

June 5, 1934.

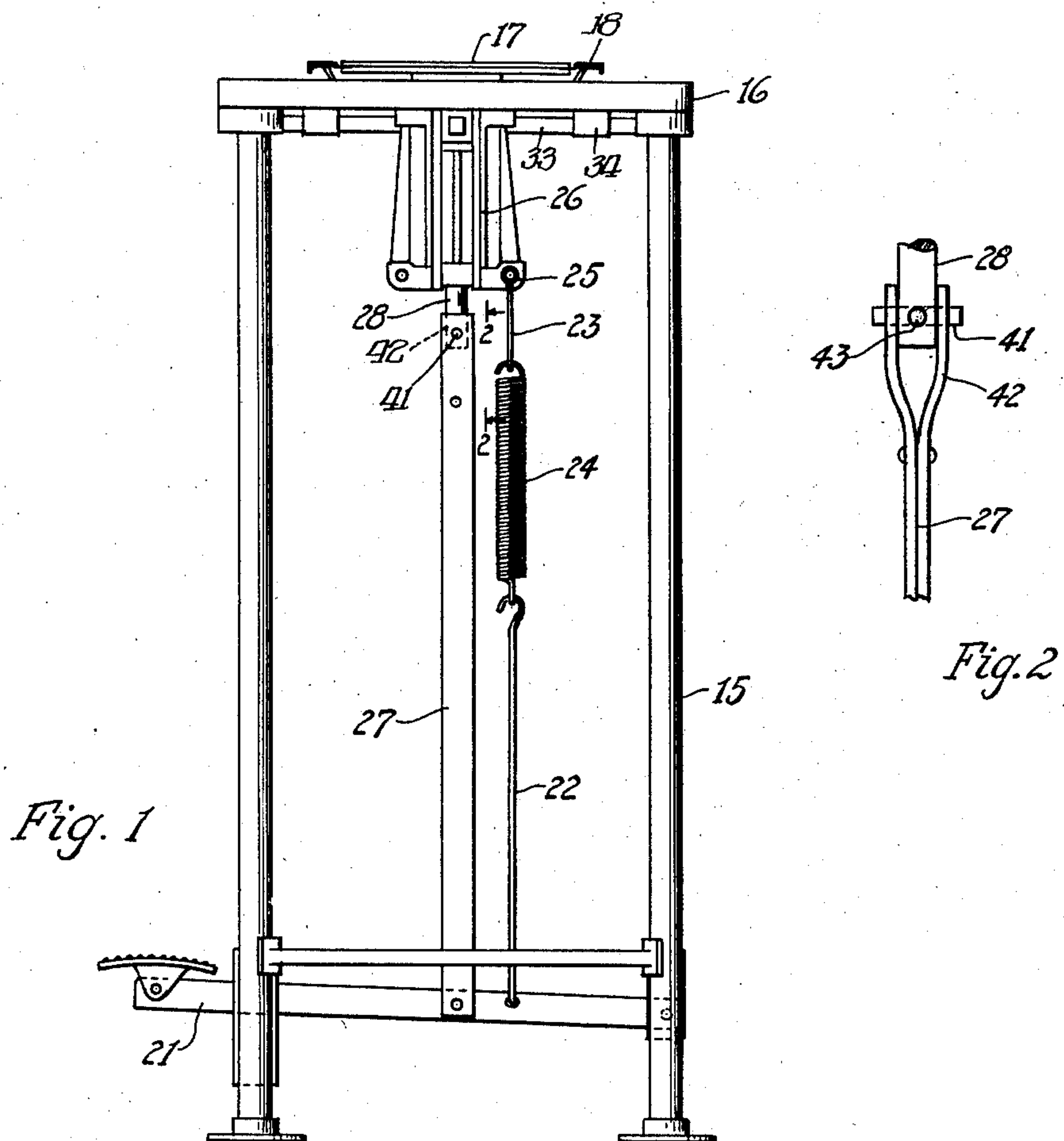
W. K. MILLER

1,961,640

MACHINE FOR WRAPPING PACKAGES

Filed Oct. 9, 1931

