The Casten Variation

for ensemble
(with optional drums or percussion)
or
piano solo

Larry Polansky
1993-4

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for ensemble (with optional drums or percussion)
or
piano solo

for sarah cahill

The Casten Variation may be played by solo piano, or by an ensemble of any melody instruments (probably including piano or keyboard). It should be played loud and fast (with quarter note equal to at least mm. = 96). The tempo is relatively stable.

The piece is in five sections, each consisting of a number of groupings of 16th notes. The first note of each grouping is accented. Numbers at the beginning of each line, which may serve as rehearsal numbers, indicate the grouping number for that section. In general, accidentals hold until they are superseded by a different accidental on the same note. However, there are a great many redundant, "courtesy" accidentals in the score.

The ensemble version
The piece is orchestrated by the ensemble, according to the following ideas.

Any instruments may play any of the unison (or transposed) lines in any octave or at any transposition, for any part of the piece. These octave and other transpositions may change for each section, or within each section. For example, an alto sax may play any part of the piece that is in its written range, and transpose or not. Performers who play more than one instrument are encouraged to switch instruments during the piece, and also switch transpositions. That is, a sax player might play (all or part of) section 1 on tenor, section 2 on alto, section 3 on soprano, and so on, playing the any of the written parts as if they were for the transposed instrument. In addition, any player may transpose any section of the score (on the blank stave, or on their own) in any way, for any part of the piece. However, all transpositions must be exact transpositions: within any of the 16th note groupings, the contour and intervallic content must not change.

In addition to the three different "transpositions" in the ensemble version (2 octaves, and perfect 5th/4th), a separate transposition a major third above the lowest part is included (called the "F# transposition"). Other transpositions may be requested from the composer.

Performers may enter, drop out, or change instruments at any time during the piece, but all entries and exits should be made at grouping boundaries. In other words, only complete groups should be played (with the exception of accenting instruments: see below). I imagine that major orchestrational changes should be made at section boundaries, in general, although this is left to the ensemble, which makes its own orchestrational decisions based on its own conception of the performance.

A blank stave is provided in the ensemble score for assistance in creating the individual orchestrations. In section 3, when the melodies get quite high, another part, down several octaves, is also provided simply as a "courtesy." Parts in other transpositions are available from the composer, as is the score on disk for those who would like to make their own orchestrated scores (in all these cases, the melody does not change).

At any time, any instrument may simply play the first notes of groupings, as accents. Again, this may be done at any transposition. The drum or percussion part is free, but should accentuate the individual groupings and help demarcate the five sections; in the latter, by "feel" or type of percussion used.

Finally, each instrument should *detune* its absolute pitch either slightly, or radically, to play the piece, so that even unison or transpositionally related melodies are "out of tune" with each other (at different absolute pitches), in any way the performers want. Each instrument, however, should be in the usual tune with itself (12-tone et). In other words, string instruments, electronic instruments, and keyboards may change their absolute pitch, but should not change the relative tuning within the instrument.

The piano version

The piano part may be played as a solo piano work. The piano version/part is identical to the ensemble part with the exception of a few transposed pitches which were outside of the piano range, and which are retained in their original octaves in the ensemble score. The keyboardist for the ensemble may use this part in the ensemble version. In general, little or no pedal should be used, and the accents should be as strong as possible.

The piano version of the work should be as fast as possible. Slightly longer pauses between sections may be taken in the piano version than in the ensemble version. Although the work is written with one octave in the left hand and the other in the right hand, the pianist will find that this is not necessarily the optimal fingering: octaves may be grouped into a single hand for certain passages to facilitate performance. This version of the work was premiered in spring 1994, at Mills College, by both Sarah Cahill and Jennifer Hymer.

About the piece

The Casten Variation is a computer-composed work based to some extent on the form of Ruth Crawford's *Piano Study in Mixed Accents*, a solo piano work from the early 1930's. After an extended statistical and multi-dimensional scaling analysis of that piece (presented in my paper "Envisioning Ruth Crawford's *Piano Study in Mixed Accents*" at the Society for Music Theory, Montreal, 1993), I "resynthesized" the work. The multi-dimensional scaling analysis considered the morphological similarities of all of the melodic groupings in the original, according to a set of morphological metrics. *The Casten Variation* retains those similarity relationships, but creates a new set of melodies according to those similarity measures, and time- and register- stretches the work. Except for the first and last groupings of each section, none of the notes are the same between the analysis (*Piano Study...*) and the resynthesis (*Casten...*), except by coincidence. I am grateful to my friend and colleague Charles Dodge for suggesting the analysis/resynthesis description of this work.

The Casten Variation is written in the computer language HMSL, using my own morphological metrics software, and then transferred to Finale for notational purposes. David Fuqua was of assistance in preparing the score itself. HMSL is written by the composer, Phil Burk and David Rosenboom, and distributed by Frog Peak Music.

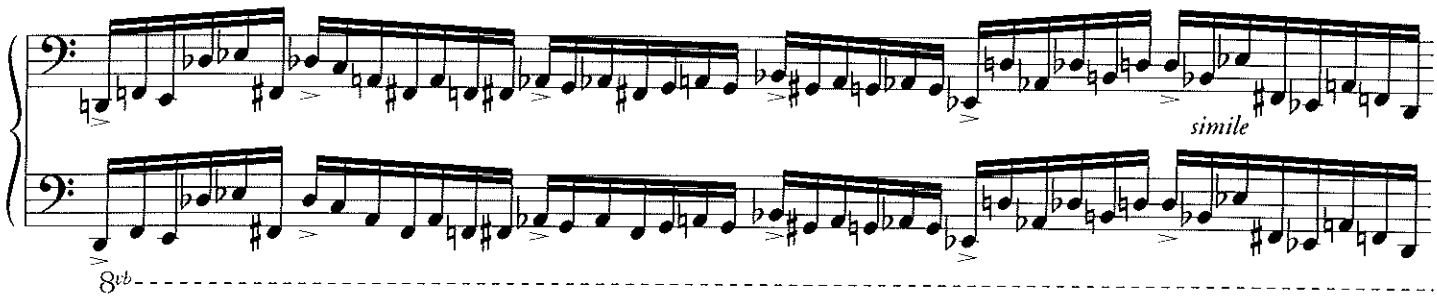
Larry Polansky
Lebanon, NH
January 25, 1994

