

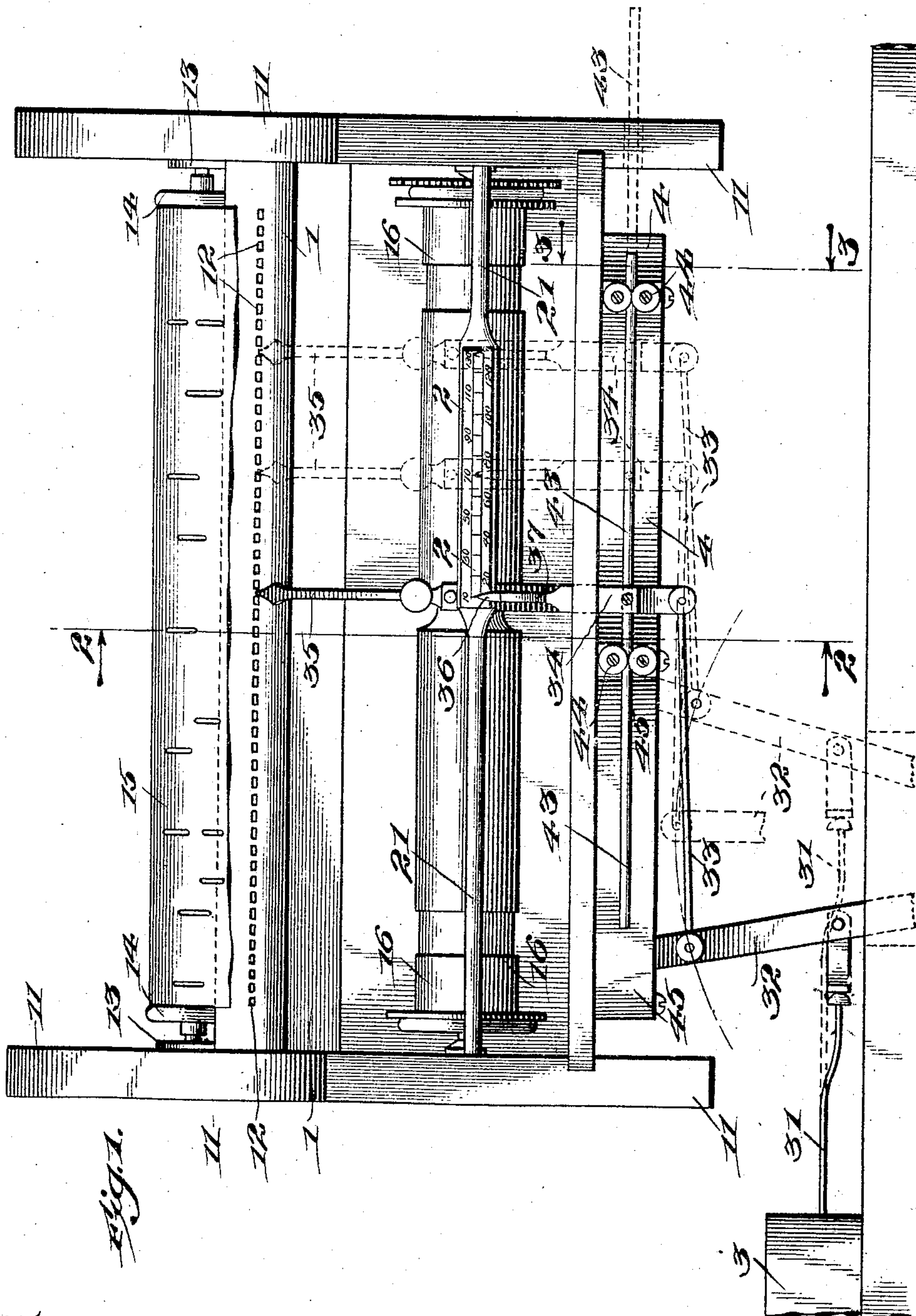
No. 819,113.

PATENTED MAY 1, 1906.

F. L. YOUNG.  
TEMPO INDICATOR.

APPLICATION FILED MAR. 24, 1905.

