

A. J. HOBART.
TUNE SHEET ATTACHMENT FOR AUTOMATIC PIANOS.
APPLICATION FILED OCT. 8, 1908.

913,009.

Patented Feb. 23, 1909.

3 SHEETS—SHEET 1.

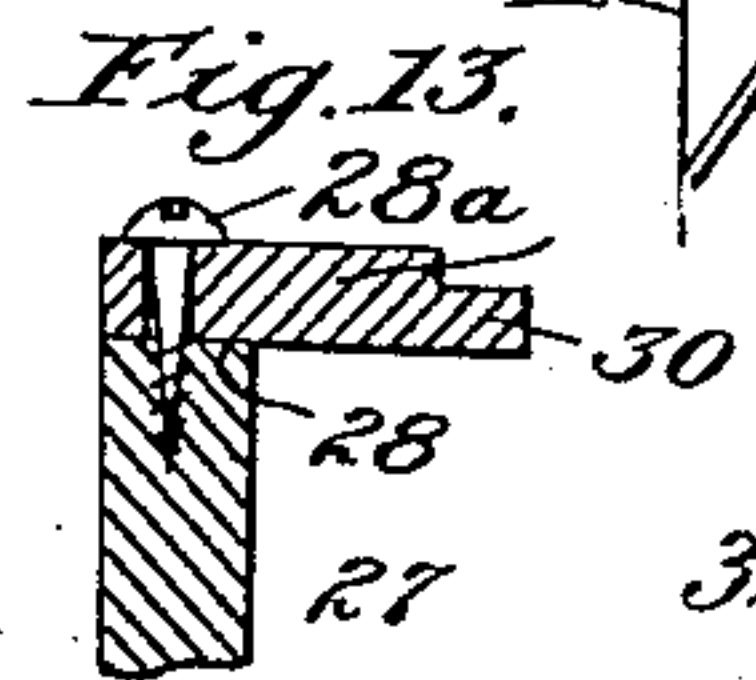
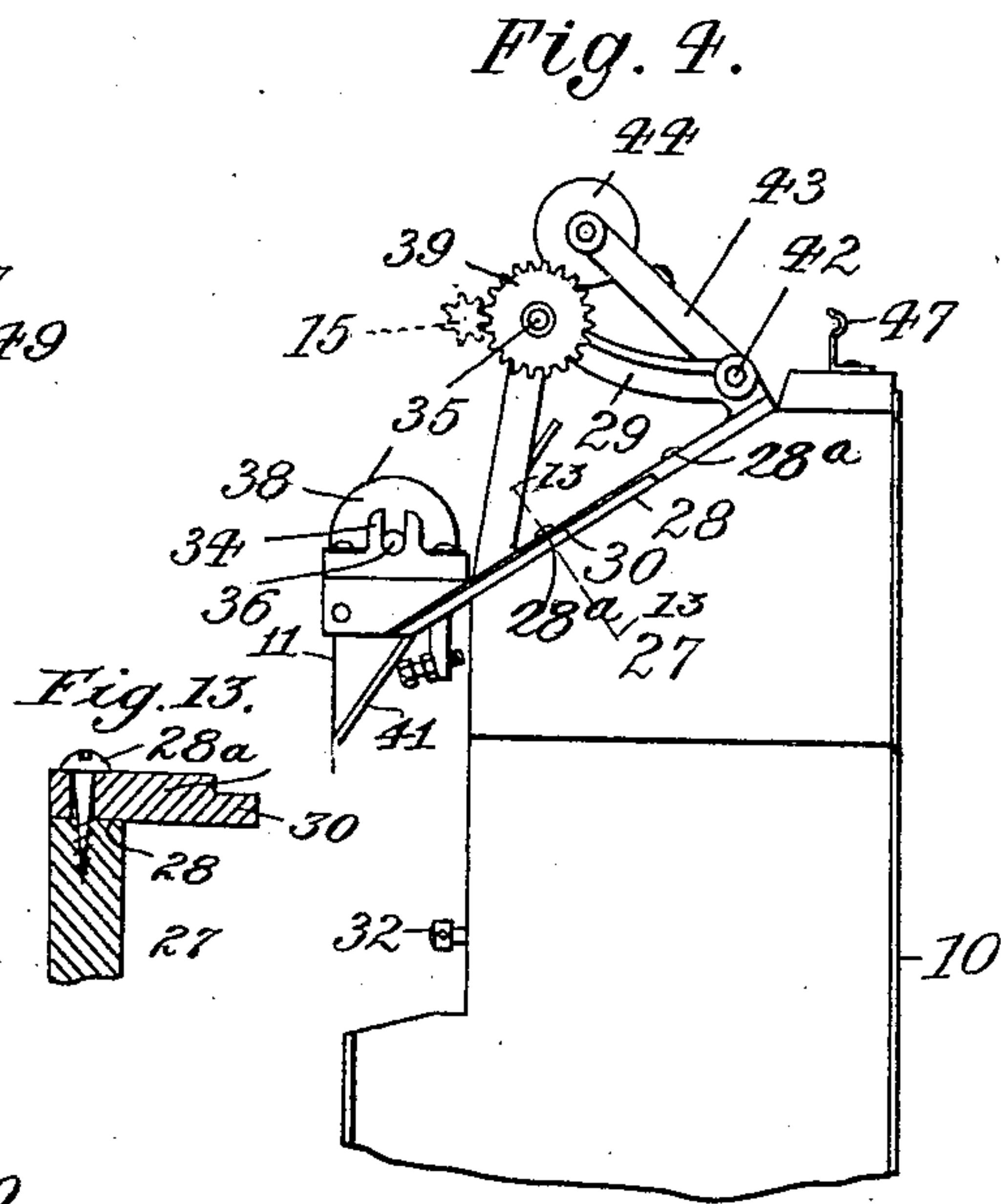
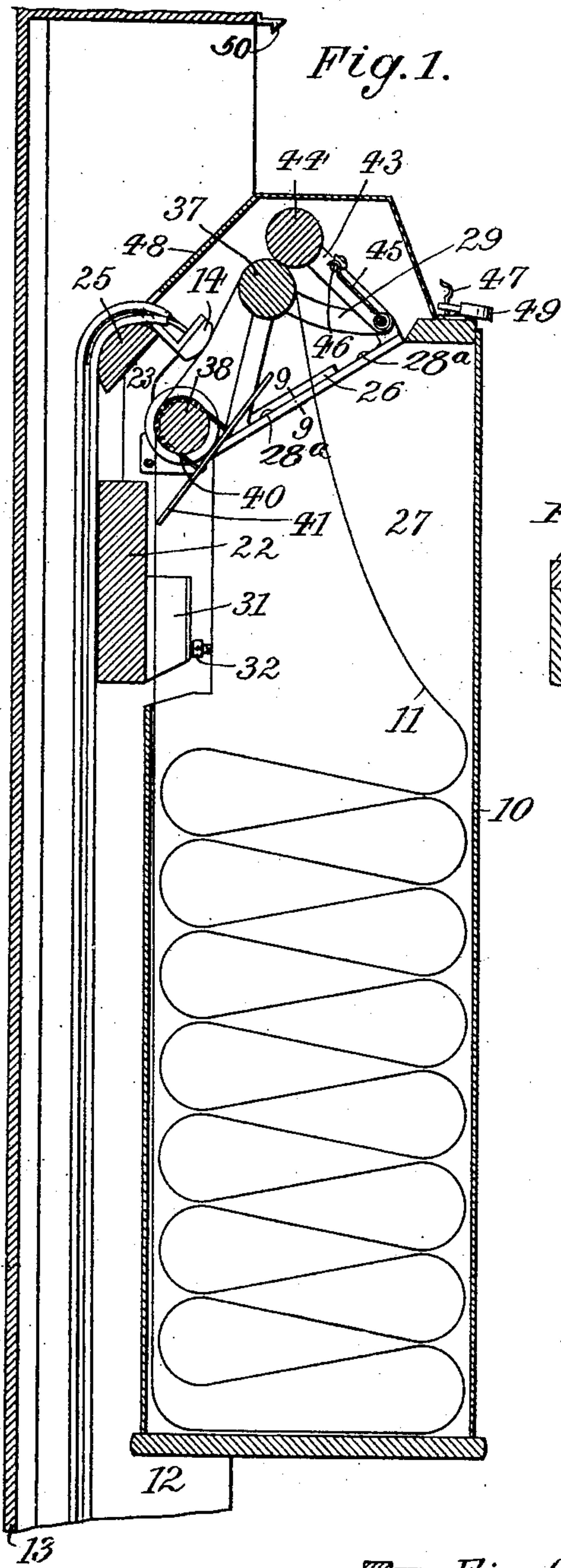