The Casten Variation

Piano/Keyboard

Larry Polansky

Section 1



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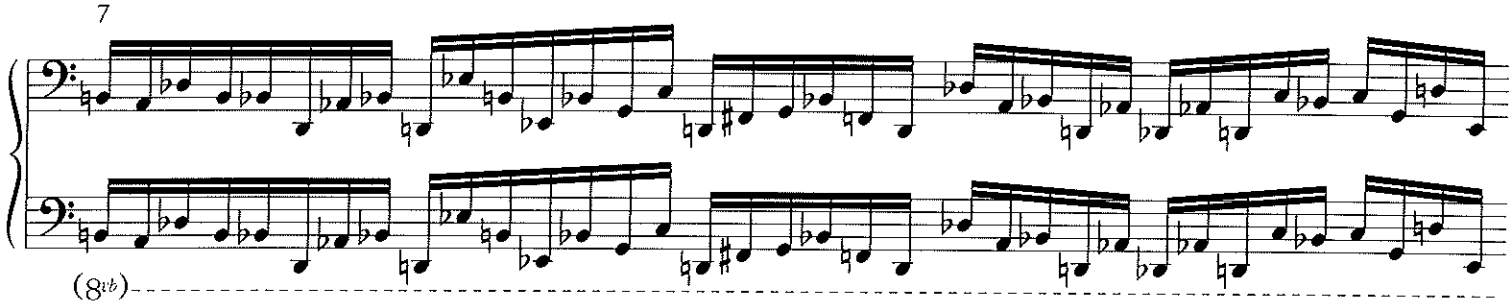

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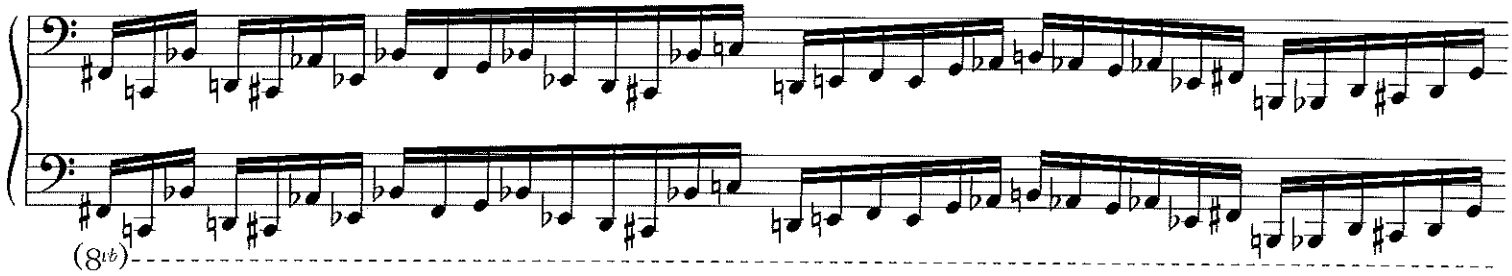

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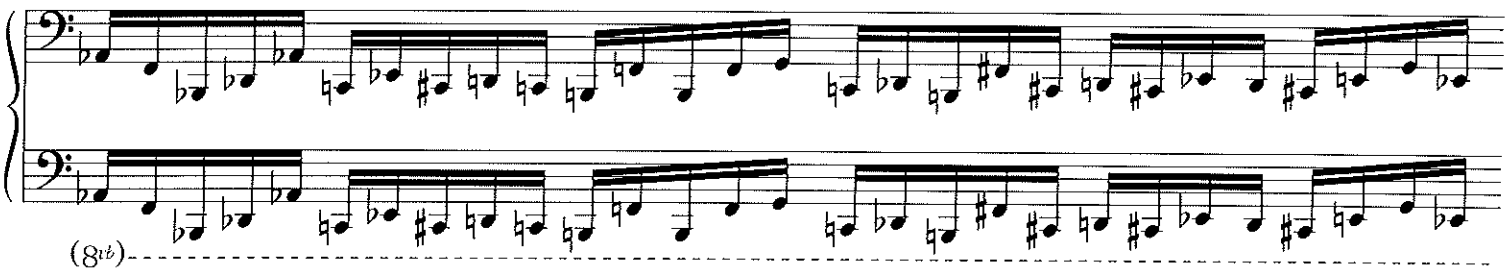

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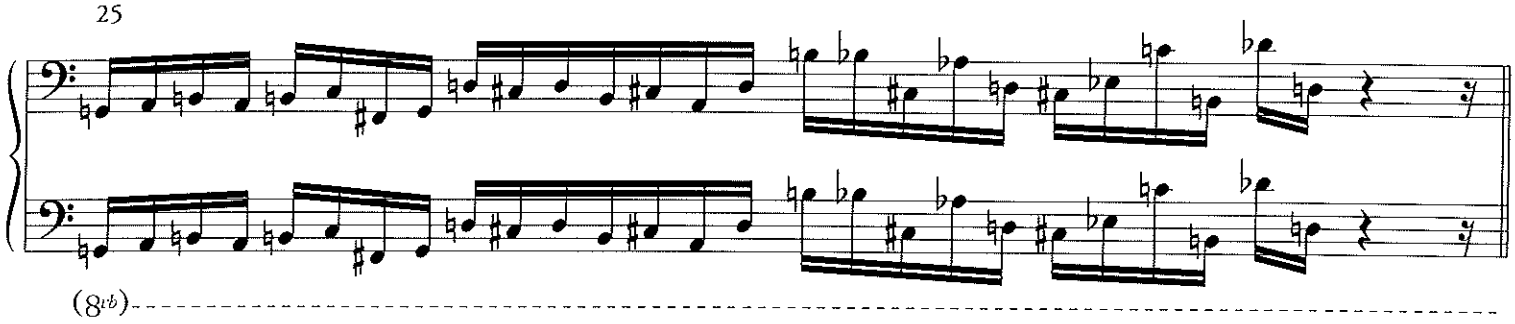

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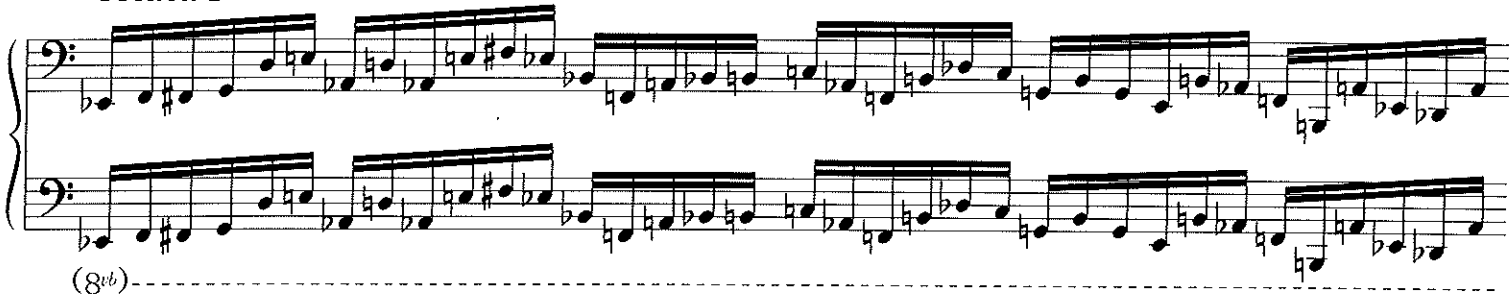

