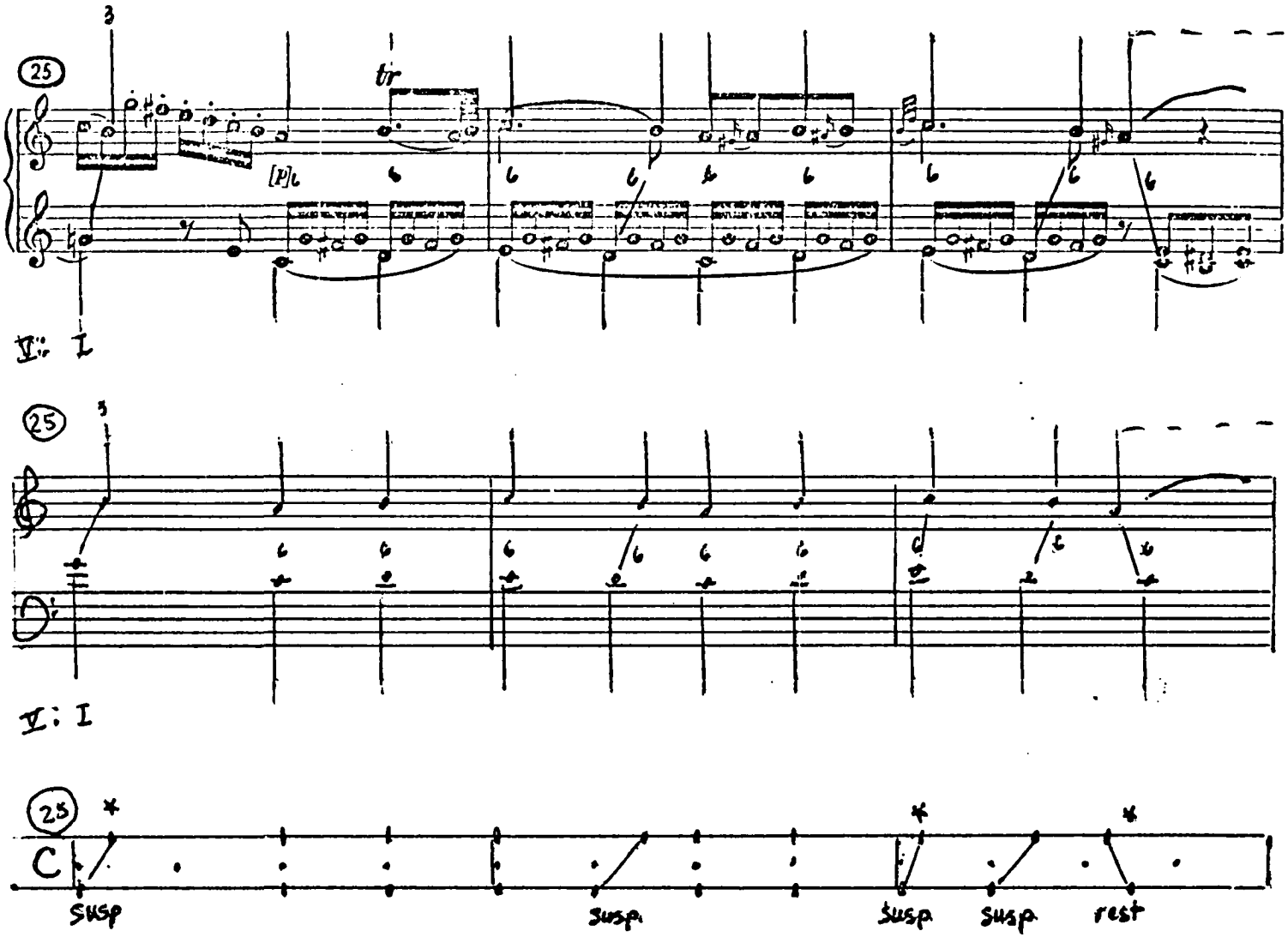

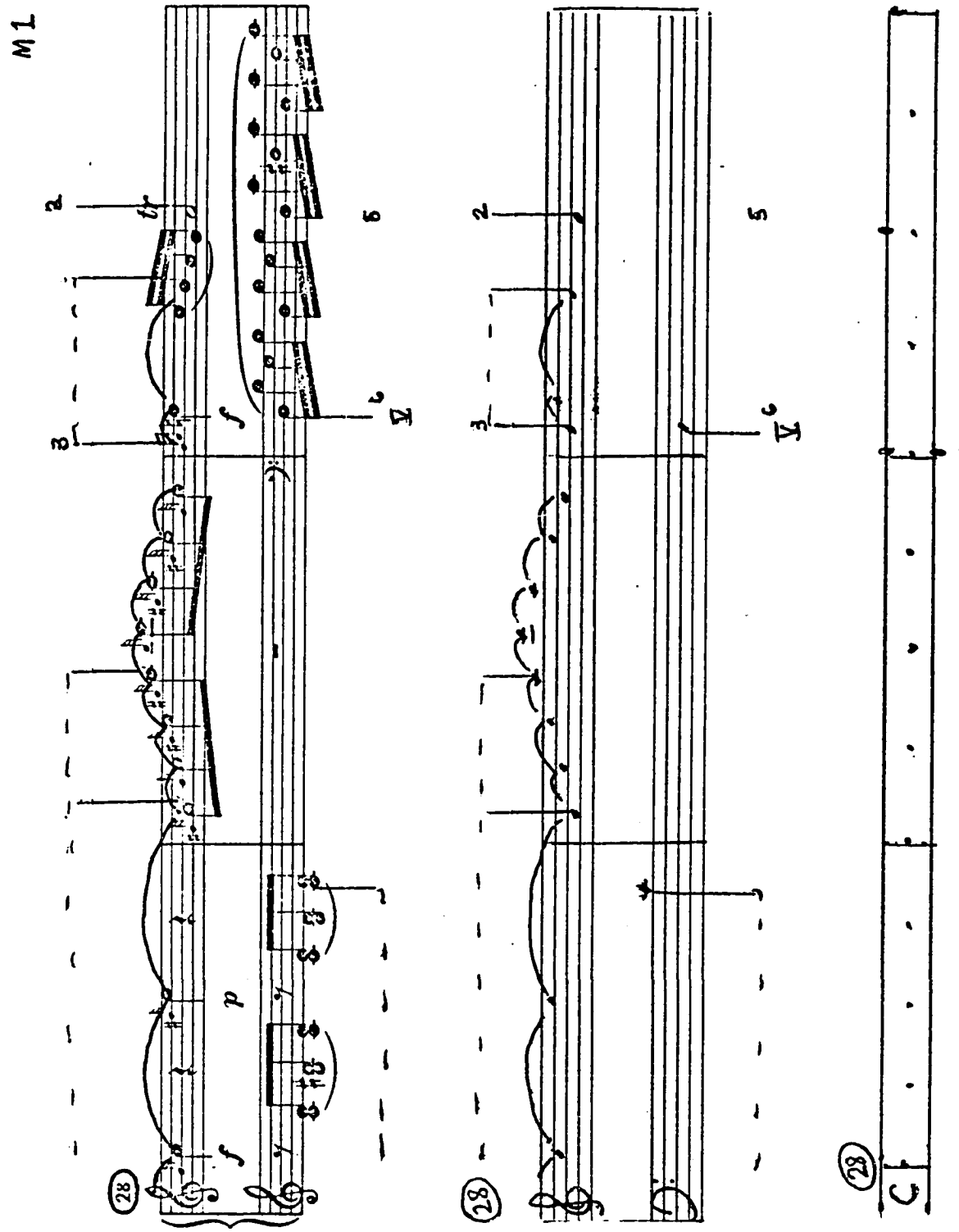

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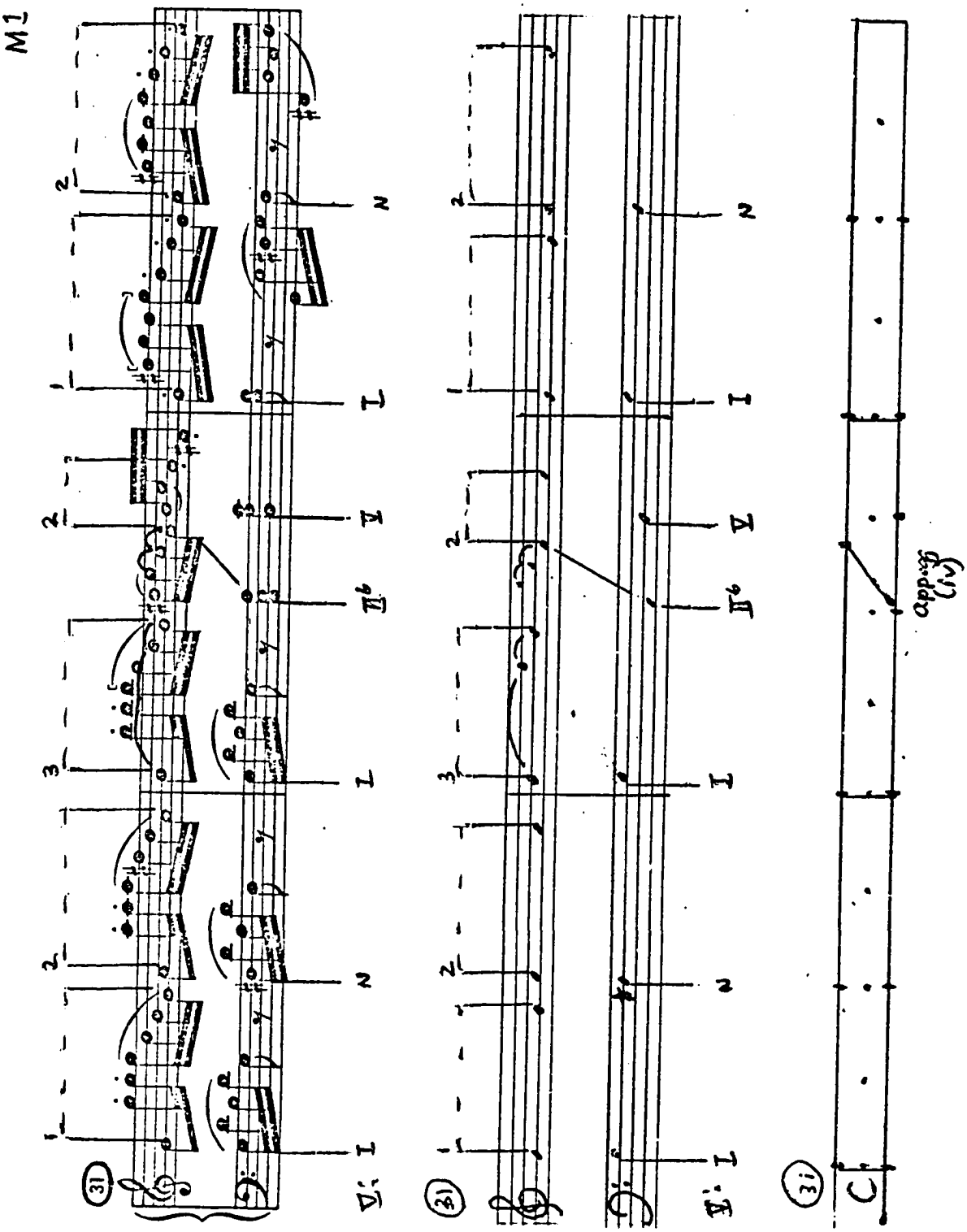

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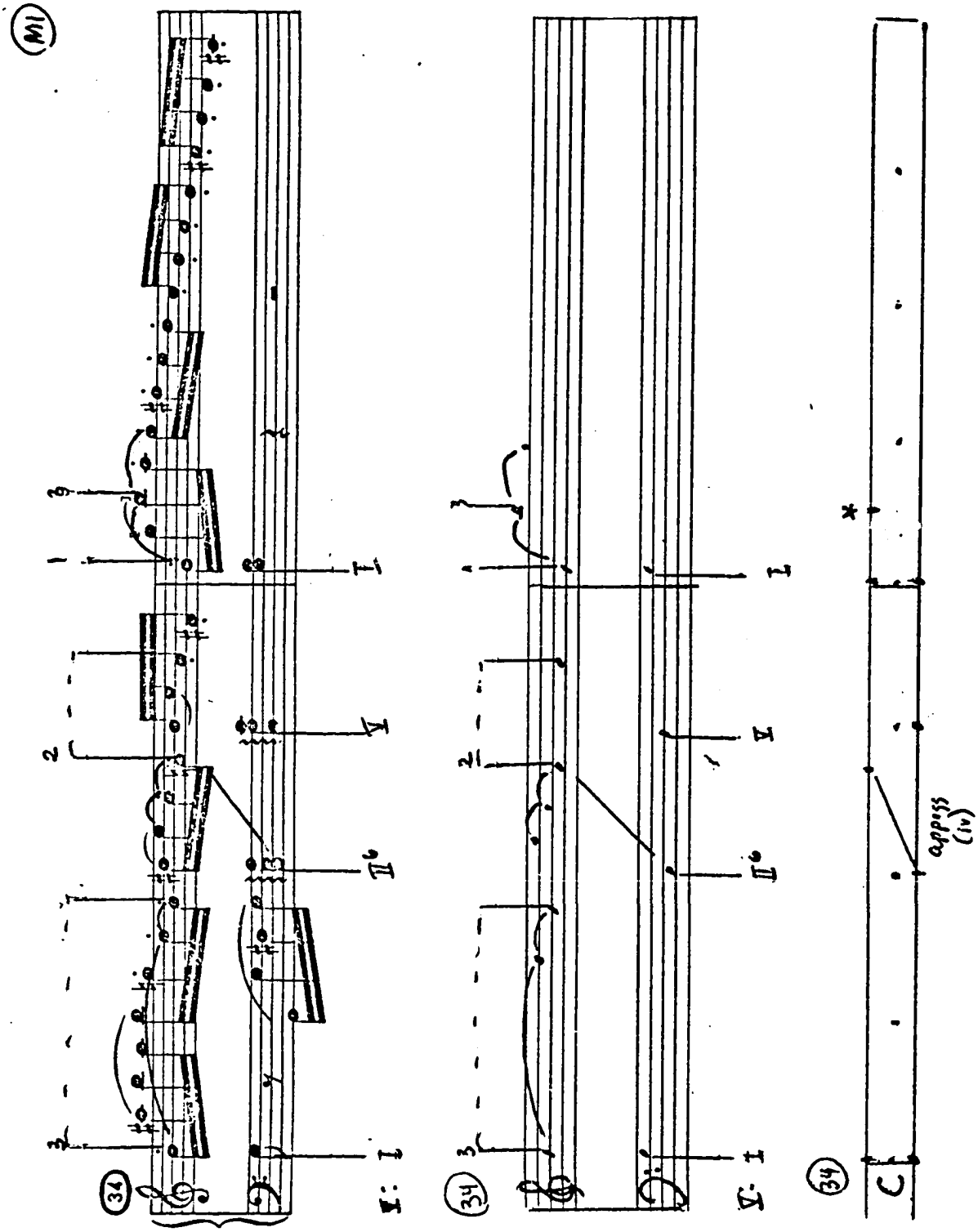

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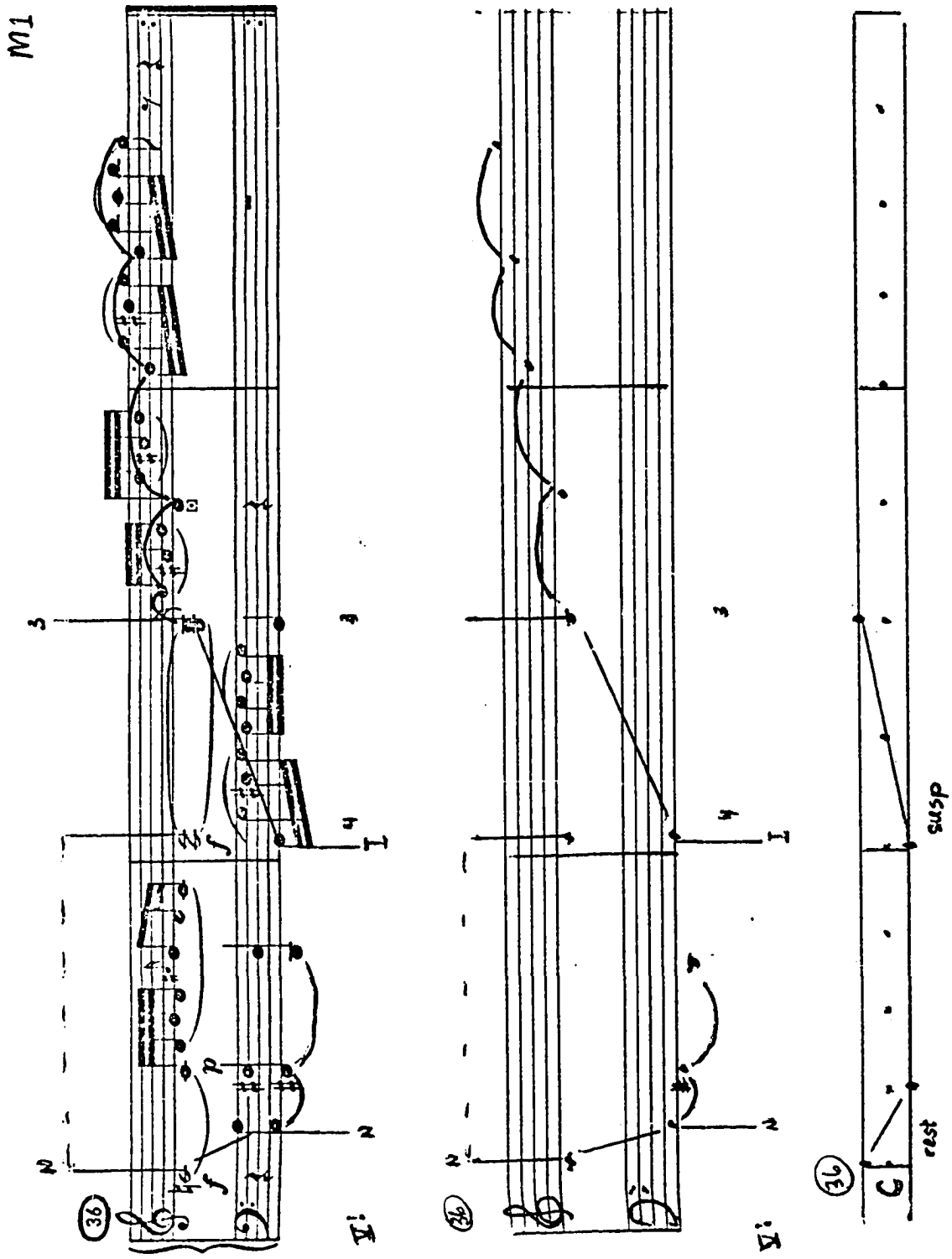

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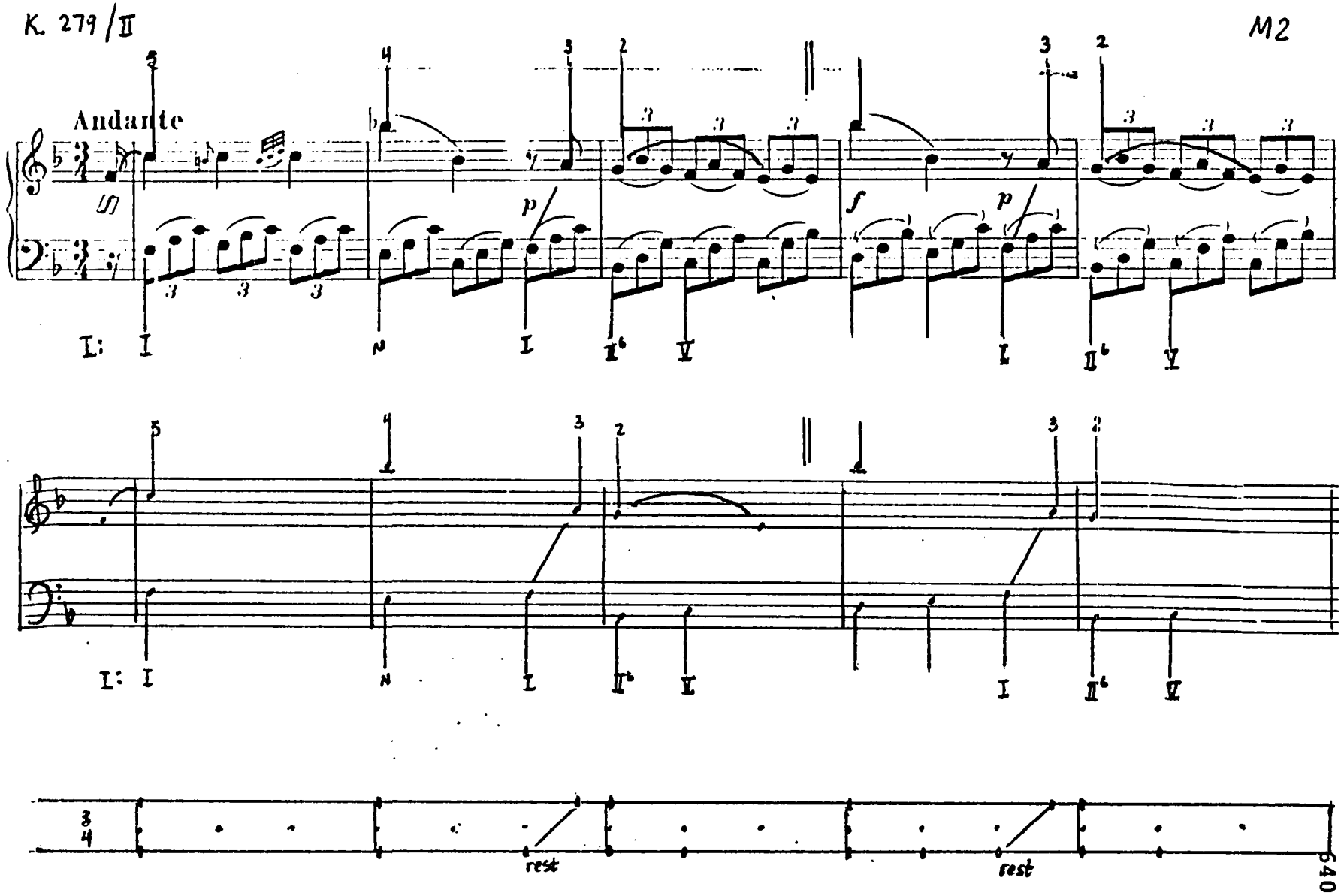

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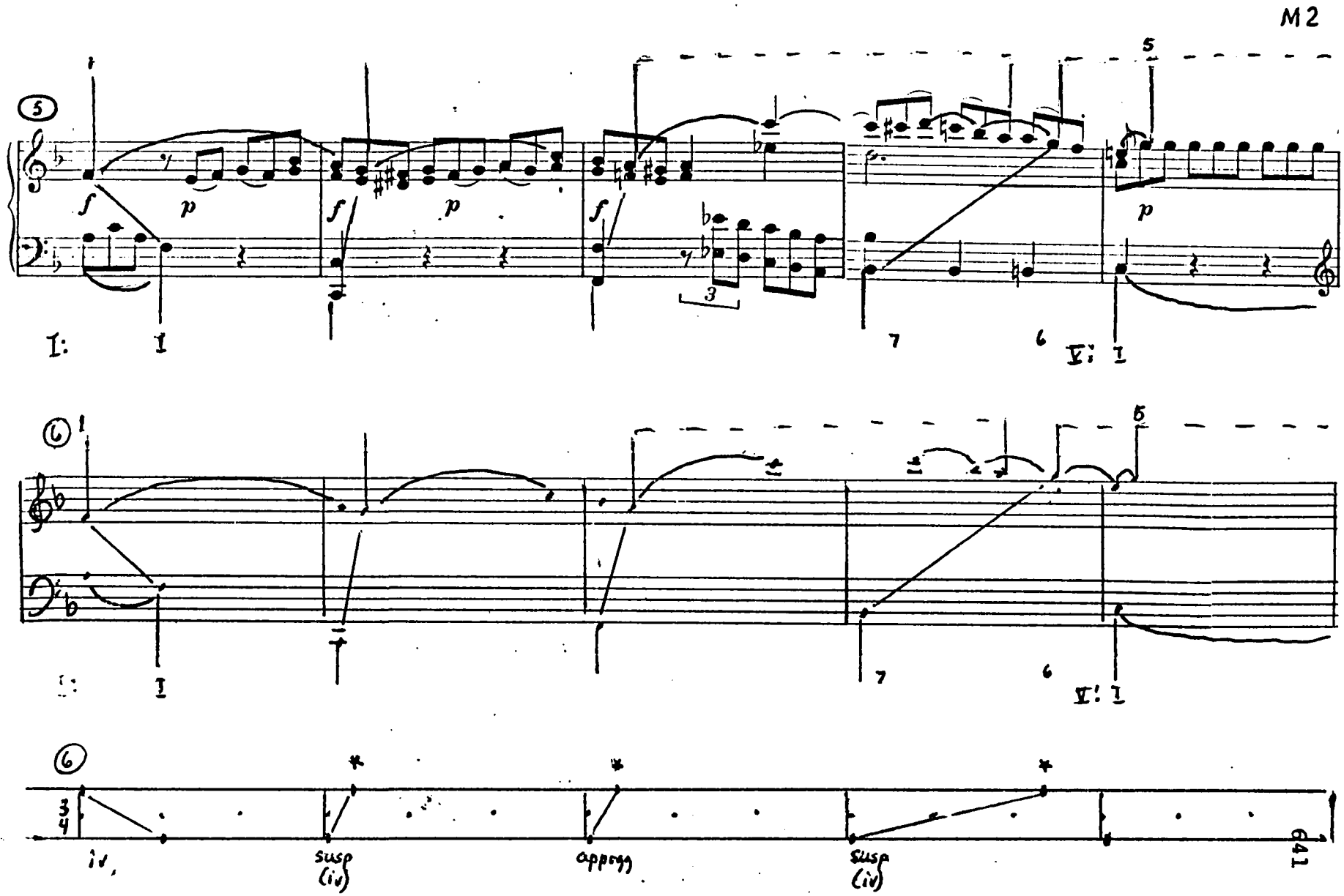

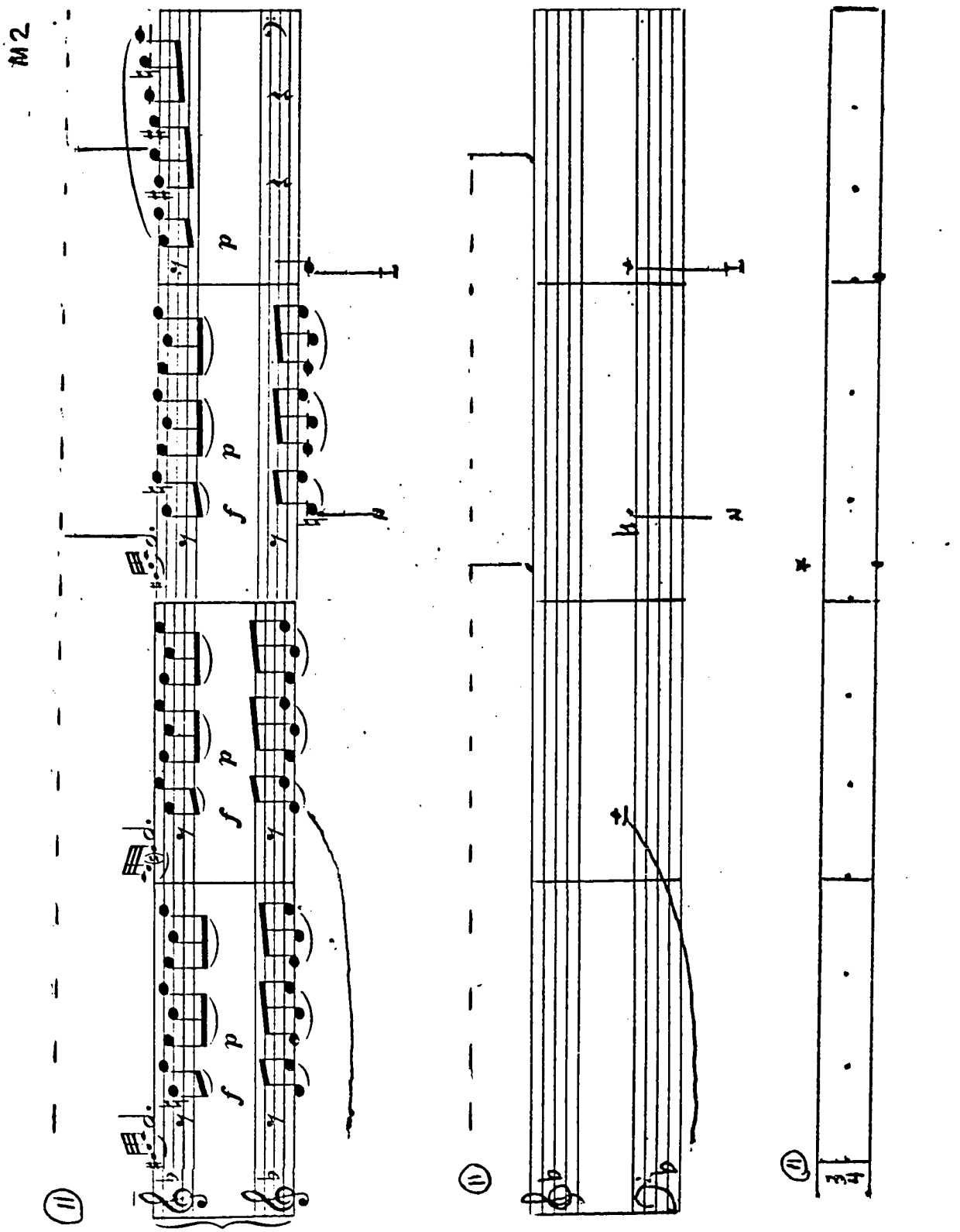

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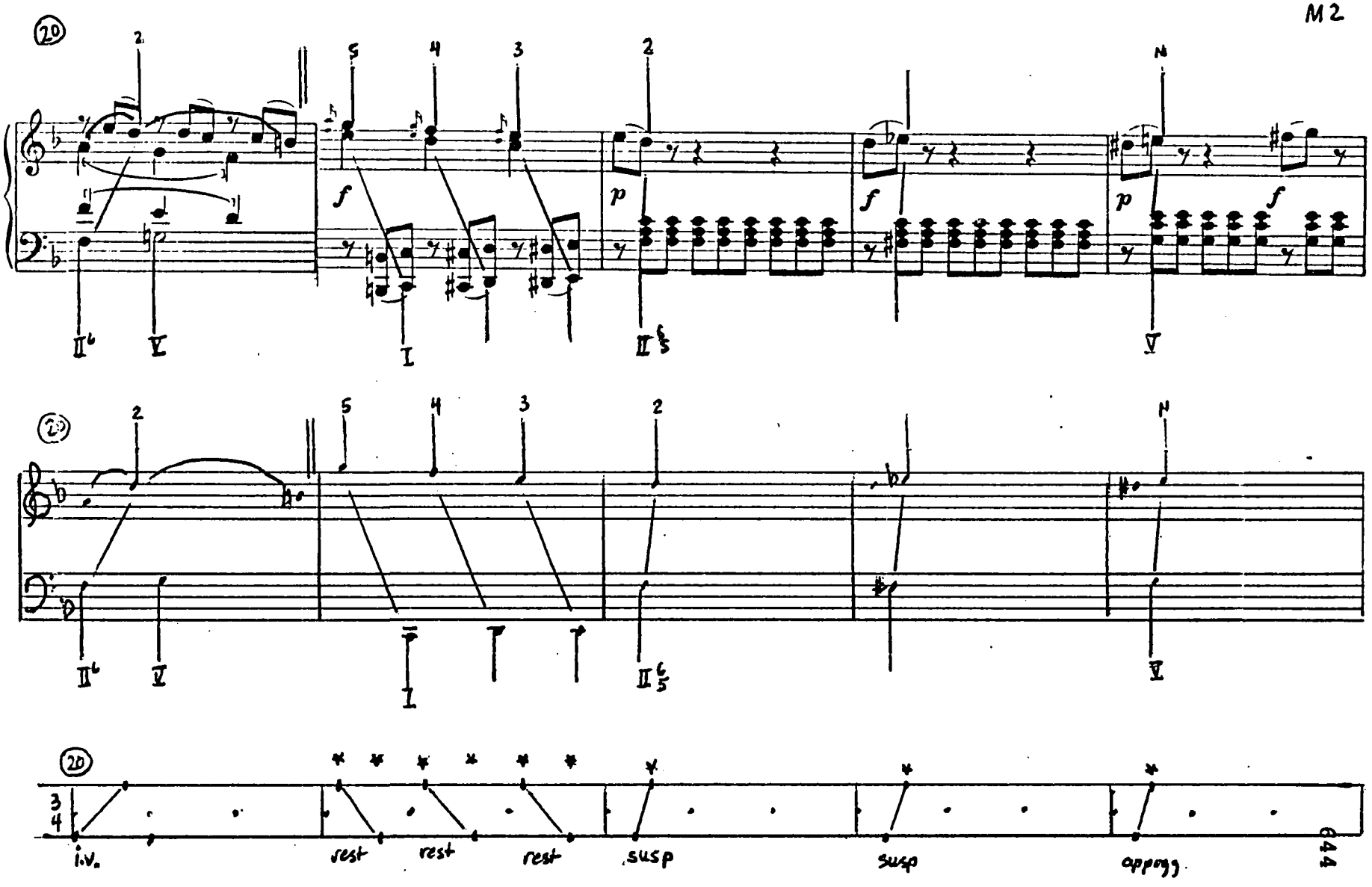

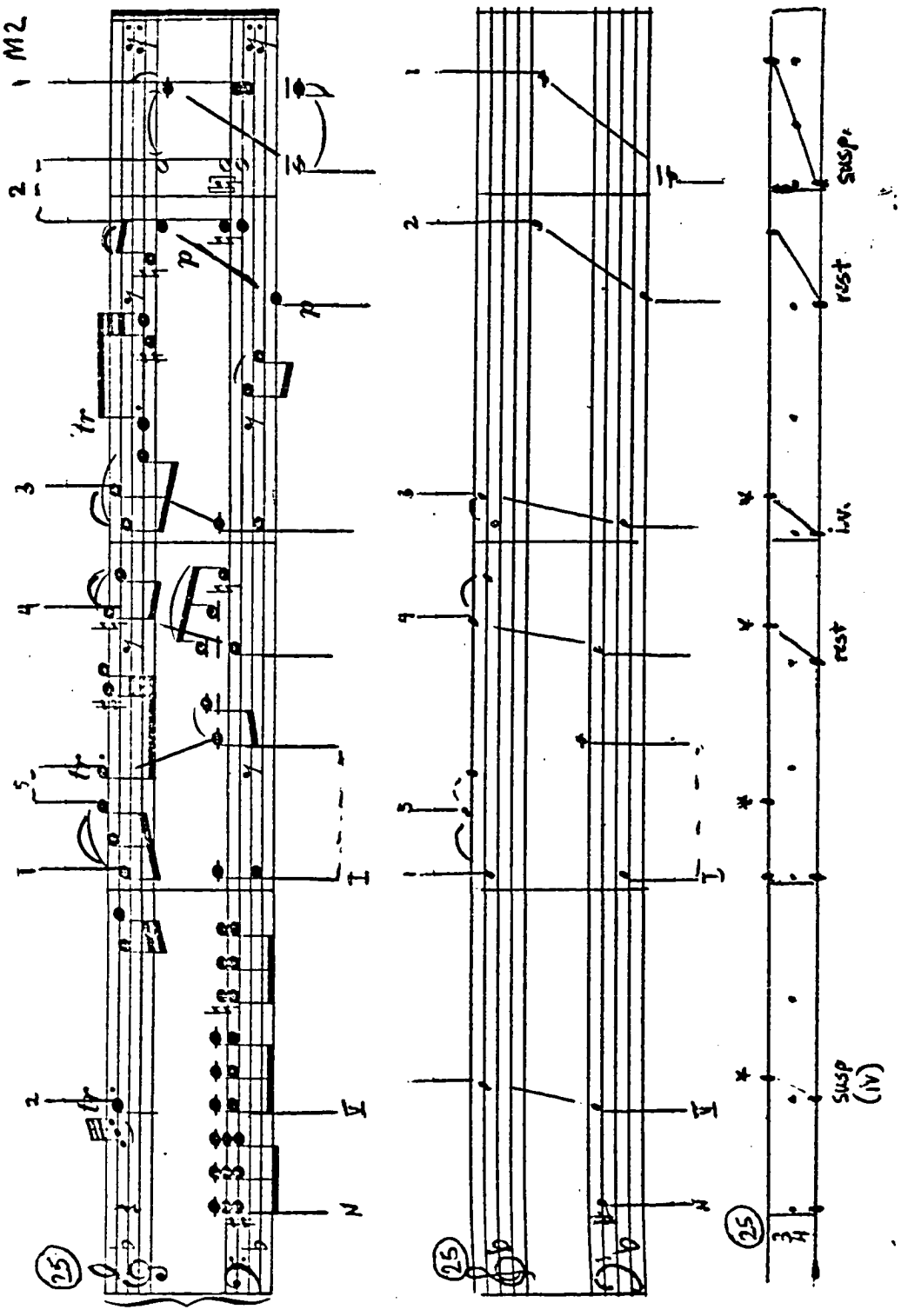

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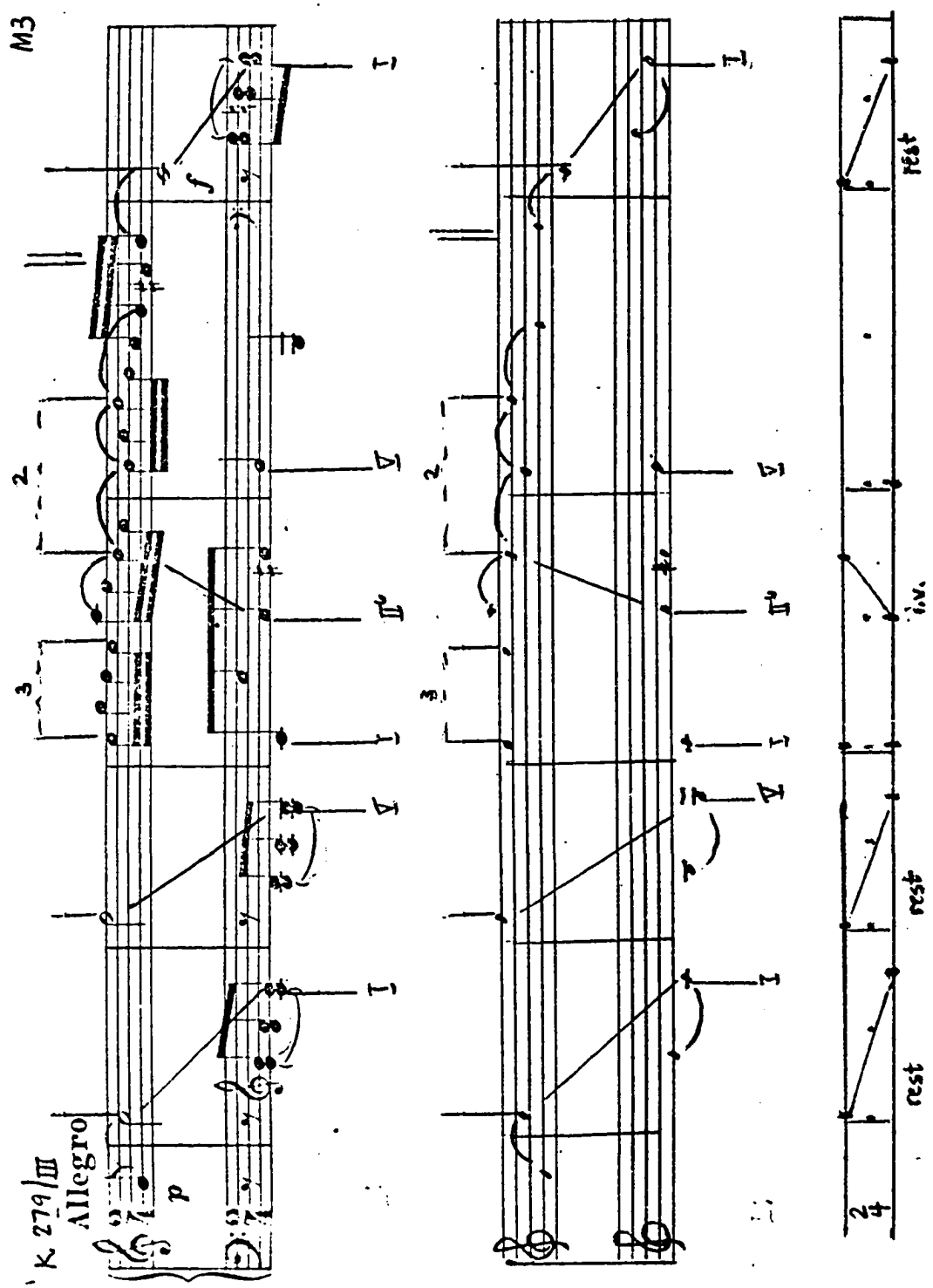

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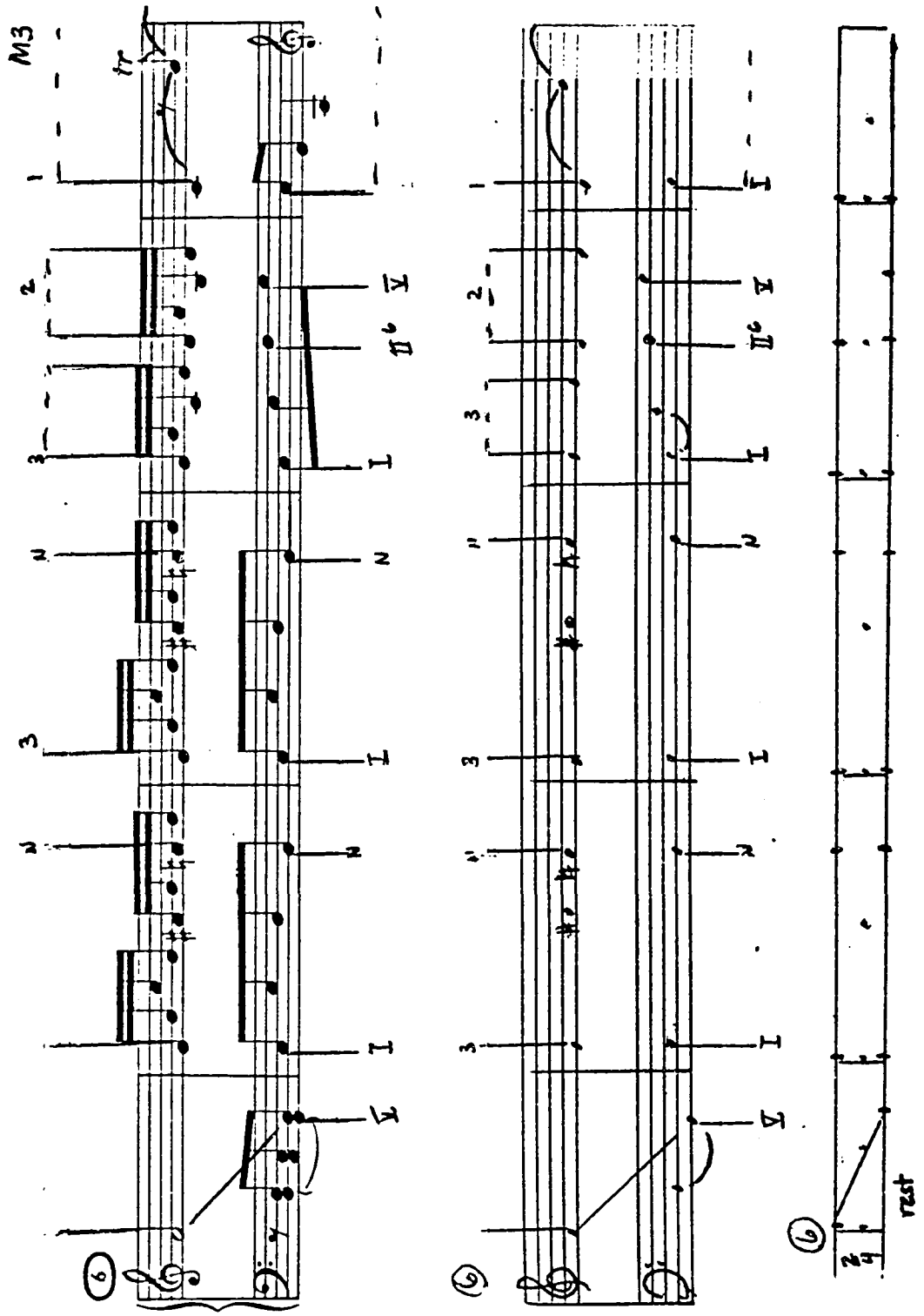

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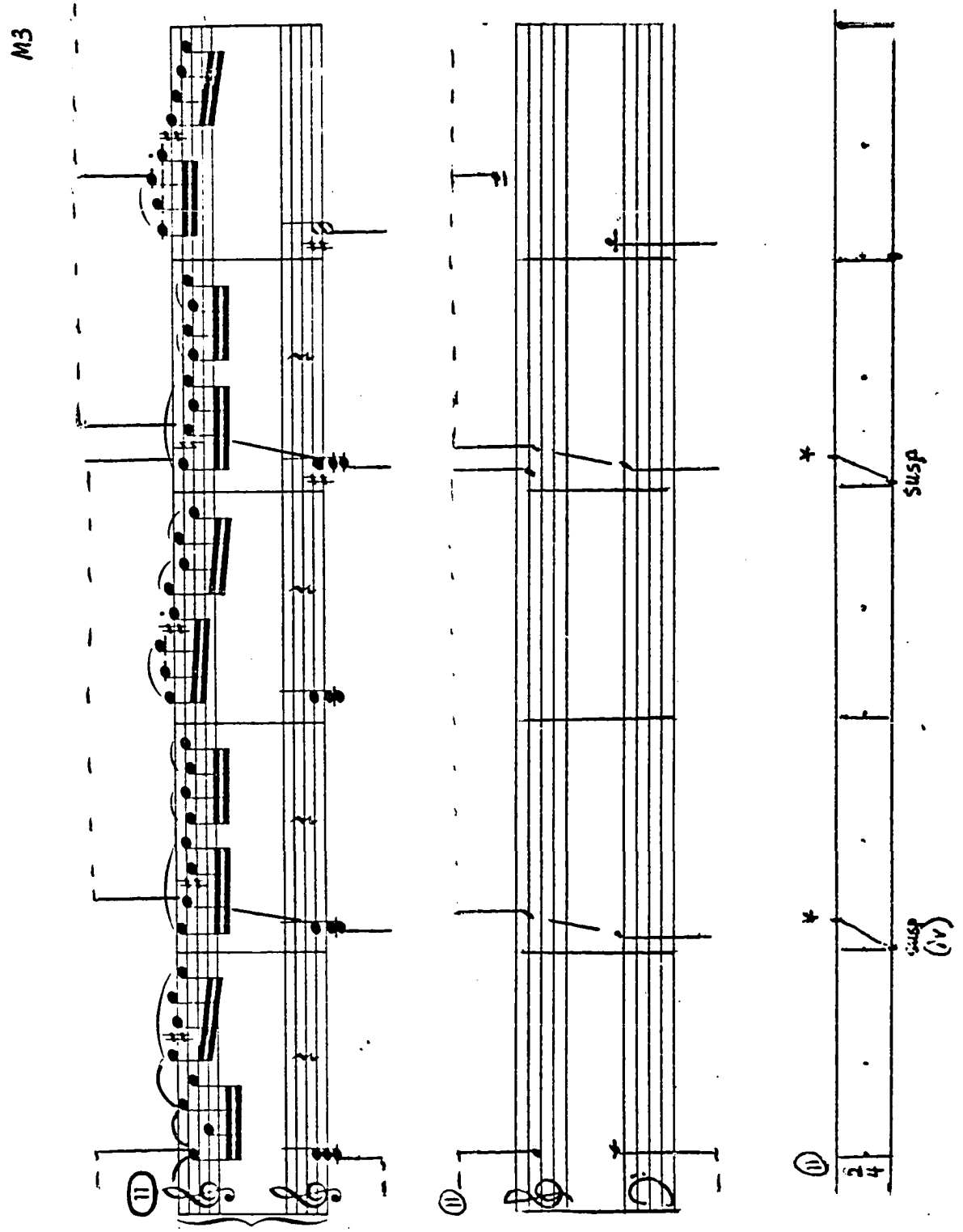

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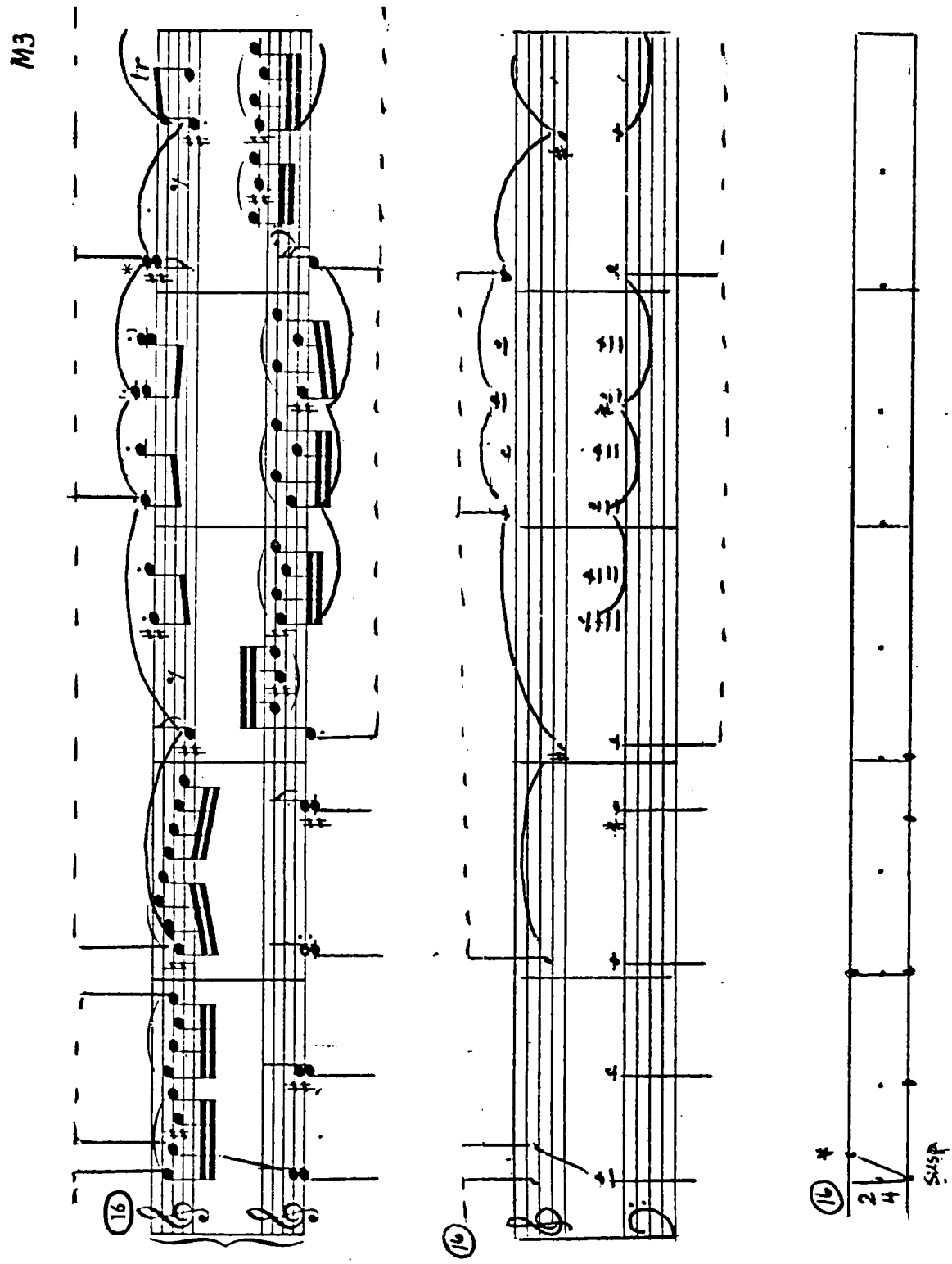

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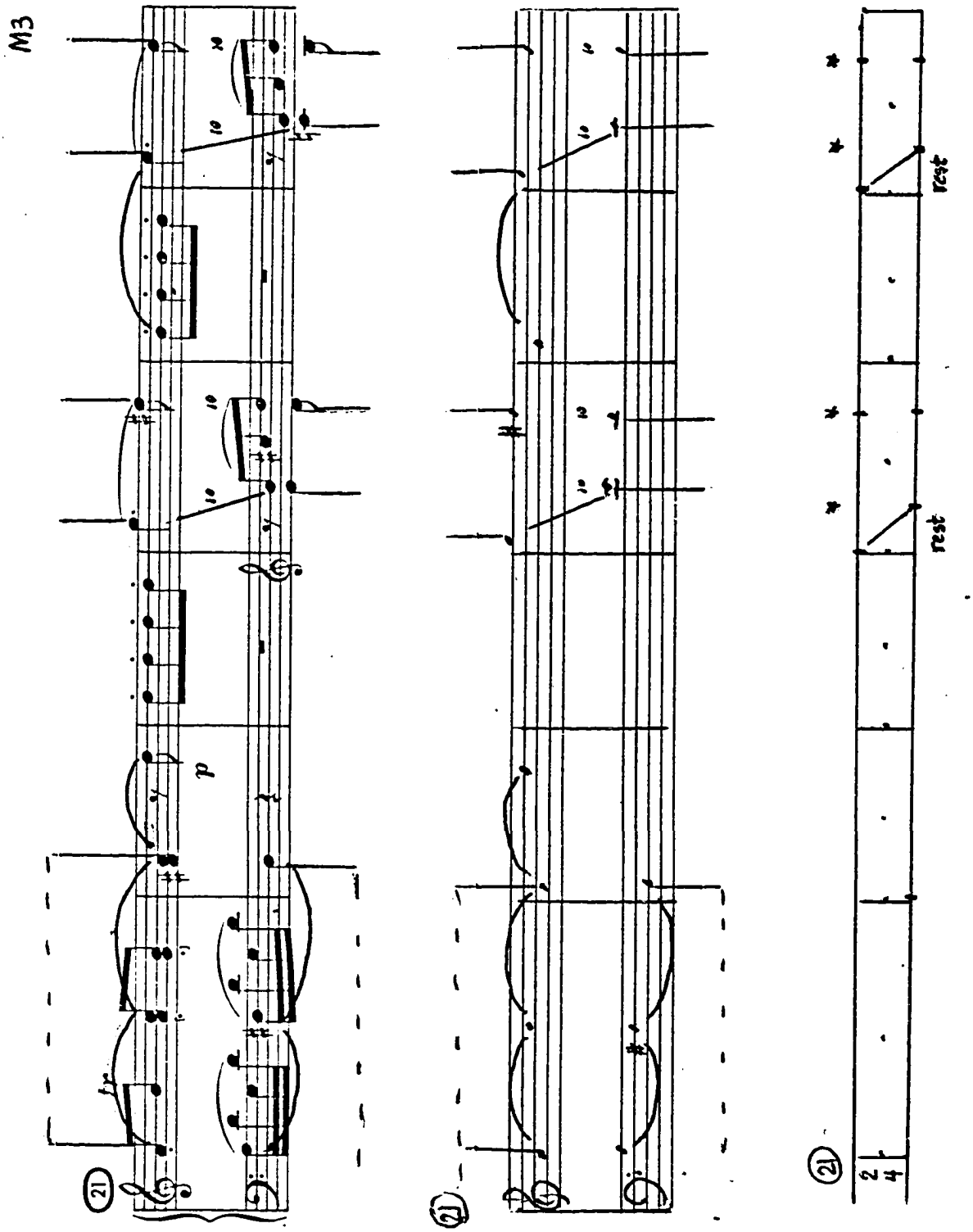

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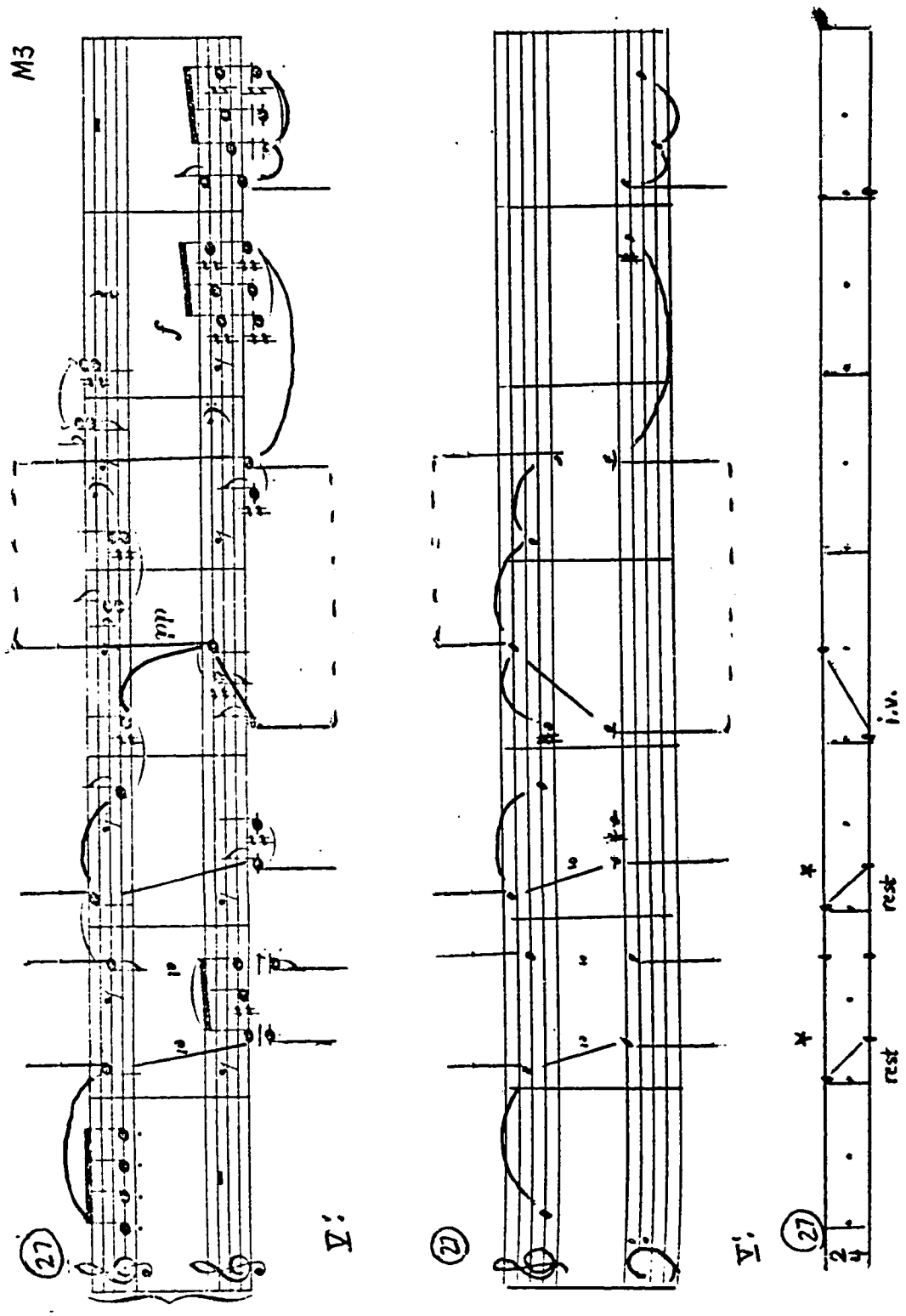

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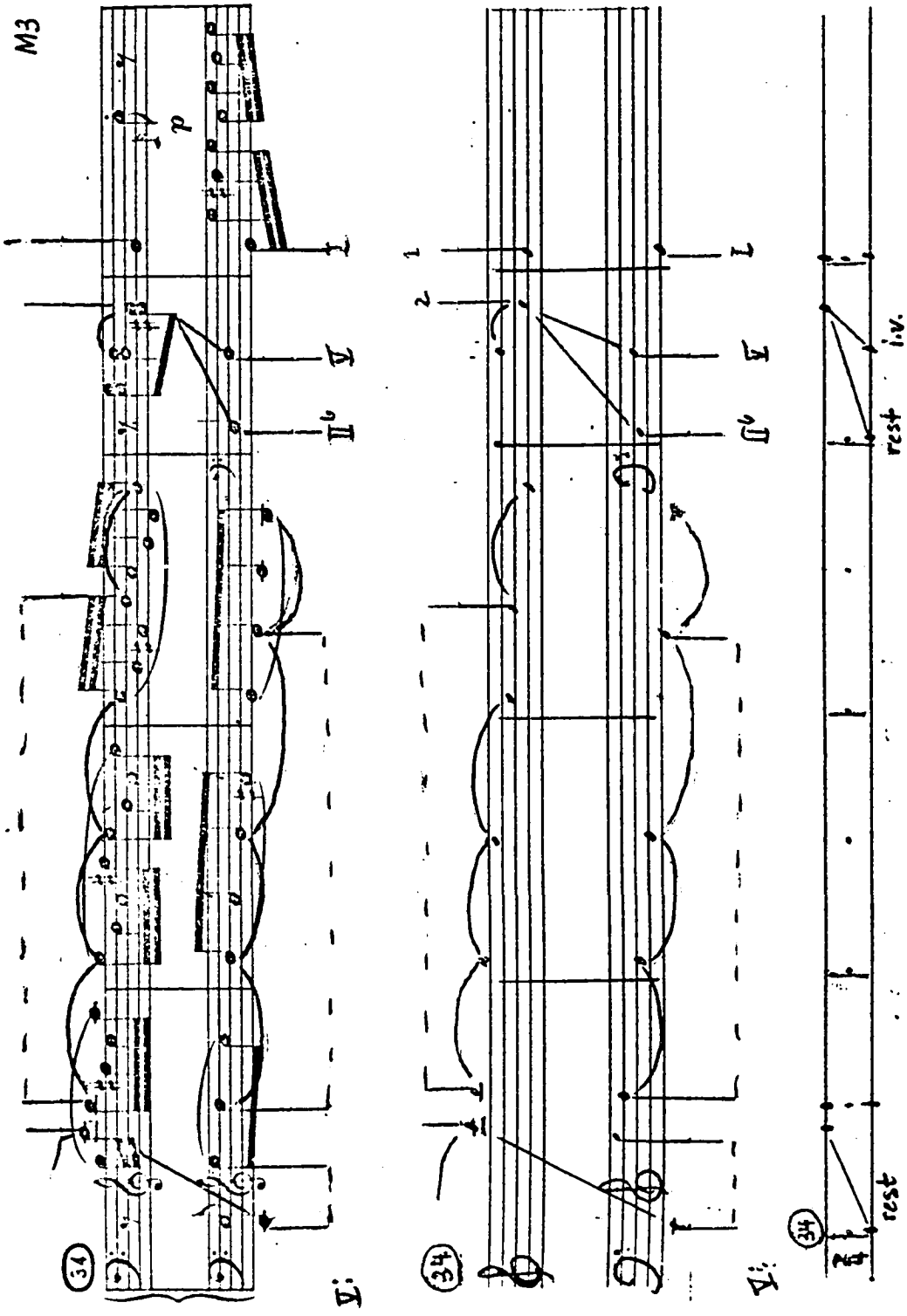

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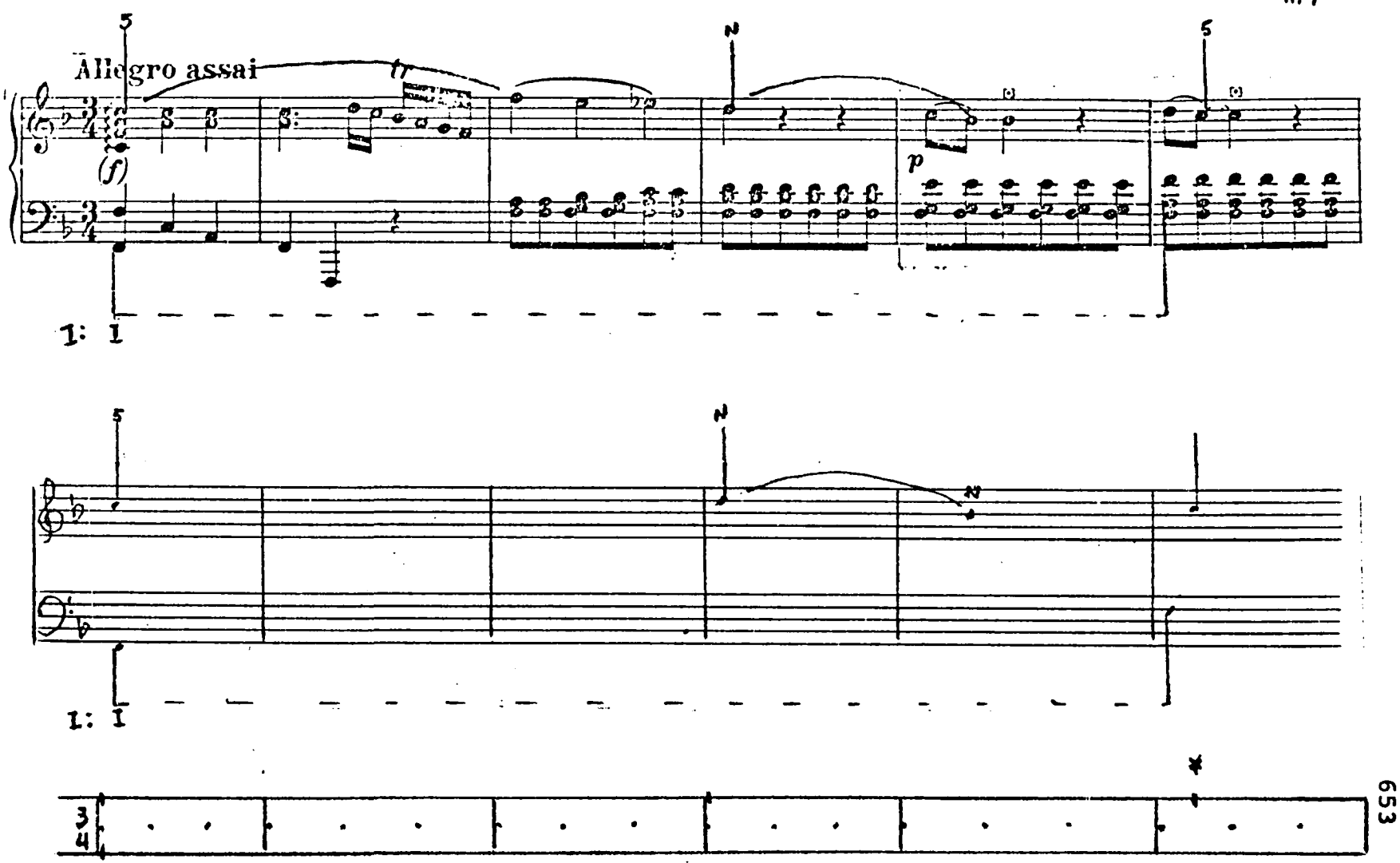

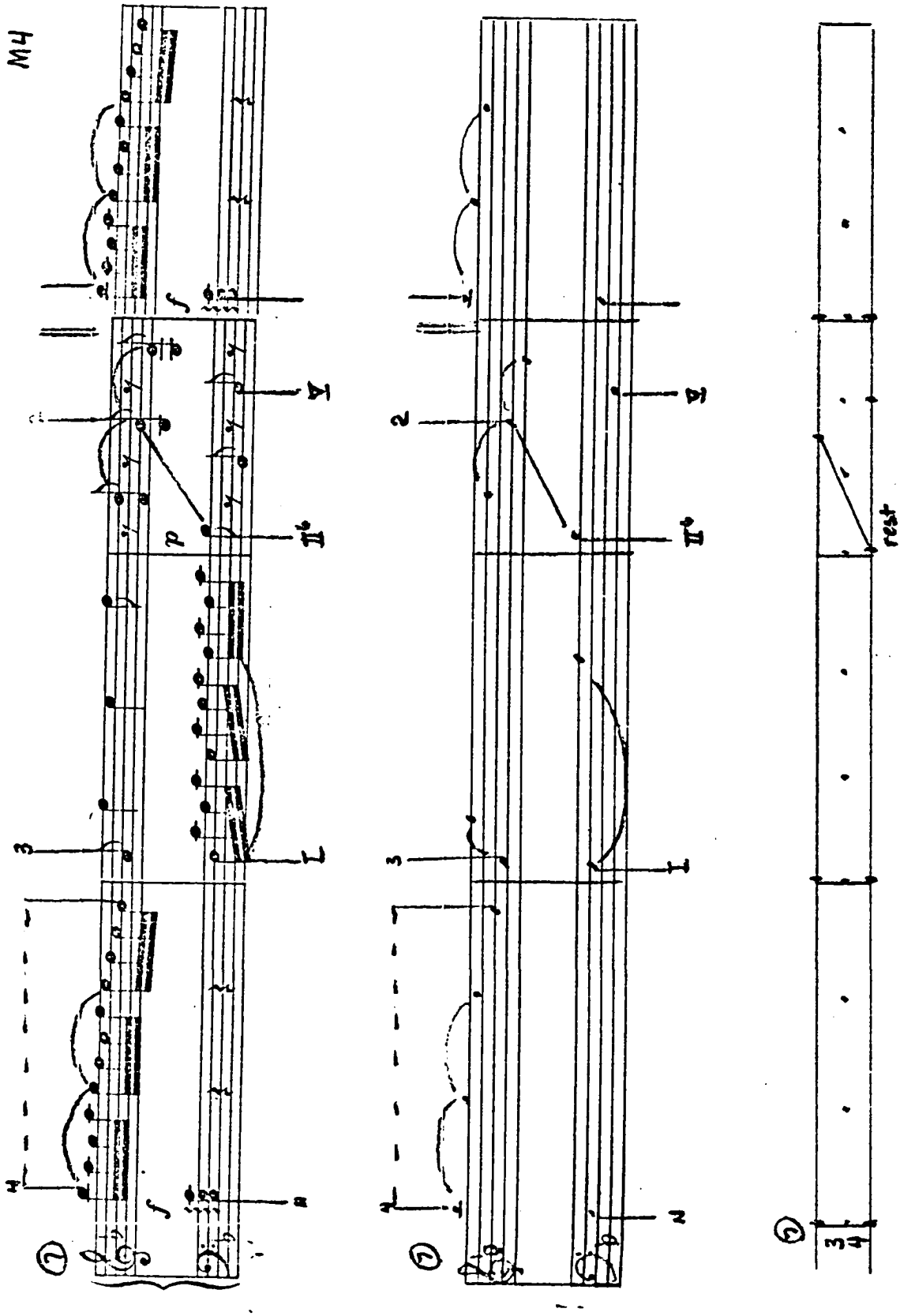

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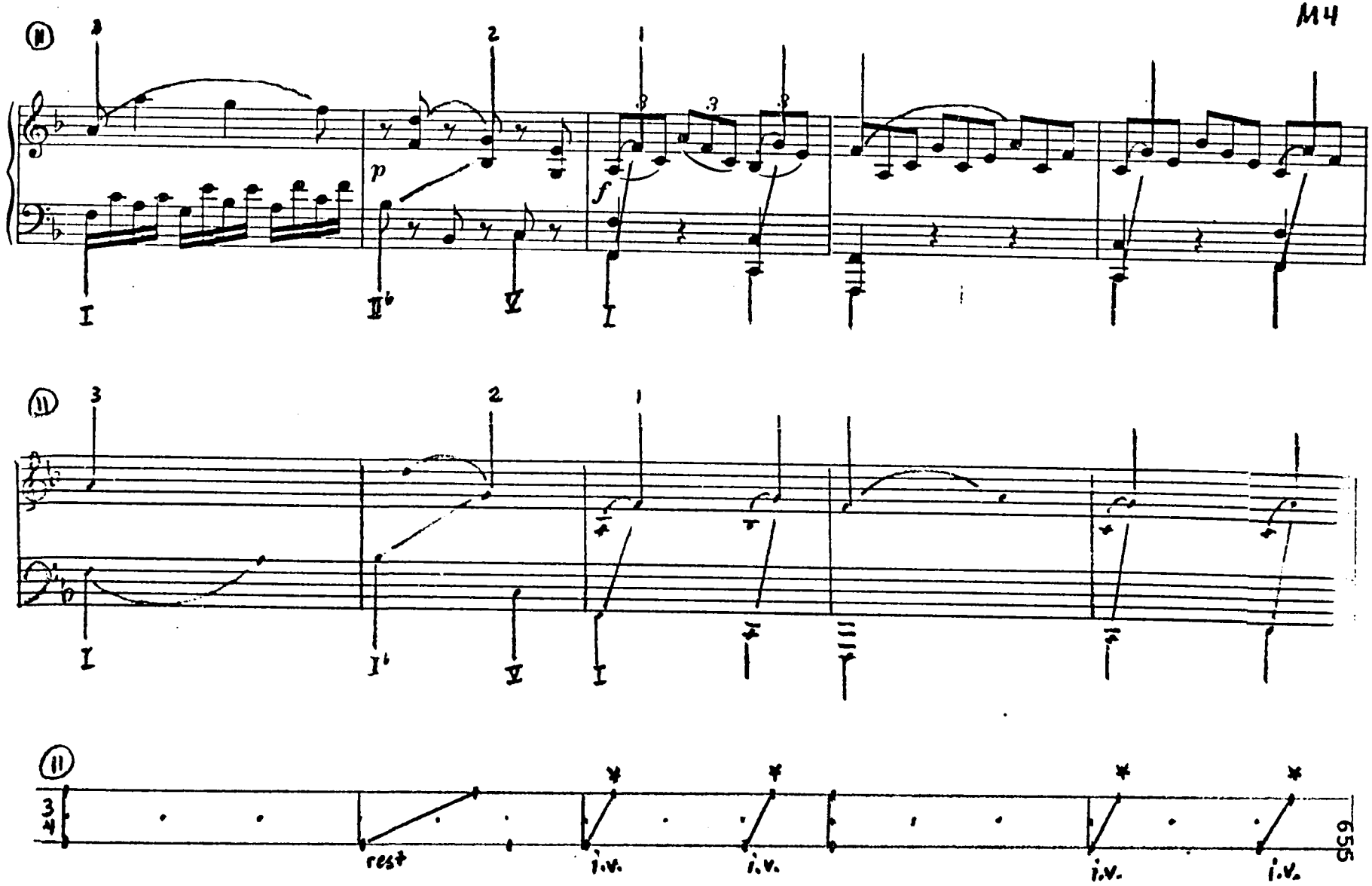

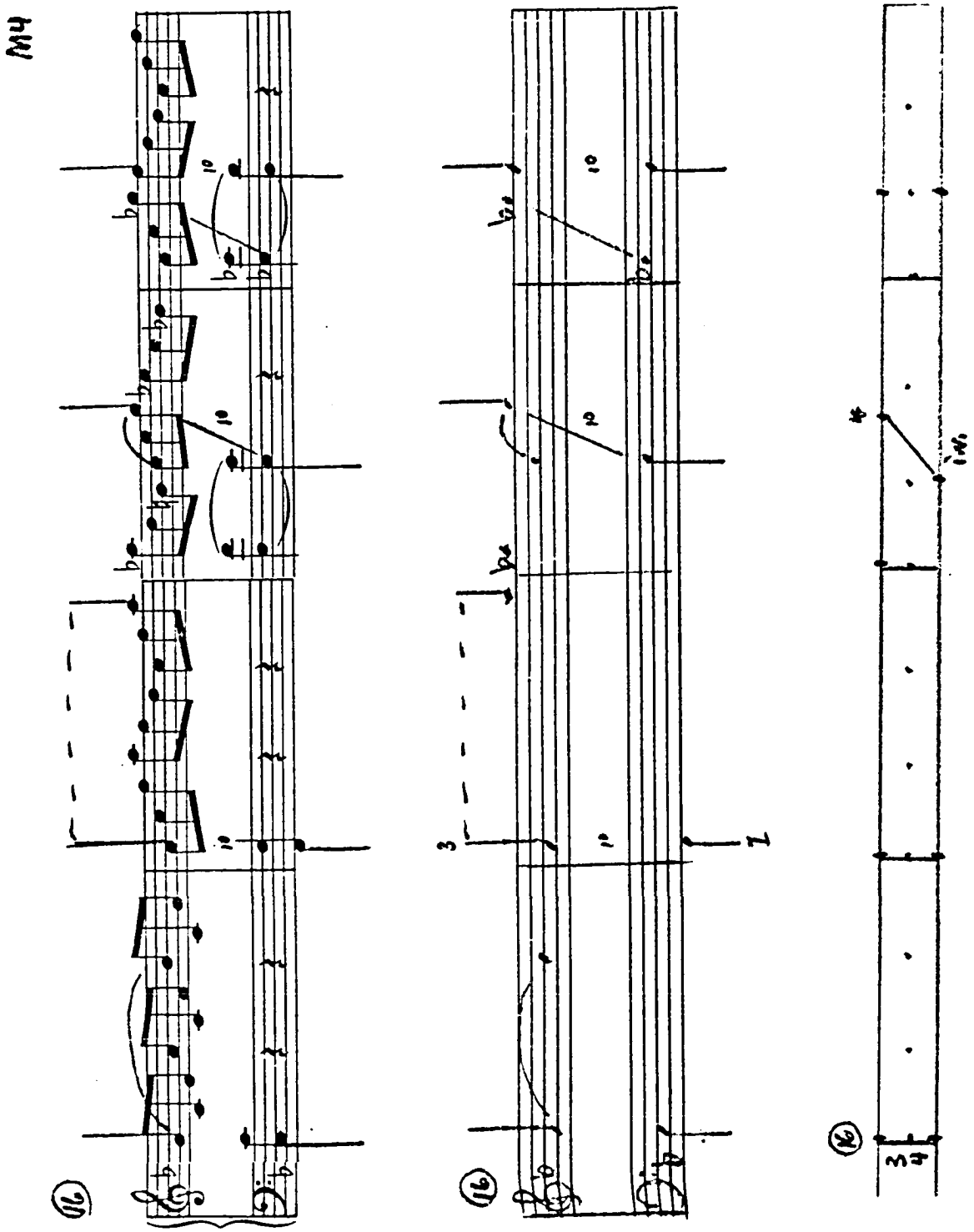

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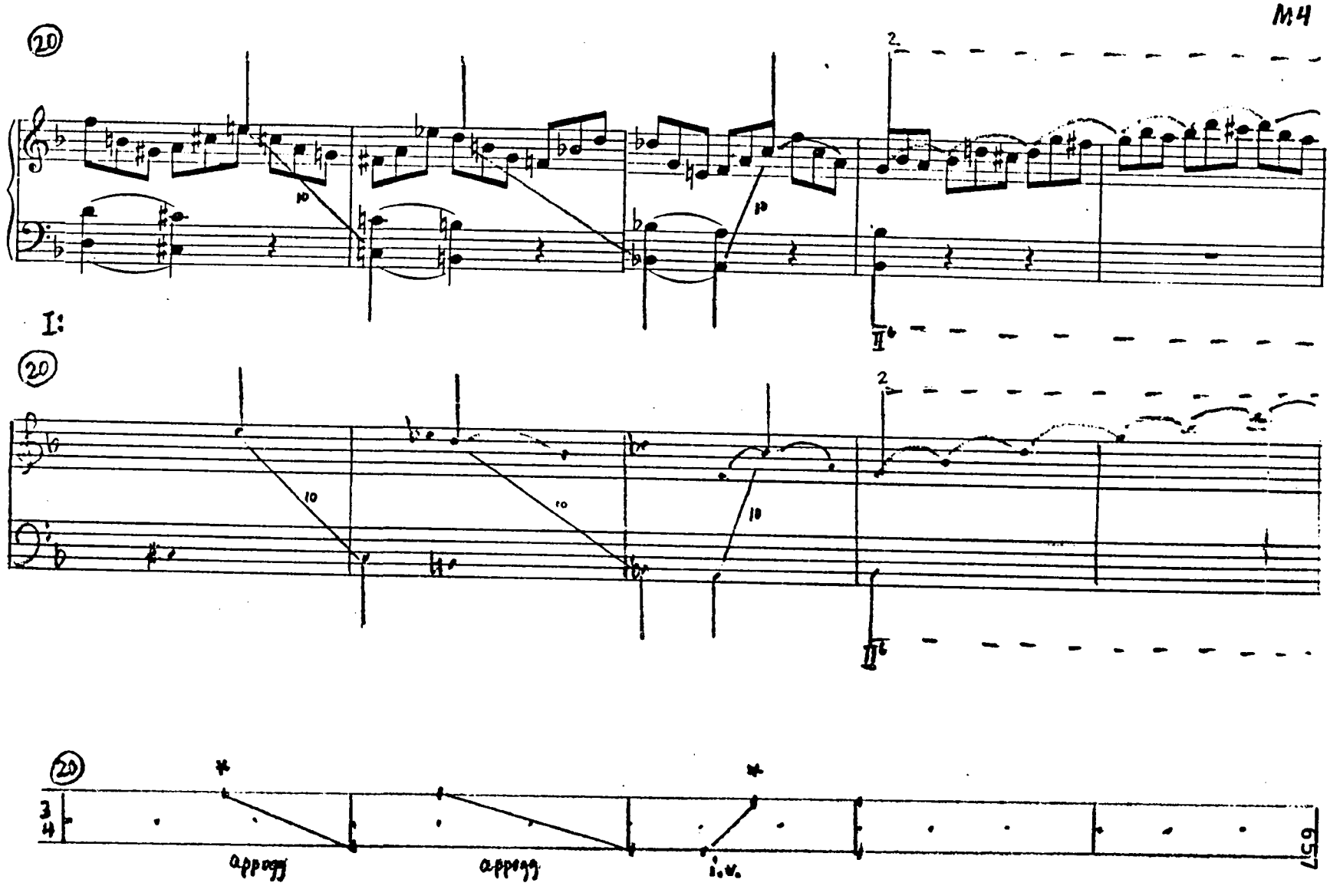

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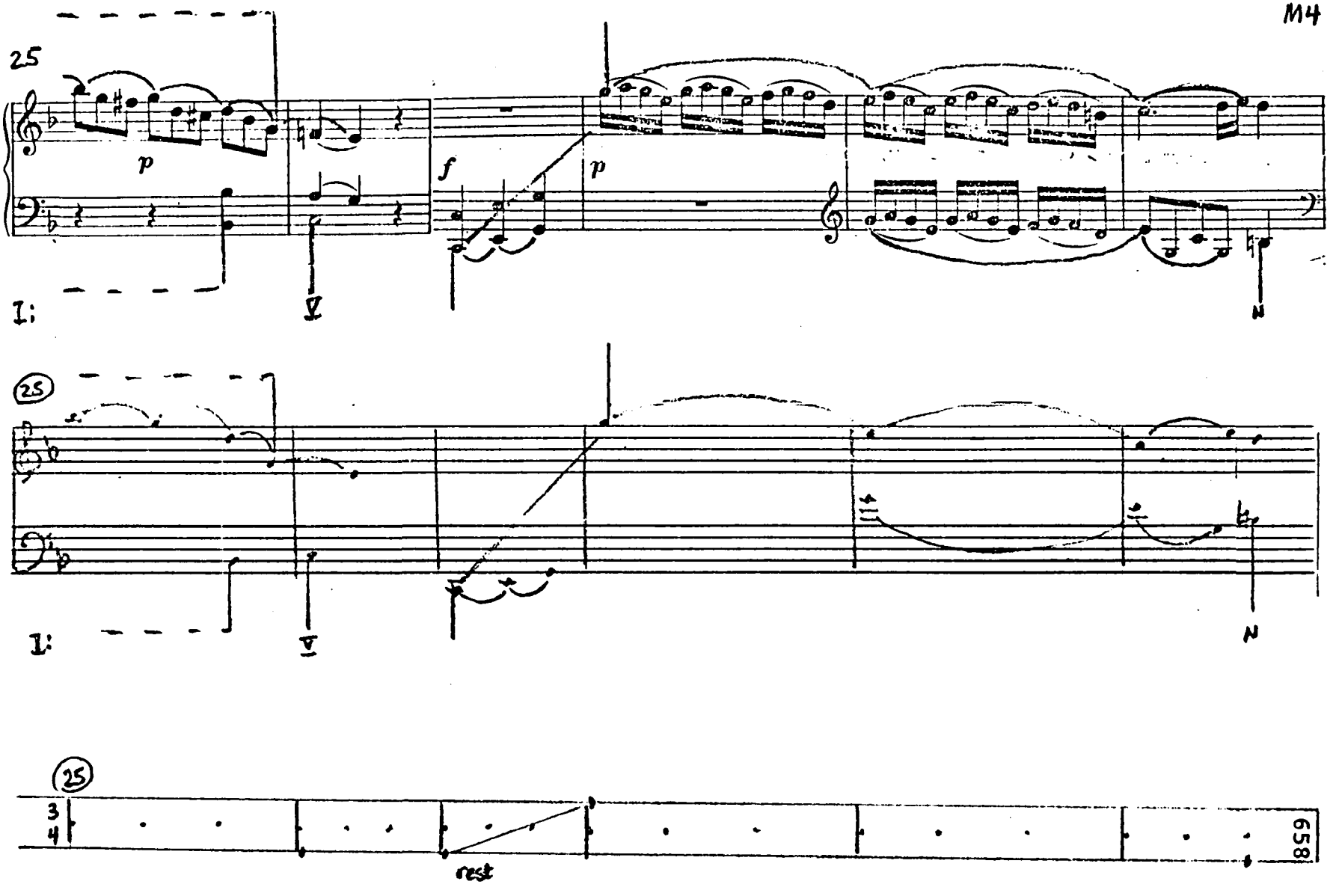

