

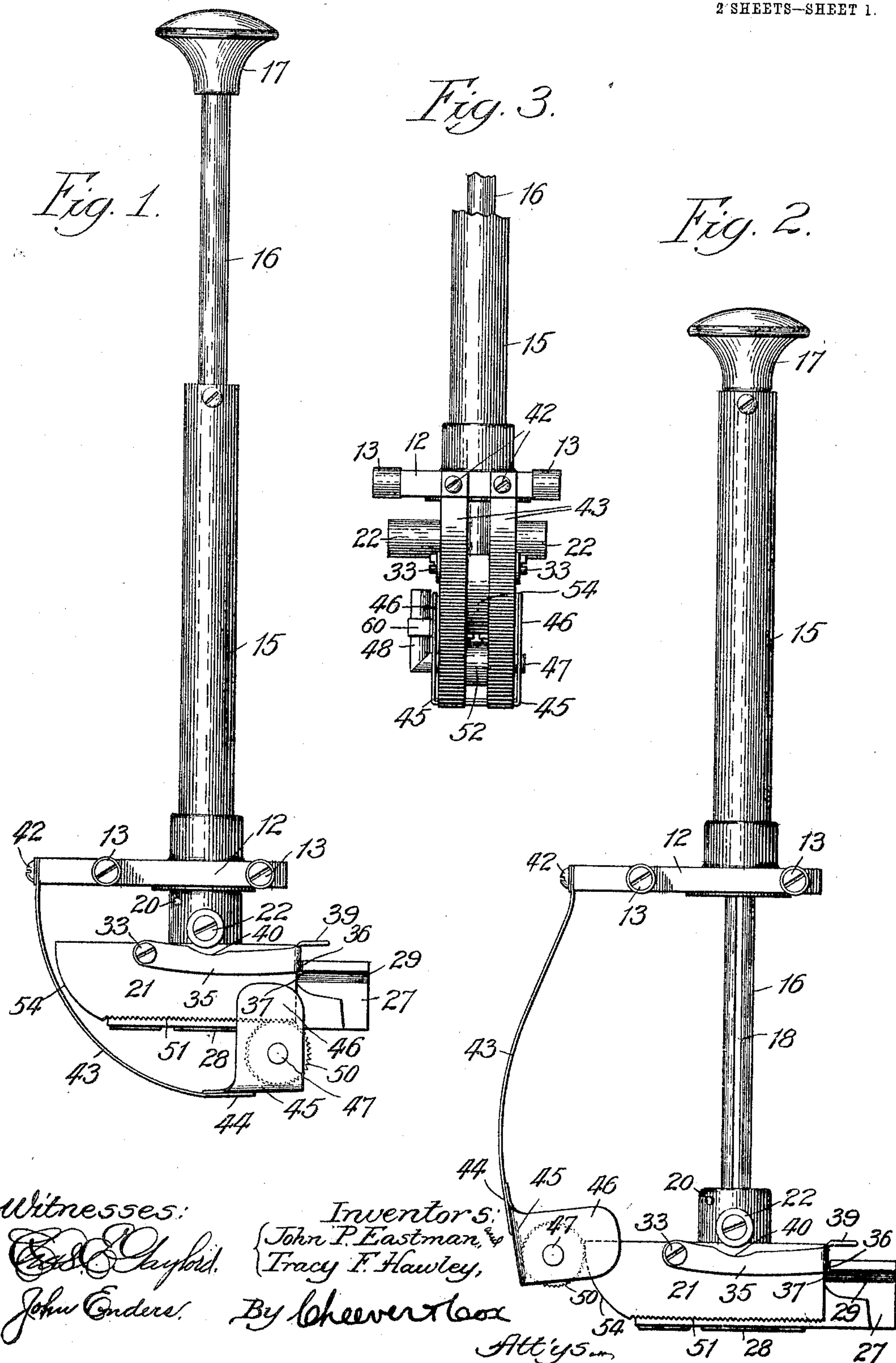
No. 817,422.

PATENTED APR. 10, 1906.

J. P. EASTMAN & T. F. HAWLEY.
SELF INKING STAMP.

APPLICATION FILED MAR. 20, 1905.