3 SHEETS—SHEET 1.



**Attest:**

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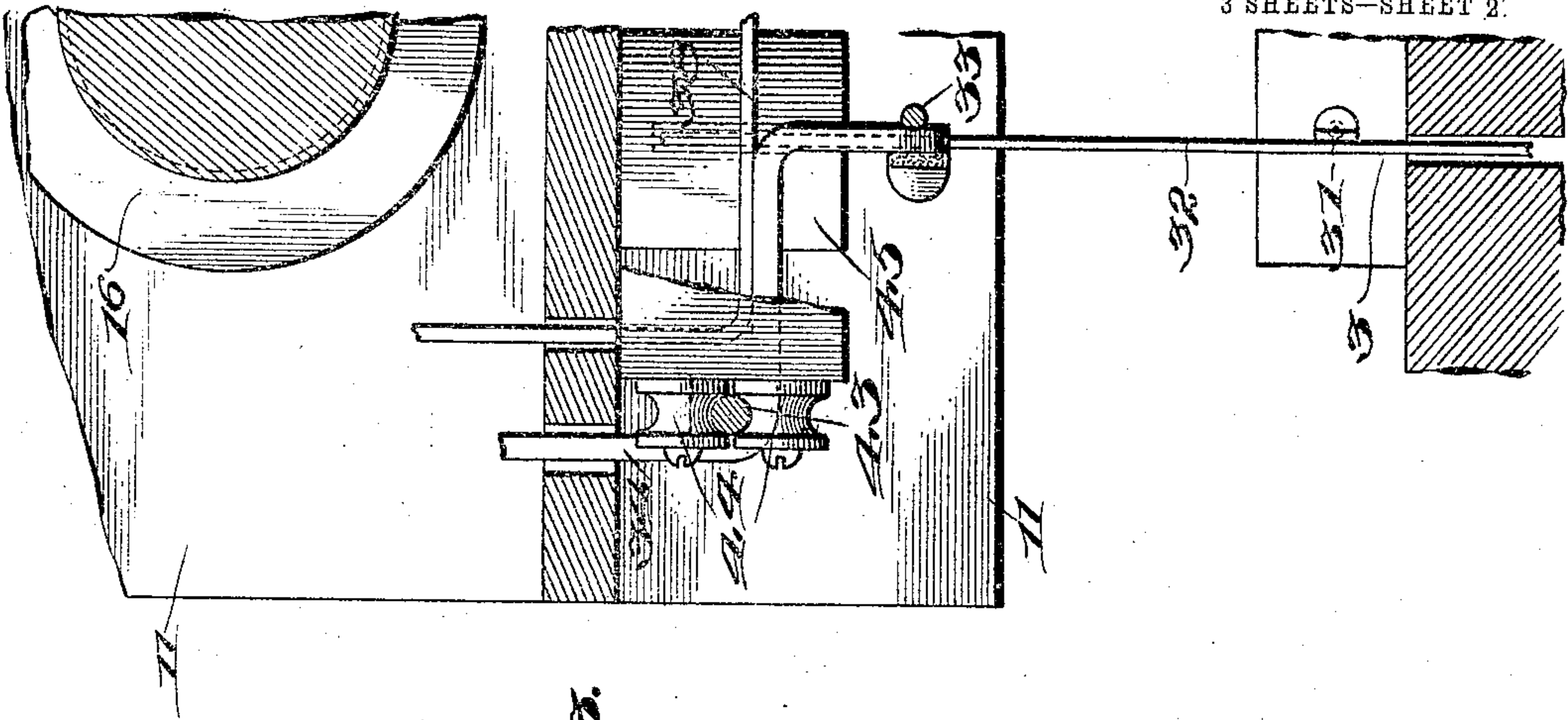


Fig. 3.