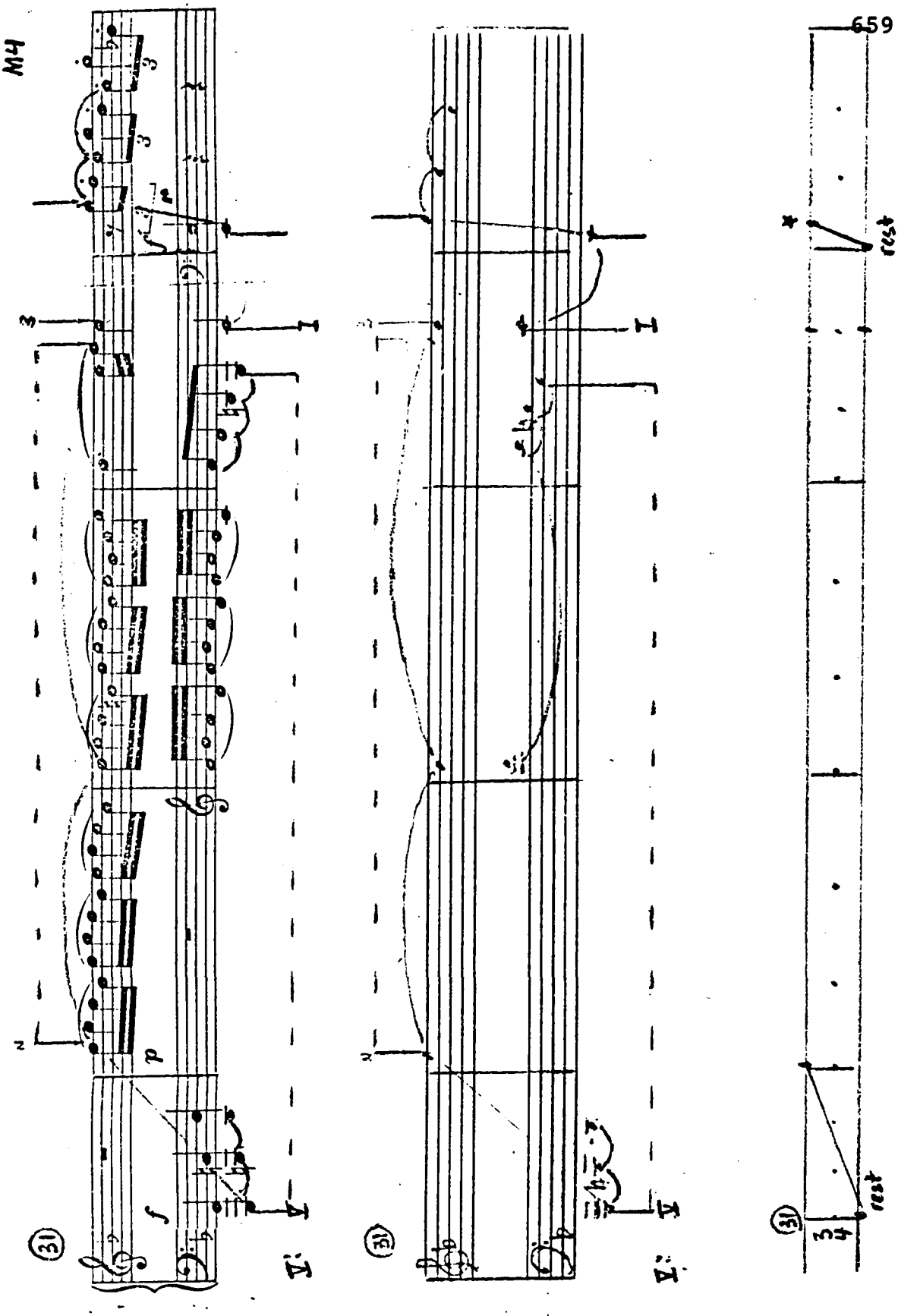

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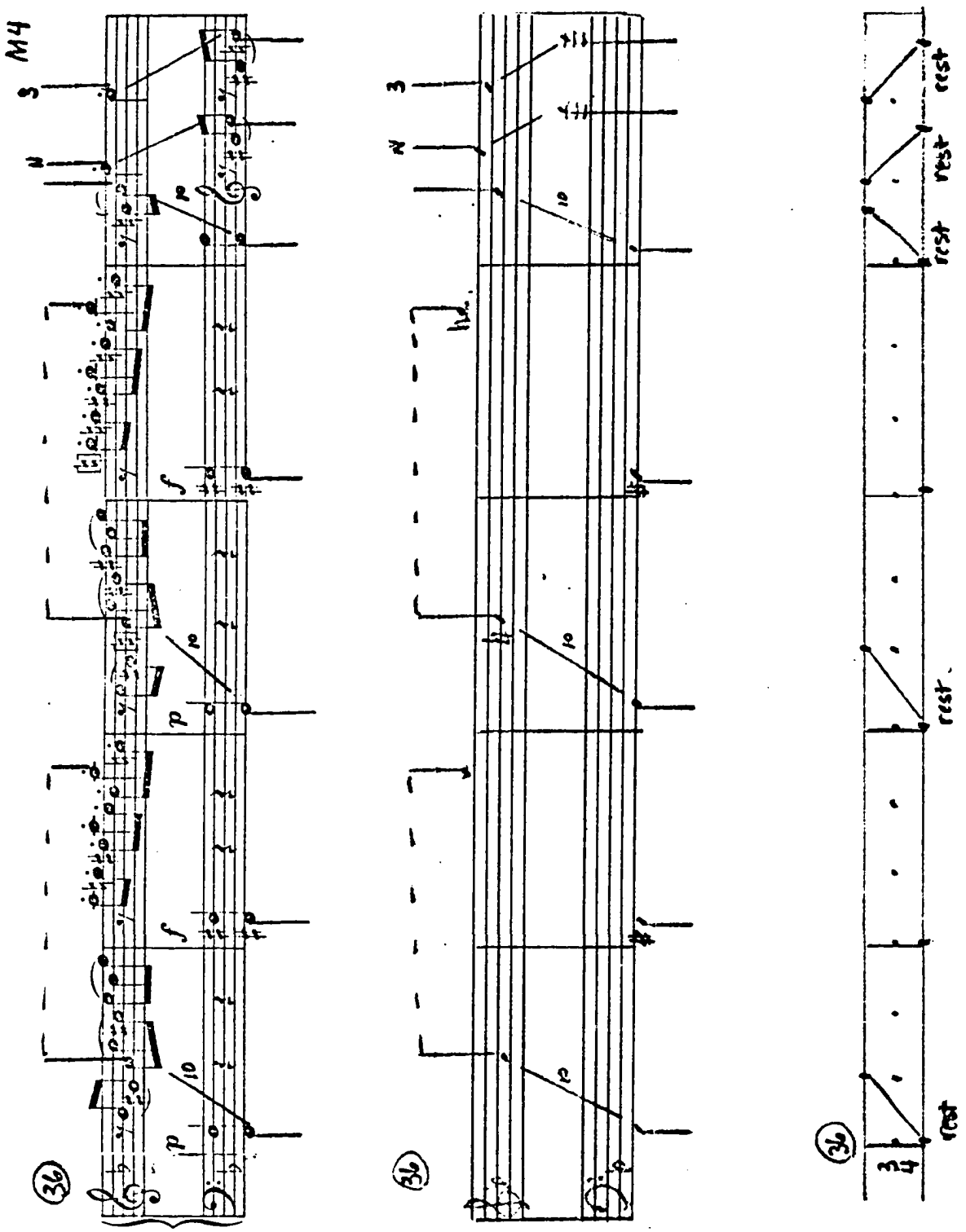

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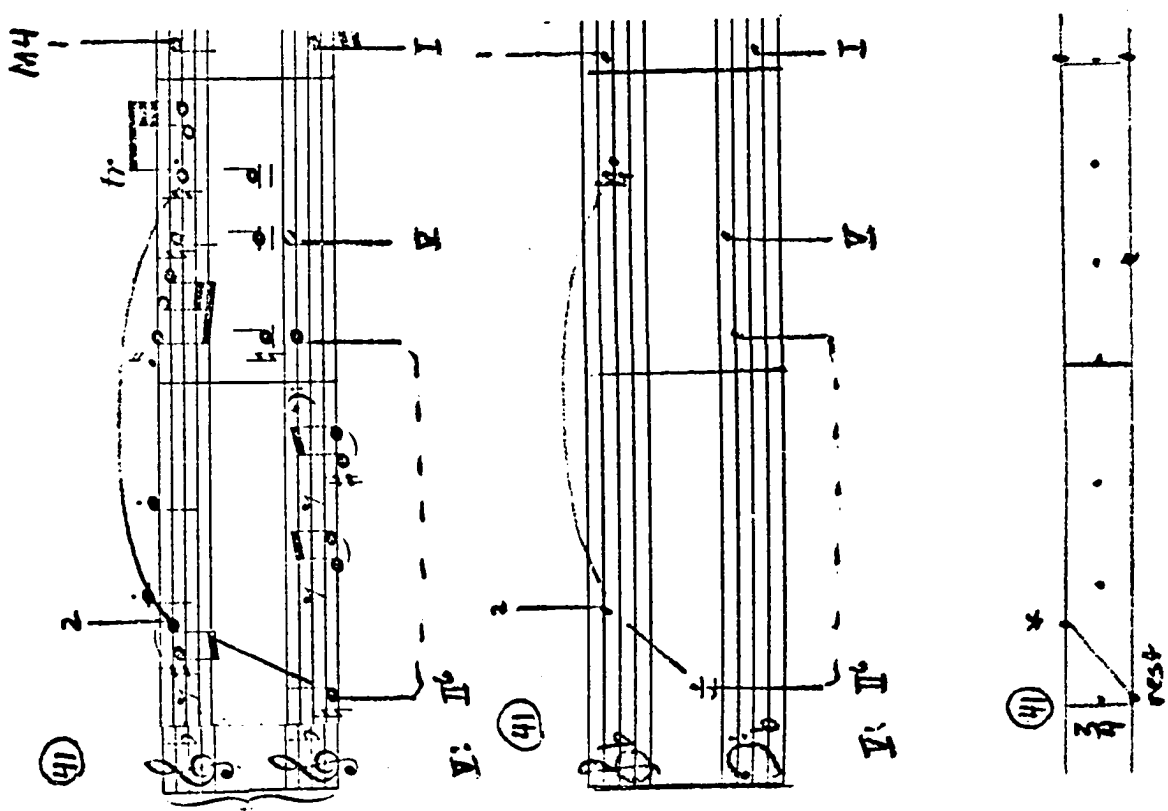

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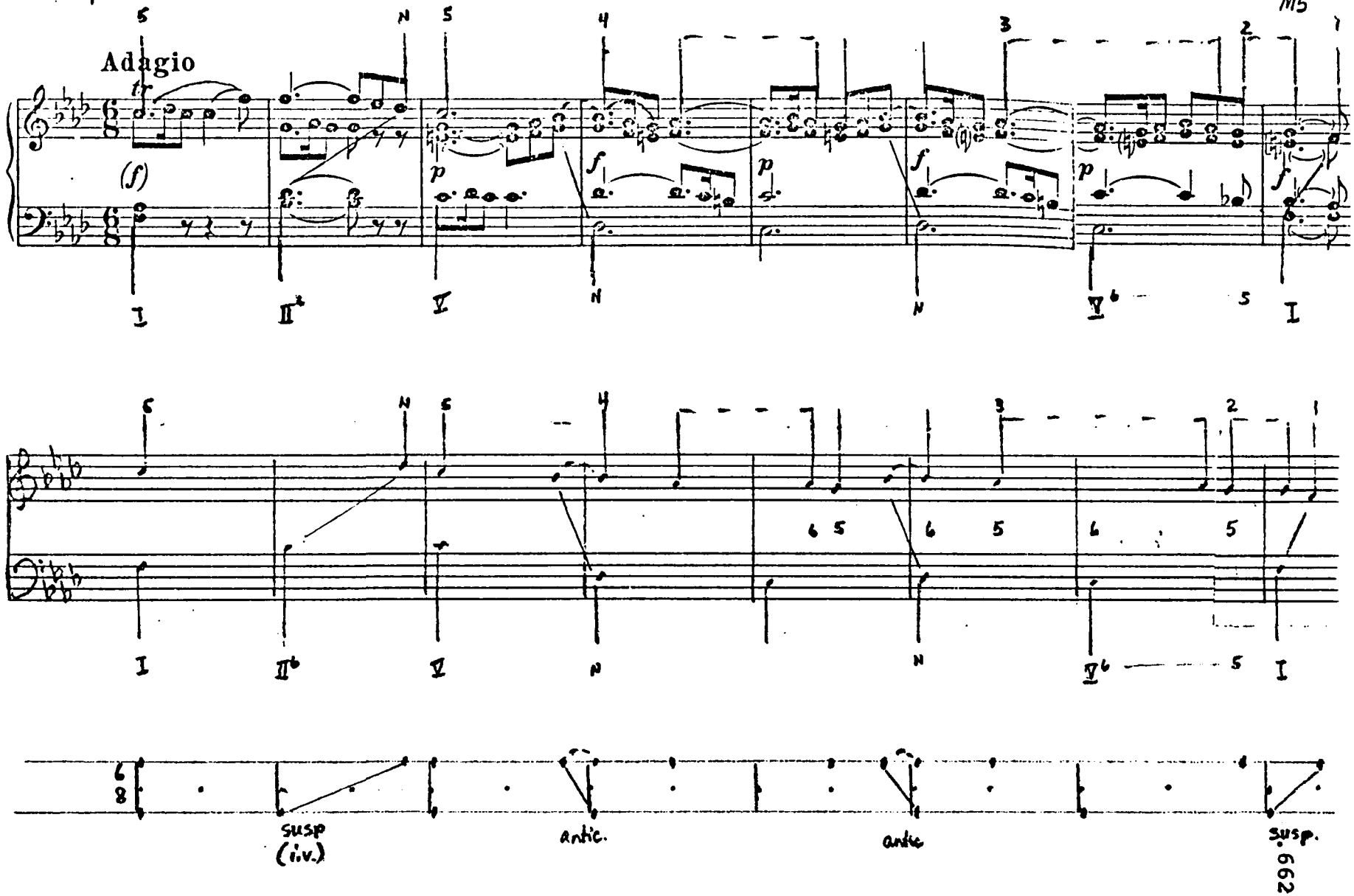

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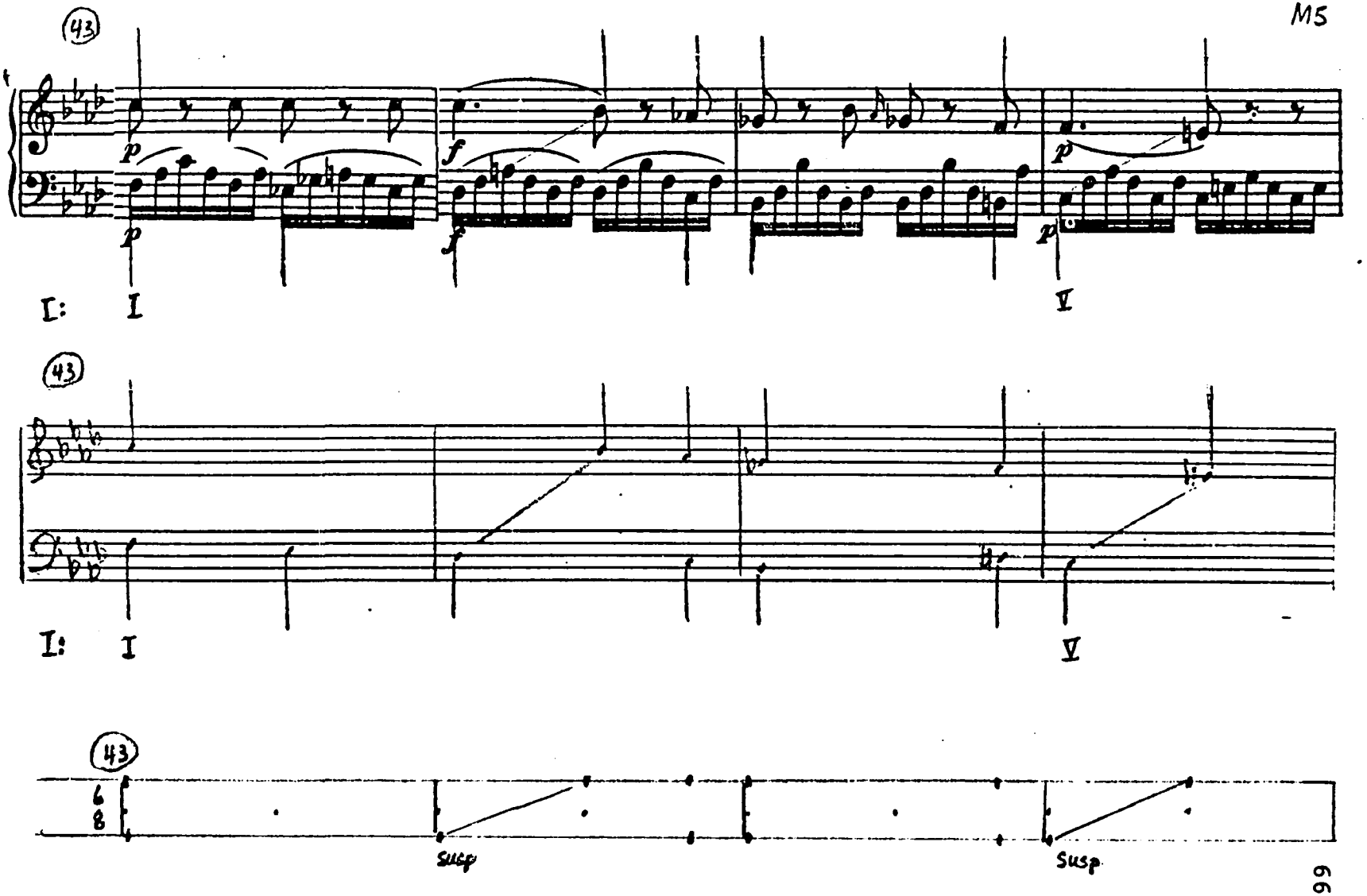

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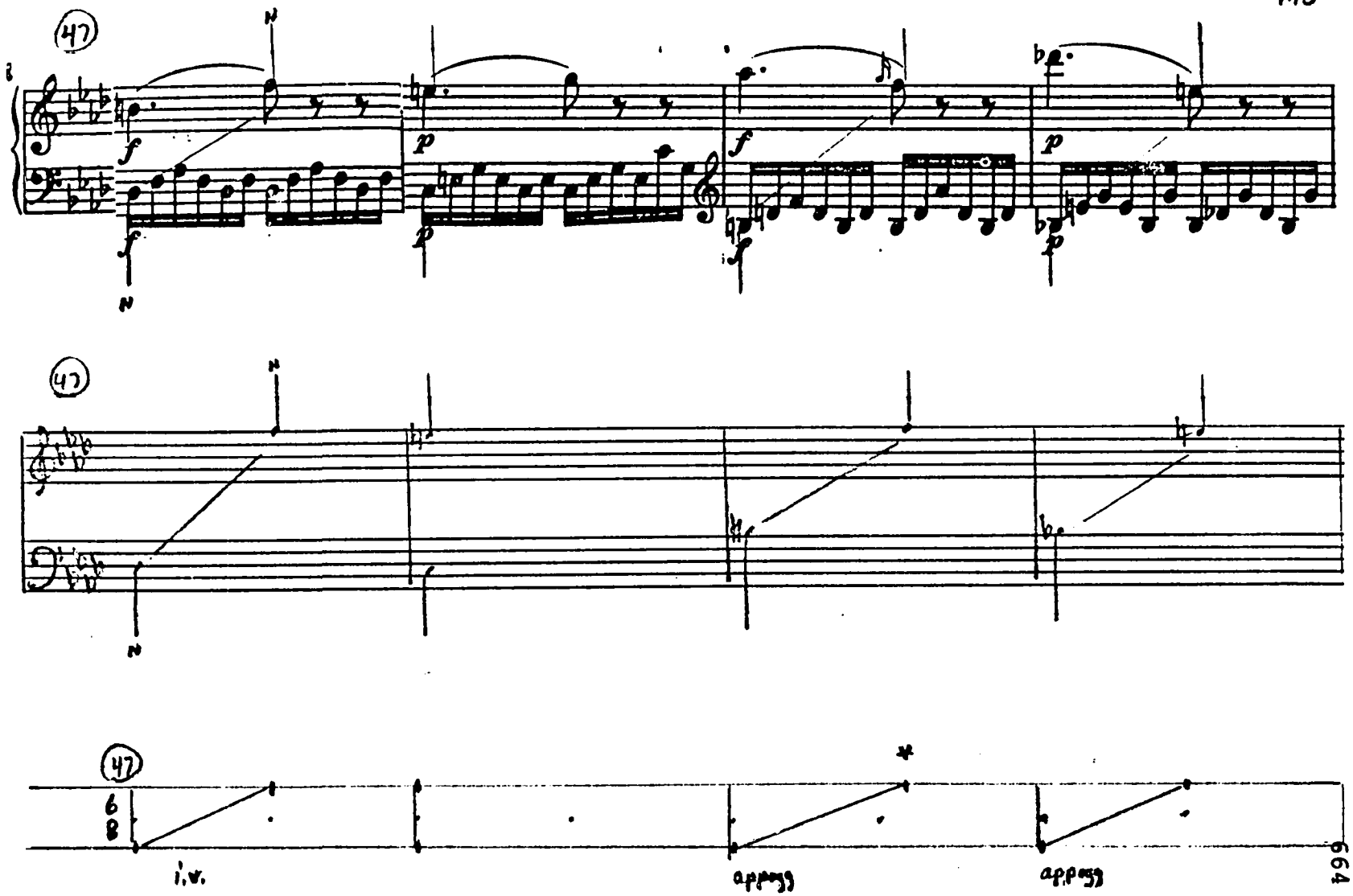

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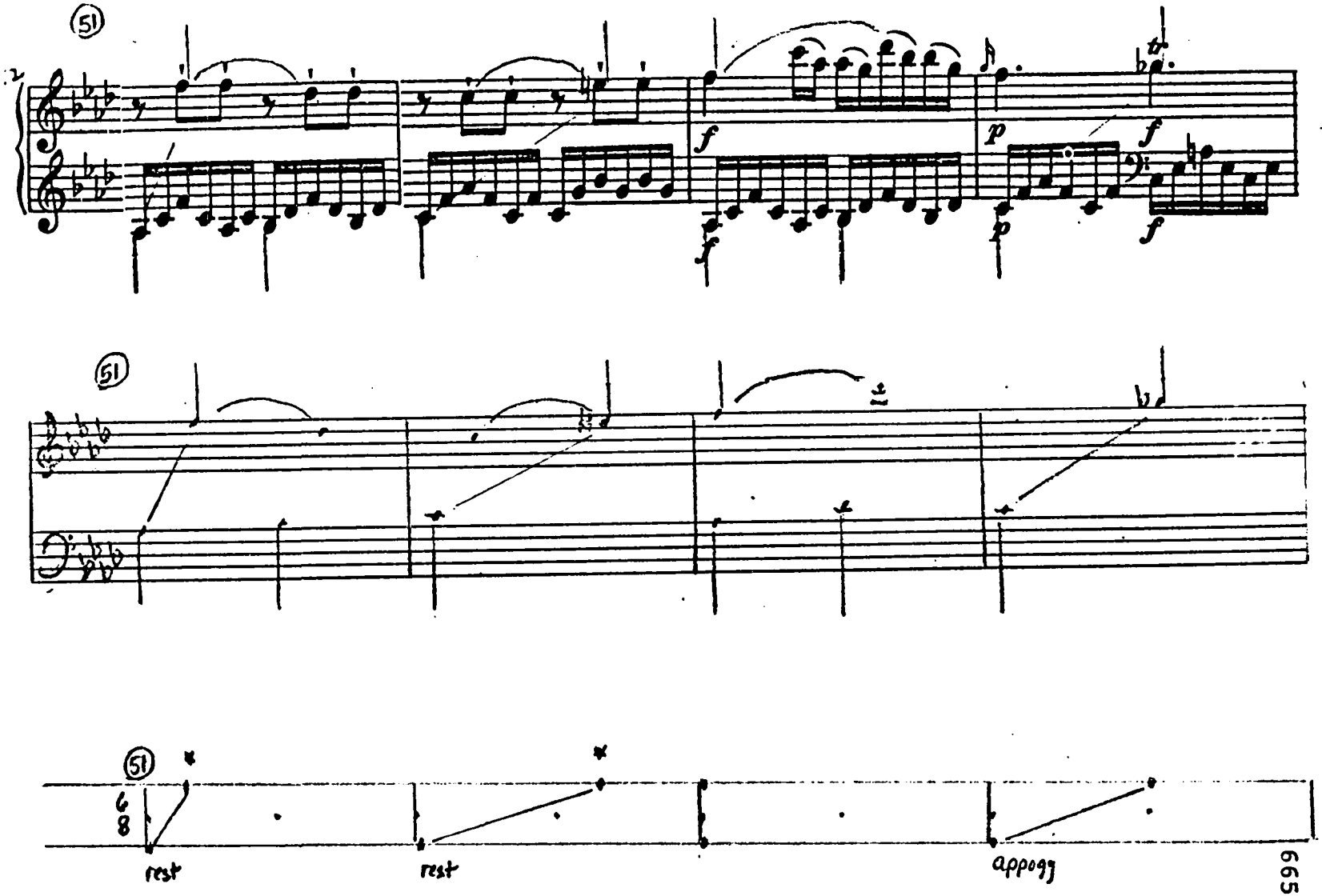

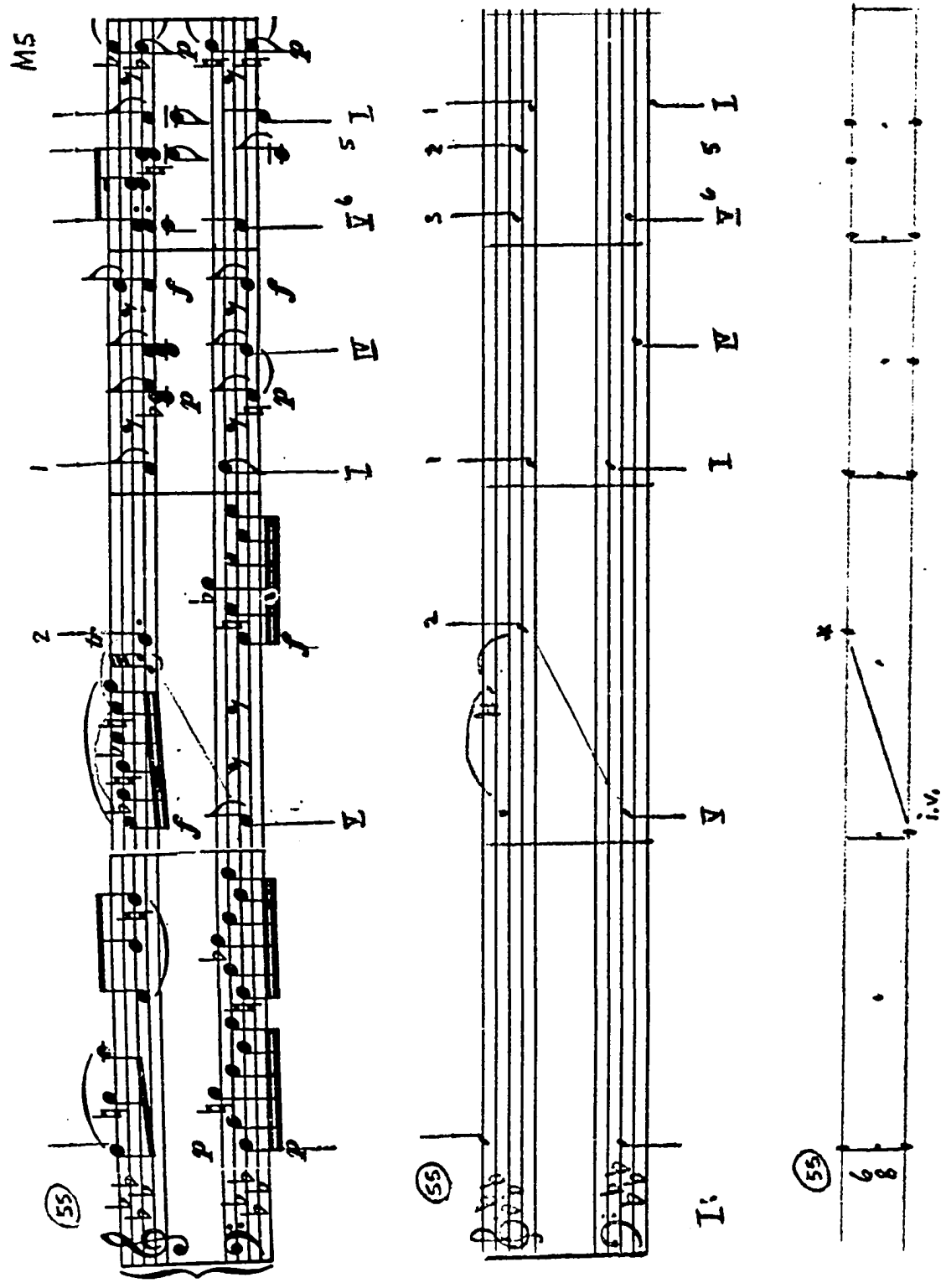

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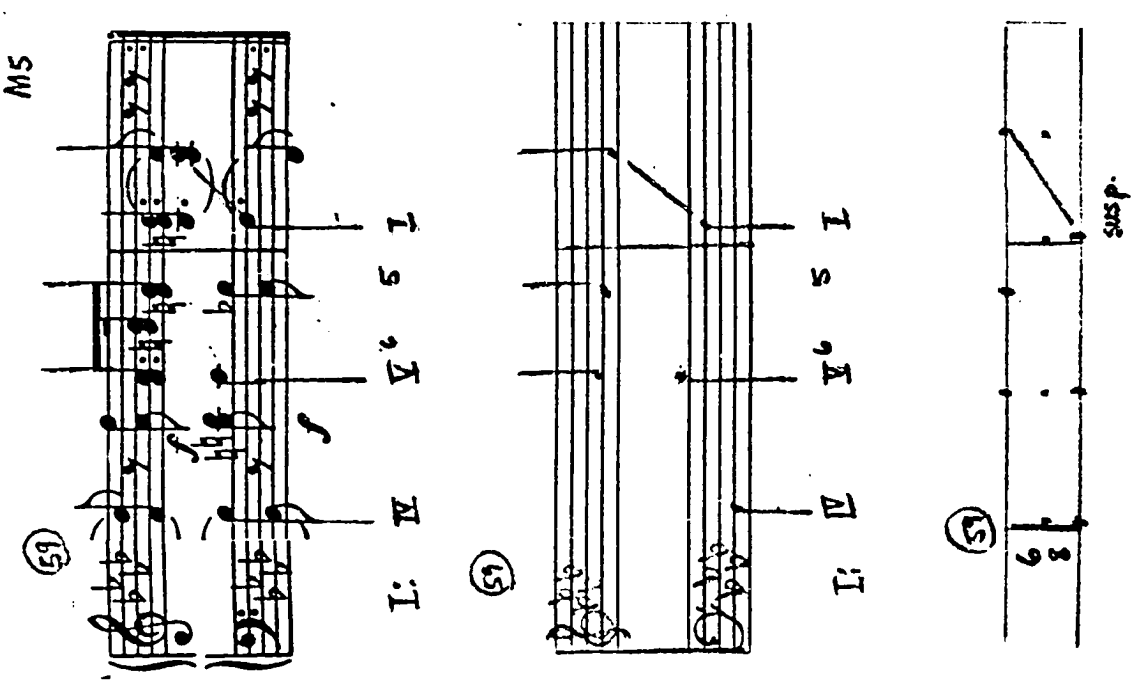

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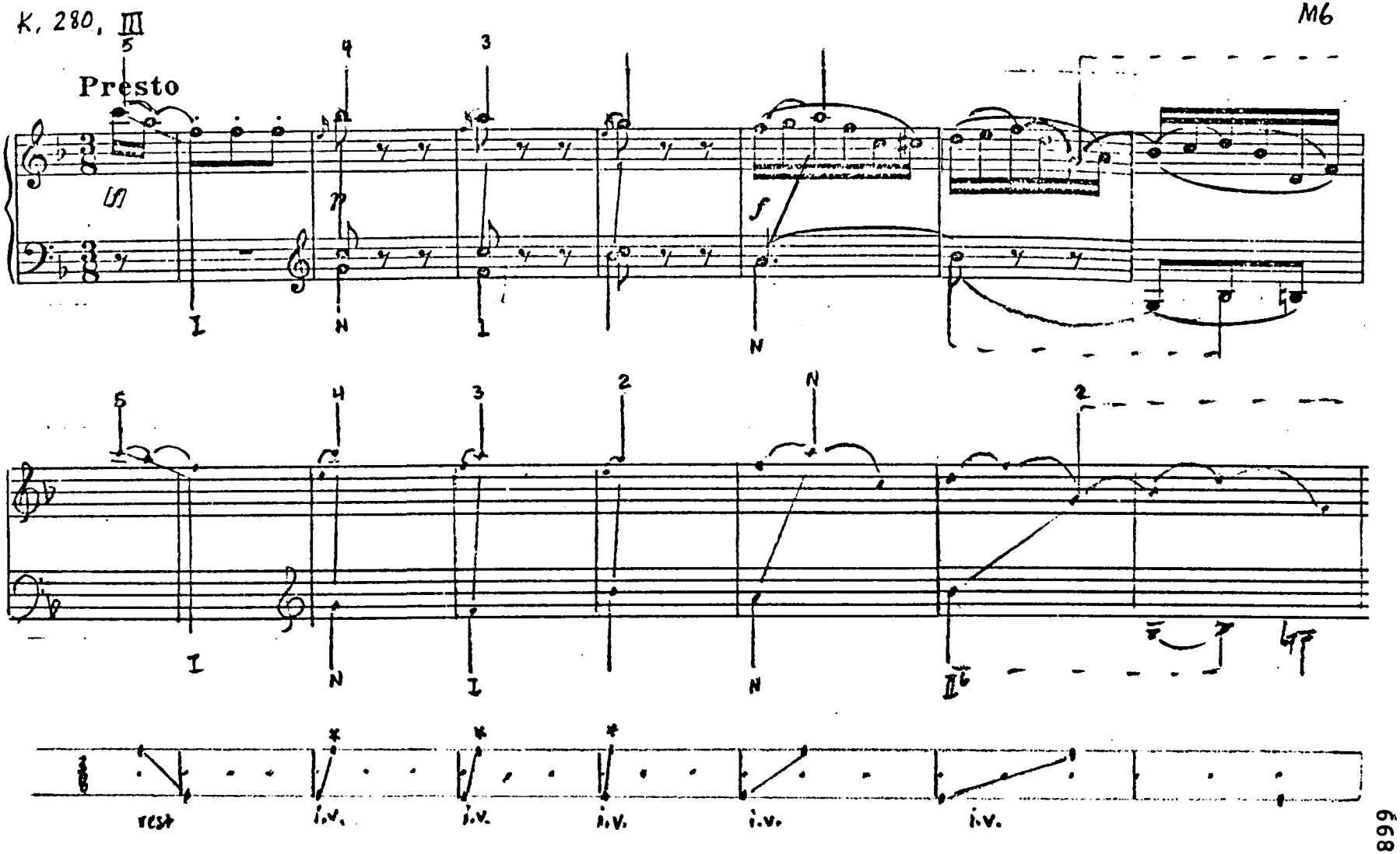

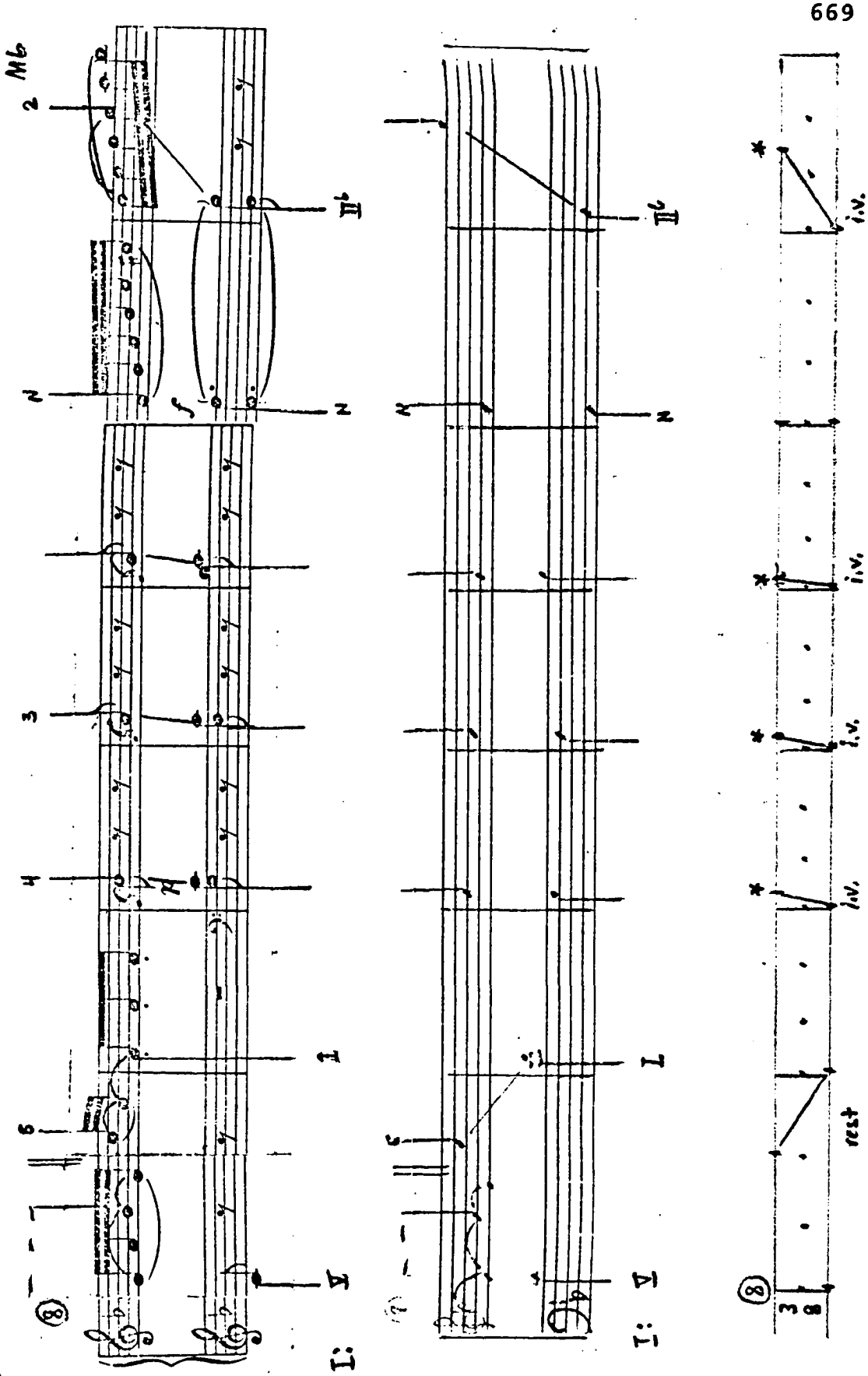

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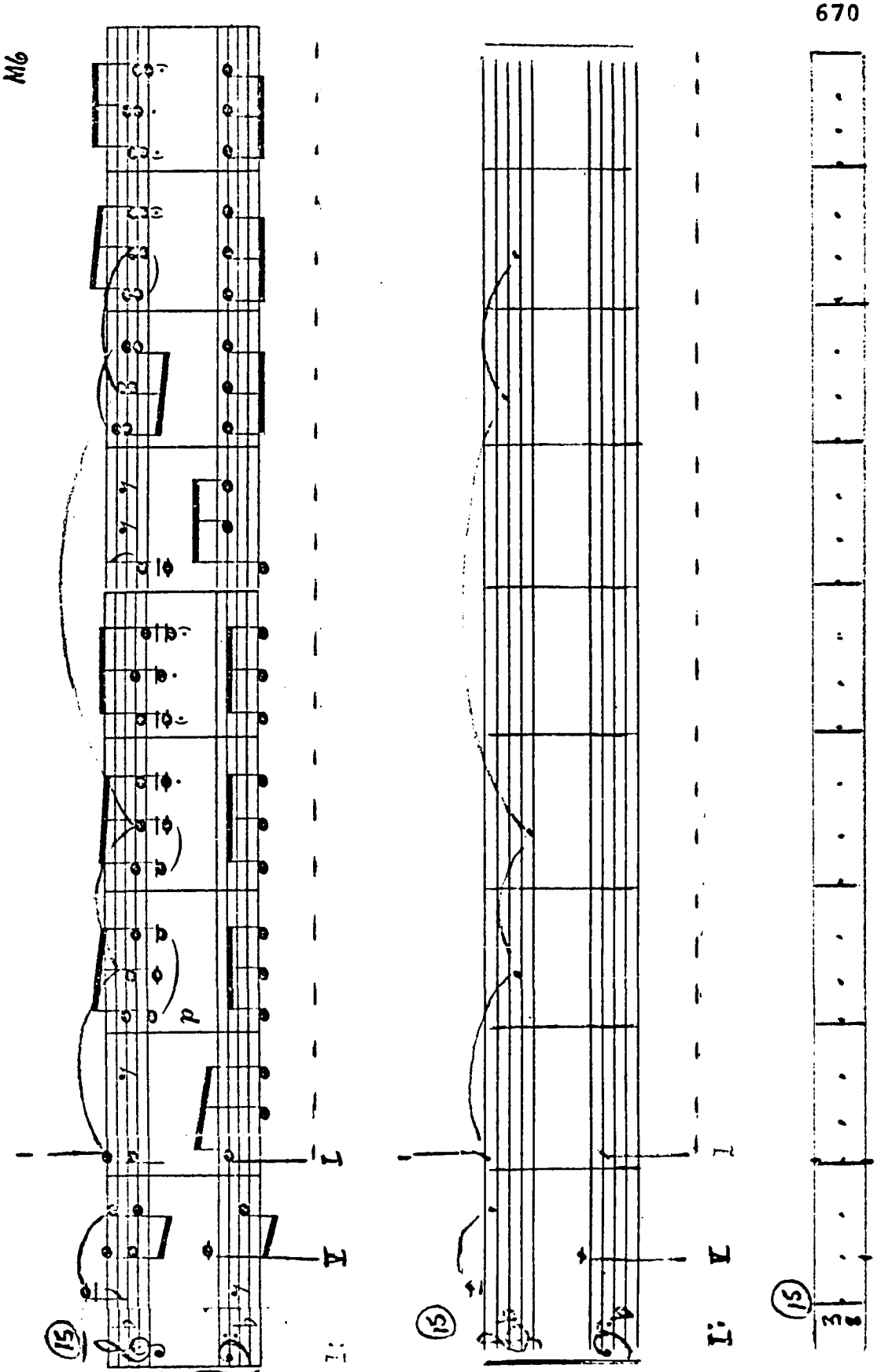

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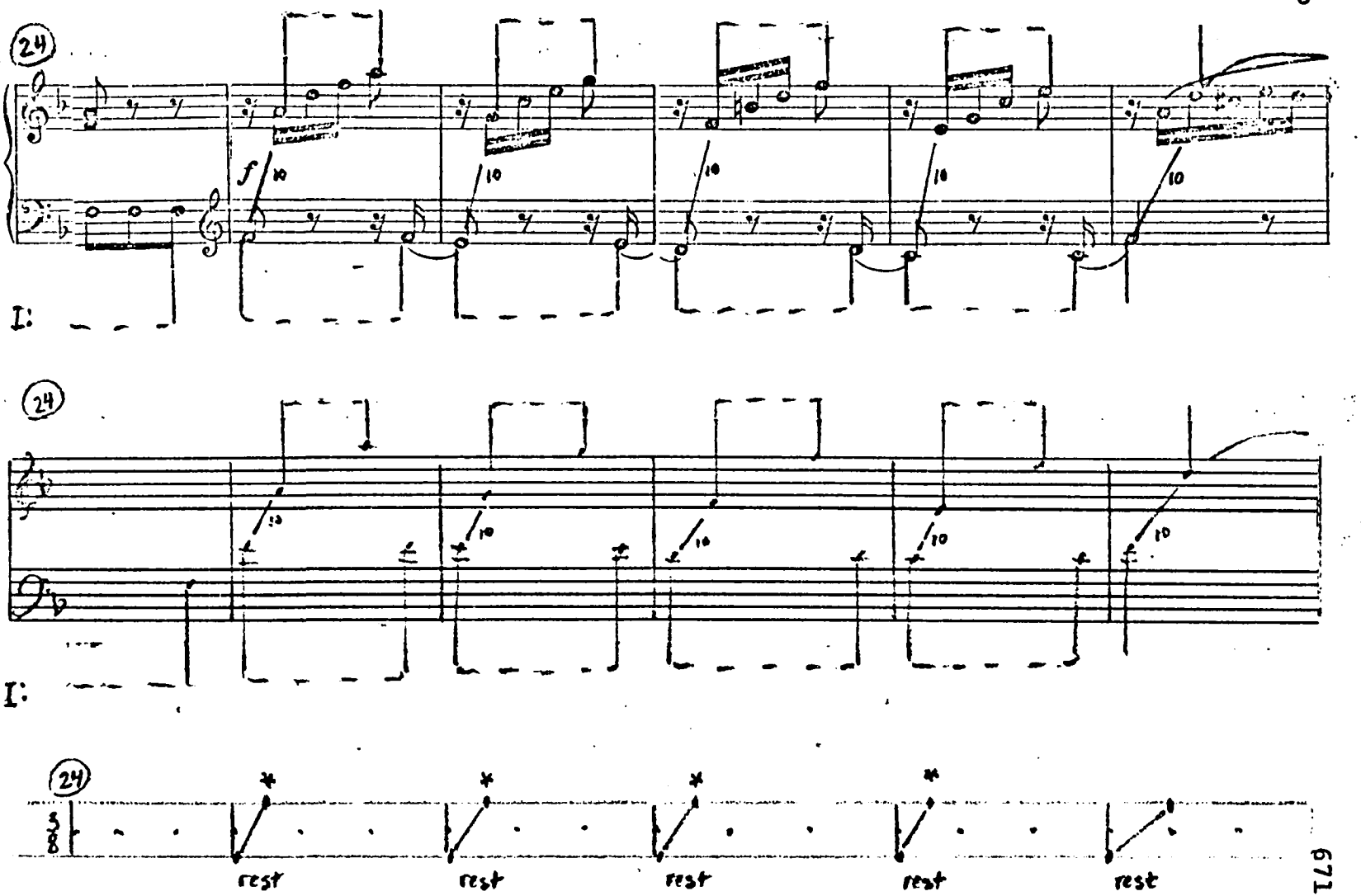

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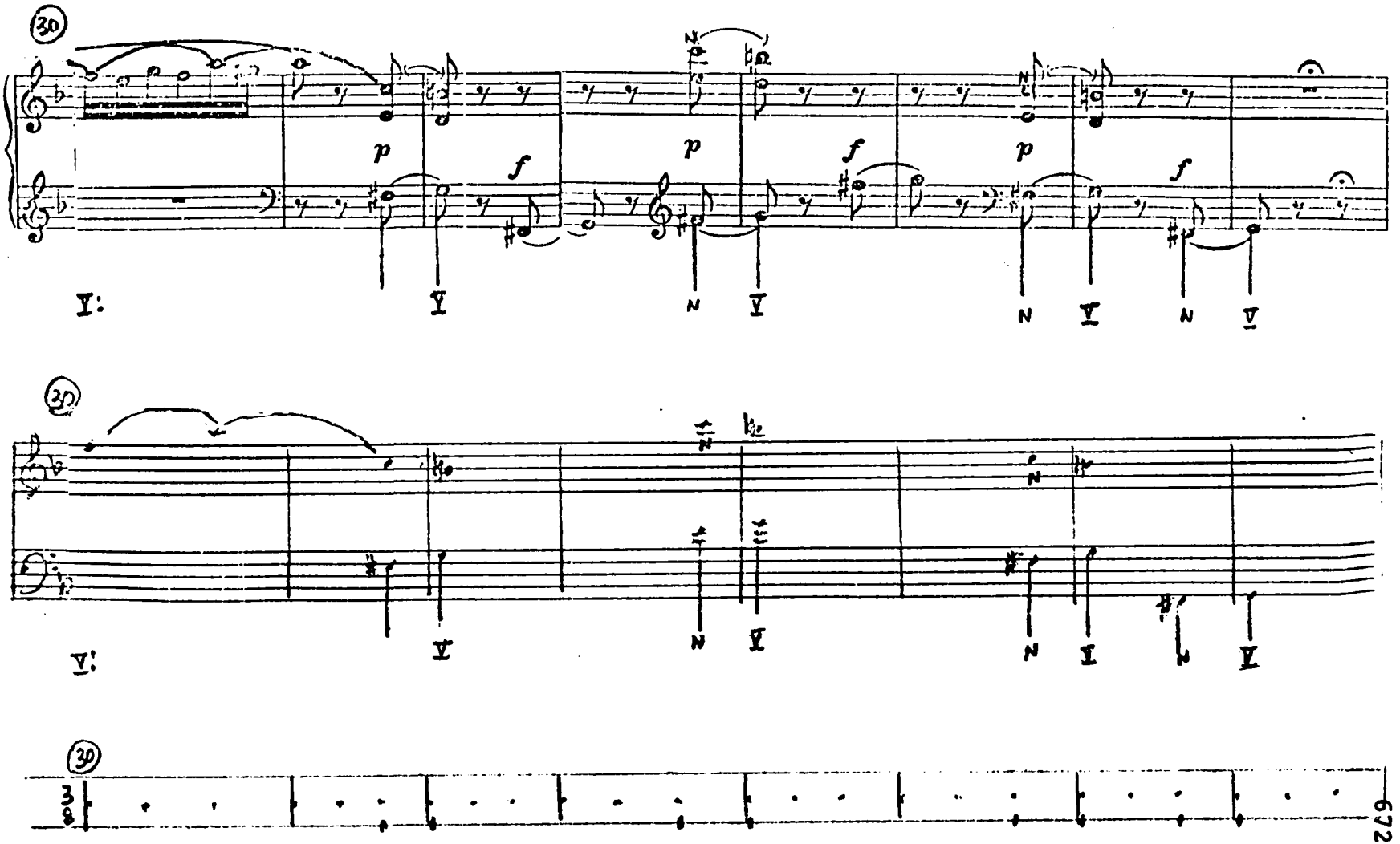

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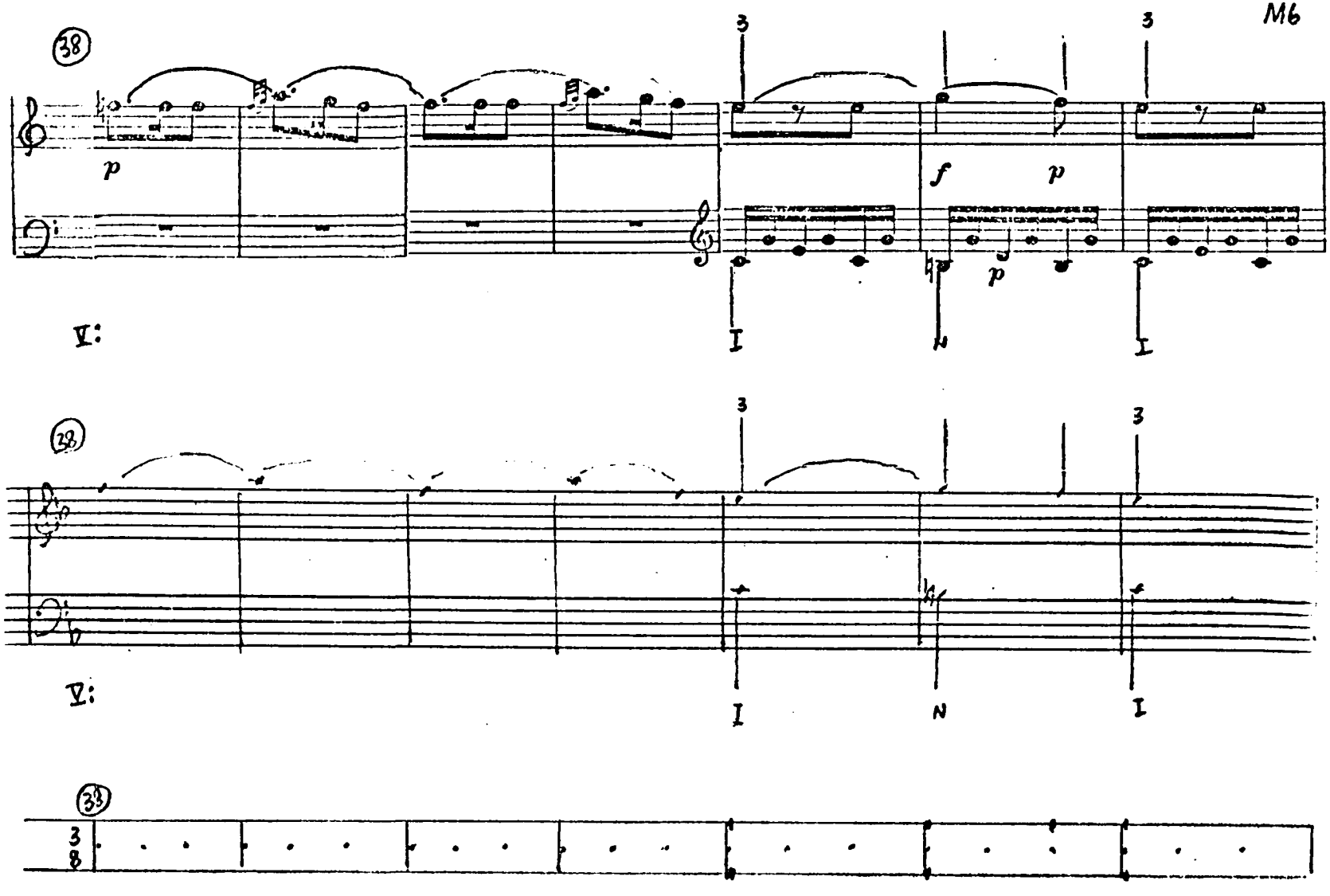

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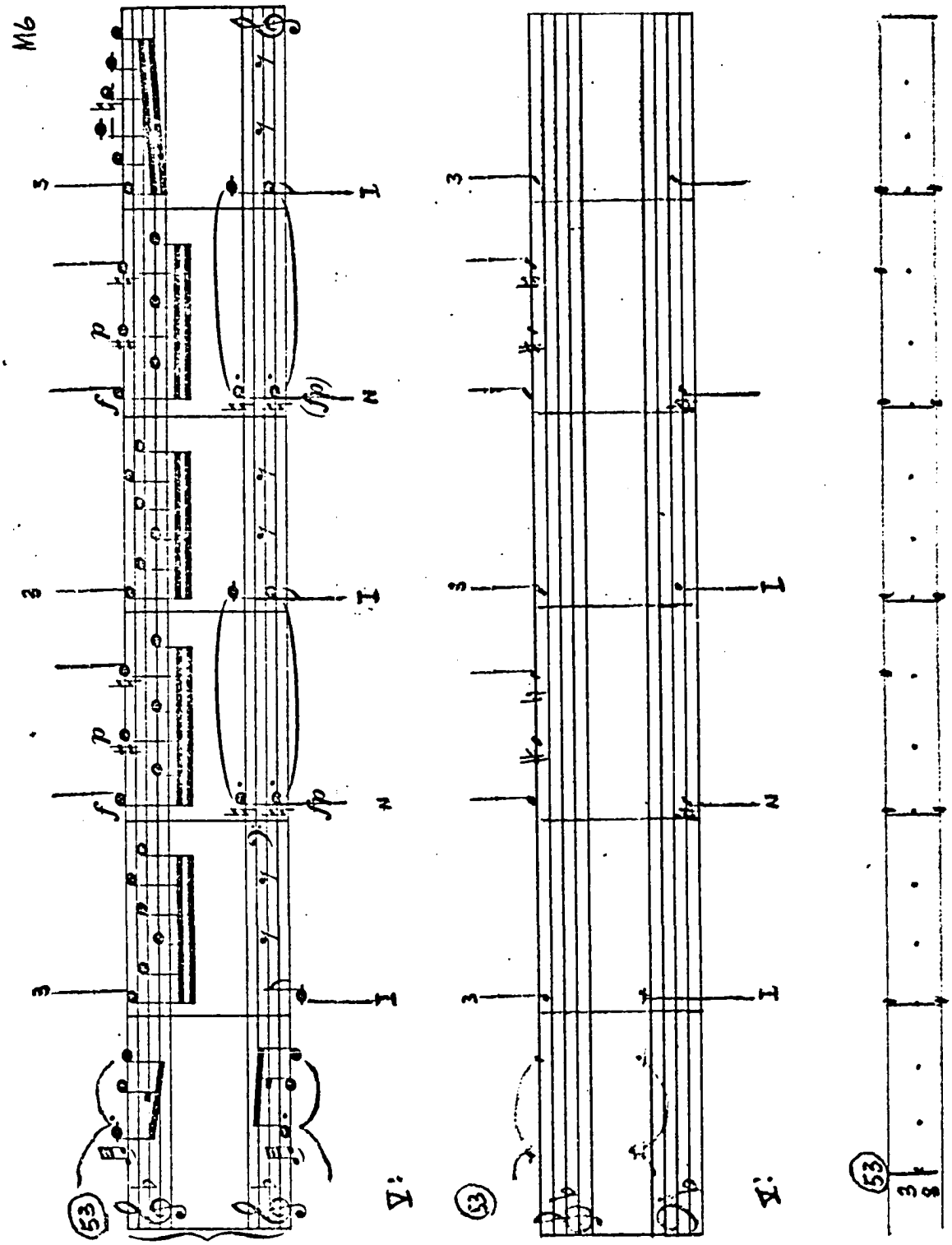

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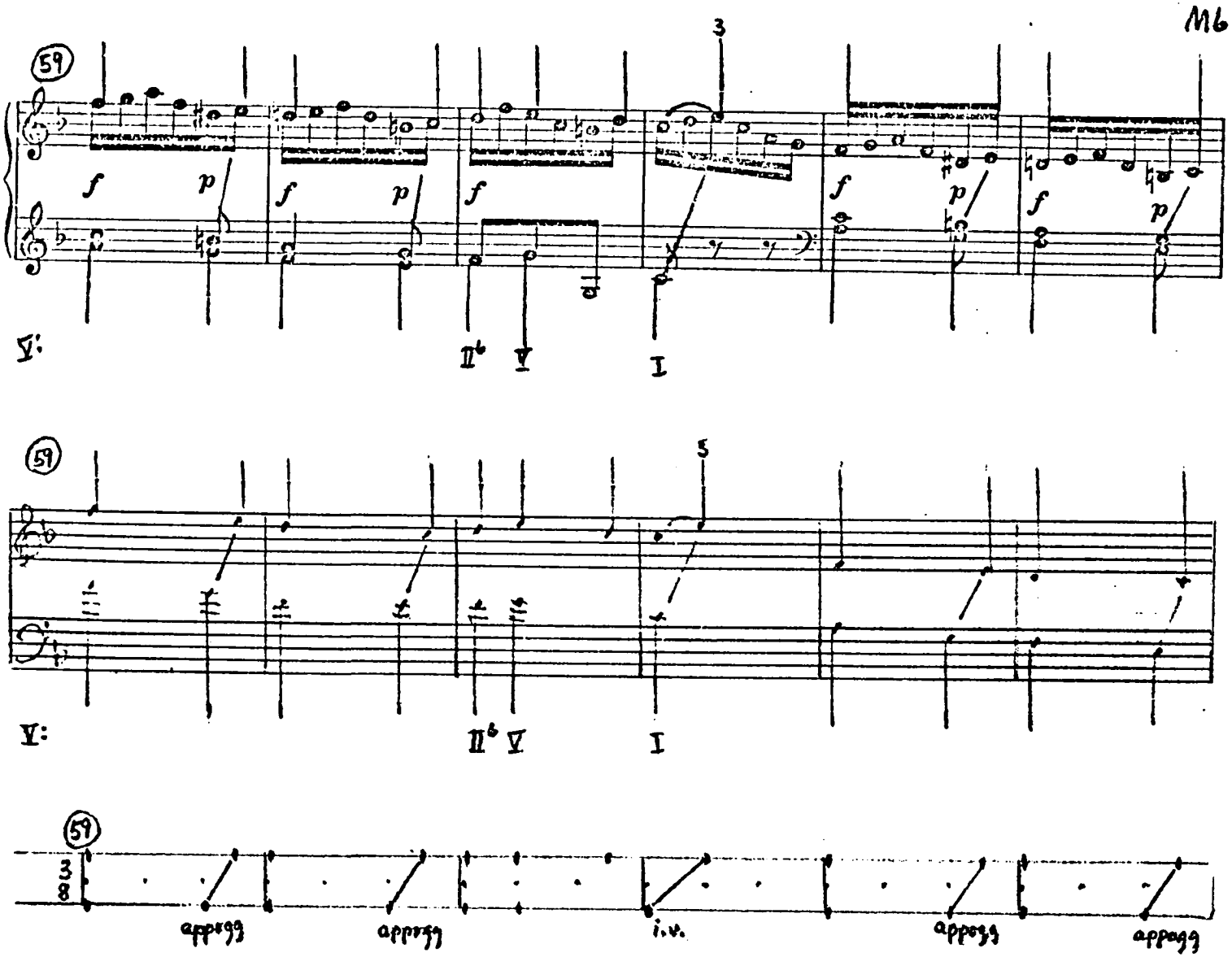

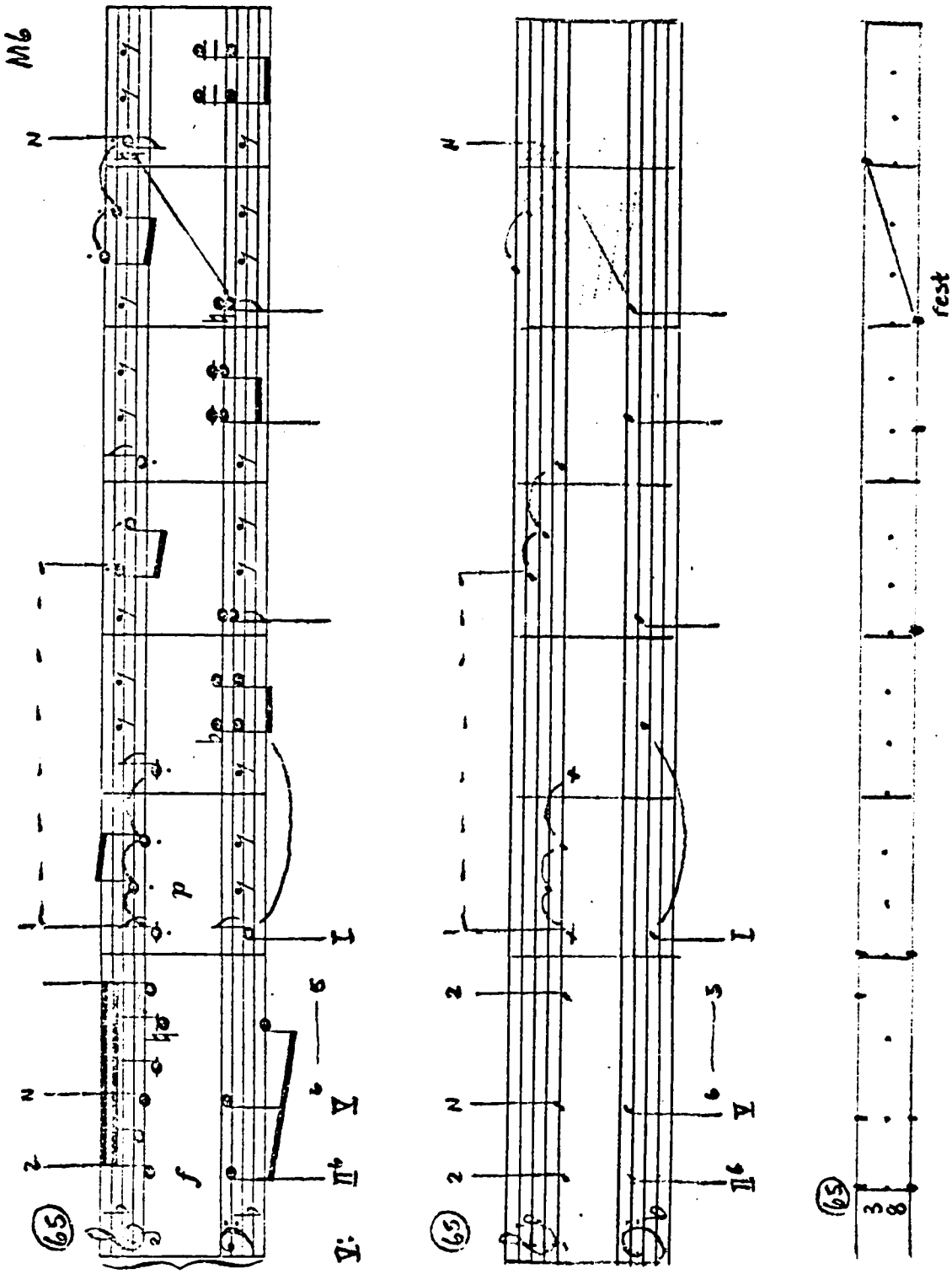

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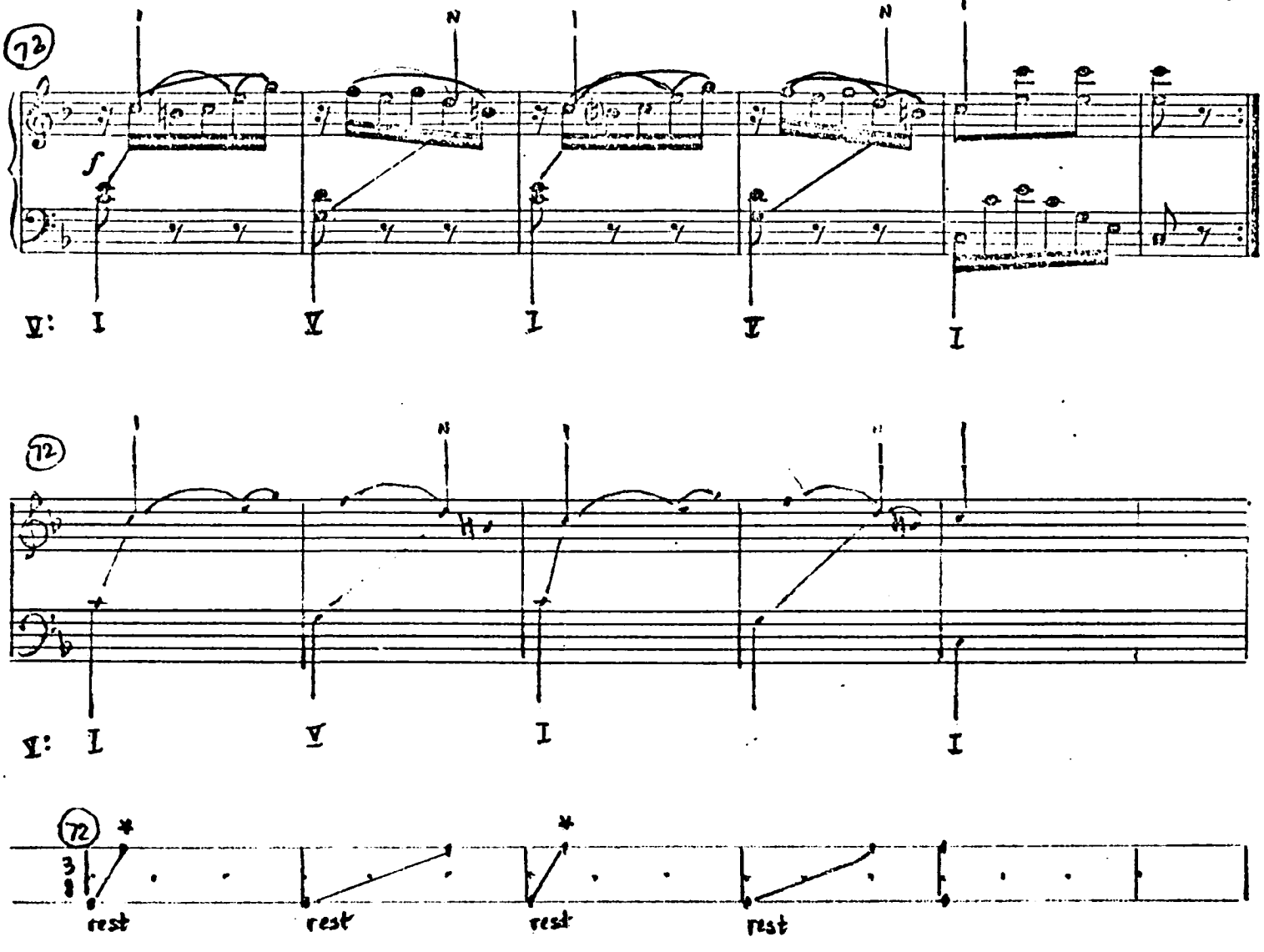

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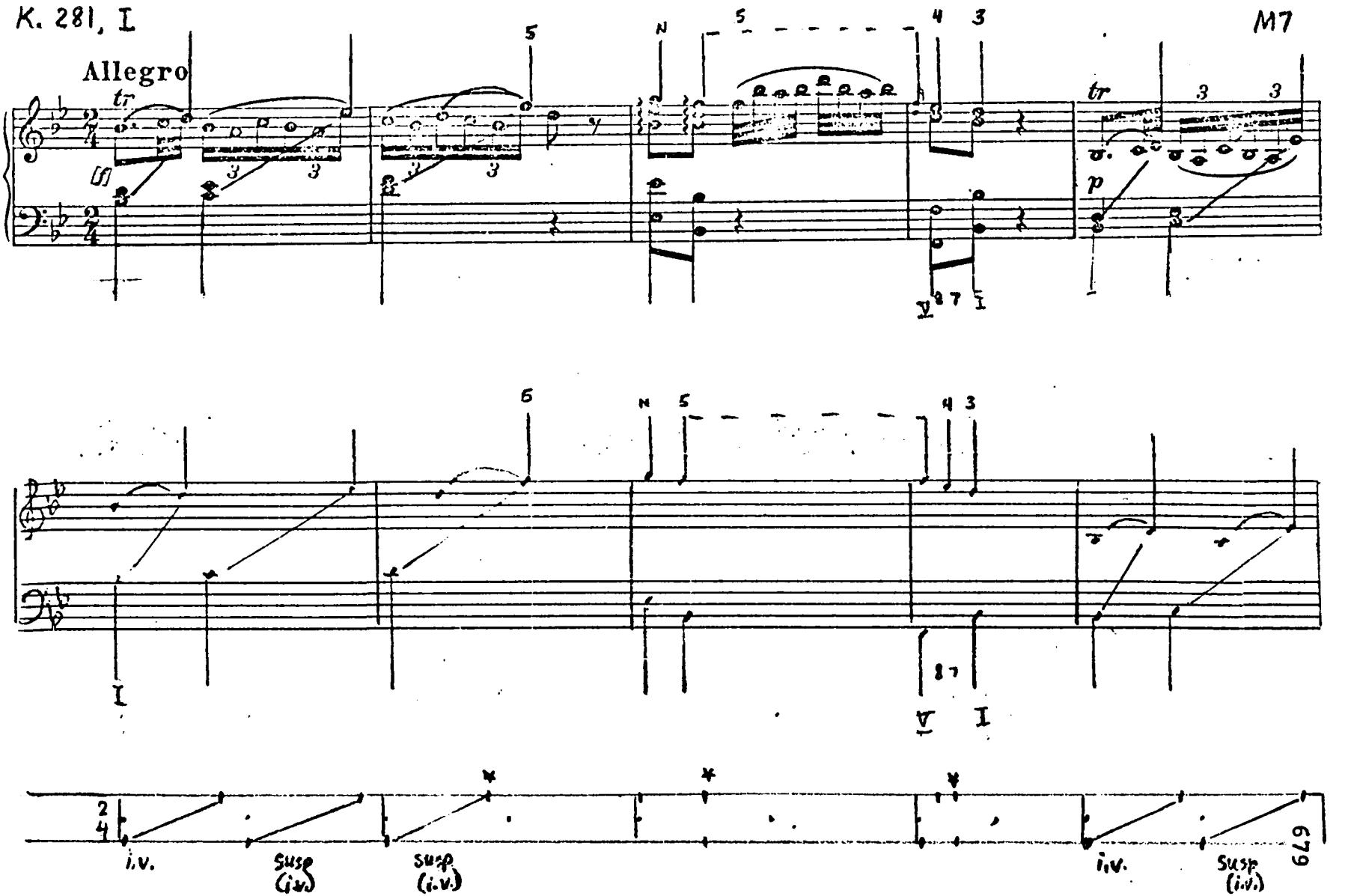

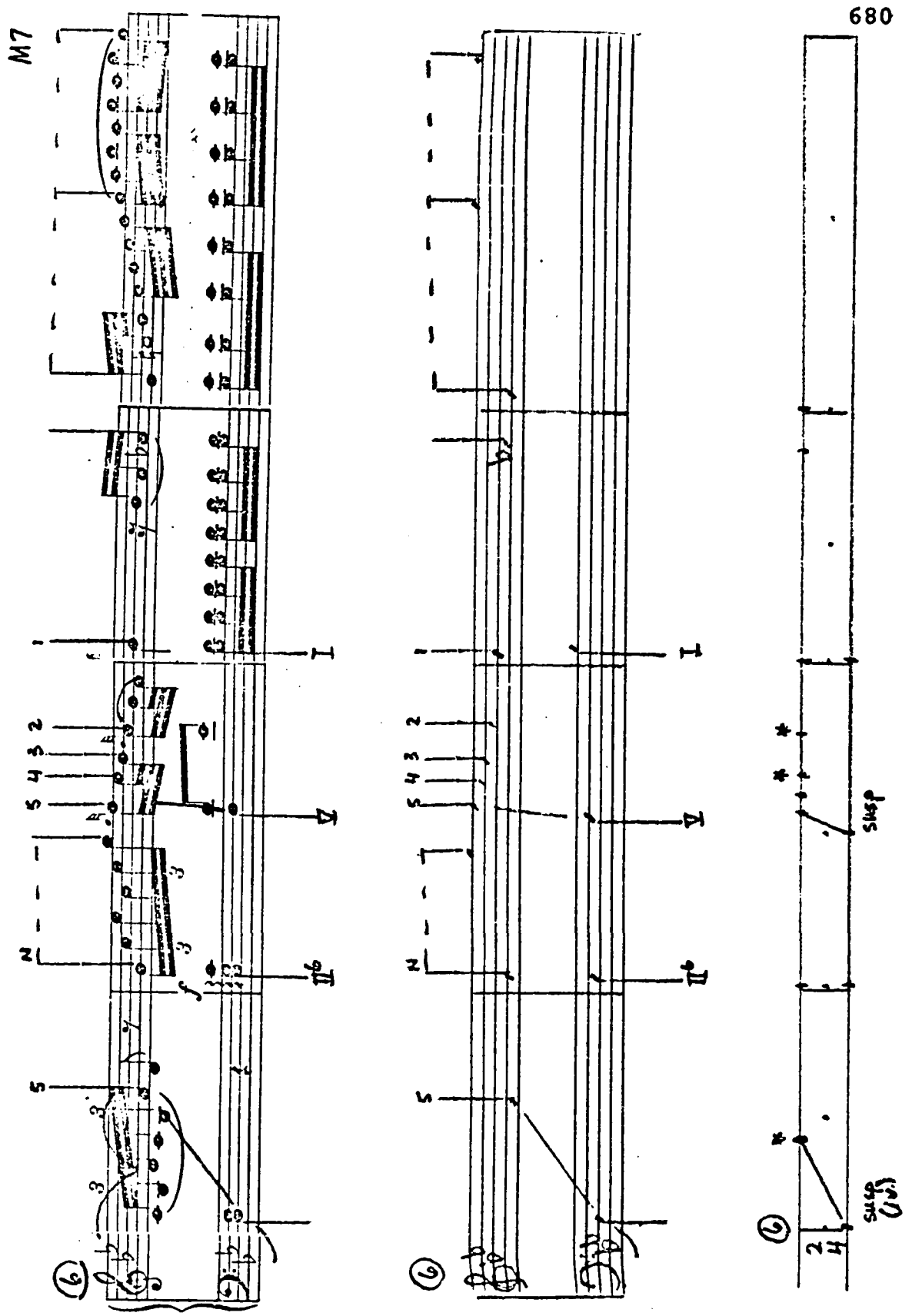

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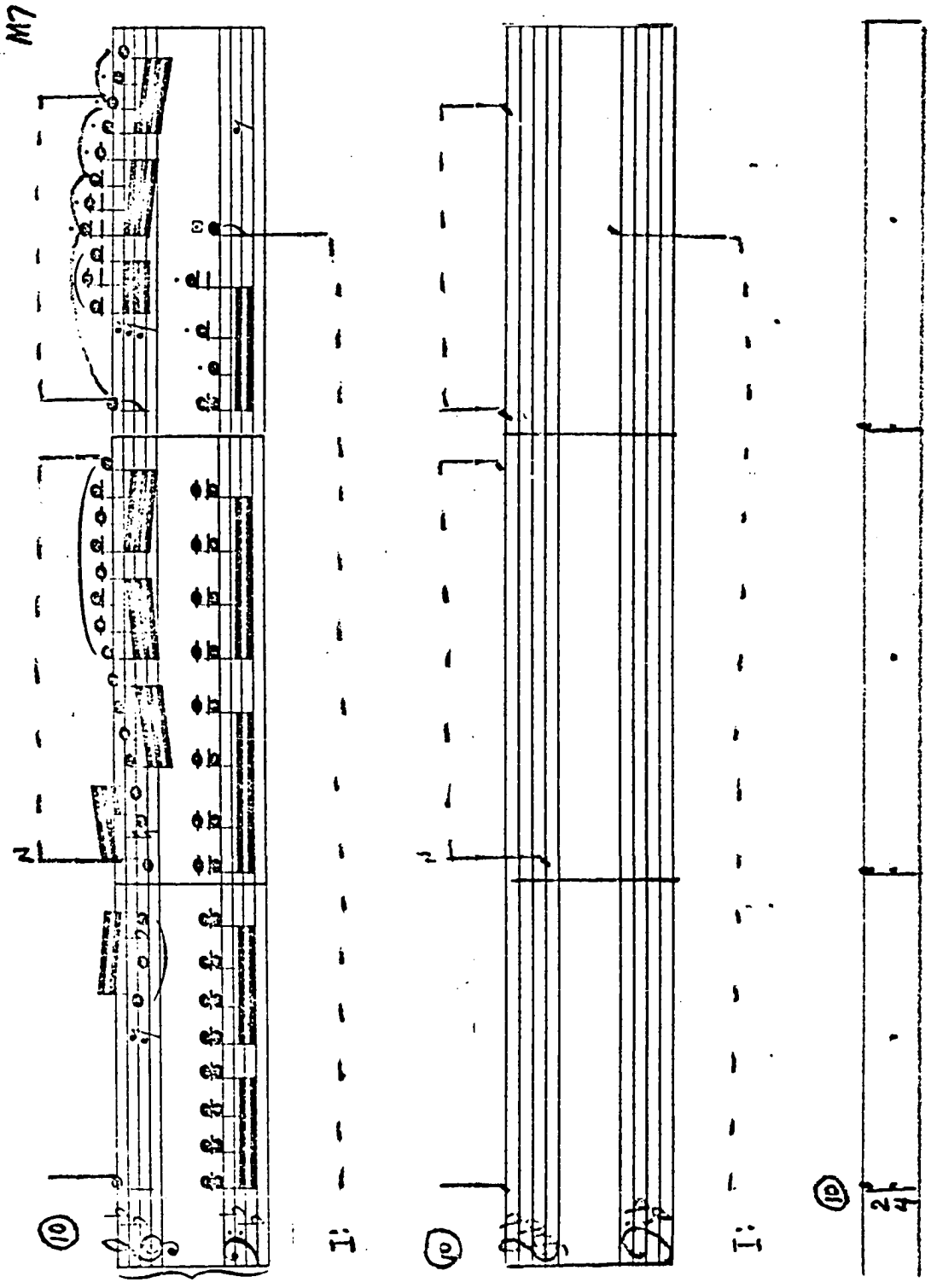

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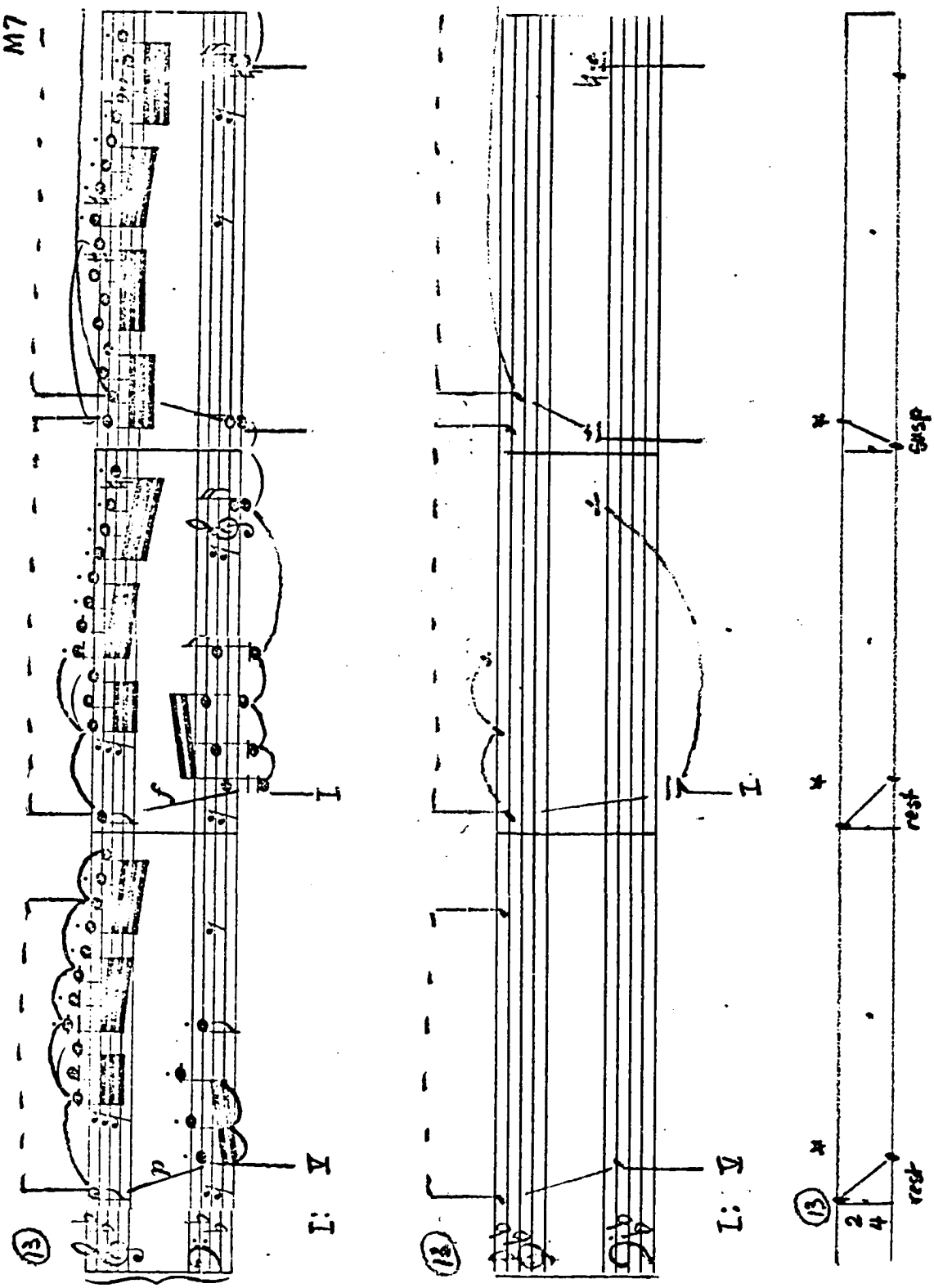

