

No. 811,508.

PATENTED JAN. 30, 1906.

G. H. KENDALL.
NUMBERING MECHANISM FOR PRINTING PRESSES.

APPLICATION FILED MAY 17, 1905.

2 SHEETS—SHEET 1.

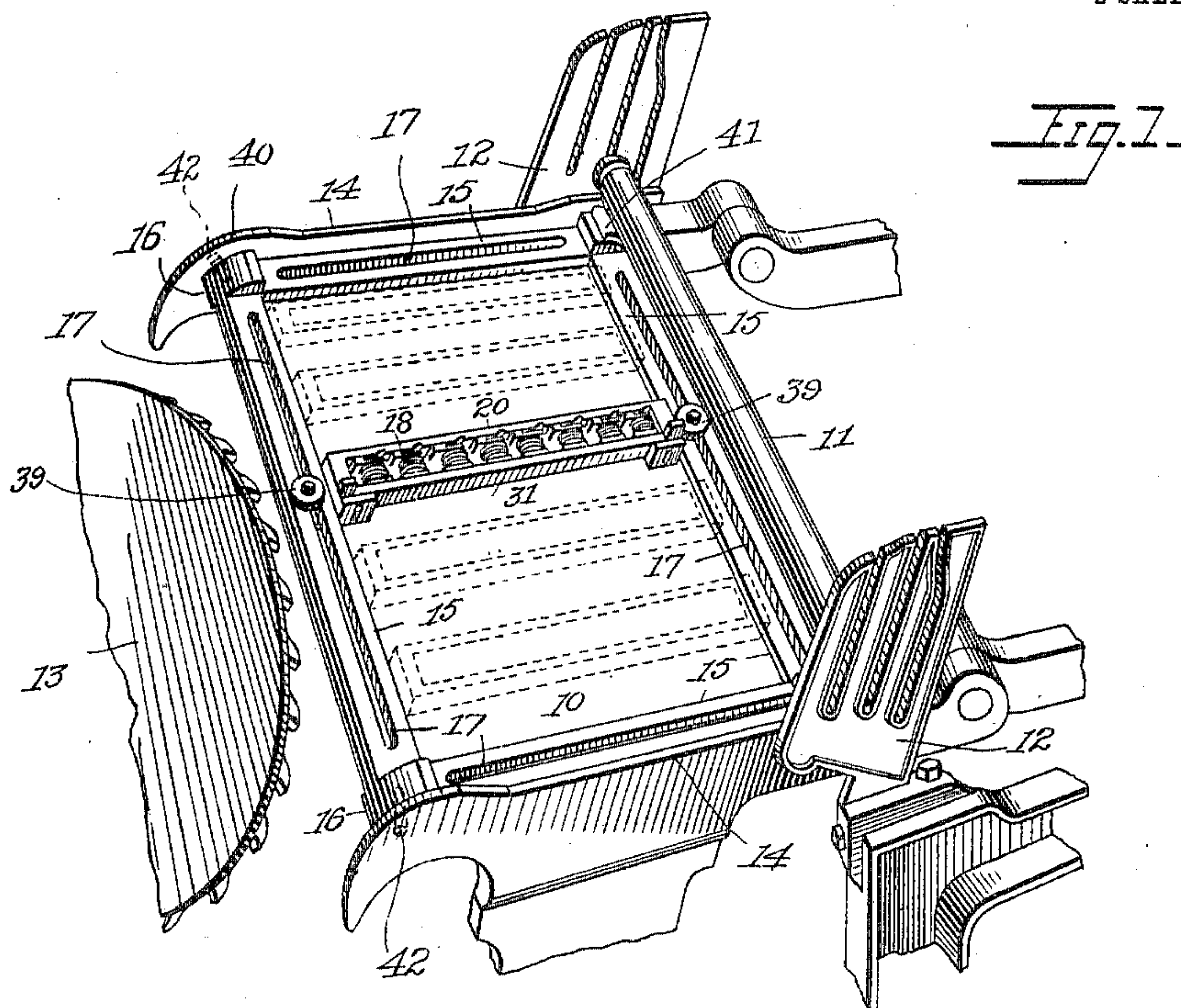
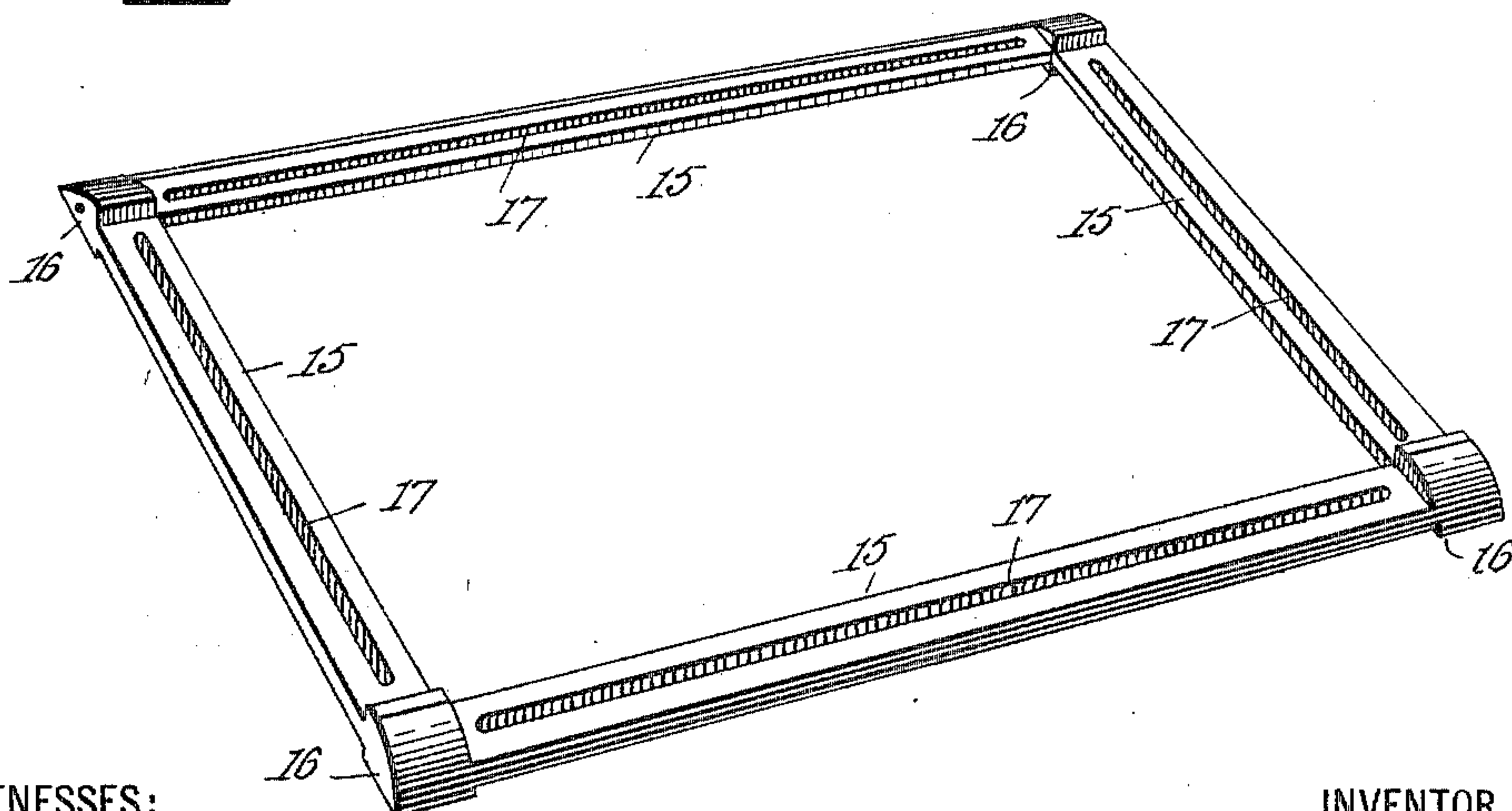