2 SHEETS—SHEET 1.



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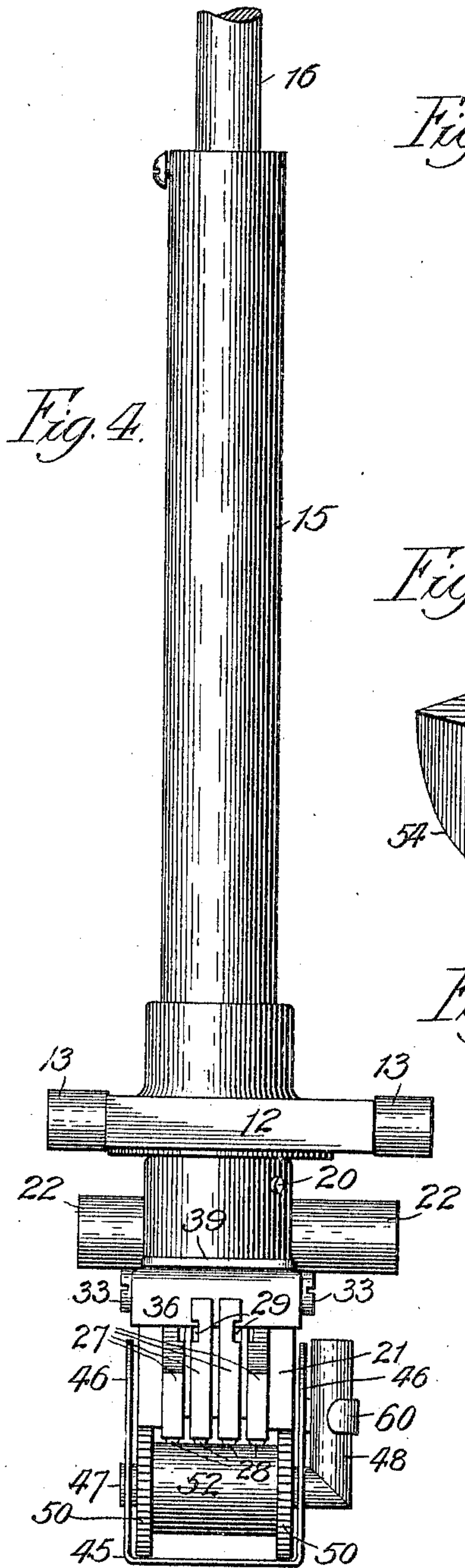


Fig. 5.