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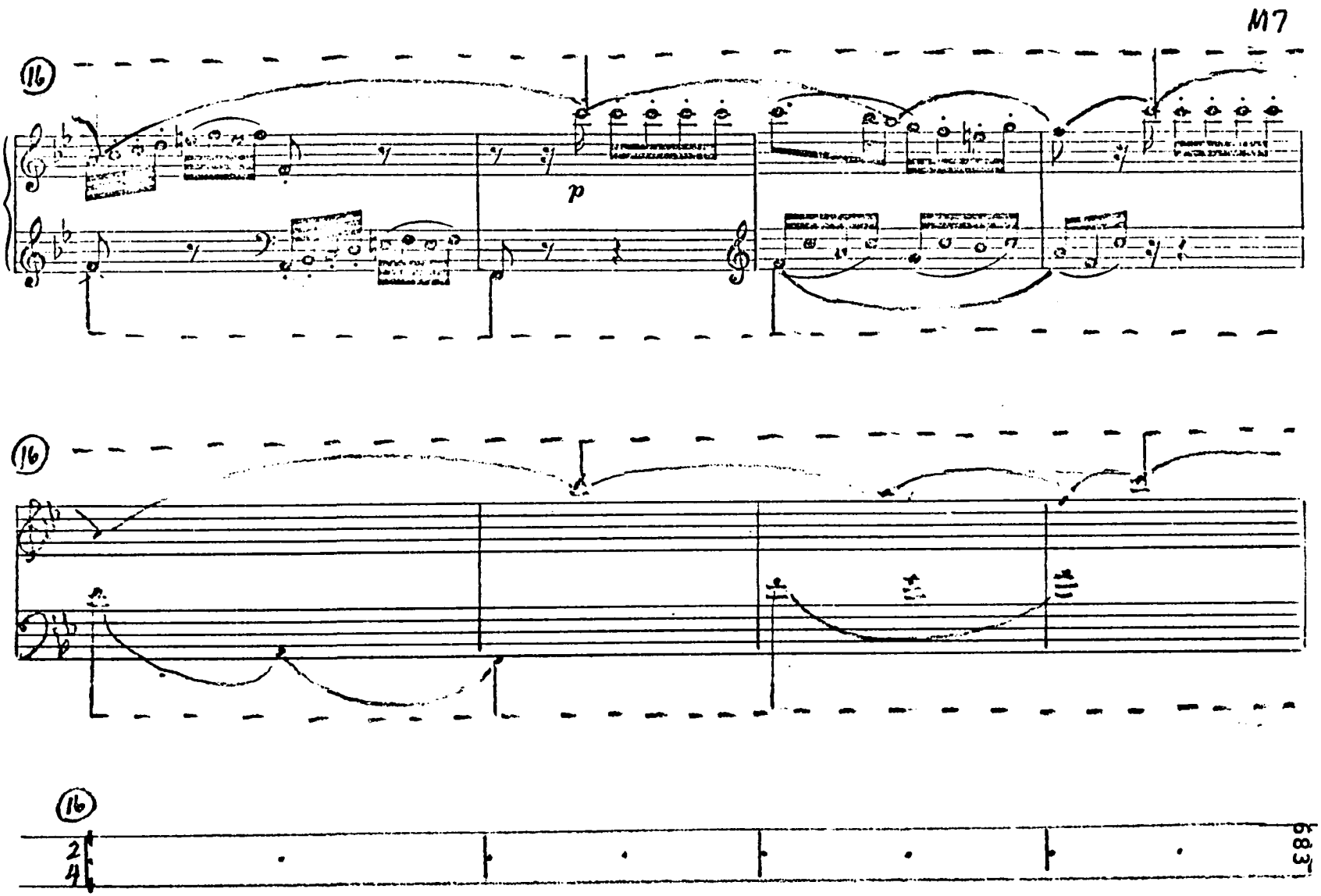

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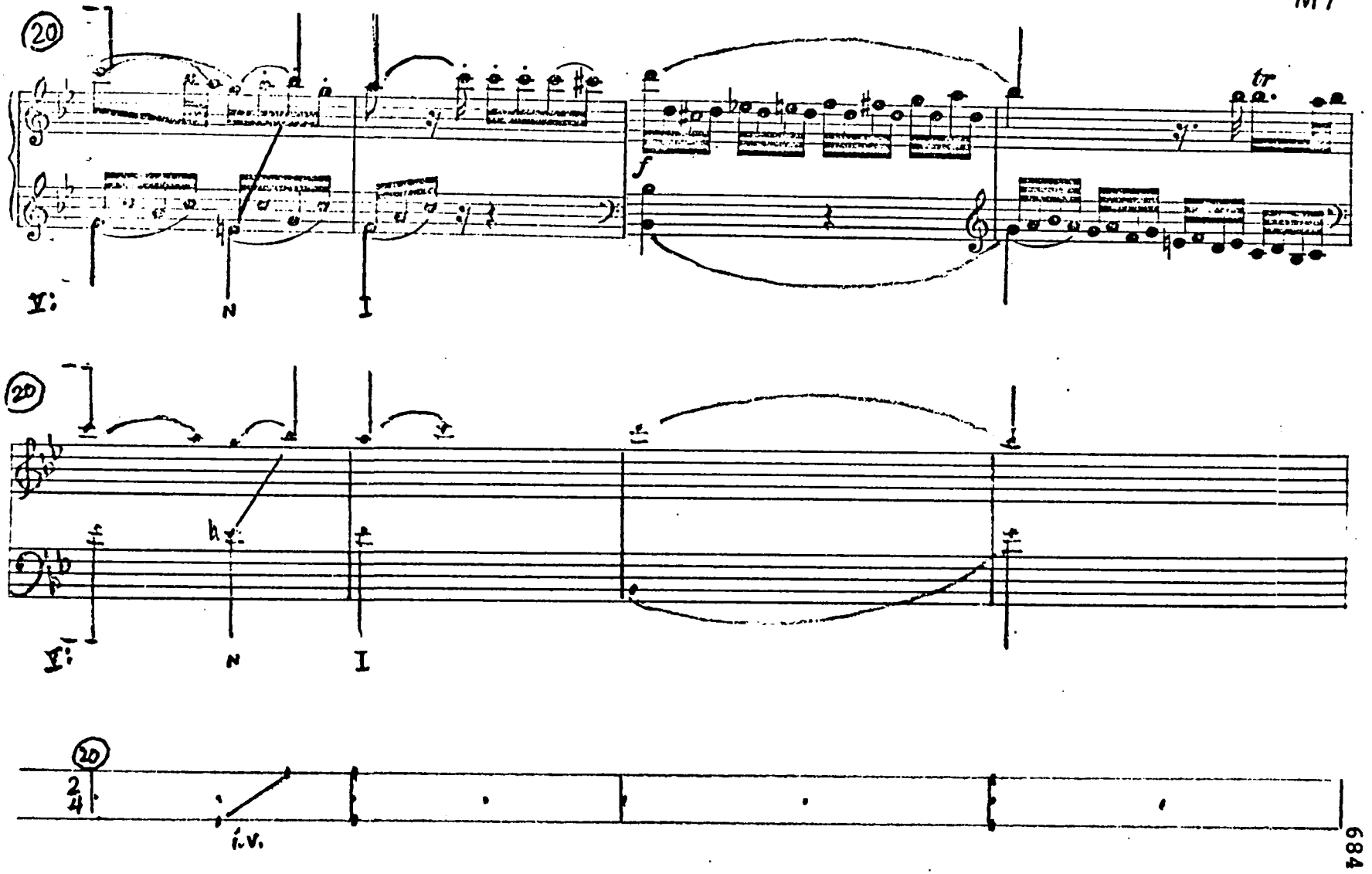

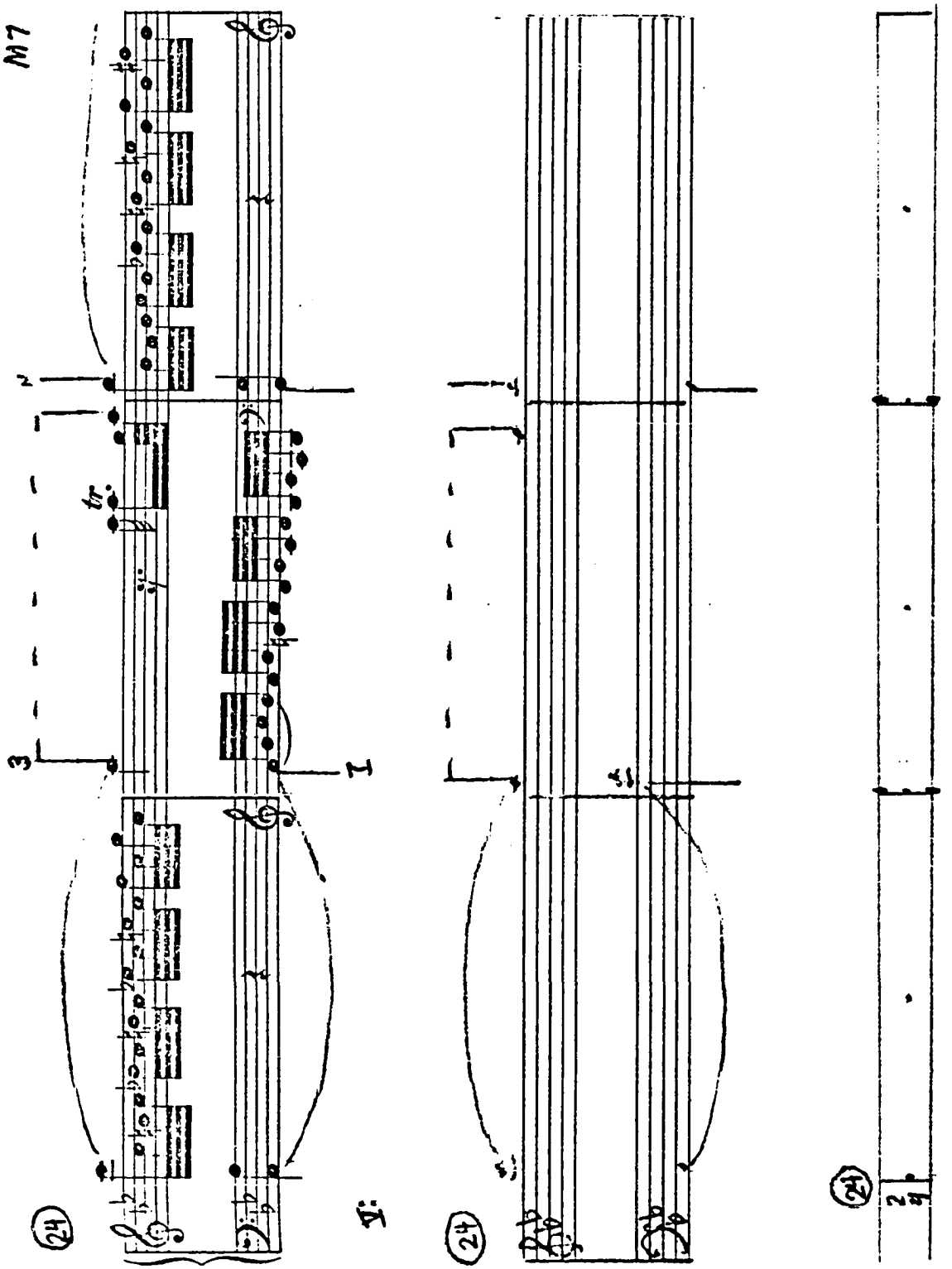

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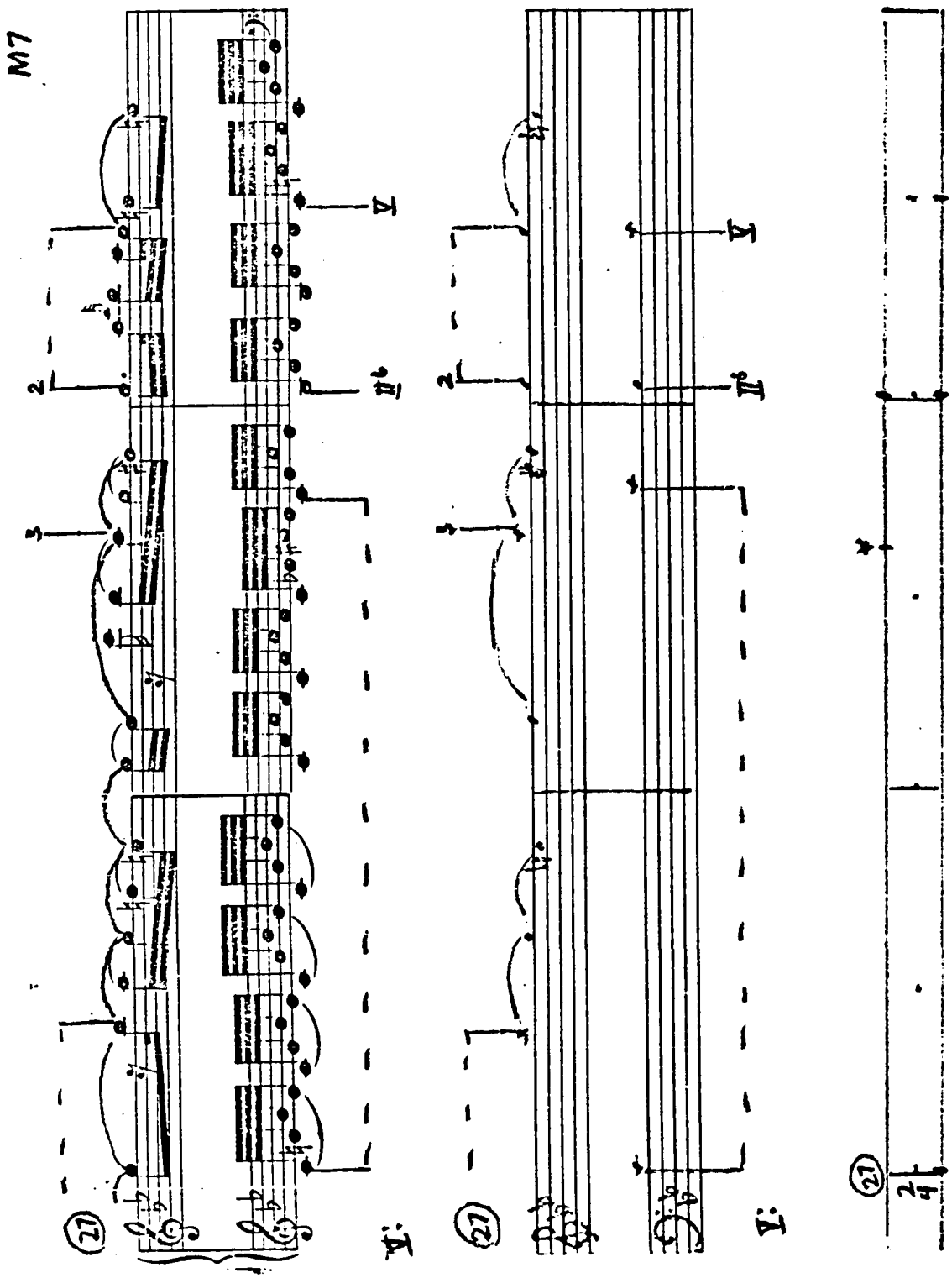

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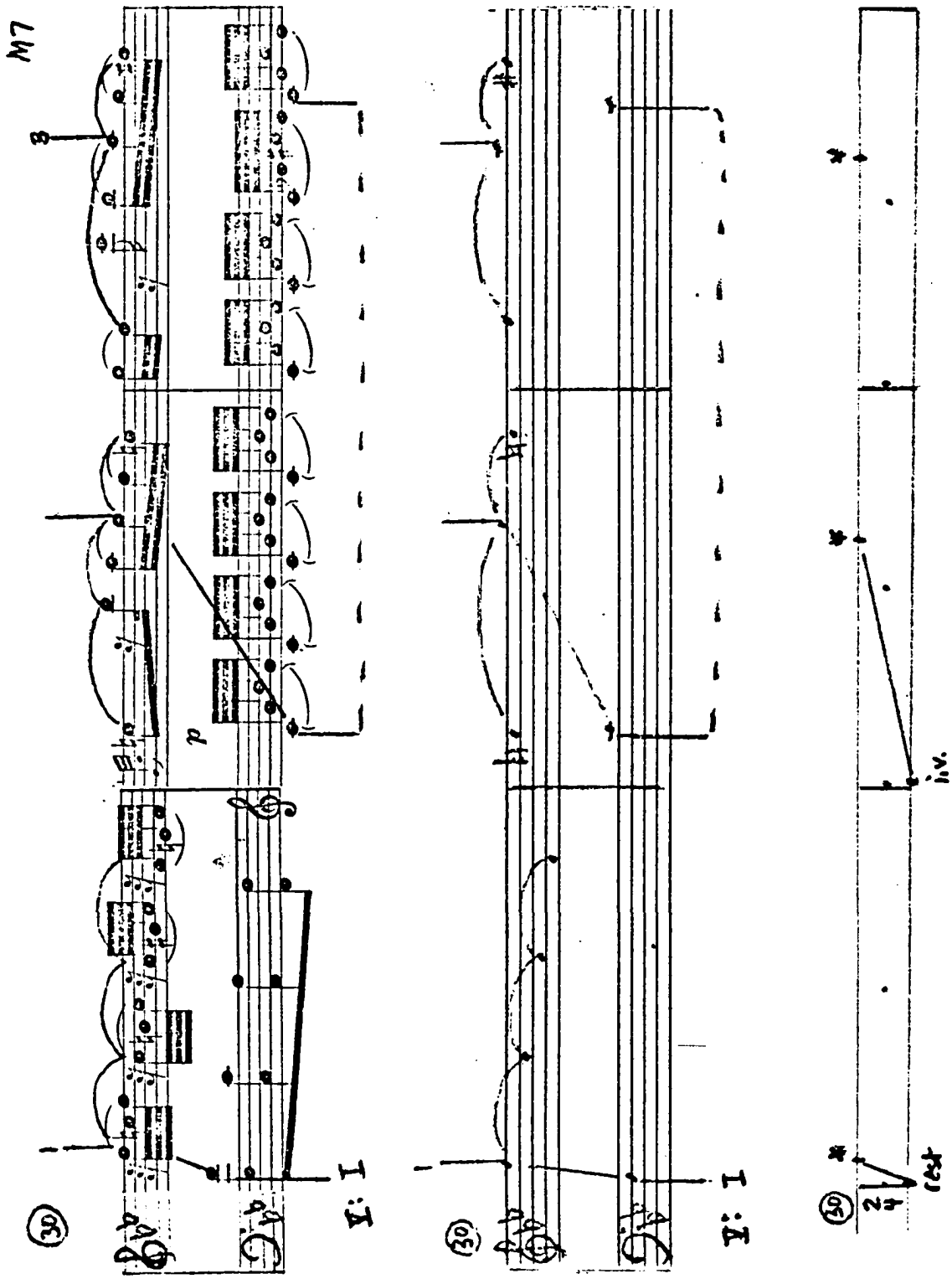

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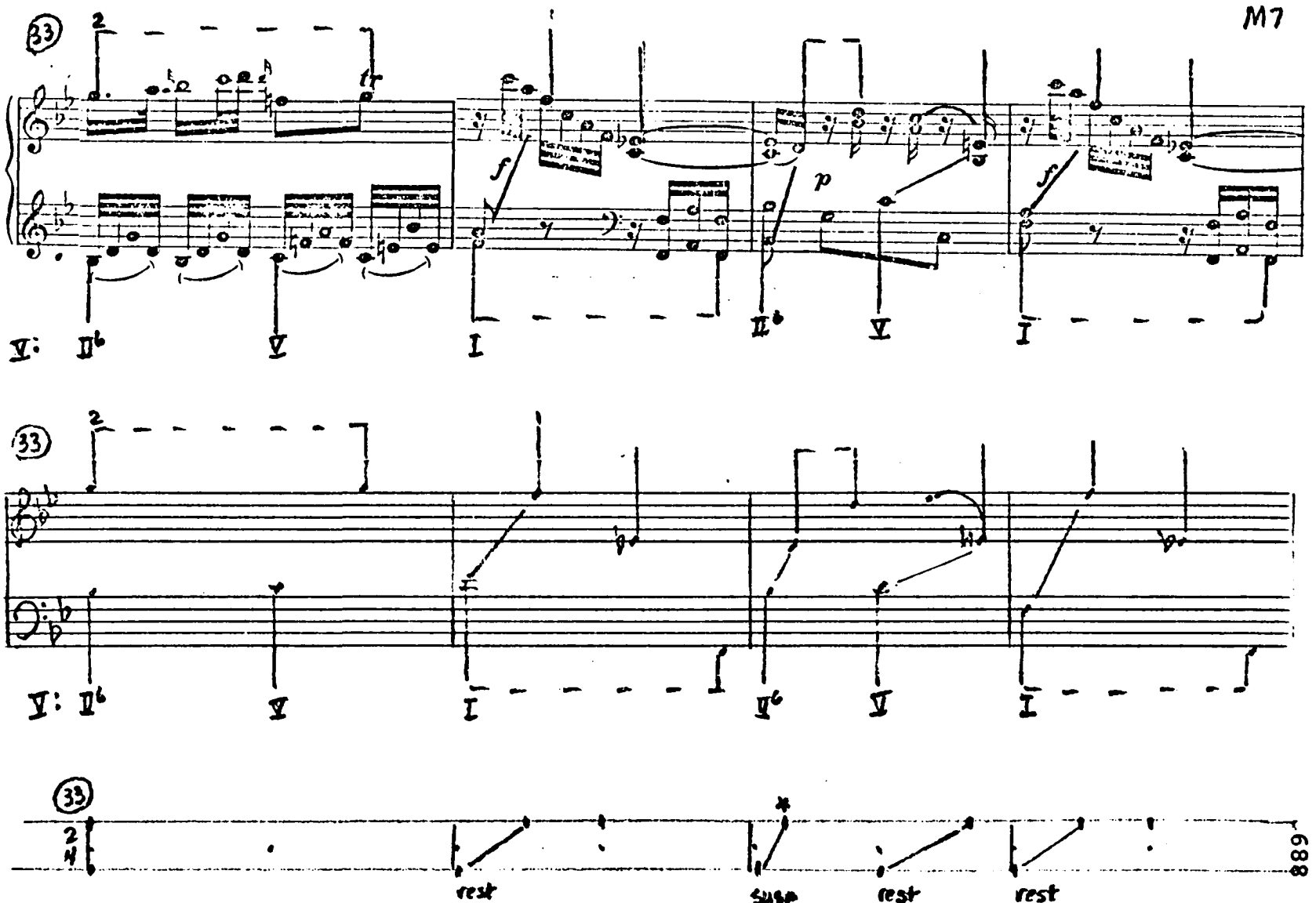

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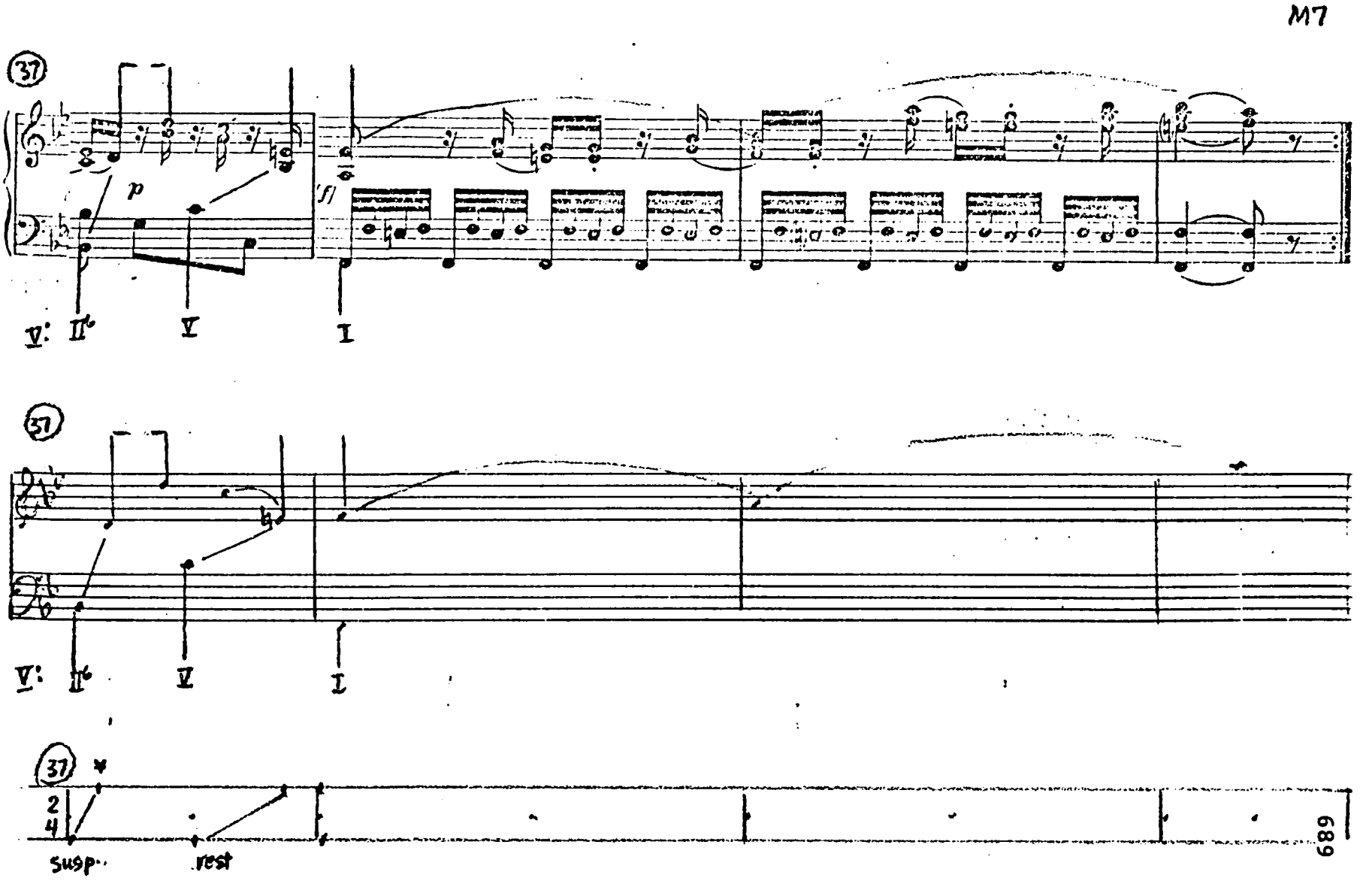

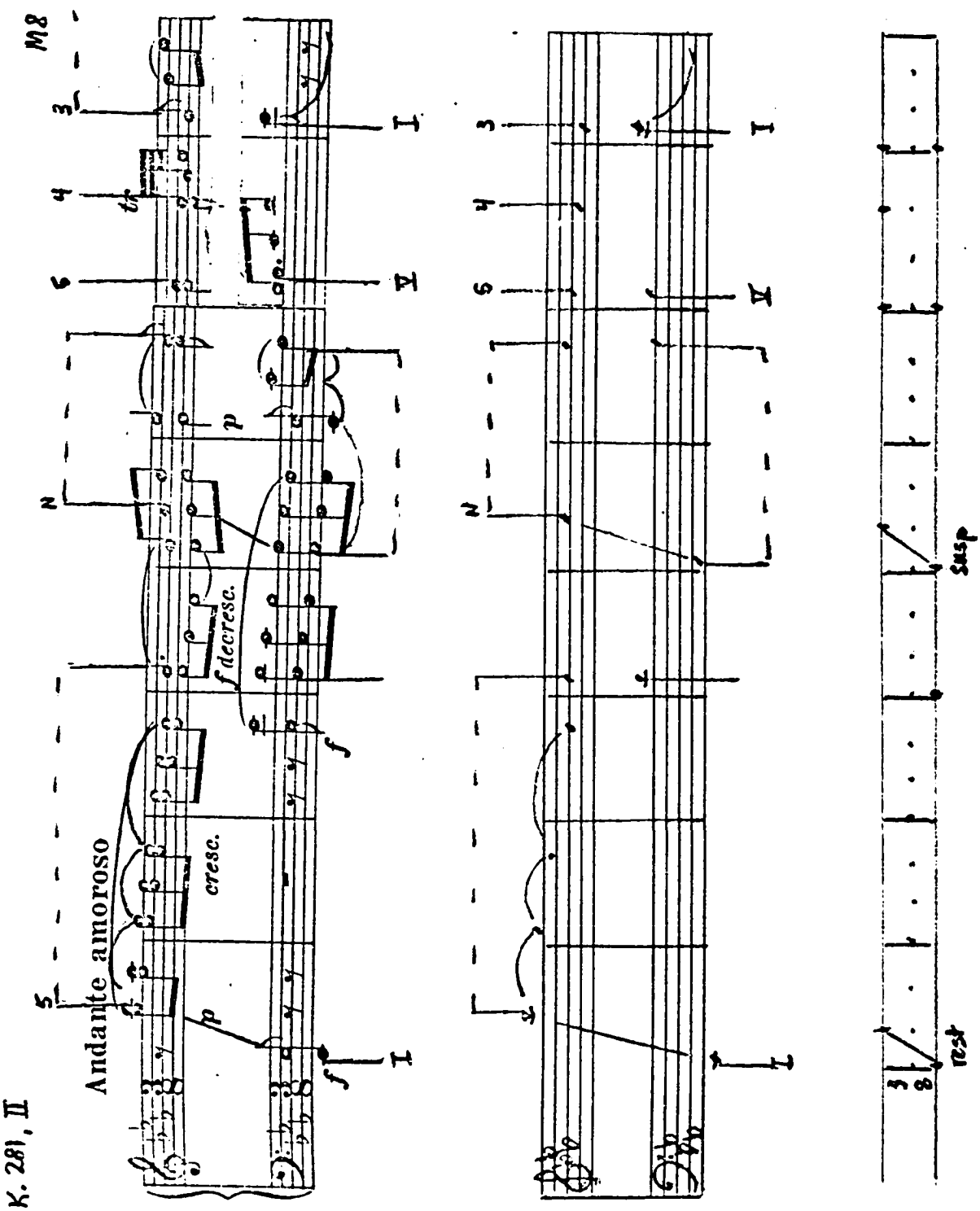

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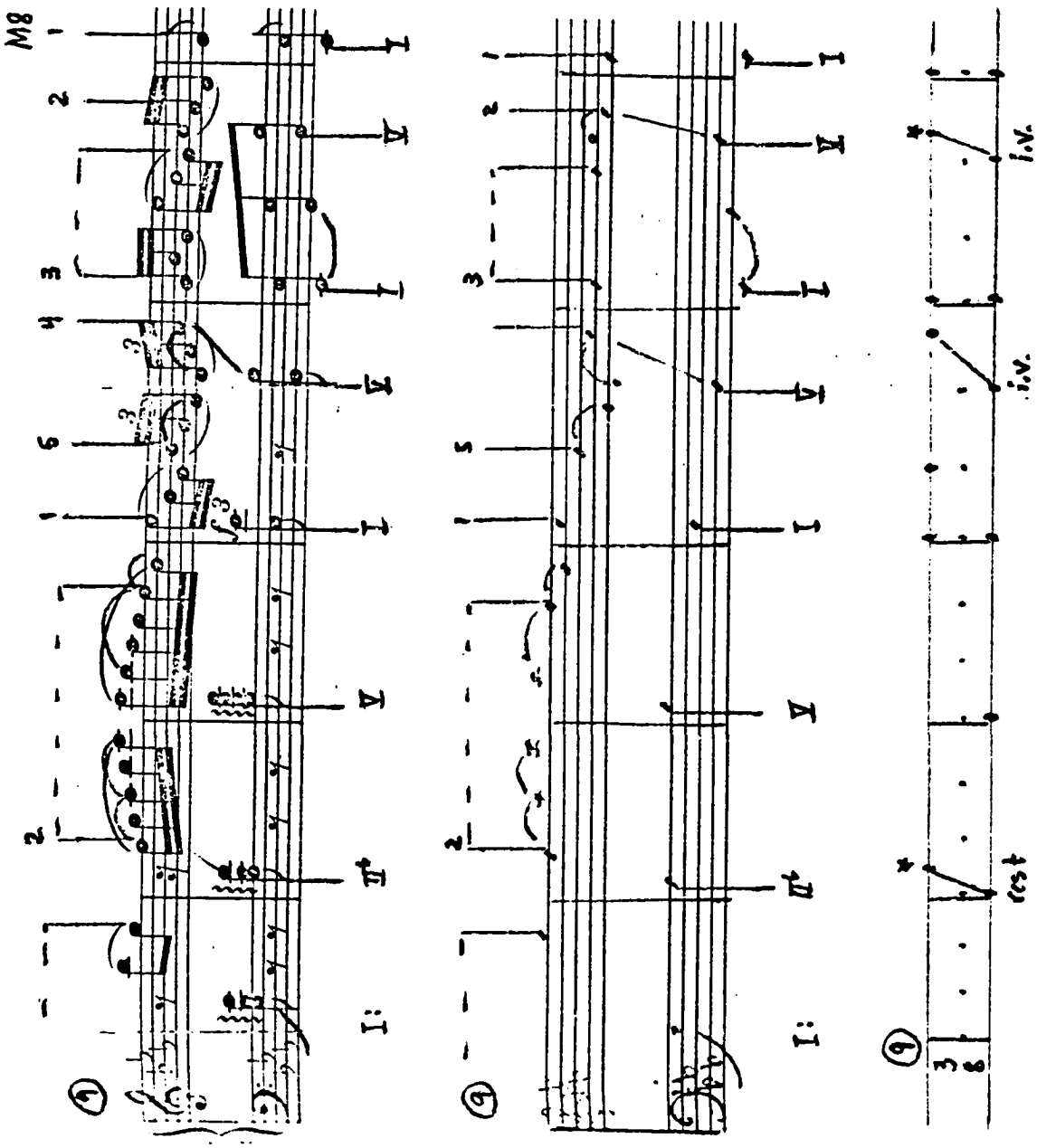

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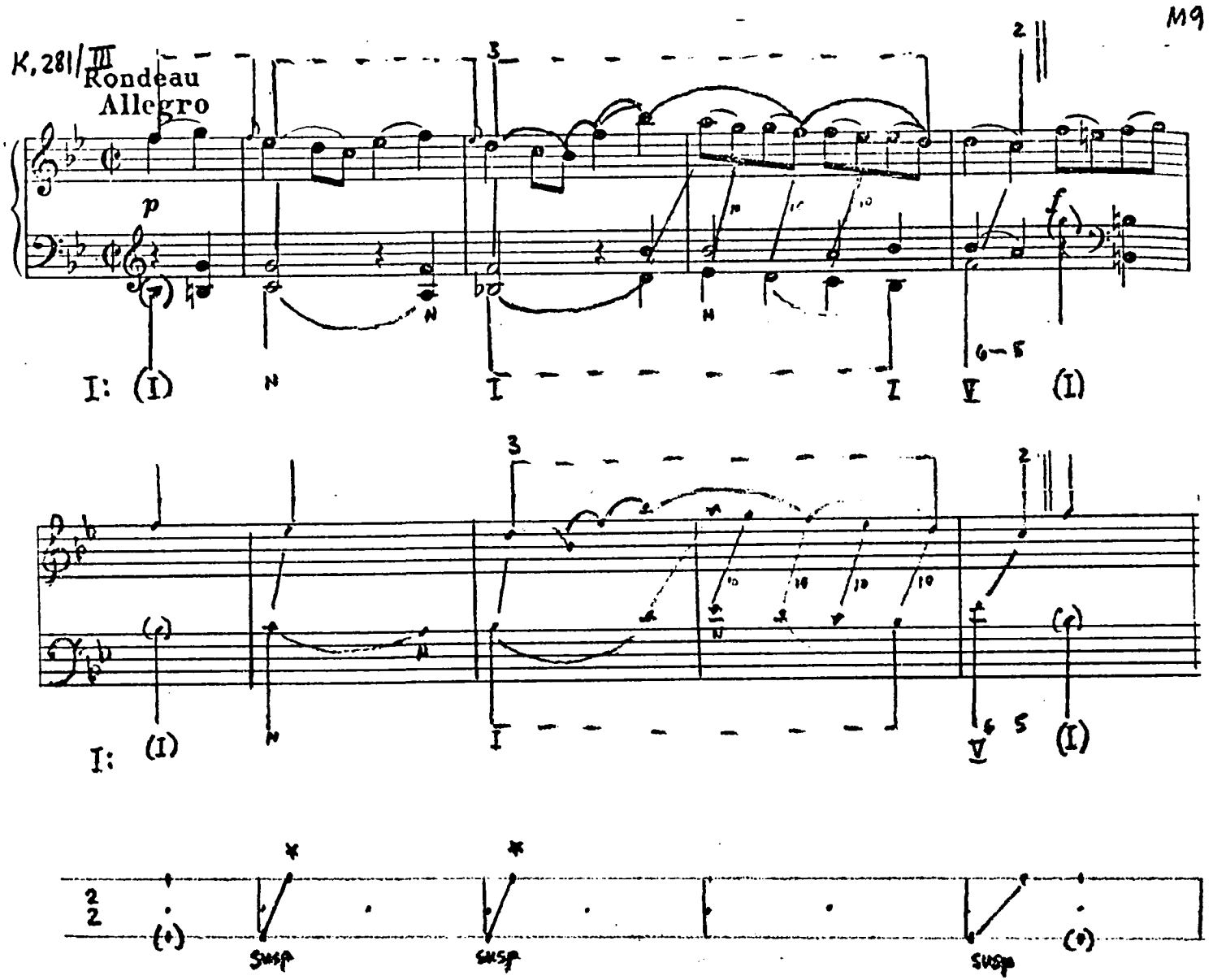

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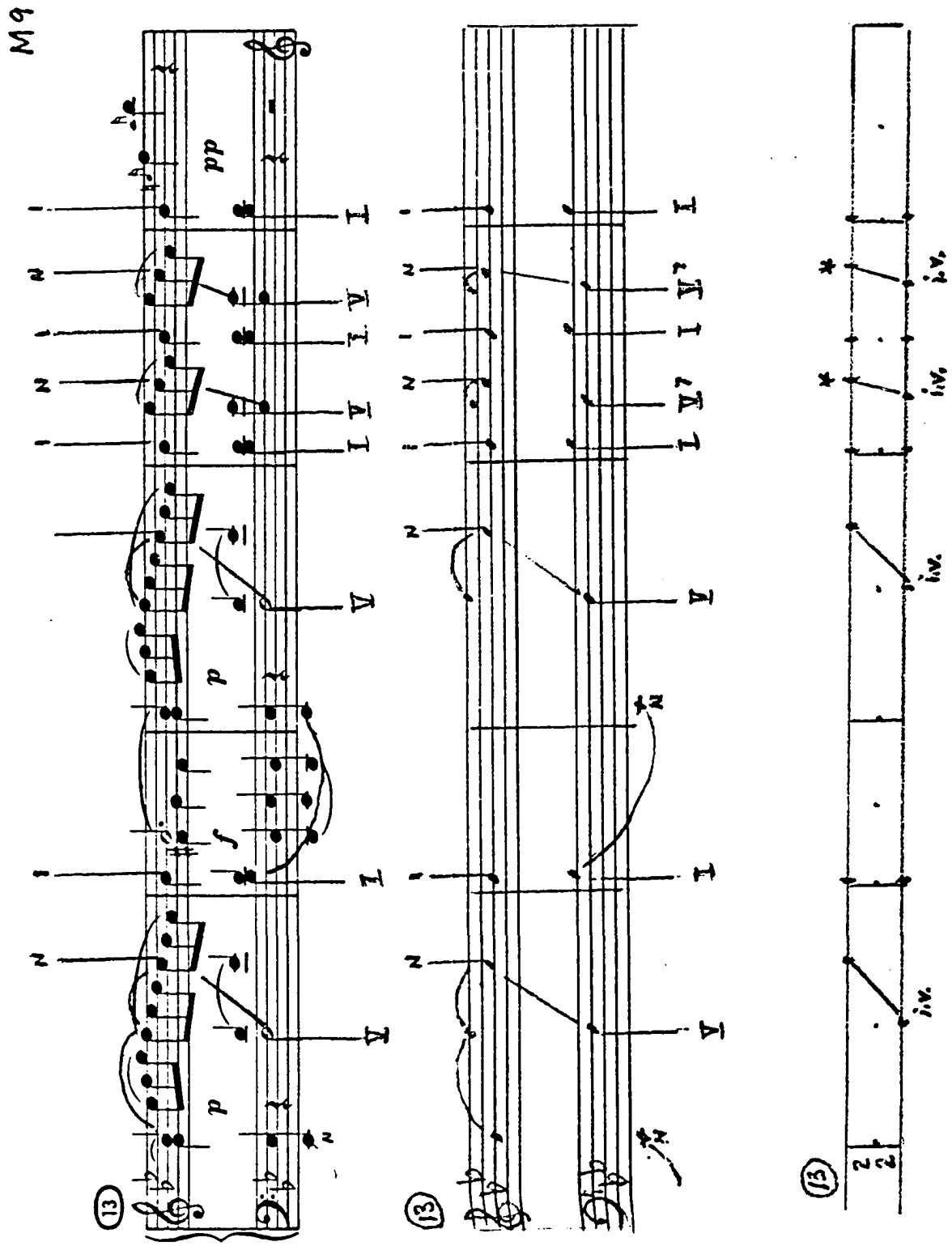

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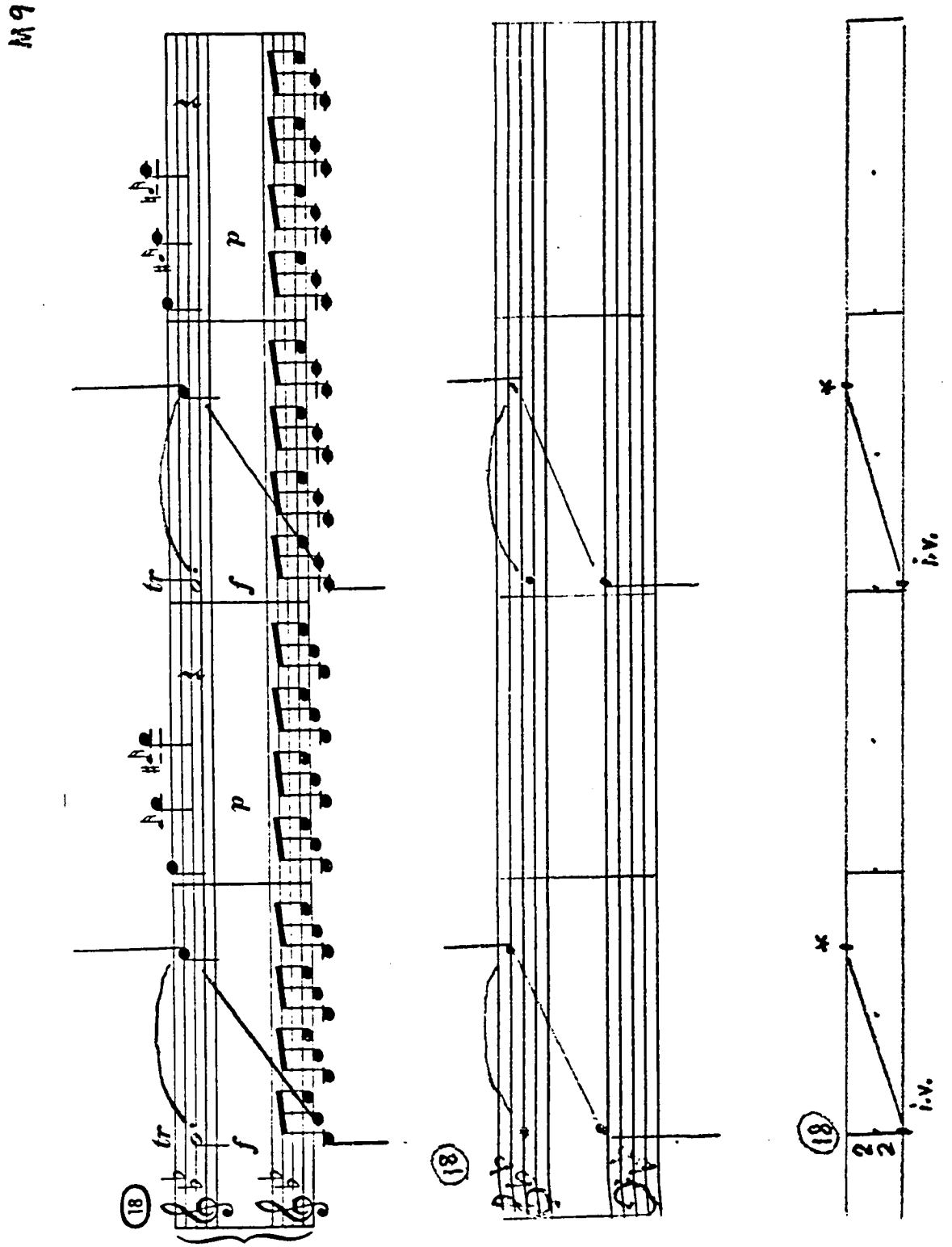

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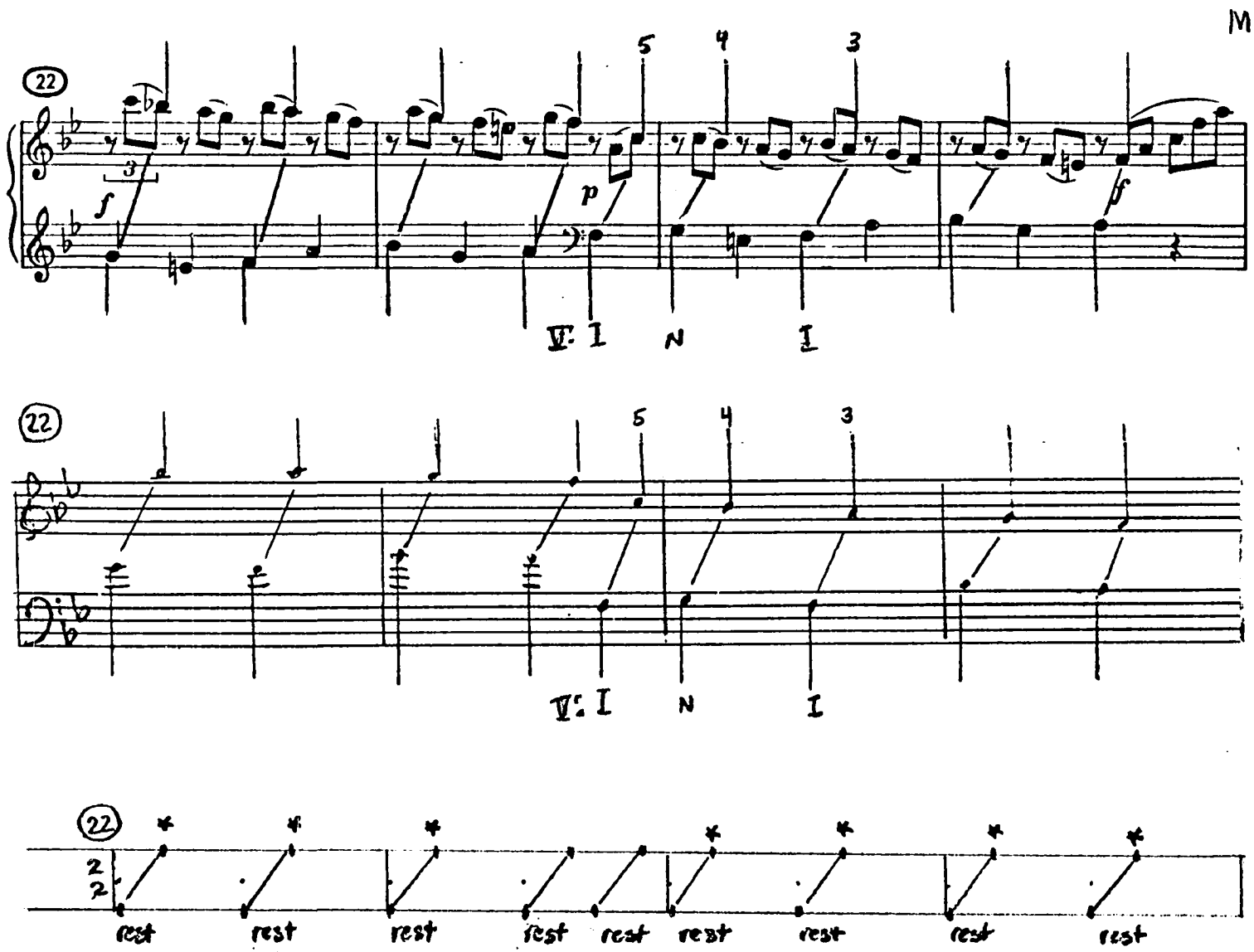

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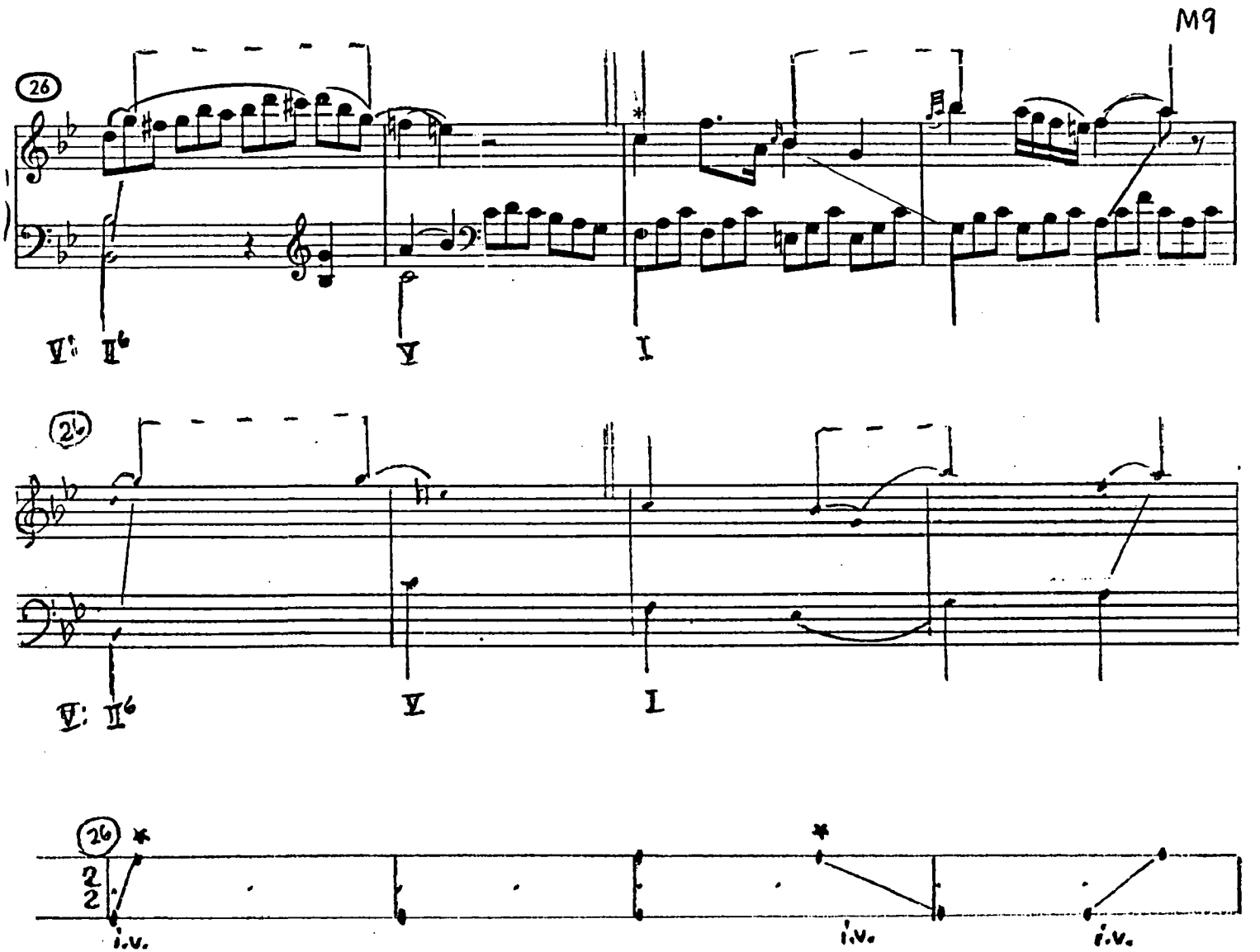

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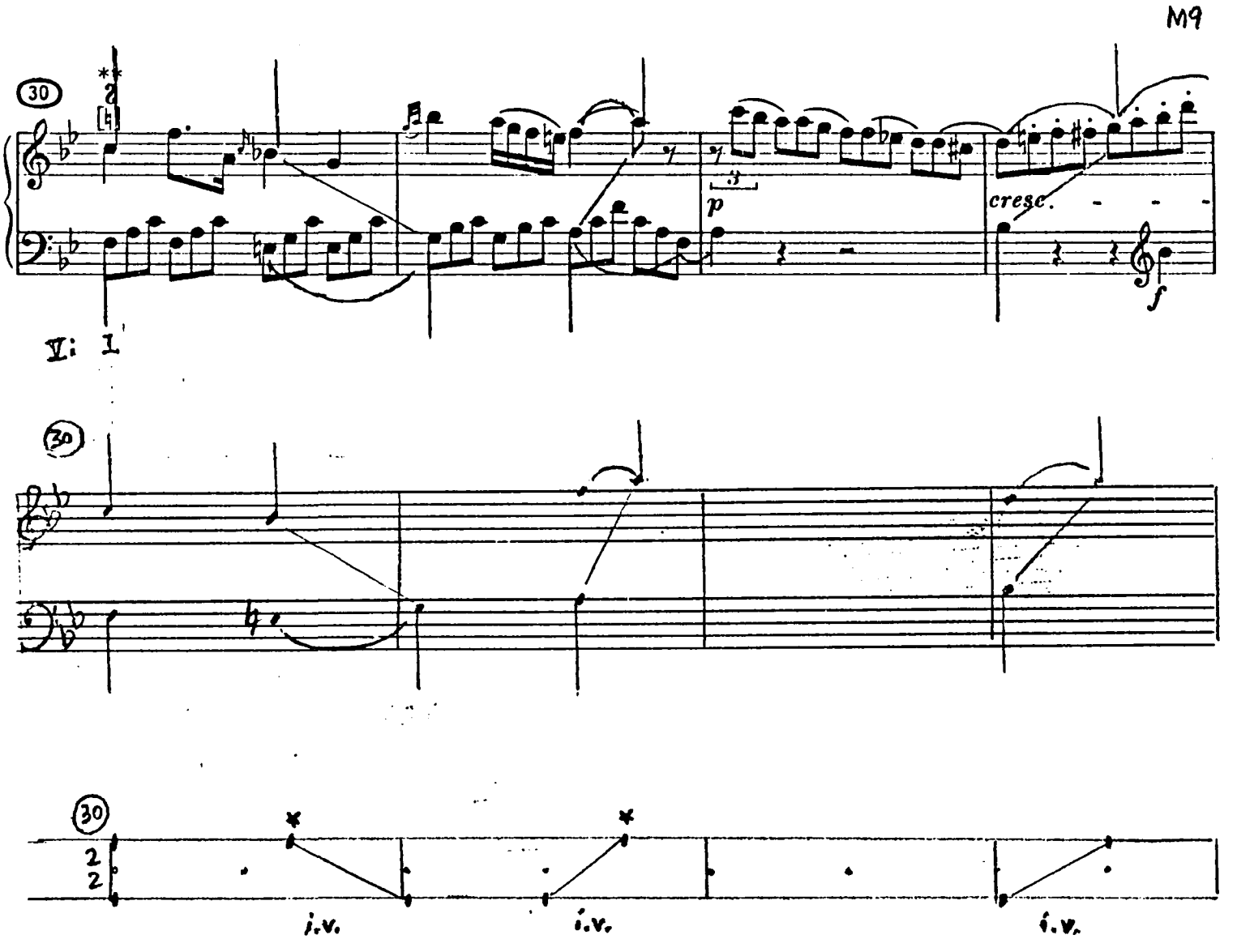

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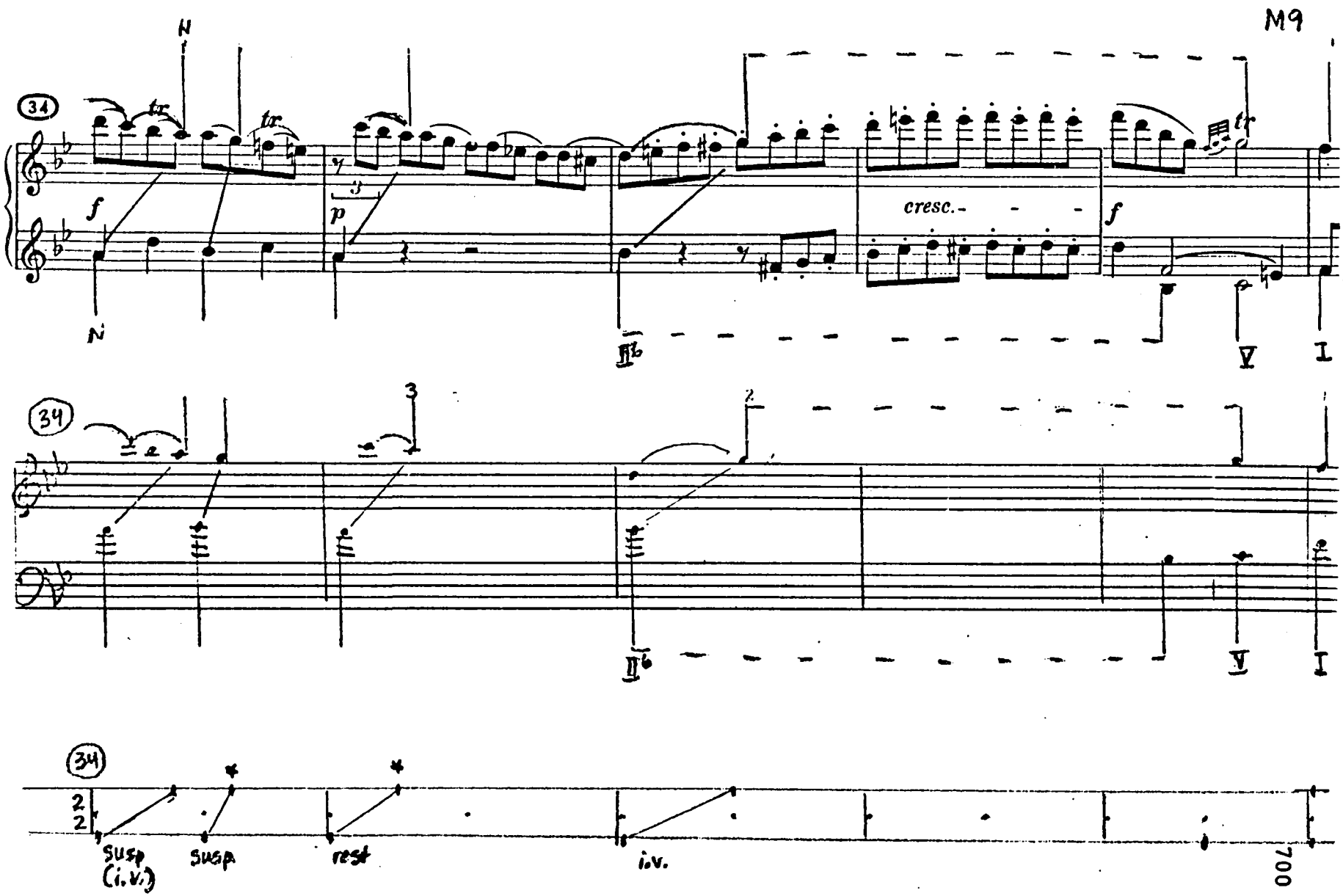

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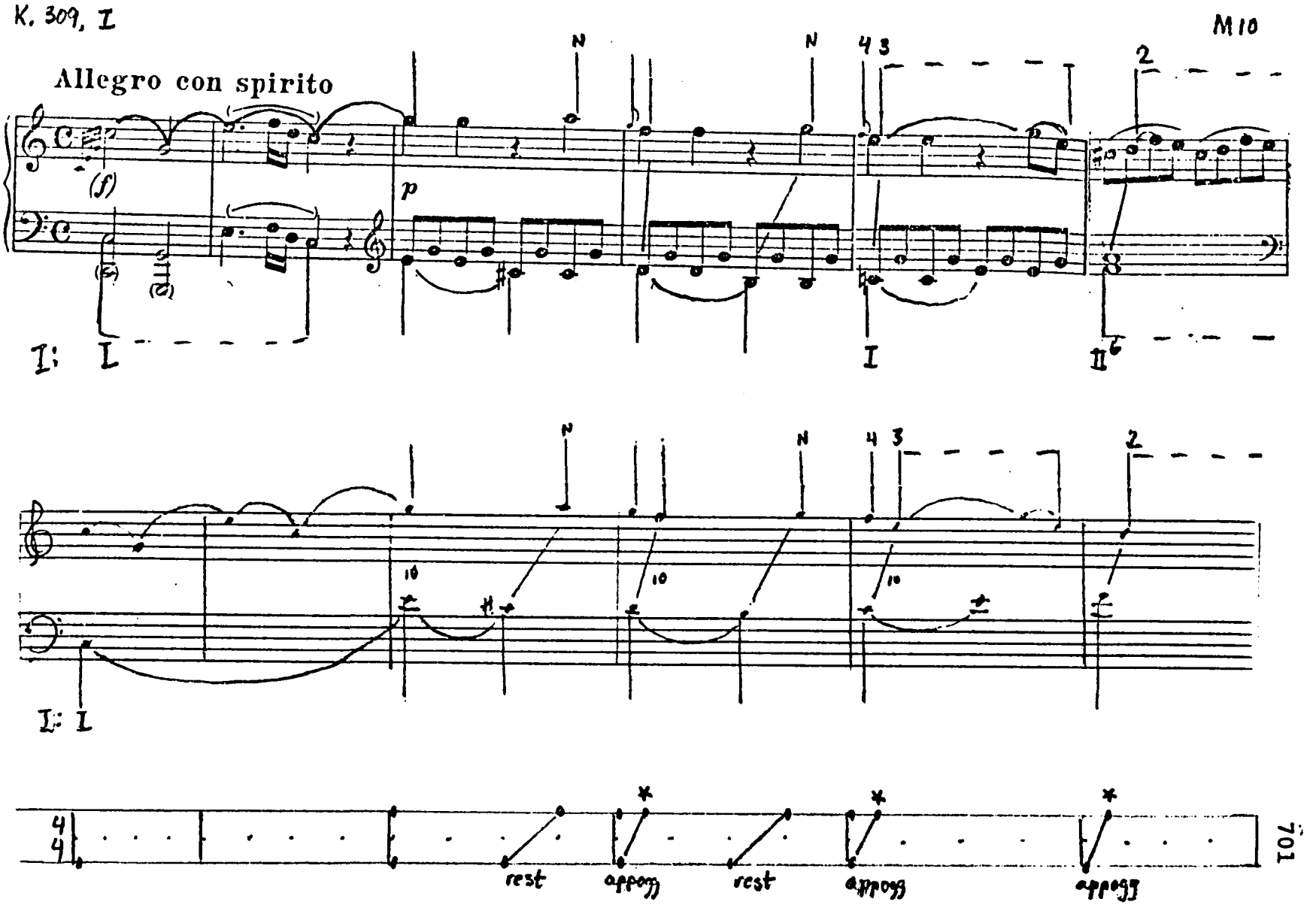

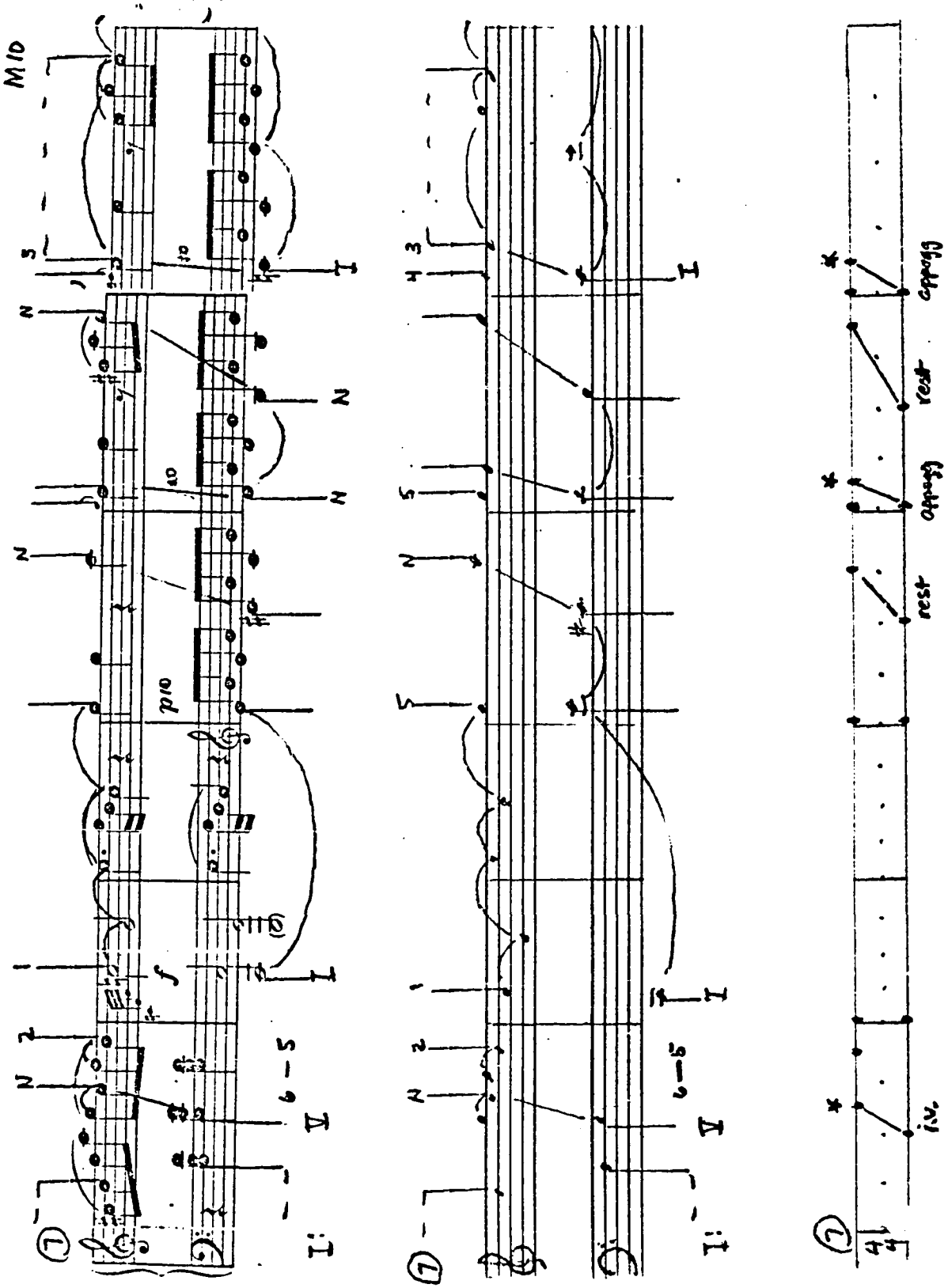

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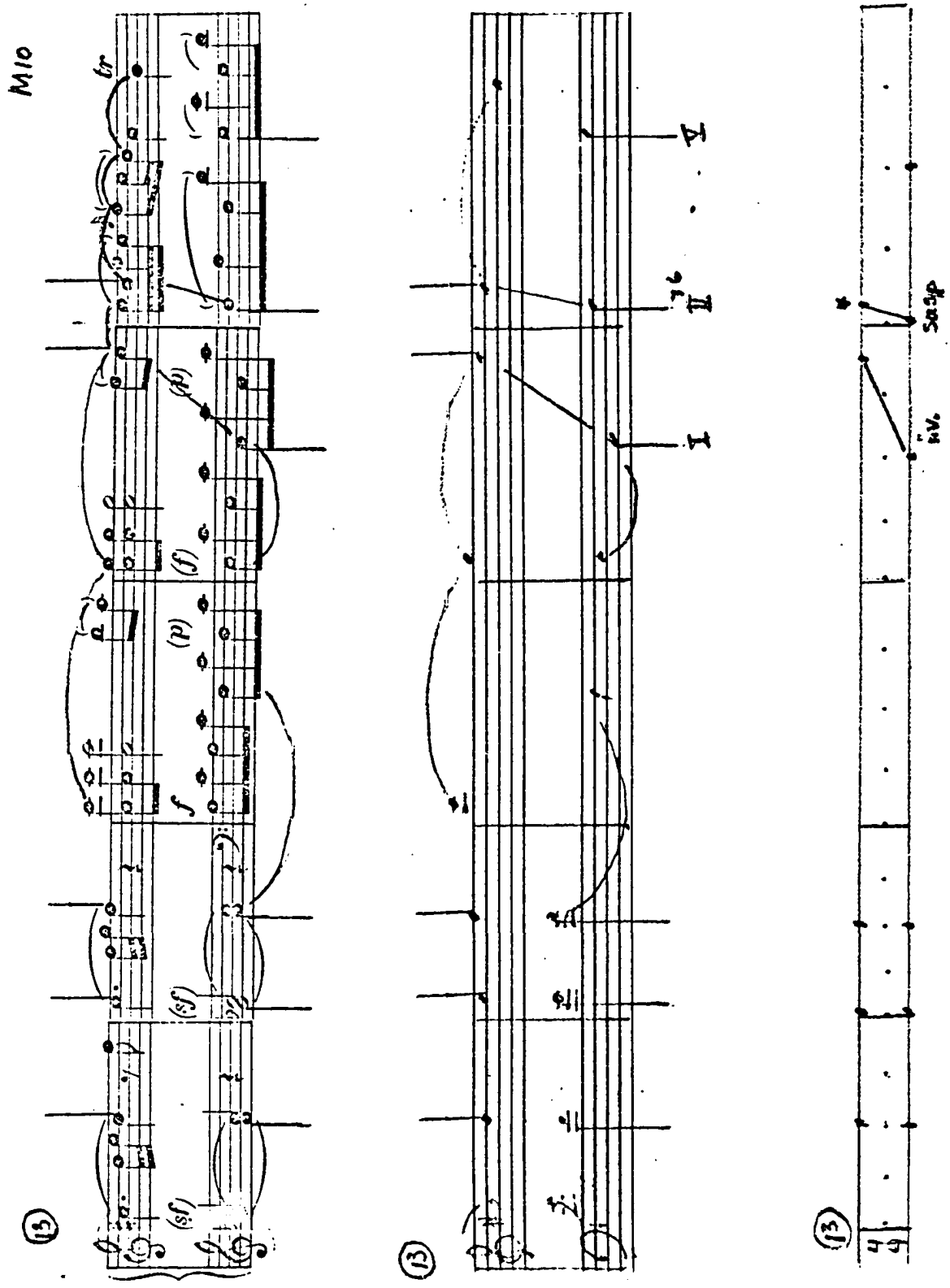

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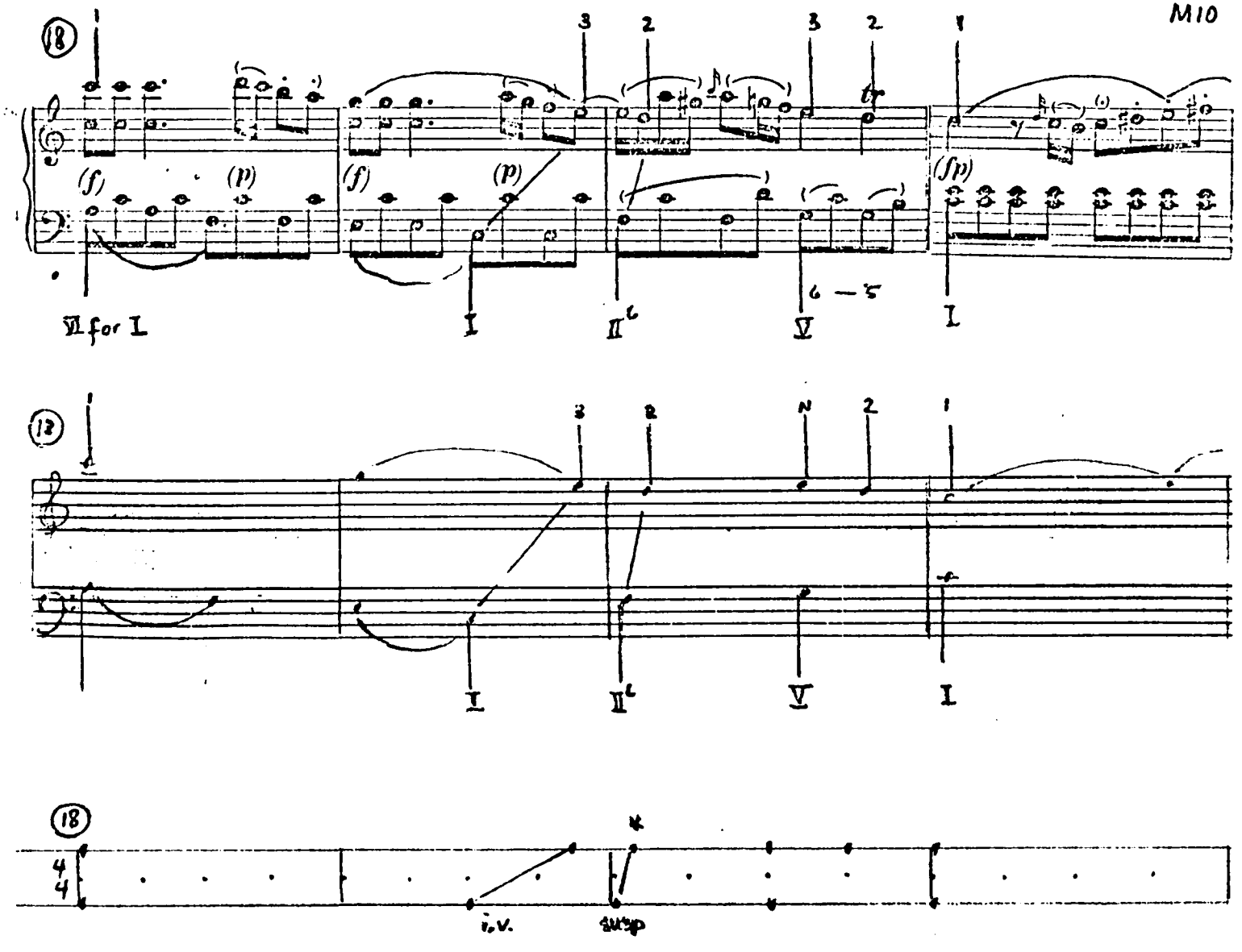

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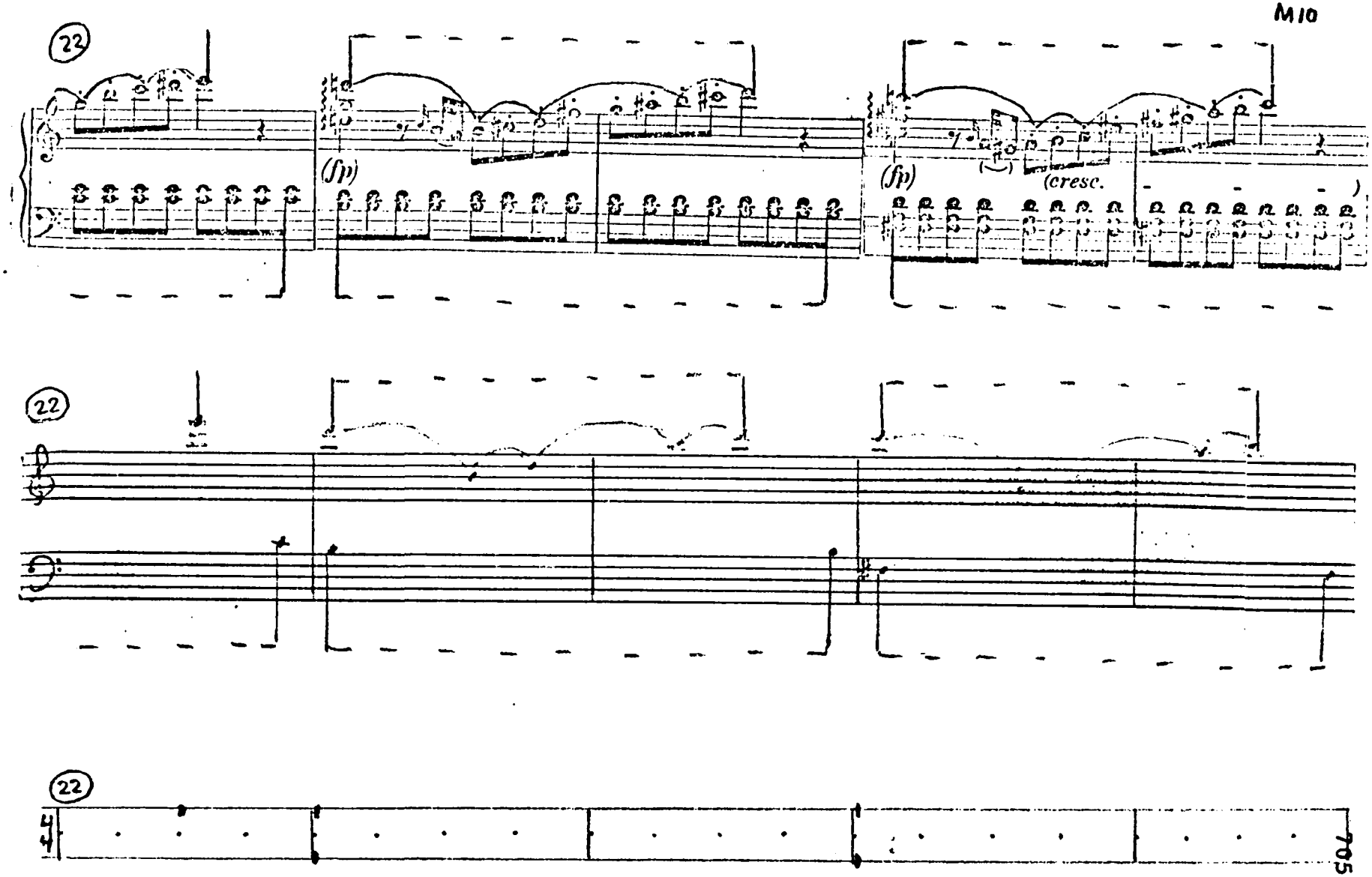

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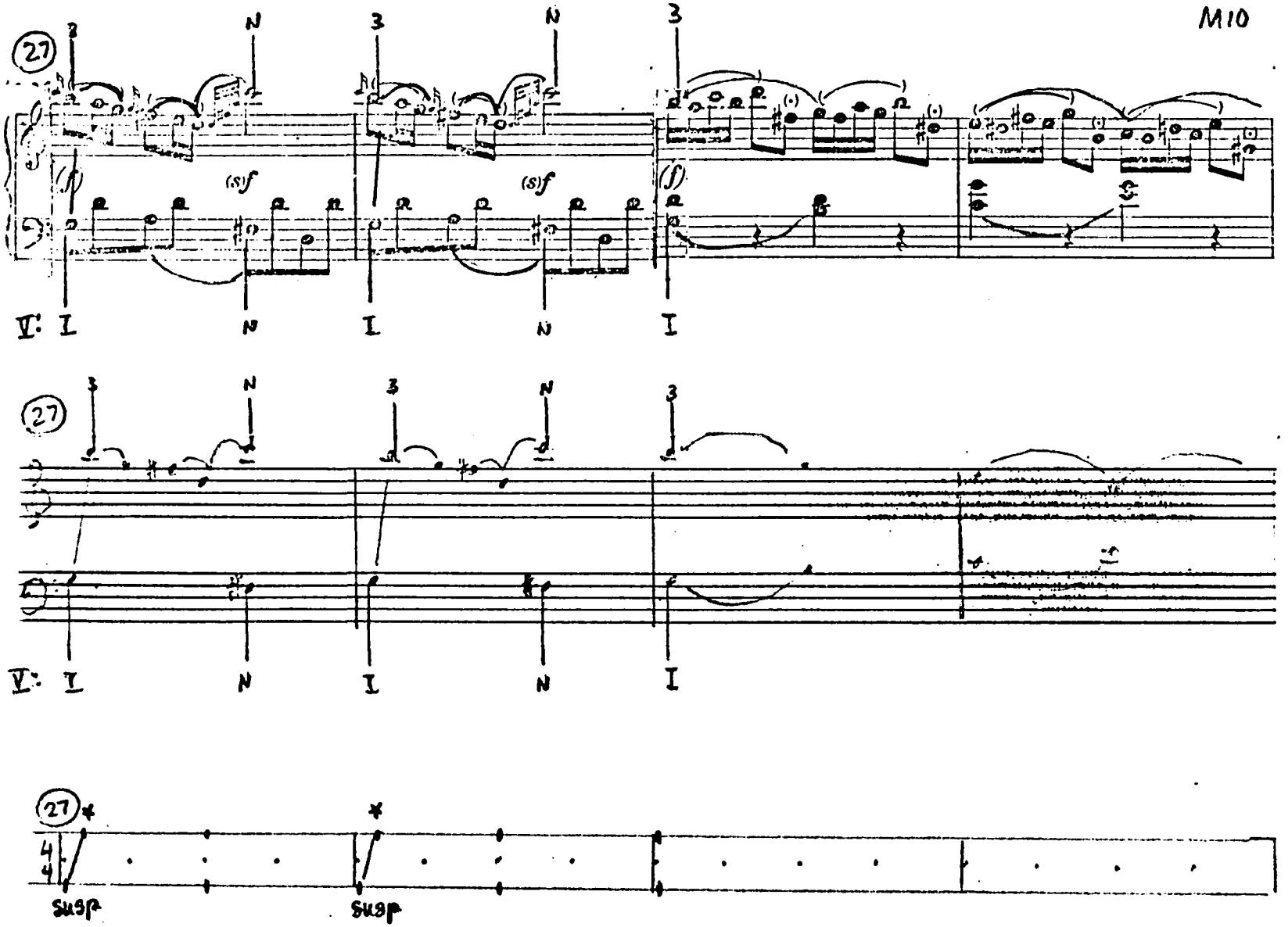