Fig. 2



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Fig. 3.

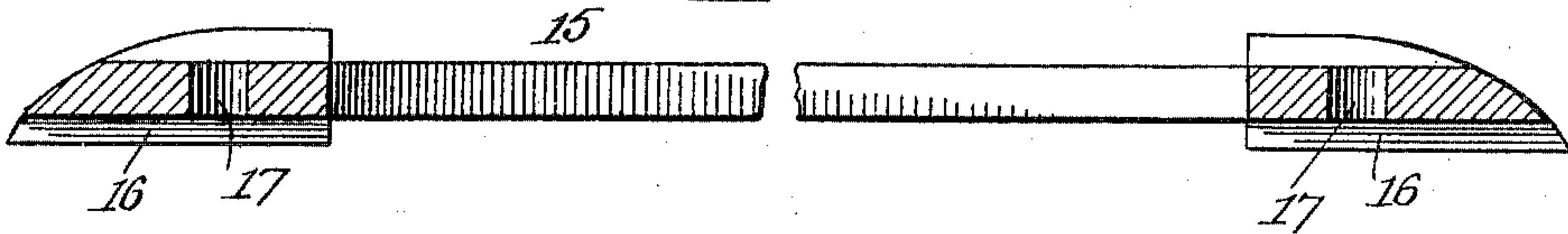


Fig. 4.