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

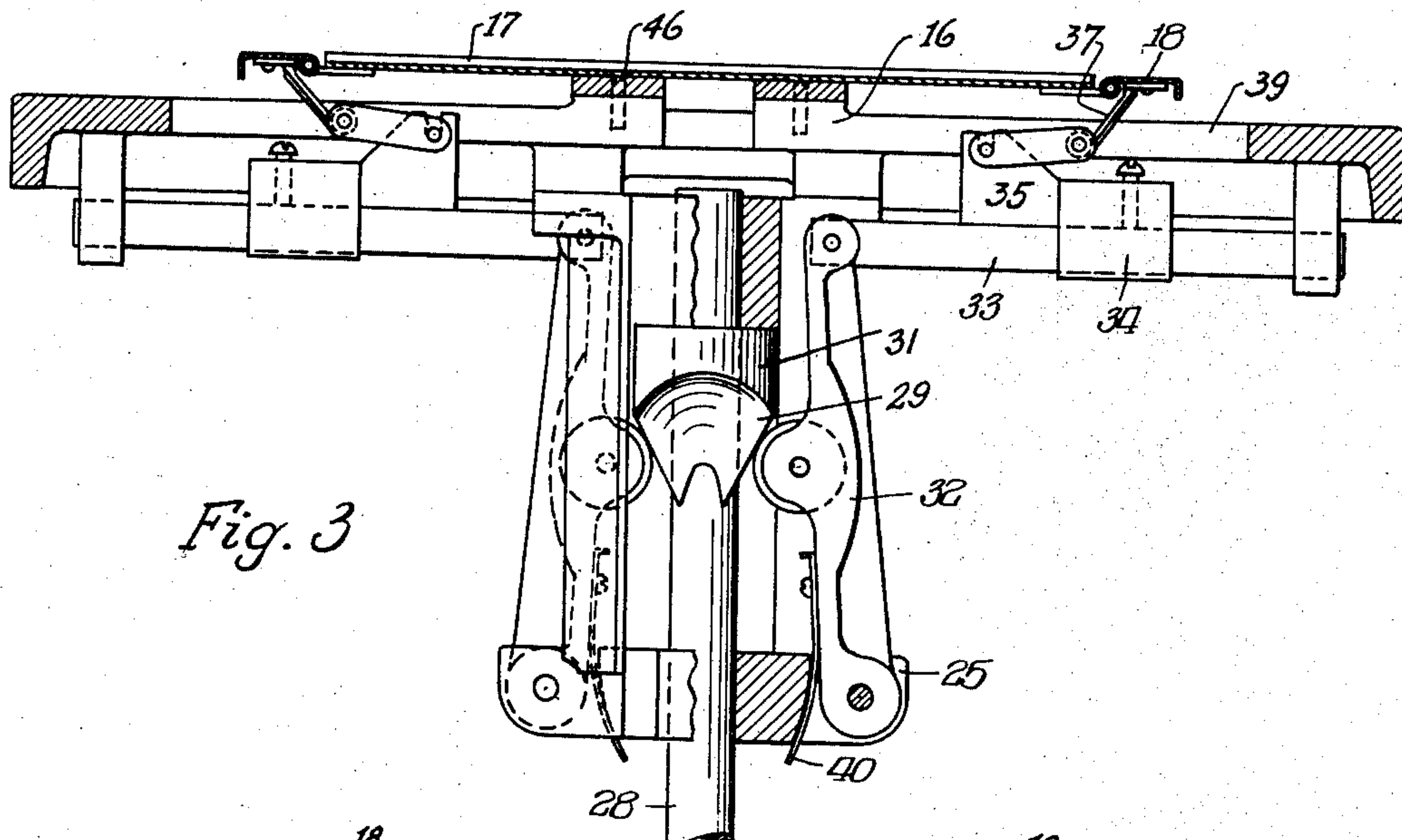


Fig. 3

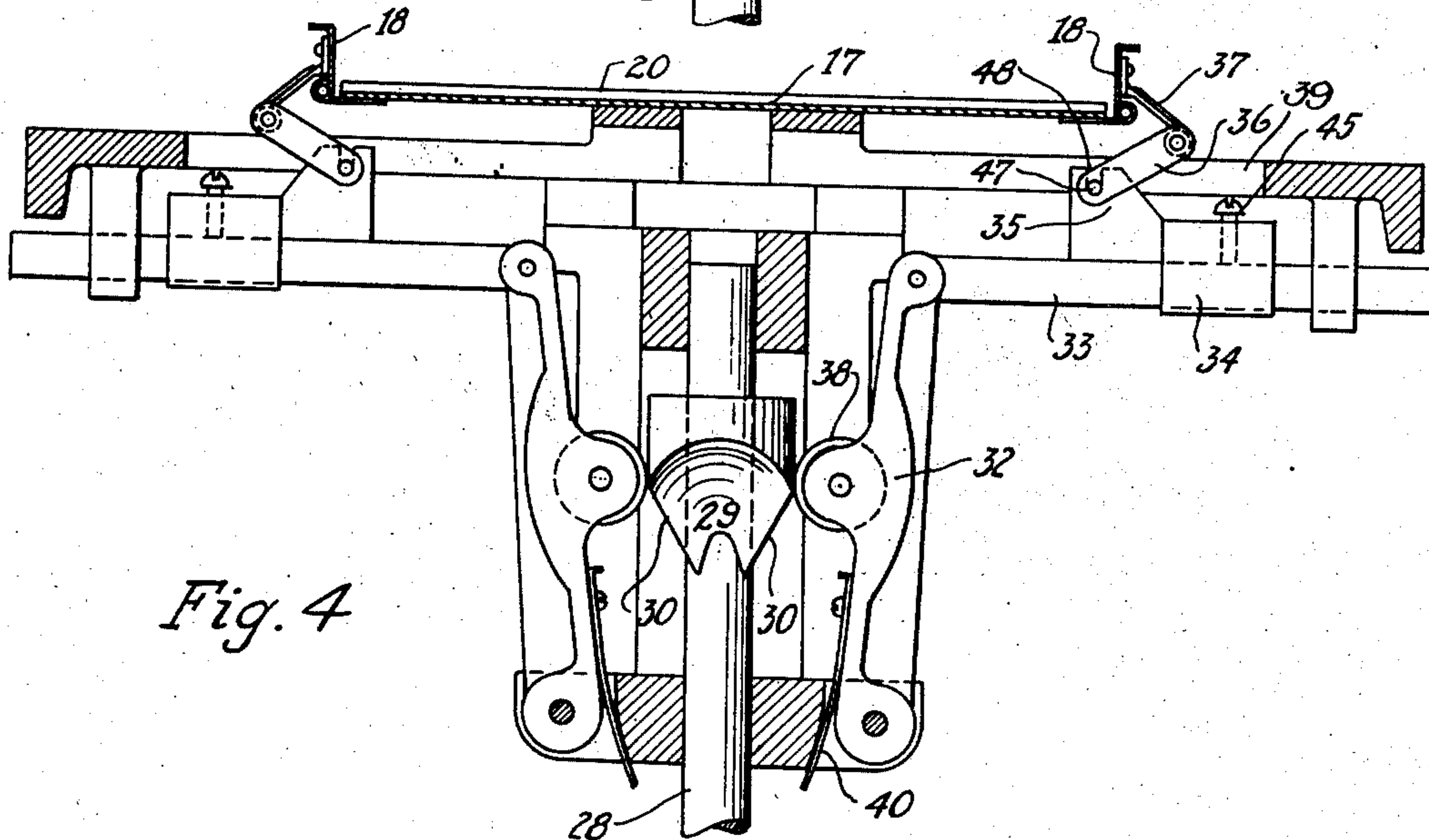