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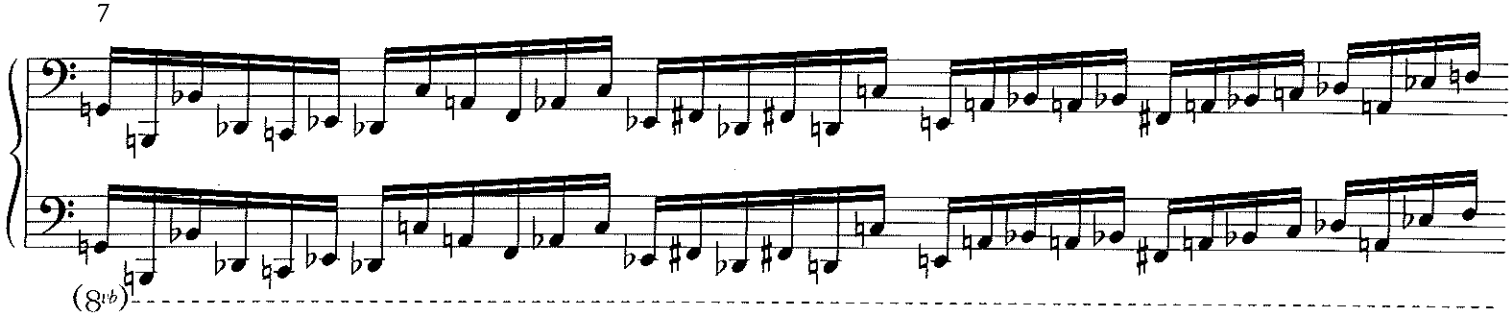

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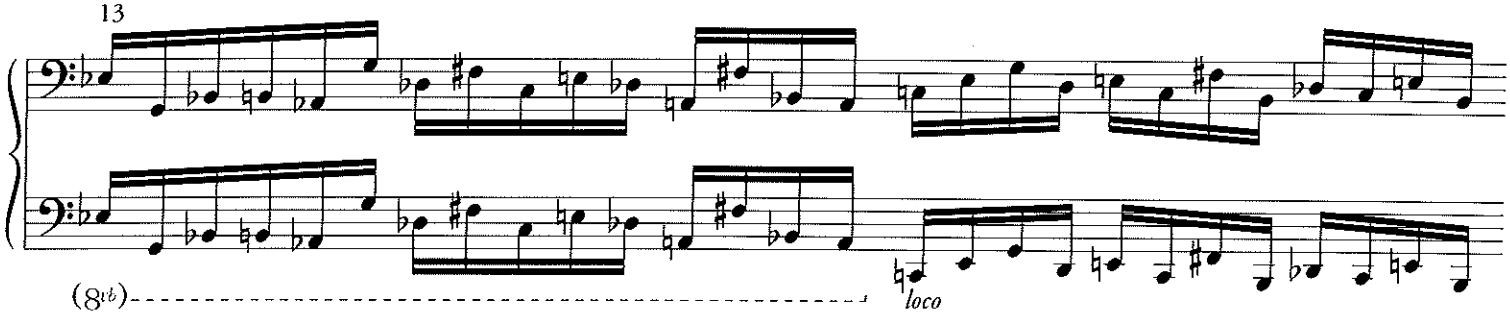

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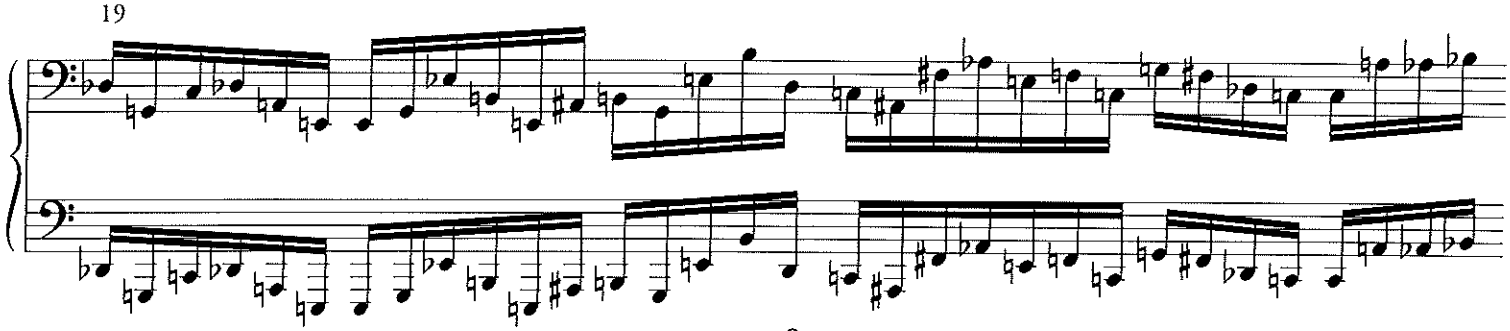