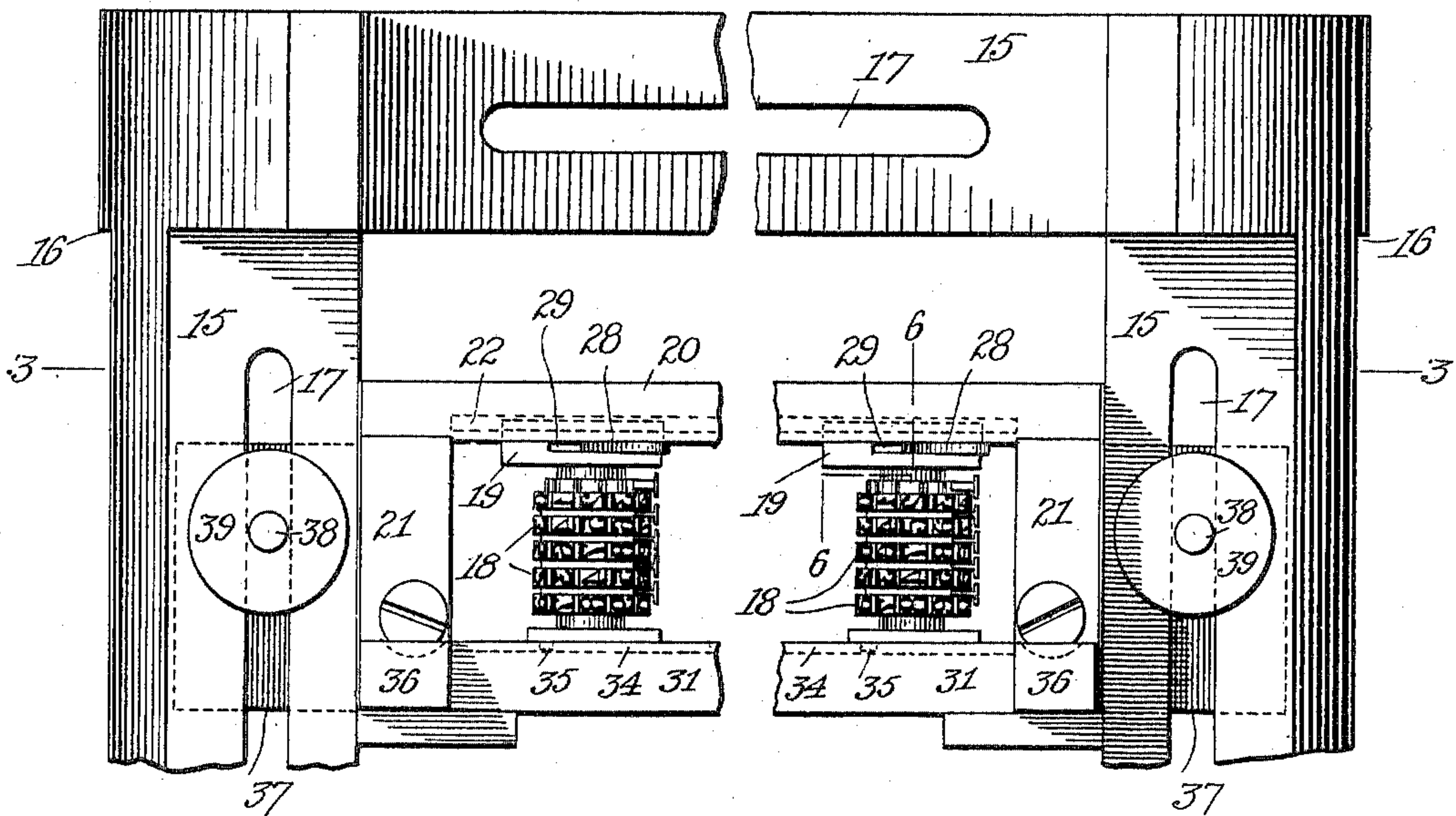


Fig. 5.