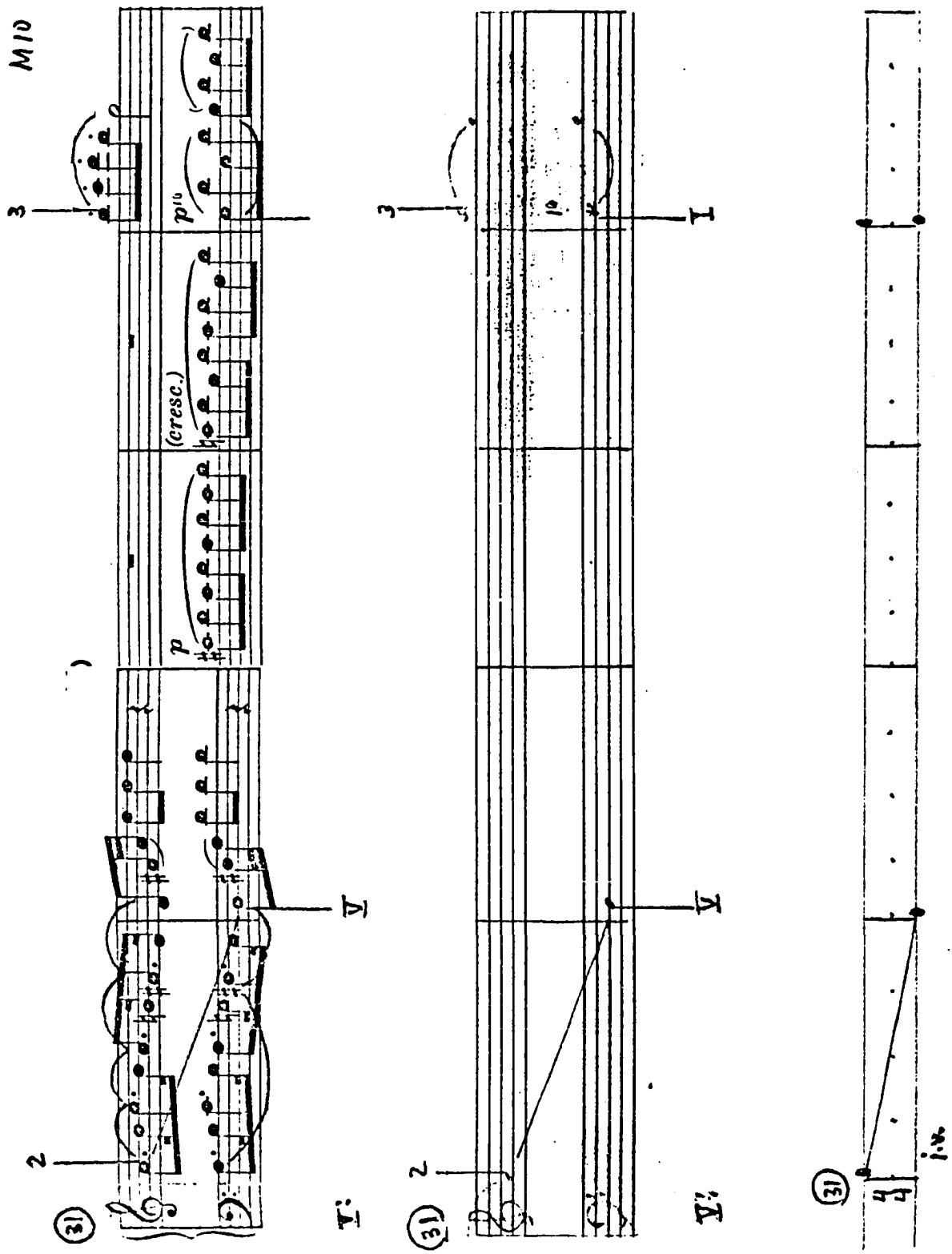

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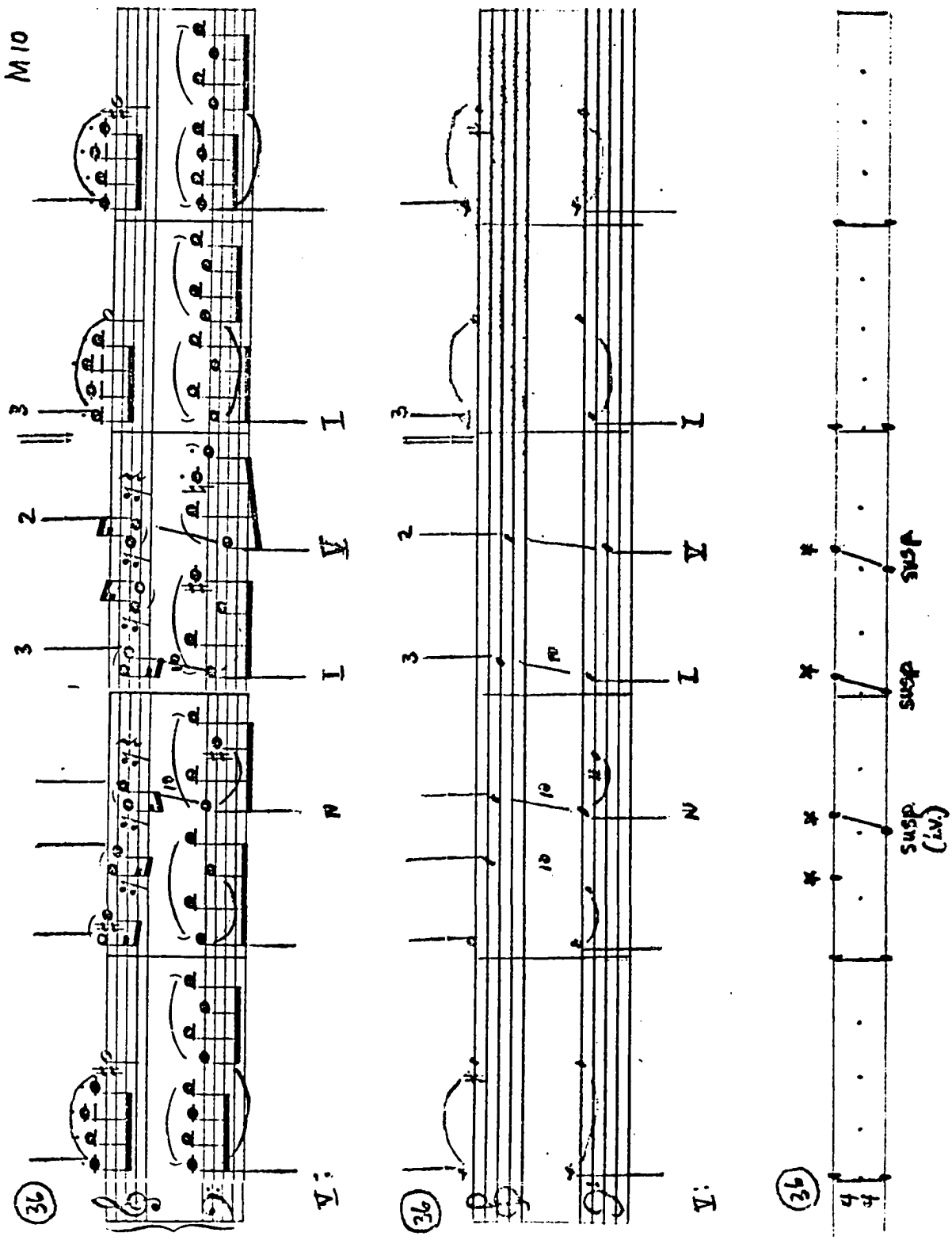

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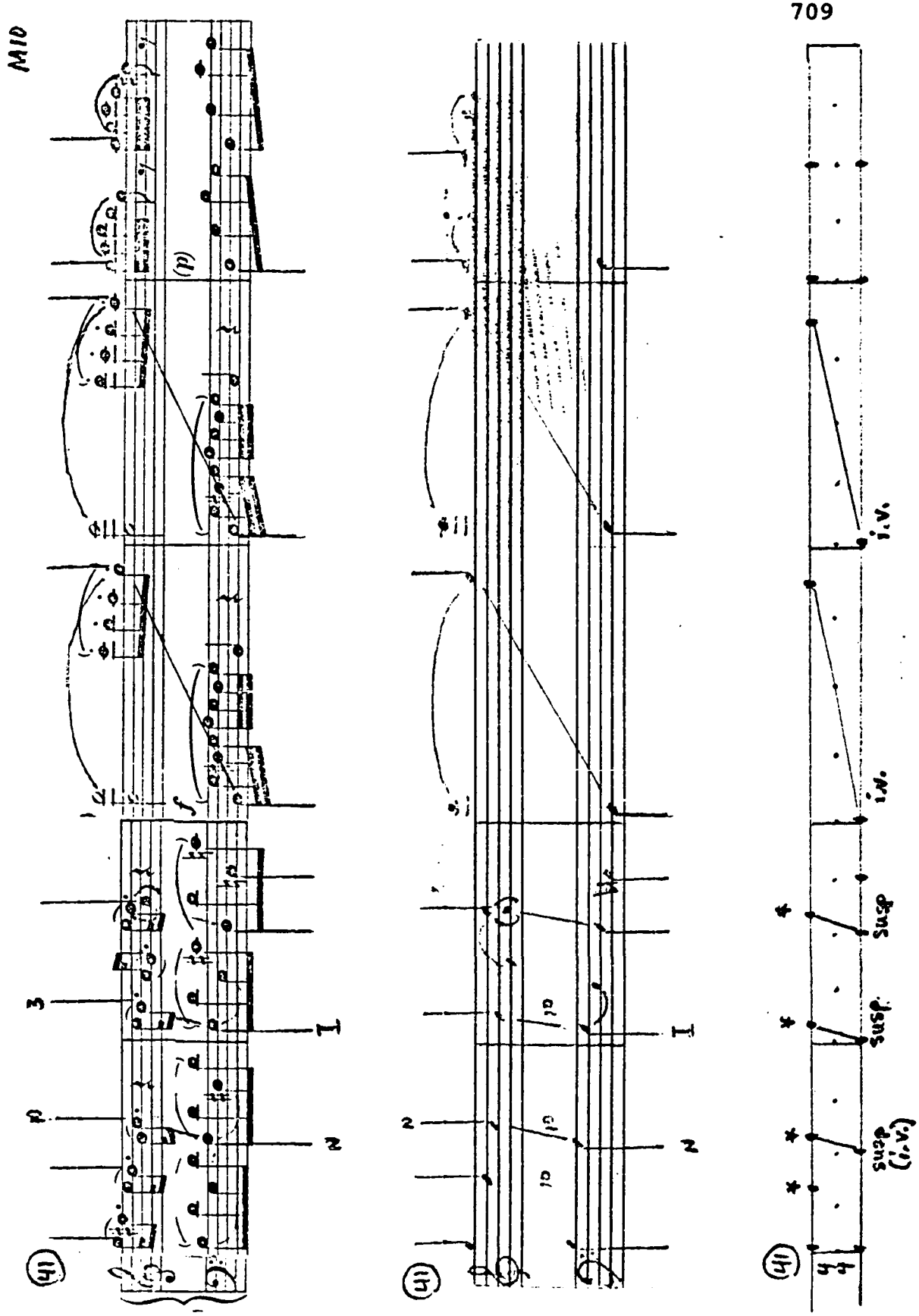

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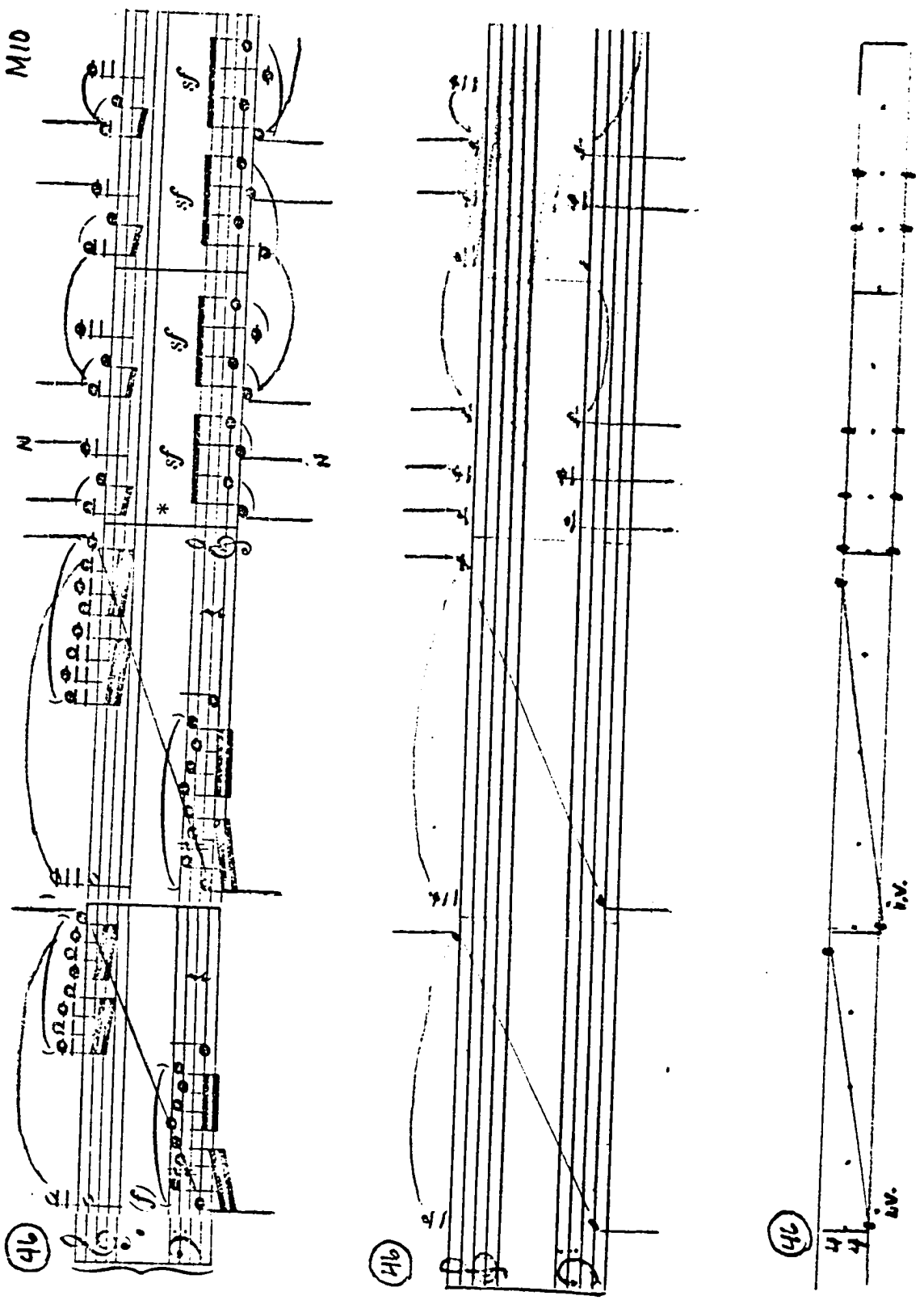

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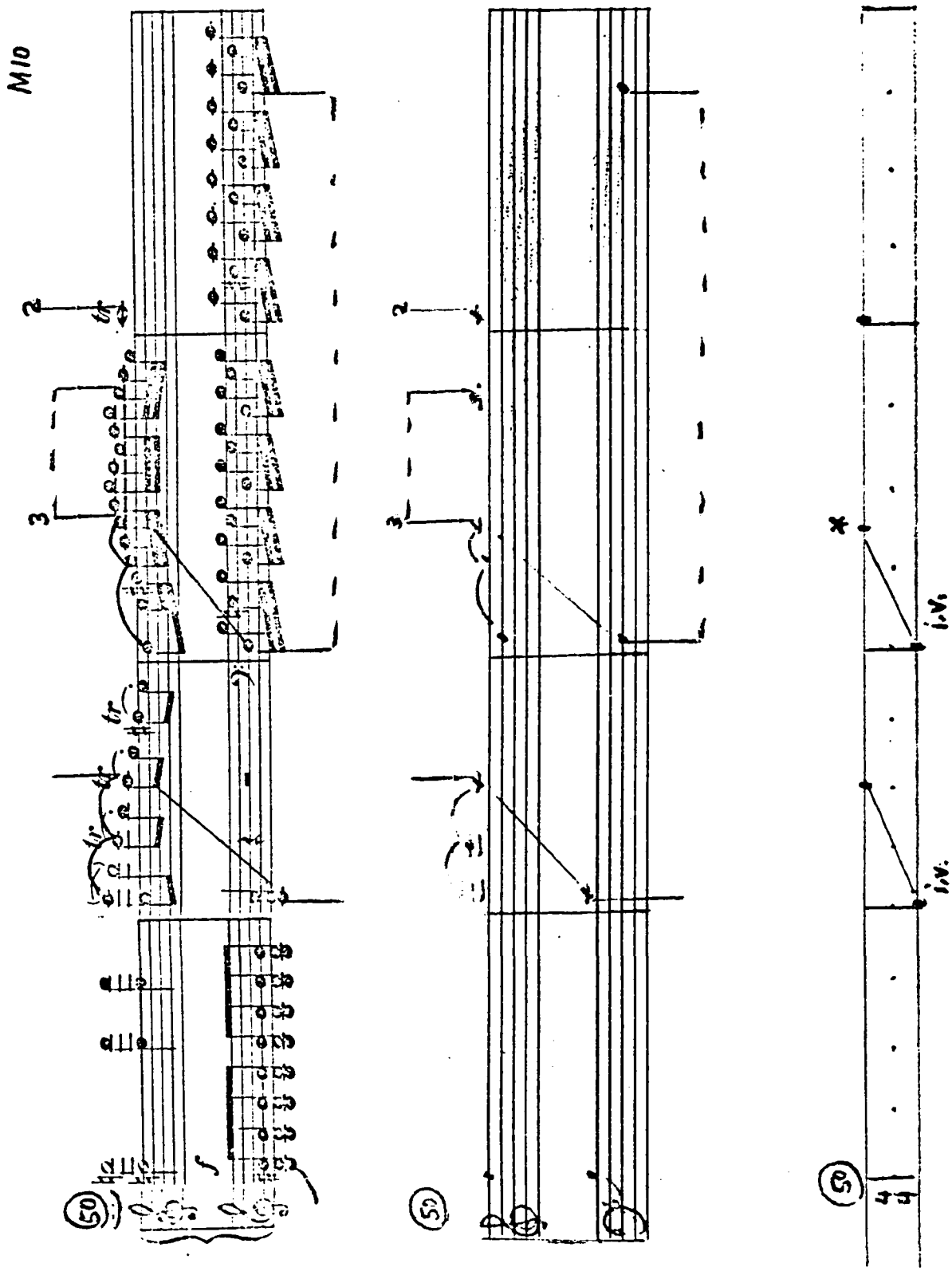

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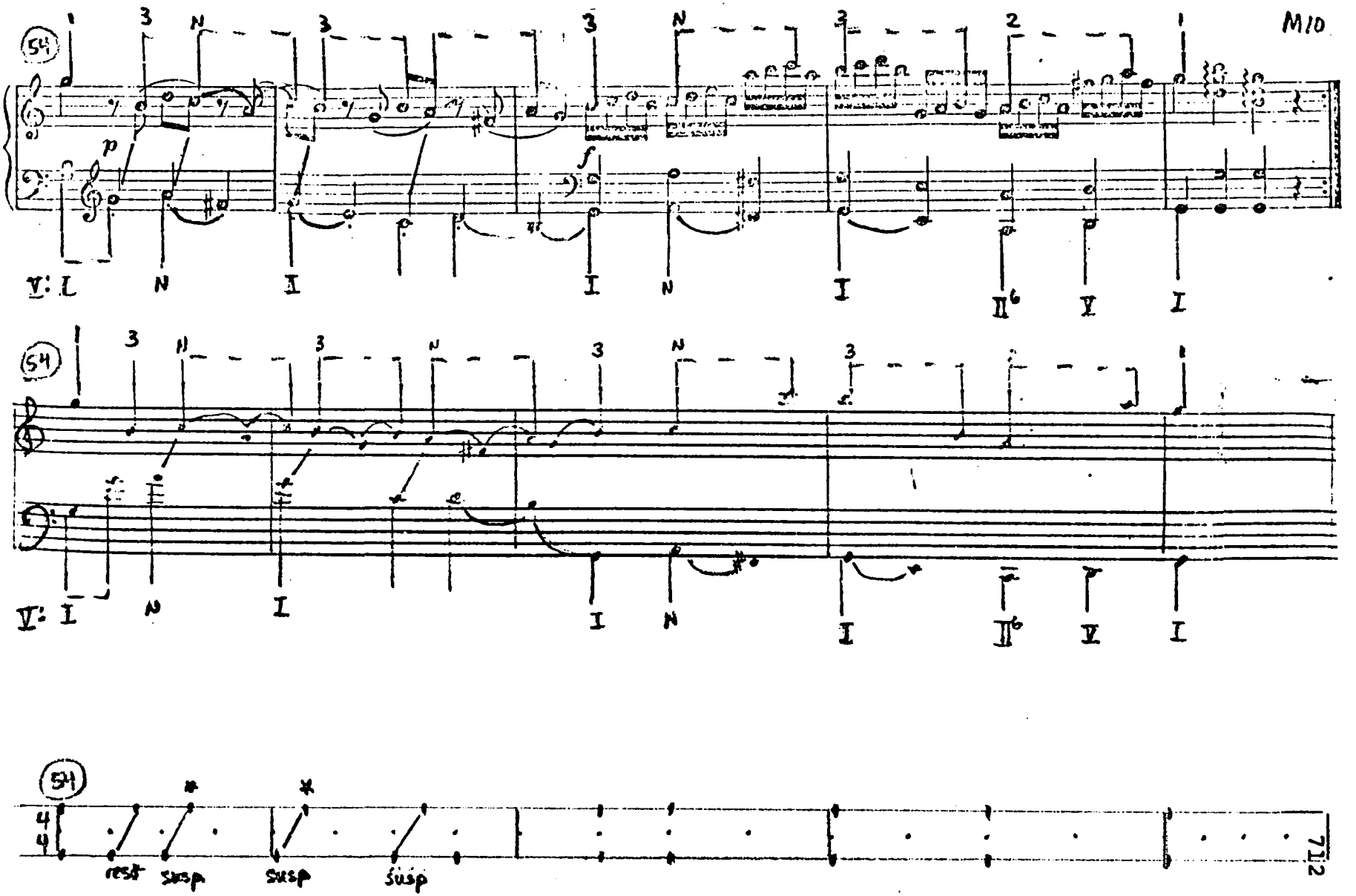

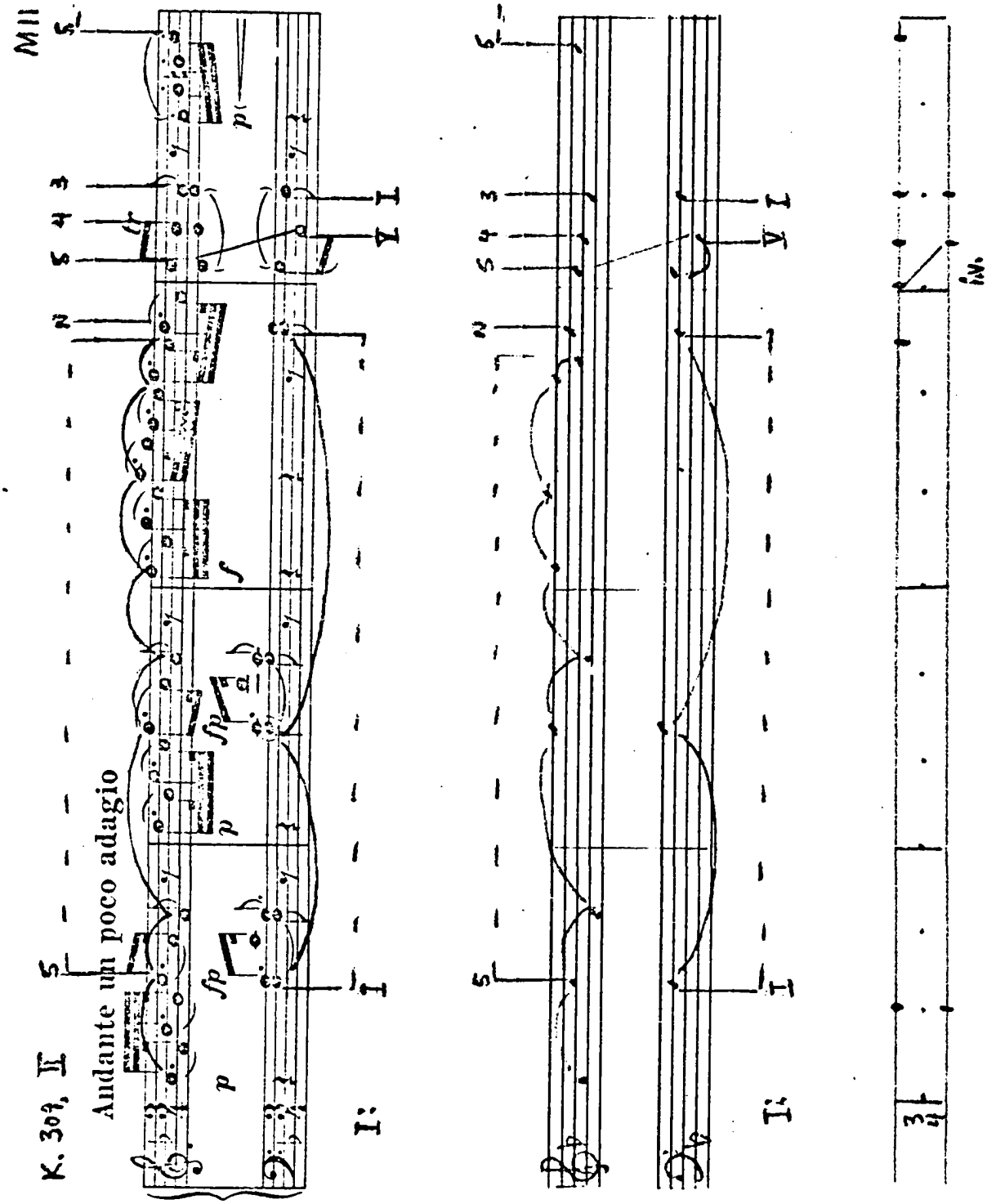

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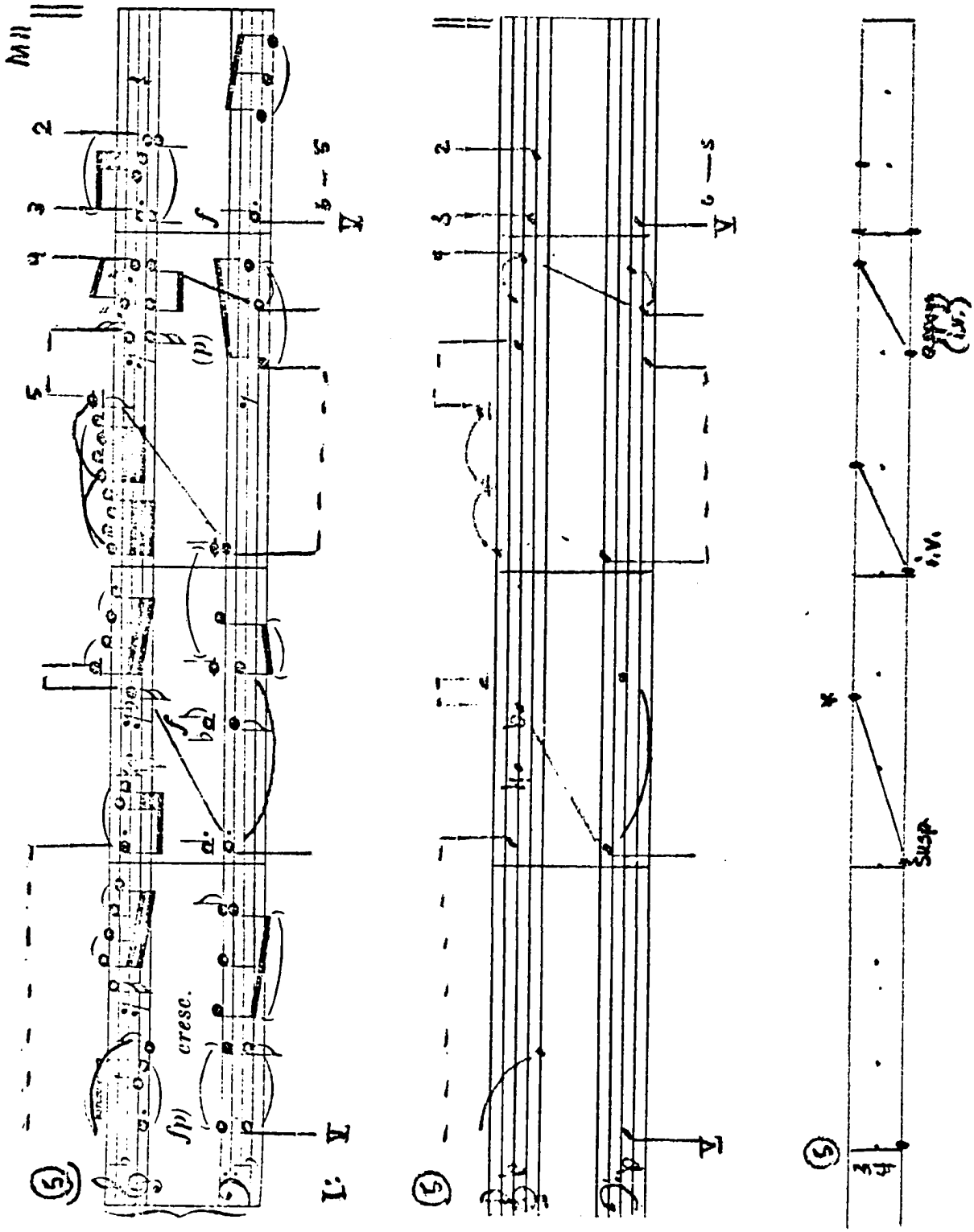

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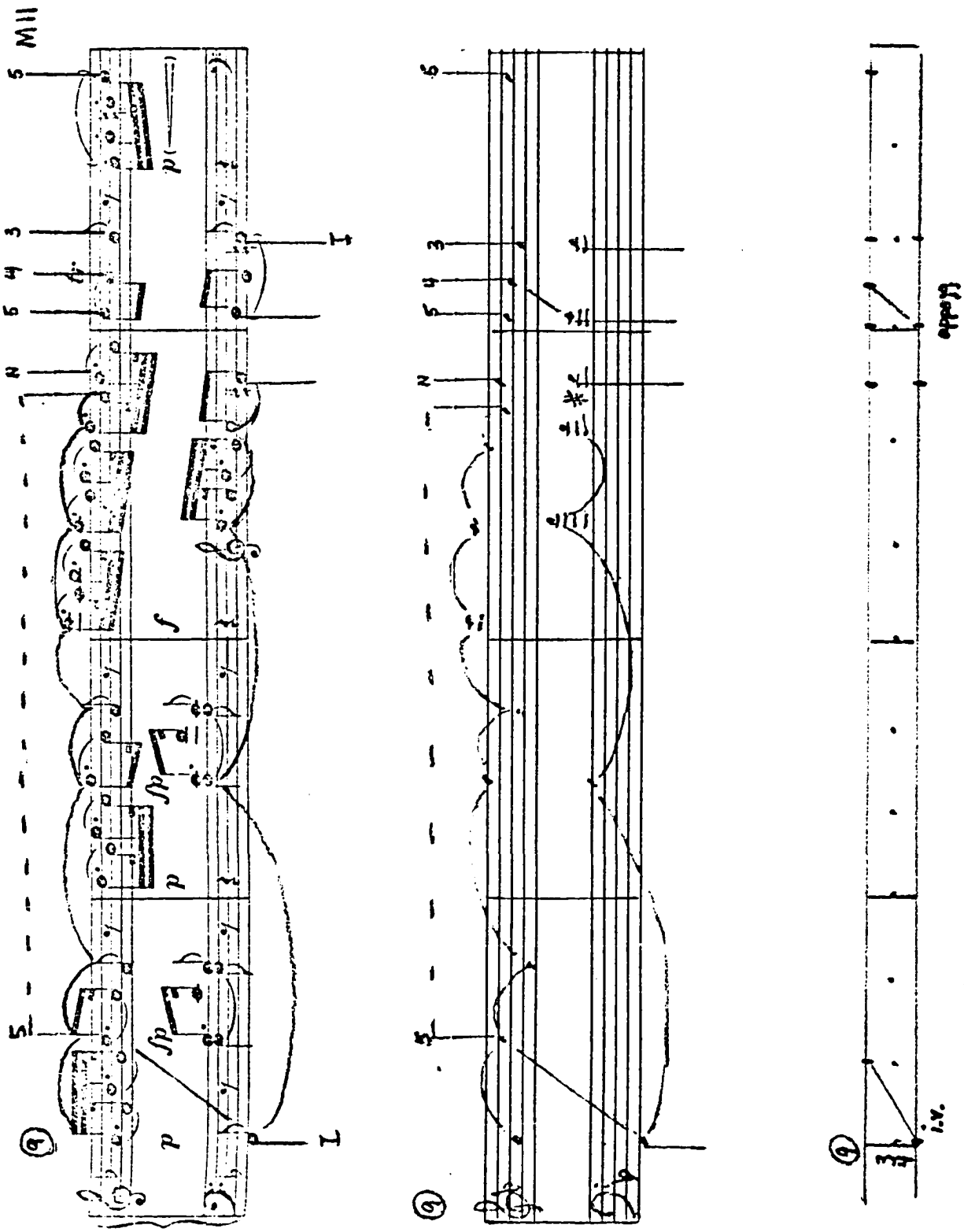

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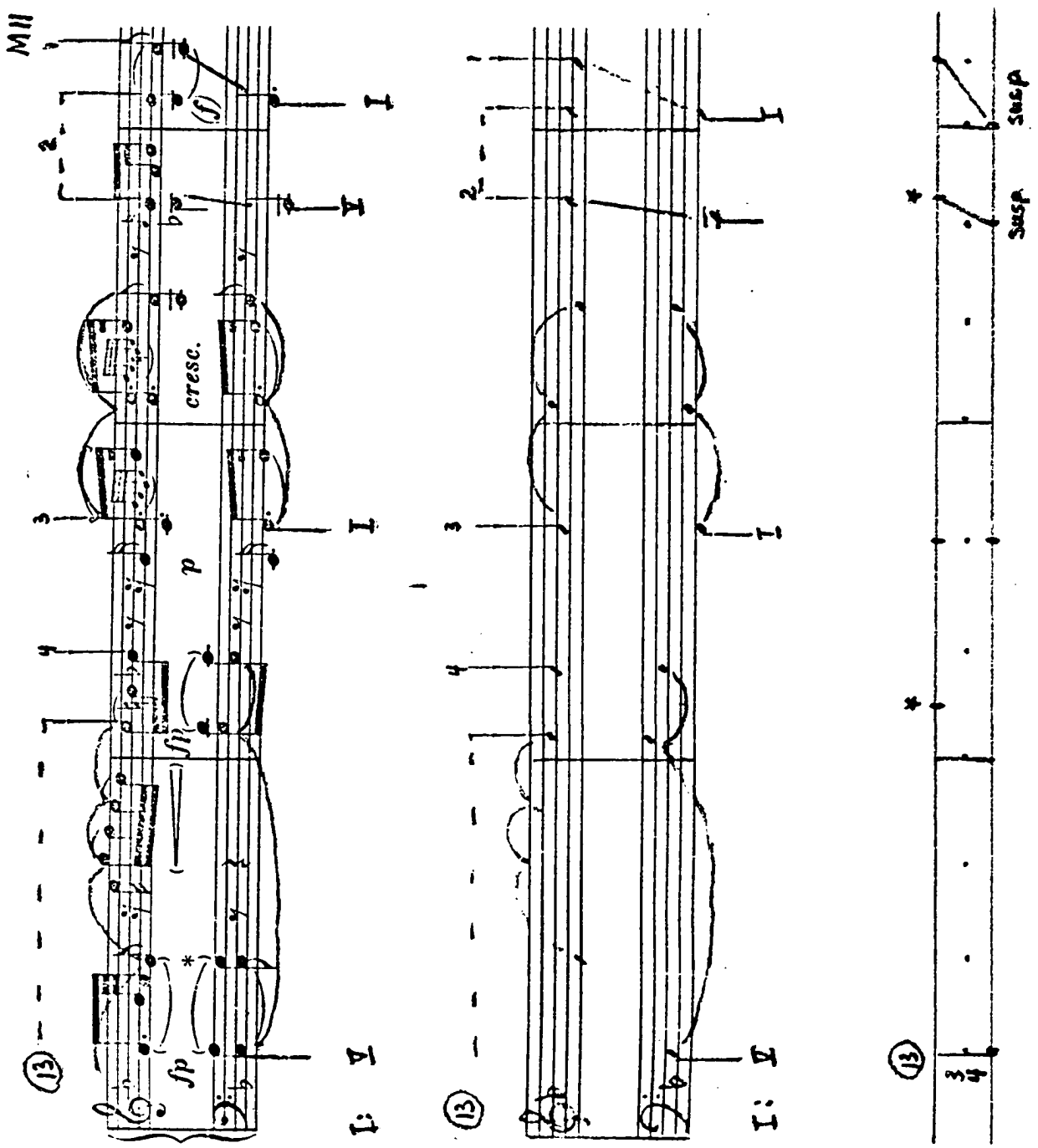

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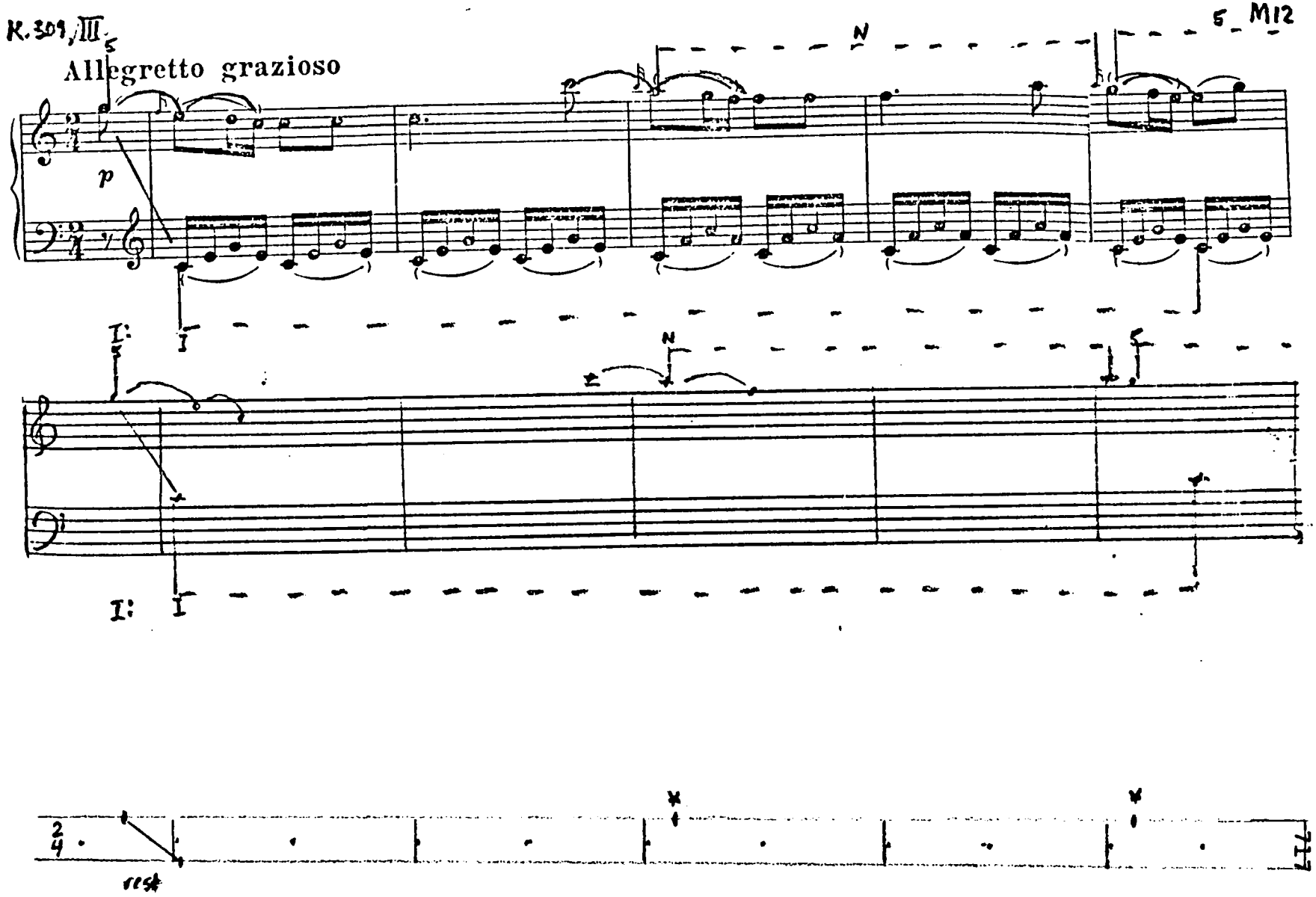

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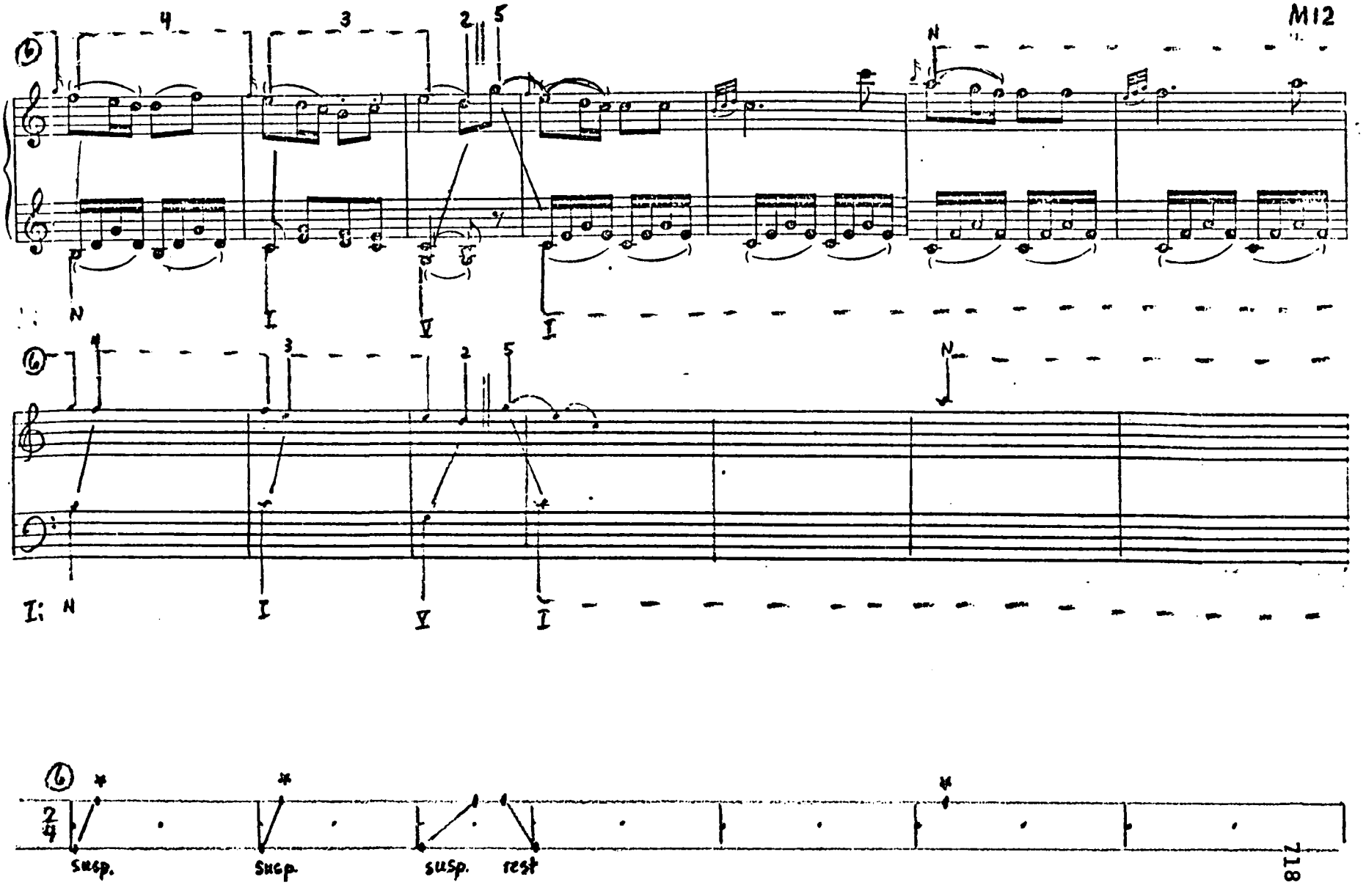

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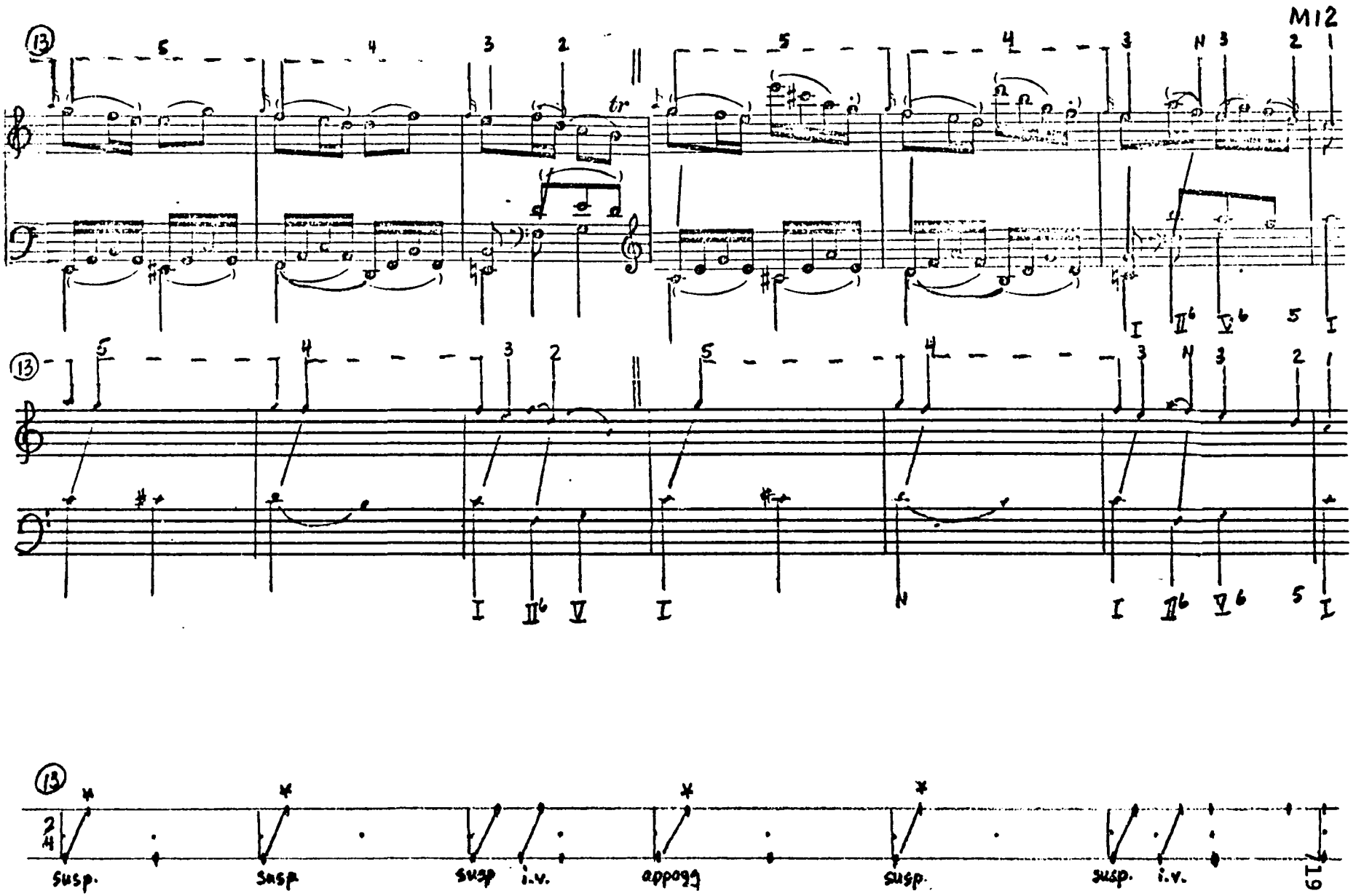

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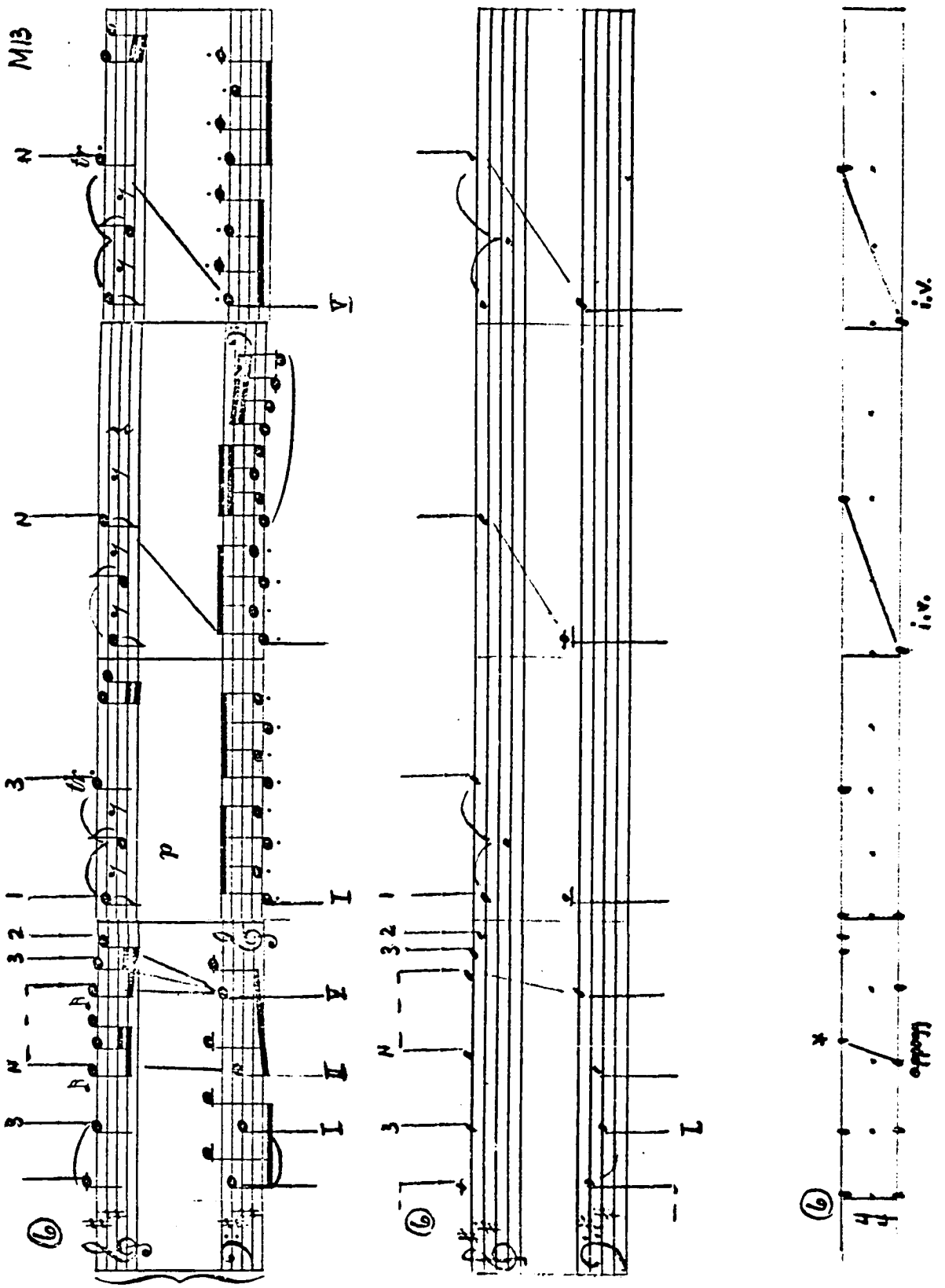
K. 311, I

Allegro con spirito



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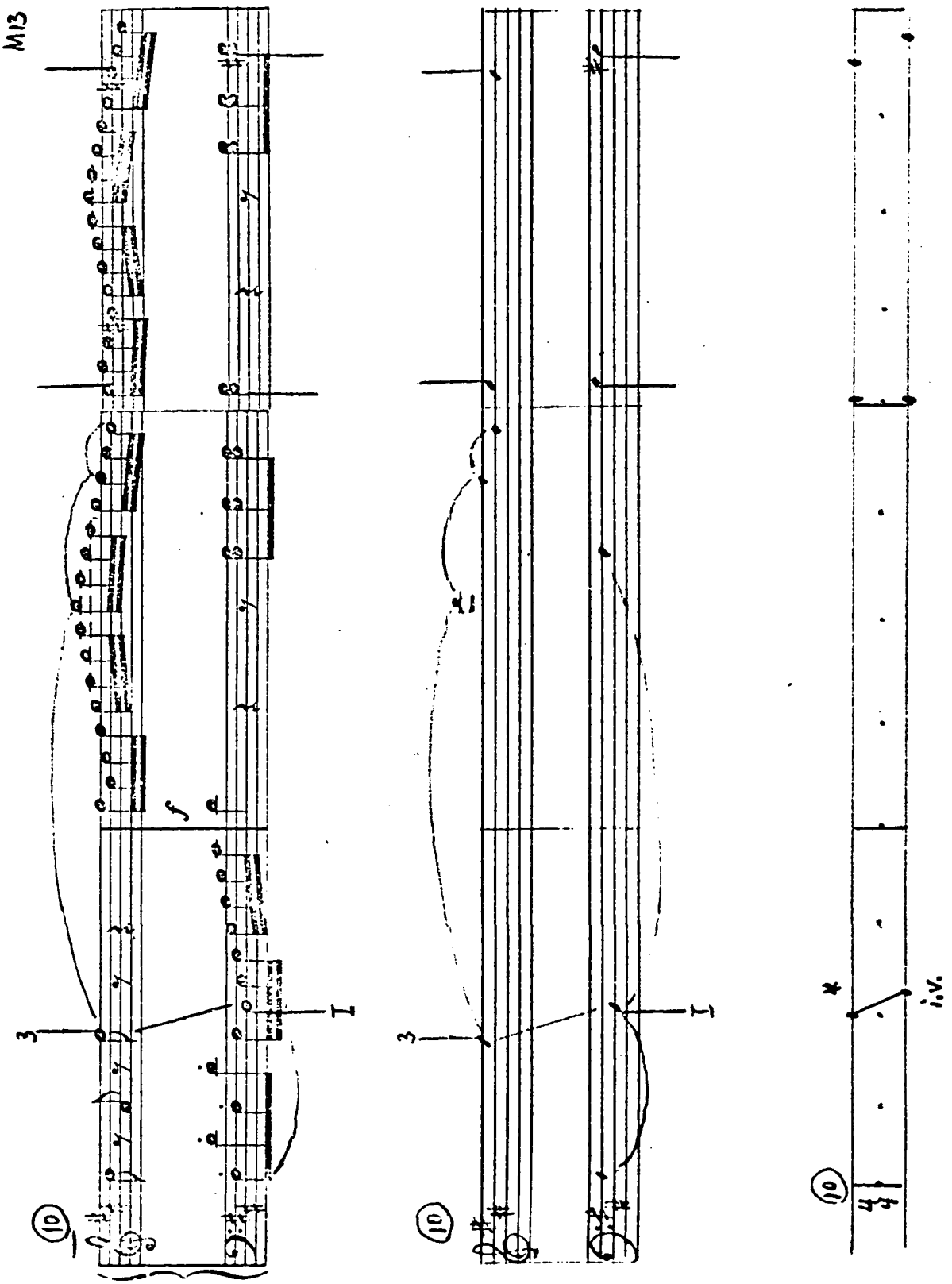

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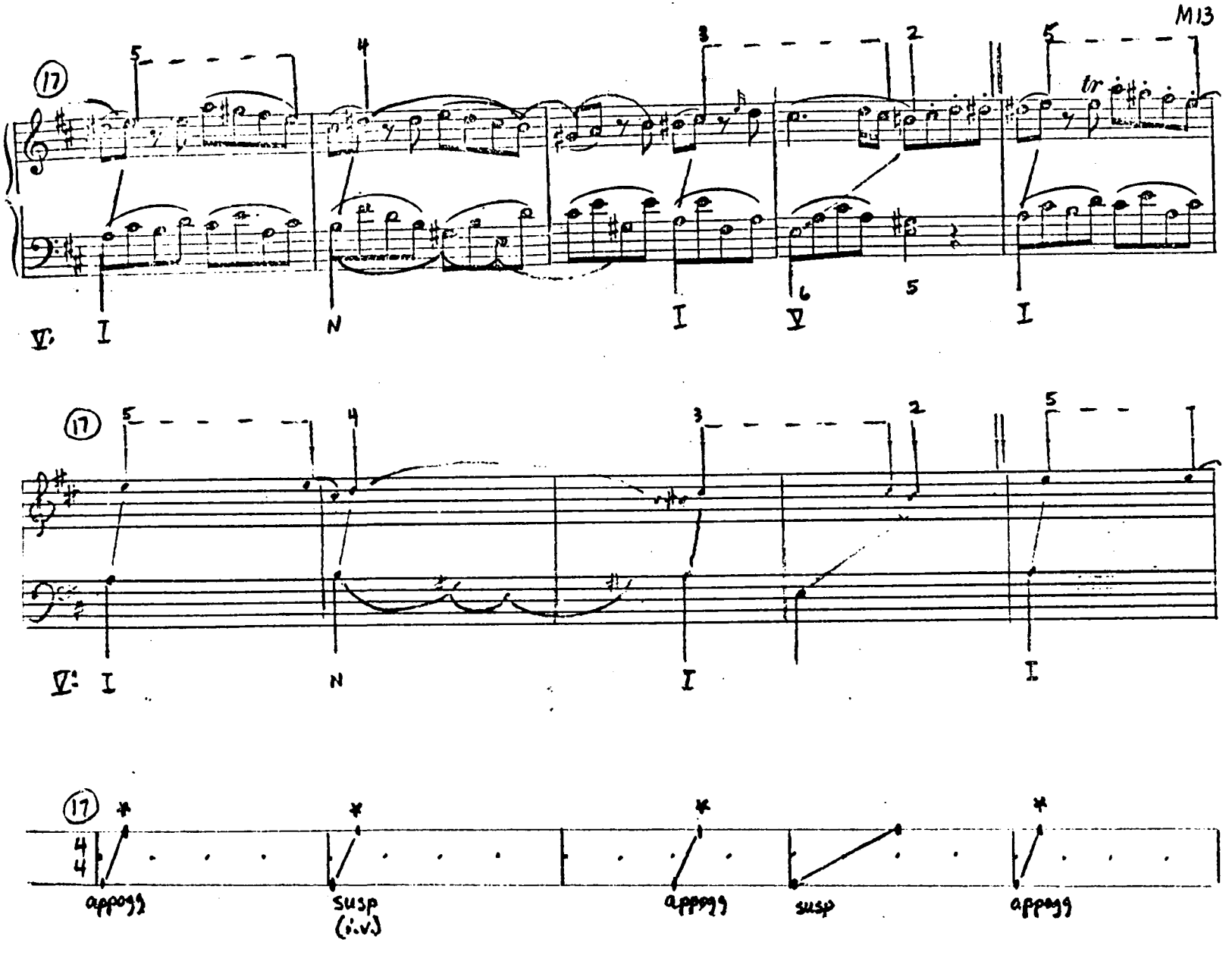

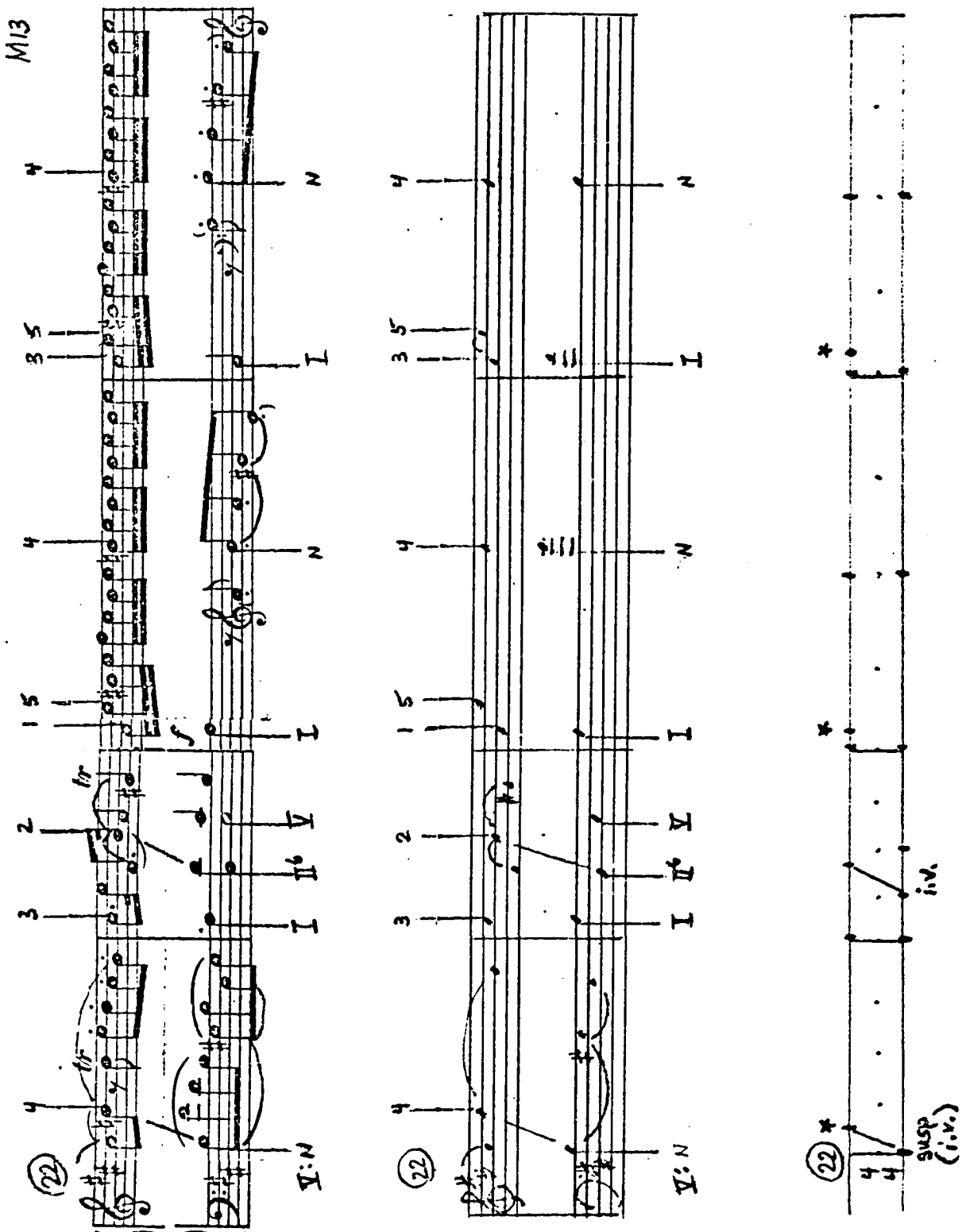

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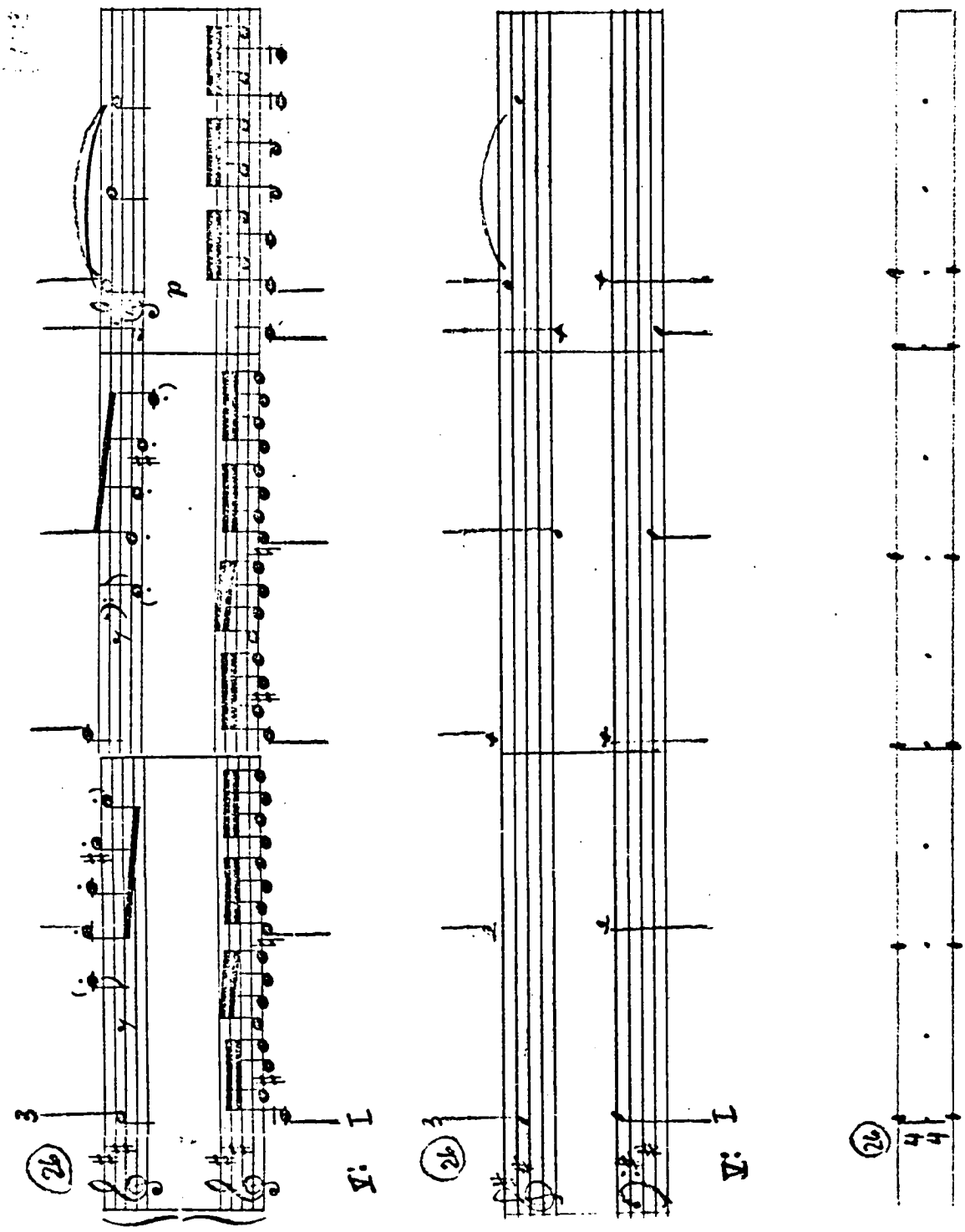

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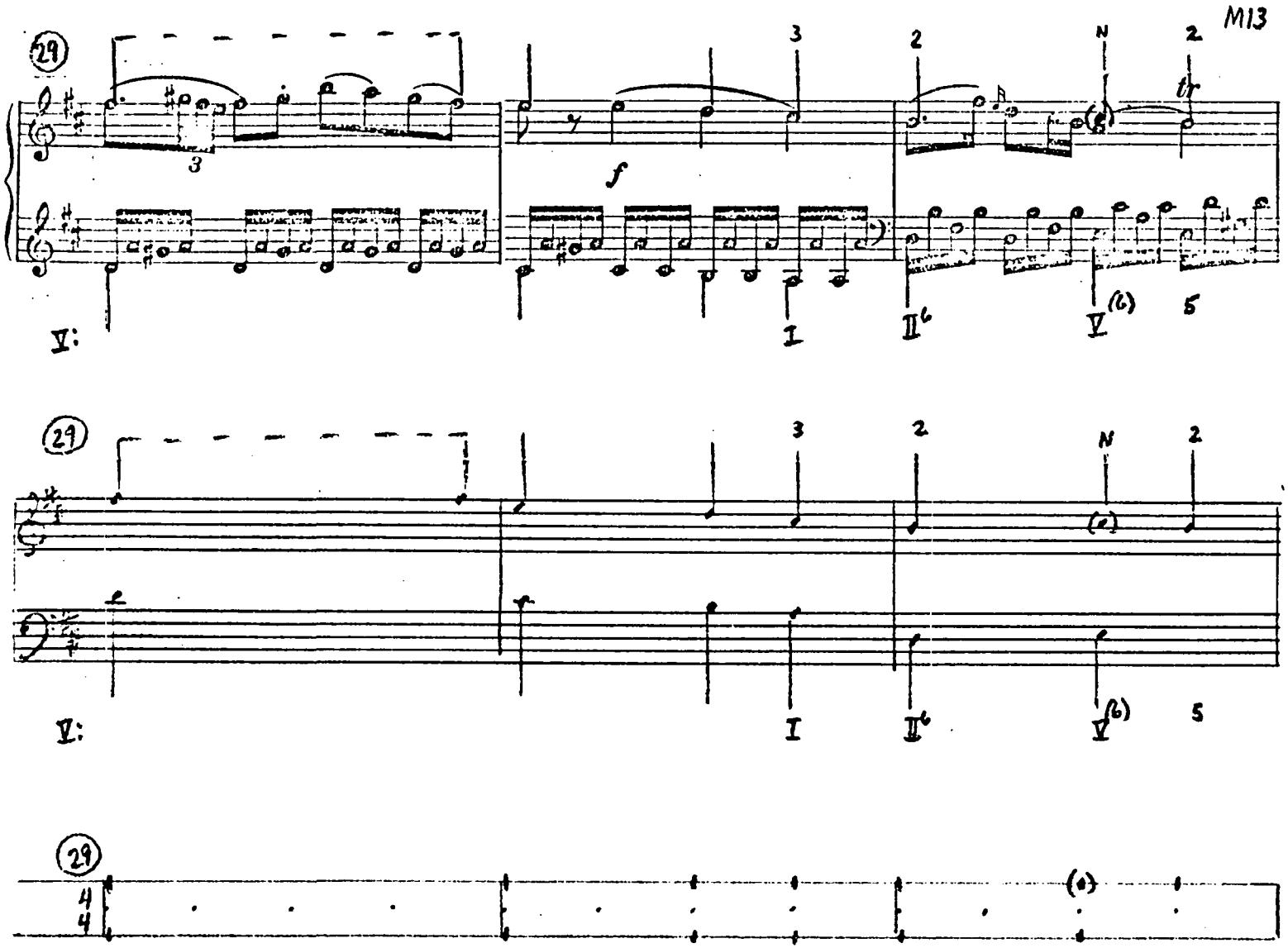

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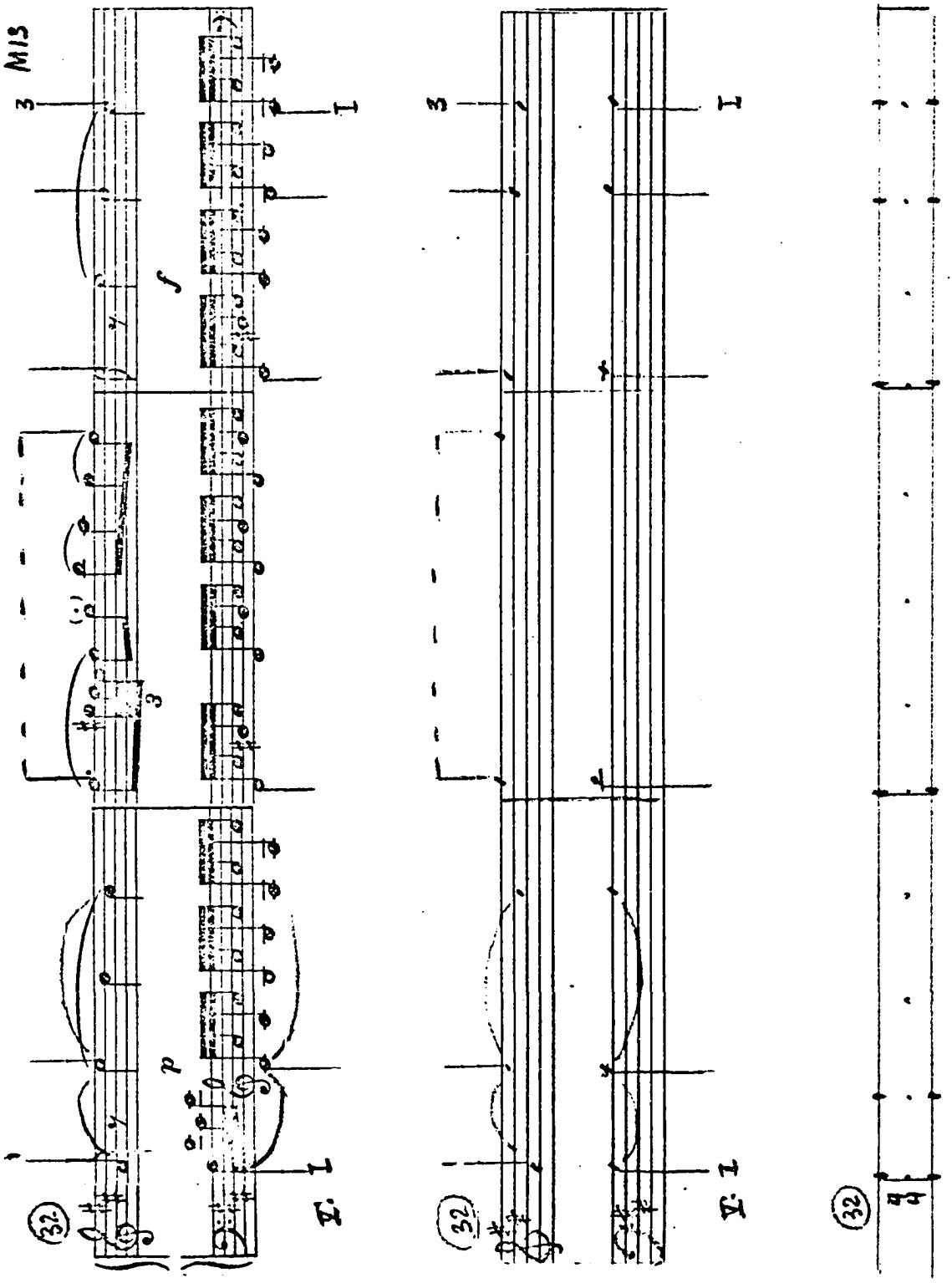

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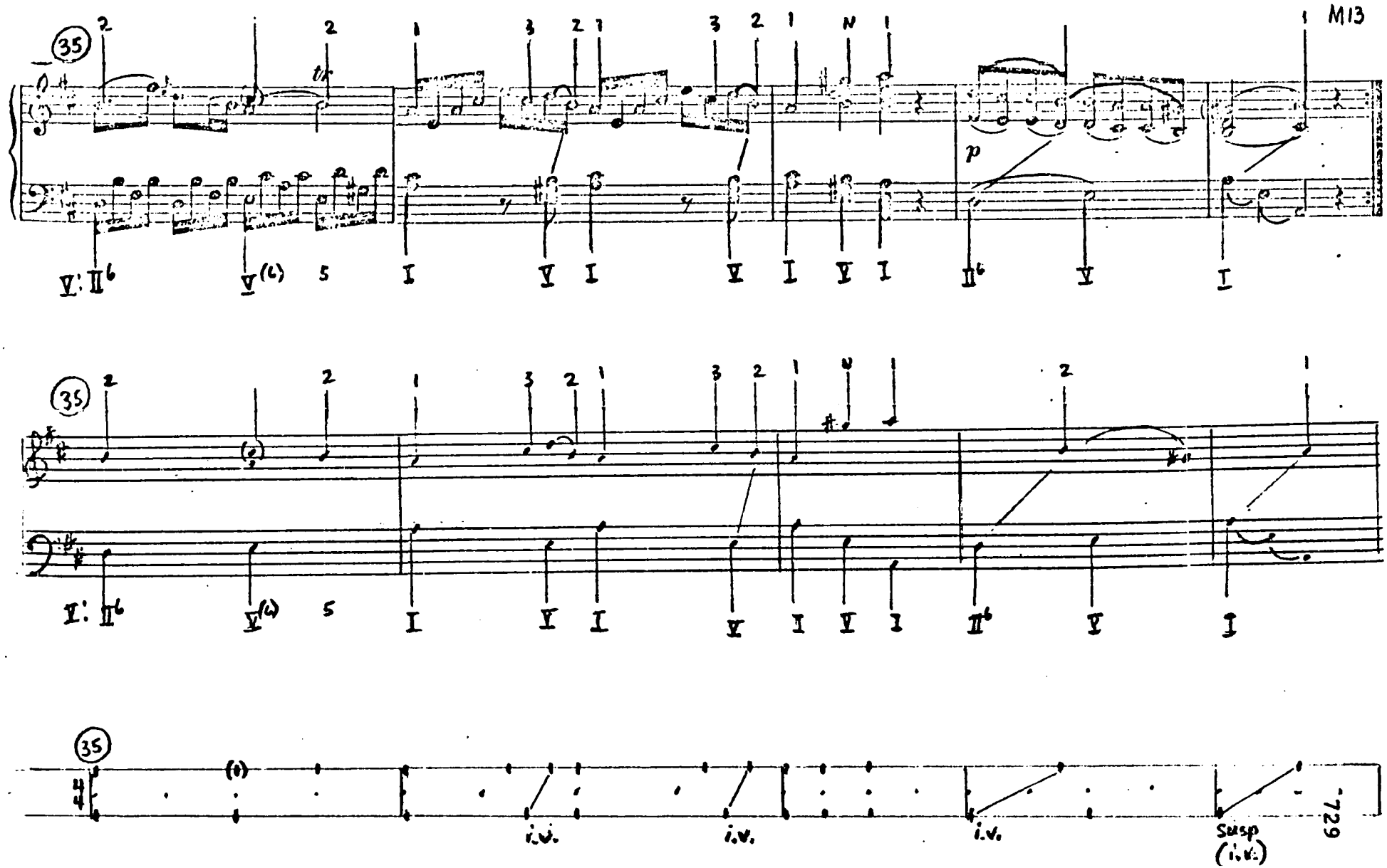

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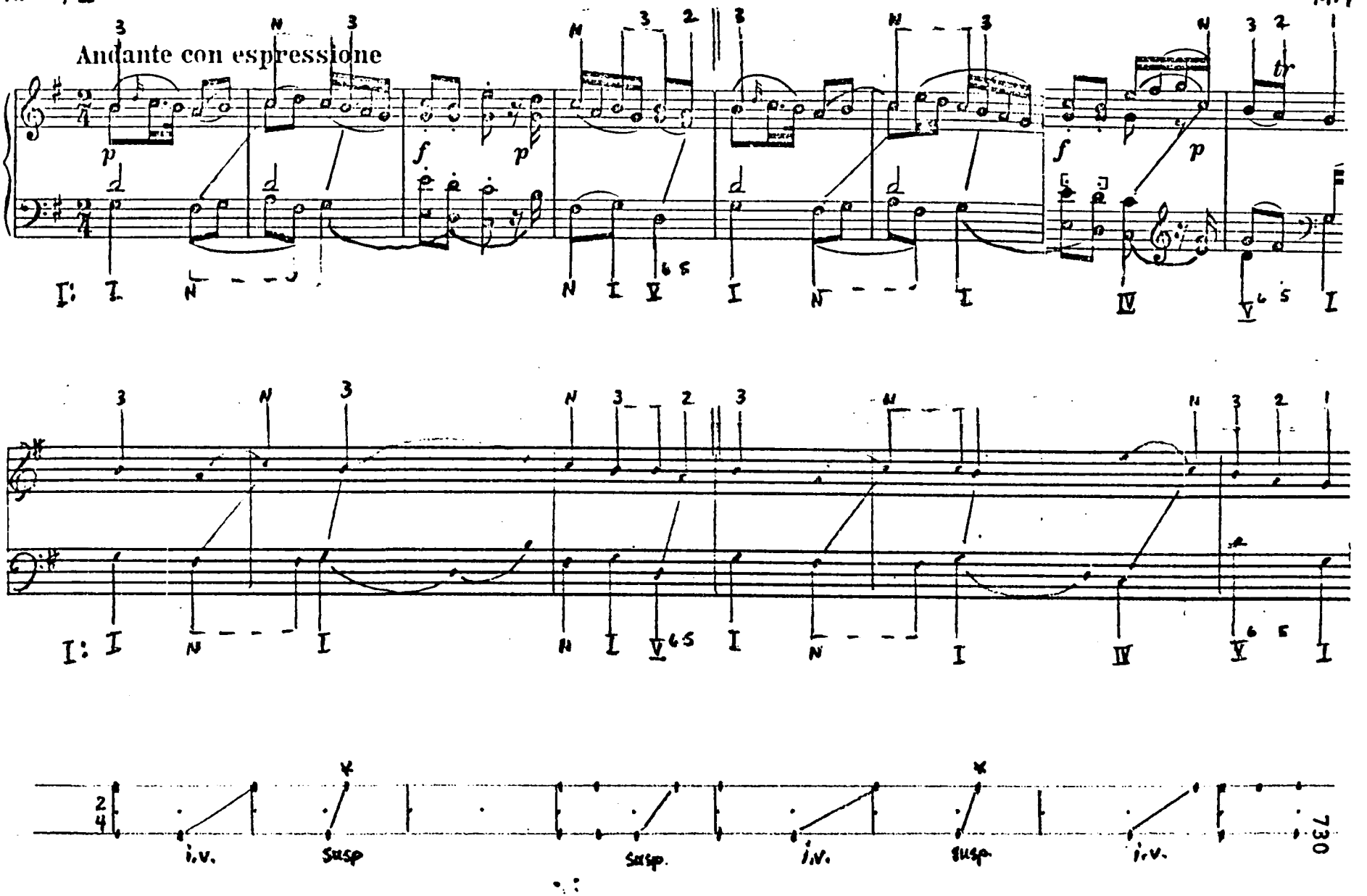
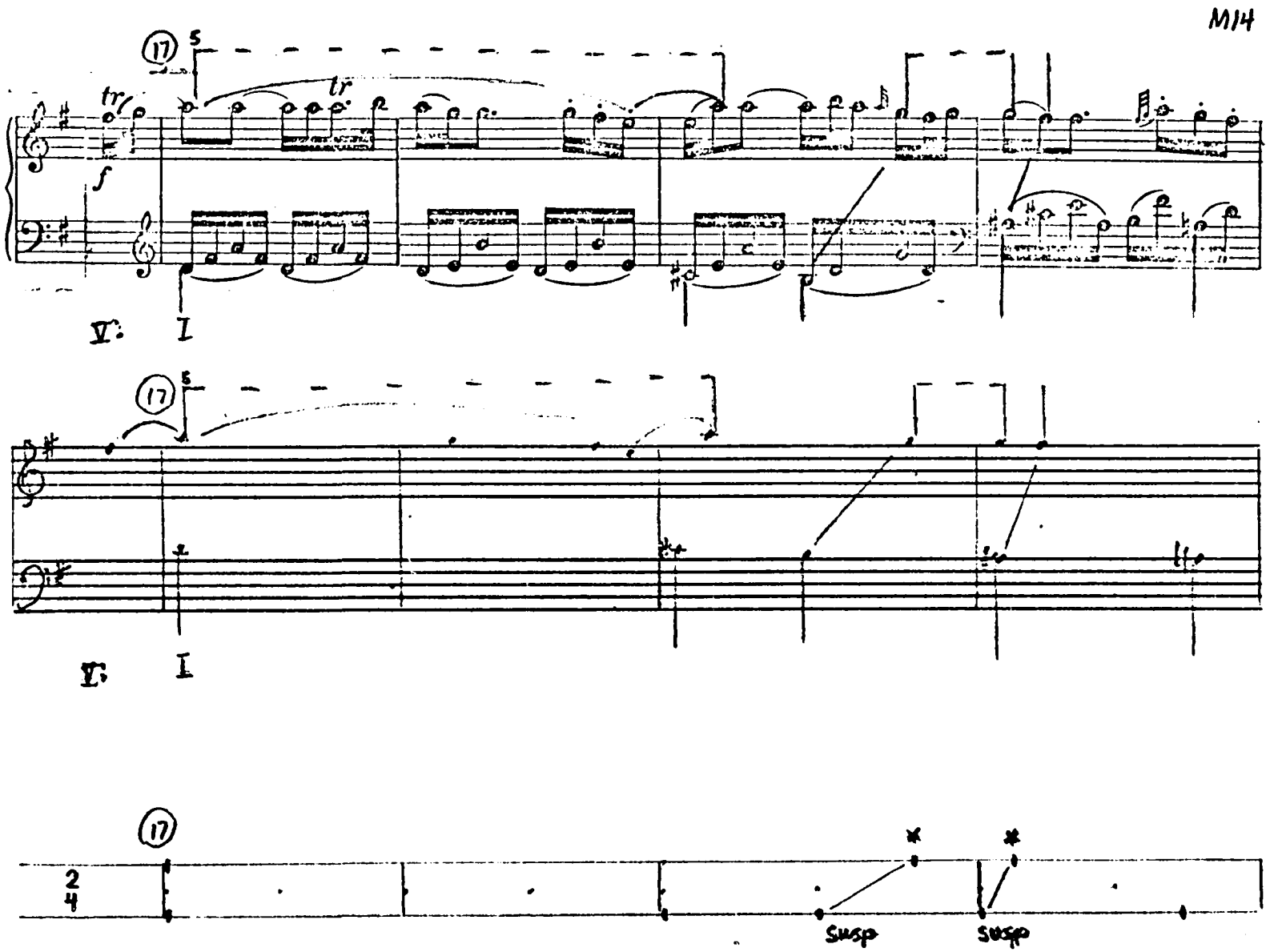
K. 311, II