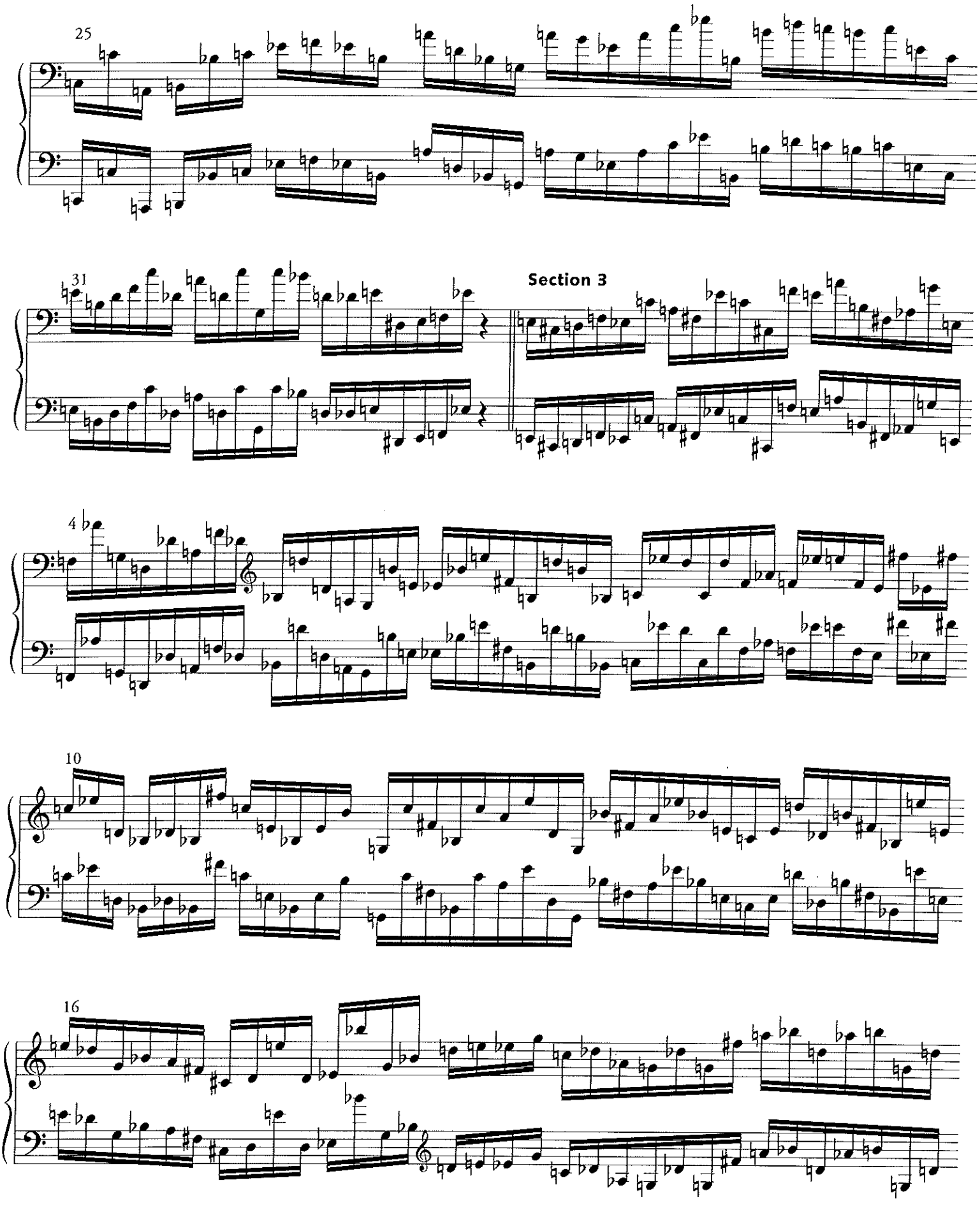
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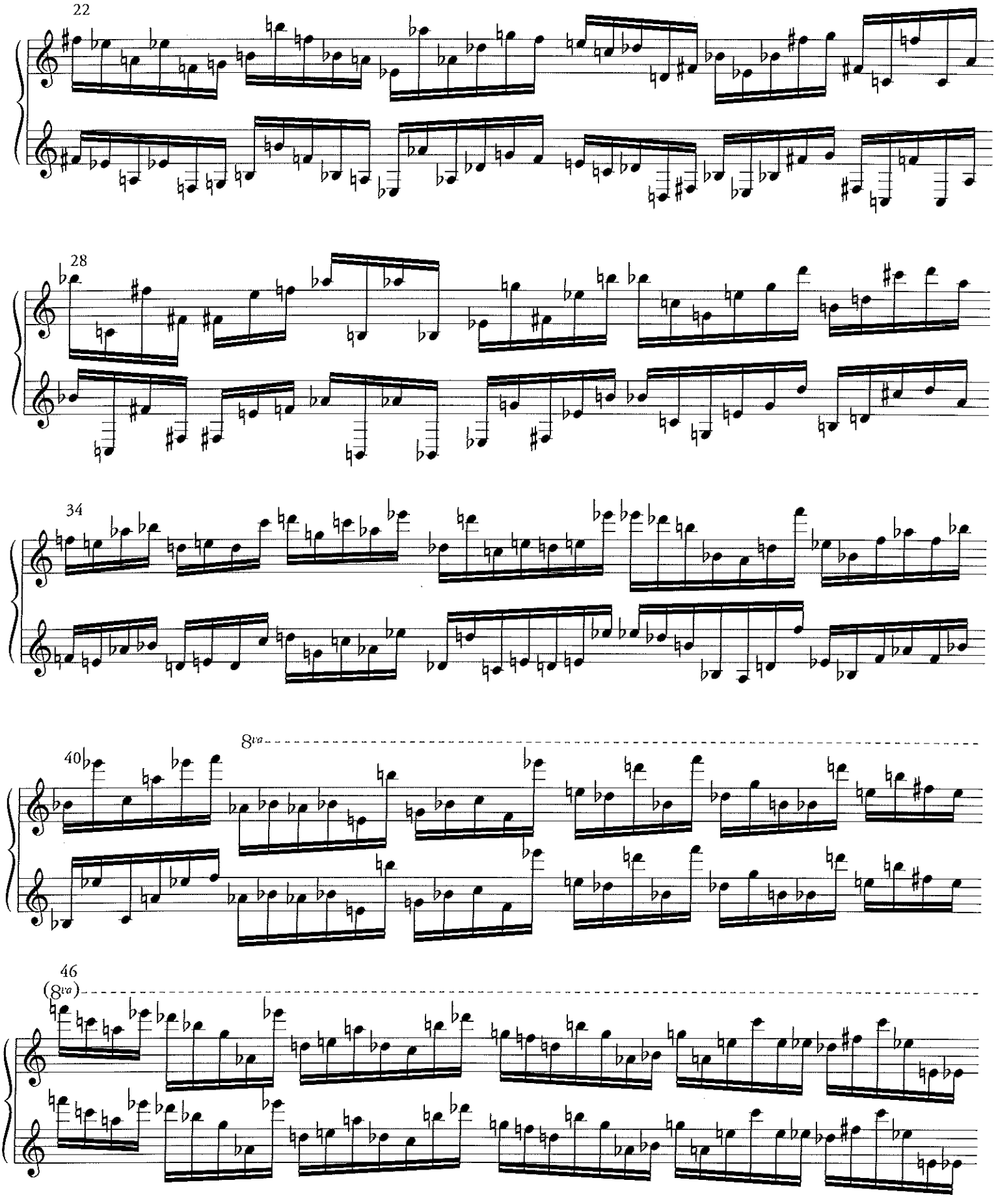
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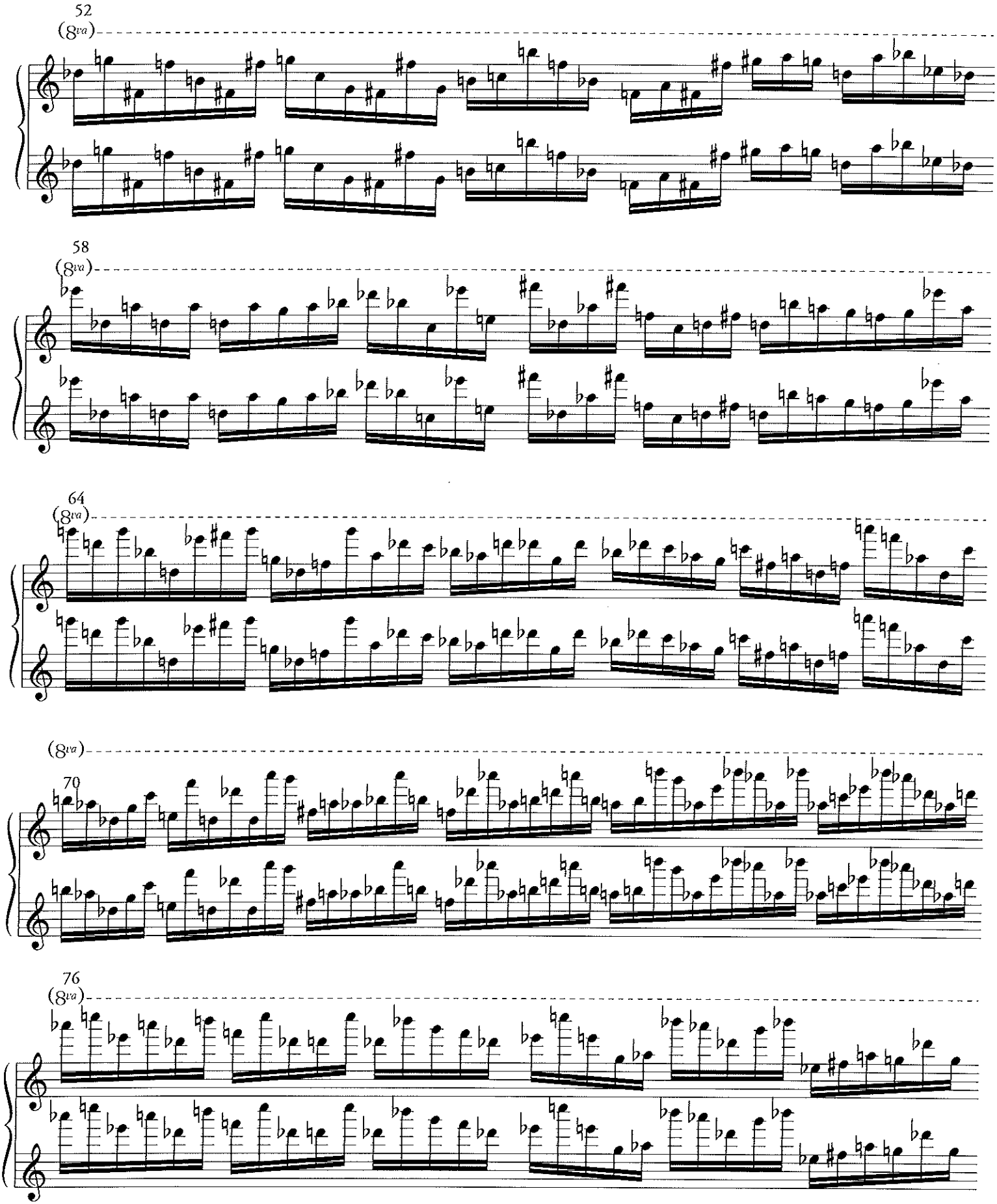
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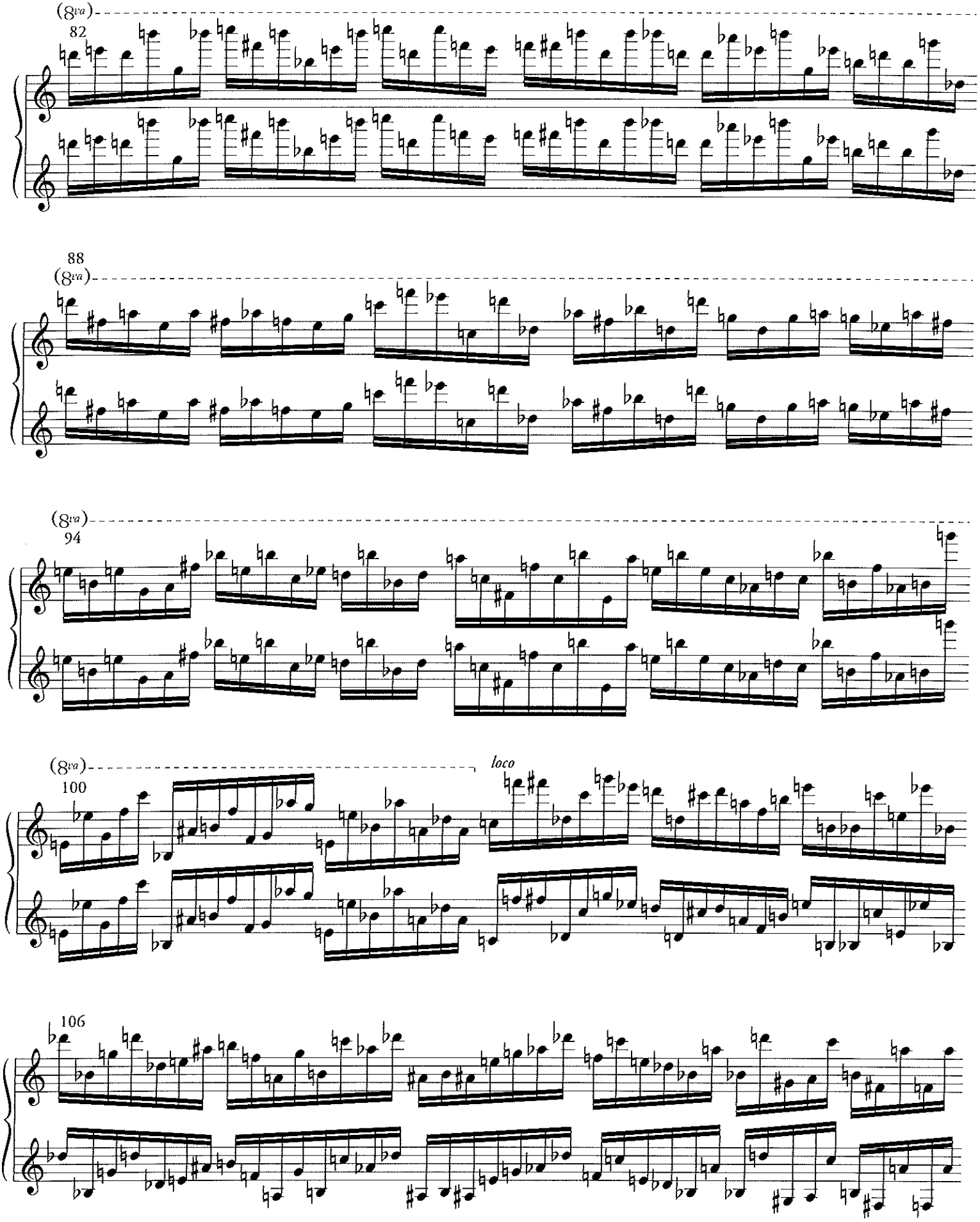
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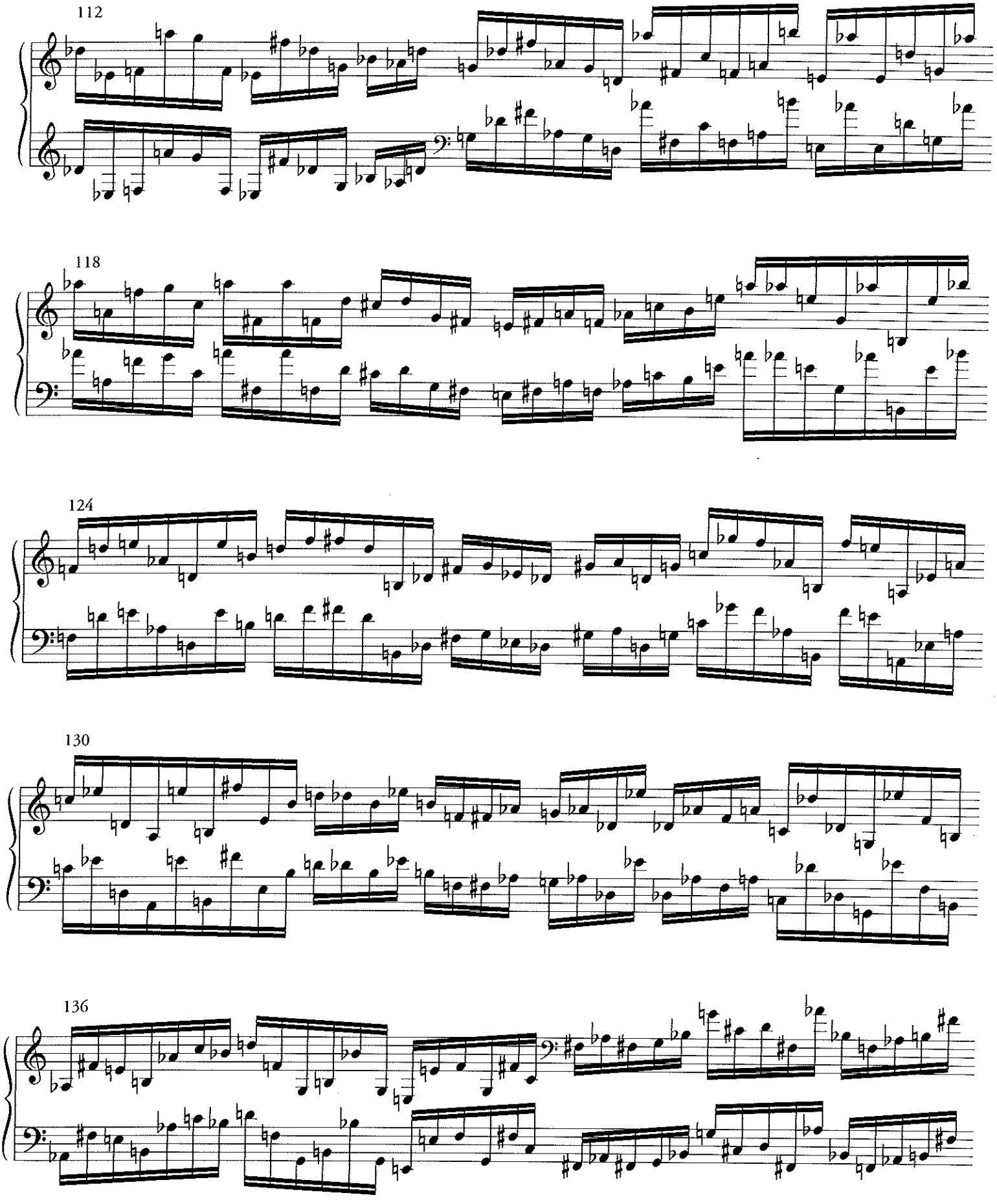
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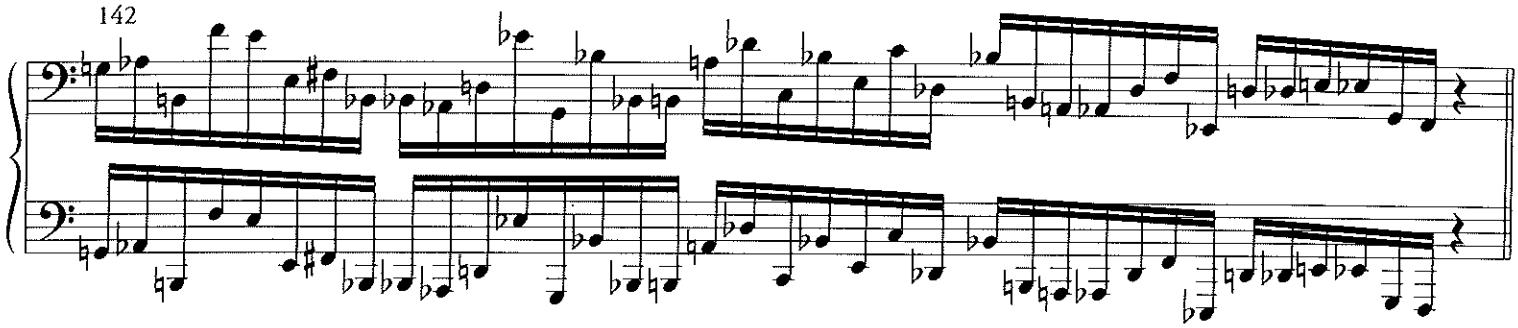