Fig. 10.

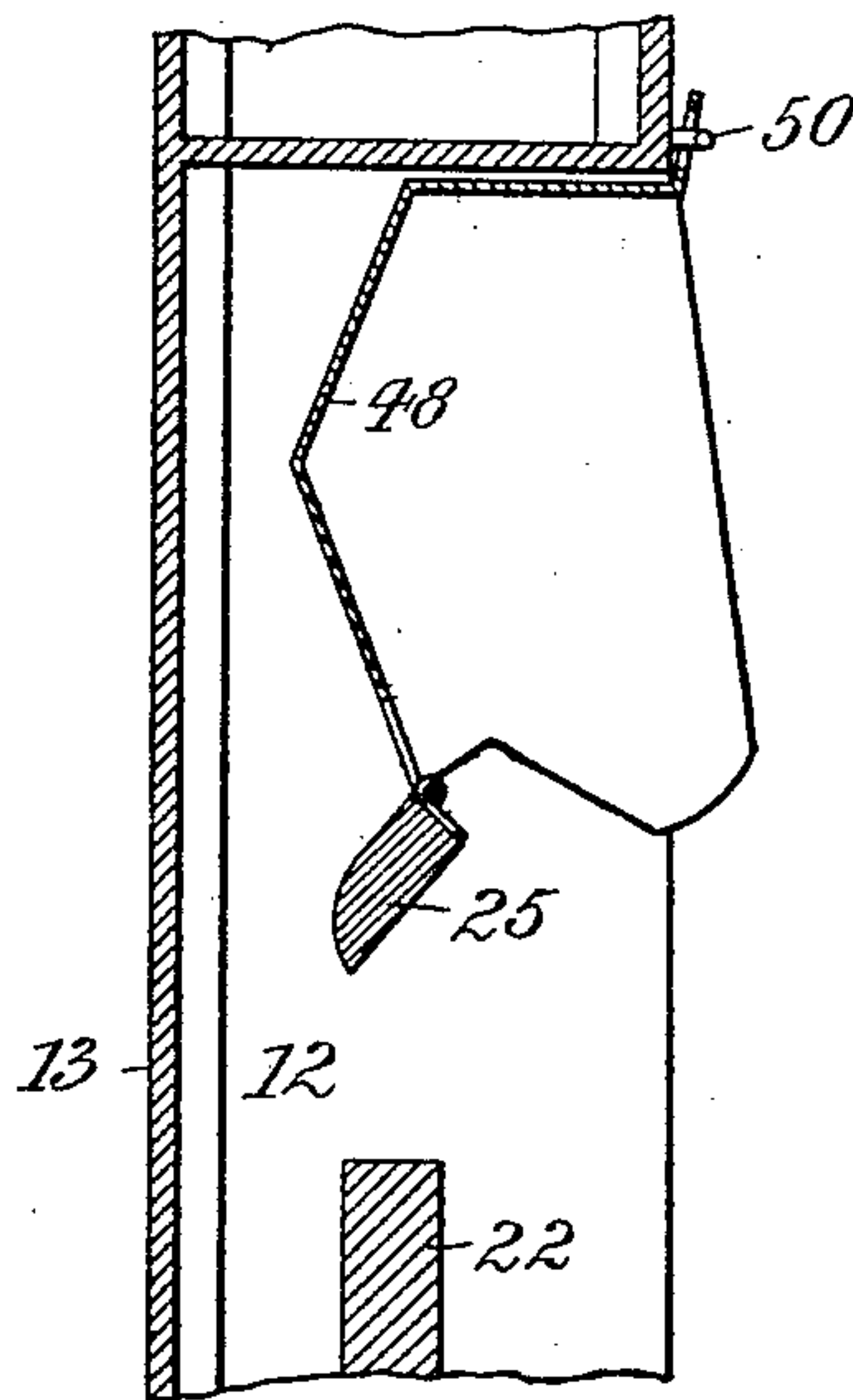


Fig. 9.



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Fig. 2.

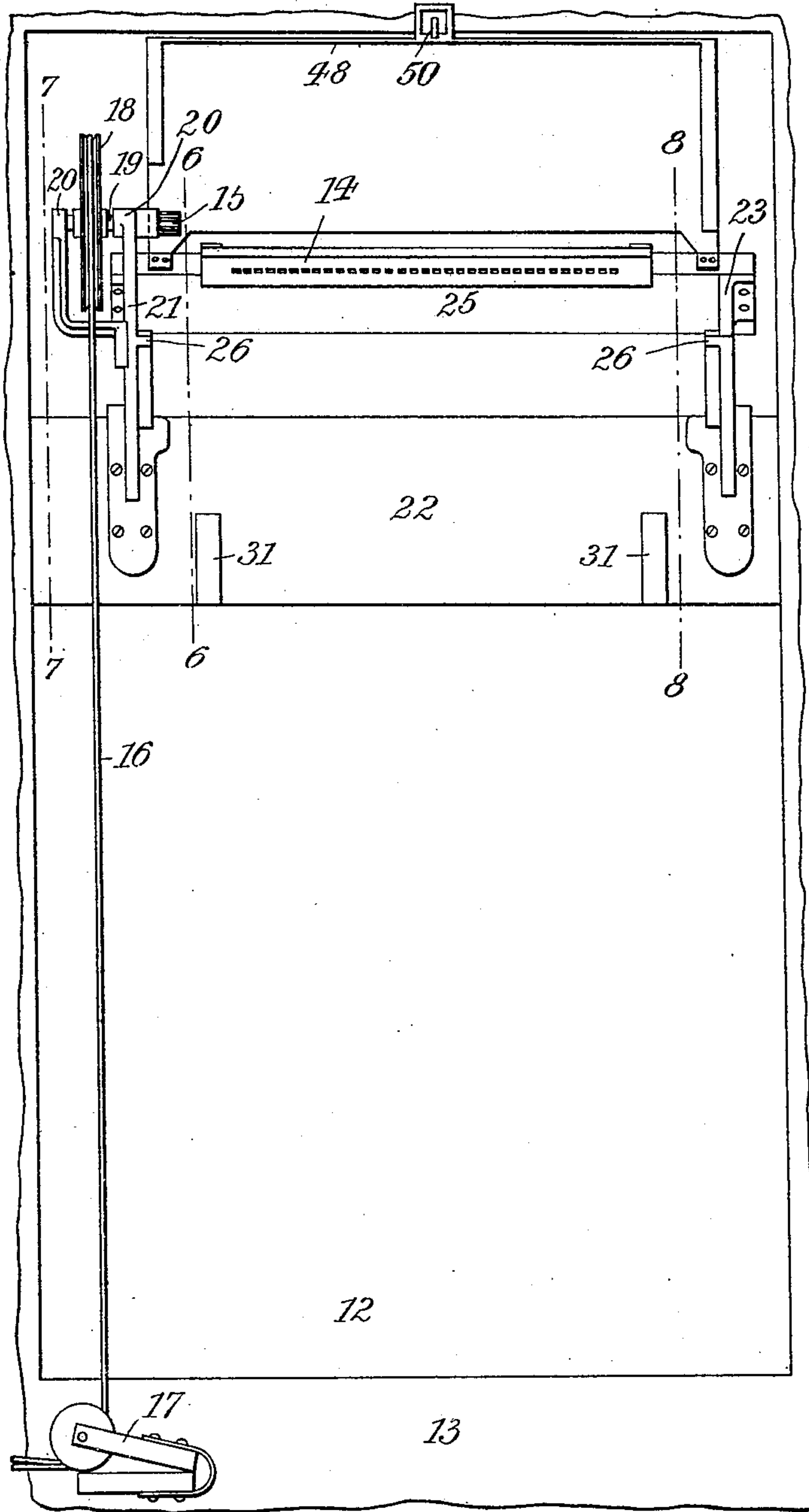


Fig. 6.