Fig. 4

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3 Sheets-Sheet 3

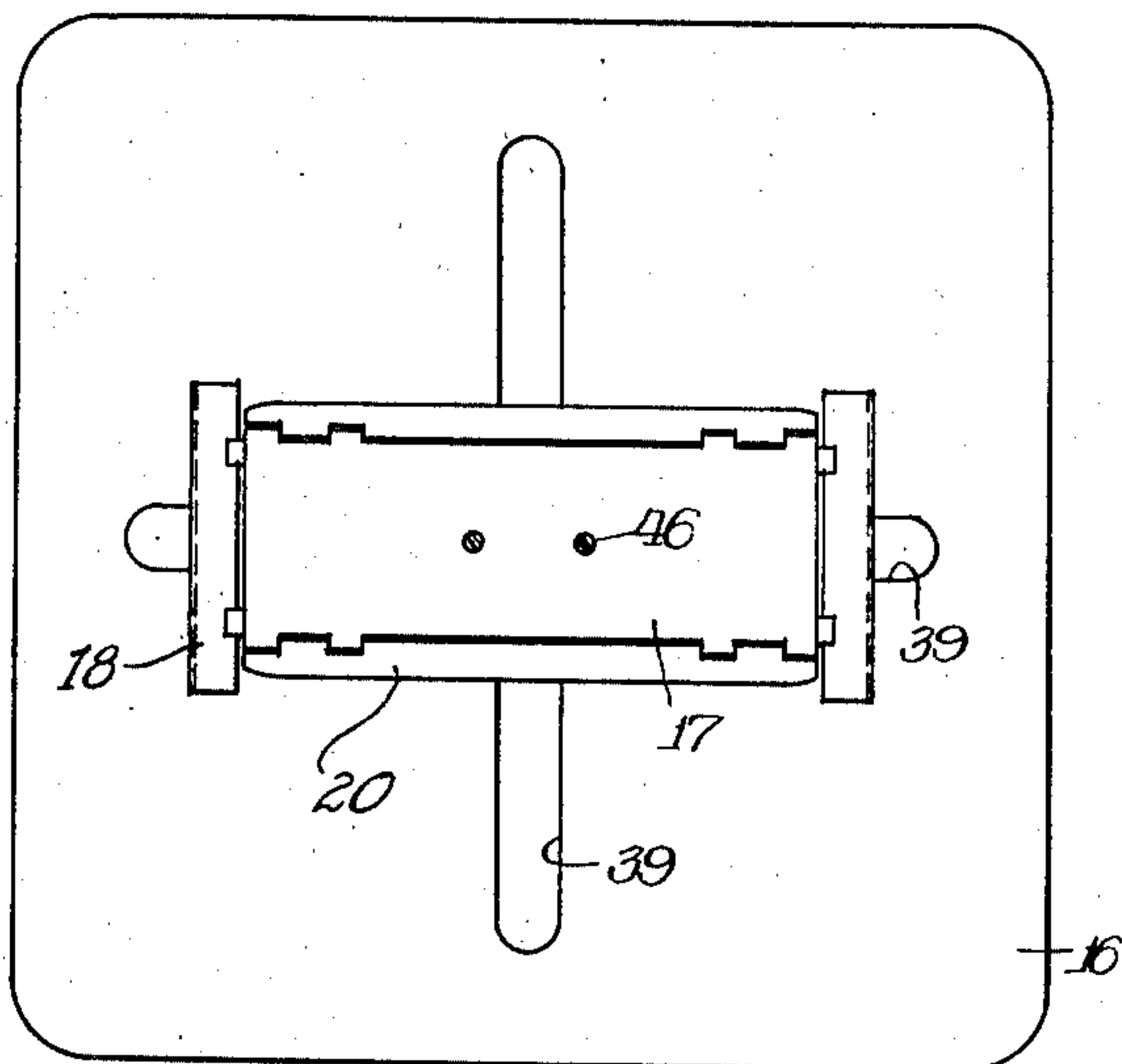


Fig. 5