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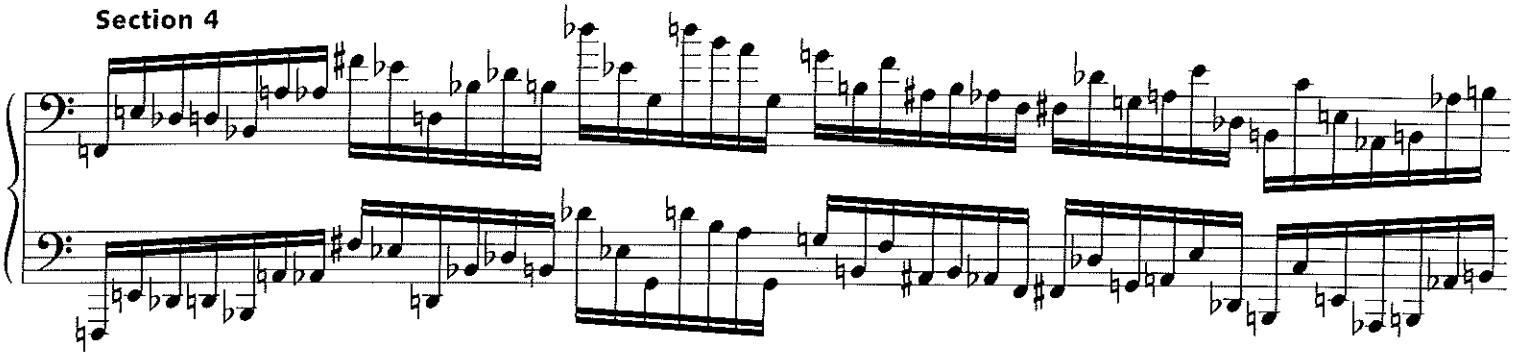