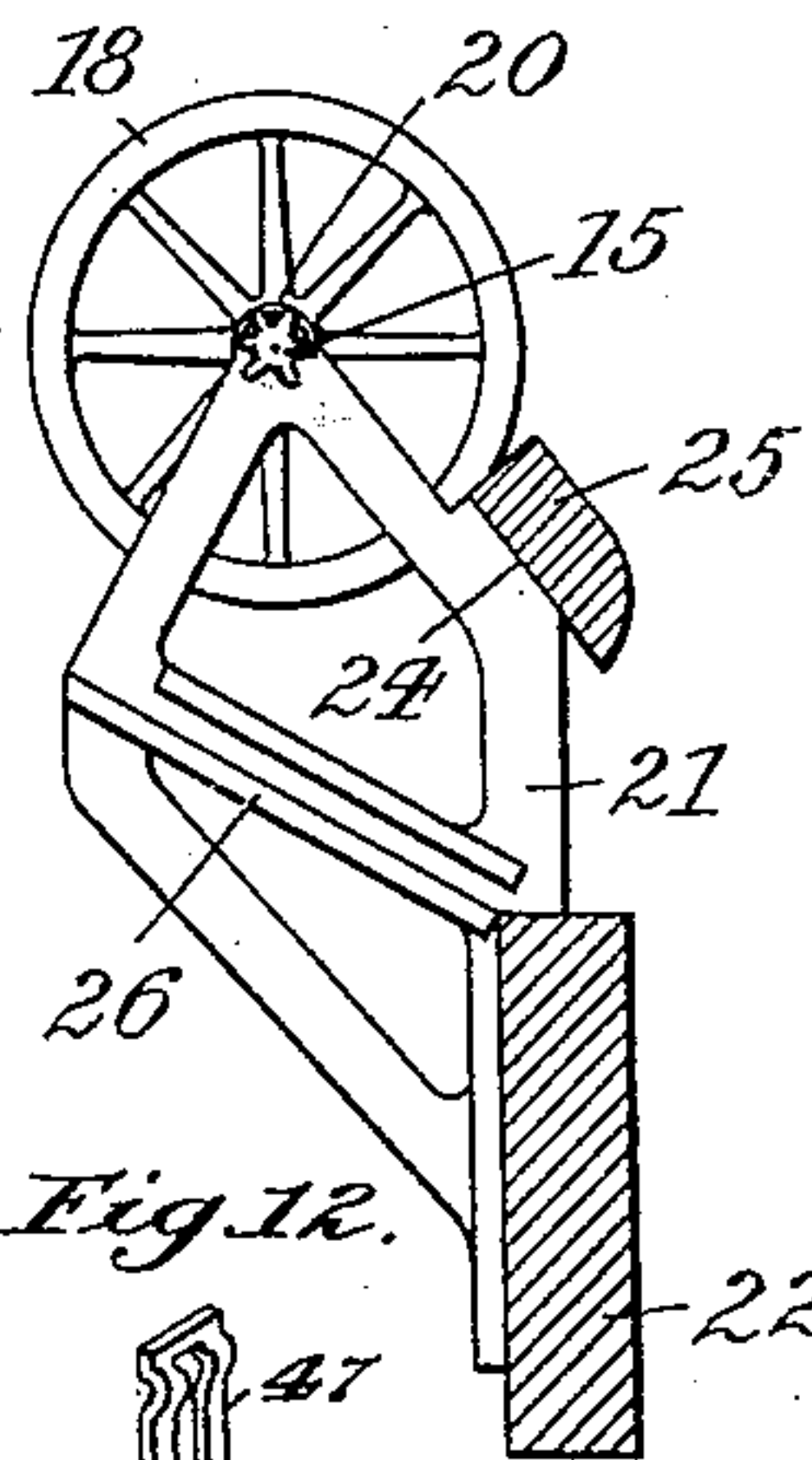


Fig. 12.



Fig. 7.