Andante con espressione





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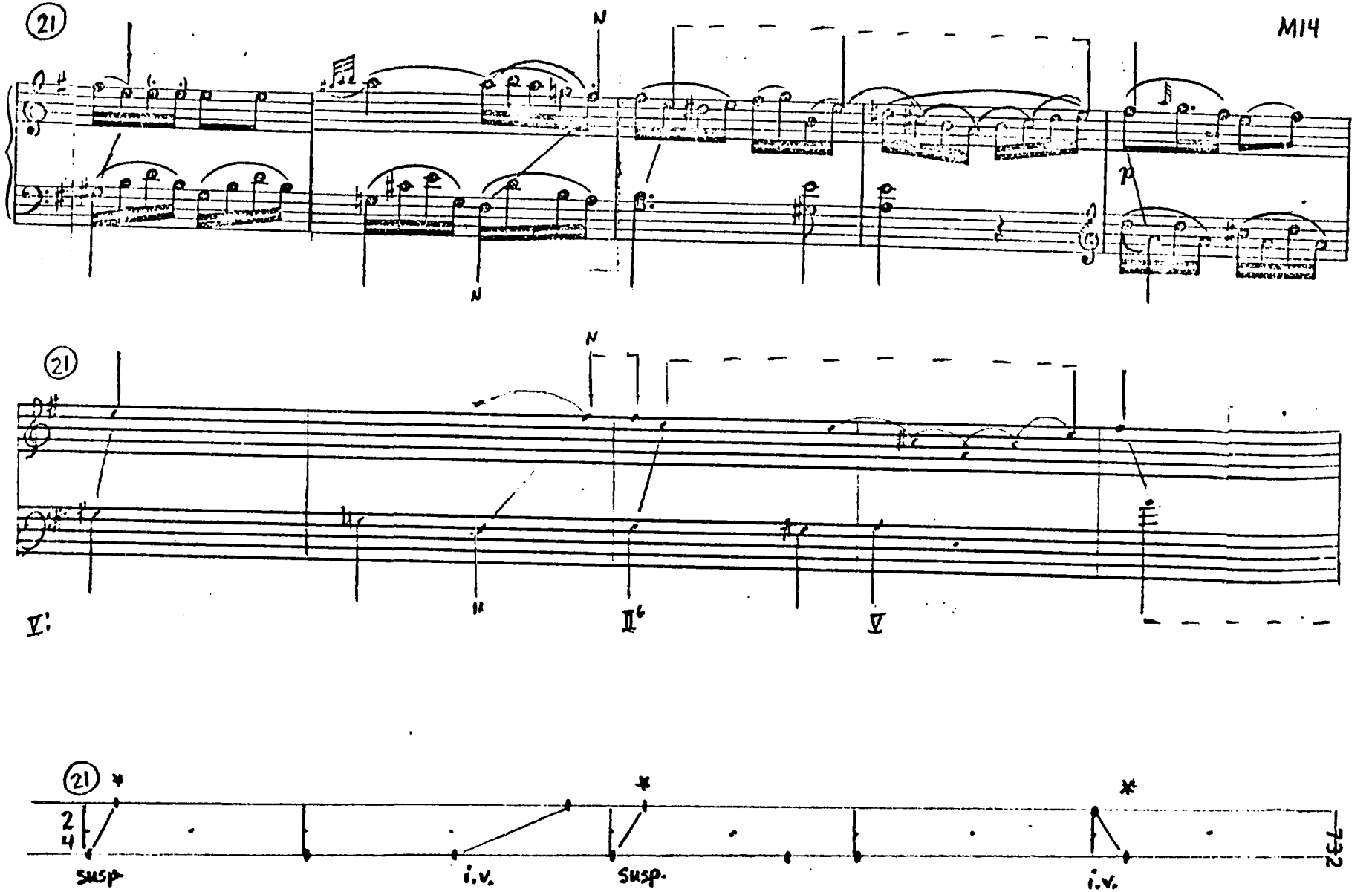

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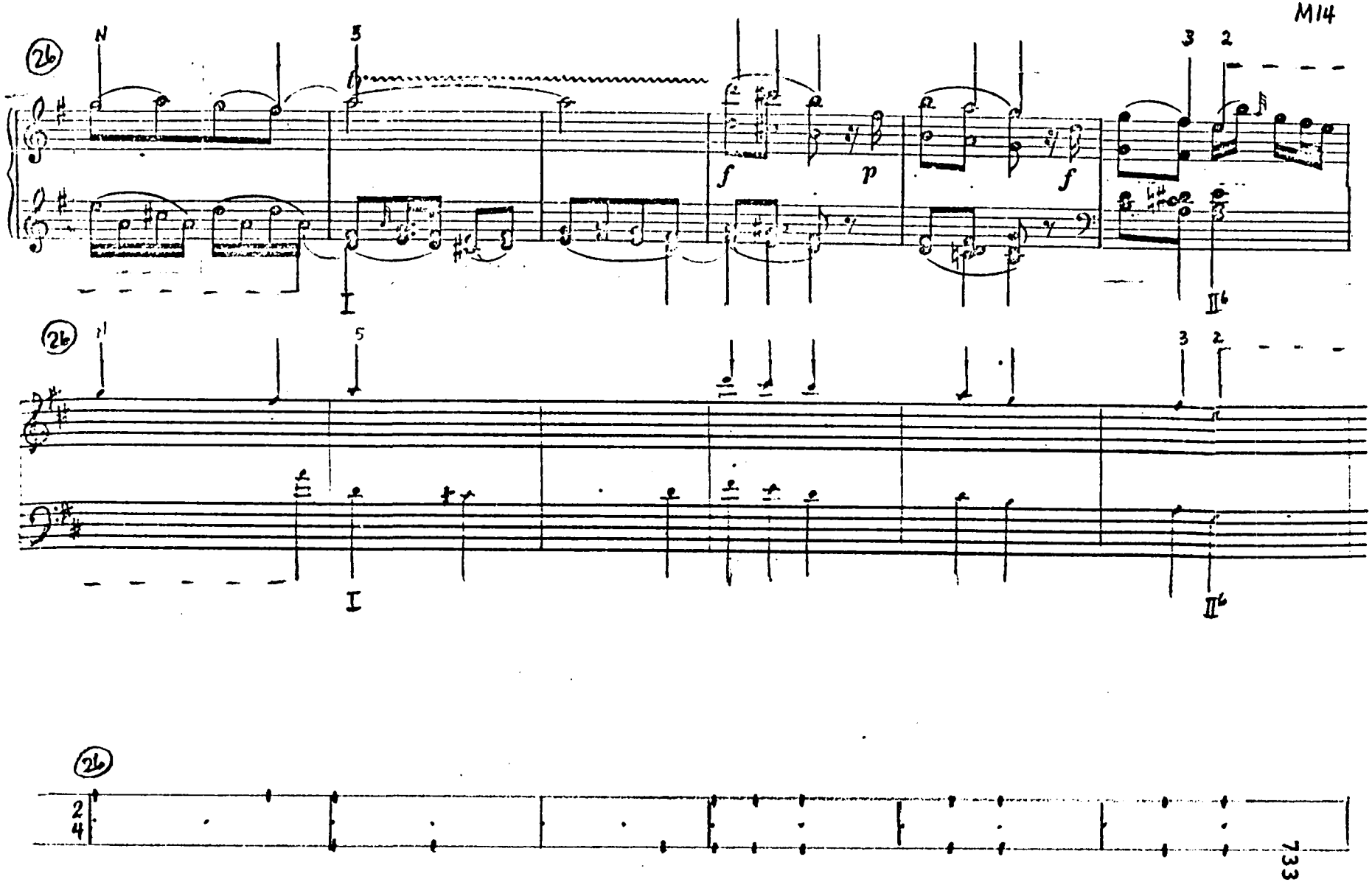

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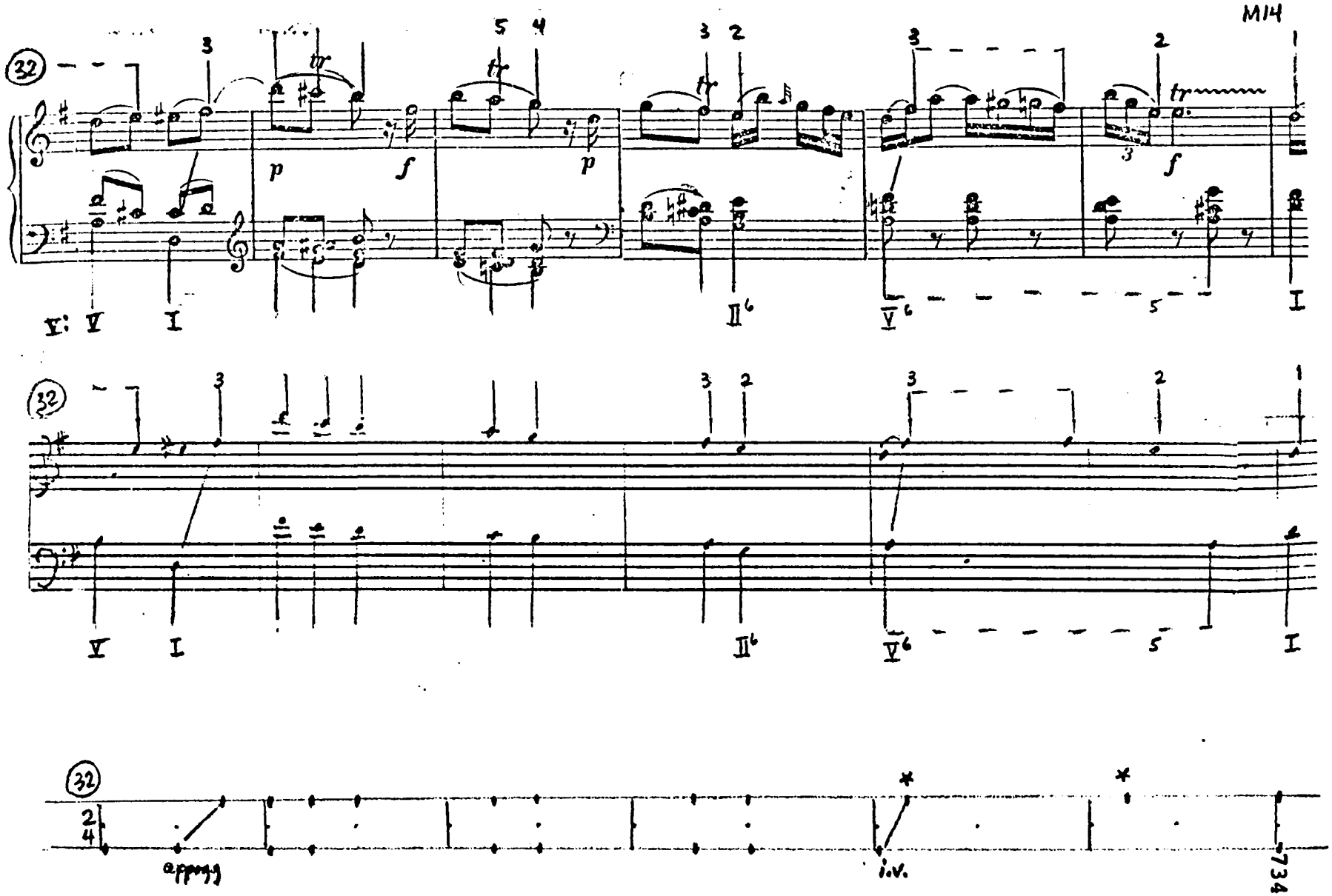

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K. 311, III

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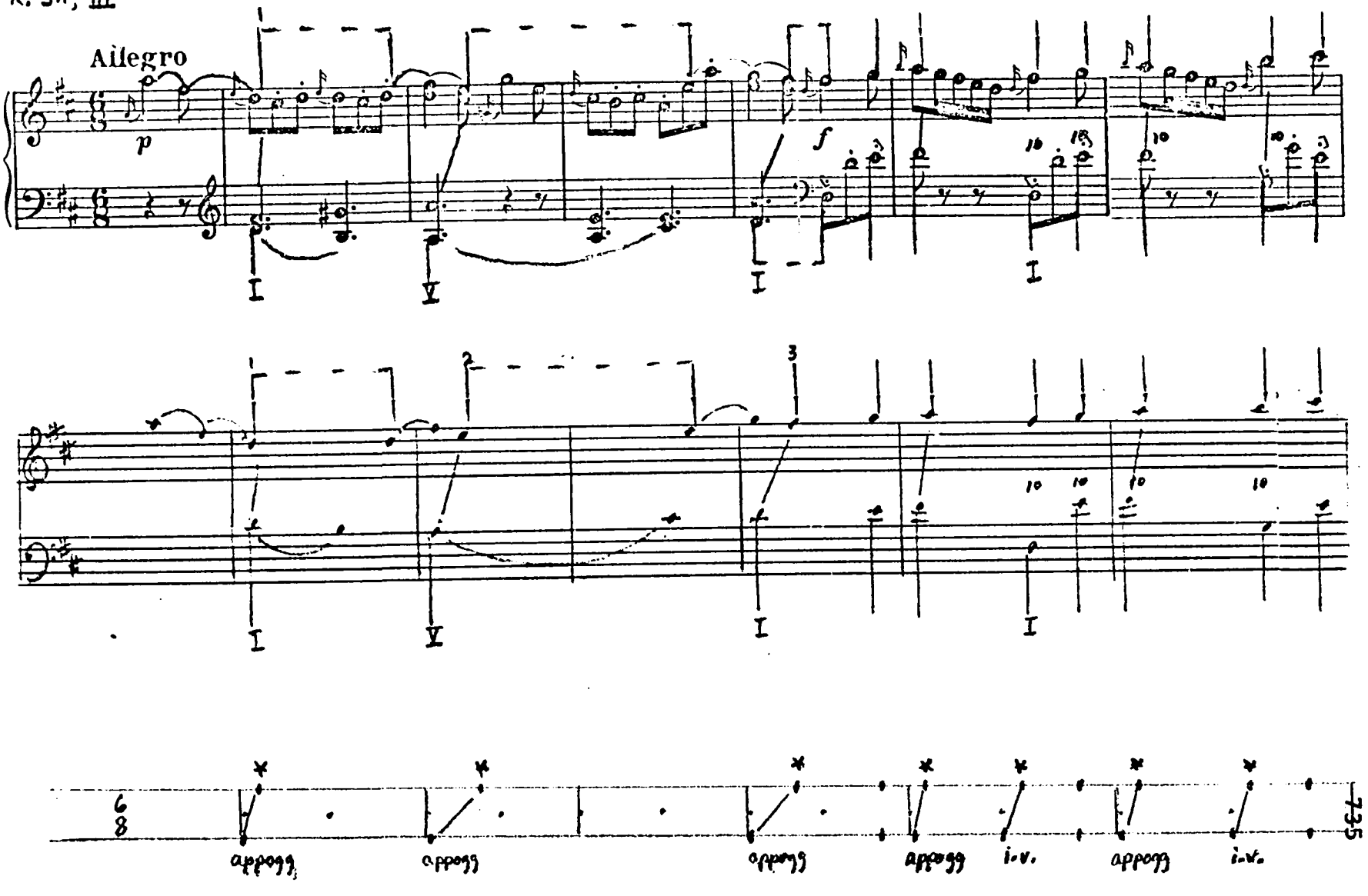

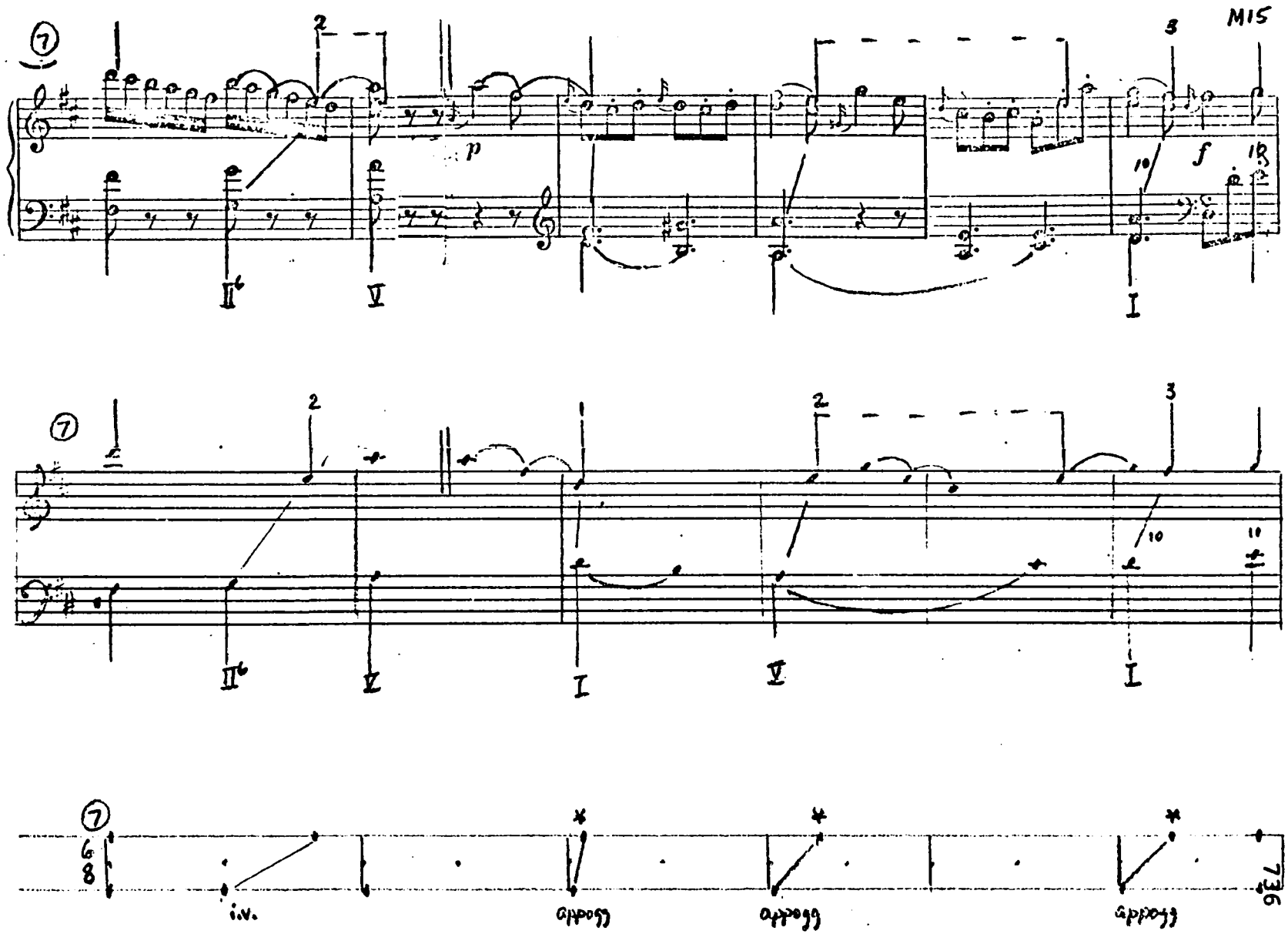

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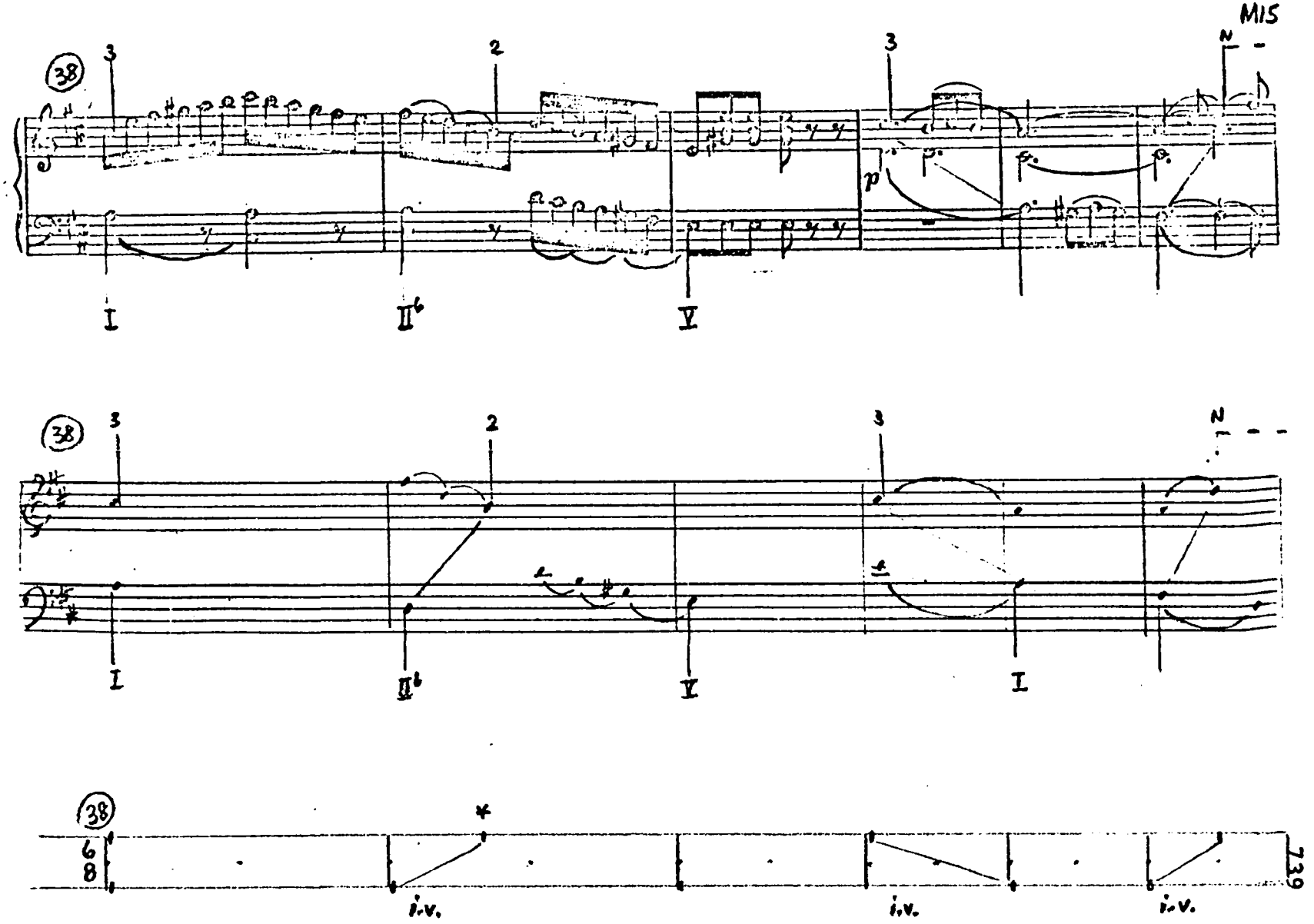

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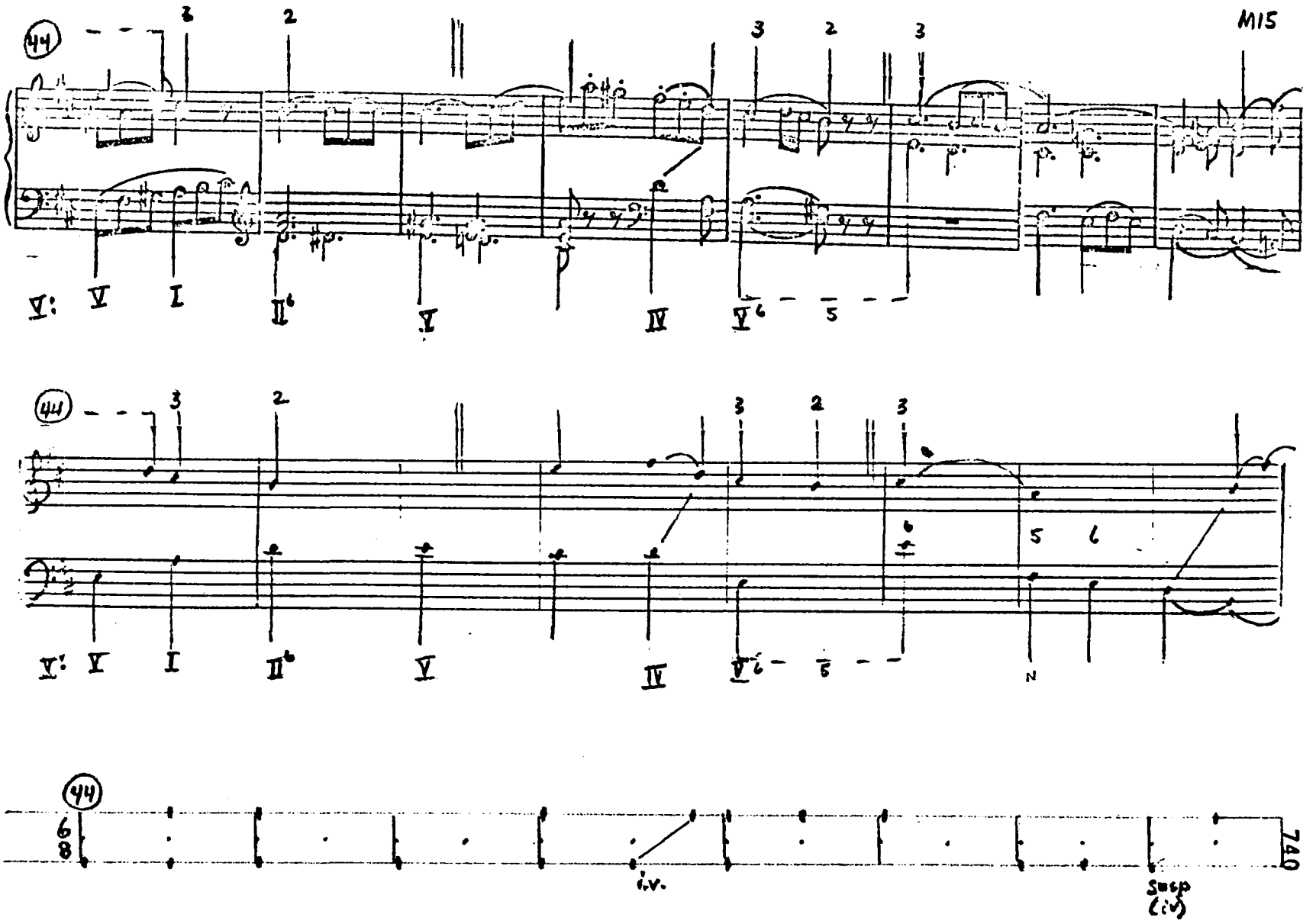

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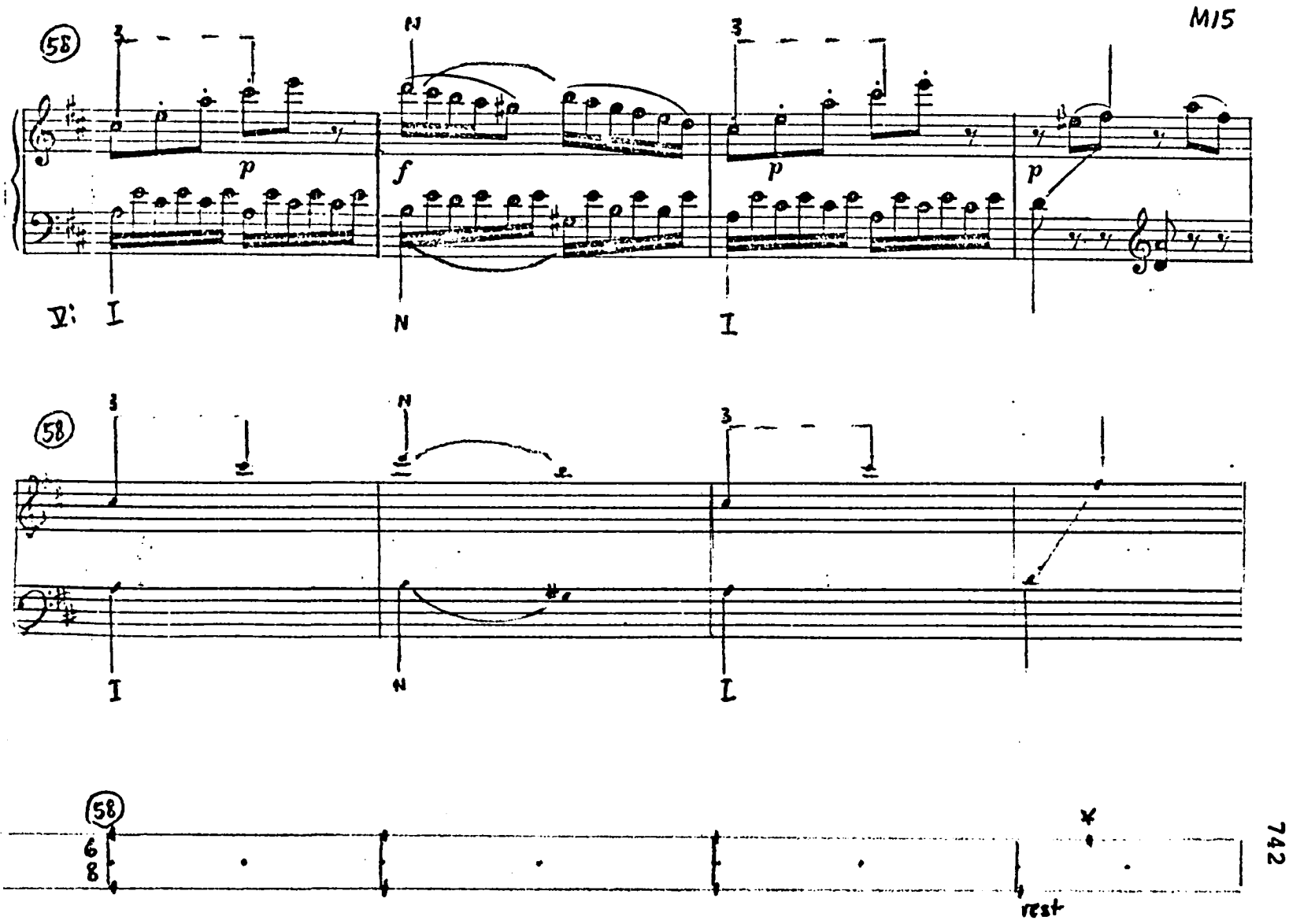

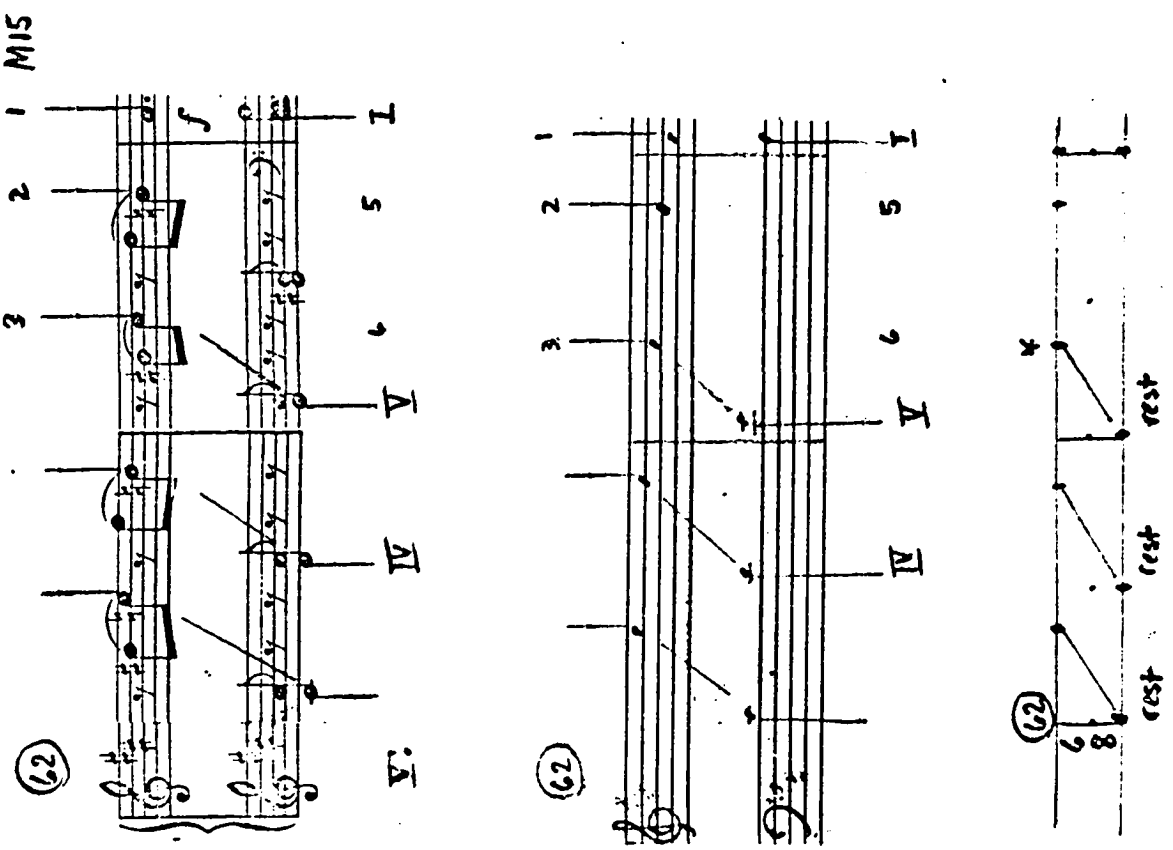

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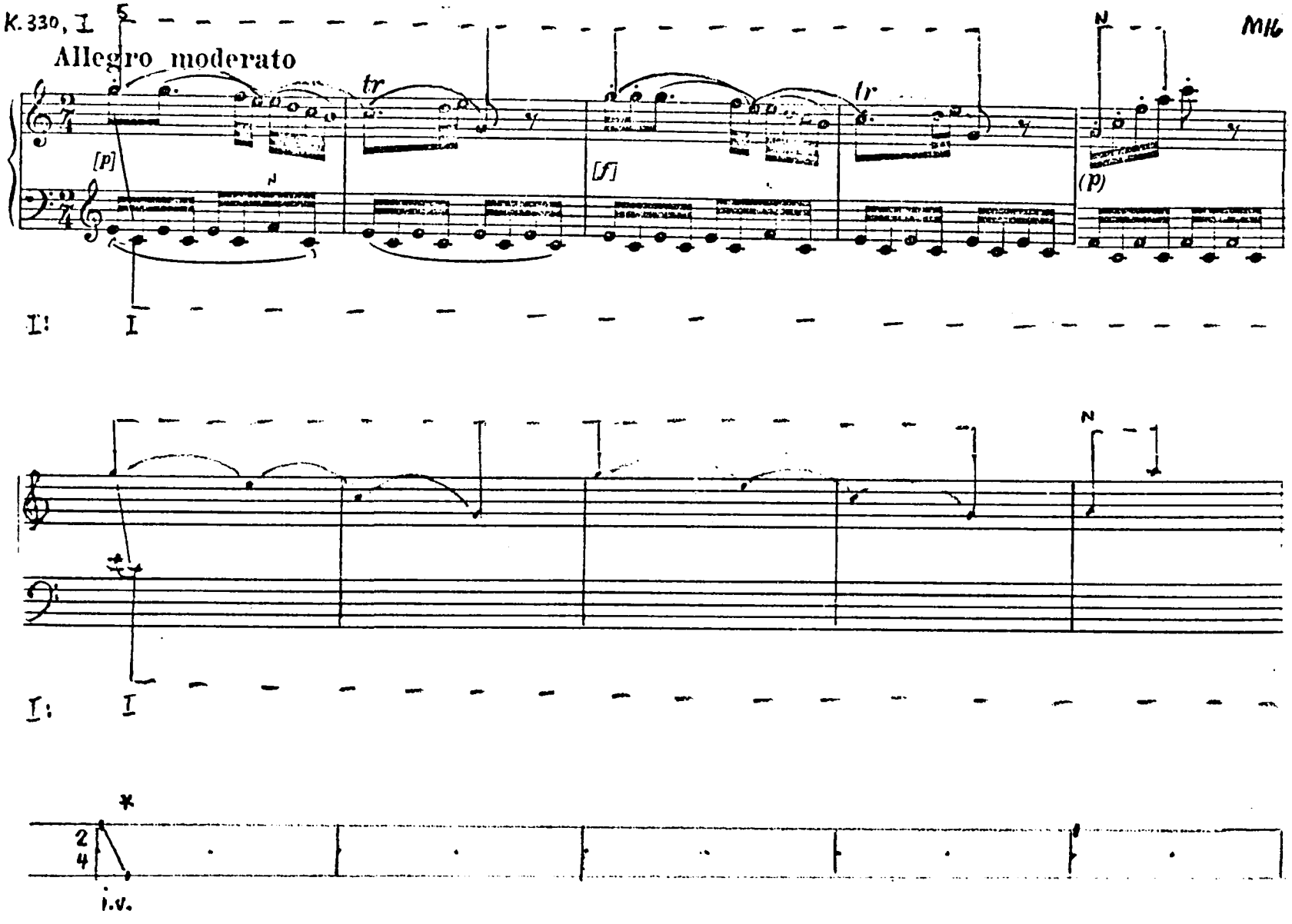

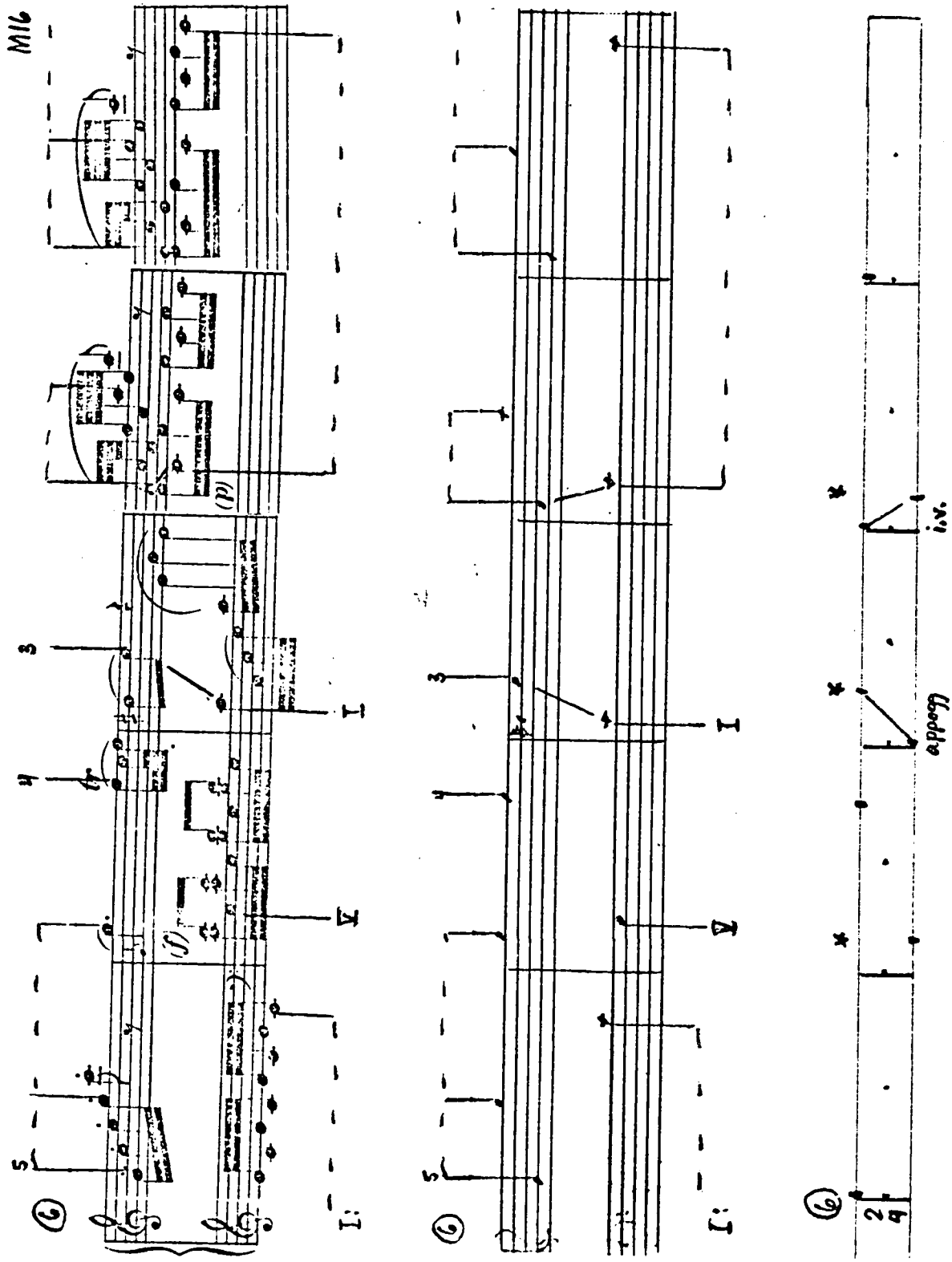

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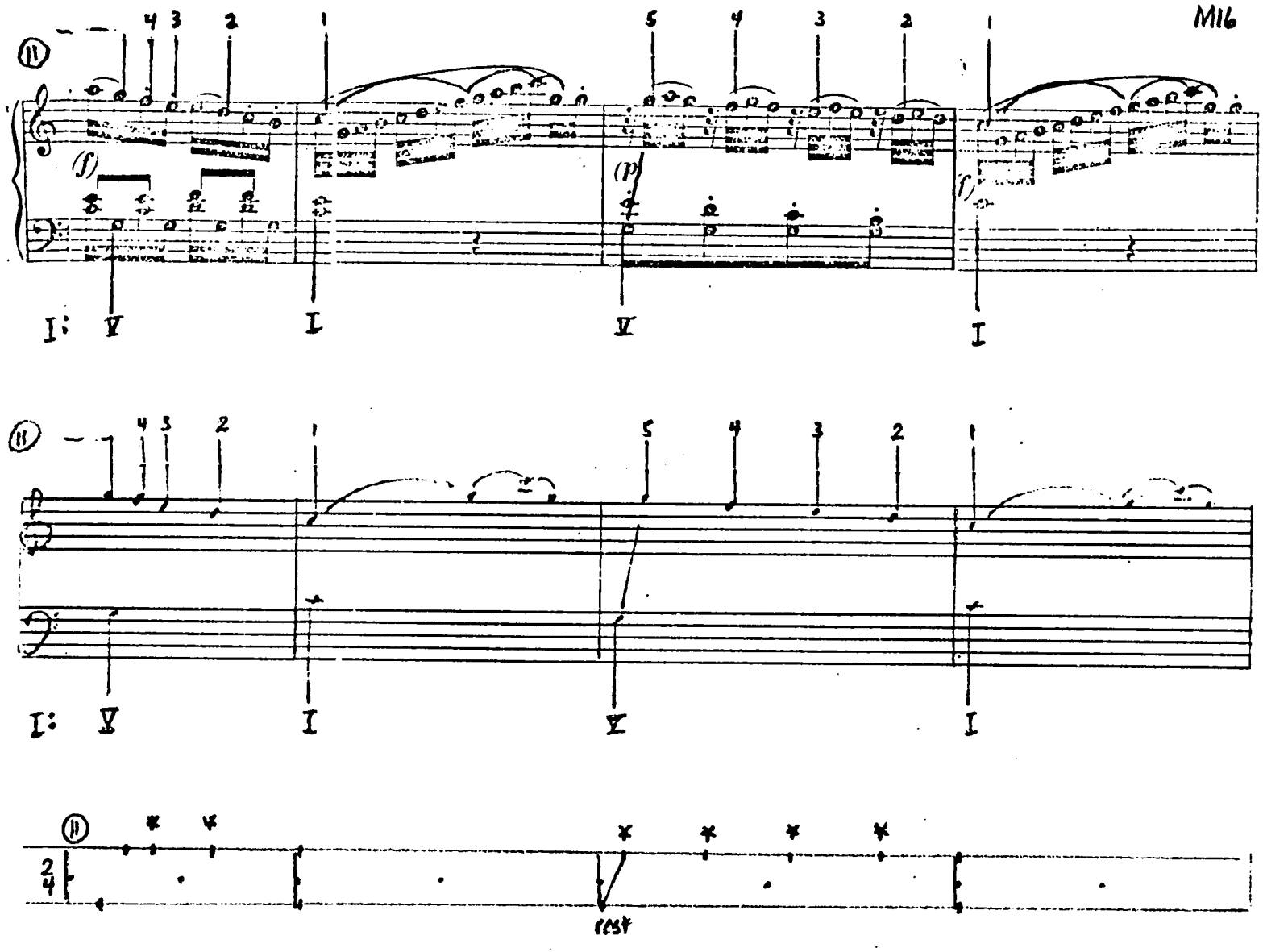

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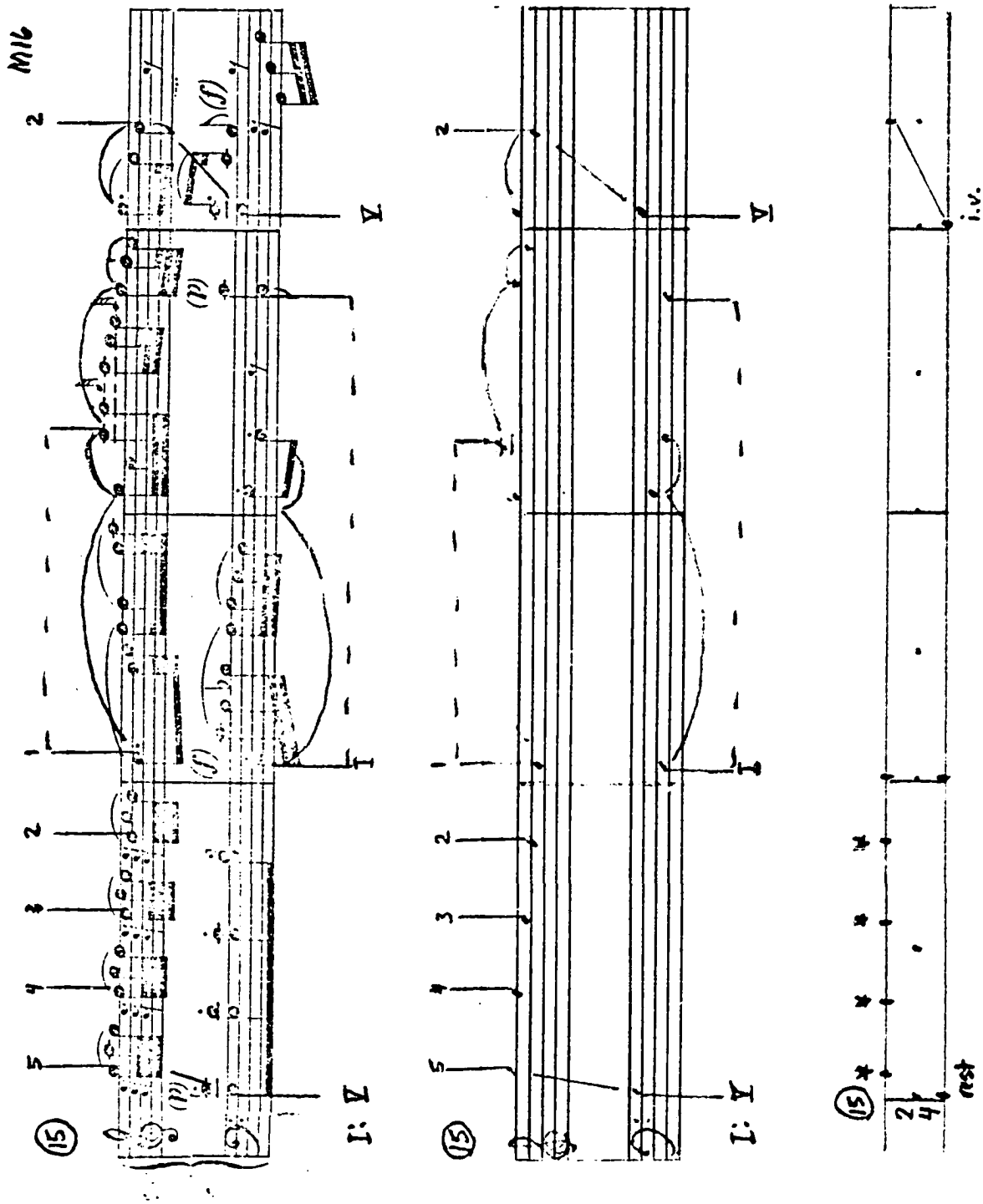

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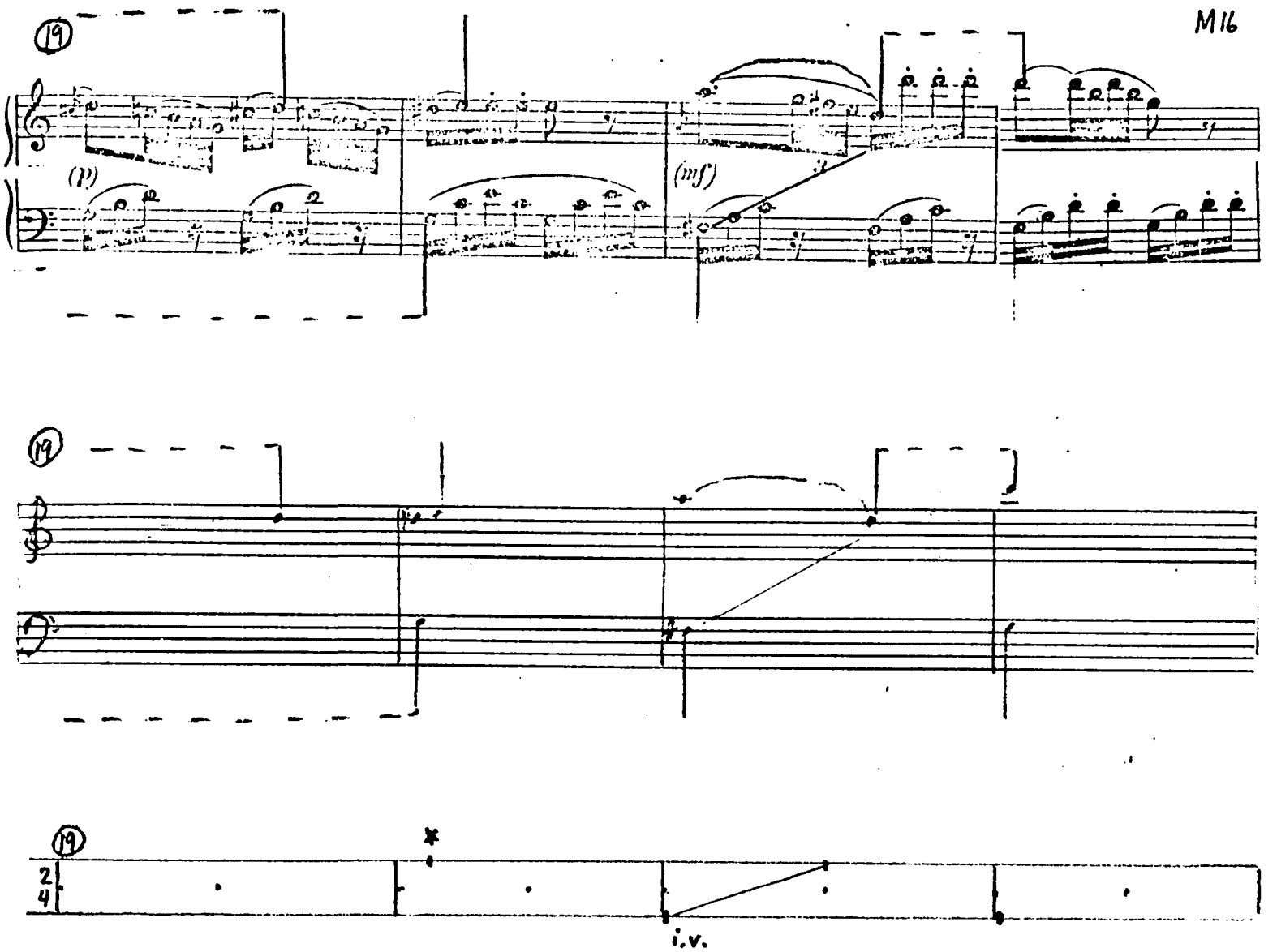

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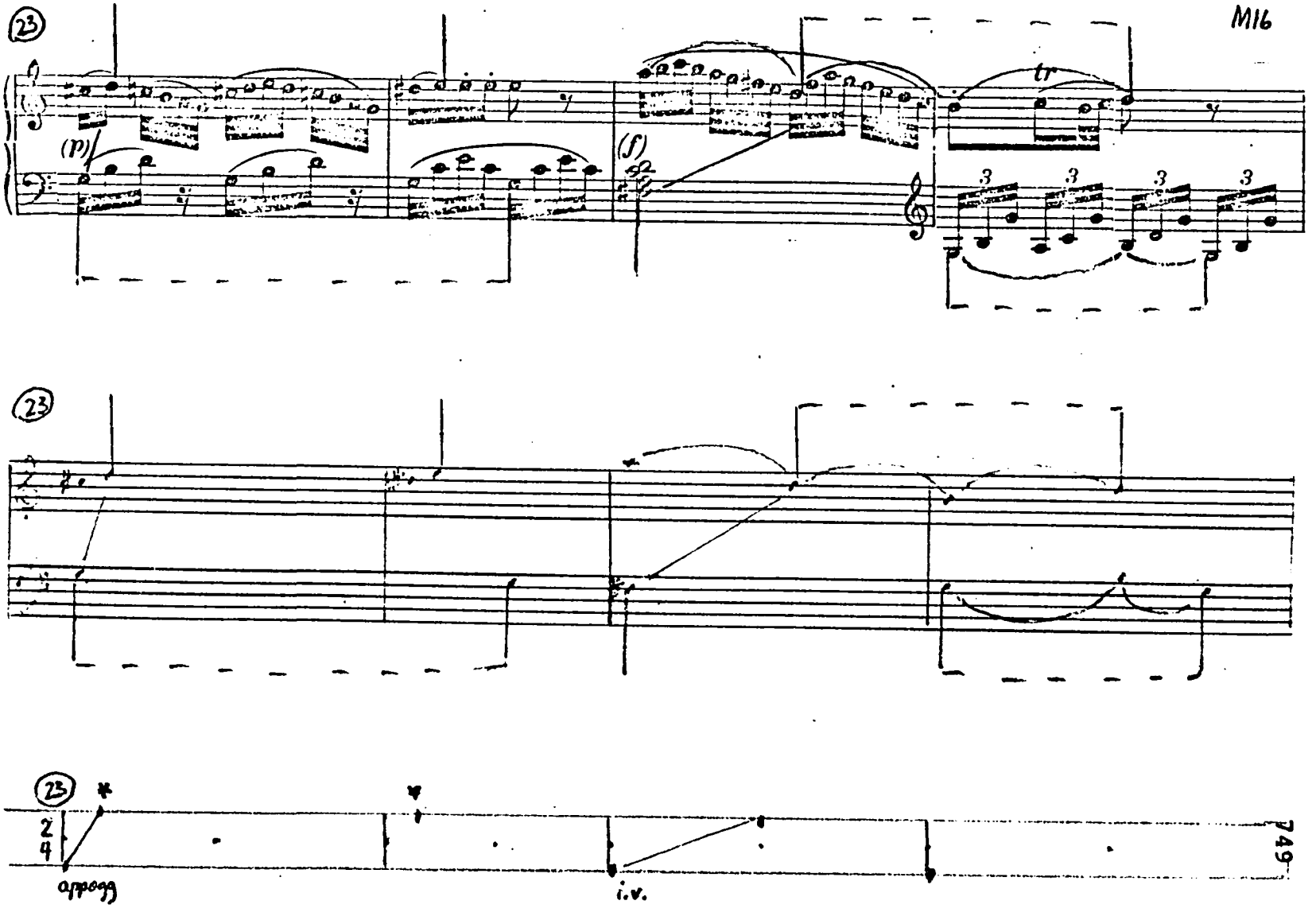

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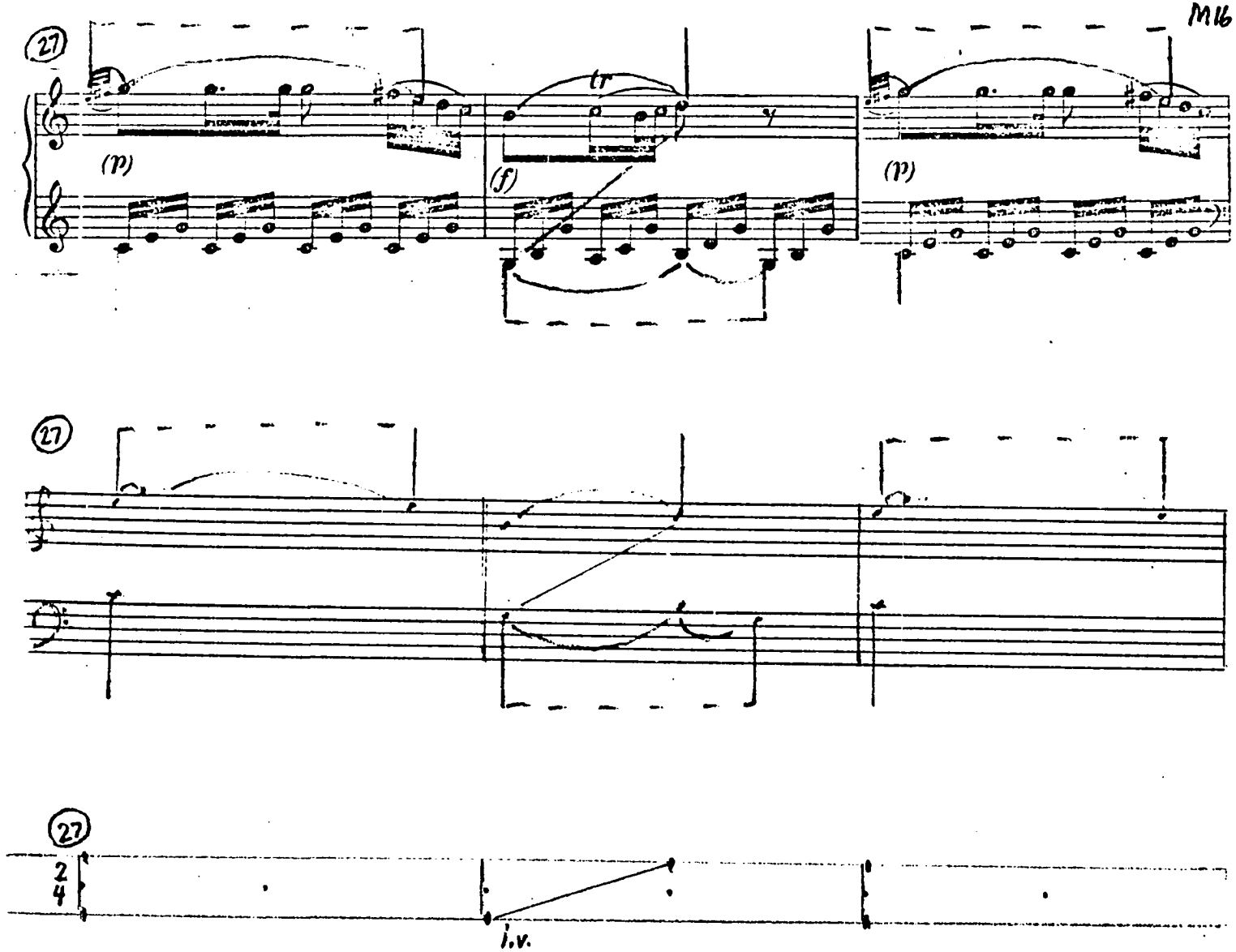

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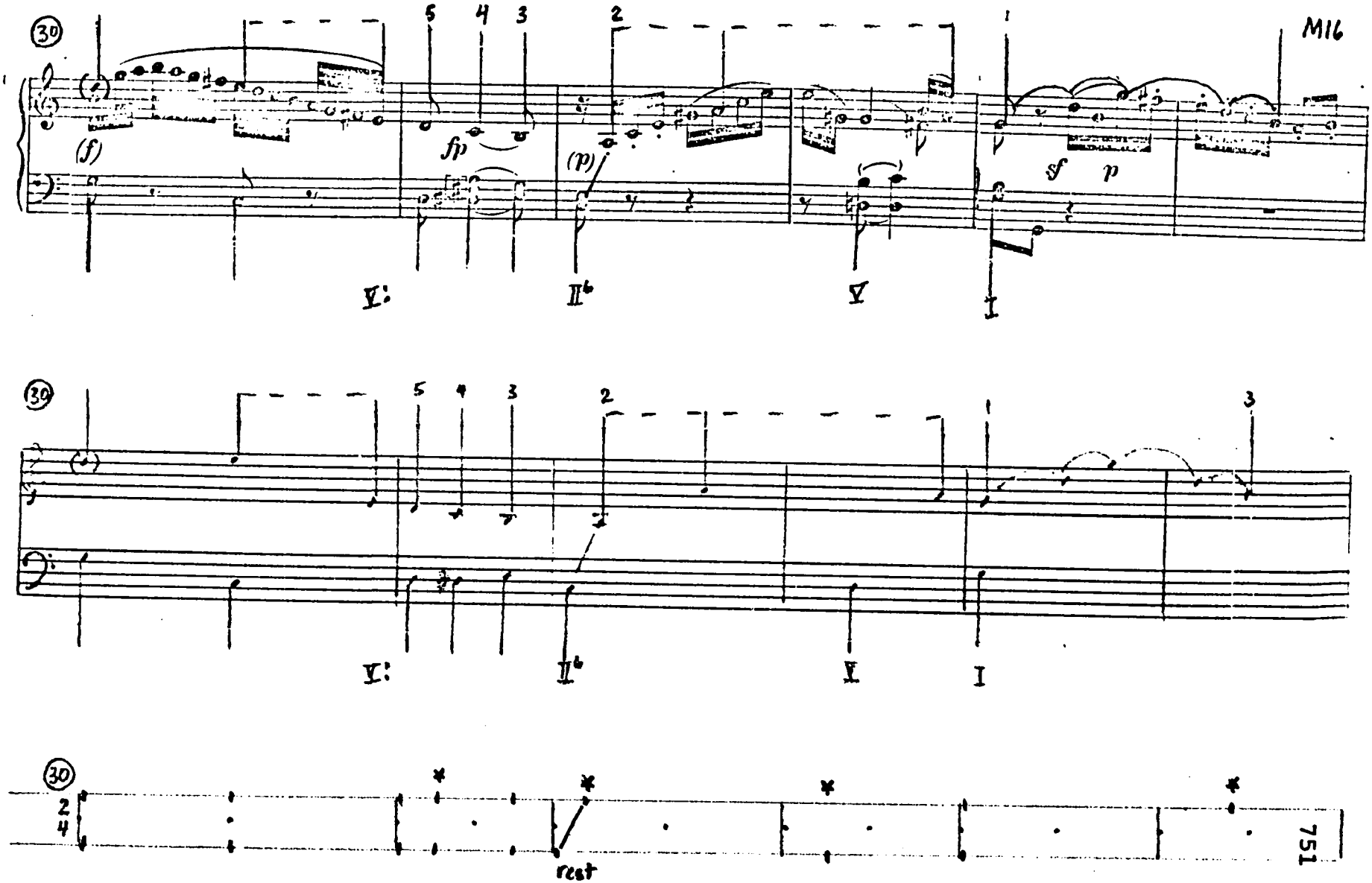

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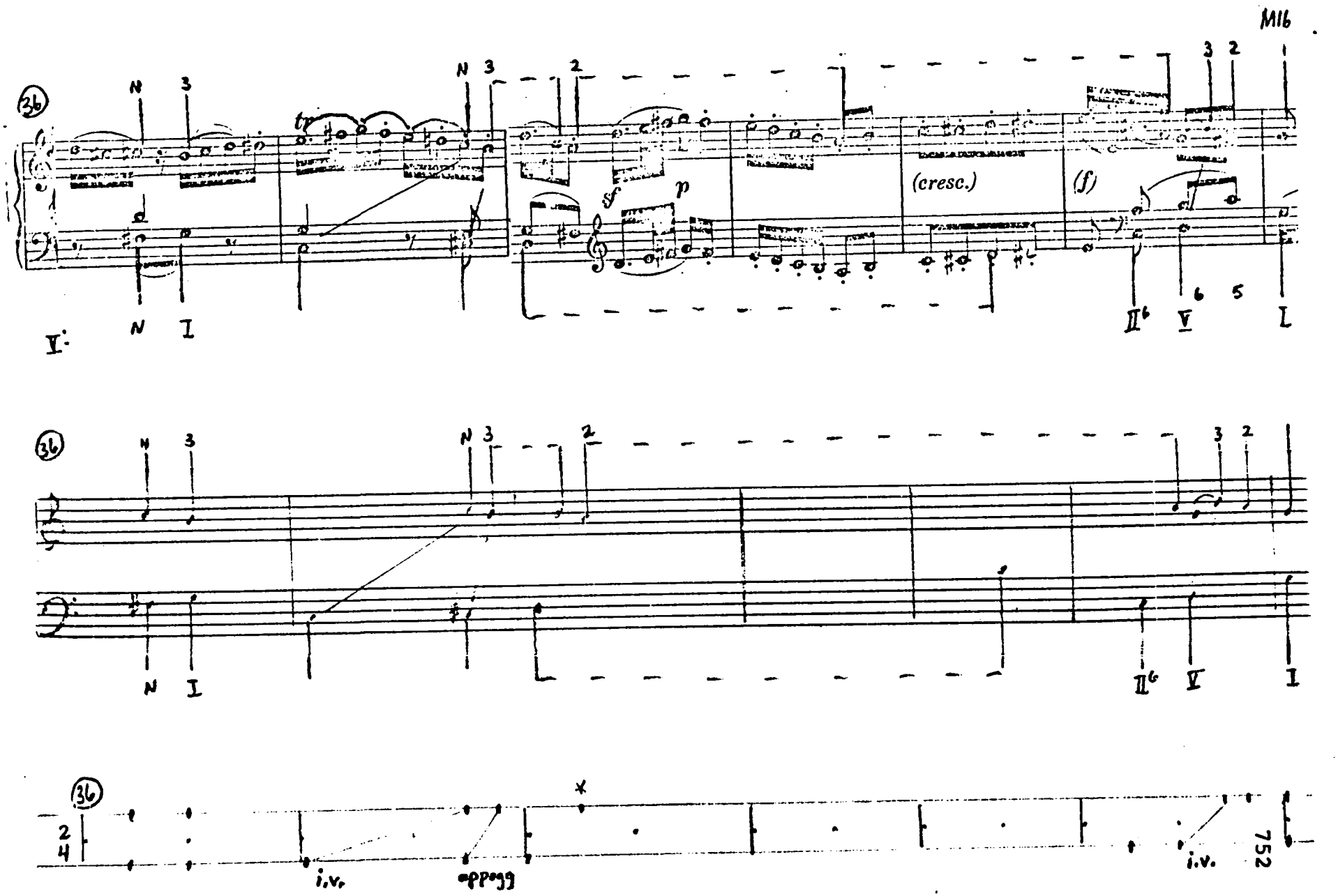

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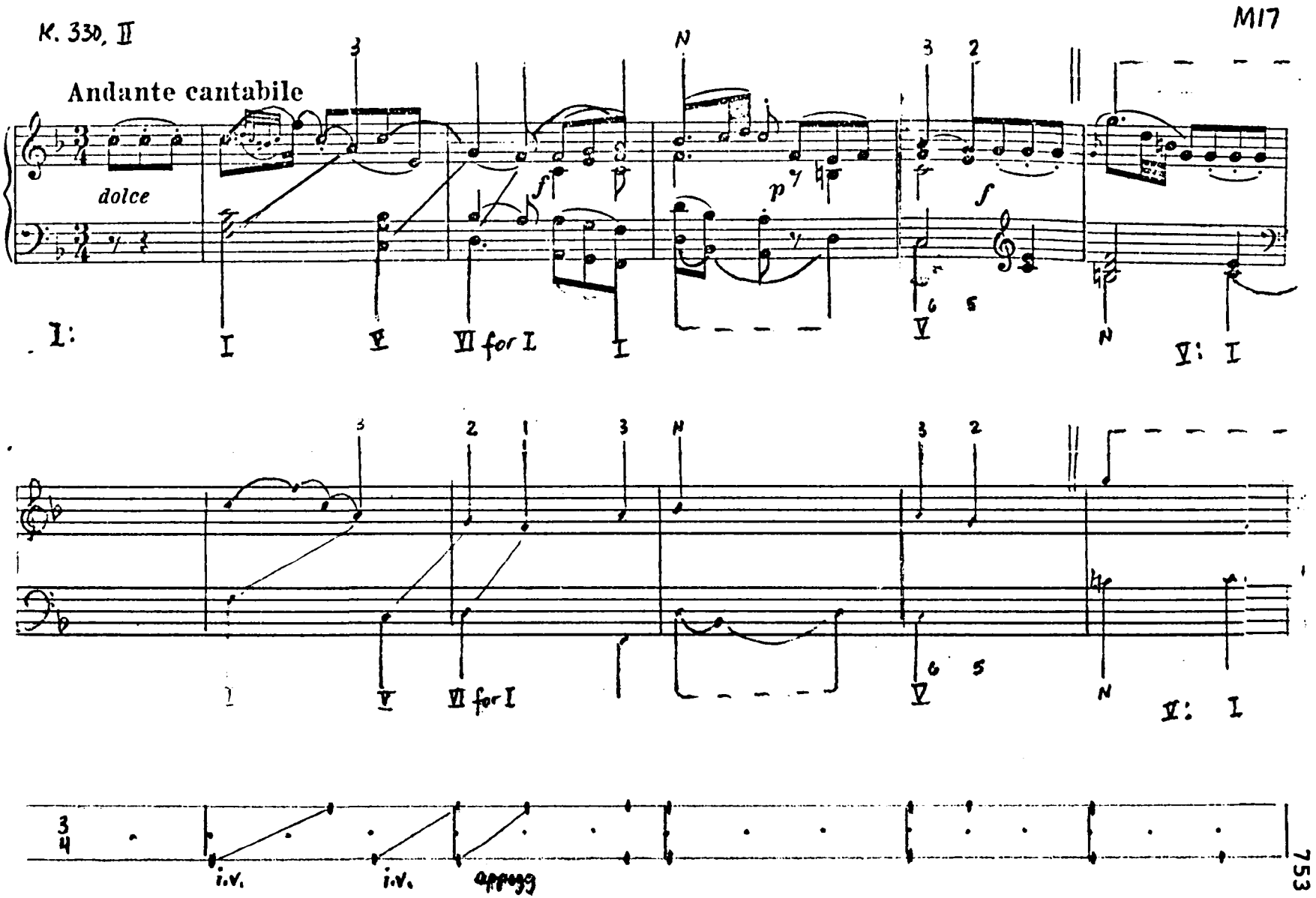

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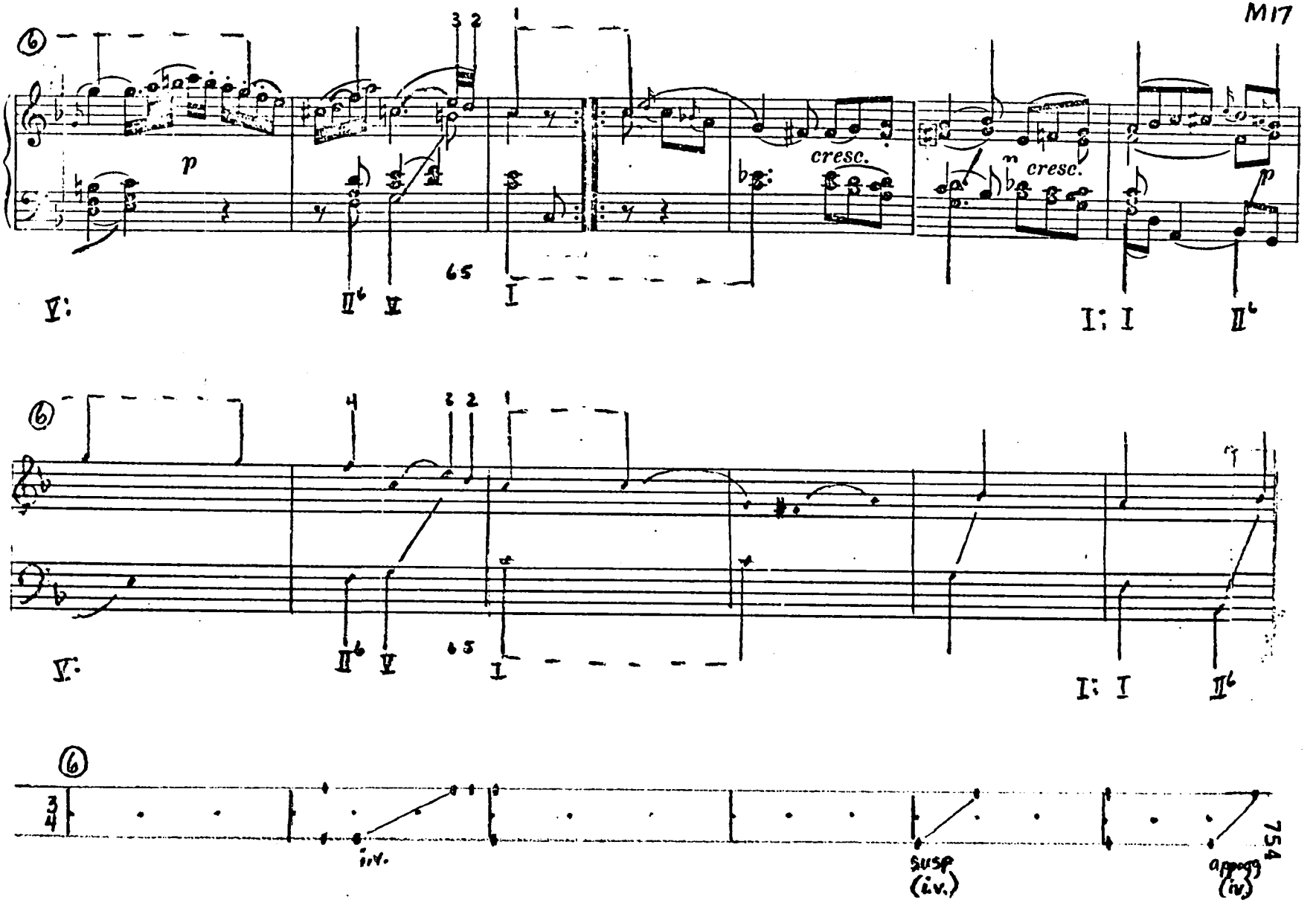

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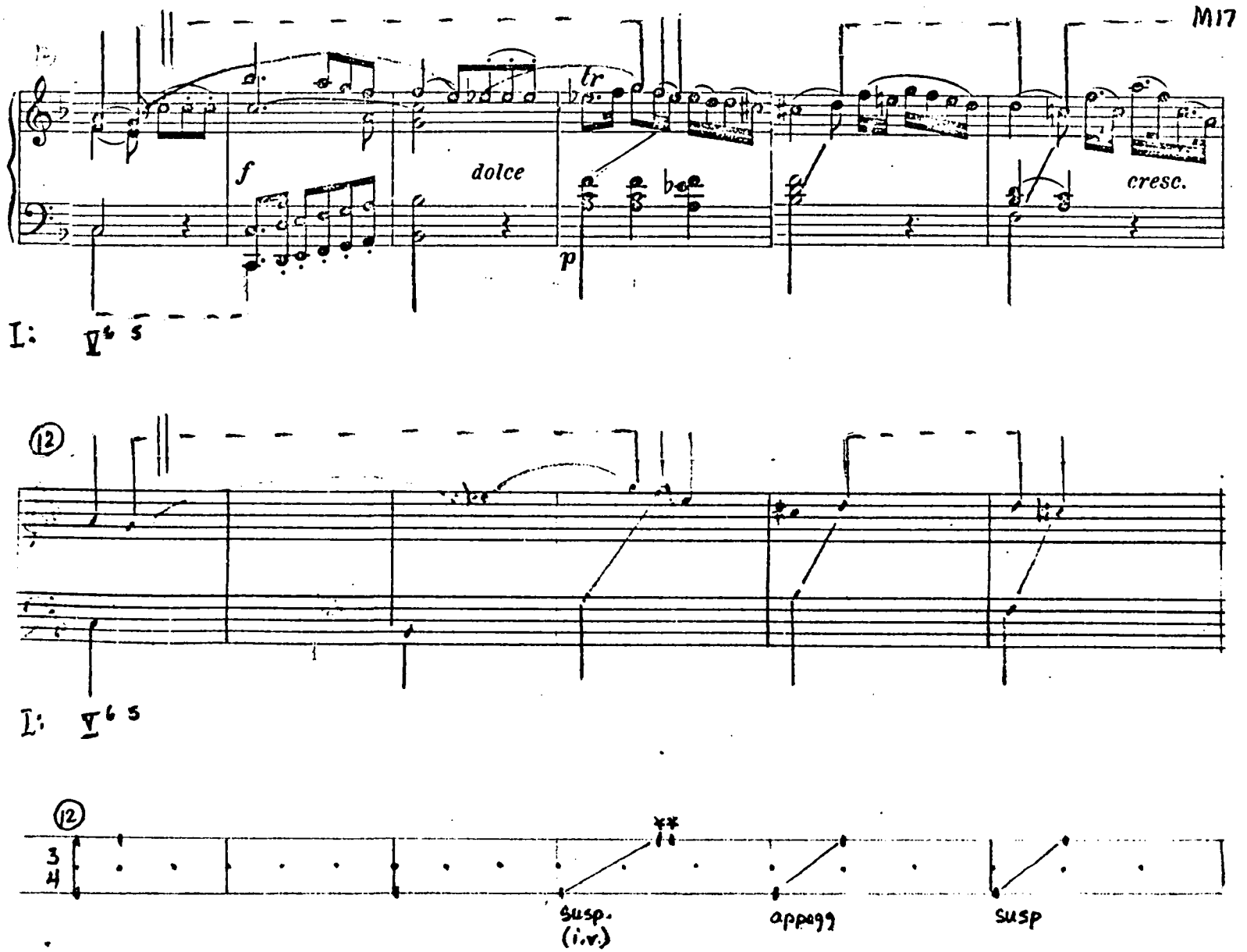

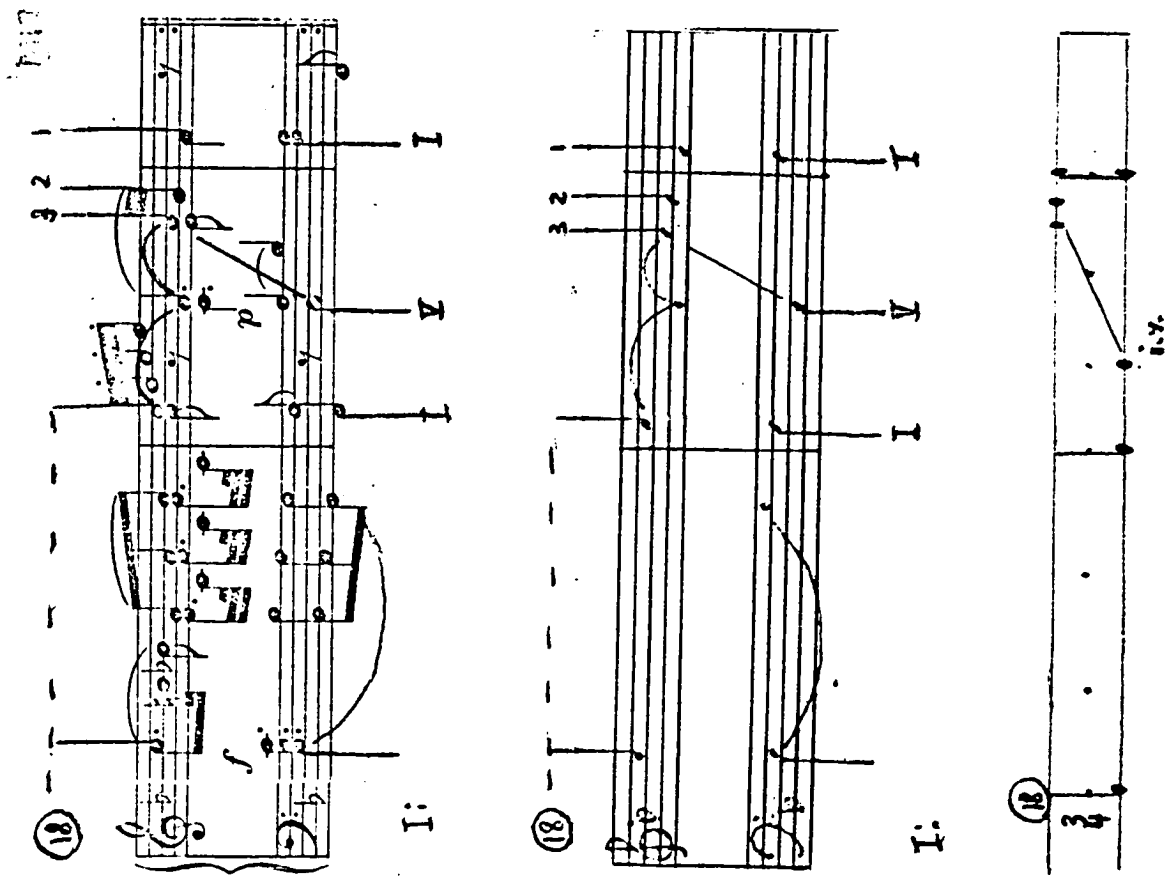

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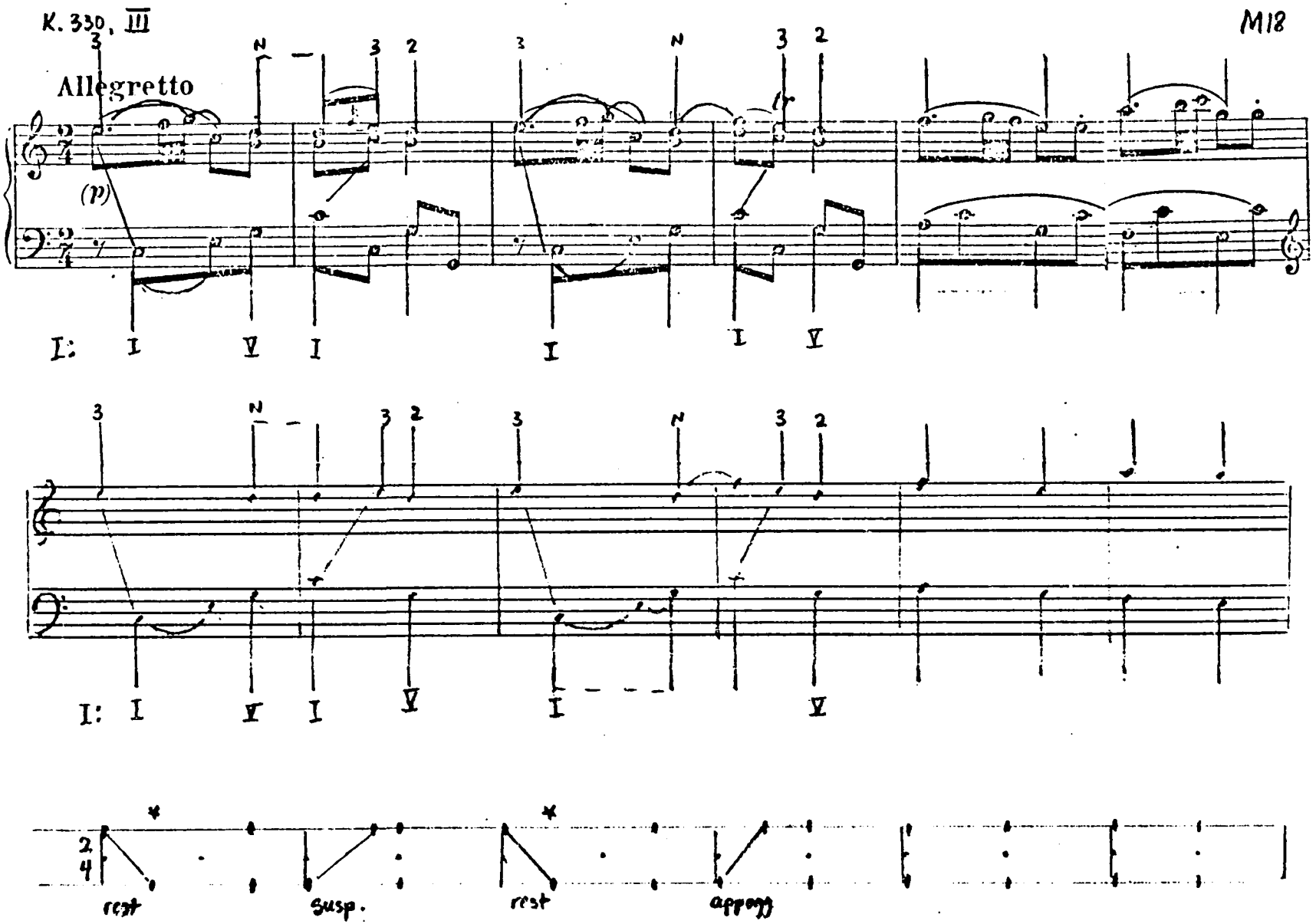