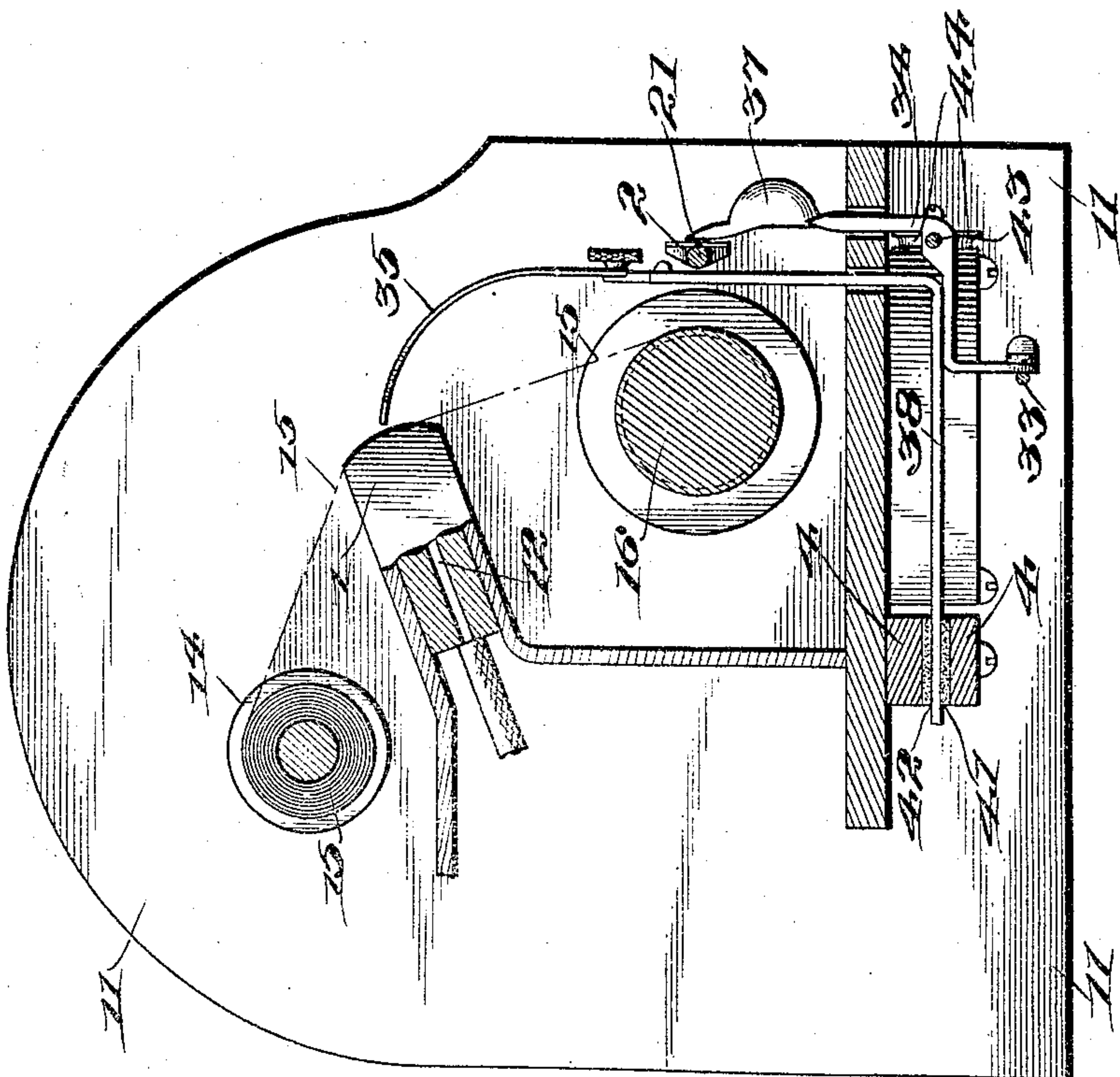


Fig. 2.