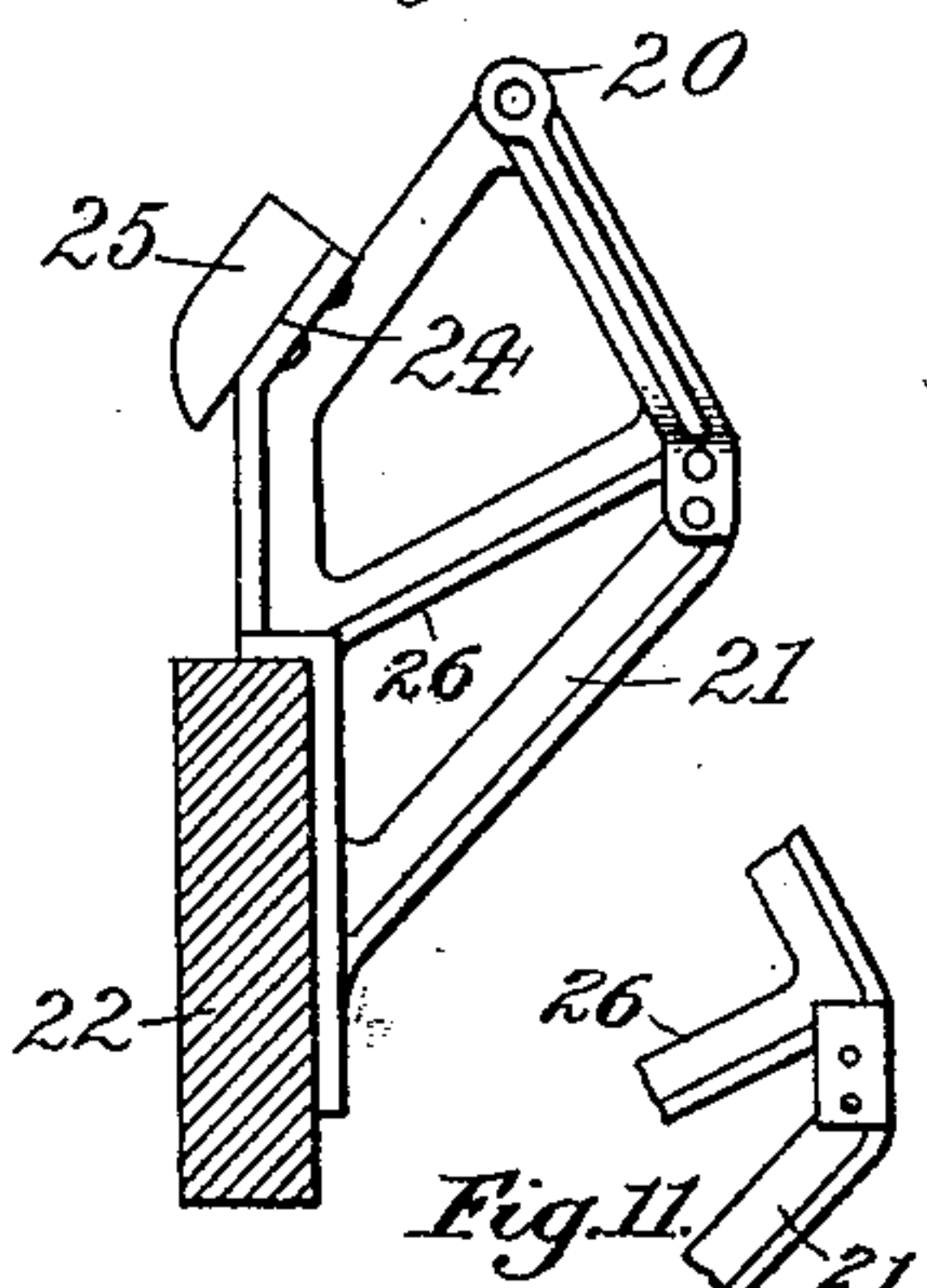


Fig. 11.