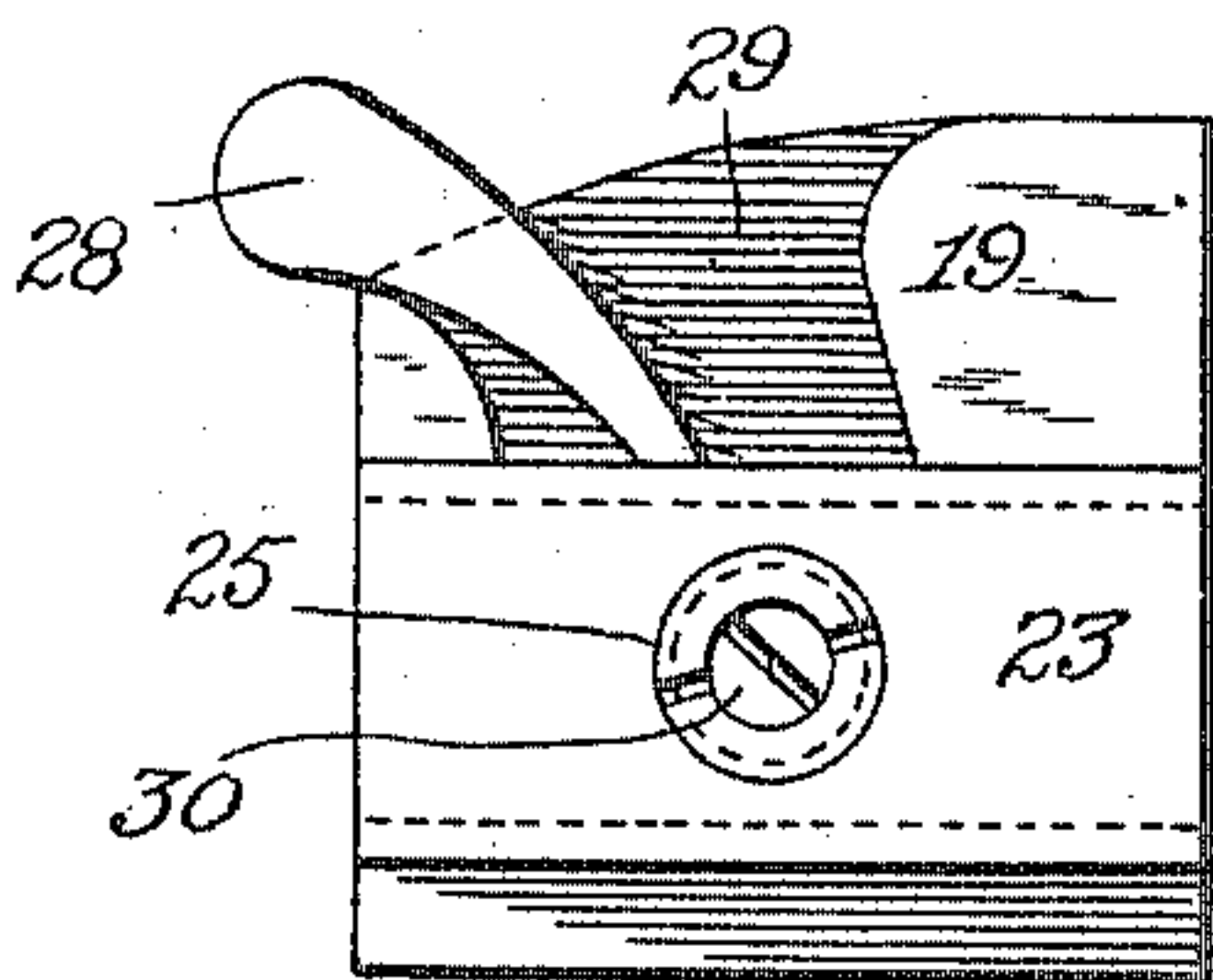
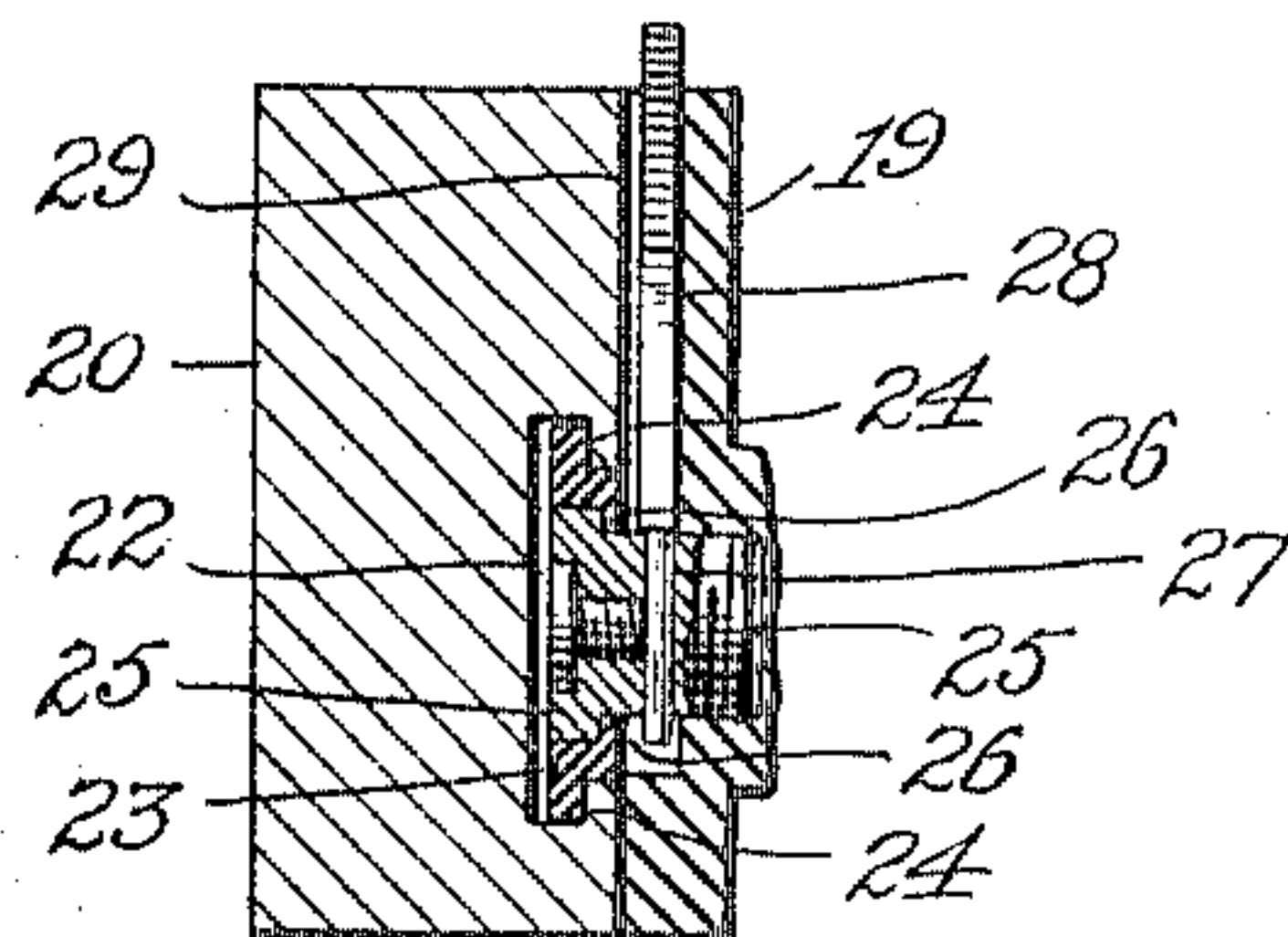