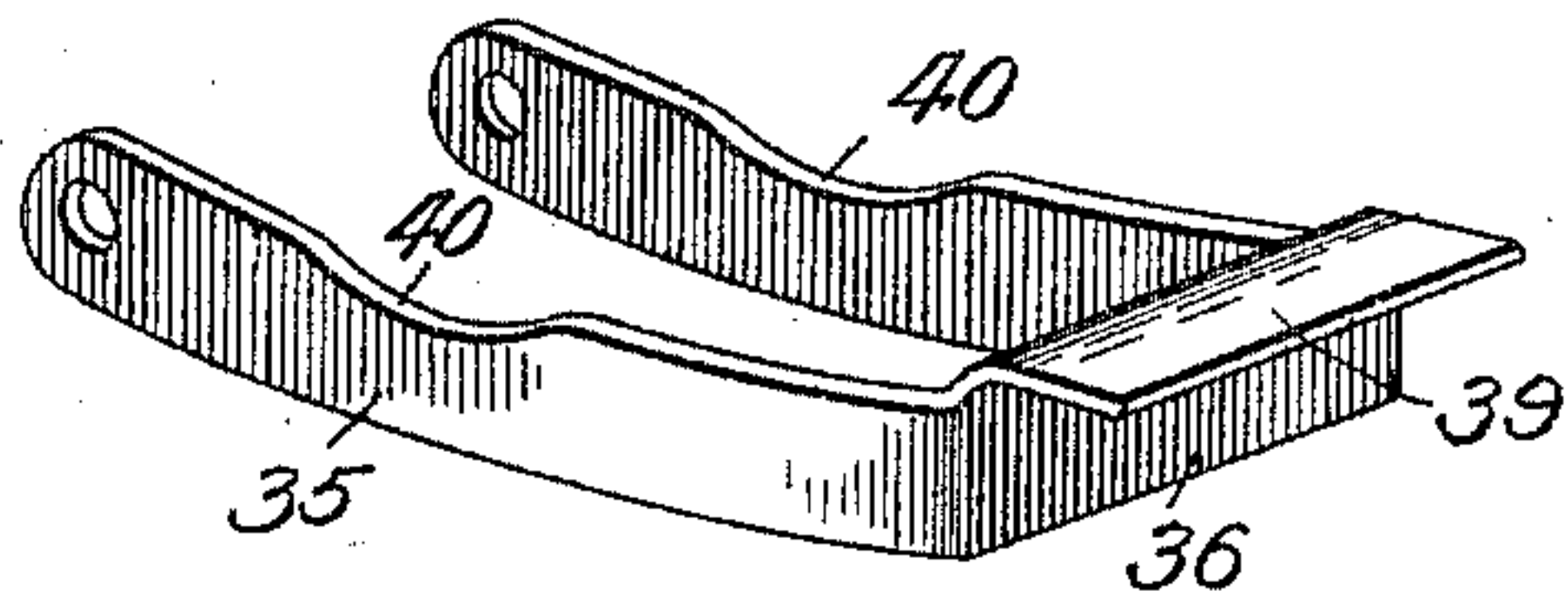


Fig. 6.