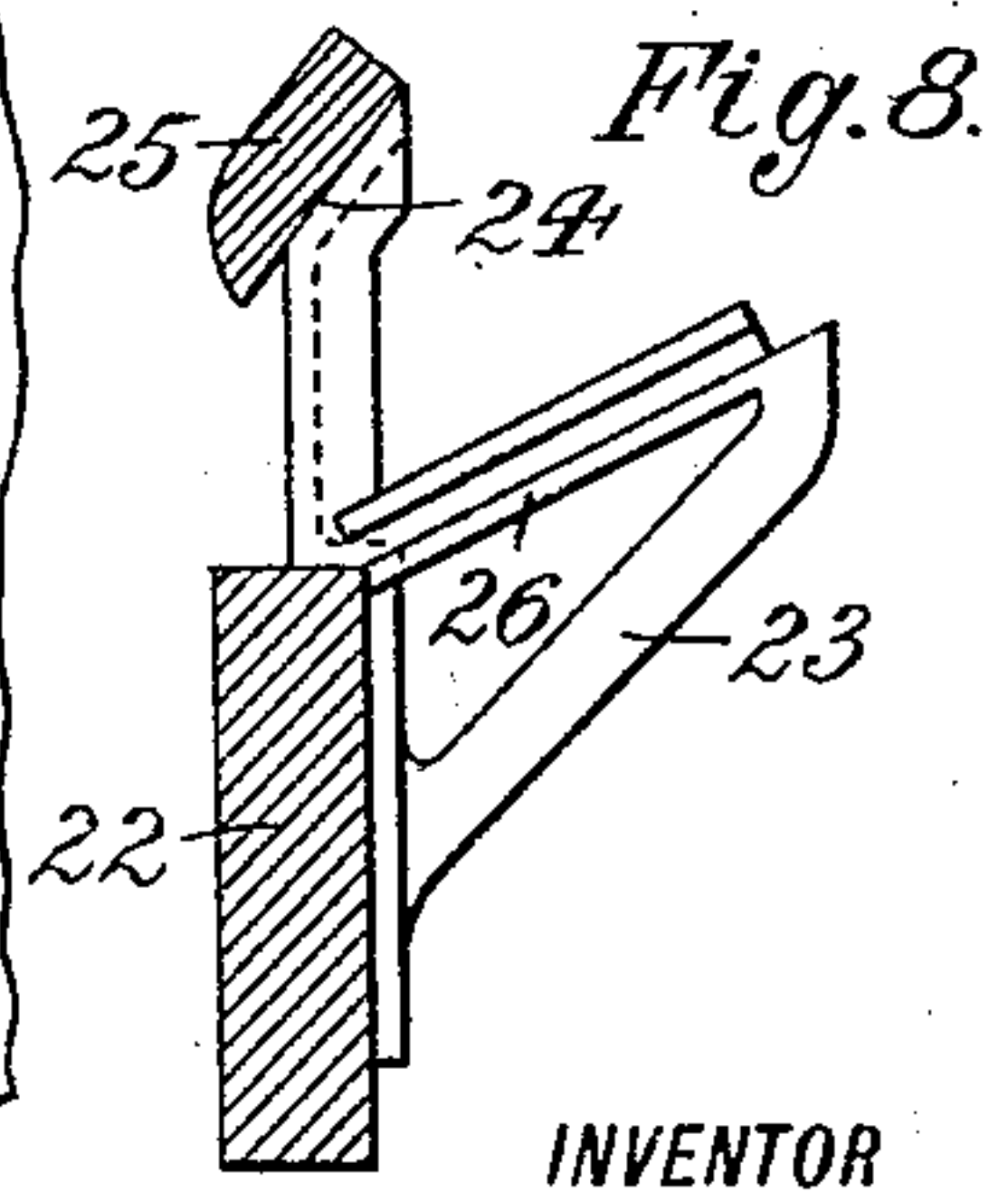


Fig. 8.

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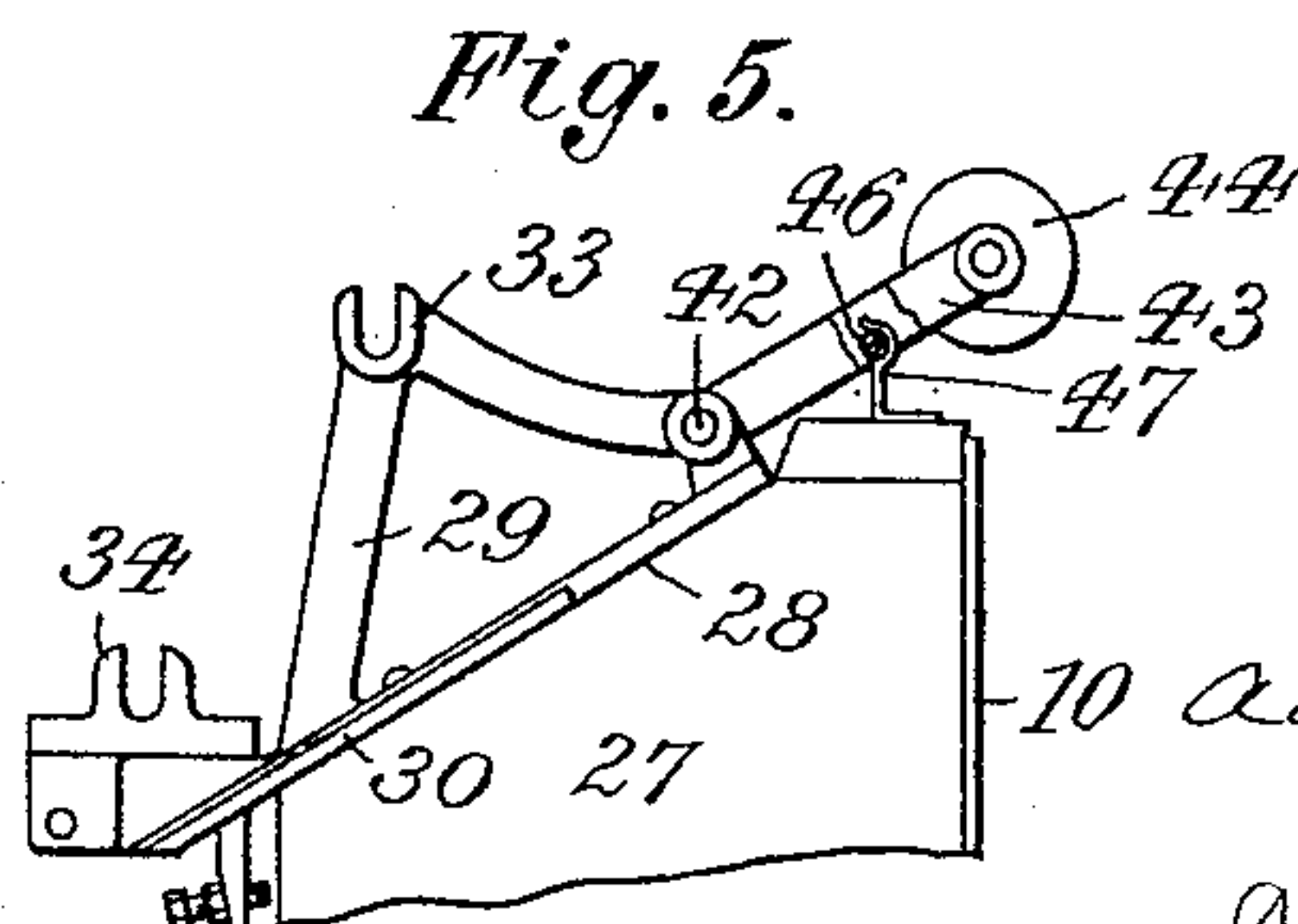
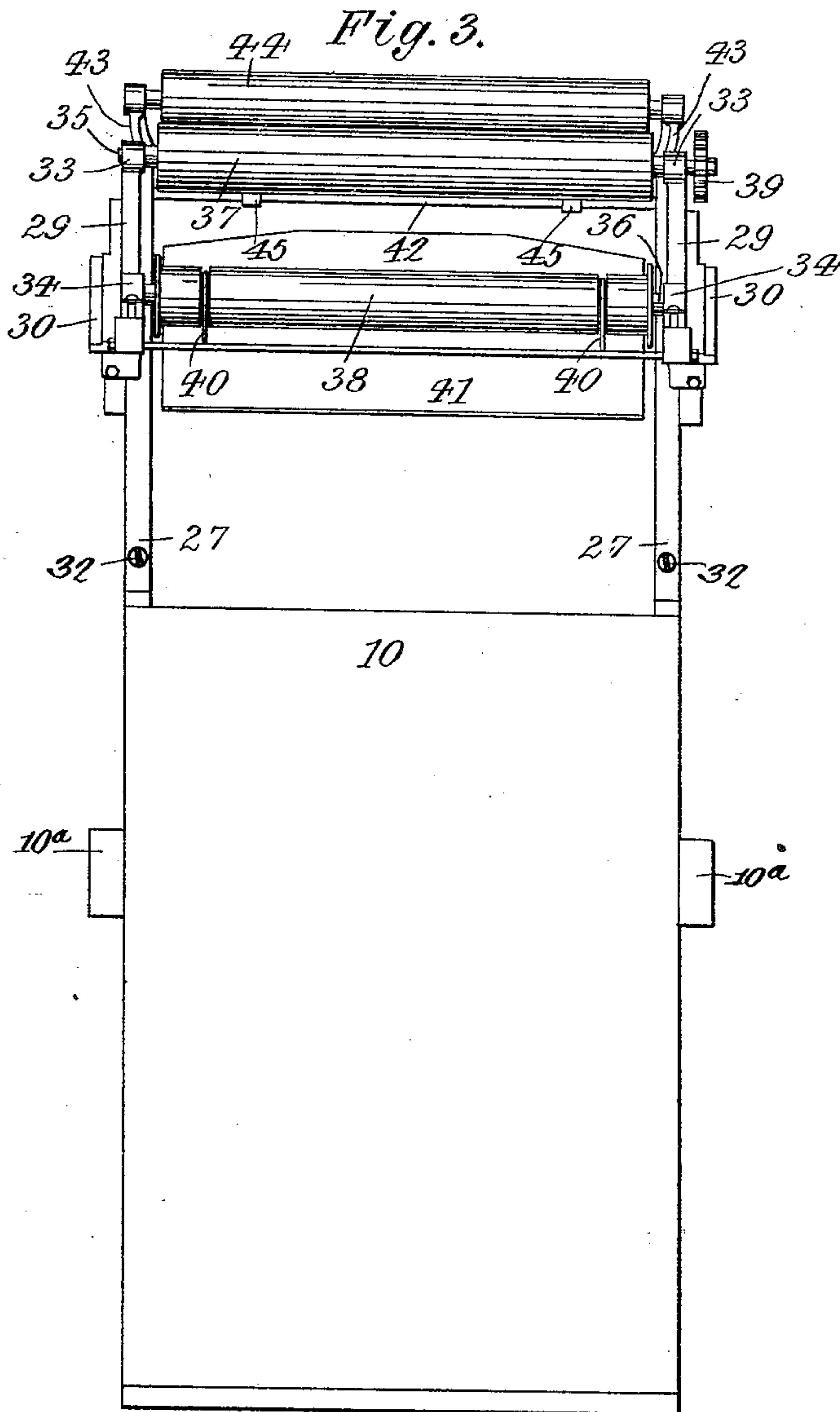
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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TUNE-SHEET ATTACHMENT FOR AUTOMATIC PIANOS.