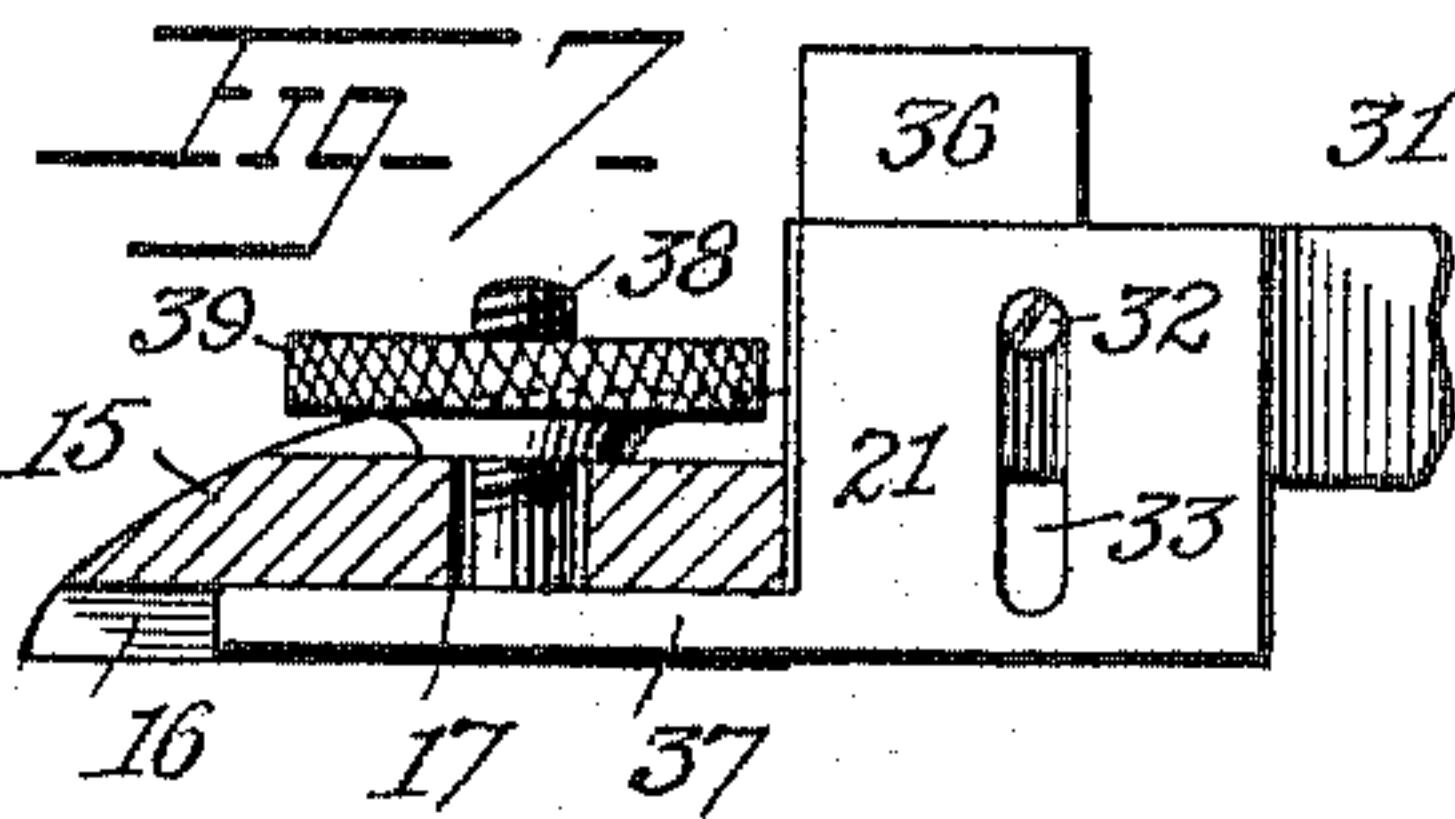