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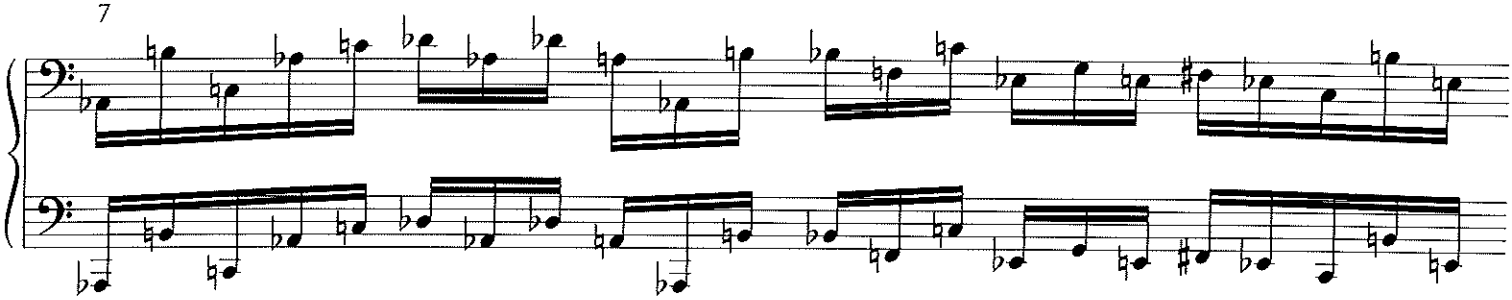