No. 913,009.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed October 6, 1908. Serial No. 456,456.

To all whom it may concern:

Be it known that I, ADAM J. HOBART, a citizen of the United States, residing at St. Johnsville, Montgomery county, State of New York, have invented new and useful Improvements in Tune-Sheet Attachments for Autopneumatic Pianos, of which the following is a specification.

This invention relates to a tune sheet attachment for autopneumatic pianos or piano players, which is so constructed that it may be readily slid into operative position and is prevented, by its own weight, from becoming accidentally displaced or disconnected.

In the accompanying drawings: Figure 1 is a vertical transverse section of my improved tune sheet attachment, showing the tune sheet box coupled to a piano case, Fig. 2 a rear view of part of a piano case with the box removed; Fig. 3 a front view of the box with some of the parts omitted; Fig. 4 a side view of the upper part thereof with the spreader omitted; Fig. 5 a similar view, showing the box set for the introduction of a new music sheet; Fig. 6 a section on line 6—6, Fig. 2, looking to the left; Fig. 7 a section on line 7—7, Fig. 2, looking to the right with the pulley omitted; Fig. 8 a section on line 8—8, Fig. 2, looking to the right; Fig. 9 a cross section on line 9—9, Fig. 1; Fig. 10 a vertical transverse section through part of the piano case, showing the hood open; Fig. 11 a detail of the left hand bracket with the outer bearing removed; Fig. 12 a perspective view of the catch, and Fig. 13 an enlarged section on line 13—13, Fig. 4.

A box 10 strengthened by ribs 10^a, containing an endless tune sheet 11, is adapted to be partly projected into a recess 12 formed within the case 13 of a piano or piano player. The latter is provided with the usual duct-bridge 14 adapted to operate actively engage tune sheet 11, and with a pinion 15 for driving said sheet. The means for imparting motion to pinion 15 are shown to consist of a rope 16 engaging tension device 17, and turning, by pulley 18, a shaft 19, which is mounted in bearings 20 and carries pinion 15. Bearings 20 are formed on a frame or bracket 21 which is secured to a cross-bar 22 of case 13 and is opposed by a frame 23, in all respects similar to frame 21 excepting that it lacks bearings 20.