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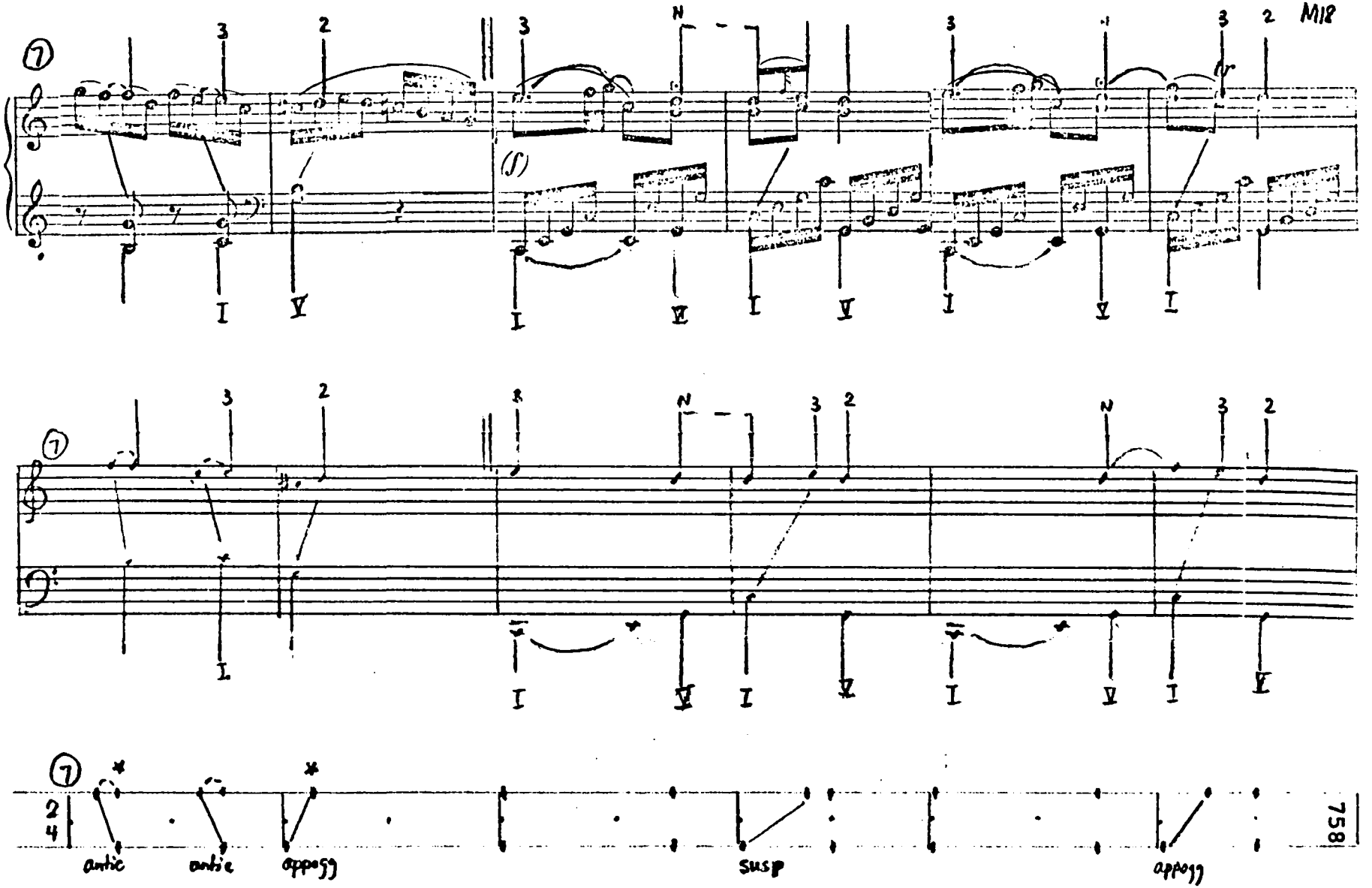

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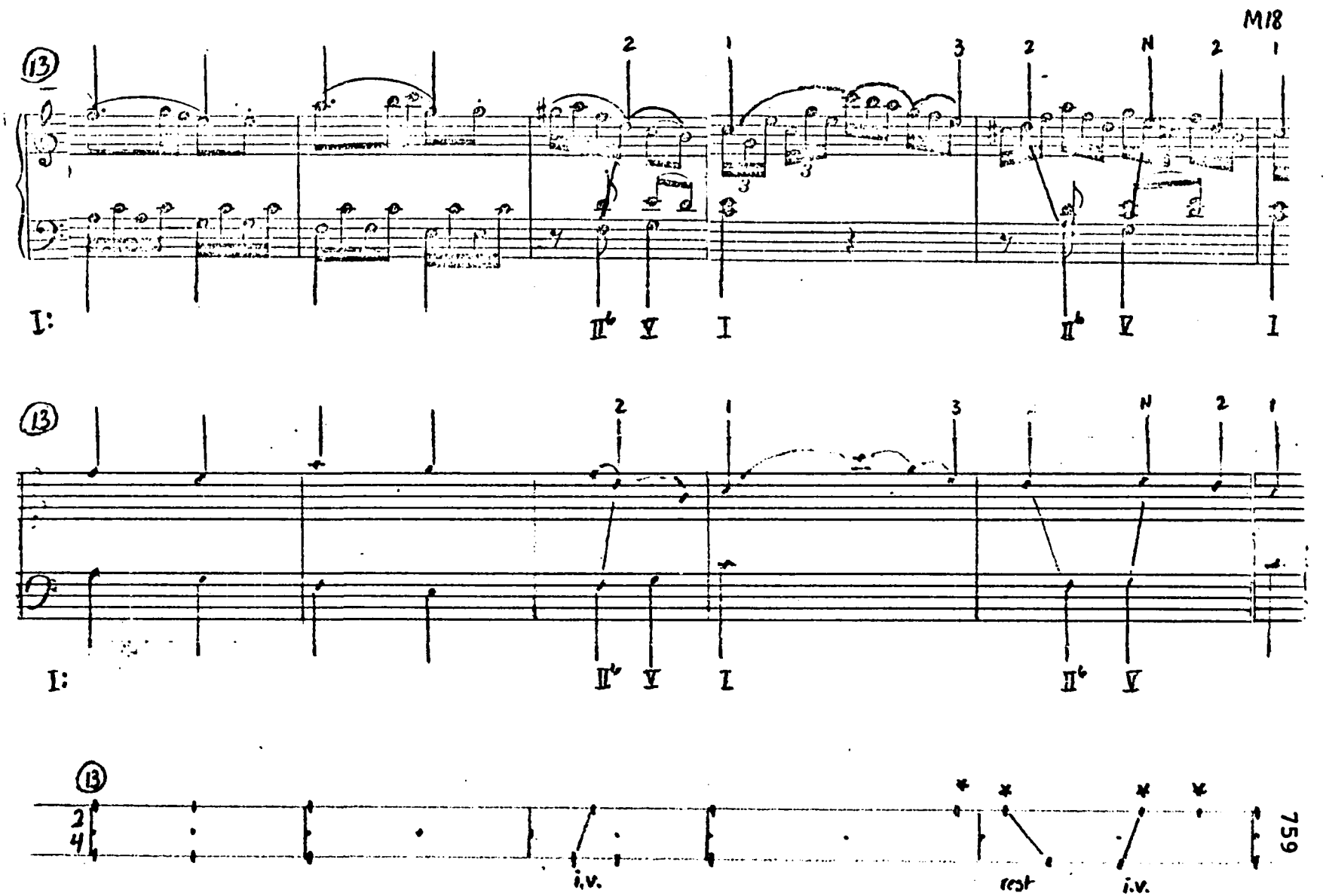

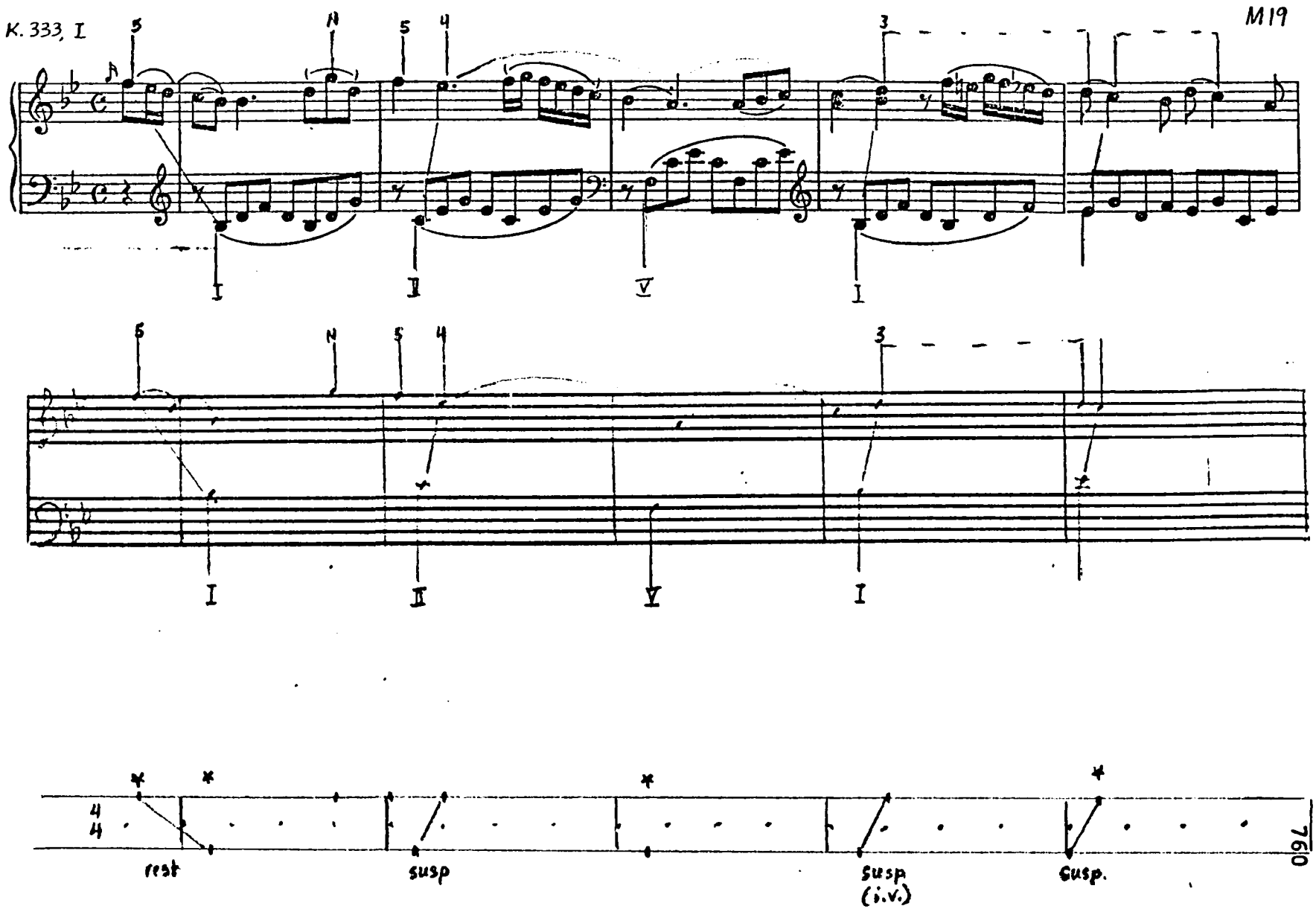

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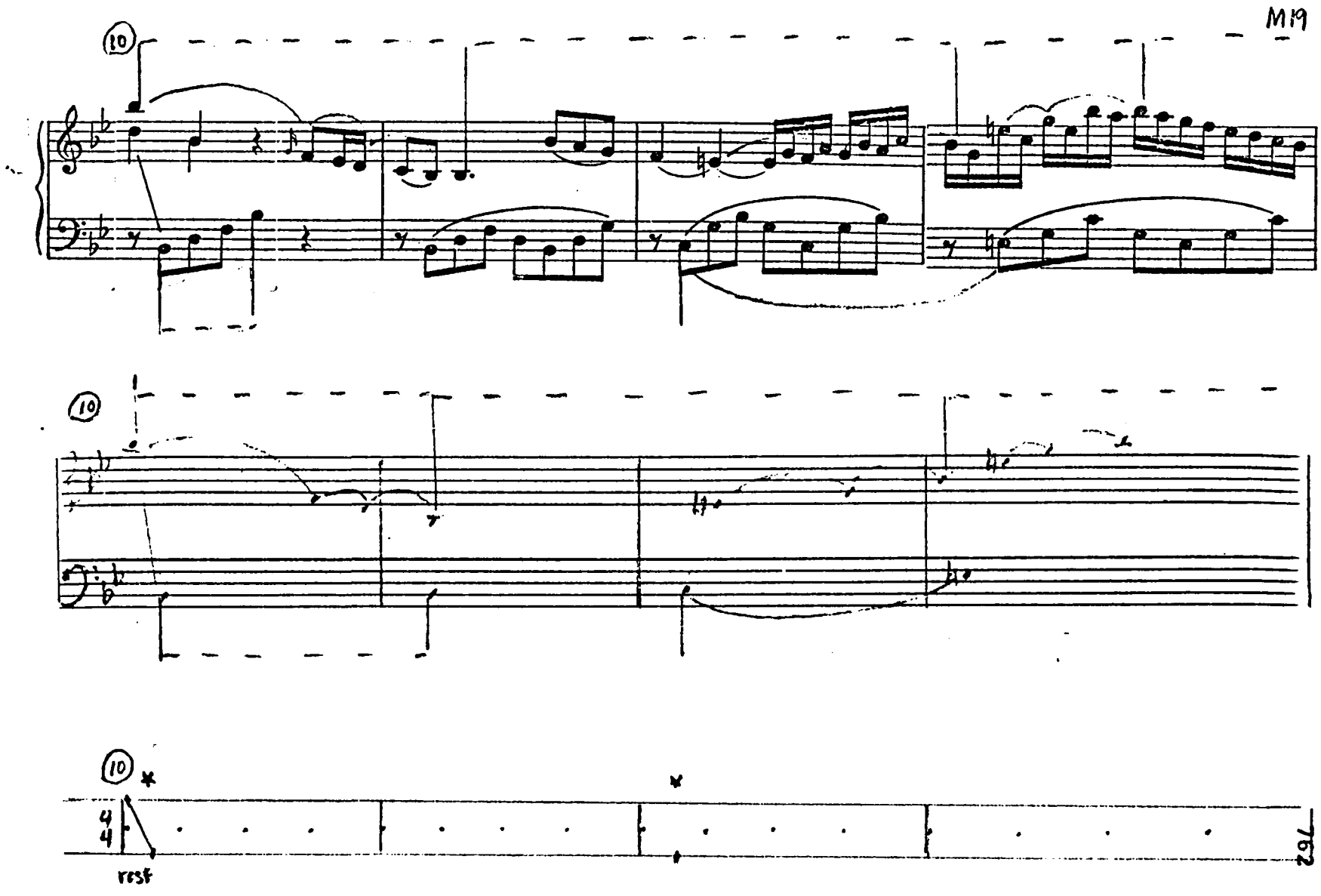

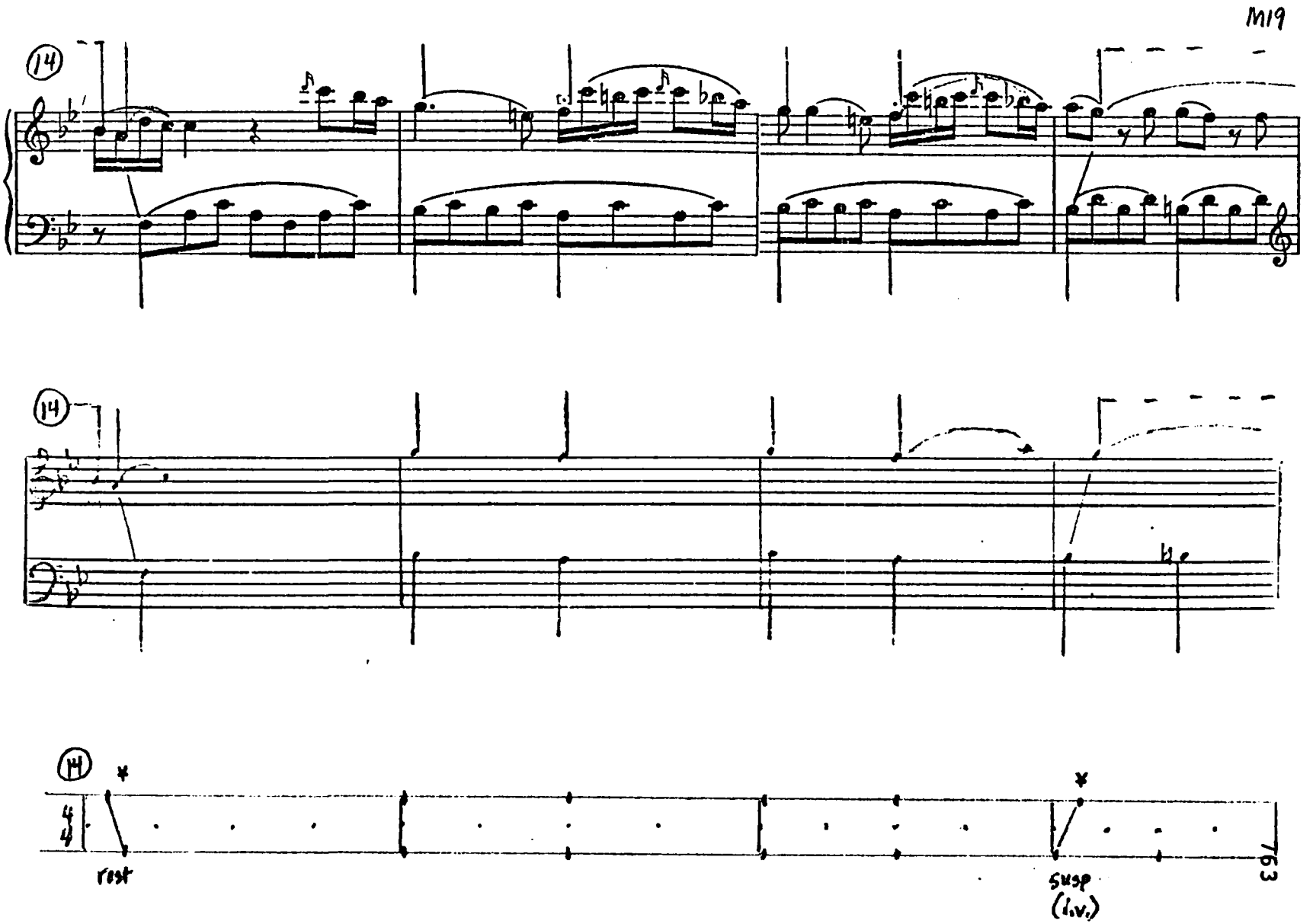

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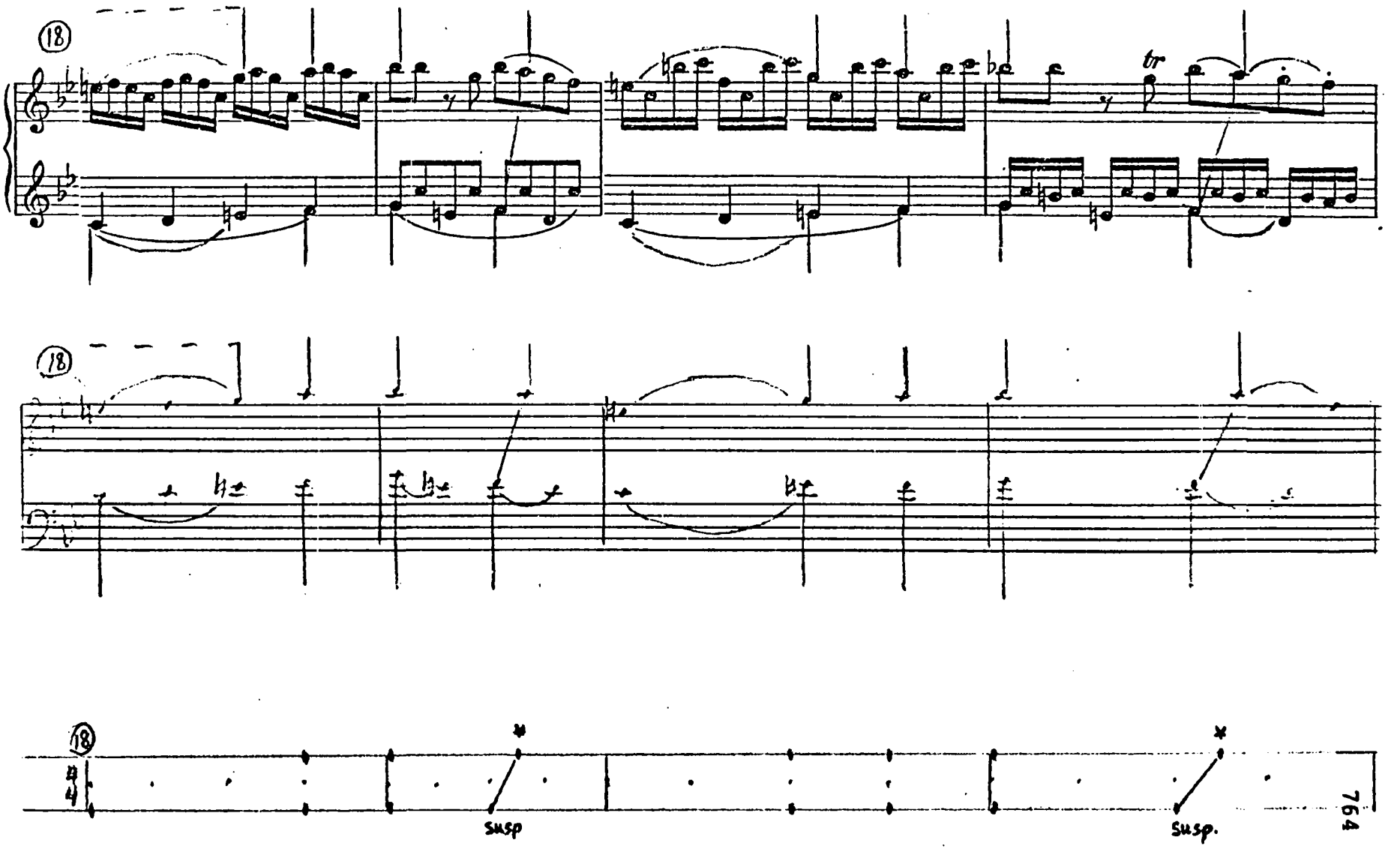

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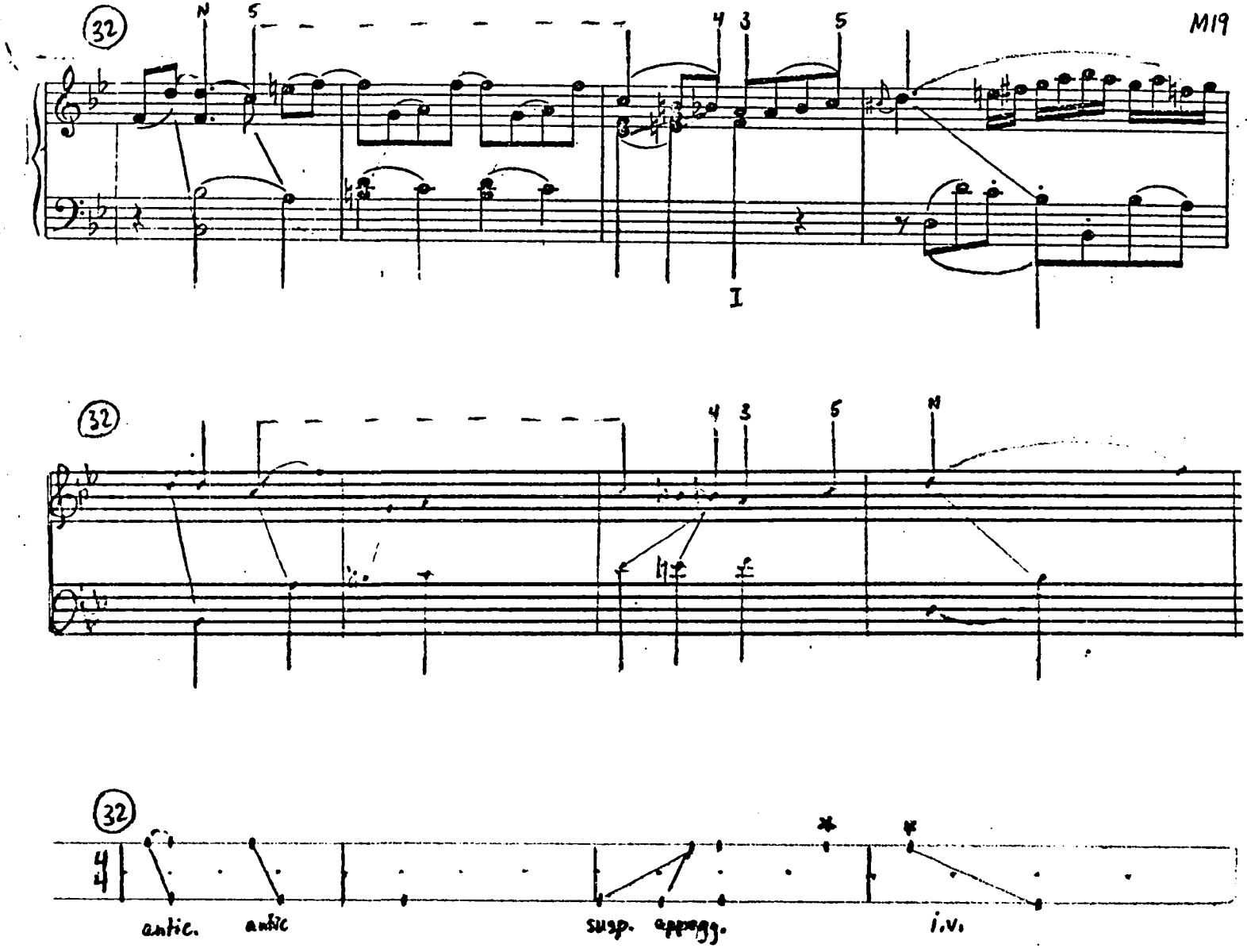

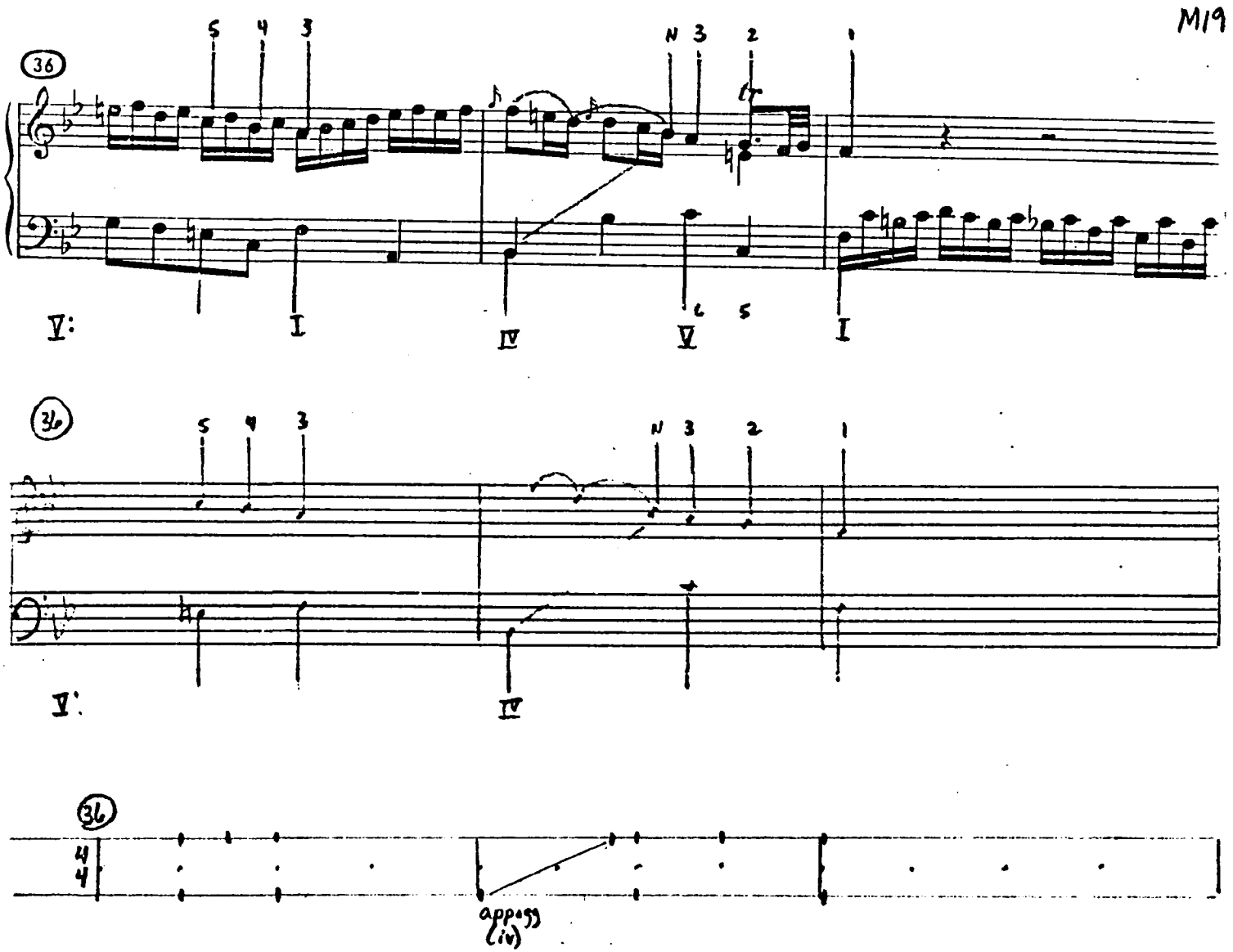

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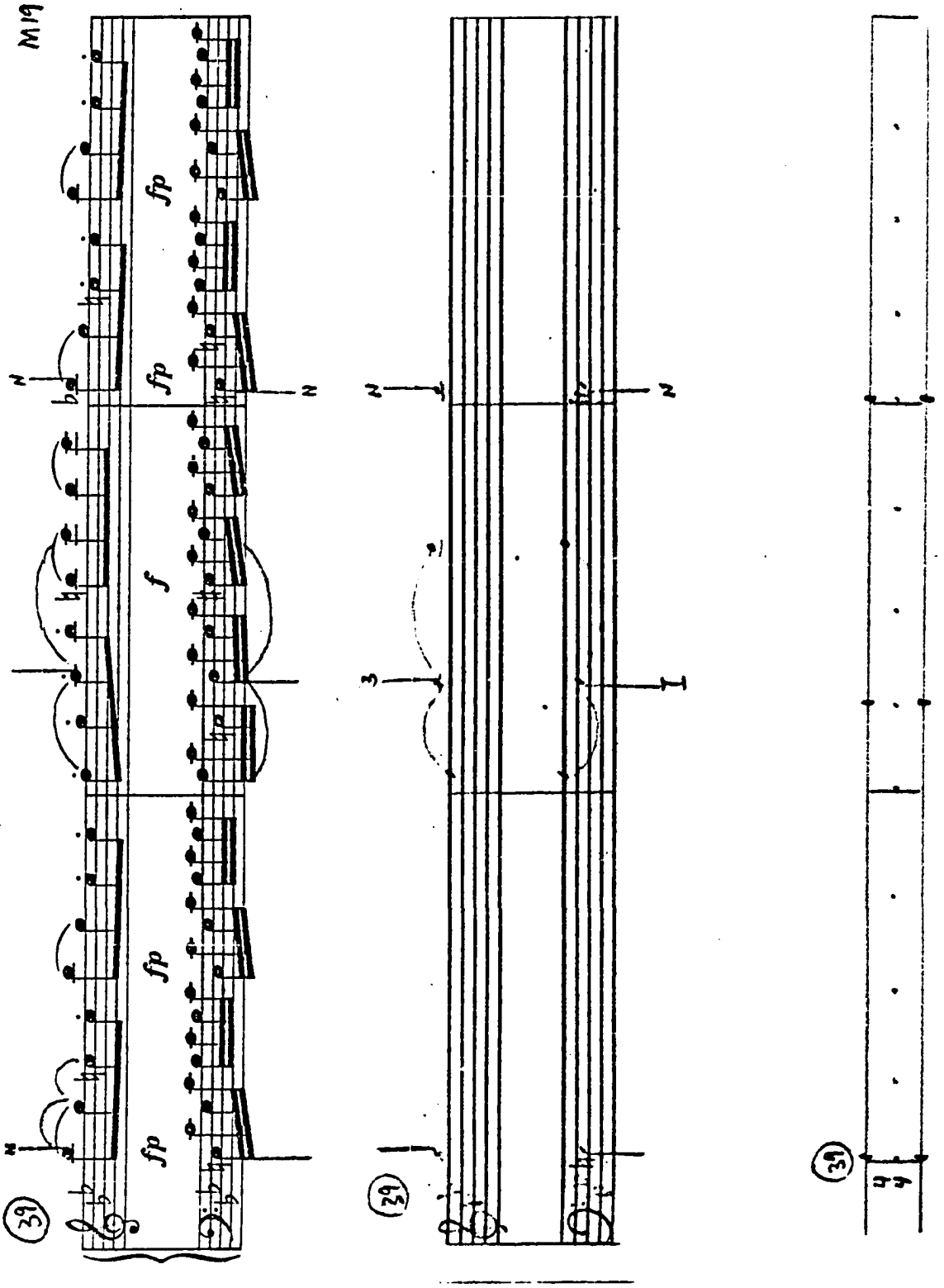

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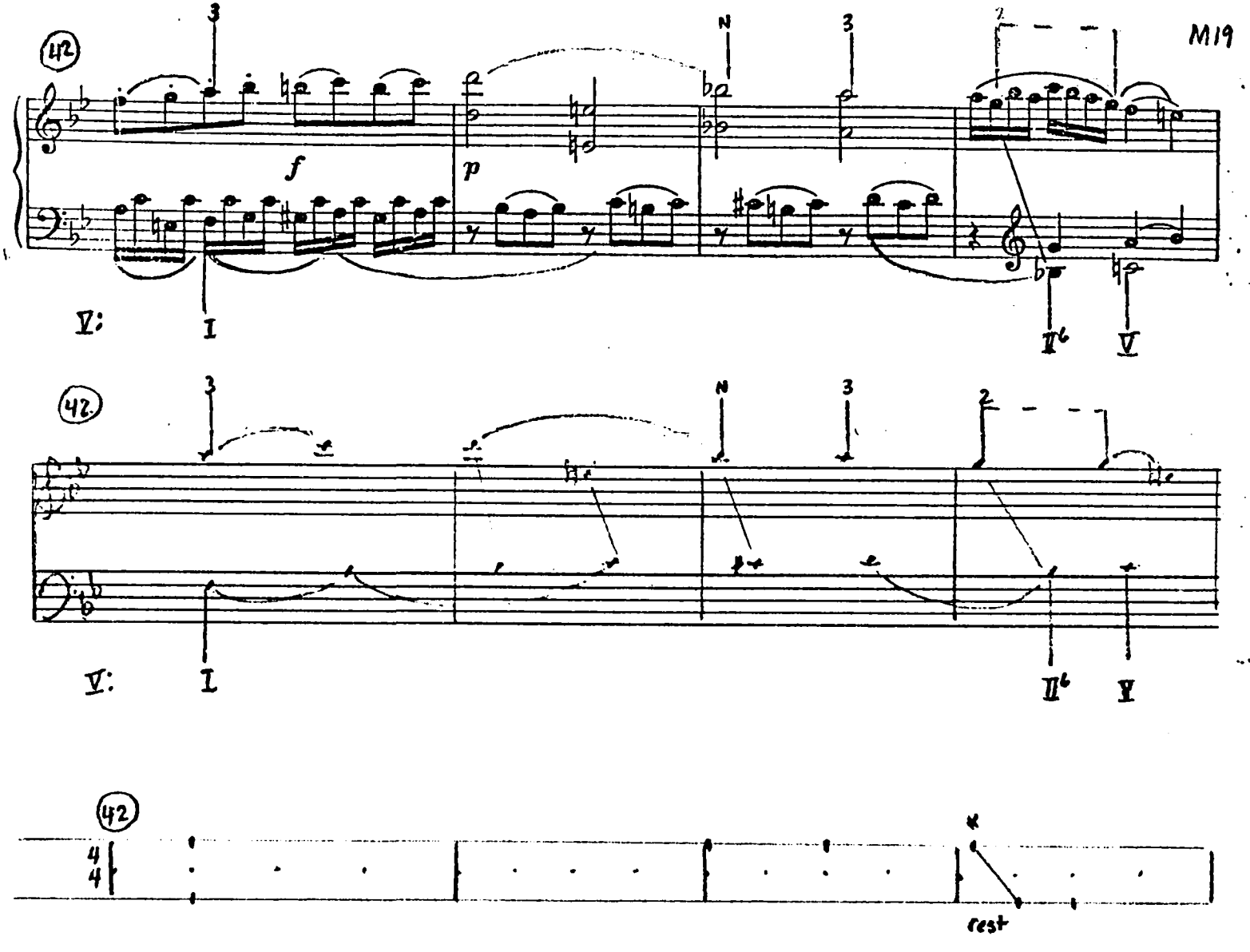

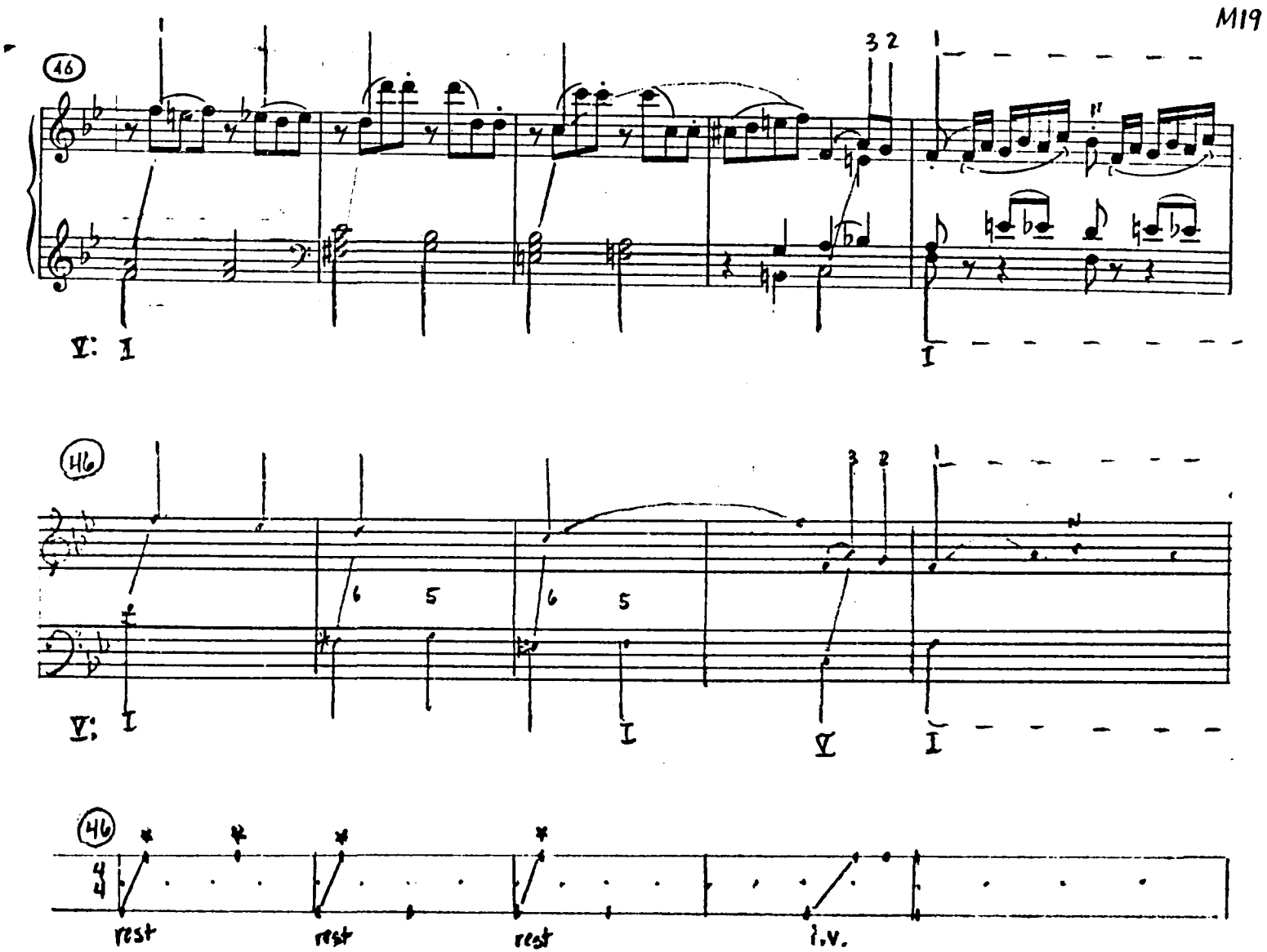

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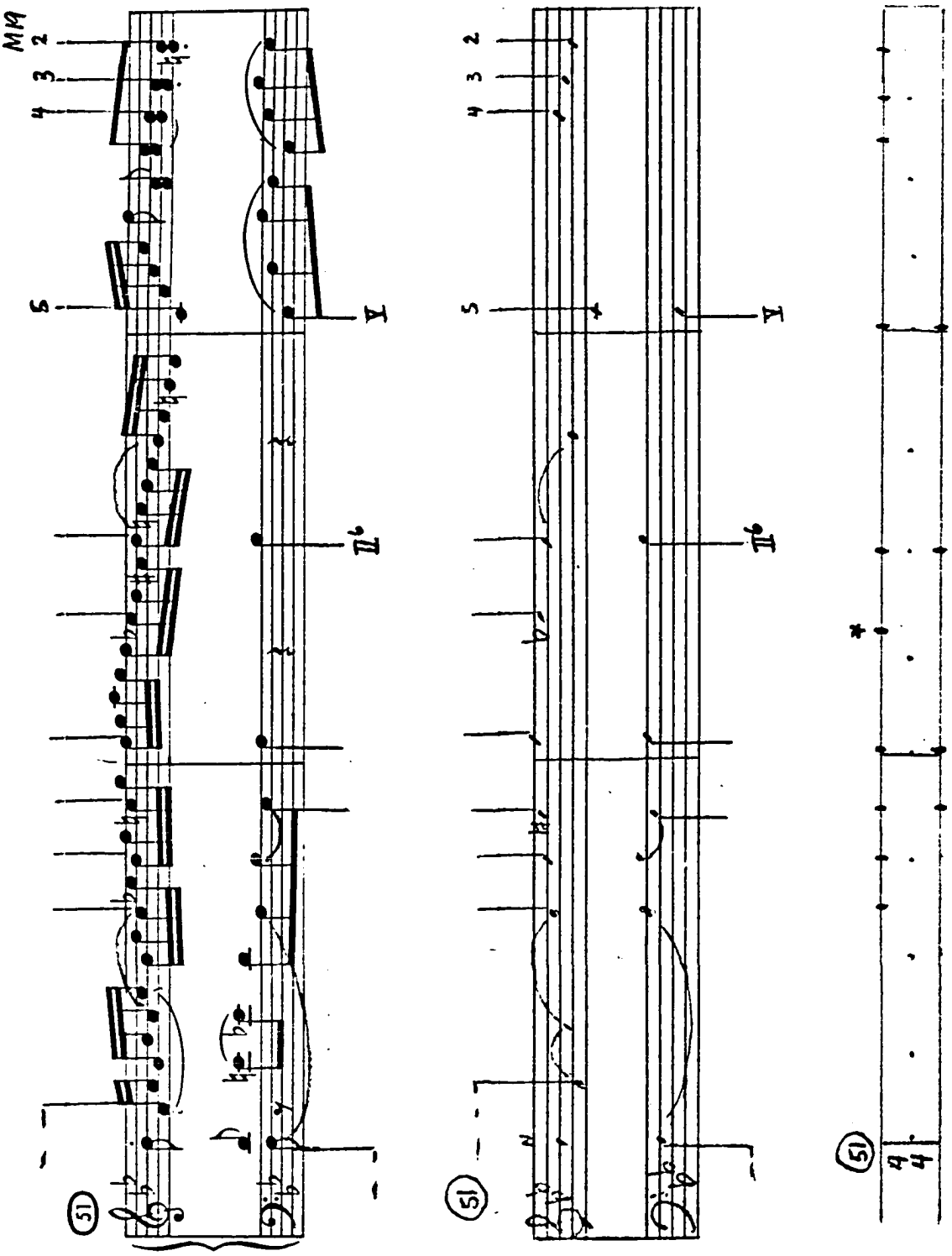

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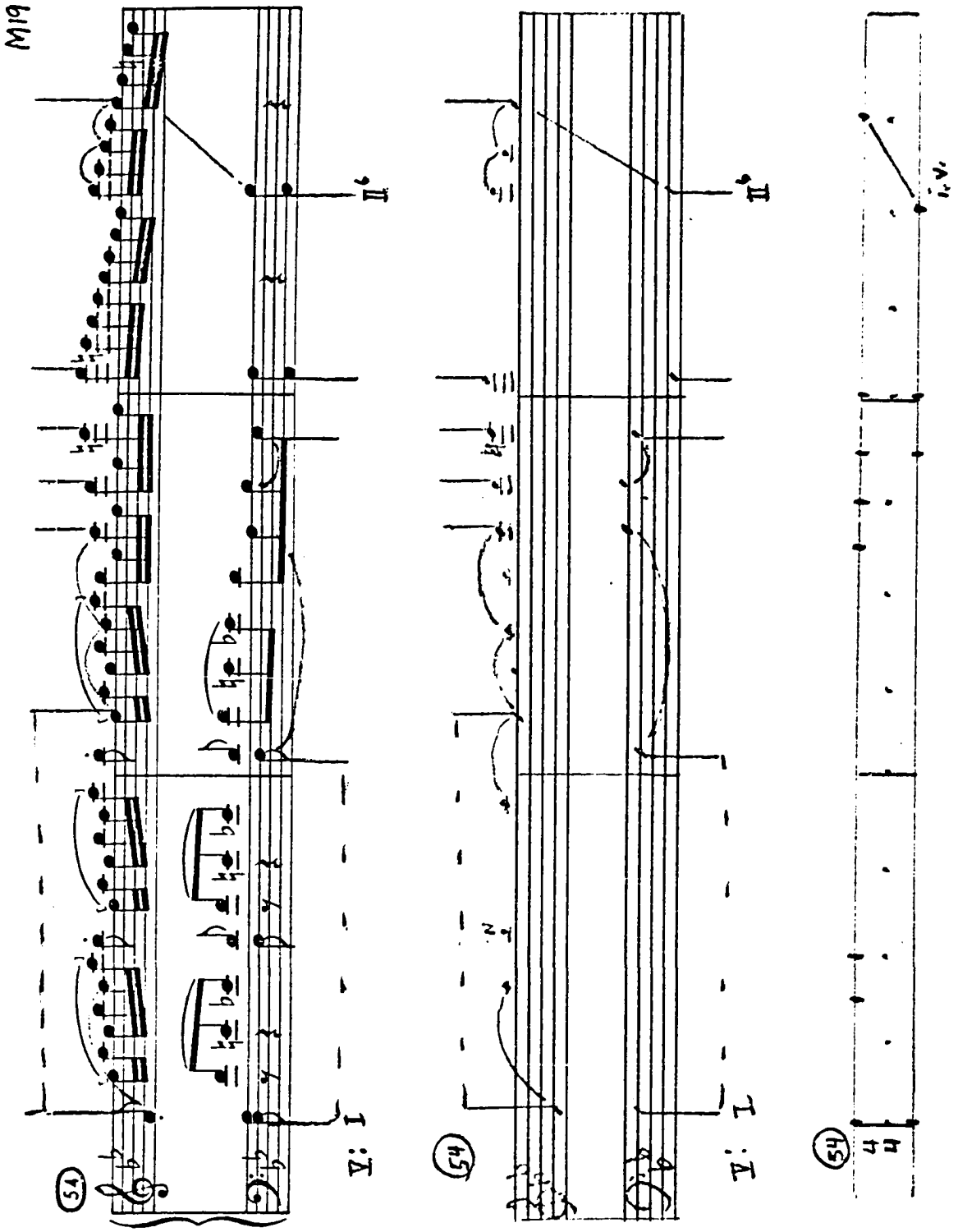

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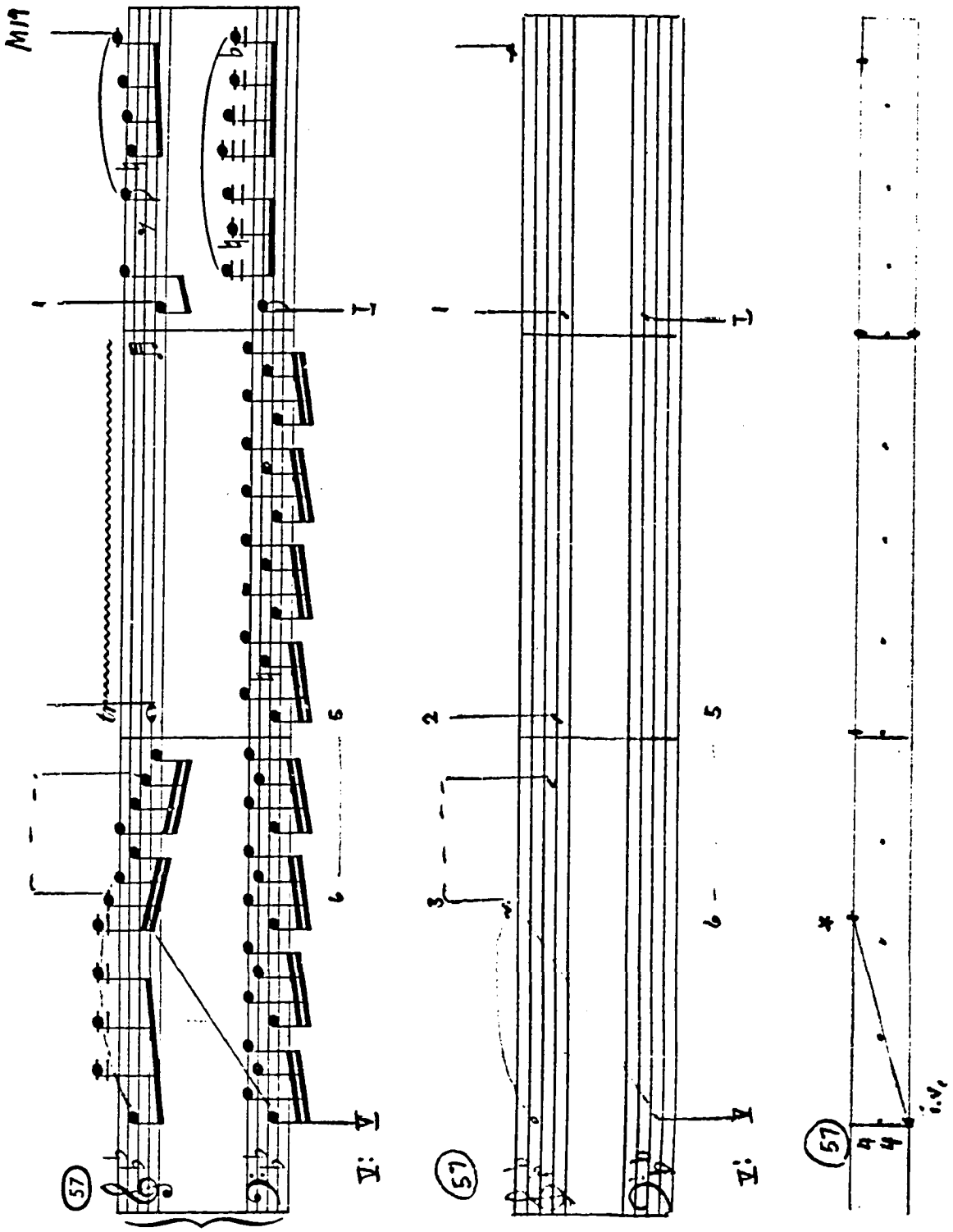

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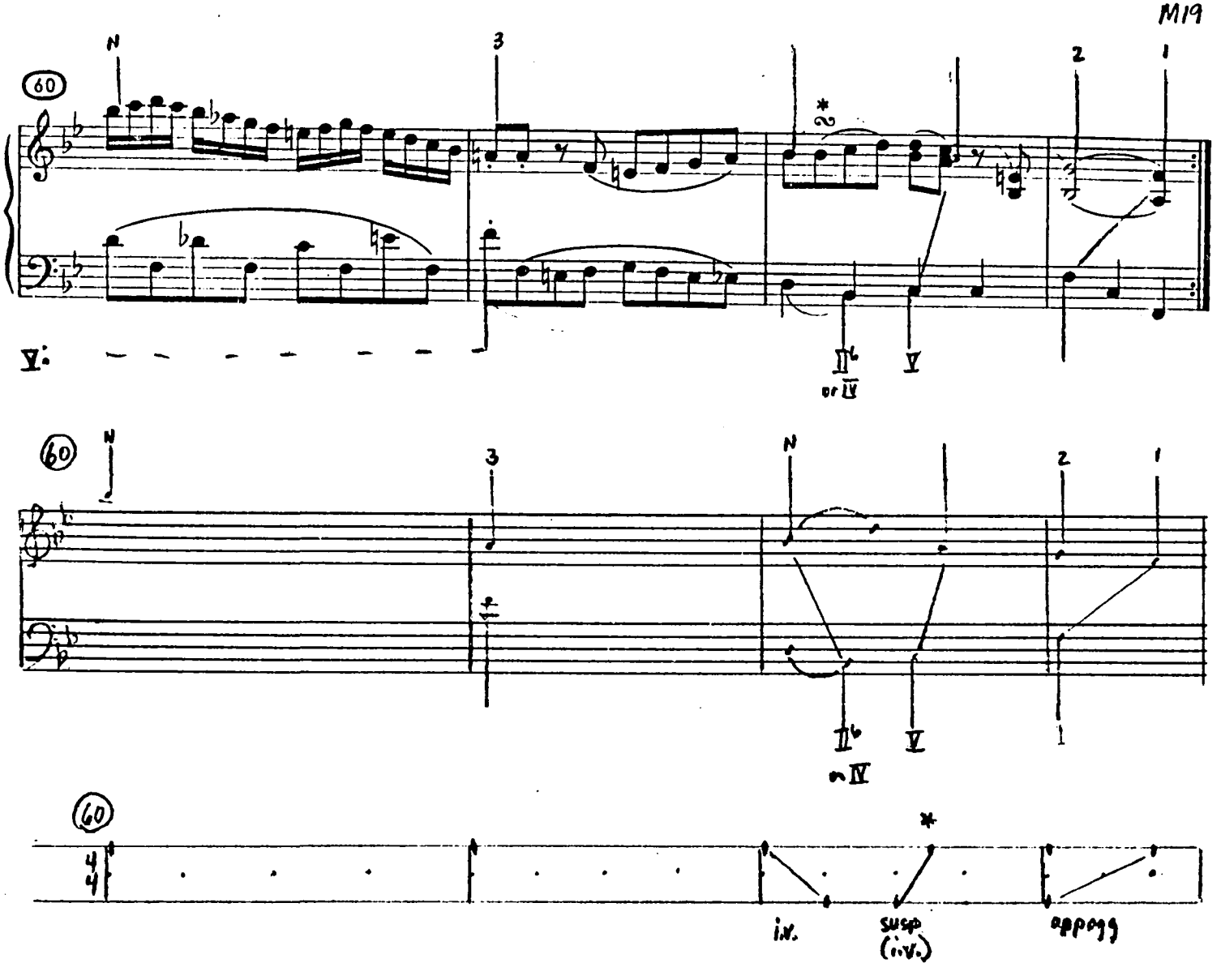

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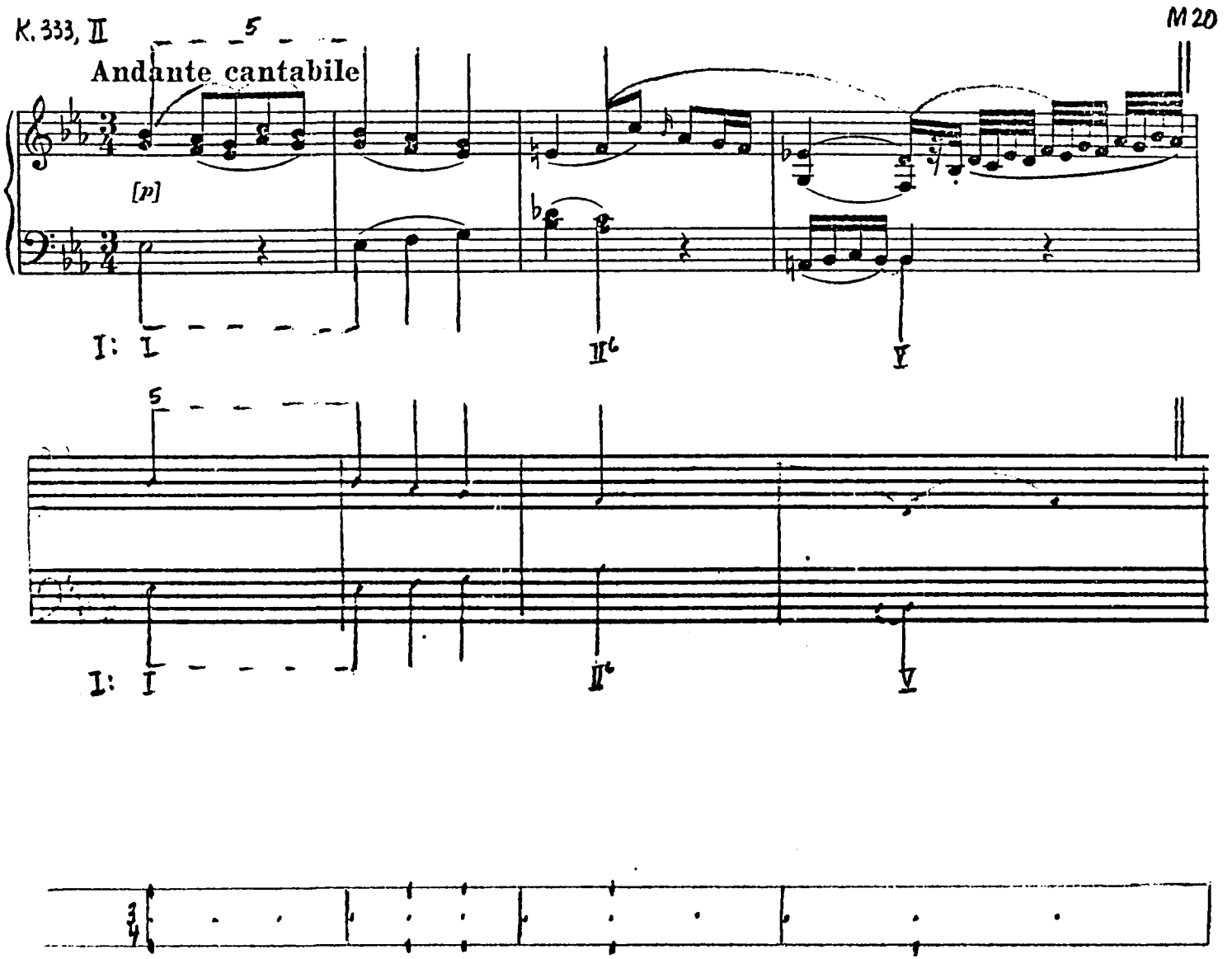

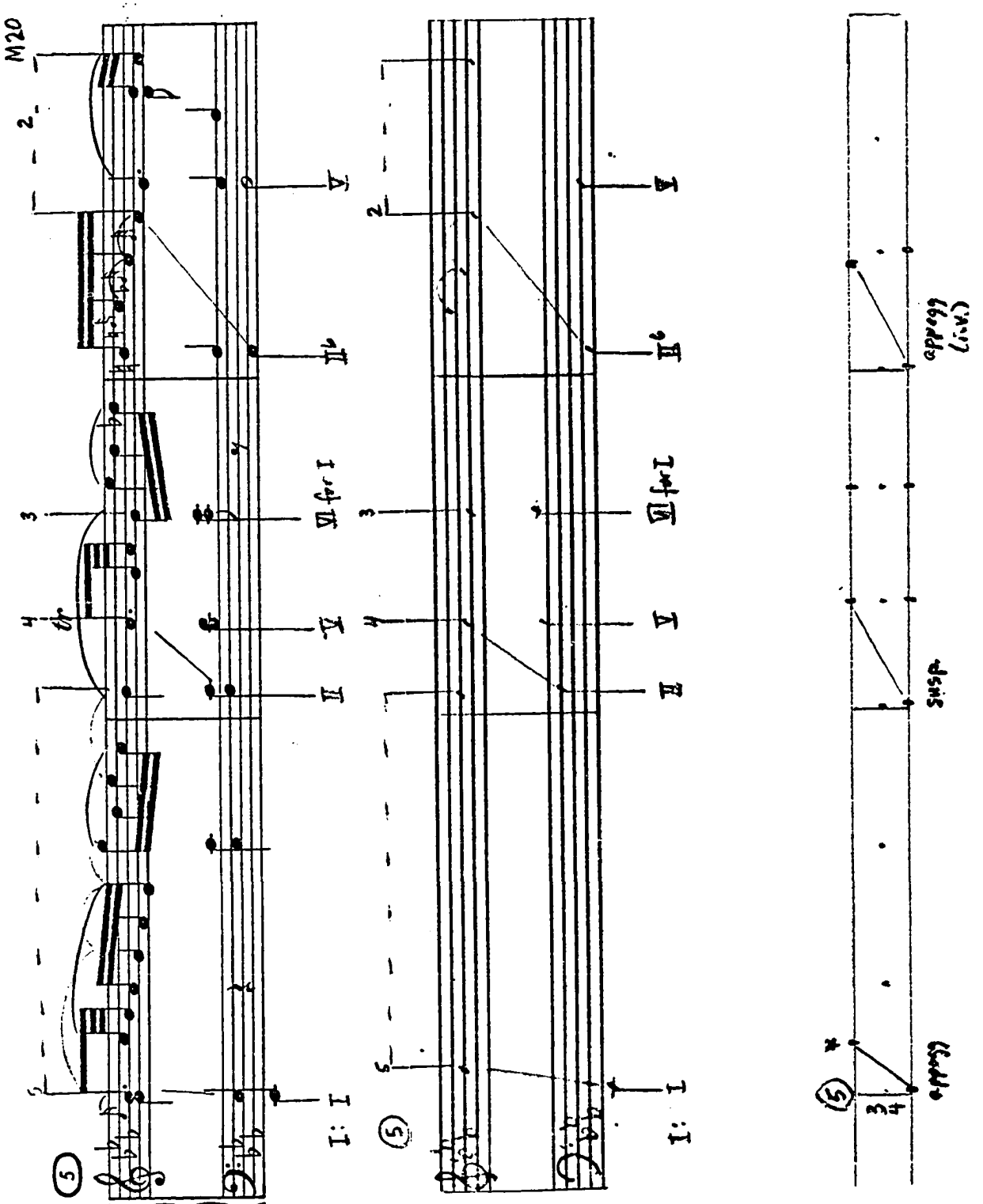

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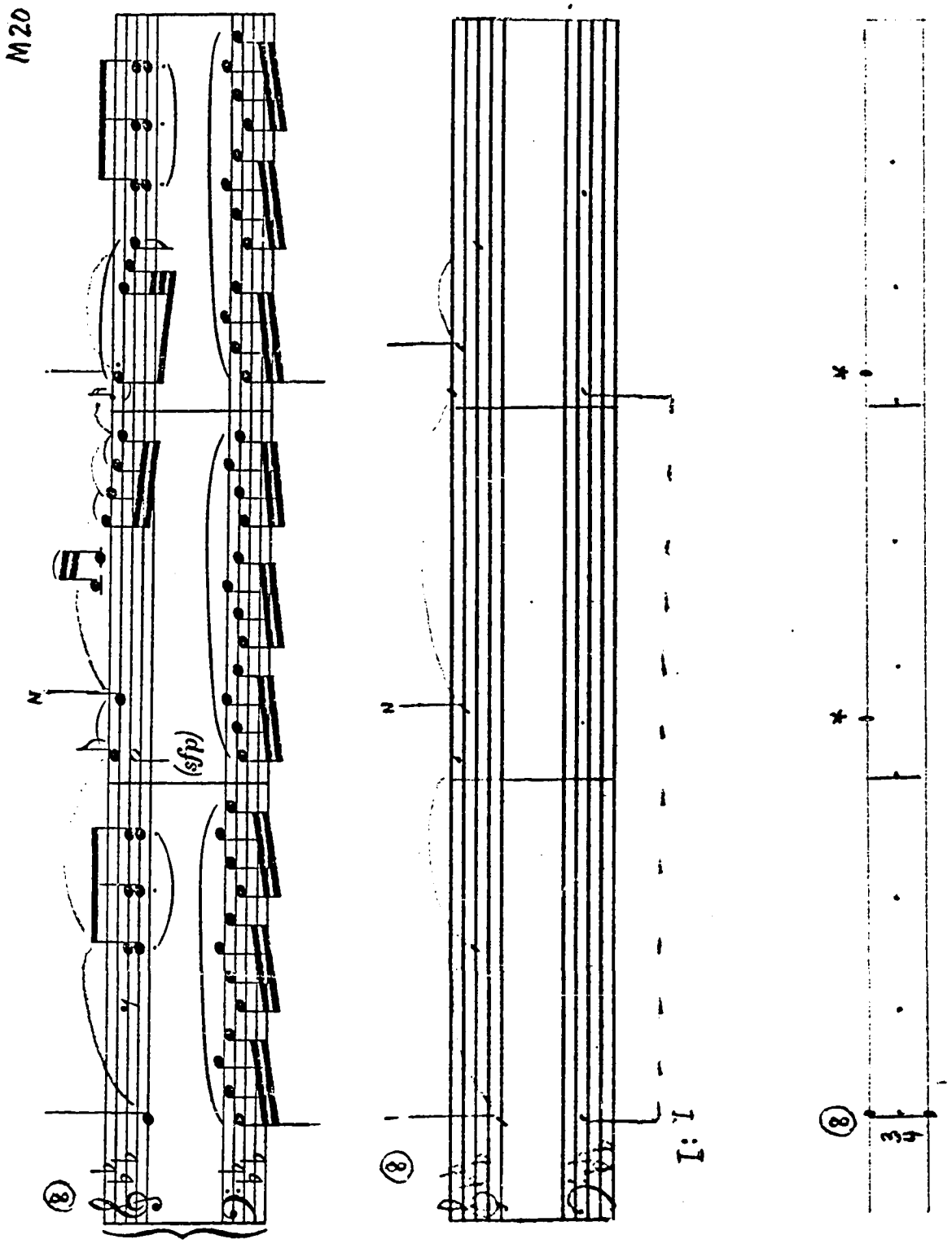

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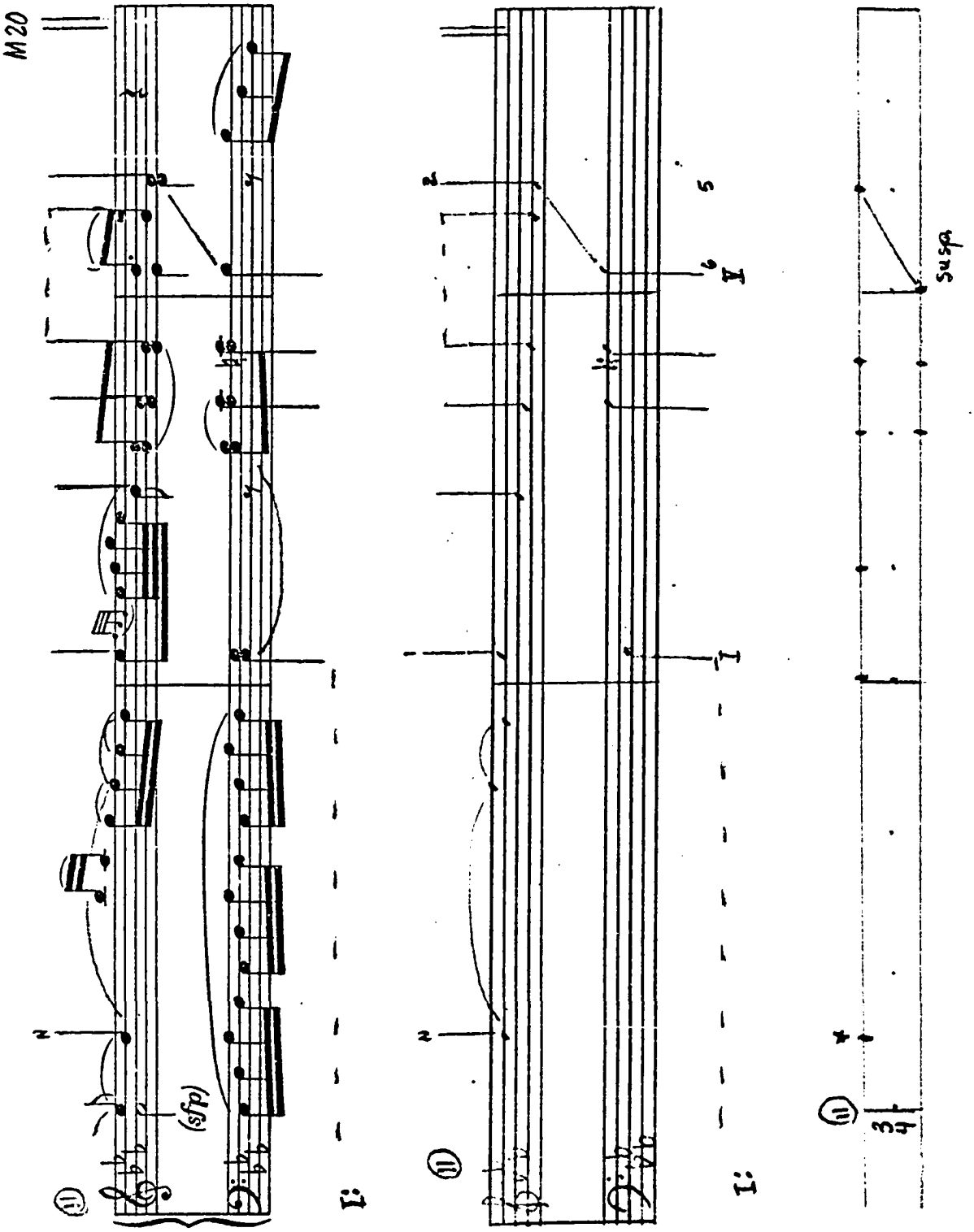

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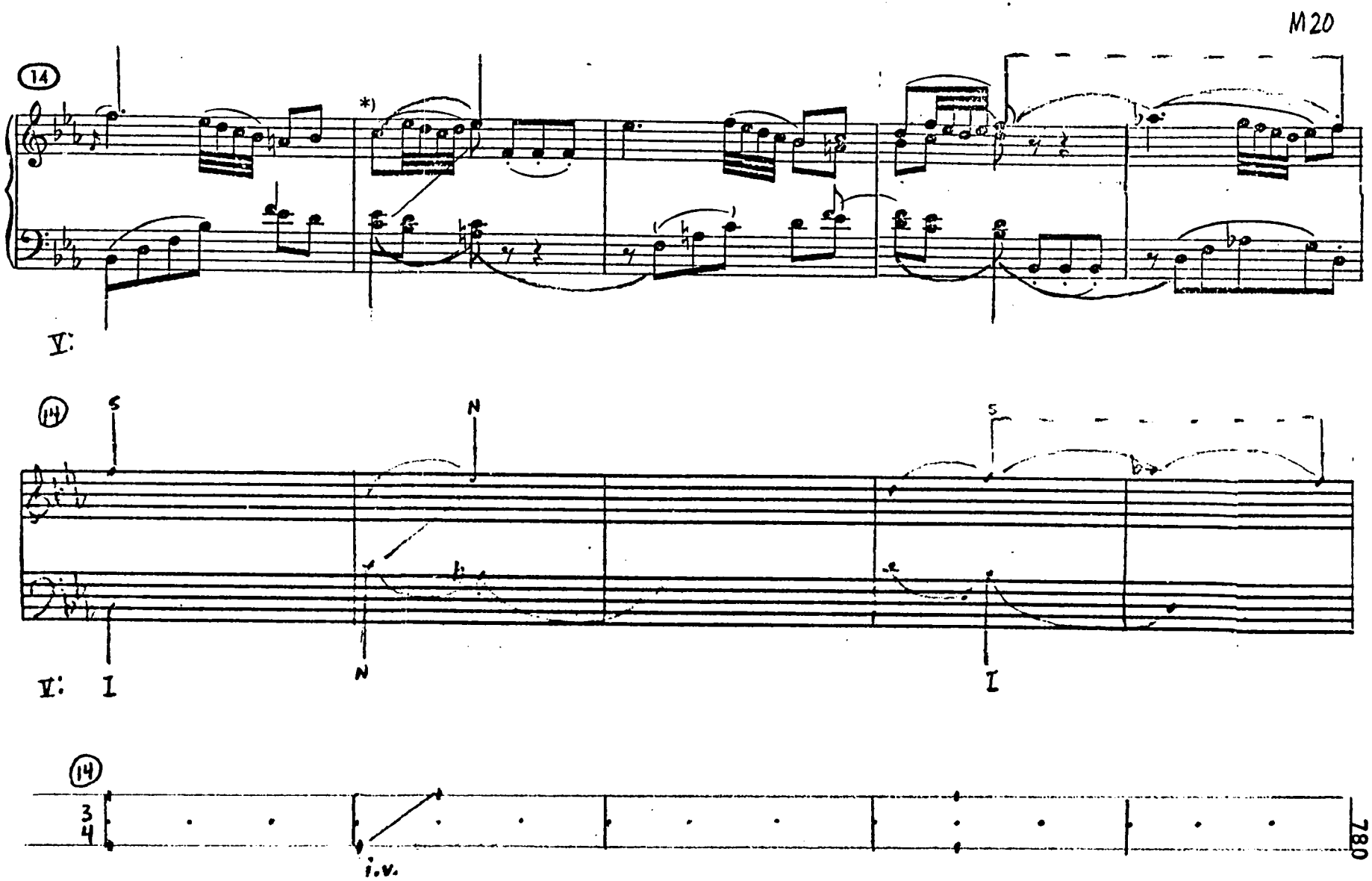

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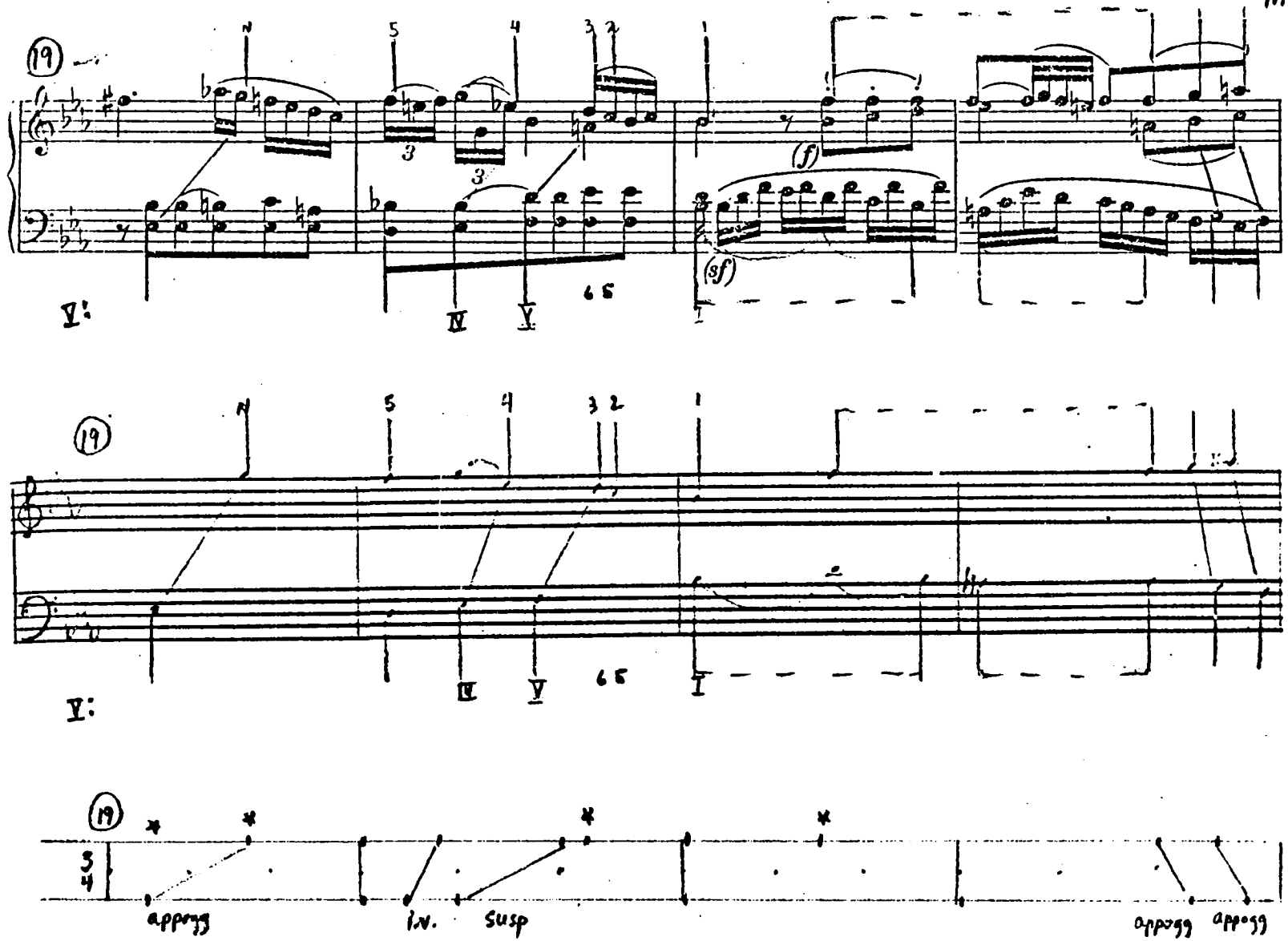
M20



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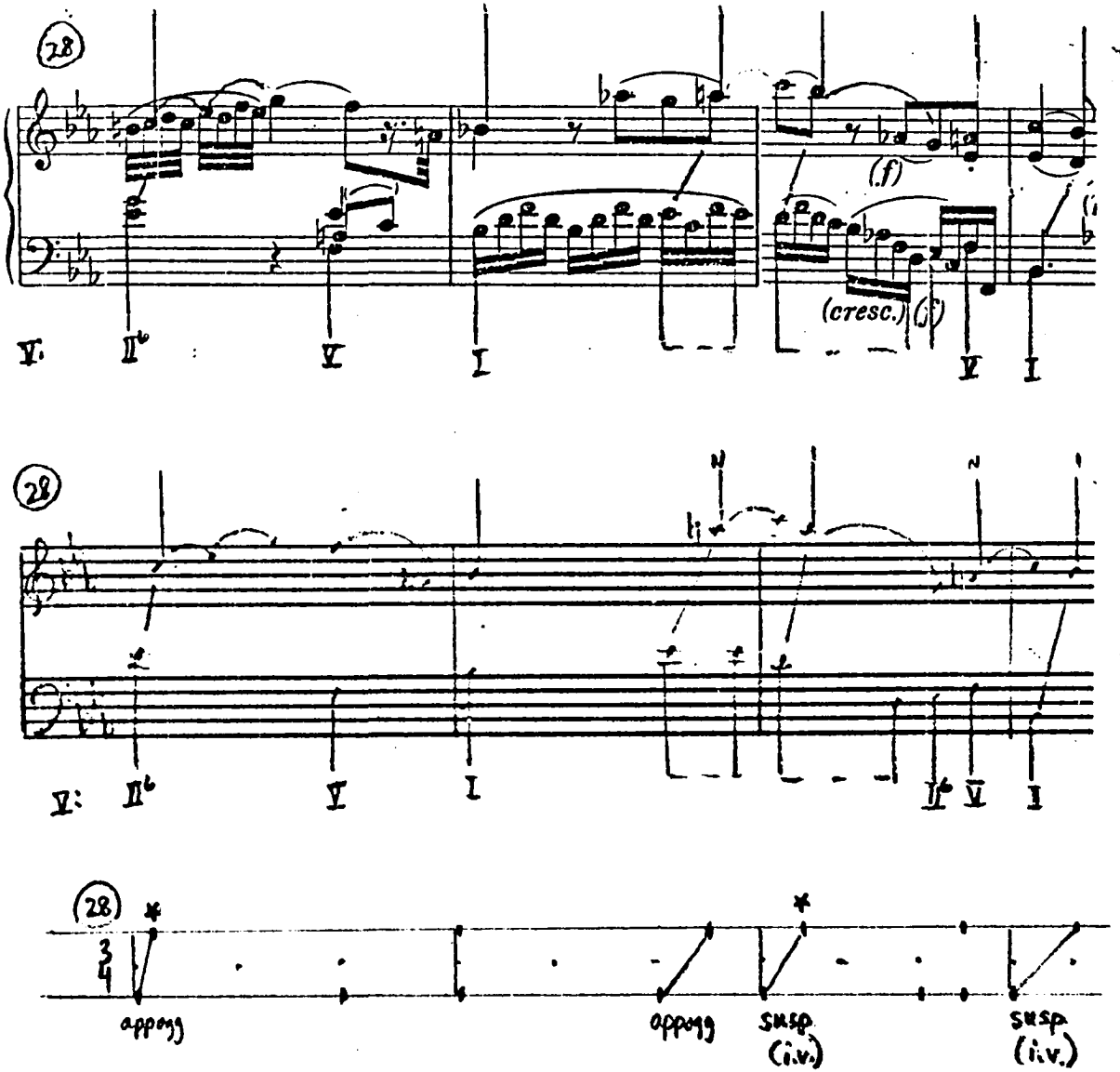

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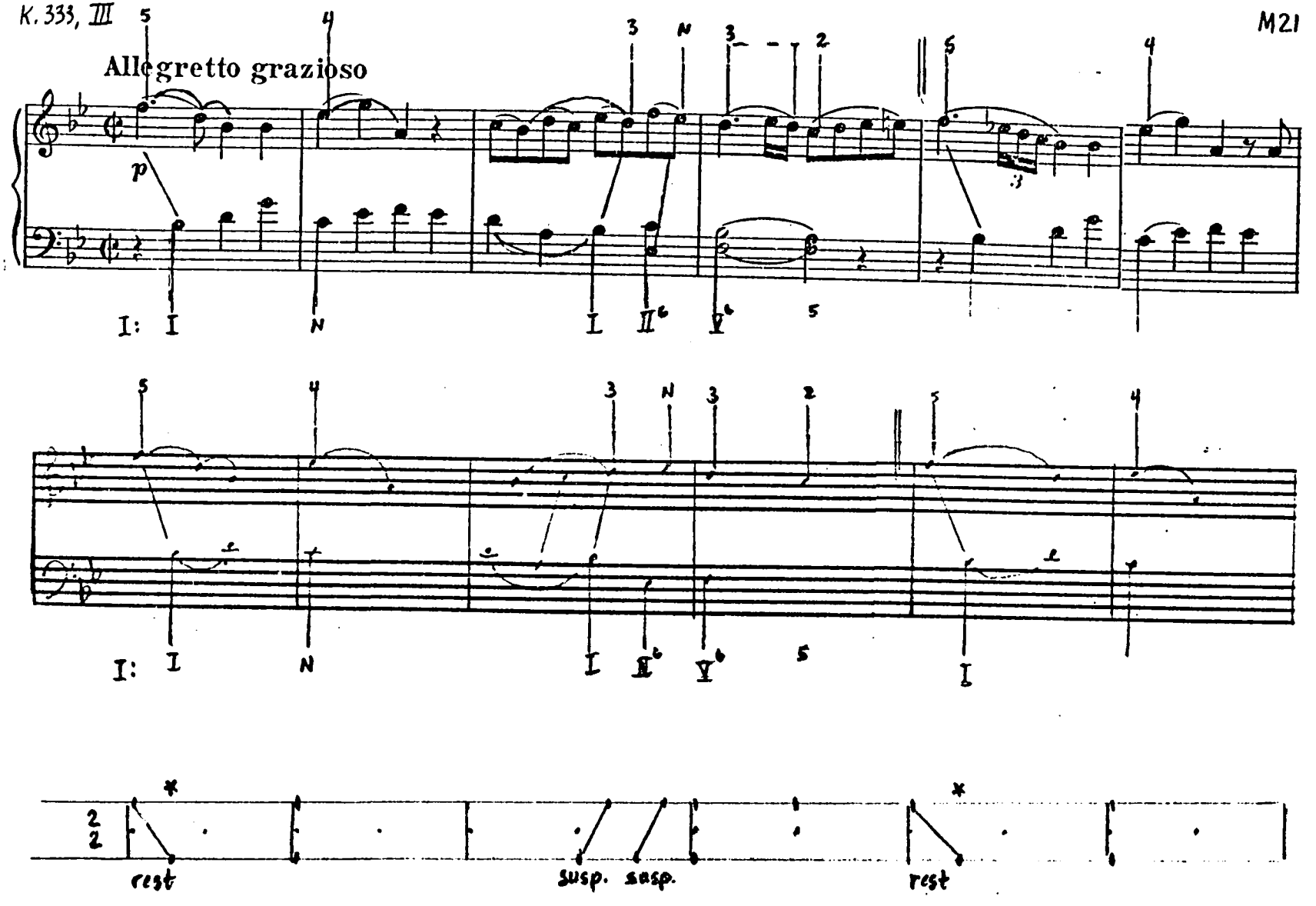