Fig. 6.



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NUMBERING MECHANISM FOR PRINTING-PRESSES.

No. 811,508.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed May 17, 1905. Serial No. 260,820.

To all whom it may concern:

Be it known that I, GEORGE H. KENDALL, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Numbering Mechanism for Printing-Presses, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

In operating numbering-machines it frequently happens that a numbering-head does not strike the paper at the exact spot intended. When this occurs in the machines in ordinary use, to obtain the proper registration of the head it is necessary to unlock the chase, remove it from the press, readjust the whole form to meet the requirements, and then replace the chase.

One of the objects of the present invention is to provide means whereby the numbering-heads can be adjusted transversely and longitudinally and by combining both these movements diagonally across the chase, so as to occupy any predetermined place in the form, and whereby such adjustments can be made without unlocking the chase and removing it from the press.

In most numbering-machines the heads are turned by a lever, the free end of which projects above the form so as to be struck by the platen when the two impression members come together. This free end of the lever projecting above the printing-surface necessarily extends into the path of travel of the ink-roll. If no provision is made to prevent it, the end of the lever contacts with the roll and becomes inked. Consequently the paper is marred by receiving the imprint of the end of the lever when the impression is made. Ordinarily this is avoided by cutting an annular groove in the periphery of the ink-roll, so that the latter will pass the end of the lever without contacting with the same. This is objectionable, as it not only spoils the roll for other use, but every time an adjustment of the number-machine is made a new cut must be made in the roll.

Another object of the present invention is to provide means whereby the ink-roll will travel so as not to contact with the end of the operating-lever, and thereby avoid the necessity of cutting away any part of the roll.

The invention consists in the novel con-

struction, combination, and arrangement of parts, such as will be hereinafter fully described, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the drawings, in which similar reference characters designate corresponding parts, Figure 1 is a perspective view of a device embodying the invention, showing it mounted in a printing-press, the latter being shown in a fragmentary form. Fig. 2 is an enlarged detail perspective view of the chase. Fig. 3 is a sectional view on the line 3 3 of Fig. 4. Fig. 4 is an enlarged plan view of the device broken away in parts. Fig. 5 is an end view of one of the numbering-heads. Fig. 6 is a sectional view on the line 6 6 of Fig. 4. Fig. 7 is a detail sectional view showing the means for securing an end of the numbering-machine to the chase.