Frames 21, 23 are beveled as at 24 to seat a bar 25 carrying duct-bridge 14. Each frame is further provided with a track-rail or support 26 which has a downward dip from the outer towards the inner end of the frame. With the construction shown, recess 12 is formed in the back of piano case 13 and consequently rails 26 are inclined downwardly from the back towards the front of the instrument.

Both sides 27 of box 10 have inclined upper edges 28, to which are secured by screws 28^a frames or brackets 29 having laterally extending flanges or sliders 30. These flanges incline downwardly from the rear to the front of the box, their pitch being equal to that of rails 26, which rails they are adapted to engage. The word "front" is here used to indicate that part of the box which corresponds to the front of case 13 and projects into recess 12 of case 13. Rails 26, together with sliders 30, constitute an inwardly inclined race for removably connecting box 10 with case 13.

In order to attach box 10 to case 13, it is raised manually to carry the lower ends of flanges 30 above upper ends of rails 26. The box being pushed forward will descend along the rails, so that when it arrives at its terminal position it is held or wedged against displacement by its own weight. In this way a reliable connection between box and case is effected in a simple manner, which, without any additional locking means, insures a true alinement between the co-acting elements carried by the box and case, respectively.

The terminal position of box 10 is determined by the guide rails 31 of the music sheet, which constitute abutments for set screws 32 tapped into the box. The pitch of rails 26 and sliders 30 should be such that the box is prevented by its own weight from slipping backwards along the rails, during the ordinary use of the instrument. If the box is to be removed, for the purpose of introducing new music, it may be readily slid backwards and simultaneously raised along the rails, its weight being thus overcome by manual power. As has been stated, rails 26 are preferably grooved, their lower flanges constituting the supports for sliders 30, while their upper flanges form guides or guards for the same.

Each frame 29 is provided with bearings

33, 34 for the shafts 35, 36 of the tune sheet feed roller 37, and guide roller 38. Motion is imparted to roller 37 by a gear wheel 39 mounted on shaft 35 and adapted to be engaged by driving pinion 15 when box 10 is coupled to casing 13. To roller 38 is connected, by yokes 40, a spreader 41 adapted to separate the two runs of sheet 11. To frames 29 are pivoted, at 42, arms 43, in which is hung a pressure roller 44 adapted to bear against sheet 11 above feed roller 37. Roller 44 is held against roller 37 by means of a spring 45 mounted on fulcrum 42 and engaging a rod 46 which connects the two arms 43. A perforated catch 47 also adapted to engage rod 46 holds roller 44 off roller 37, against the action of spring 45, whenever a new music sheet is to be introduced. In this case rollers 37, 38 are lifted out of their bearings 33, 34, to be slipped between the two runs of the music sheet, while roller 44 is swung back, (Fig. 5).

A hood 48, hinged to bar 25 of case 13, is adapted to fold over box 10, so as to cover and protect the tune sheet and tune sheet rollers. This hood may be locked to catch 47 by a pad lock 49 passing through the aperture of the catch to prevent tampering with the contents of box 10, or an unauthorized withdrawal of the box from the piano case. The hood is adapted to be held in its open position by a suitable keeper 50.

It will be seen that my improved tune sheet attachment may be readily coupled to the piano case, and that the weight of the attachment is utilized to carry the same into operative position and prevent any accidental displacement thereof, so that all additional fastening means may be dispensed with.

I claim:

1. An autopneumatic piano case, combined with a tune sheet box, and with a race that slopes downward and toward the piano case and removably connects the box to said case, substantially as specified.

2. An autopneumatic piano case having a track that slopes downward and towards the piano case, combined with a tune sheet box having a slider adapted to engage said track, substantially as specified.

3. An autopneumatic piano case having a support, combined with a tune-sheet box

having a slider that slopes downward and towards the piano case and is adapted to engage said support, substantially as specified.

4. An autopneumatic piano case having a track that slopes downward and towards the piano case, combined with a tune sheet box having an inclined slider adapted to engage said track, substantially as specified.

5. An autopneumatic piano case, combined with a tune sheet box, a race that slopes downward and towards the piano case and removably connects the box to said case, and with an abutment for said box, substantially as specified.

6. An autopneumatic piano case having a duct-bridge and a pinion, combined with a tune sheet box having a tune sheet and a feed roller, and with a race that slopes downward and towards the piano case and operatively connects said box to said case, substantially as specified.

7. An autopneumatic piano case having a duct-bridge, a pinion, and a grooved track that slopes downward and towards the piano case, combined with a tune sheet box having a tune sheet adapted to engage the duct-bridge, a feed roller adapted to engage the pinion, and a slider adapted to engage the track, substantially as specified.

8. An automatic piano case having a duct-bridge, a pinion, a grooved track that slopes downwards and towards the piano case, combined with a tune sheet box having a tune sheet adapted to engage the duct-bridge, a feed roller having a gear adapted to engage the pinion, and a slider that slopes downwardly and towards the piano case and is adapted to engage the track, substantially as specified.

9. An autopneumatic piano case having a hinged hood, combined with a tune sheet box adapted to be engaged by said hood, and with a race that slopes downward and towards the piano case and operatively connects said box to said case, substantially as specified.

Signed by me at St. Johnsville, N. Y., this 2nd day of October, 1908.

ADAM J. HOBART.

Witnesses:

ALBERT E. MOSHER,
WALBER L. ENGELHARDT.