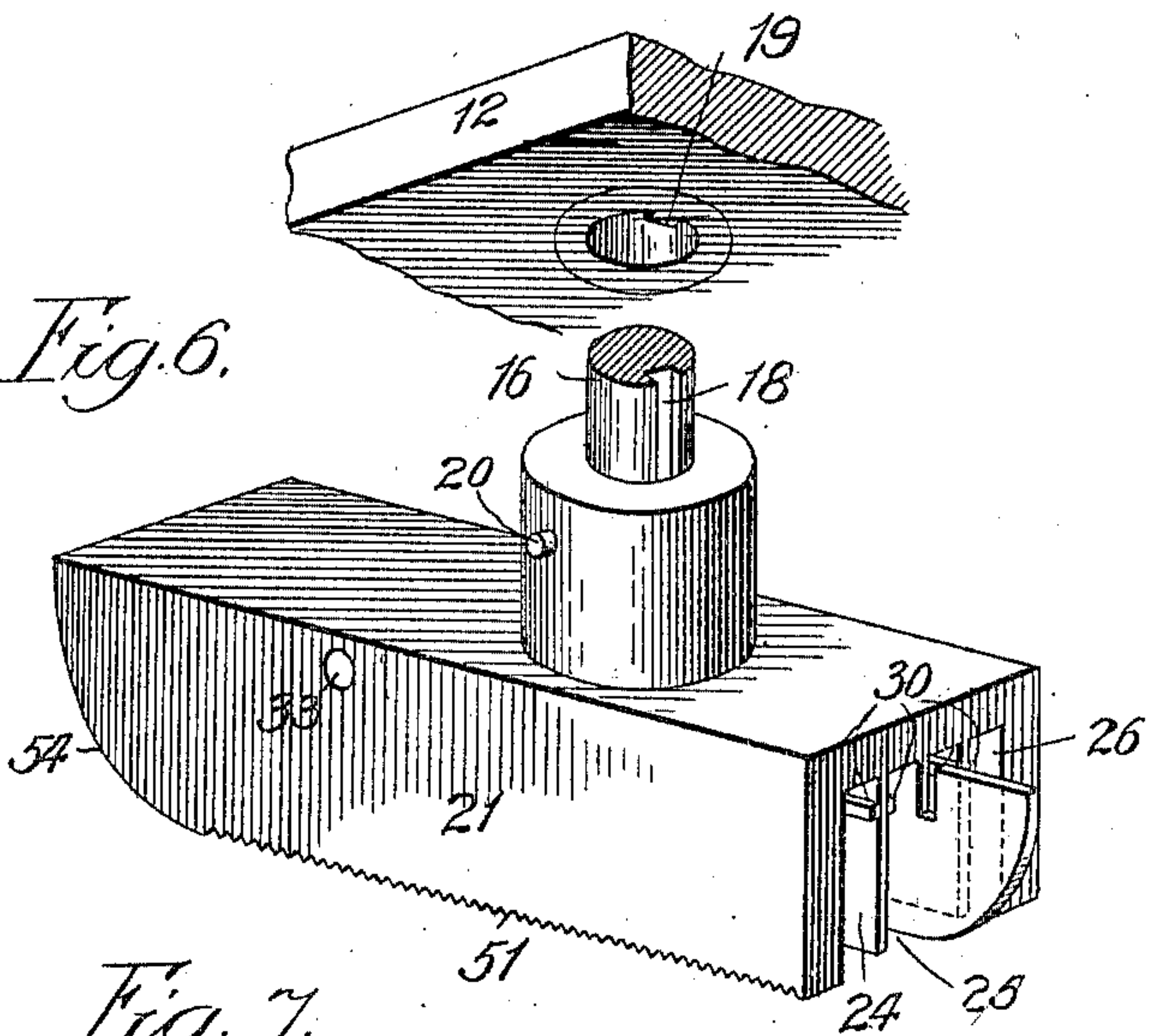


Fig. 7.