The device is adapted to be used in that class of printing-presses which have a type-bed and a member coacting with the type-bed to form the impression. In Fig. 1 are shown in a fragmentary way parts of a press in which a type-bed and platen are hinged together and are oscillated relatively to each other. These parts primarily are the type-bed 10, the ink-roll 11 and its supports 12, the ink-plate 13, and the guides 14 on opposite sides of the type-bed for controlling the ink-roll during the movement of the latter across the type-bed.

The chase 15 is of the rectangular shape adapted to fit the type-bed of the press. On its under side at the four corners are the short posts or lugs 16, that rest on the type-bed when the chase is in position. These posts elevate the chase so that there will be a space between the under face of each of the four sides and the surface of the type-bed. In each side of the chase is the longitudinal slot 17, extending almost the entire length of the side.

Each numbering-head comprises the type-wheels 18 and the mechanism for turning the latter contained in the casing 19. As these several parts are of a construction common in the art, they need not be particularly described.

A frame is provided for supporting the numbering-heads. This frame consists of the bar 20 and the cross-pieces 21 at right angles to the ends of the same. In the inner face of the bar and running almost the entire length of the same is the groove or recess

22. In this recess is the plate 23, one for each numbering-head, longitudinally movable therein. The plate is retained in the recess by the engaging flanges or shoulders 24. The recess is deeper than the plate is thick, so that the latter can have play sidewise in the former. Journaled in the plate is the head of the screw 25, and the latter is held in place by the flange or shoulder 26, projecting inside the head. The threaded end of the screw engages with the casing 19 of the numbering-head. Passing through the shank of the screw is the pin 27 on the inner end of the lever 28, movable in the recess 29 in the side of the casing of the numbering-head. The lever is held in place by the set-screw 30, passing through the head of the screw 25 and impinging on the pin 27. By means of the lever the screw 25 can be rotated in either direction to clamp the plate 23 to hold the numbering-head or to loosen the plate to release the numbering-head. By this mechanism the numbering-head can be adjusted longitudinally of the supporting-frame and secured in its adjustments.

The numbering-heads are operated by the arm 31, movably mounted in recesses at the ends of the cross-pieces 21. This arm is limited in its movements at each end by the pin 32 registering with the slot 33 in the adjacent end of the cross-piece, Fig. 7. In the inner face of the arm is the longitudinal groove 34, with which engages the lug 35 of the numbering-head. This lug moves along the groove when the numbering-head is adjusted. On the ends of the arm are the lugs 36, projecting above the form so as to be pressed downwardly by the platen when the latter moves toward the type-bed. When the arm is pressed downwardly, the arbor of the type-wheels is rotated through the action of the lug 35. This arm and the mechanism it operates form no part of the present invention and need not be more particularly described.

Projecting from each end of the frame formed by the bar 20 and the cross-pieces 21 is the flange or plate 37, of such a thickness as to fit the space between the under face of one of the sides of the chase 15 and the surface of the type-bed. On this flange is the screw-threaded pin 38, adapted to pass through the adjacent slot 17 in the side of the chase. On the end of the pin is the thumb-nut 39 for clamping the flange 37 to the side of the chase.

The guides 14, on which the shaft of the ink-roll 13 travels, have the ends of their tracks raised or inclined upwardly, as at 40. These raised parts of the tracks are opposite to the lugs 36 on the ends of the operating-arm 31. As the inking-roll moves back and forth over the form the raised parts of the tracks carry the roll clear of the lugs 36. Consequently the latter are not inked and will

not mar the paper when the impression is made. By using these raised guides no cutting of the inking-roll is required, and it can be used for other purposes.

The chase is locked in place on the type-bed by the clutches 41, (only one is shown in Fig. 1,) which engage the lower corners of the chase, and the pins 42, passing through the guides 40 and the upper corners of the chase. By removing the pins 42 the chase can be readily removed from the type-bed.

The operation of the device is as follows: The numbering-machine is secured in the chase by placing the frame with its end flanges or plates 37 beneath opposite sides of the chase, with the pins 38 passing through the slots 17 in the sides. By turning the thumb-nuts 39 onto their pins the numbering-machine can be clamped to the chase. By loosening the thumb-nuts the numbering-machine can be moved in the chase to give a transverse adjustment of the numbering-heads. By moving the numbering-heads back and forth on the bar 20 a longitudinal adjustment, at right angles to the adjustment allowed by moving the numbering-machine as a whole in the chase, of the numbering-heads can be secured. Consequently by moving the numbering-machine in one direction in the chase and by moving the individual numbering-heads longitudinally in their frame the numbering-heads can be located at any predetermined places in the form. After the form is completed it is locked on the type-bed 10 of the press by placing the lower corners of the chase in the clutches 41 and inserting the pins 42 in the holes made for their reception in the guides and upper corners of the chase. After the chase has been locked in the press the numbering-heads can be readily adjusted without unlocking the chase. This can be done by loosening the thumb-nuts 39, moving the bar to the desired position, adjusting the heads in the bar, and then securing the bar in place again. The construction of the chase and bar especially adapt the device to such adjustments. When the press is put in motion, the type-bed oscillates so as to pass beneath the ink-roll 11, and the latter is controlled in its movements by the guides 14, so that the lugs 36 of the operating-lever will not be inked. When the platen meets the form, the operating-lever is moved to turn the type-wheels of the numbering-heads in the usual manner.