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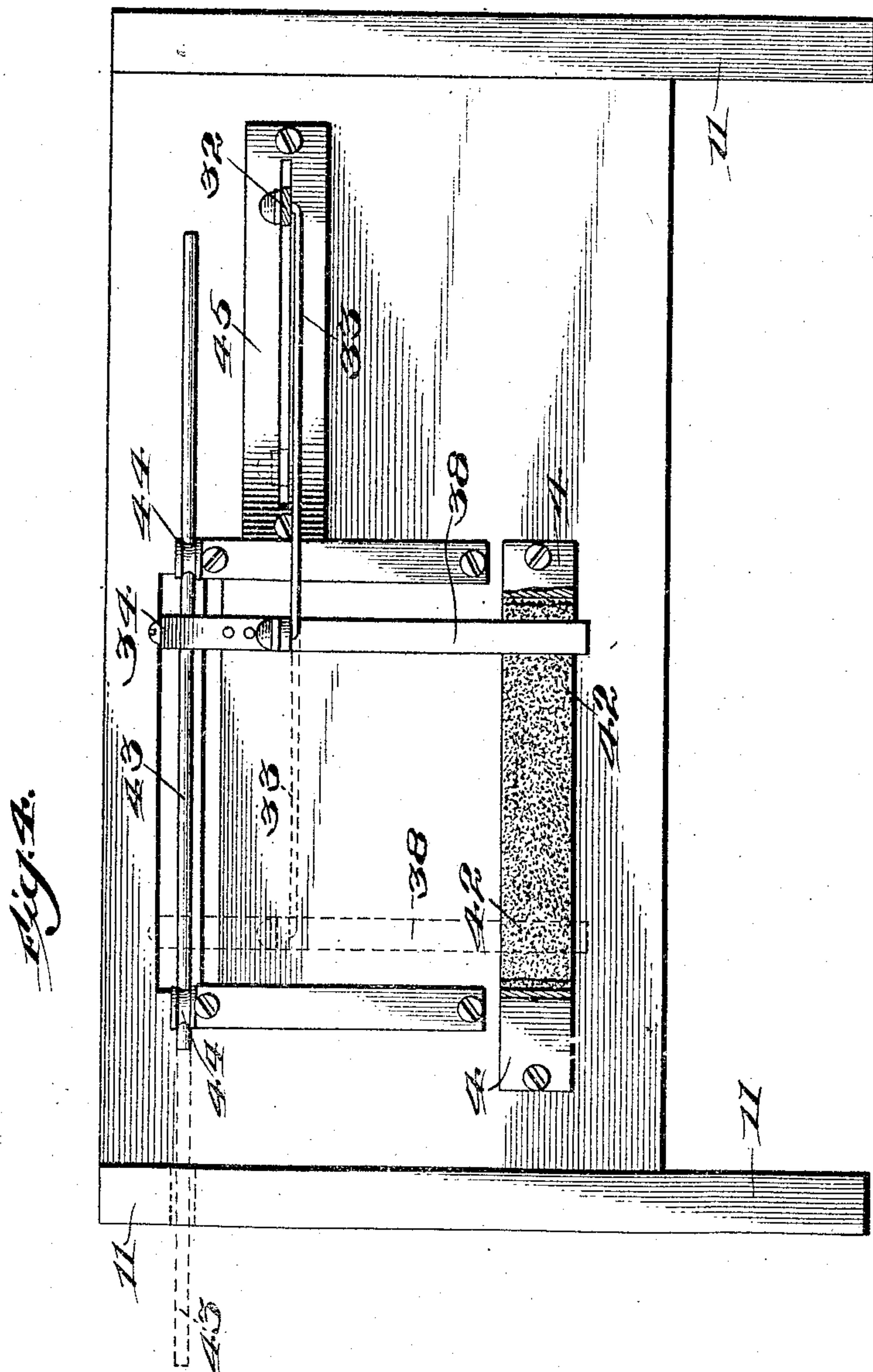
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

FRANCIS L. YOUNG, OF NEW YORK, N. Y., ASSIGNOR TO THE AEOLIAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF CONNECTICUT.

## TEMPO-INDICATOR.

No. 819,113.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed March 24, 1905. Serial No. 251,731.

To all whom it may concern:

Be it known that I, FRANCIS L. YOUNG, a citizen of the United States, and a resident of Brooklyn, in the city and State of New York, have invented certain new and useful Improvements in Tempo-Indicators, of which the following is a specification.

My invention relates to tempo-indicators for mechanical musical instruments.

It is common in mechanical musical instruments, which of course includes mechanical players for keyboard musical instruments which are separate from the instrument itself, to provide means for modifying the tempo by altering the speed at which the music-roll is moved over the tracker-board. Such a device is usually manually actuated by a lever extending to a convenient point for grasping by the hand of the operator or player. It is also customary to provide a tempo-scale adjacent such lever, the lever being provided with a pointer adapted to move over or adjacent the scale, so as to indicate the time. The scale is commonly marked with a series of numerals representing the number of beats to the minute. It is also customary, as shown—*e. g.*, in United States Patent No. 692,968, granted on my application February 11, 1902—to provide the music-sheets used on such mechanical musical instruments with a tempo-line—that is, a line indicating the speed at which the sheet is to be moved over the tracker—and to provide on the actuating-lever a pointer adapted to move over or adjacent to this line.

My present device unites in a single manually-actuating means pointers for moving over the tracker-board, or rather over the music-sheet thereon, and for moving over the graduated scale. By this means a musician may regulate the tempo either by the line marked on the music-roll or metronomically, according to his taste and fancy.

In the drawings, Figure 1 is a front elevation of so much of a mechanical musical instrument as is necessary to illustrate my invention. Fig. 2 is a vertical section through the line 2 2, Fig. 1. Fig. 3 is a similar vertical section through the line 3 3, Fig. 1. Fig. 4 is an inverted plan view of Fig. 2, one portion being removed for clearness of illustration.

1 designates a tracker, shown as supported between brackets or supports 11 and as provided with the usual ducts 12. The brackets or supports 11 are provided with cheeks 13 for engaging the music-roll 14, on which is wound the sheet 15. Between the brackets 11 is also supported the winding-roll 16, by the rotation of which the music is moved over the tracker 1. A rod 21, passing between the supports 11 in front of the roll 16, carries a graduated metronomic scale 2.