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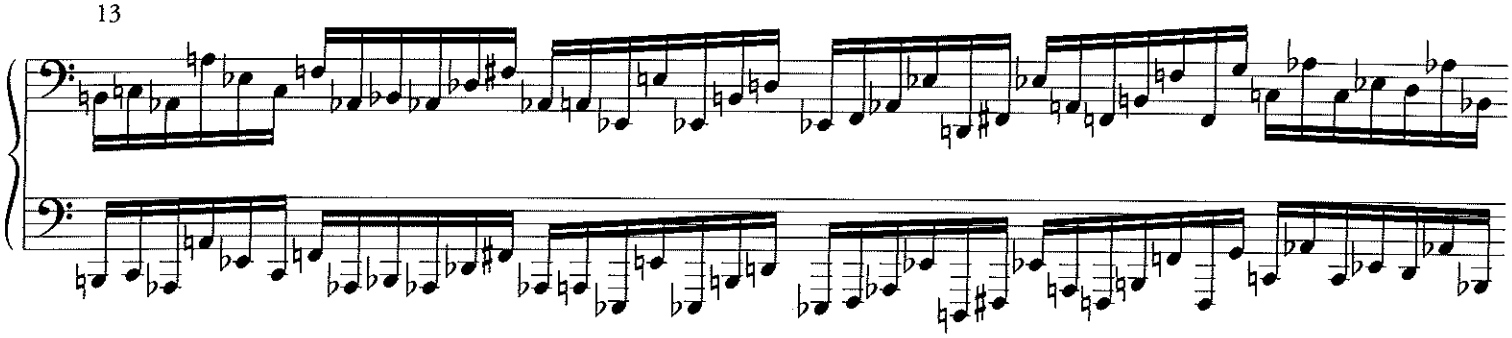

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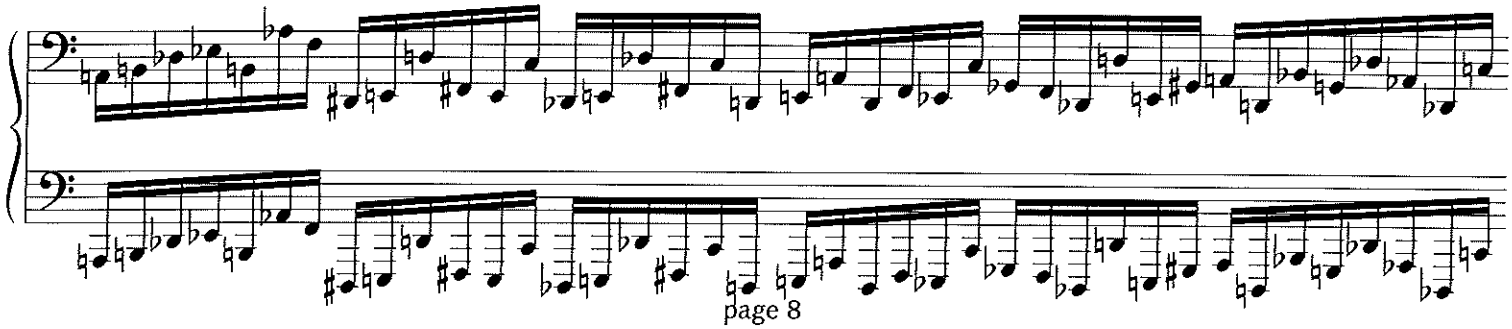