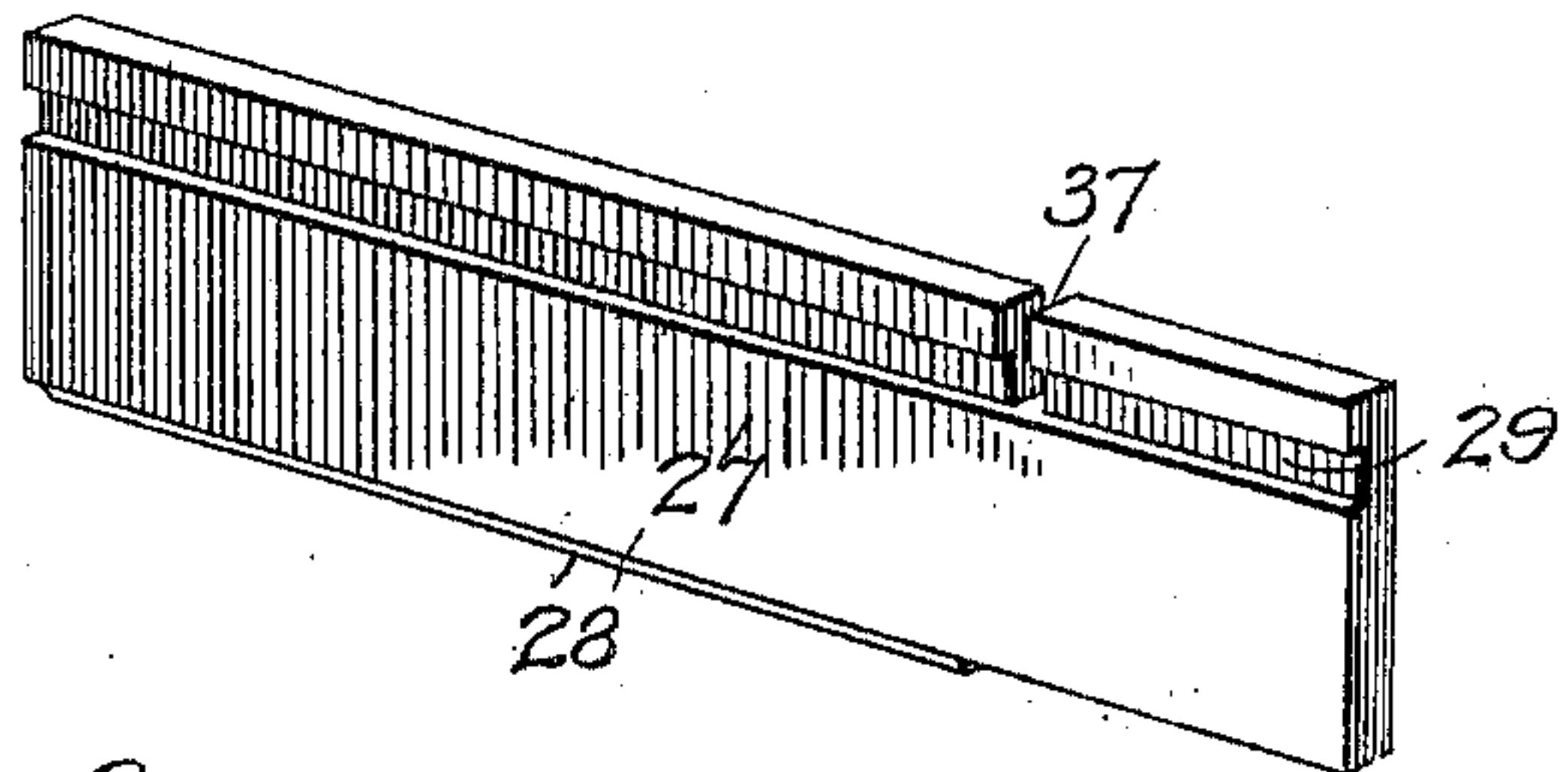
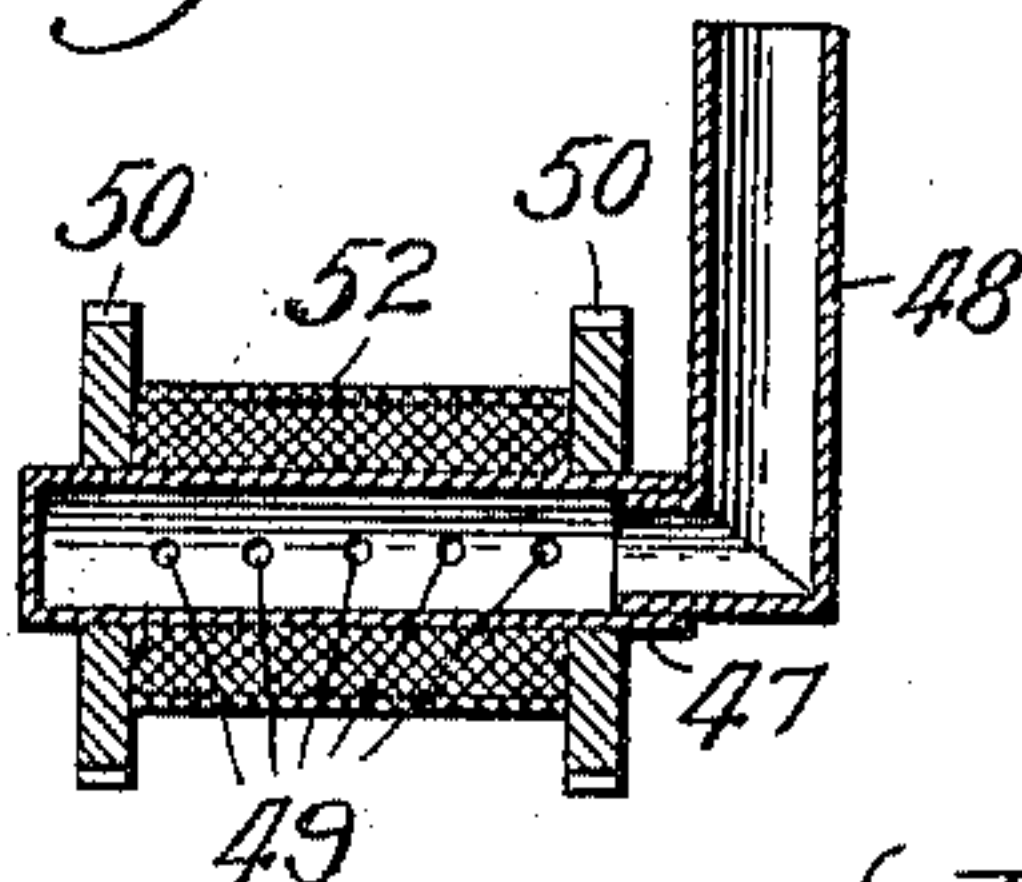


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN P. EASTMAN, OF CHICAGO, ILLINOIS, AND TRACY F. HAWLEY, OF MILWAUKEE, WISCONSIN.

SELF-INKING STAMP.

No. 817,422.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed March 20, 1905. Serial No. 251,123.

To all whom it may concern:

Be it known that we, JOHN P. EASTMAN, residing at Chicago, in the county of Cook and State of Illinois, and TRACY F. HAWLEY, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, citizens of the United States, have invented a certain new and useful Improvement in Self-Inking Stamps, of which the following is a specification.