3 designates a tempo-controlling means which, as many such means are well known in the art and as it *per se* forms no part of my present invention, I have not deemed it necessary to fully illustrate. A rod 31, leading from the device 3, extends to a swinging lever 32, which is in turn connected by a link 33 to a vertically-disposed bar 34, which is provided with an upper pointer 35 adjacent the tracker-board 1 and with a second pointer 36 adjacent the scale 2. In the construction shown the pointer 35 passes behind the scale 2, while the pointer 36 passes in front of the scale. The pointer 35 is shown as curved and as spaced away from the tracker 1, so as to permit the passage therebetween of the music-sheet 15. The lever 32 is provided with a handle 37, by which it may be laterally moved by the hand of the operator. For convenience the bar 34 may be made in two parts, as is clearly shown in Figs. 2 and 3 of the drawings, these two parts being riveted together and one of them having a rearwardly-extending portion 38, adapted to traverse a slot 41 in a block 4, the slot being preferably lined with strips 42, of felt or the like, to prevent noise. Secured to the lower end of the bar 34 is a guide 43, shown as a rod passing between and guided by pairs of idler-pulleys 44, suitably mounted on the part 45 of the instrument.

The operation of my device will be clearly understood from an inspection of the drawings. It will be seen that the lever 32 is pivoted at its lower end, (not shown,) so as to swing laterally, and that the bar 34, having link connection therewith, is adapted to move laterally without swinging motion guided by the block 4 and the rod 43, as shown in the drawings. The pointer 35 is shown as extending over the music-sheet immediately above the row of ducts 12 of the tracker 1,



while the pointer 36 moves over the graduations on the scale 2. It is evident that by moving the pointer 35 in a direct lateral line—i. e., in a line exactly transverse of the music-sheet—greater accuracy in following the tempo-line on the sheet is possible than can be secured where the pointer moves in the arc of a circle, as heretofore. Moreover, both the pointers and the handle 37 will move in parallel straight lines and to equal distances.

By the phrase "tempo-line" as applied to the music-sheet I of course include any continuous or discontinuous mark or series of marks or indications with which the player or operator is enabled to guide the indicating device.

What I claim is—

1. In a mechanical musical instrument, a tracker, means for moving a music-sheet over said tracker, a tempo-scale mounted in a plane in front of said tracker, and a bar guided to move laterally in front of said tracker and behind said scale and having a pointer in front of said tracker and a second pointer in front of said scale.

2. In a mechanical musical instrument, a tracker, music-sheet, means for moving the sheet over the tracker, and a manually-actuated tempo-modifying means, the improved tempo-indicator thereof having a sliding mounting combining a slide-bar, friction-reducing rollers therefor, a rearwardly-extending member and a slot or guide in which said member runs.

3. In a mechanical musical instrument, a tracker, music-sheet, means for moving the sheet over the tracker, and a manually-actuated tempo-modifying means, the improved tempo-indicator thereof having a scale, a pointer for said scale, a second pointer extending behind said scale and over said music-sheet, a rigid connection between the said two pointers, and sliding connections for guiding the said two pointers to slide in parallel paths respectively in front of and behind the said scale.

4. In a mechanical musical instrument, a tracker, music-sheet, means for moving the sheet over the tracker, and a manually-actuated tempo-modifying means, the improved tempo-indicator thereof having a scale, a combined handle and pointer coöperating with said scale, guides on which the said handle is mounted to slide in a rectilinear path, and a pointer extending over the music-roll and connected to move in a rectilinear path parallel with said handle.

5. In a mechanical musical instrument, a tracker, music-sheet, means for moving the sheet over the tracker, and a manually-actuated tempo-modifying means, the improved tempo-indicator thereof having a pointer extending over the music-sheet, a control-handle connected for moving the said indicator and the other parts of the tempo-modifying means, and means for guiding the said handle and the said pointer to move in parallel rectilinear paths, the said handle and said pointer being connected to move equally in their respective paths.

6. In a mechanical musical instrument, a tracker, music-sheet, means for moving the sheet over the tracker, and a manually-actuated tempo-modifying means, the improved tempo-indicator thereof having two pointers, one extending over the music-sheet for coöperation with tempo-indicators thereon, a scale with which the other coöperates, guiding means for guiding the two pointers to move in parallel straight lines, and connections between them and the other parts of the tempo-modifying means.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANCIS L. YOUNG.

Witnesses:

D. C. HEINS,

E. C. THOMPSON.