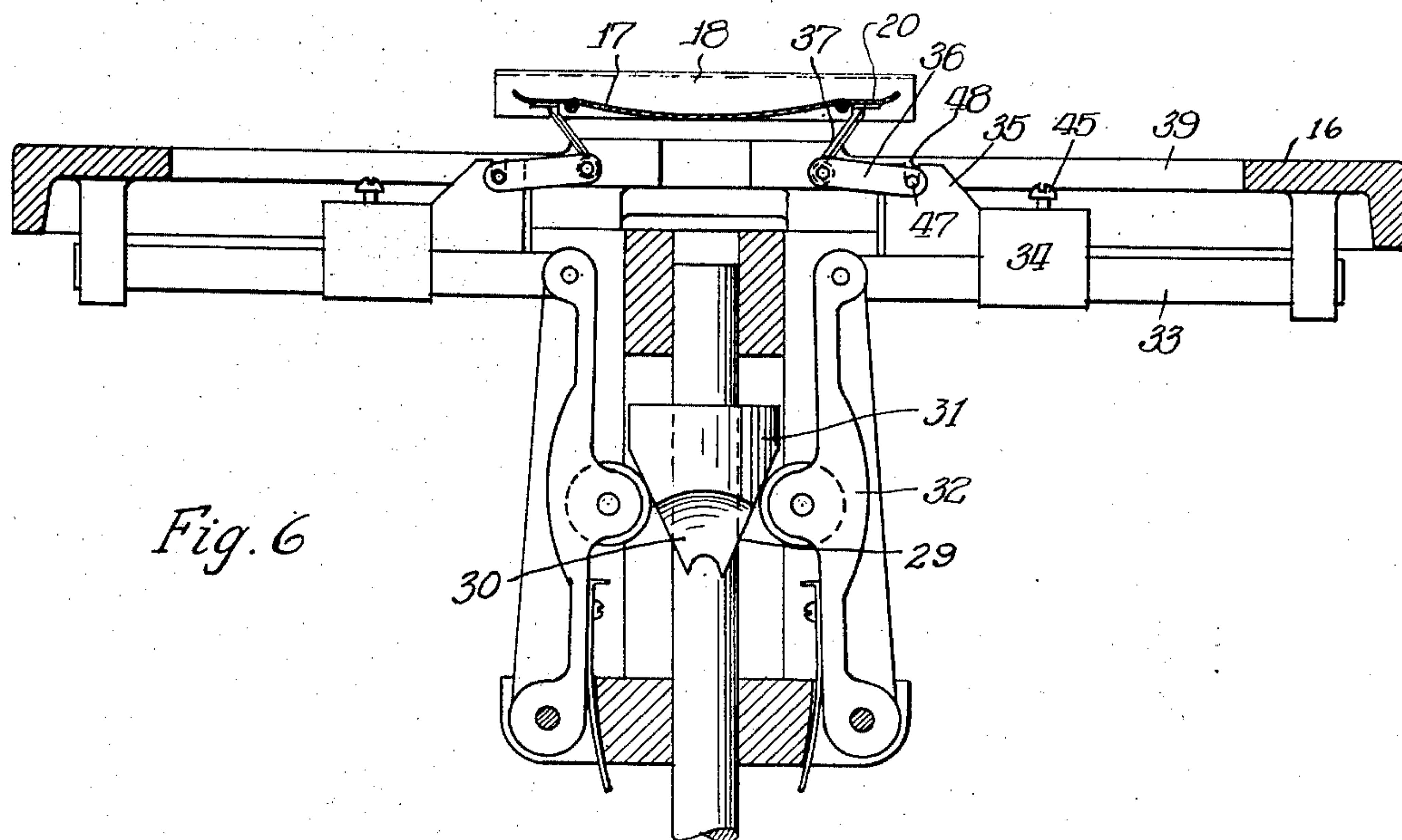


Fig. 6

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UNITED STATES PATENT OFFICE

1,961,640

MACHINE FOR WRAPPING PACKAGES

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Application October 9, 1931, Serial No. 567,829