Ordinarily slots in two opposite sides of the chase will be sufficient, so that the numbering-machine can be mounted as shown in Fig. 1, for an instance, which is the arrangement usually employed. For some purposes it may be desirable to mount the numbering-machine at right angles to the position shown in Fig. 1, which can be done by means of the slots in the other two sides of the chase. As

the length and breadth of the chase are not the same, bars of different lengths can be kept on hand to accommodate the different dimensions.

5 Usually the numbering-machine is employed by itself without any other type or impression member. It can be used, however, with other impression members by being set up with the same in the usual way.

10 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

15 1. The combination of a chase provided with slots extending along opposite sides thereof, a numbering mechanism, a frame carrying said numbering mechanism, pins on the ends of said frame for engaging with said slots, and thumb-nuts on said pins for clamping said frame to said chase.

20 2. The combination of a chase provided with slots extending along opposite sides of the same, a frame, flanges on the ends of said frame and adapted to project beneath the slotted sides of said chase, pins on said flanges to project through said slots, thumb-nuts turned onto said pins for clamping said frame to said chase, and a numbering-head adjustable longitudinally in said frame.

30 3. The combination of a chase, a frame adjustable on said chase between two opposite sides of said chase, means for securing the ends of said frame to the sides of said chase, a plate movably mounted in said frame, a numbering-head longitudinally adjustable in said frame, a rotatable screw engaging with said numbering-head and having its head journaled in said plate, and means for turning said screw to clamp said numbering-head to said frame.

40 4. The combination of a chase, a frame adjustable on said chase between two opposite sides of said chase, means for securing the ends of the frame to the sides of the chase, a plate movably mounted in said frame, a numbering-head longitudinally adjustable in said frame, a rotatable screw engaging with said numbering-head and having its head journaled in said plate, a lever, a pin on said lever and passing into said screw and a set-screw in said rotatable screw and impinging on said pin.

50 5. The combination of a chase provided with slots extending along opposite sides of the same, a frame, flanges on the ends of said frame, pins on said flanges to project through said slots, thumb-nuts turned onto said pins for clamping said frame to said chase, a plate

movably mounted in said frame, a numbering-head adjustable in said frame, a rotatable screw engaging with said numbering-head 60 and having its head journaled in said plate, and means for turning said screw to clamp said numbering-head to said frame.

6. The combination of a chase, supports on the under side of said chase to elevate the same above the surface of the type-bed, a numbering mechanism, a frame carrying said numbering mechanism and adjustable in said chase with its ends projecting beneath opposite sides of the chase, and means for securing 70 the ends of said frame to the sides of the chase.

7. The combination of a chase, supports on the under side of said chase to elevate the same above the surface of the type-bed, a frame adjustable in said chase and projecting at its ends beneath opposite sides of said chase, a numbering-head adjustably mounted in said frame, and means for securing the ends of said frame to the sides of said chase. 80

8. The combination of a chase having slots extending along opposite sides of the same, supports at the corners of the chase to elevate the chase above the surface of the type-bed, a frame, flanges on the ends of said frame to project beneath opposite sides of the chase between said supports, pins on said flanges to project through said slots, thumb-nuts turned onto said pins for clamping said frame to said chase, a numbering-head adjustable 90 in said frame, and means for securing said numbering-head in its adjustments in said frame.

9. The combination of a numbering-machine provided with an operating-arm projecting above the printing-surface of said machine, an inking-roll movable back and forth over said machine, and guides for carrying said inking-roll clear of said arm. 95

10. The combination of a chase, a numbering-machine adjustable in said chase and provided with an operating-arm projecting above the printing-surface of said machine, an inking-roll movable back and forth over said machine, and guides having raised tracks for carrying said inking-roll clear of said operating-arm. 105

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

GEORGE H. KENDALL.

Witnesses:

STANLEY I. STAREK,
E. A. COLE.