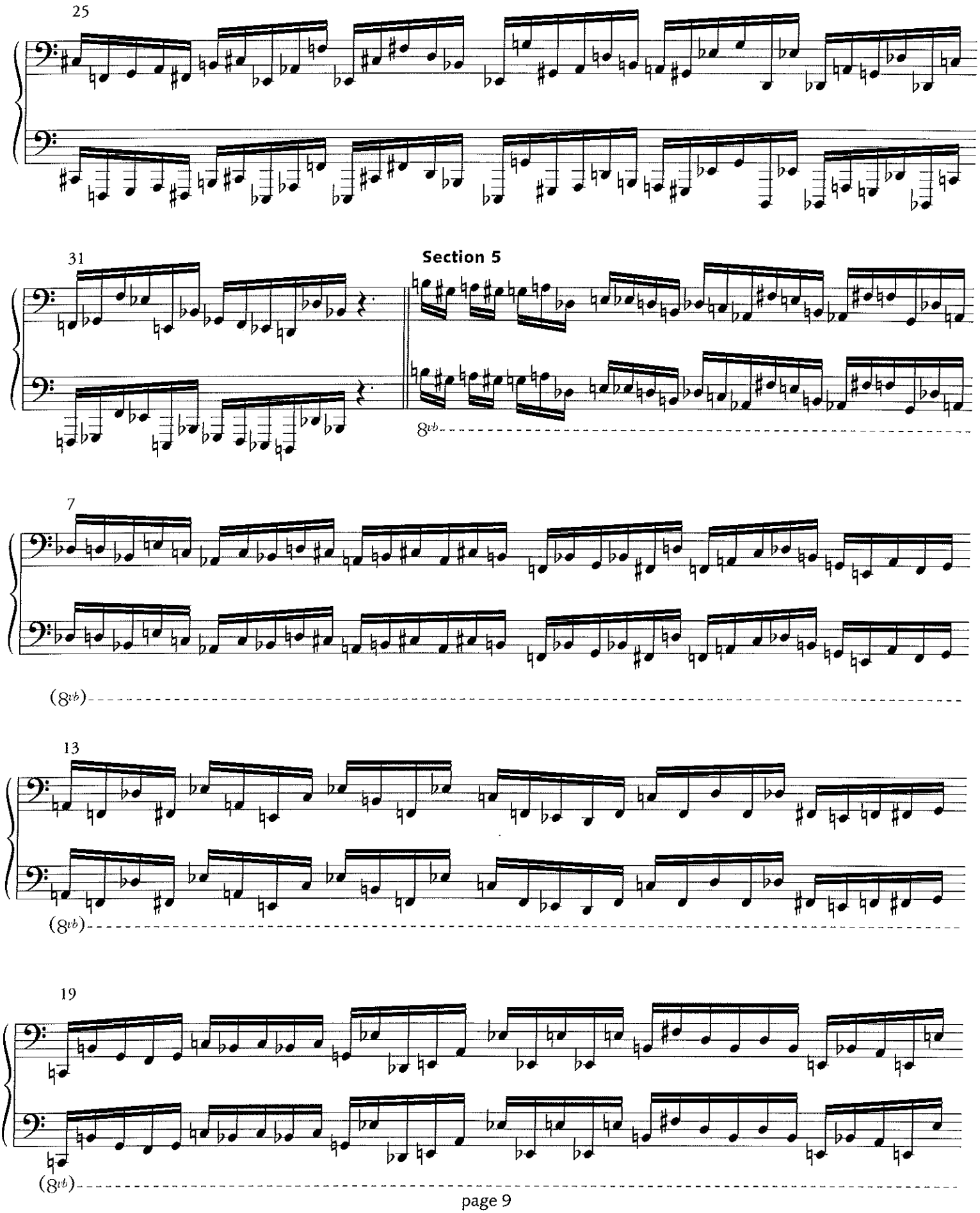
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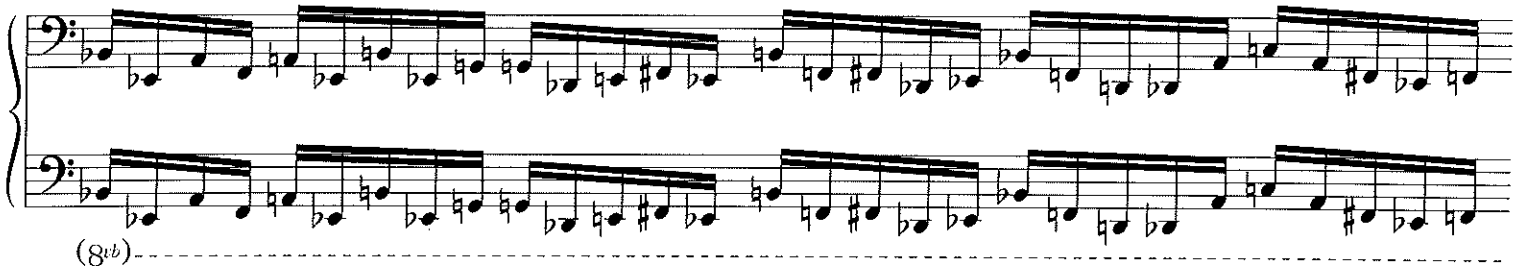

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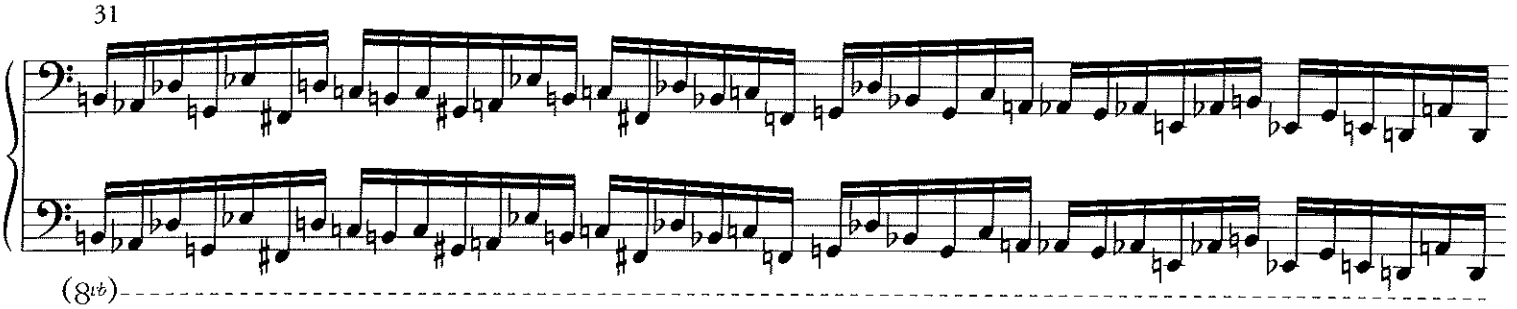
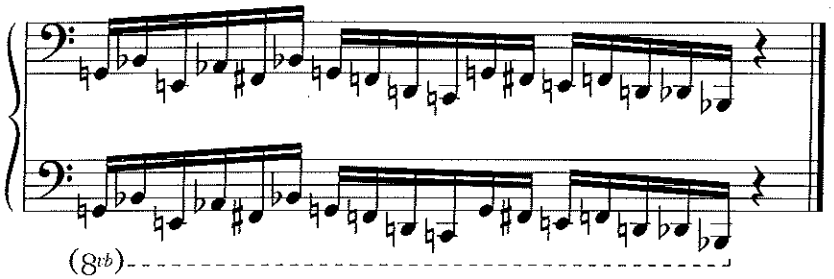
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