6 Claims. (Cl. 93—2)

This invention relates to machines for wrapping packages, and it has for its object providing a very simple and effective machine for the purpose which is readily applicable to packages of various sizes and shapes and which can be quickly adjusted for use in wrapping packages of various dimensions and thicknesses.

Of the drawings, Fig. 1 is an elevation of the machine which embodies the features of my invention; Fig. 2 is a detailed view of a portion of the operating mechanism; Fig. 3 is an enlarged central sectional view of the upper portion of the table of the machine, showing the operating mechanism in inoperative position; Fig. 4 is a corresponding view showing the mechanism when partly operative; Fig. 5 is a plan view of the machine; and Fig. 6 is a sectional view corresponding to Fig. 4 but at 90° therefrom.

The machine provides for a supporting plate upon which the wrapper of the package is laid, with the goods to be wrapped lying on the wrapper. It also provides means for turning up two opposite sides of the wrapper and for then turning up the two other sides of the wrapper. The four wrapper sides are then projecting upwardly and the operator then completes the wrapping and the binding together in any desired manner.

The machine comprises a frame 15, supporting a top board 16, and on this board is mounted a rectangular wrapping plate 17. Pivoted respectively to the four edges of this plate are wings 18 and 20. Means are provided for operating these wings when the wrapper and goods are in place, whereby one pair of wings, for instance the wings 18, are revolved from the horizontal positions to vertical positions, and then the wings 20 are revolved similarly. The means for this purpose comprises a pedal lever 21 which is normally supported in its elevated position by links 22 and 23 and a spring 24. The upper link 23 is supported by a bracket 25 depending from the top board of the machine, by means of a frame 26. Pivoted to the lever is a bar 27 which is preferably flat, and mounted in a fork 42 in the upper end of this bar is a rod 28. Fixed to the rod 28 is a cam member 31 having cam faces 30 and 29 which are adapted to operate levers 32 and, thus, by suitable mechanism to operate the wings. Pivoted to the upper ends of each of the levers 32 is a slidably mounted bar 33, and fixed to each of these bars is a carriage 34, having fixed thereto a lug 35, and pivoted to each lug is a link 36 which is pivoted to an arm 37 fixed to the adjacent wing 18 or 20. The lugs 35 and links 36 play in a slot 39 in the board 16.

In operation, as the lever 21 is forced downwardly by the operator, carrying with it the bar 27 and the rod 28 together with the cam member 31, the cam faces acting on the rollers 38 force outwardly the upper ends of the levers 32 and, thus, also the carriages 34. As the carriages move outwardly, the links 36 acting on the arms 37 revolve the wings from the horizontal to the vertical position, and the wings bend upwardly the corresponding edges of the wrapper.

It is usually desirable to operate one pair of wings before the other pair. In order to accomplish this, the cam faces 30 are mounted on the rod 28 somewhat lower than the faces 29. As a consequence, the levers 32 associated with one pair of wings and operated by the faces 30 will operate the wings before the other pair is operated by the faces 29. Preferably, the surfaces of the faces 29 which operate later than the others are longer and less inclined, so that the wings controlled by the faces 29 are operated somewhat slower than those controlled by the faces 30.

The levers 32 may be in all respects similar as the alternation of the wing operation is produced by the position of the cam operating means on the bar 28. Each of the levers 32 is provided with a spring 40 which returns the lever 32 to the inward or inoperative position after the pedal 21 has been released, and the spring 34 elevates the pedal lever and the cams.