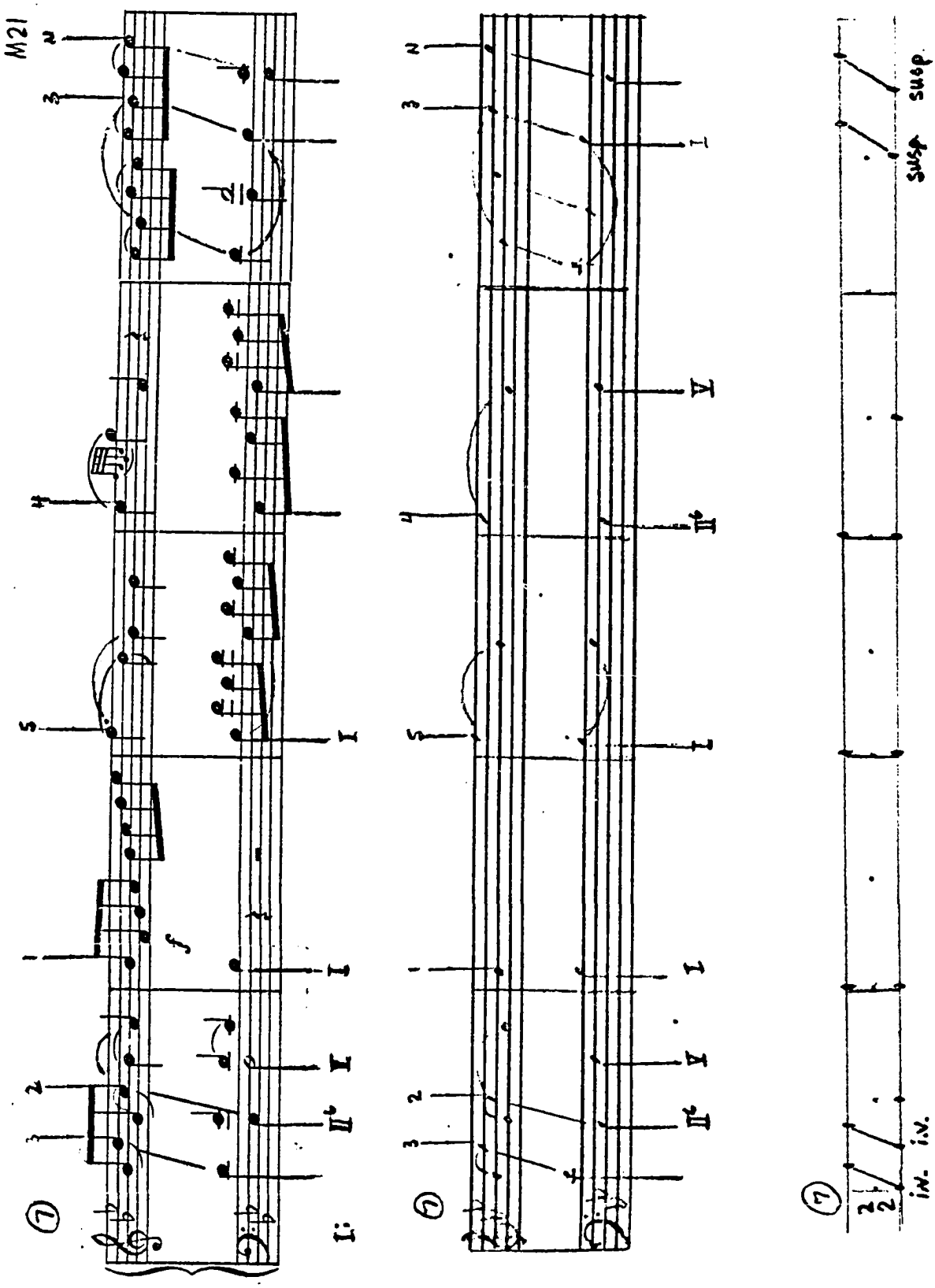

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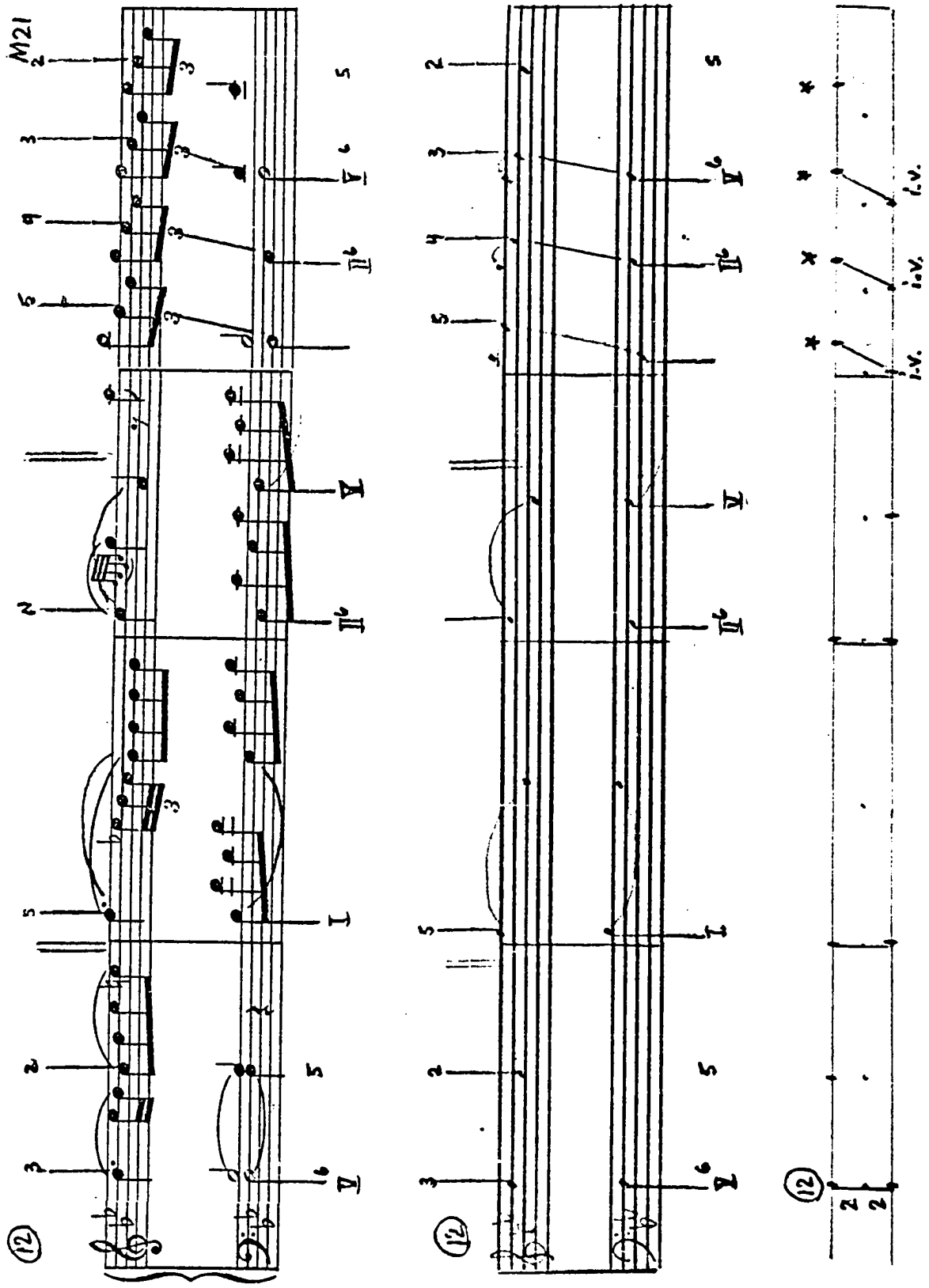

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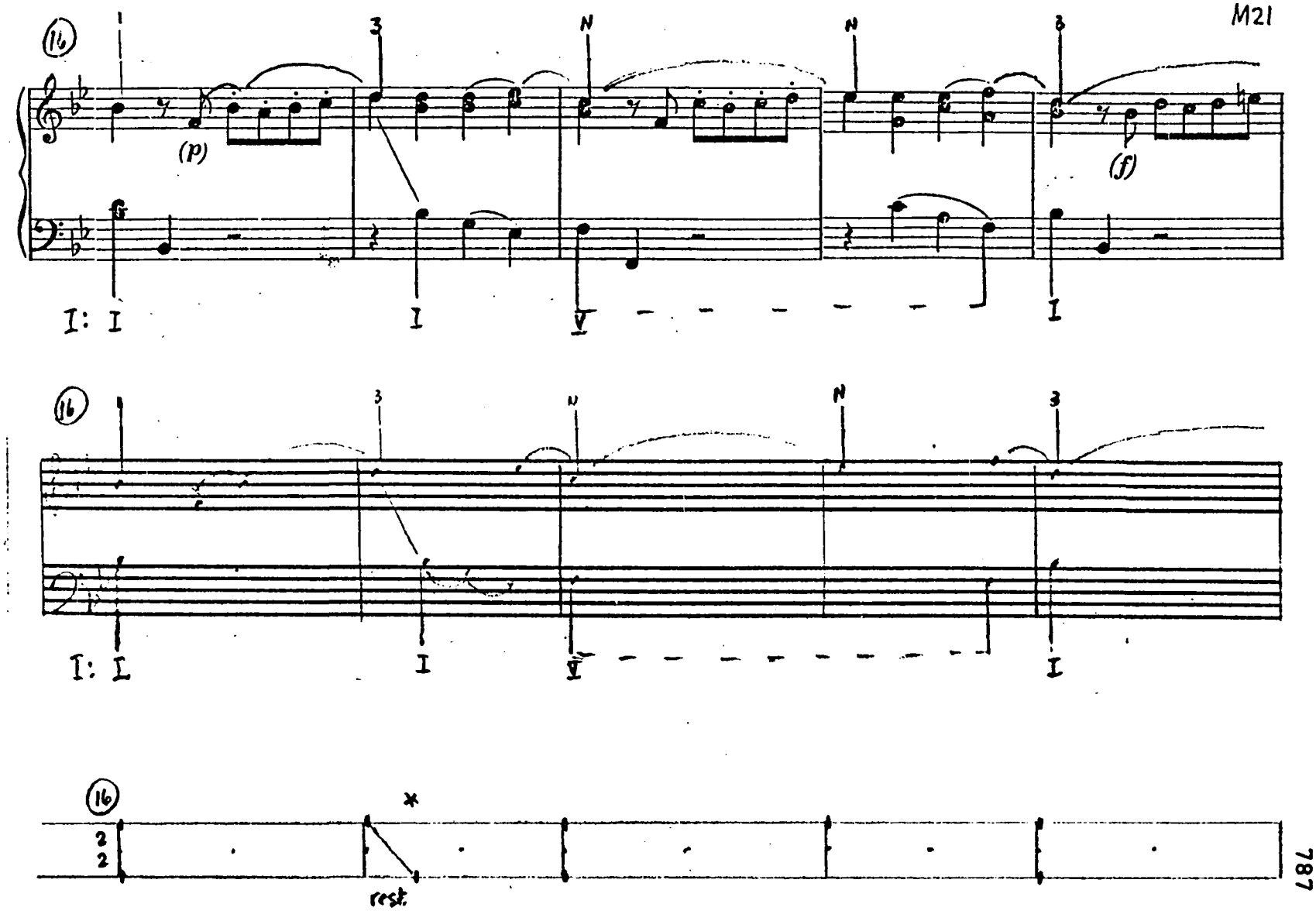

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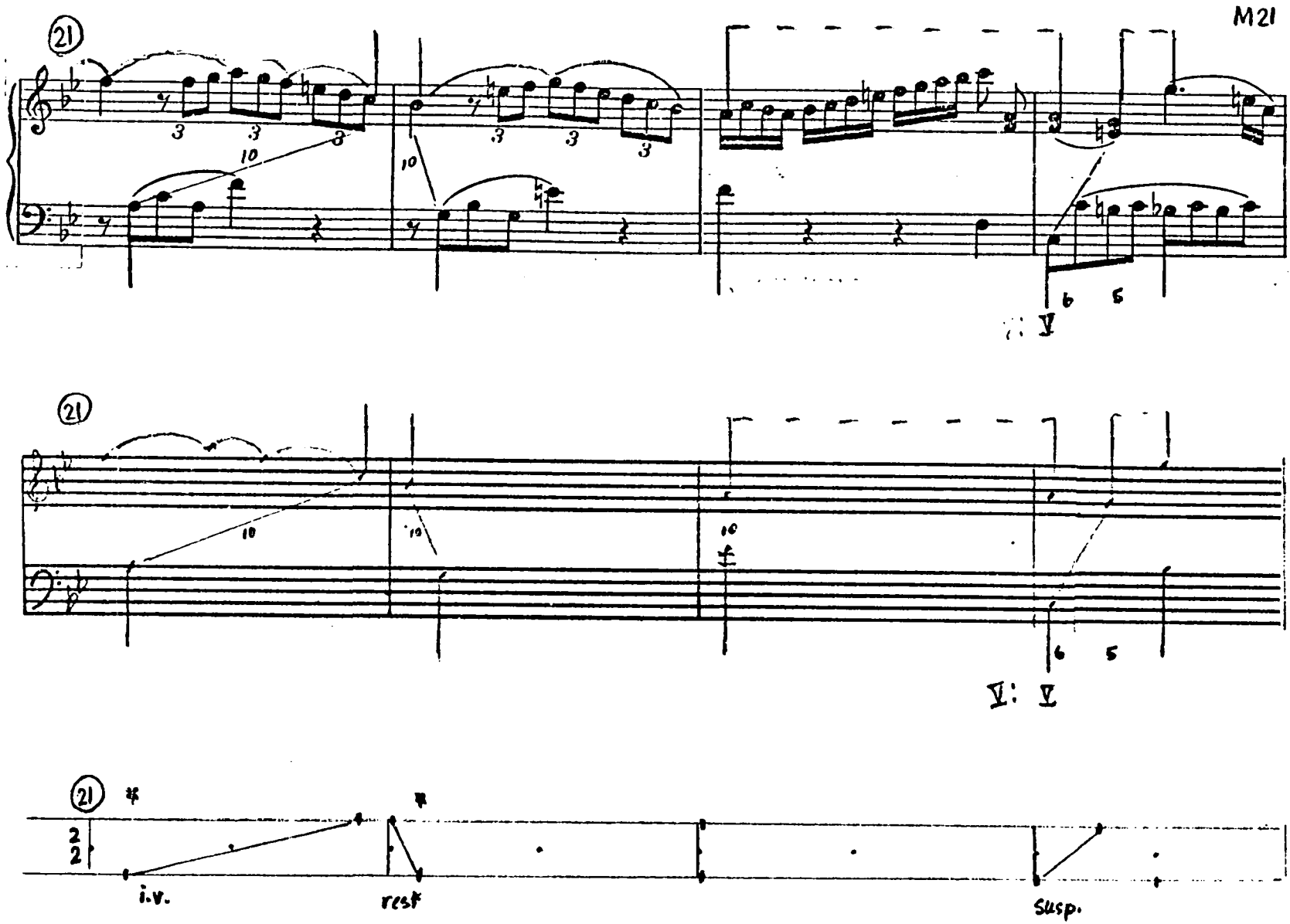

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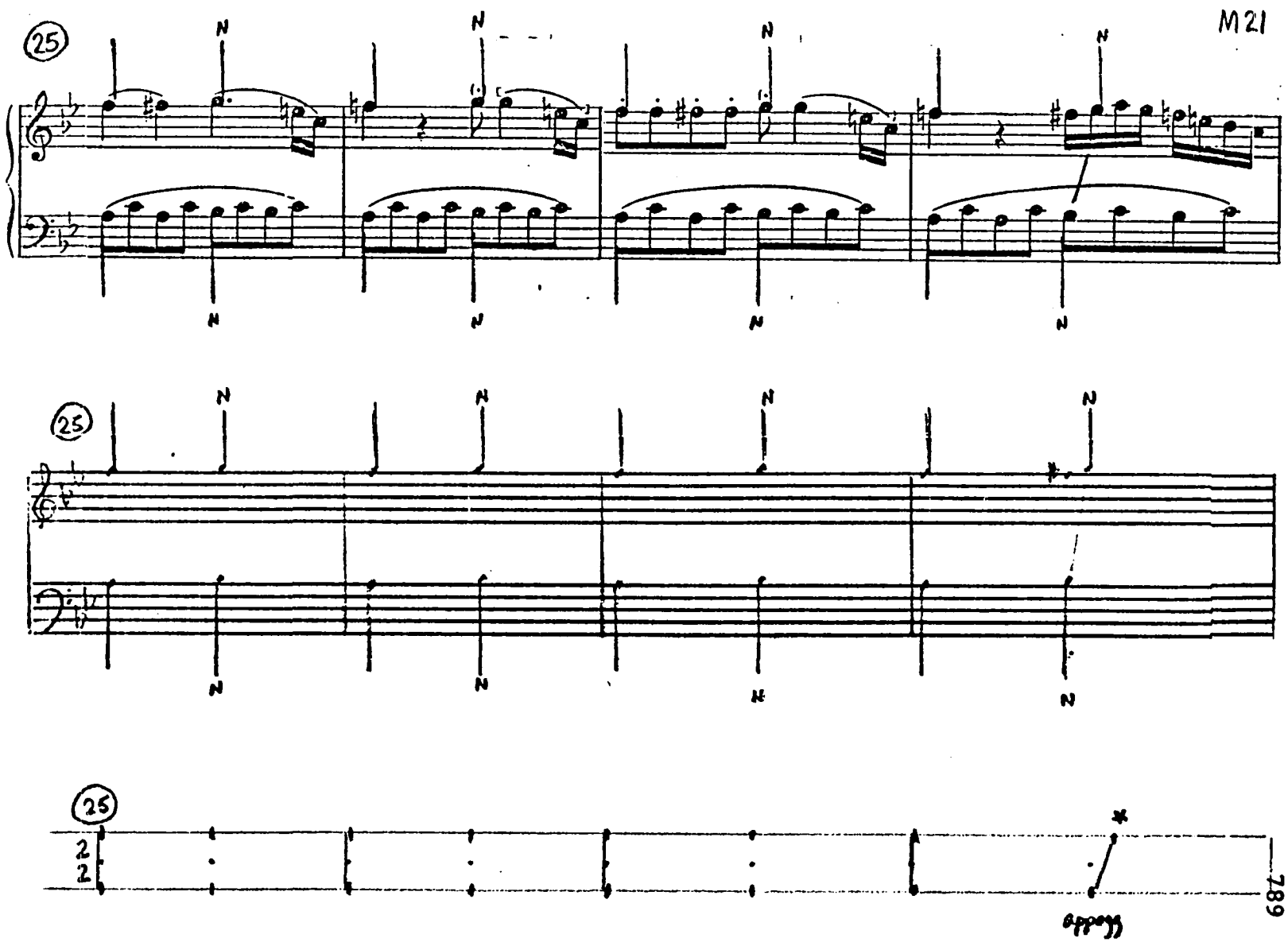

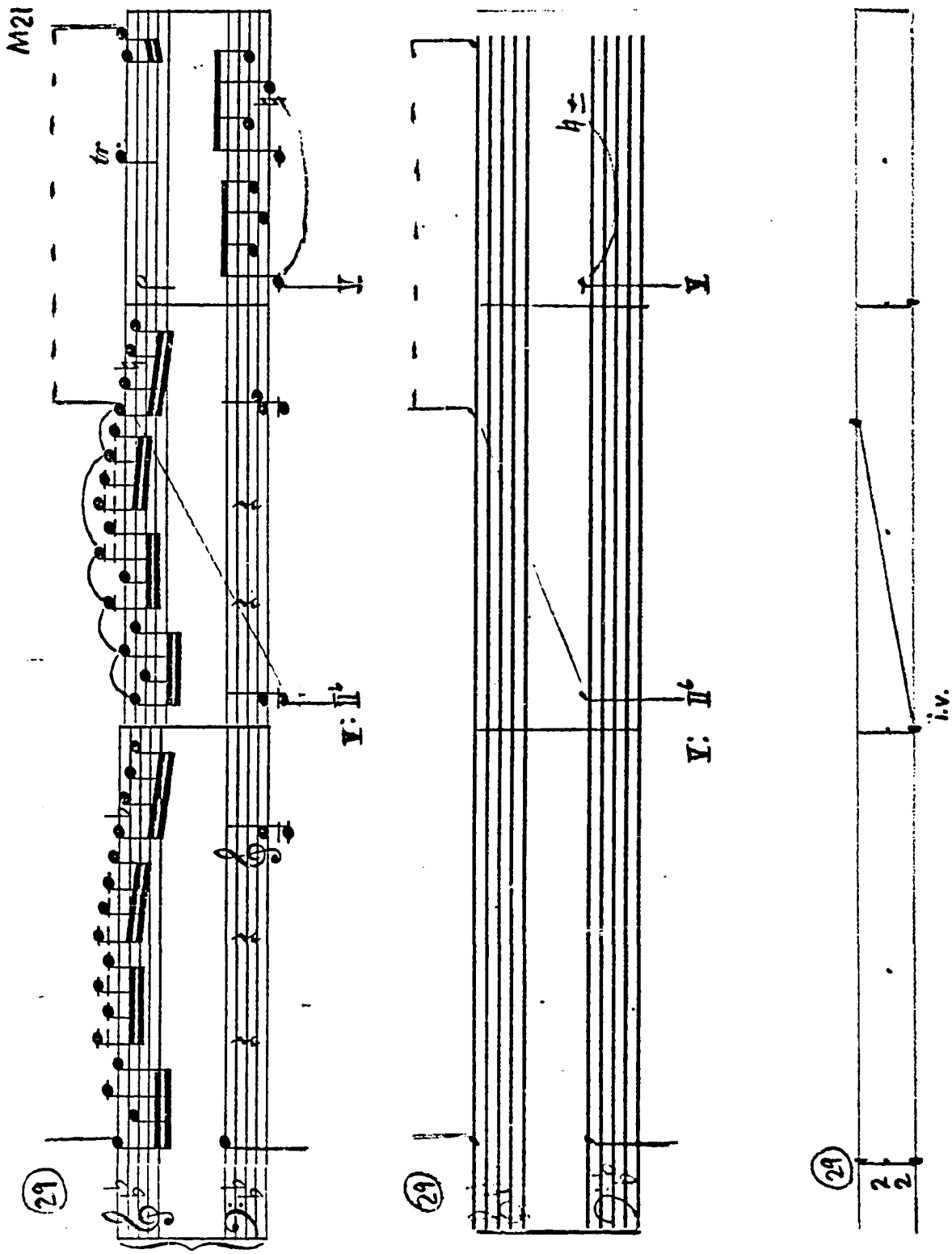

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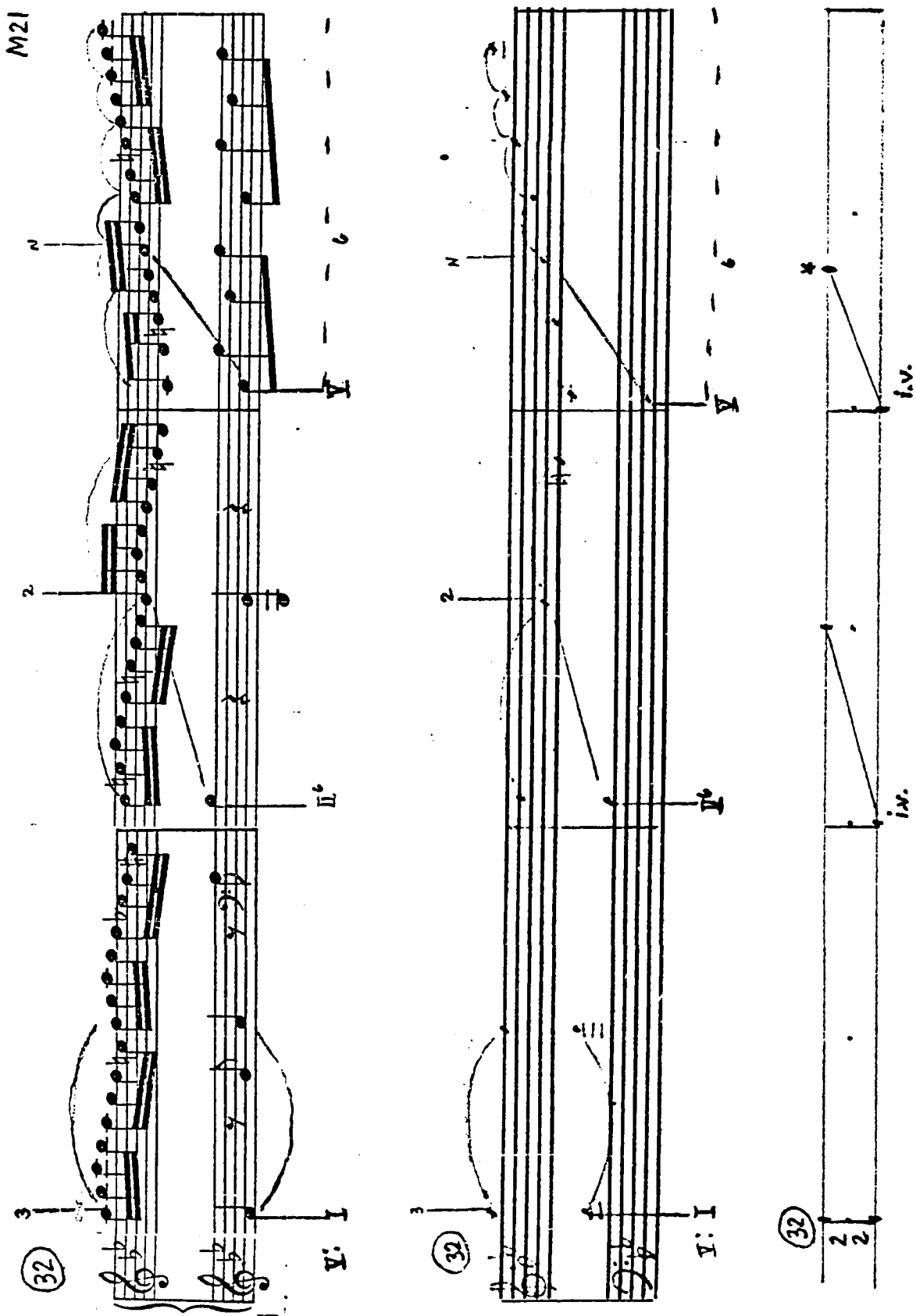

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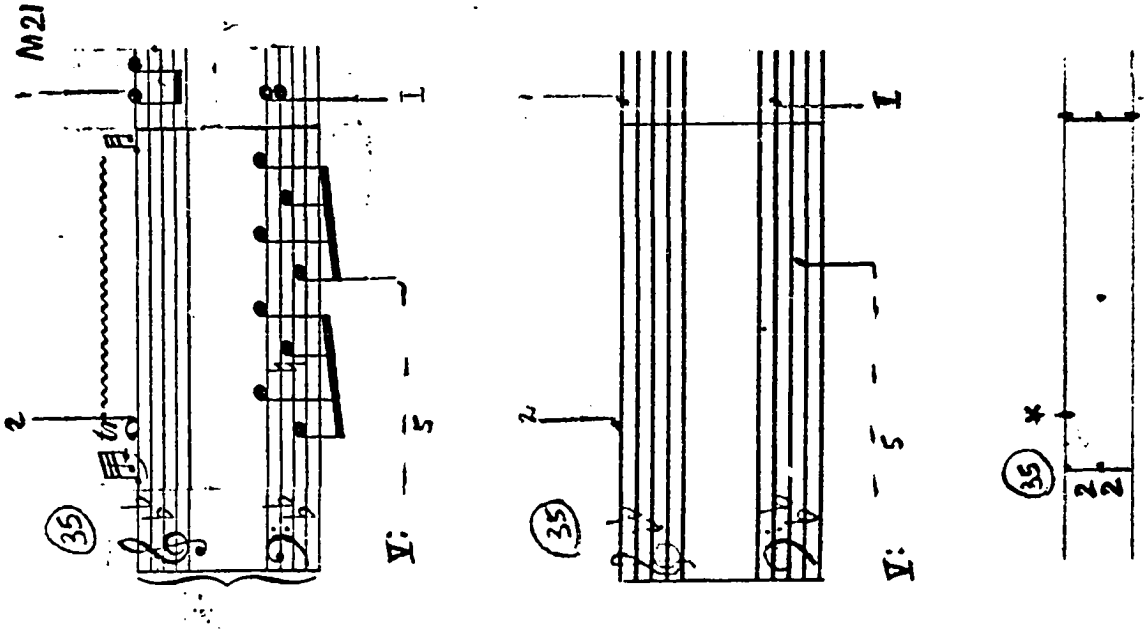

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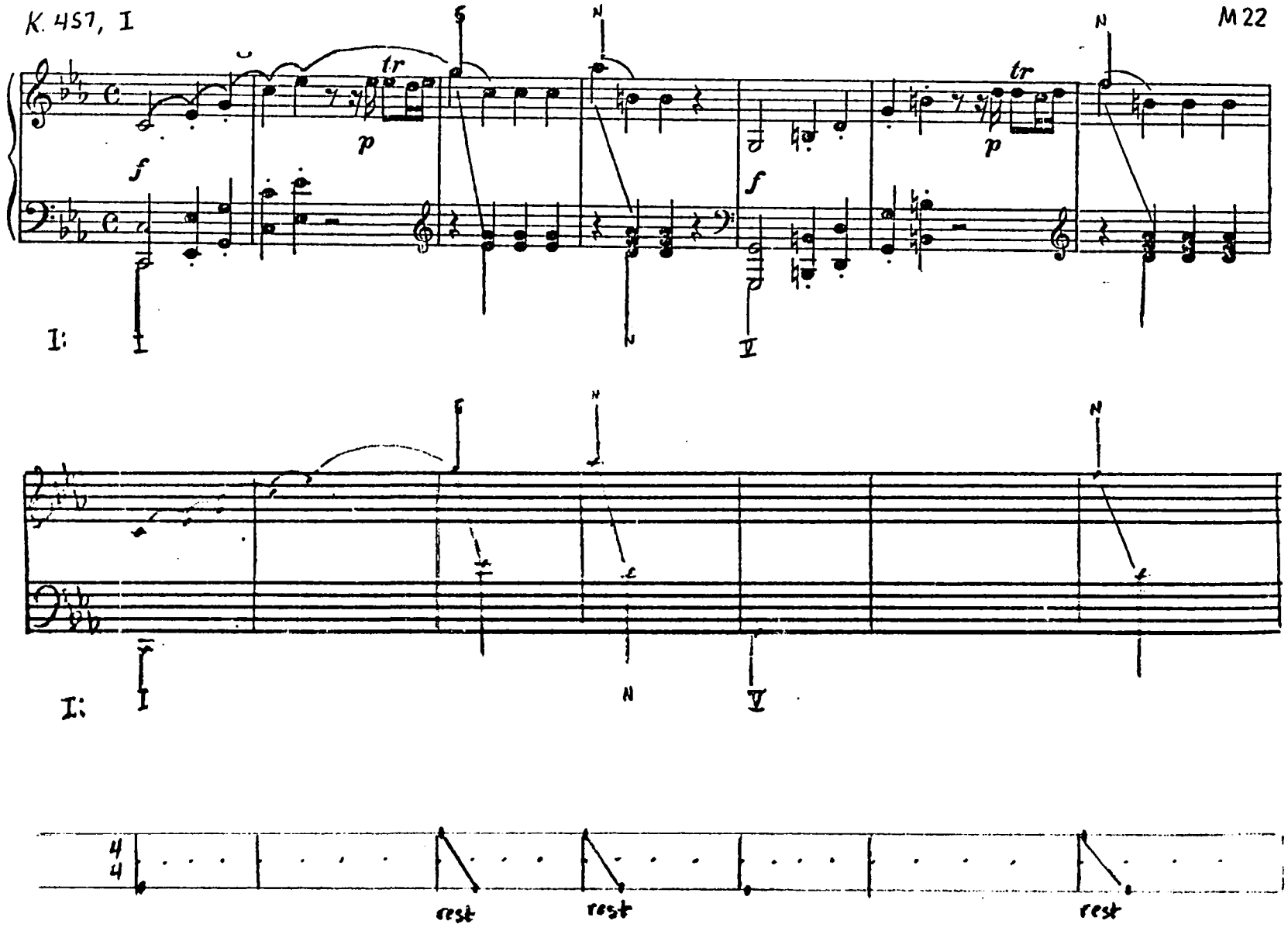

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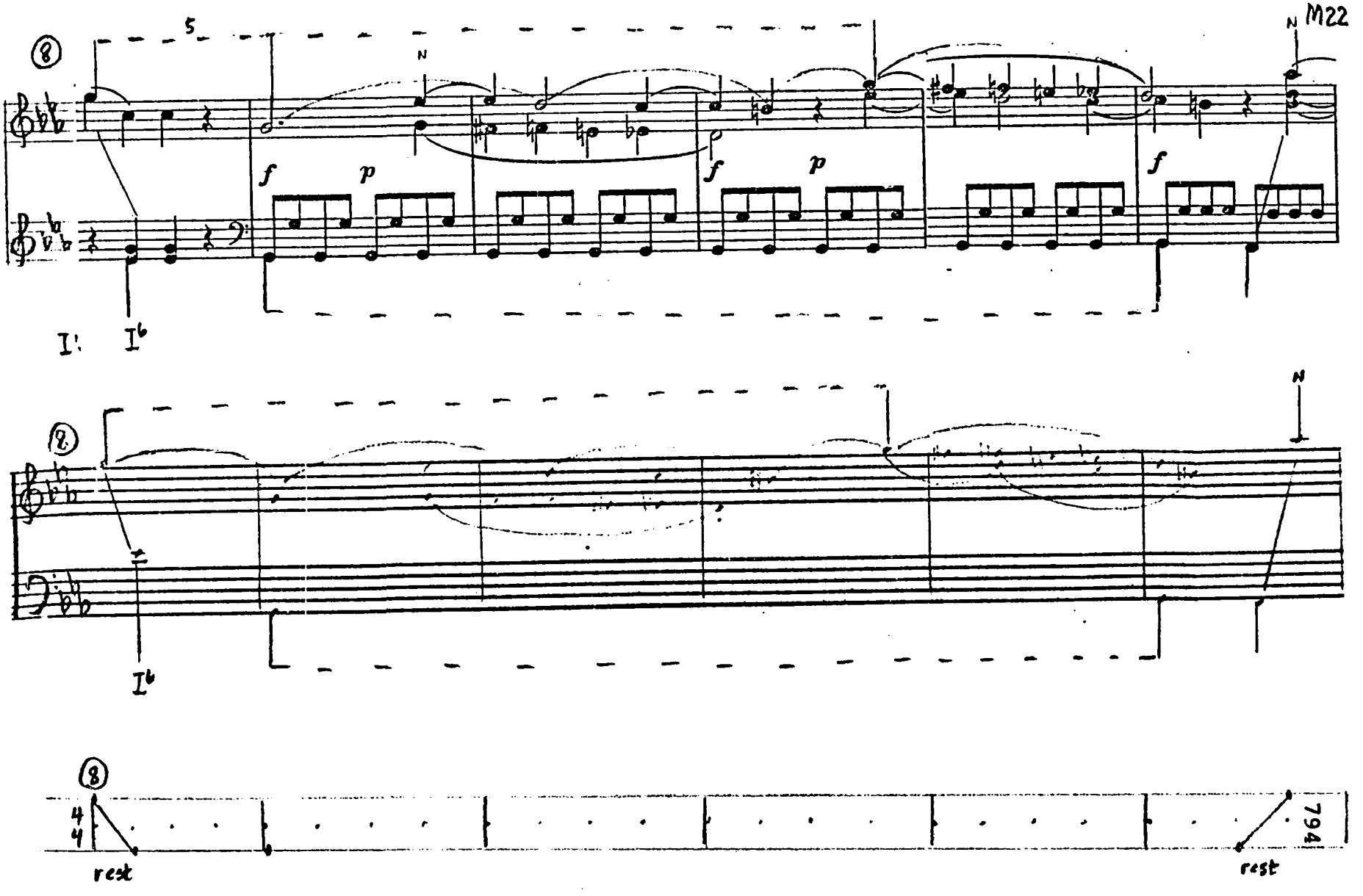

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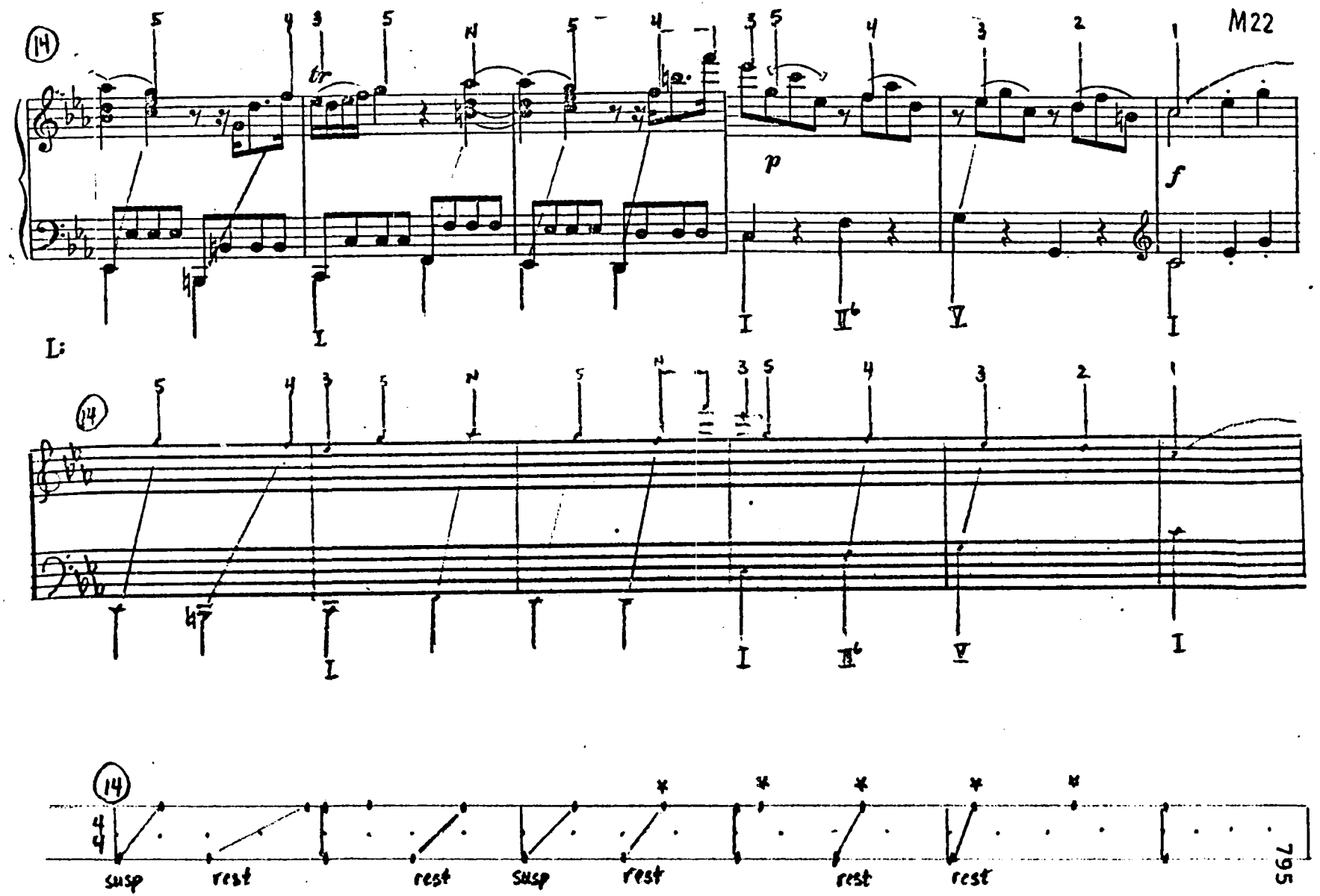

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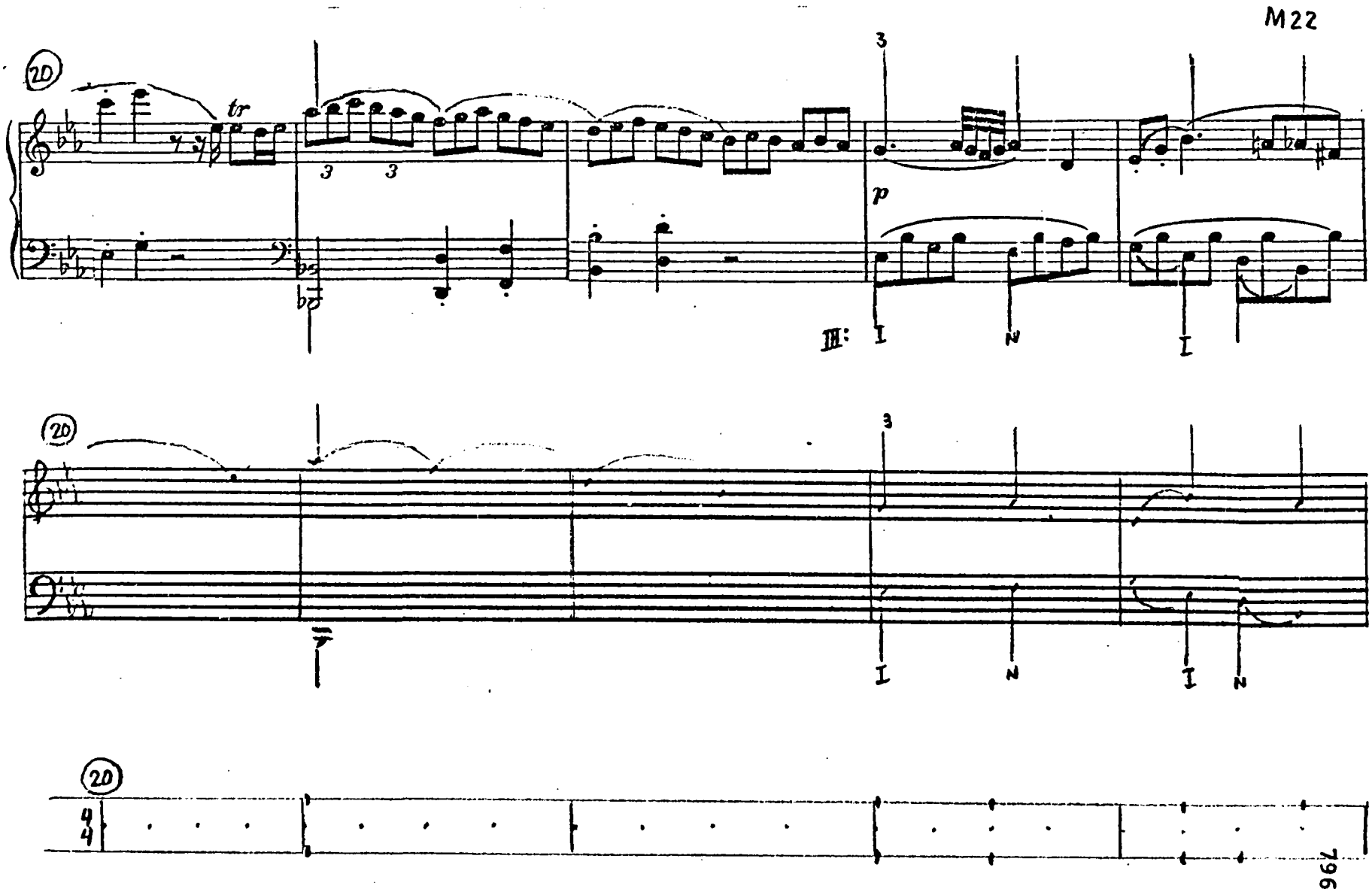

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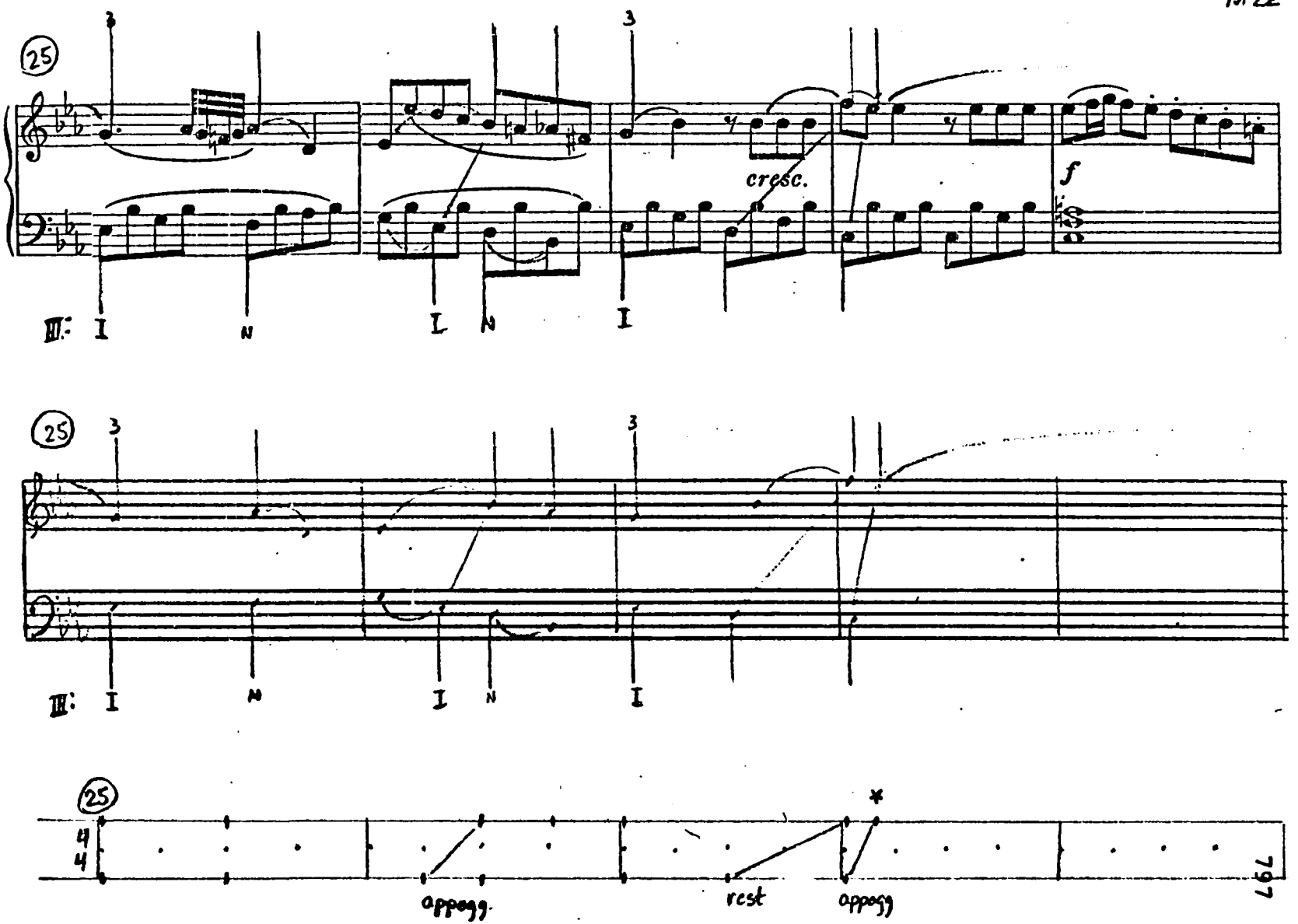

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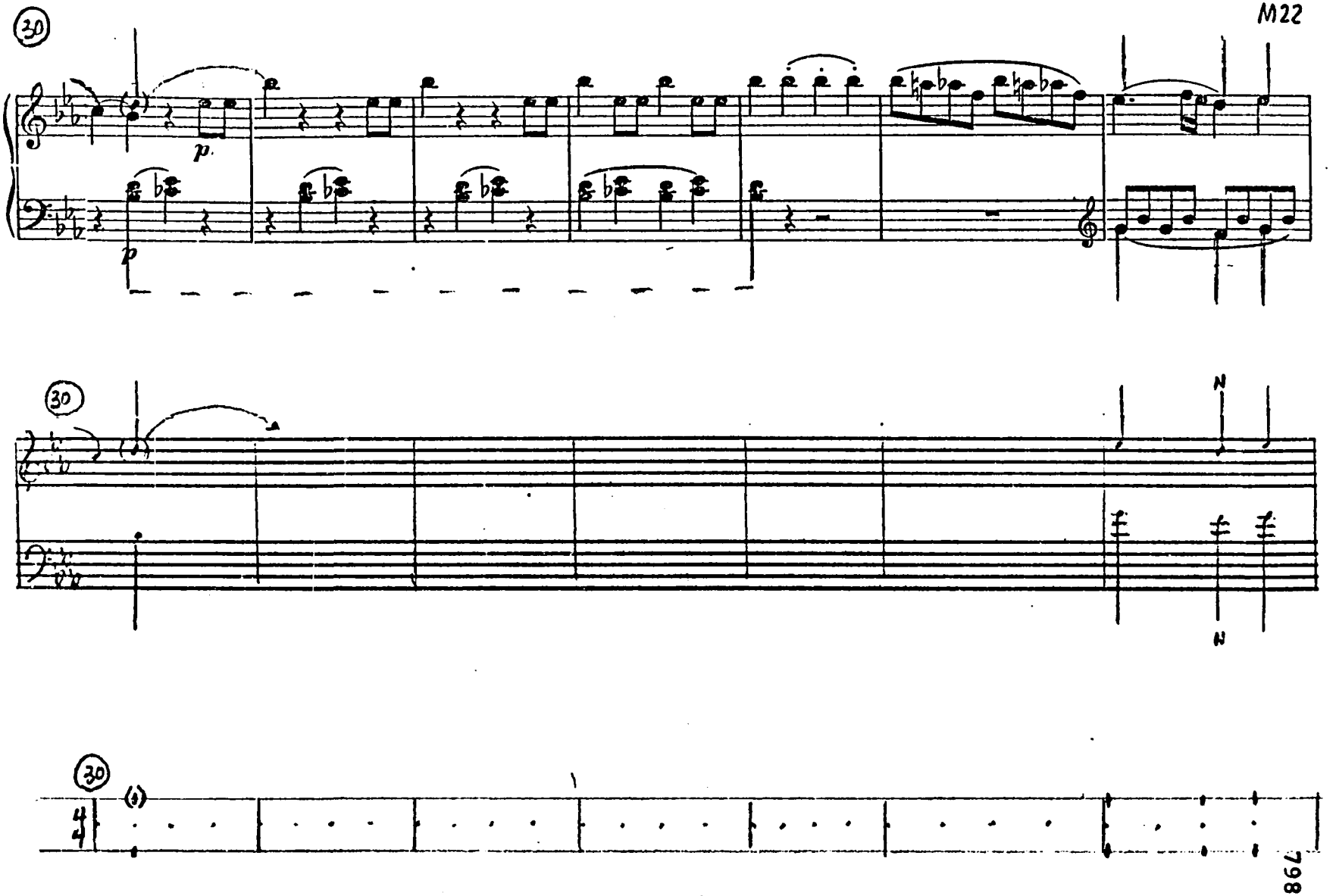

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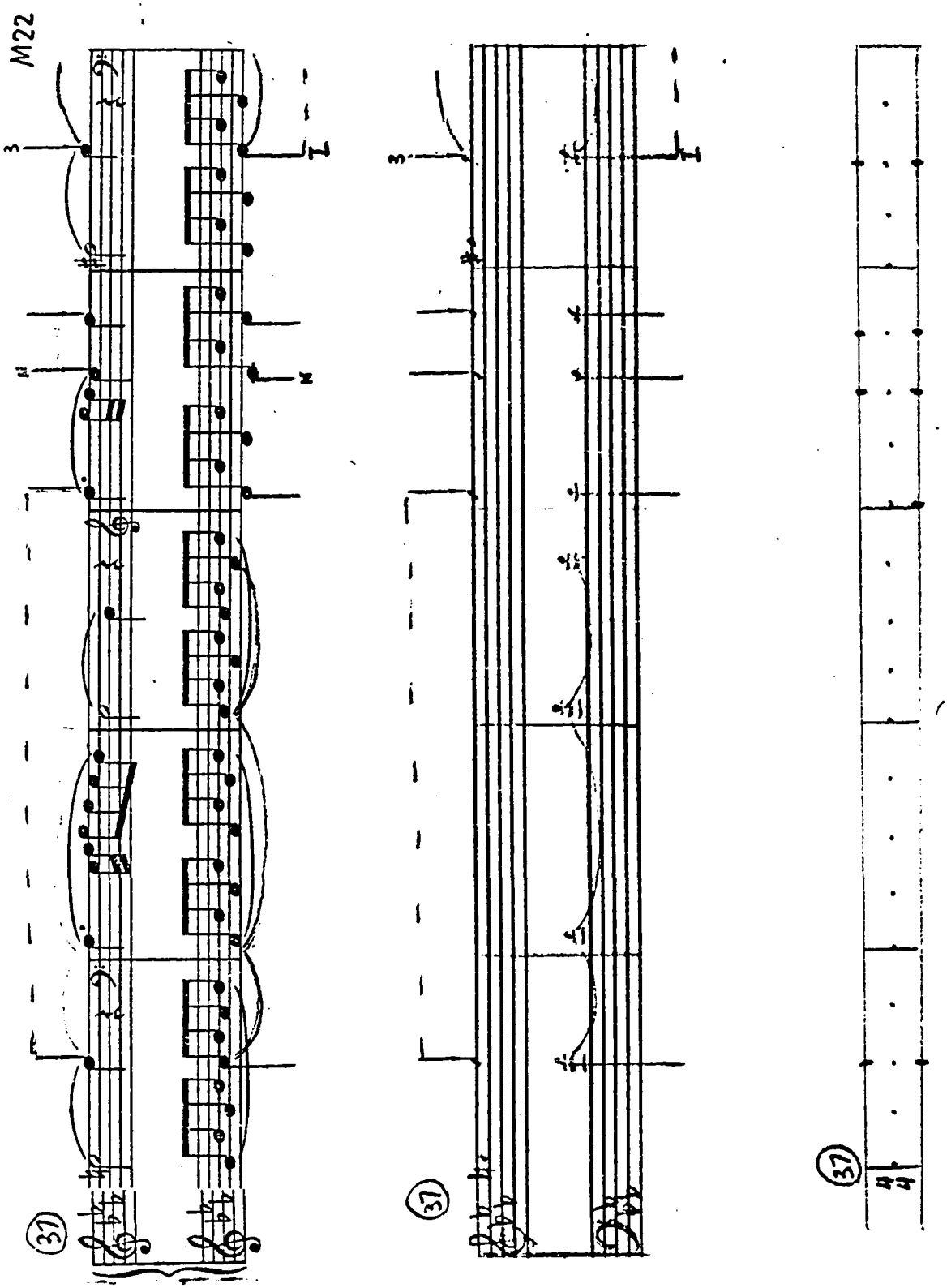

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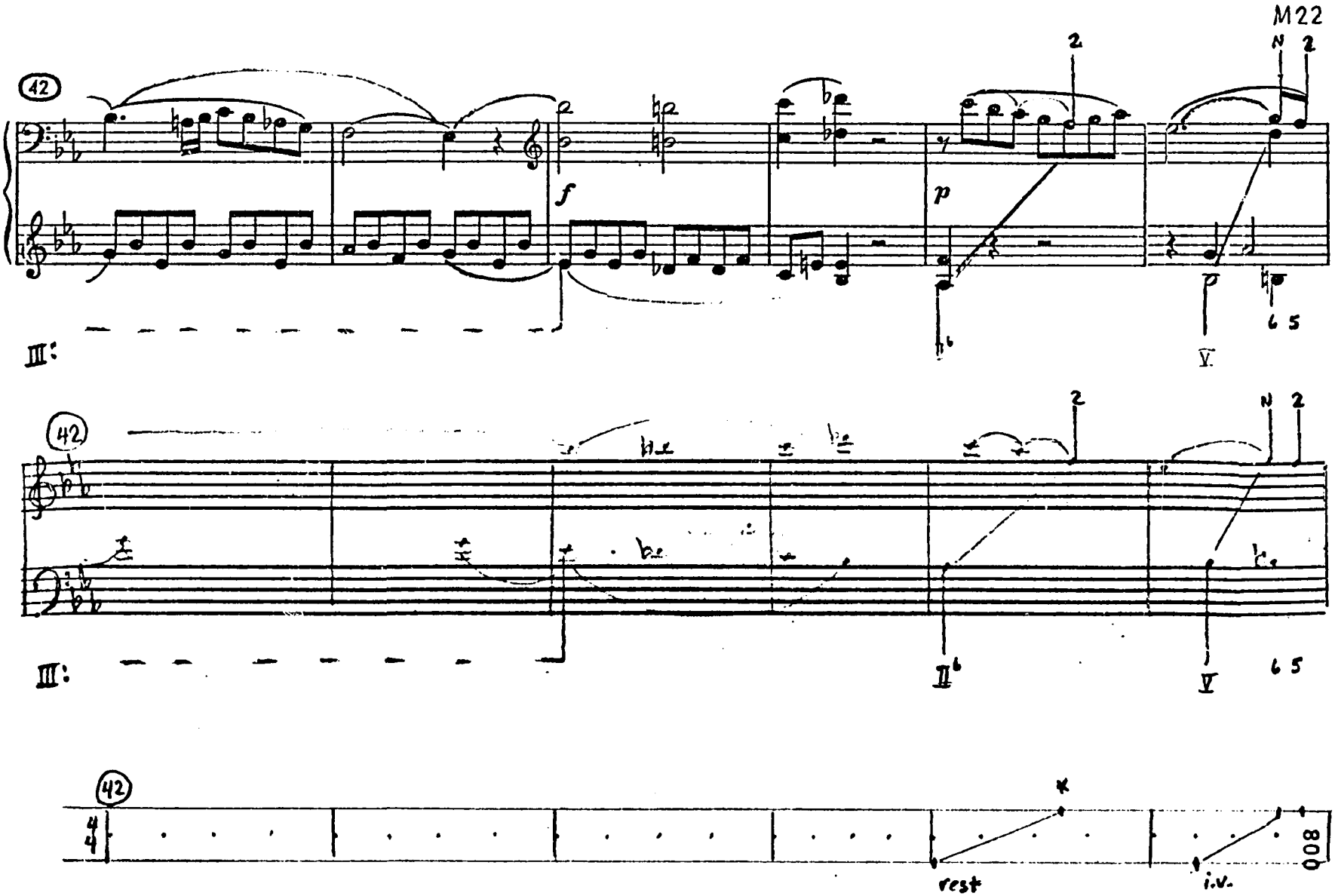

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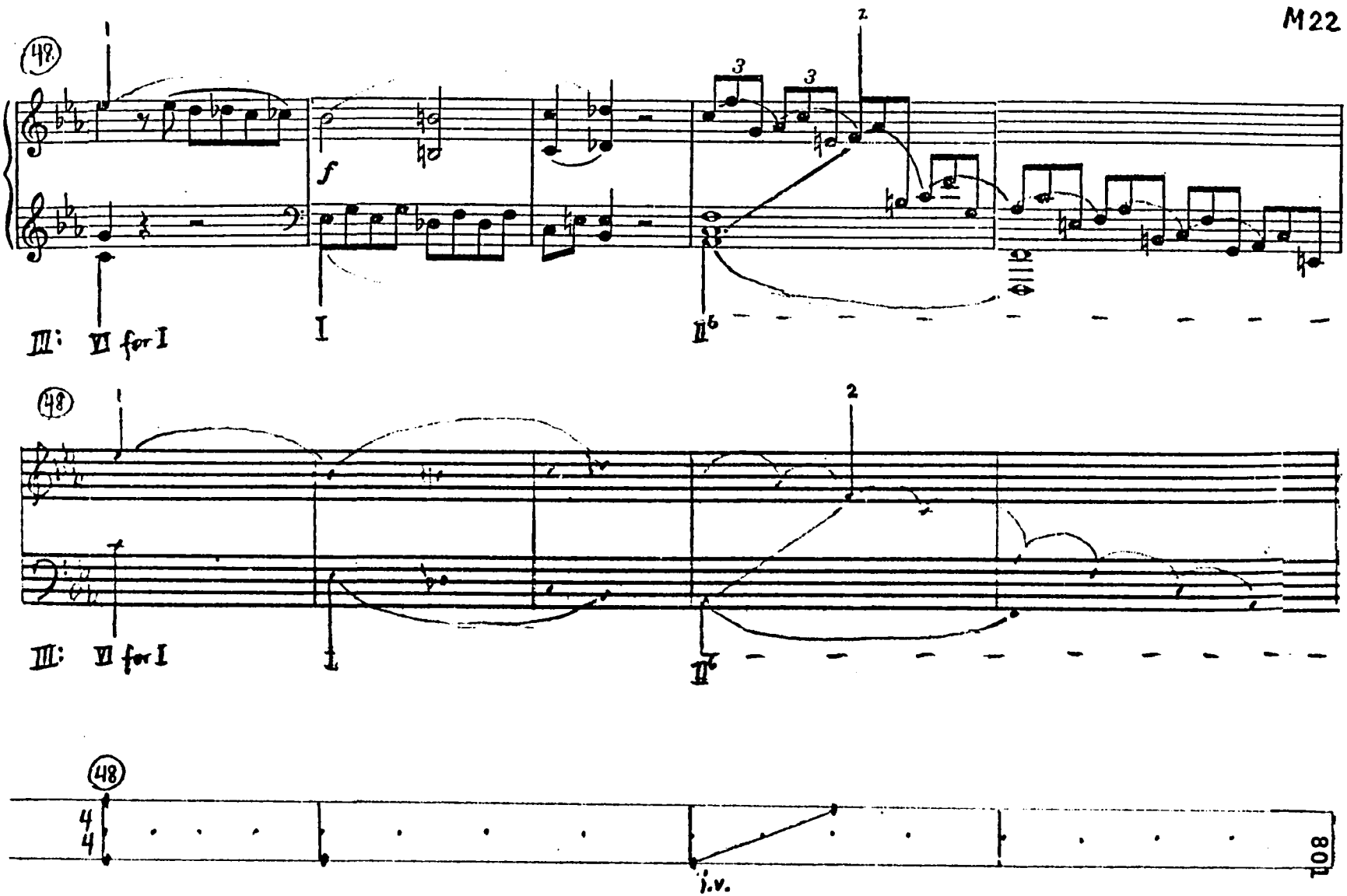

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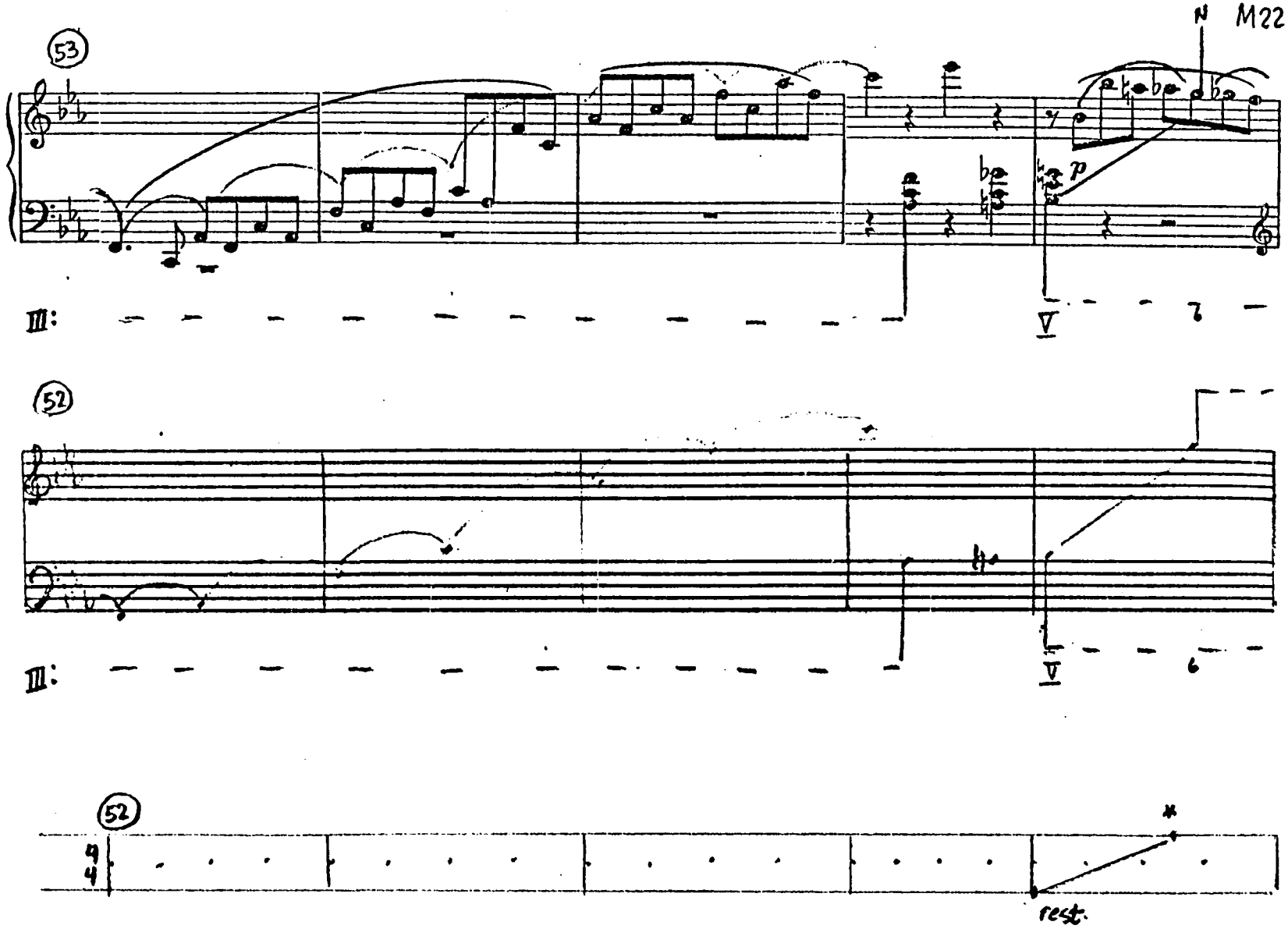

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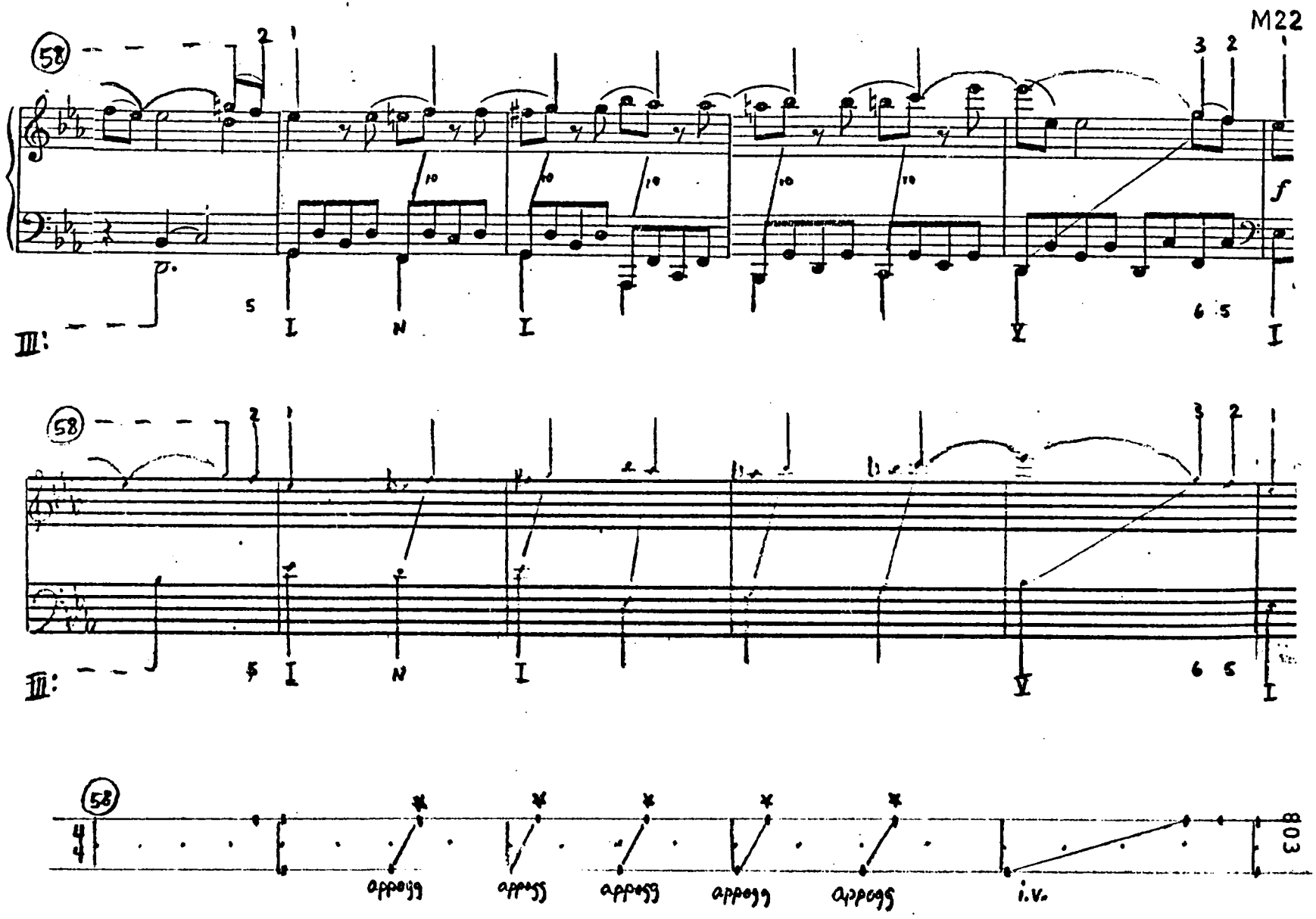

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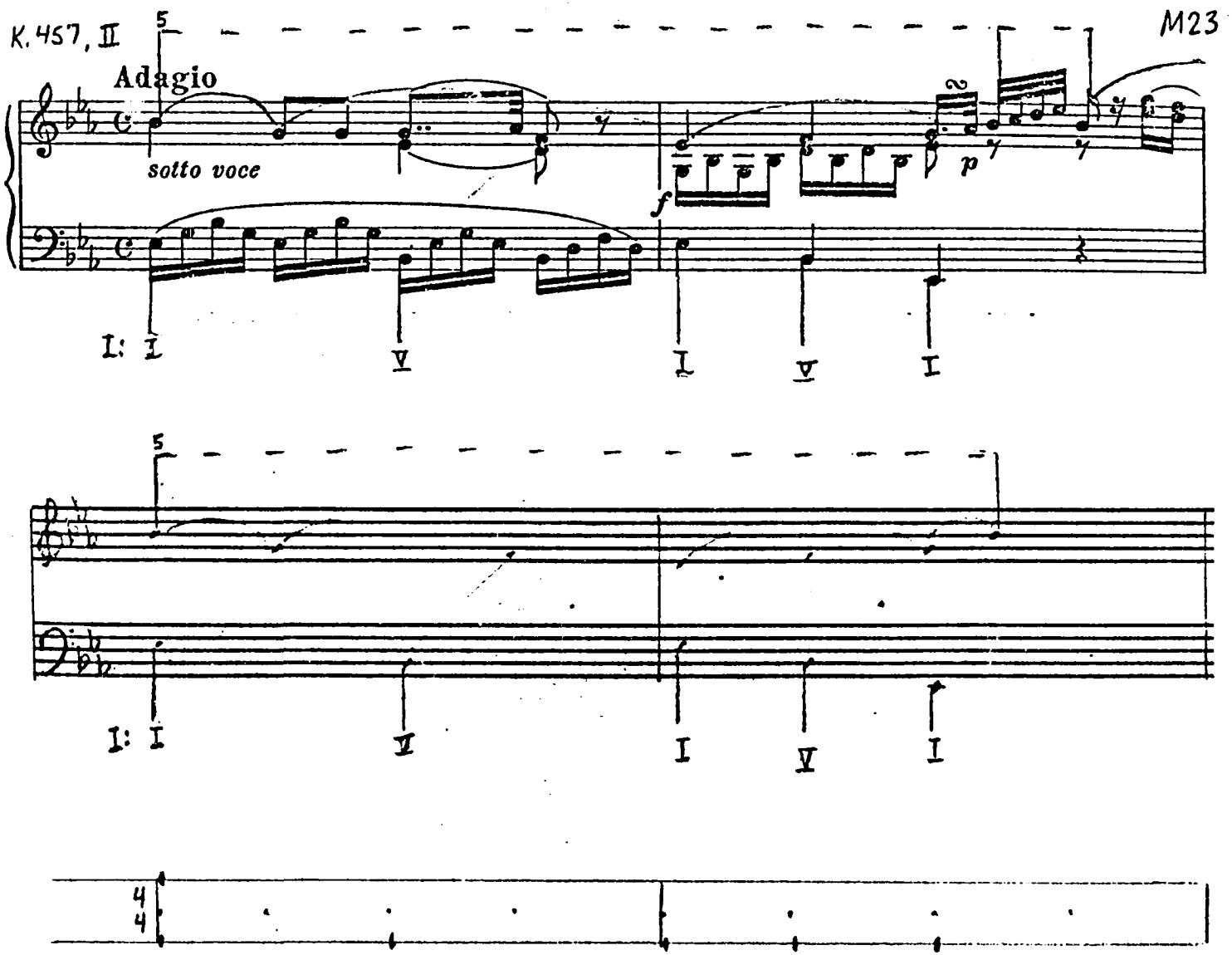

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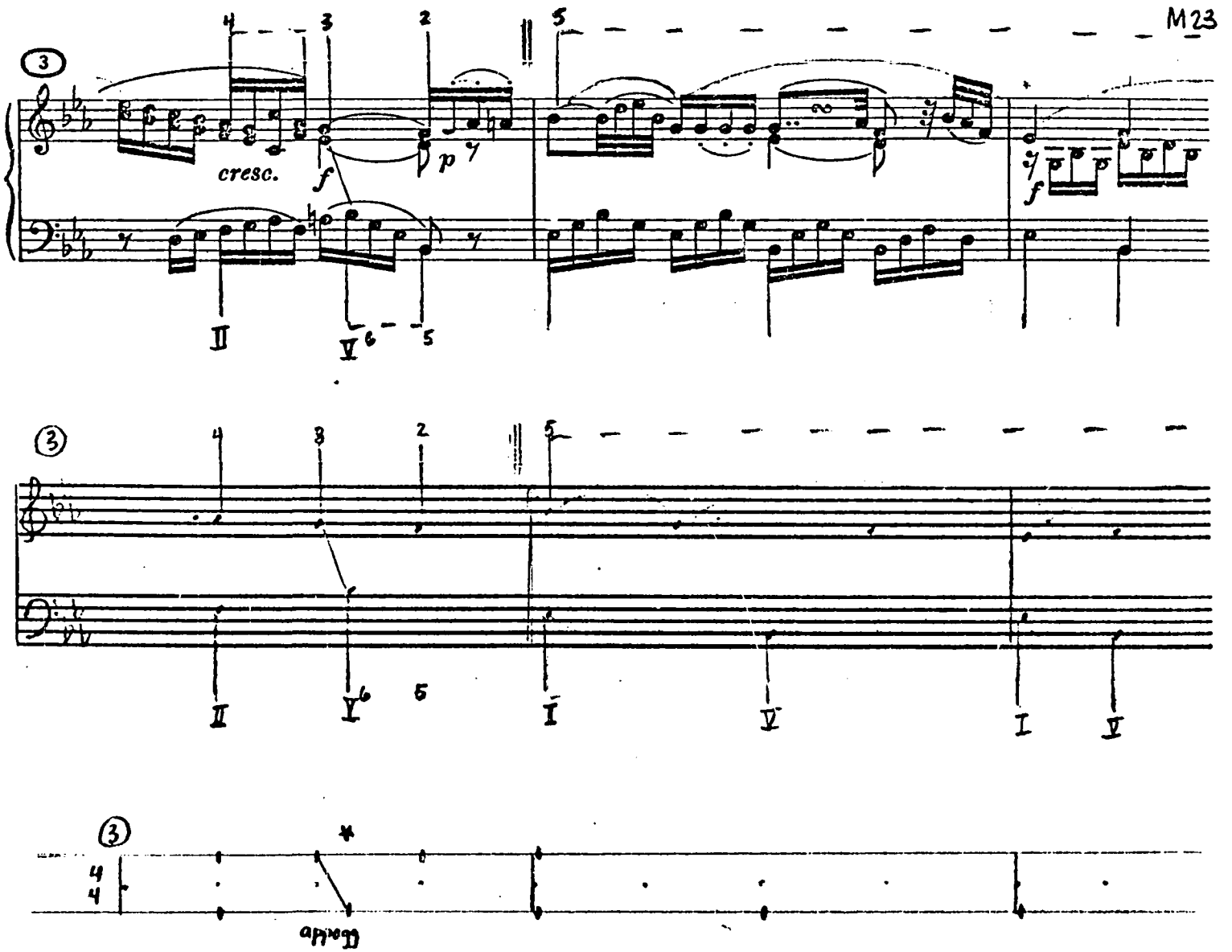

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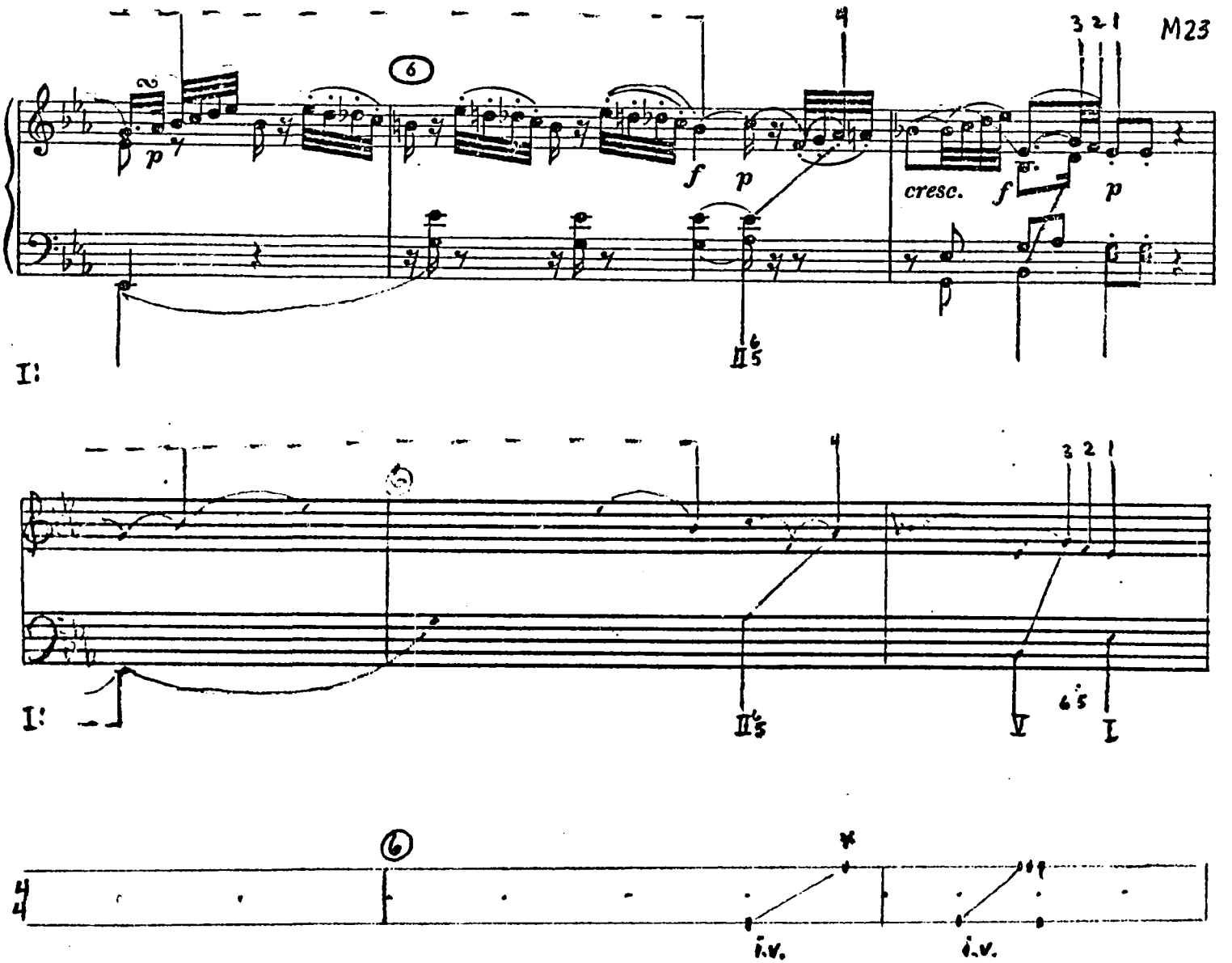