Means are provided for adapting the machine to packages of varying sizes and shapes. As shown in Fig. 5, the wings 18 are materially shorter than the wings 20. As indicated, the wings 18 are operated first with the mechanism hereinabove described. If, for any reason, it is desired to operate the wings 20 first, it is necessary only to remove the pin 41 which connects the rod 28 with the bar 27 and rotate the rod 28 through an angle of 90° and insert the pin through the arms of the yoke 42 as before, but through the opening 43 in the rod 28. This rotates correspondingly the cams 30 and 31 and, thus, operates the wings 20 before the wings 18.

In order to use a wrapping plate 17 of other dimensions, it is necessary only to loosen the set screws 45 which set the carriages on the bars 33 and shift the carriages to the proper positions for connecting other wings and then substitute another plate 17 with proper wings. In practice, it is desirable to have the wings permanently pivoted to the plates 17 and to the links 36. So that, in changing to plates or wings of different sizes, it is necessary only to remove the

screws 46 which hold the plates 17 onto the top board 16 and then elevate the plates 17, together with the arms 37 and the links 36. The pins 47 may then be slipped out of the slots 48 of the lugs 35. A new set of apparatus may then be installed by loosening the carriages, slipping the pins 47 of the new set into the slots 48, inserting the screws 46, and resetting the carriages. The arrangement is such that the links 36 may extend inwardly to the arms 37 when the wings are in inoperative position, as shown in Fig. 6, or they may slant outwardly, as shown in Fig. 3. The range of movement of the carriages 34 and the slots 39 may thus be materially less than if the arms 37 slanted in the same direction for short plates 17 as for long plates.

I claim as my invention:

1. In a package wrapping machine, a support, a wrapping plate mounted on said support, a pair of wings pivoted to opposite sides of said plate, and means for revolving each of said wings from horizontal to vertical positions, said means comprising an arm fixed to the wing and projecting downwardly when said wing is in a horizontal position, a carriage mounted for horizontal movement on said support, a link pivotally connecting said carriage and said arm, and means for moving said carriage outwardly.

2. In a package wrapping machine as claimed in claim 1, in which said plate is removably mounted on said support, said carriage having a slot therein and a pivot fixed to said link and being removably mounted in said slot, whereby said link is pivotally connected to said plate.

3. In a machine for wrapping packages, a support, a rectangular wrapping plate mounted on said support, a wing pivoted to each of the sides of said plate, means for revolving each of said wings from the horizontal to the vertical positions, each of said means comprising an arm projecting downwardly from said wing, a carriage

slidably mounted in said support, a link pivotally connecting said carriage with said arm, and means for sliding said carriage along said support.

4. In a machine for wrapping packages, a support, a plate removably mounted on said support, a pair of wings pivoted to opposite sides of said support, means for revolving each of said wings from a horizontal to a vertical position, each of said means comprising a carriage slidably mounted in said support, said carriage having a slot therein, a pivot removably mounted in said carriage, a link fixed to said pivot and pivotally associated with said wing, and means for sliding said carriage with reference to said support.

5. In a package wrapping machine, a support, a rectangular wrapping plate mounted on said support, a wing pivoted to each edge of said plate, means for simultaneously revolving one opposite pair of wings from horizontal to vertical positions, means for then simultaneously revolving the other pair of opposite wings from horizontal to vertical positions, said means comprising a bar mounted for vertical movement in said support, manually operable means for sliding said bar, a cam member mounted on said bar and having a pair of cam faces mounted on opposite sides thereof and similarly positioned longitudinally of said bar, another pair of cam faces mounted respectively on the other two sides of said bar and similarly positioned longitudinally of said bar, said latter cam faces being nearer one end of said bar than said former cam faces, and means operatively coacting with said cam faces for operating the respective wings.

6. In a package wrapping machine as claimed in claim 1, said latter means comprising a horizontal rod, said carriage being adjustably mounted on the rod.

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