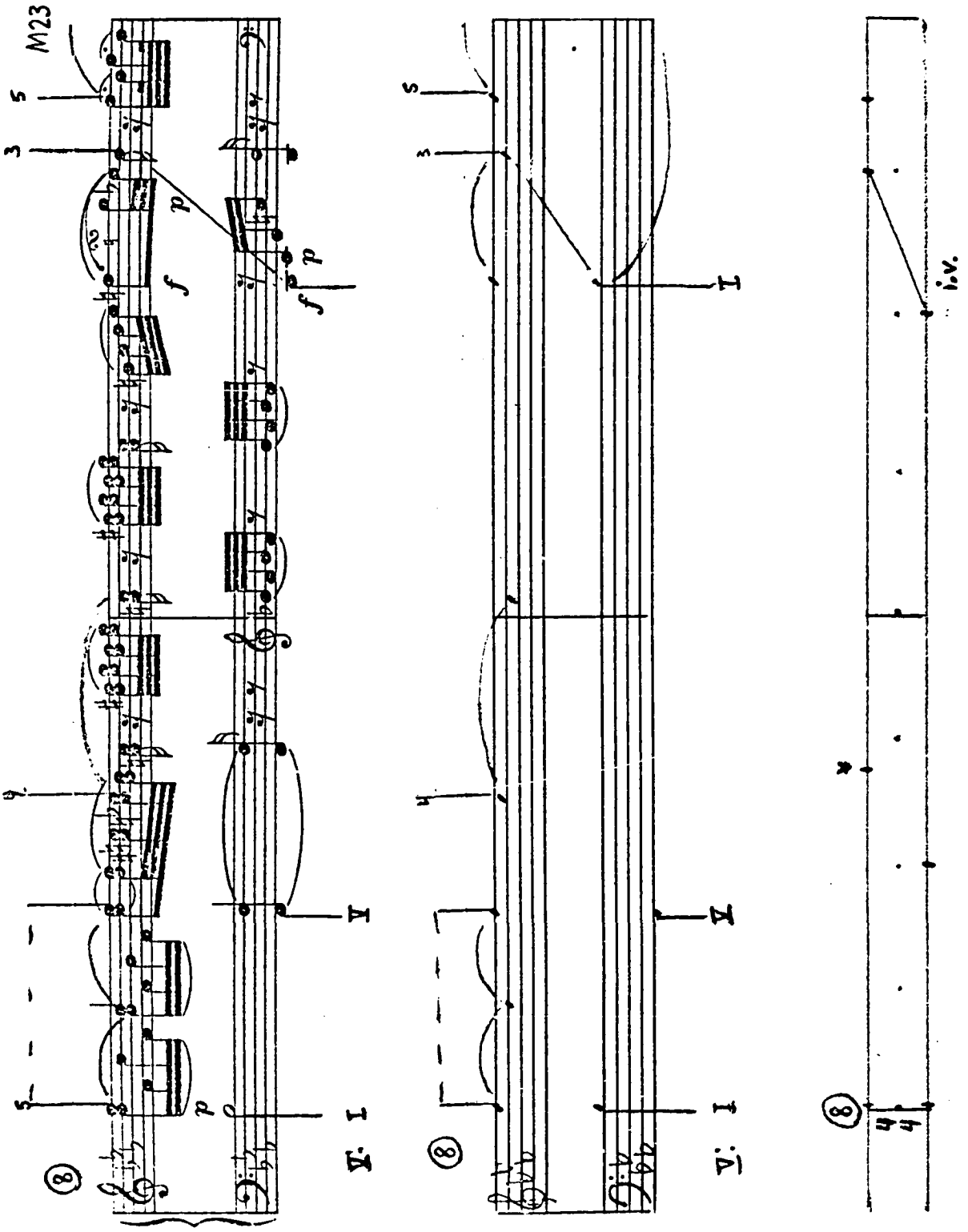

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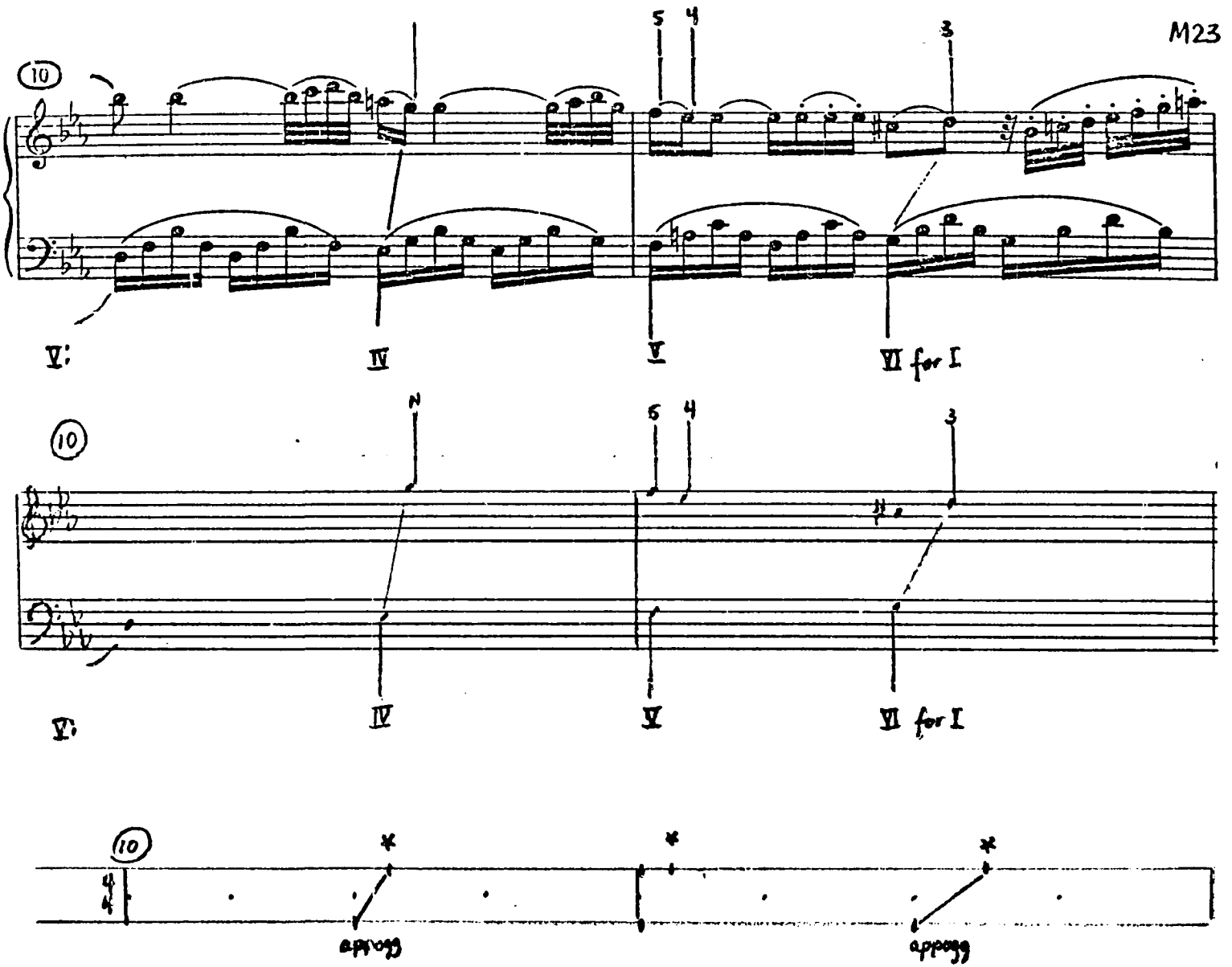

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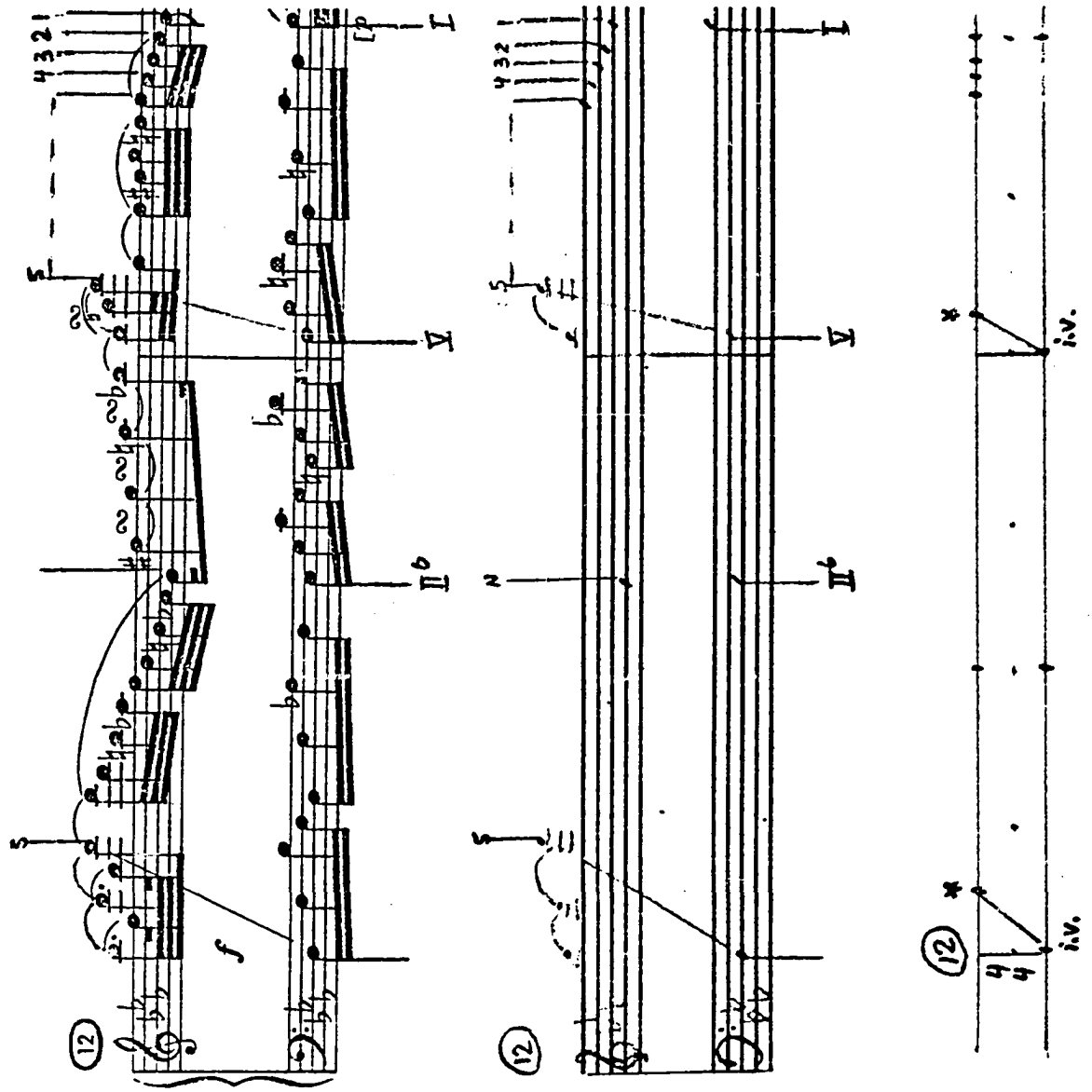

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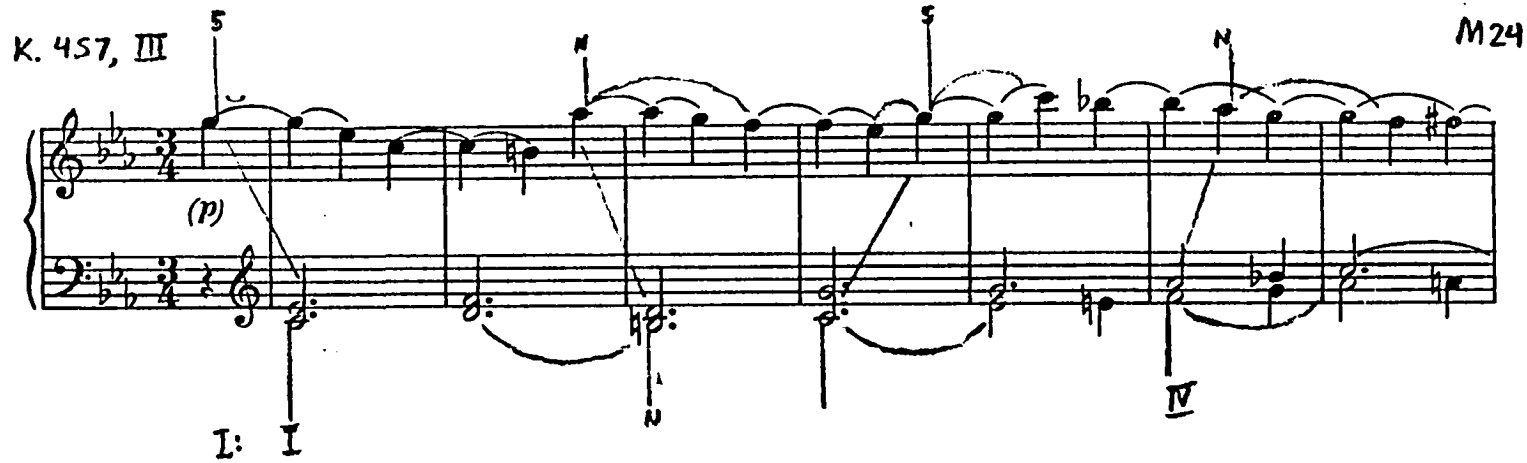

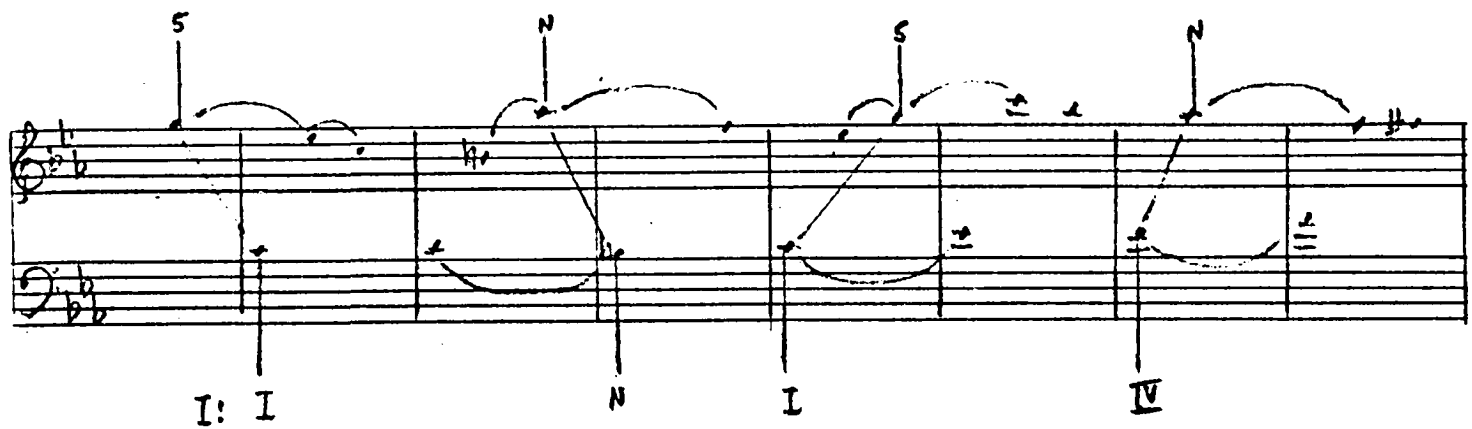

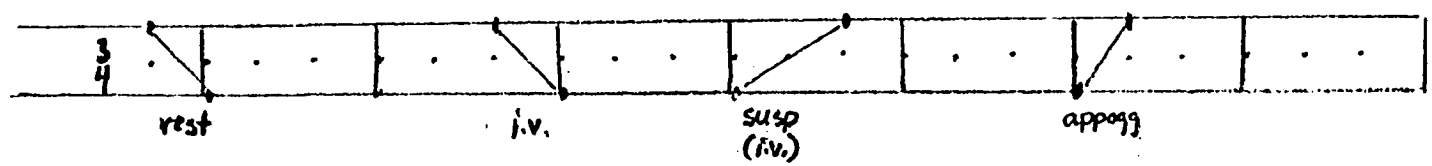

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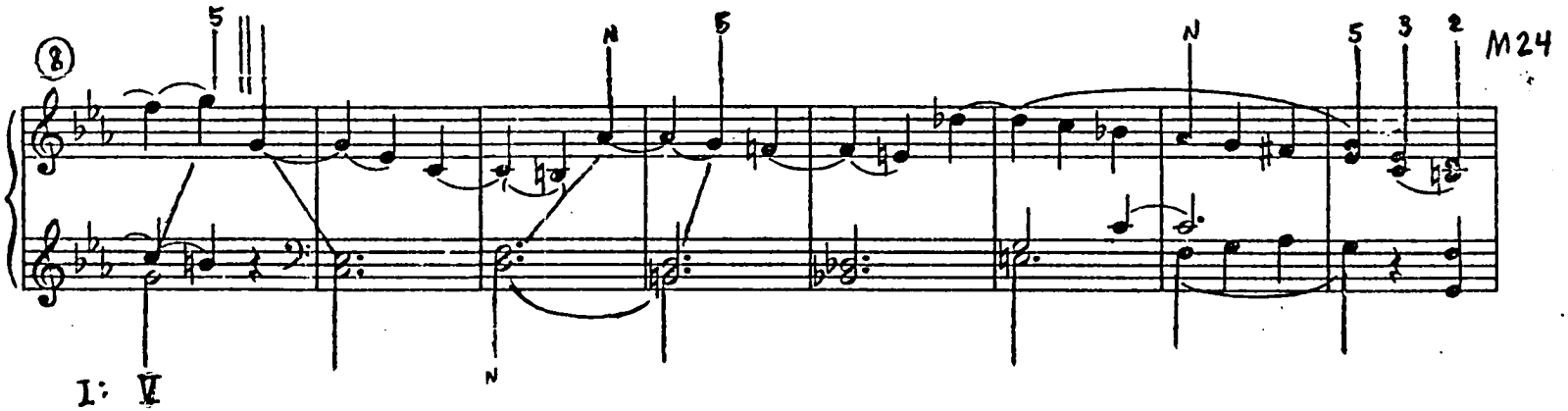

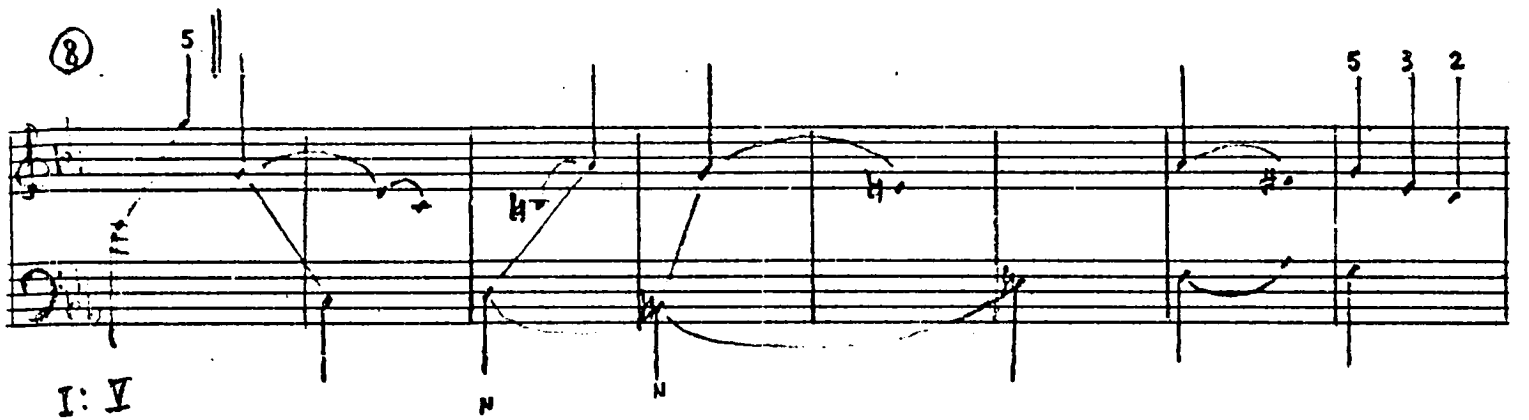

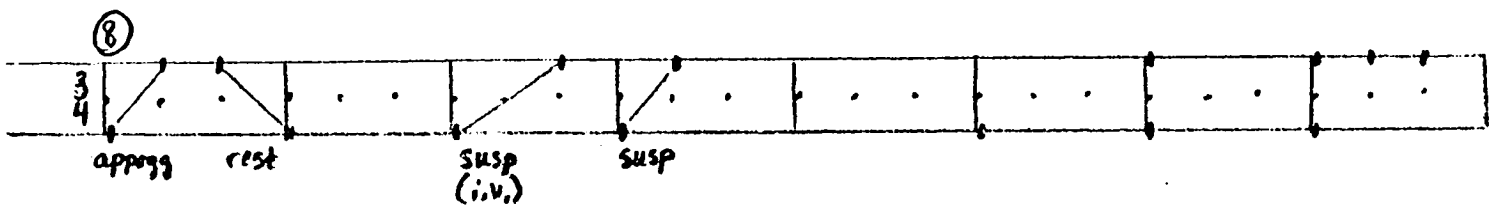

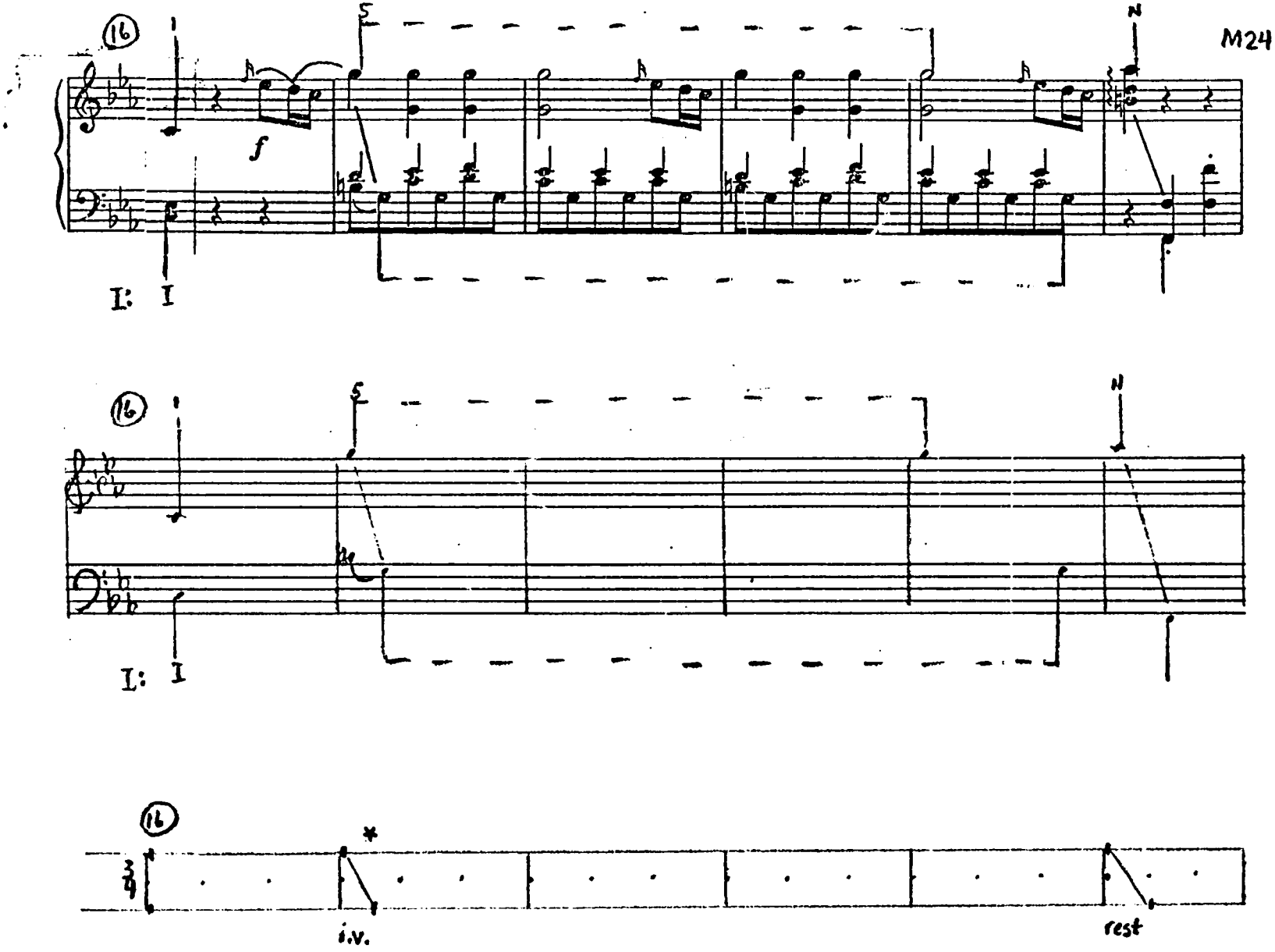

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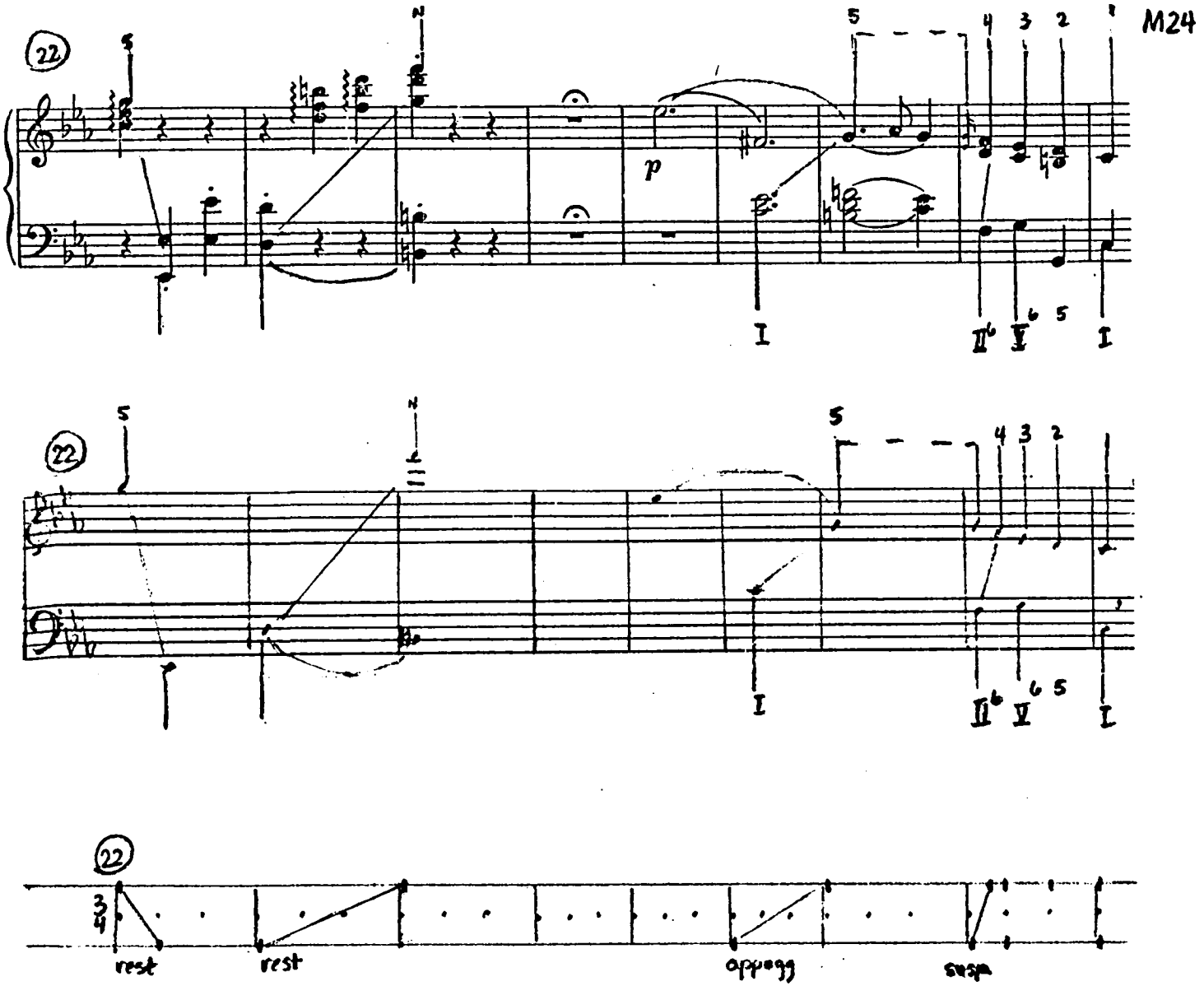

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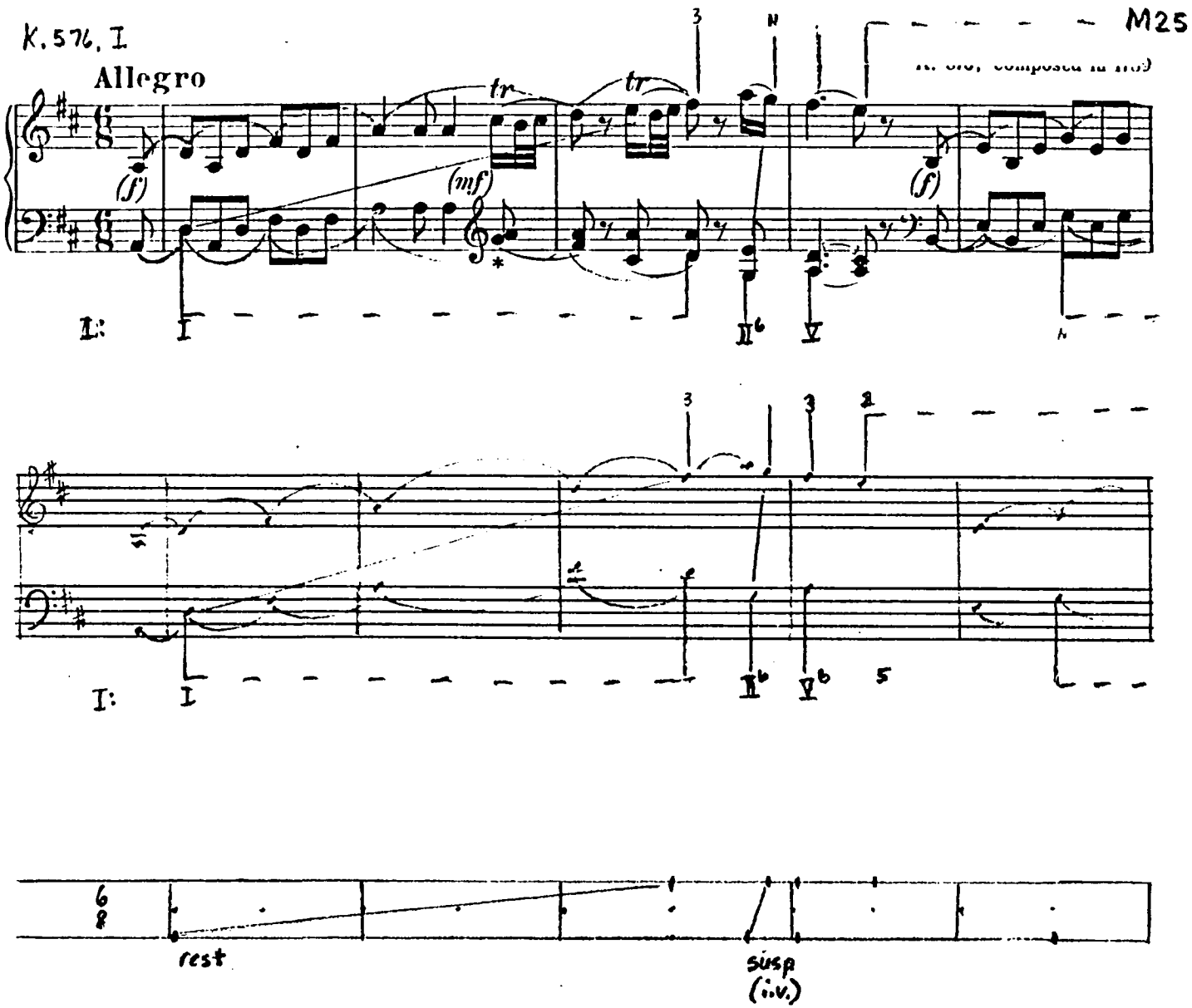

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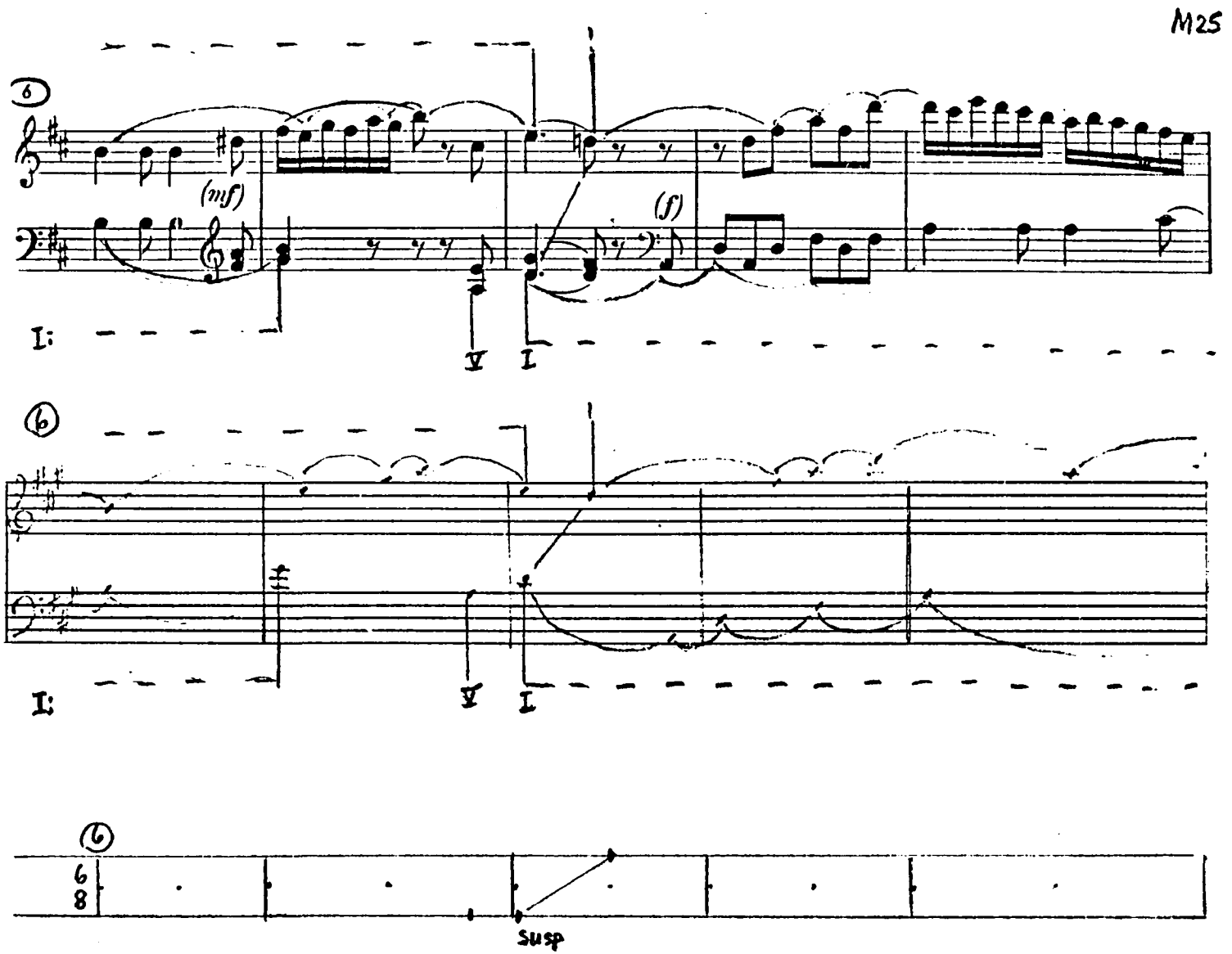

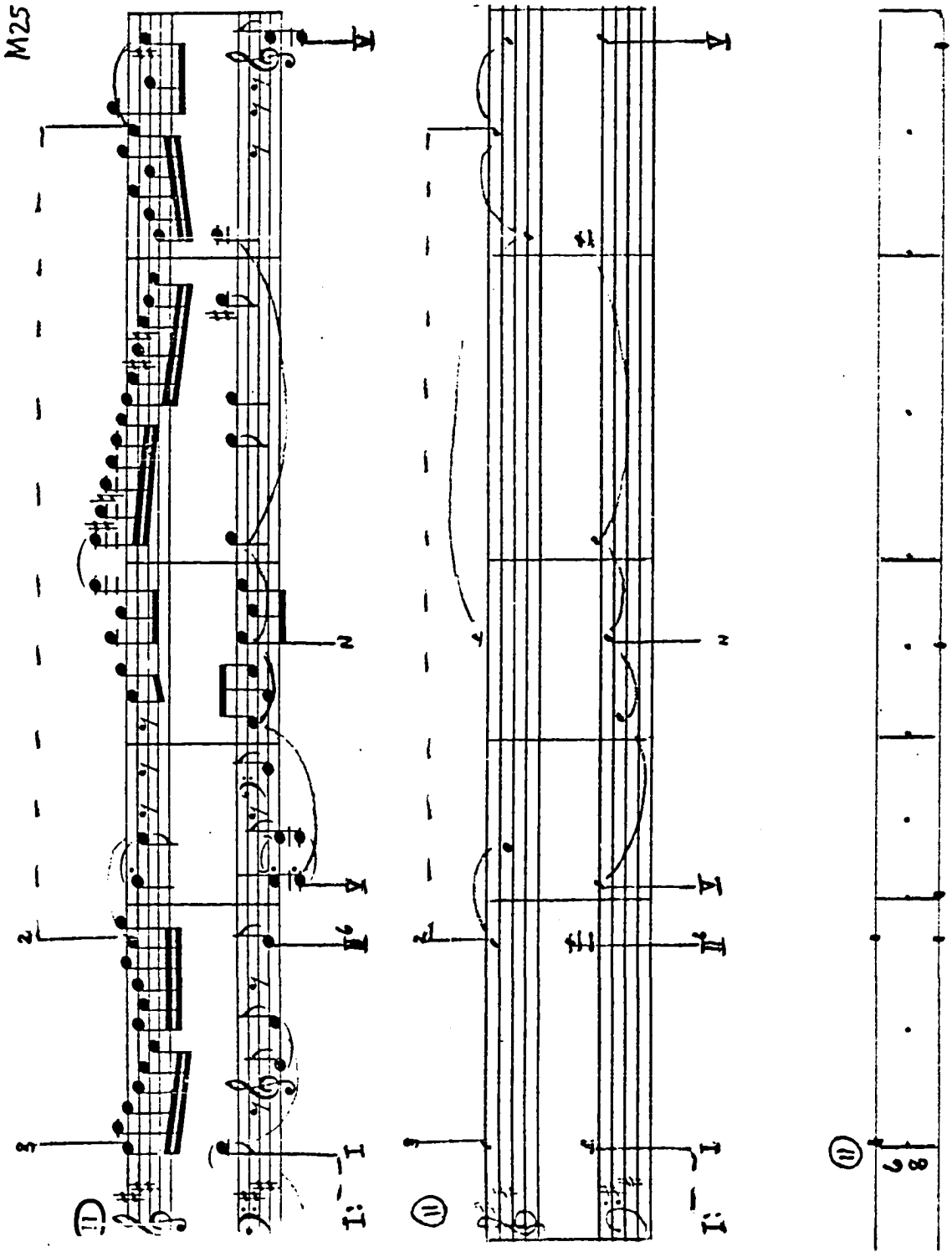

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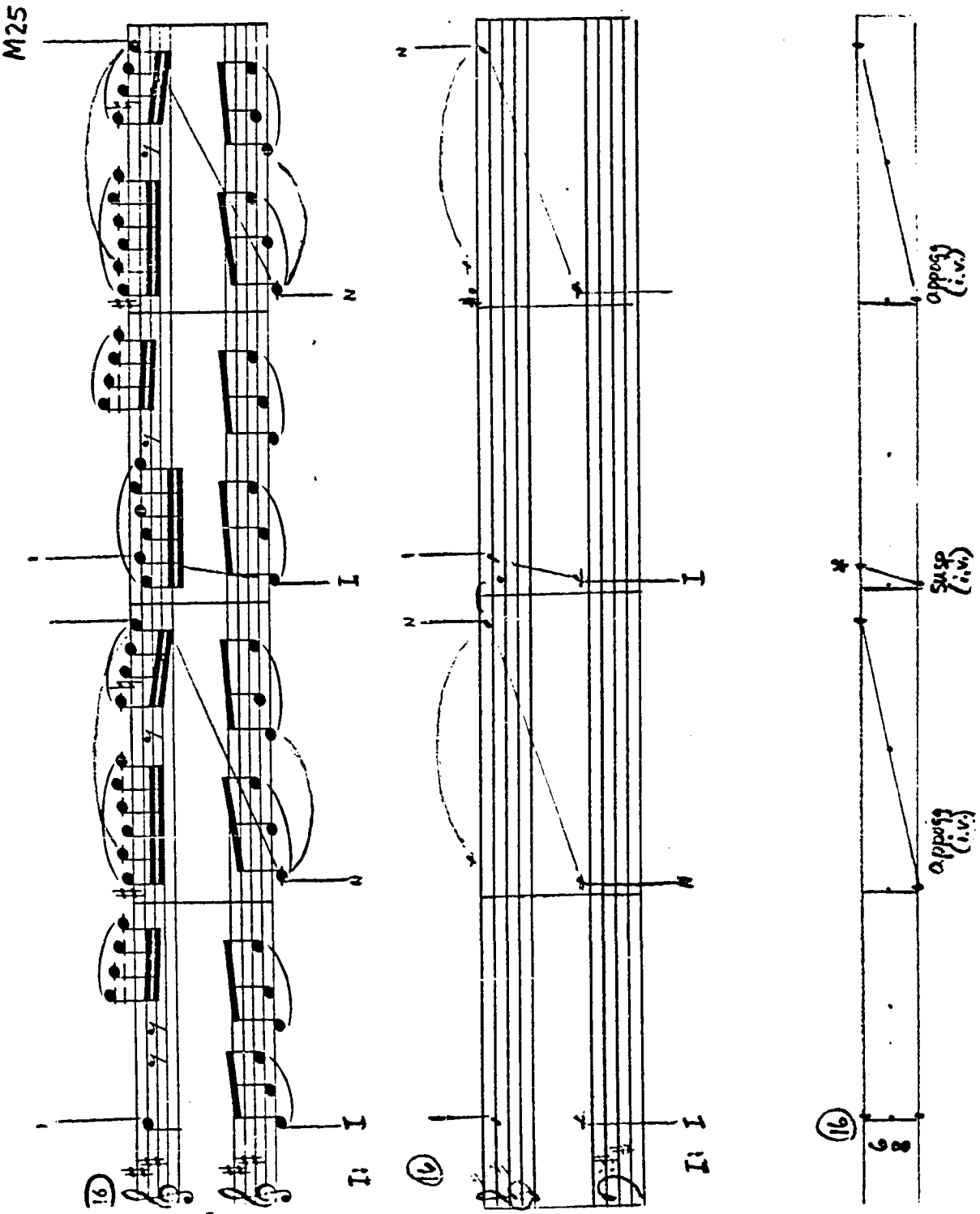

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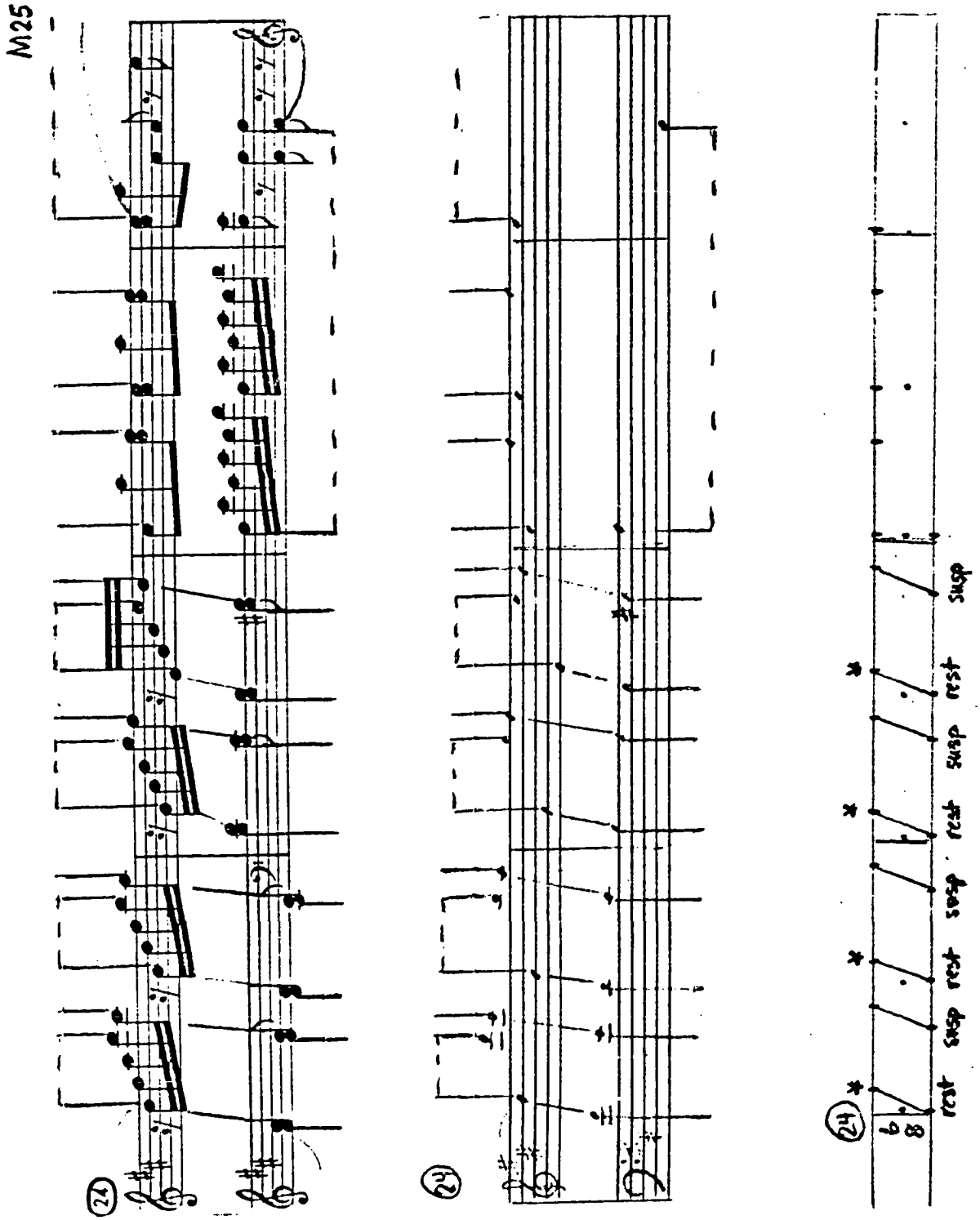

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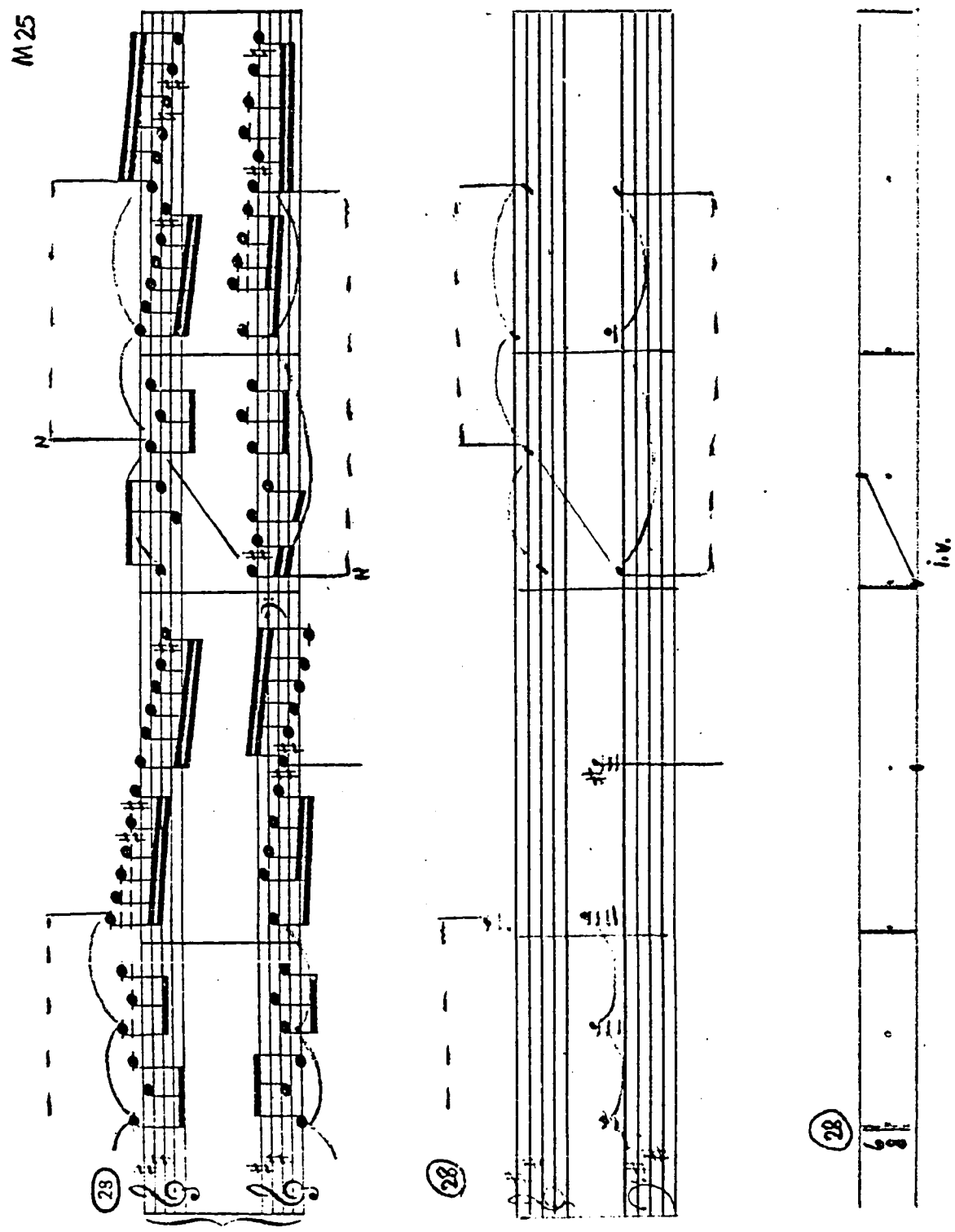

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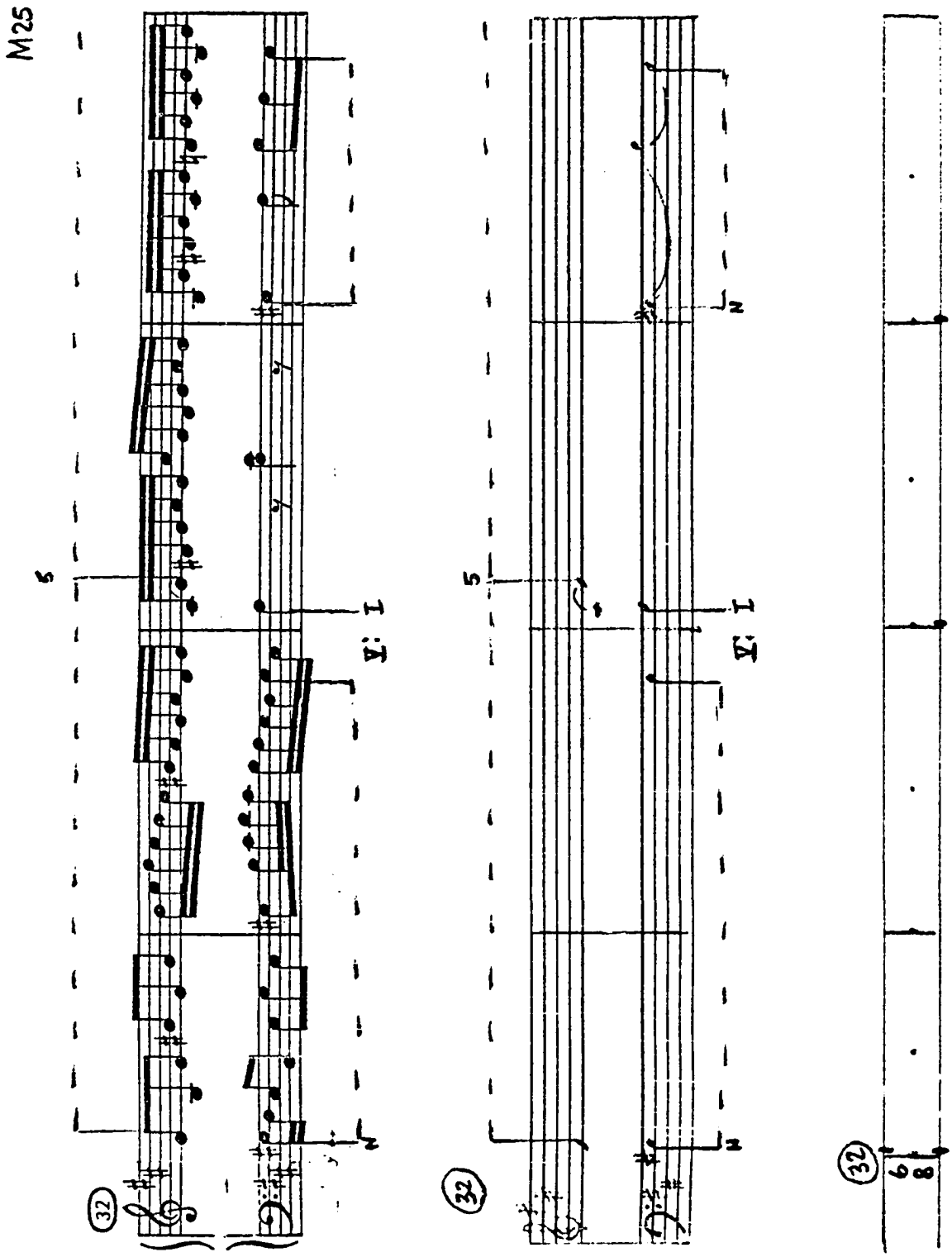

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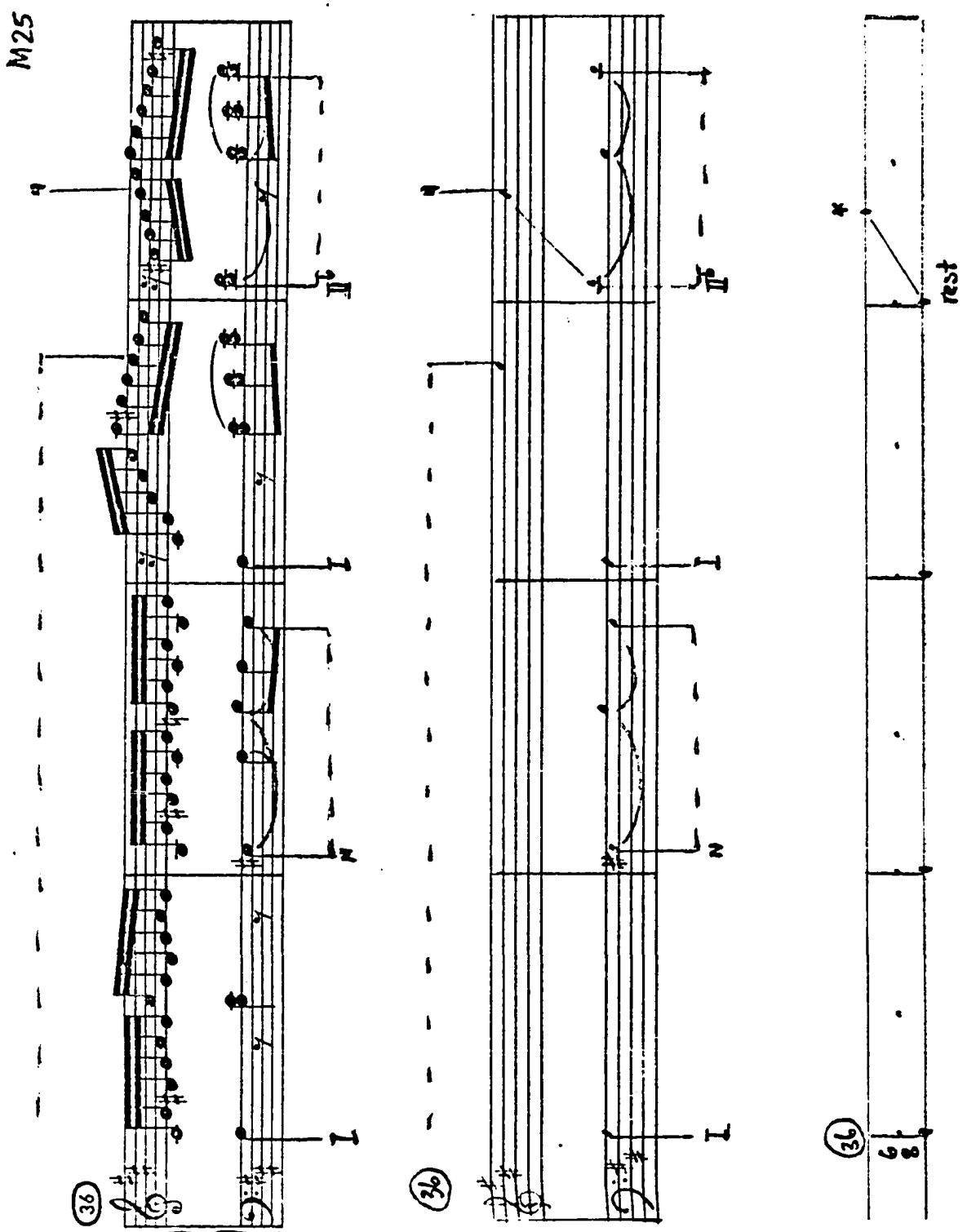

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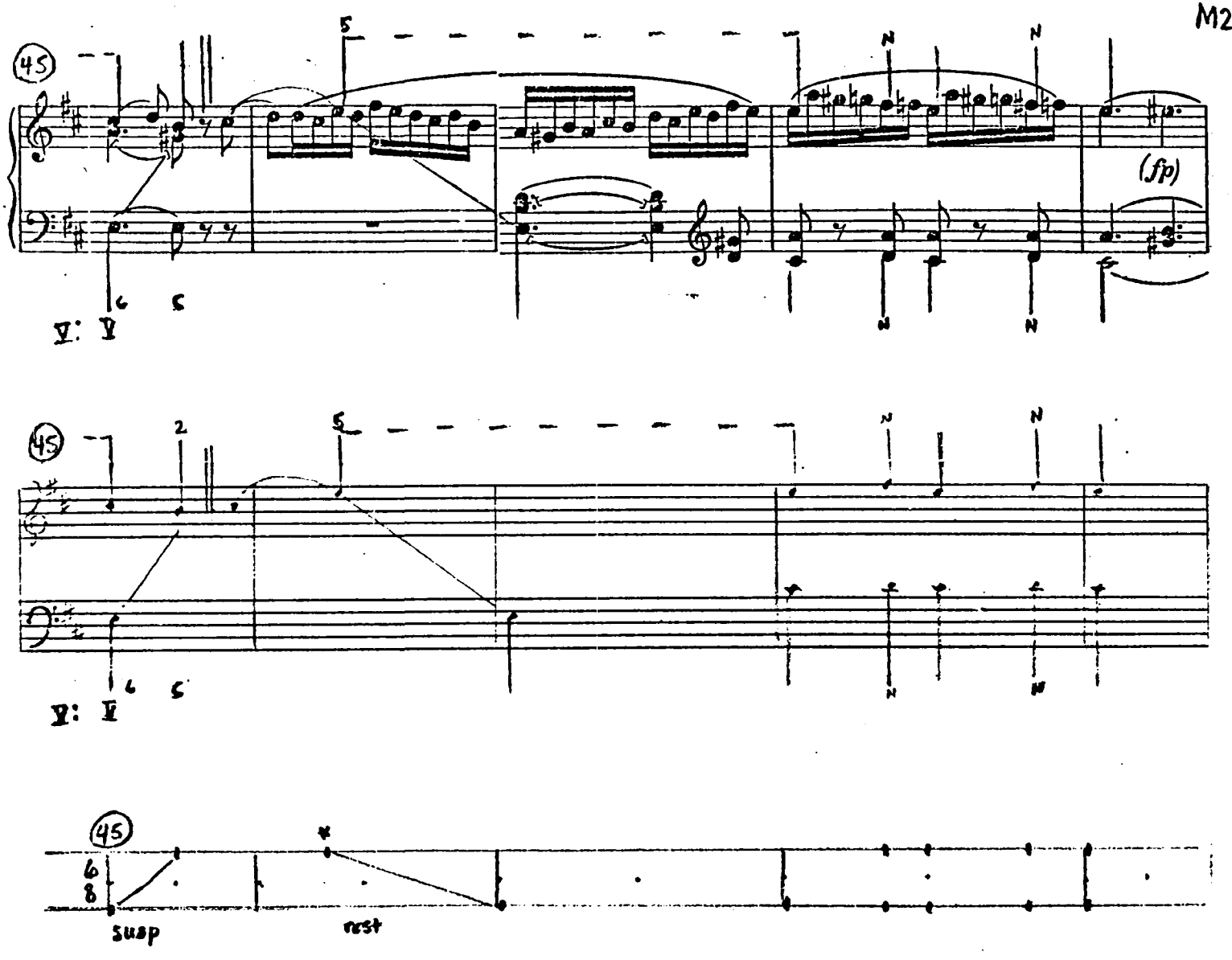

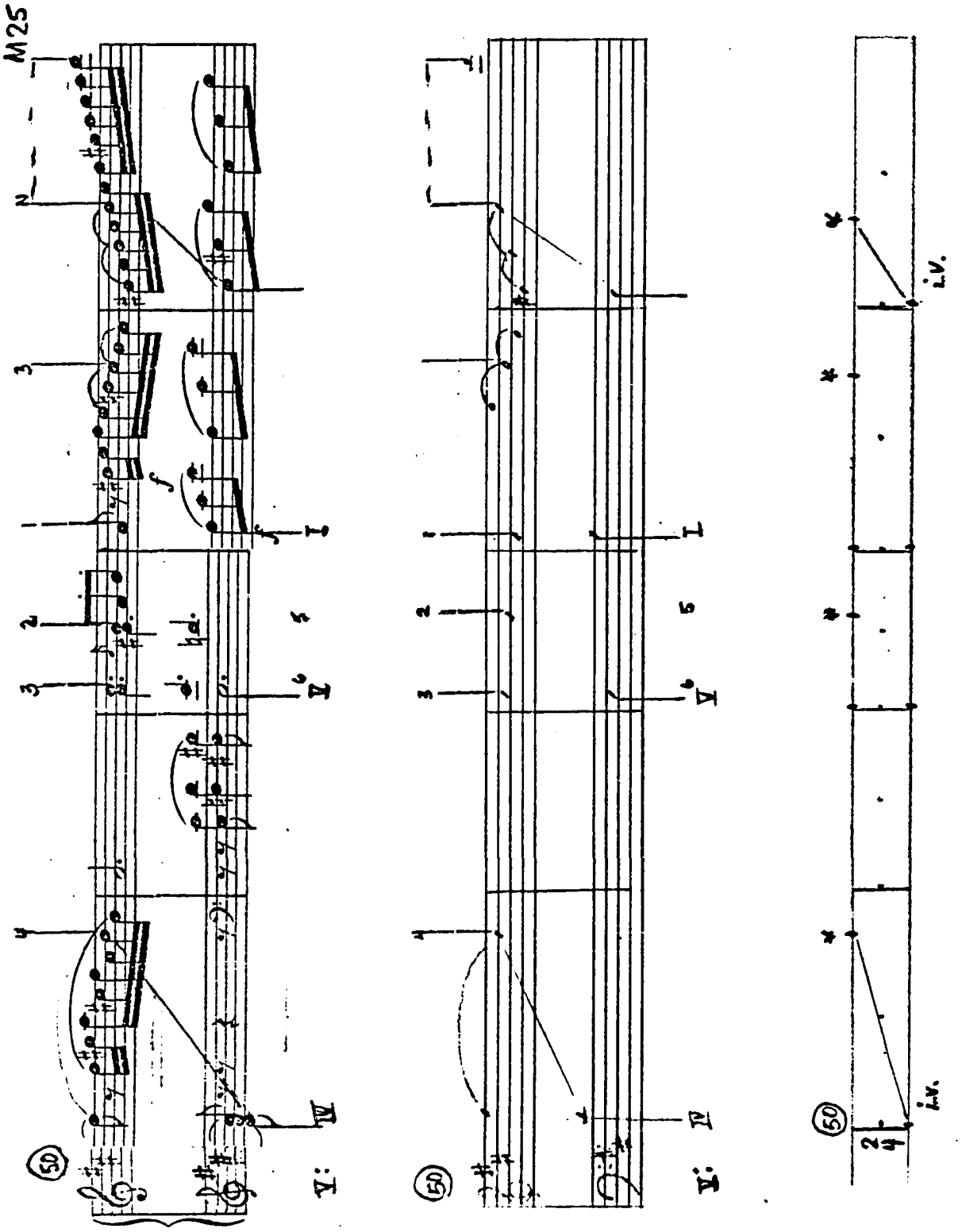

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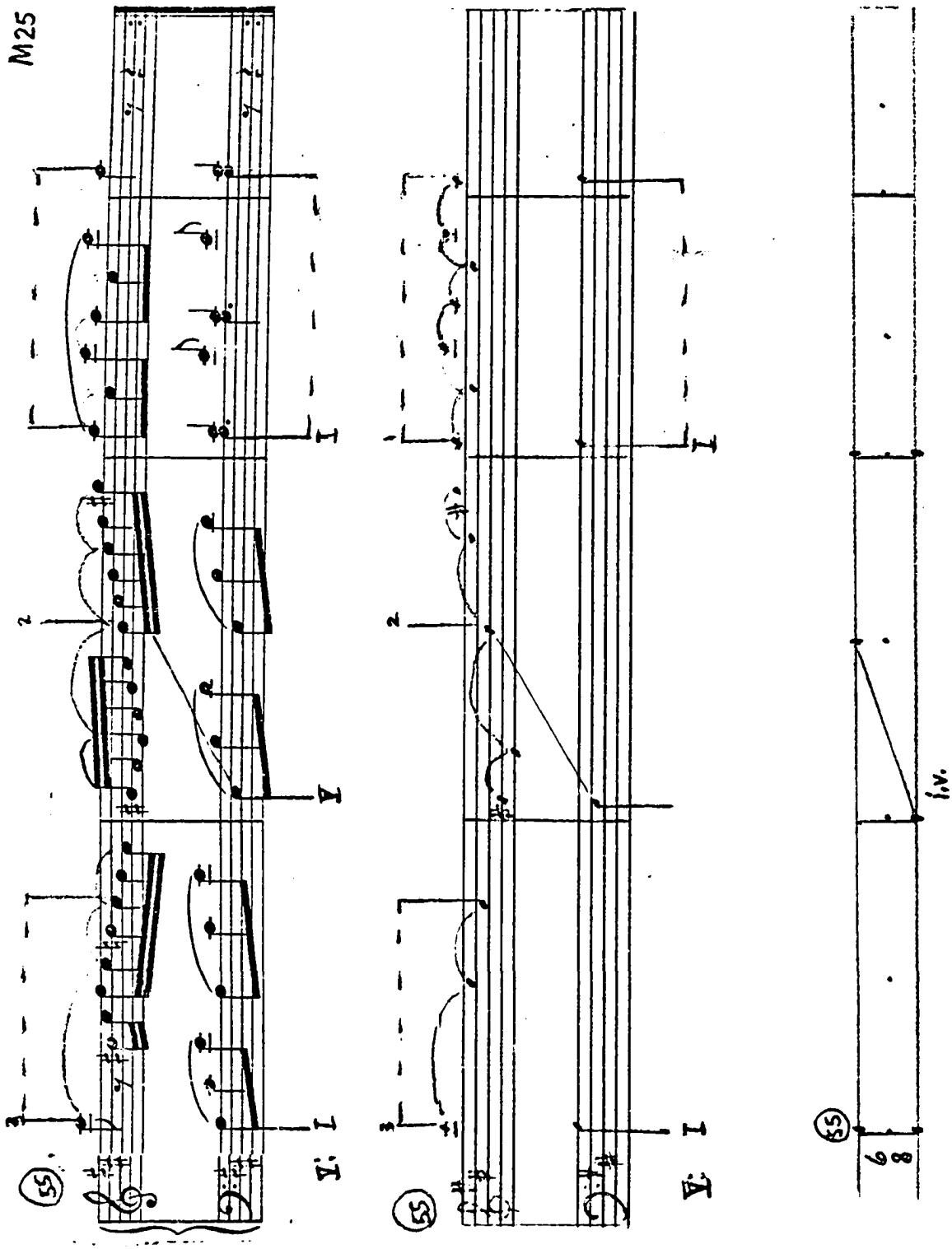

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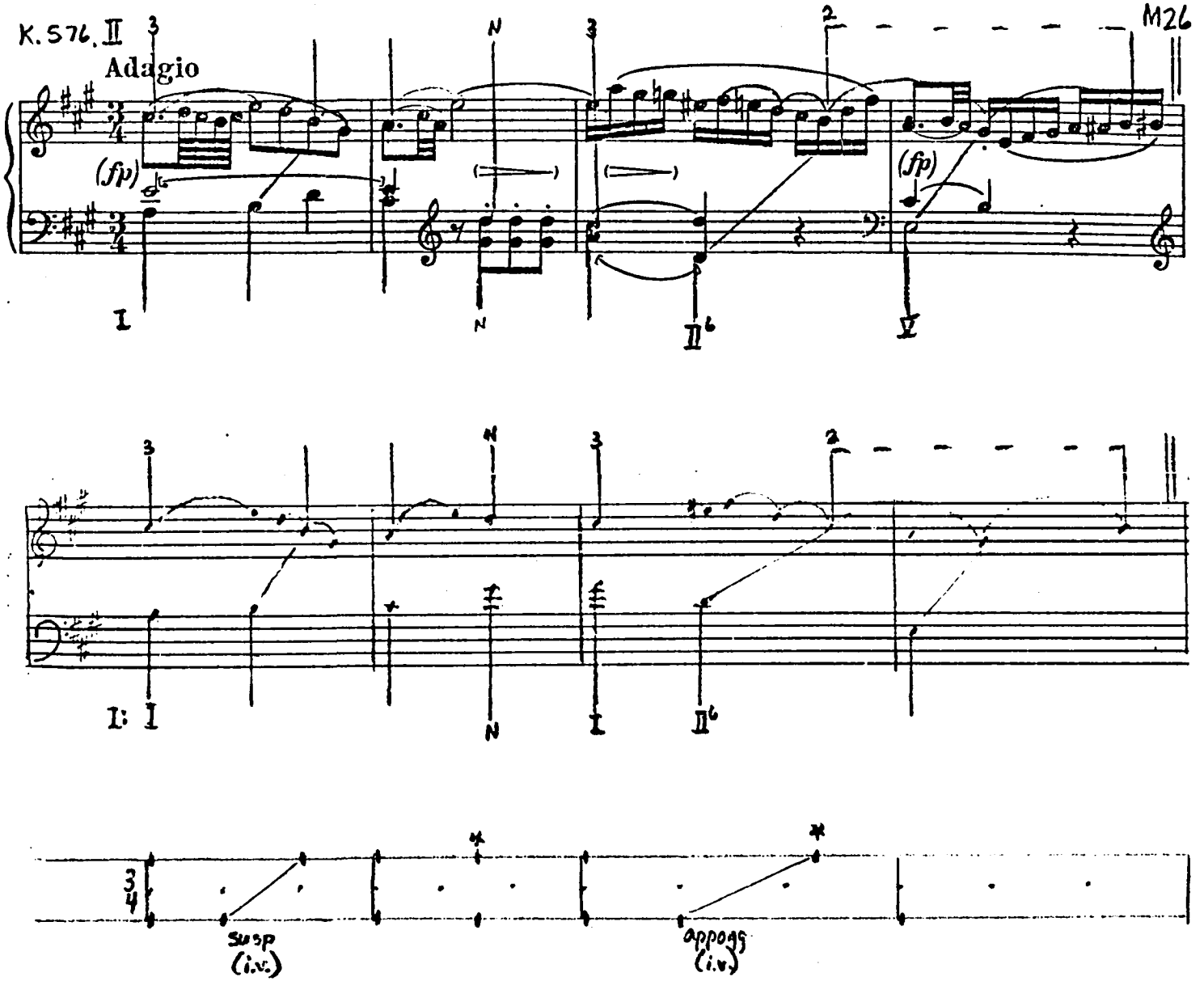

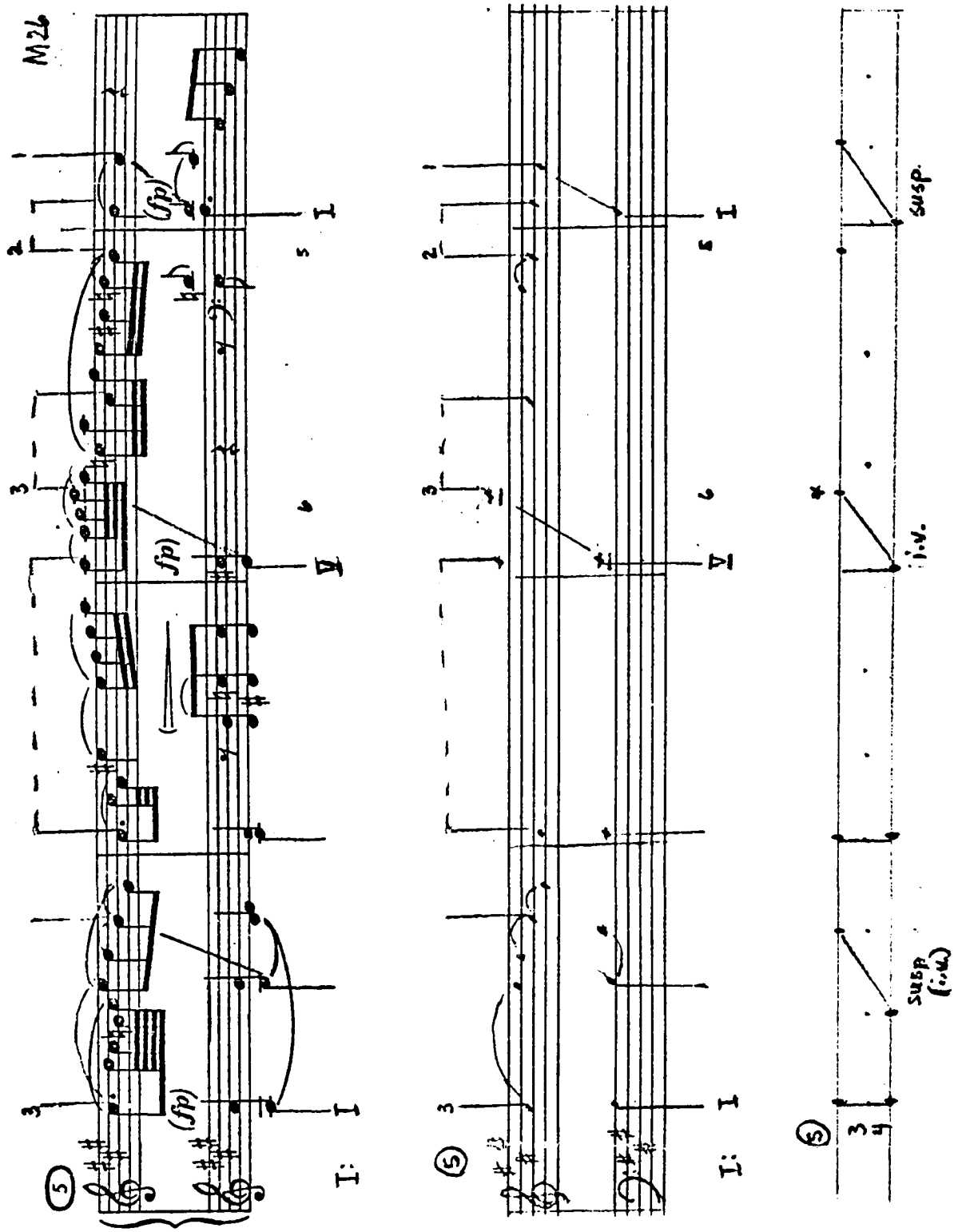

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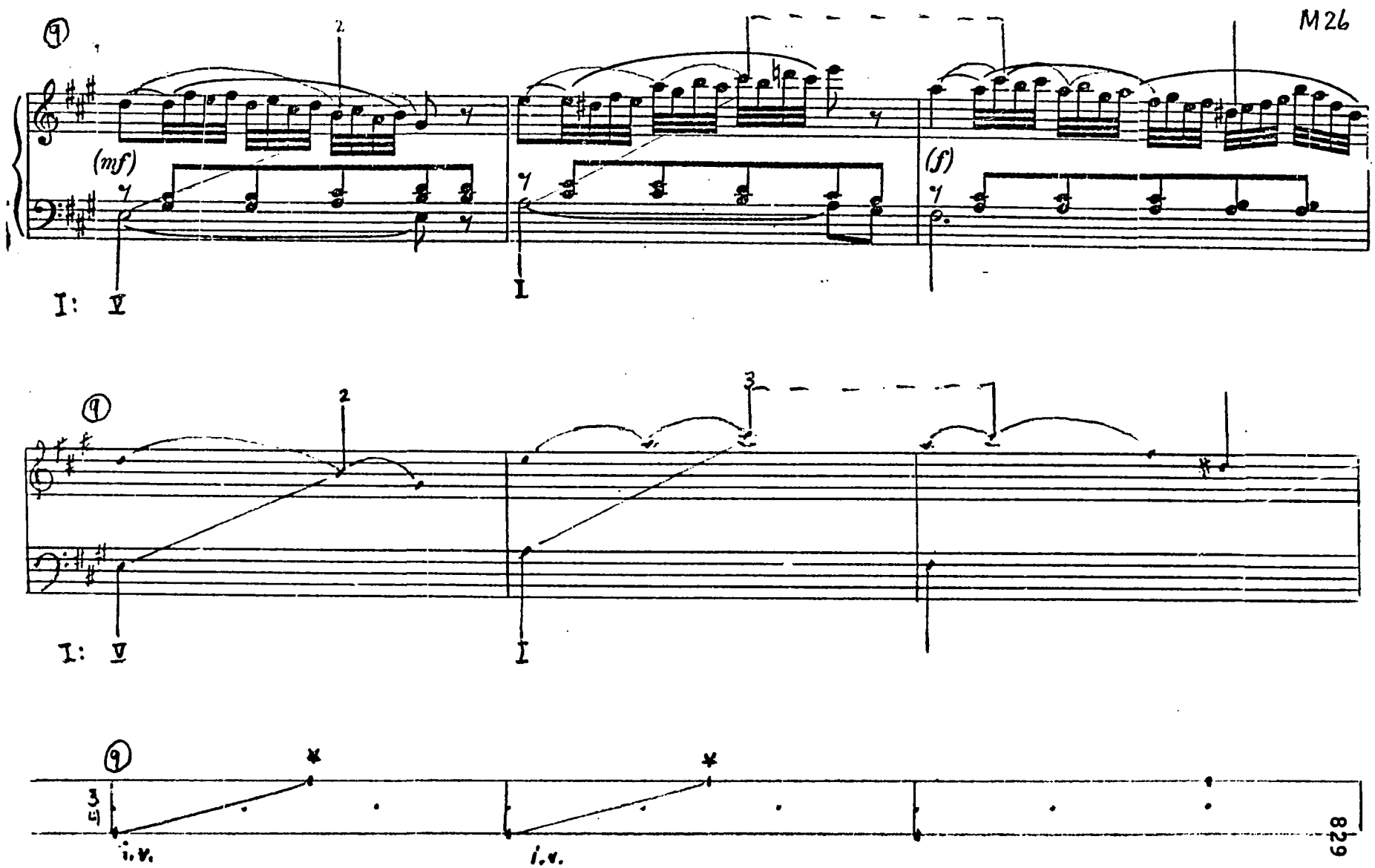

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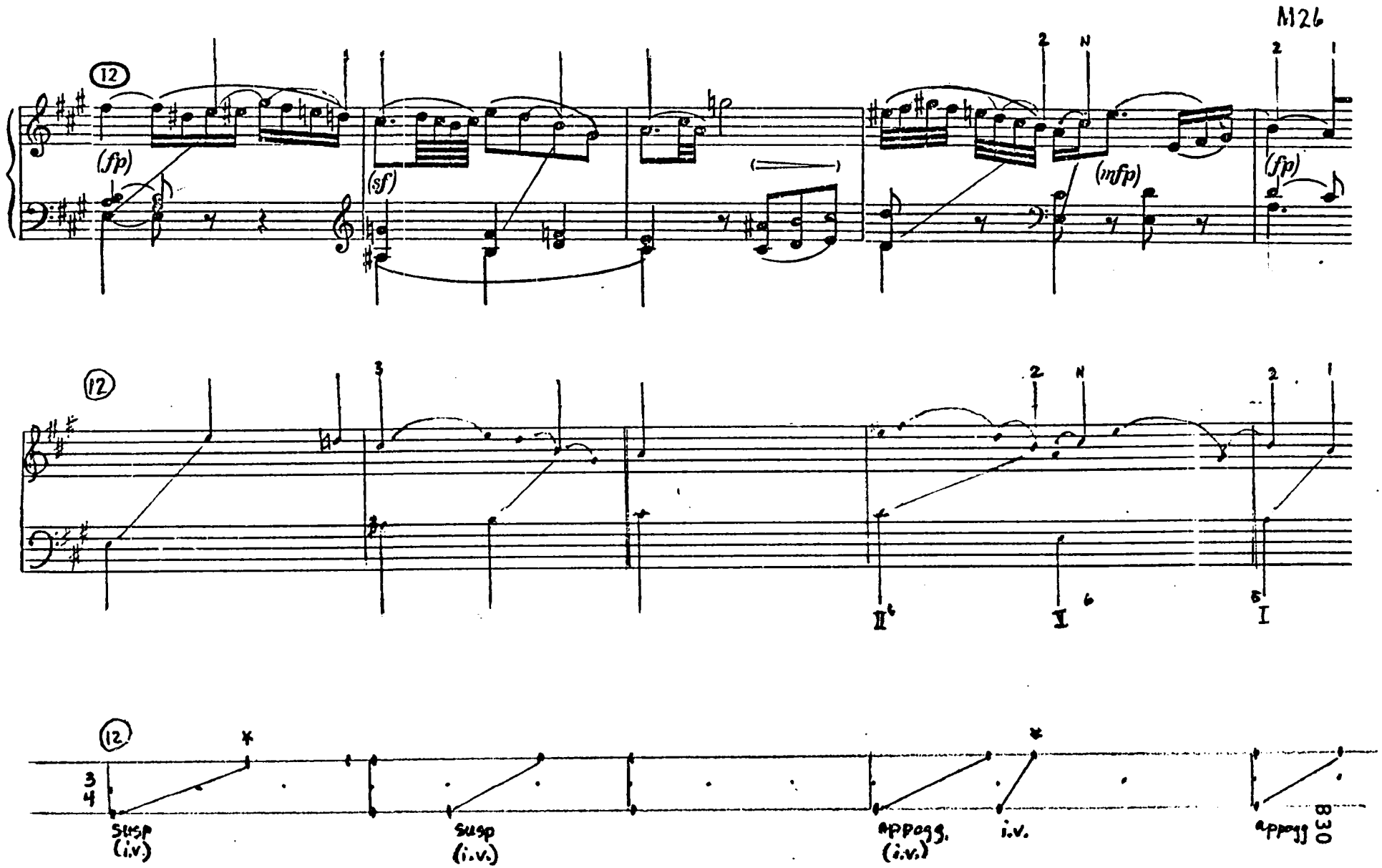

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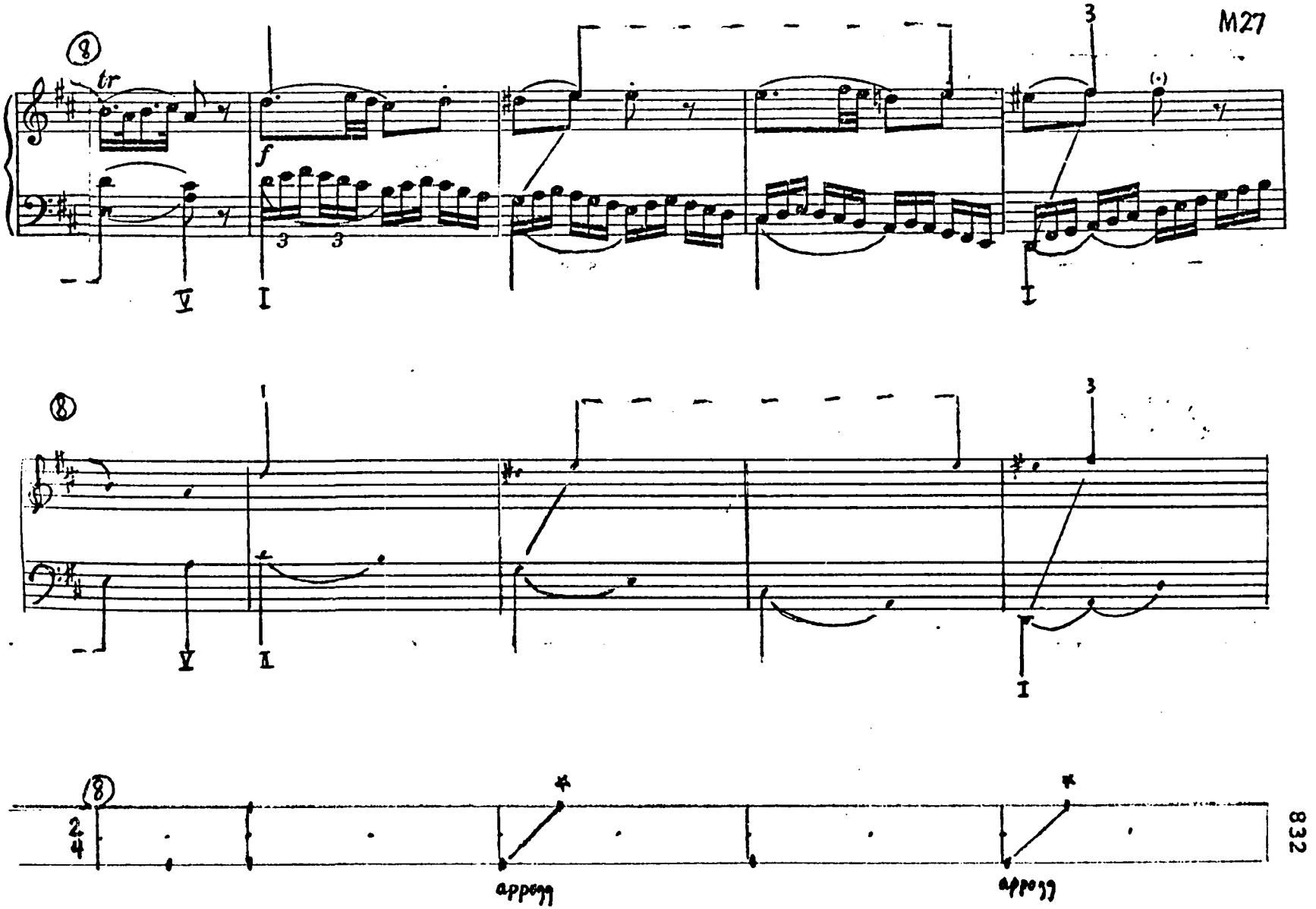

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