Our invention relates to self-inking stamps wherever used, but more particularly to stamps for use in ticket printing and issuing machines, such as is illustrated in our prior patent, No. 725,054, and our copending application, Serial No. 251,122.

The object of our invention is to provide such a mechanism in which the type-slugs can be easily removed and inserted in the device, in which the ink is evenly and smoothly distributed to the face of the type, and in which the roller distributing the ink is forced to actually rotate over the face of the type, thereby insuring an even distribution of the ink, as well as avoiding danger of the material of the roller being injured by sliding over the type.

A further object of our invention is to provide such a mechanism which can be very easily and cheaply made and installed, which is efficient in operation, and not readily liable to get out of order in the hands of careless operators.

Our invention consists in mechanism capable of accomplishing the above objects and in details of construction, which will be hereinafter more fully described and claimed as the specification proceeds.

Figure 1 is a side elevation of mechanism, illustrating our invention in its preferred form when the mechanism is in normal position or at rest. Fig. 2 is the same view as Fig. 1 with the parts moved to the opposite extreme position ready to print or in the act of printing. Fig. 3 is a side view looking at Fig. 1 from the left, while Fig. 4 is the opposite side view looking at Fig. 1 from the right. Fig. 5 is a detail perspective view of a latch for holding the type-slugs in the device. Fig. 6 is a perspective detail view showing the stamp-base or type-holder and the means for causing it to travel in a straight line with reference to the stamp-carriage or supporting-frame without turning on its axis. Fig. 7 is

a detail view of a type-slug. Fig. 8 is a detail sectional view of the lower portion of Fig. 4, showing the method of applying ink to the roller for inking the type.

The device of our invention here illustrated is designed for use in any self-inking stamp; but as it is especially designed for use in our ticket printing and issuing machine, heretofore referred to, it will be so described and claimed without meaning to thereby limit the breadth of our claim.

Referring to the drawings, the numeral 12 indicates the main frame or support for the device, which, if the mechanism is designed for use as an ordinary hand-stamp, may be supplied with suitable supporting-legs adapted to rest upon the table. It here takes the form of a stamp-carriage mounted on rollers 13, designed to fit in and travel along in the stamp-cases of our prior patent and copending application above referred to. Rising from this frame or carriage 12 is a tubular member 15, in which a stamp-rod 16, bearing at its upper end a stamp-handle 17, is adapted to move up and down. In the side of this rod inside the tubular member 15 is cut a longitudinal groove 18, adapted to be engaged by a tongue or key or other equivalent means 19, so that the rod 16 may be moved from the position of Fig. 1 down to the position of Fig. 2 and back again without the rod turning on its axis with reference to the stamp frame or carriage 12 and the tubular member 15.

Secured to the lower end of the rod 16 by a pin 20 or other suitable means is a stamp base or case 21, carrying the type for printing upon its bottom surface. Extending from the sides of the stamp-base are pins or rollers 22, adapted to travel in the cam-tracks of the stamp-cases of our prior patent and copending application above referred to.

The under side of this stamp-base 21 has cut in it one or more recesses 24, 25, and 26, extending substantially the length of the base and of such a size that they are adapted to receive one or more type-slugs 27, bearing upon their lower faces lines of type 28. In commercial practice we use slugs made by someone of the commercial type-casting machines which form such slugs. In the upper portion of each slug there is a longitudinal recess 29, adapted to engage a corresponding rib 30 upon the inside of the stamp-base or

type-holder 21, so that all of the slugs 27 in the base 21 are held with the type-faces 28 appearing at the bottom of the base 21 in a level printing-surface. In order to secure the type-slugs in position in the base or type-holder 21, we pivot on screws 33 or other suitable projecting journals on the sides of the base 21 a latch 35, having a cross portion 36, adapted to enter cross-slots 37 in the tops of the type-slugs at the end of the stamp-base, and thereby, as shown in Fig. 1 and elsewhere, hold the type-slugs in position within the base 21. This latch member just described has a lip or handle 39, adapted to be grasped by the operator to lift the latch up against the pins or rollers 22 a sufficient distance to remove the slugs from the base or type-holder 21. The pins 22 engage the latch 35 in the depressions 40 and serve as stops to prevent the latch being raised too high, and thereby coming in the way of other mechanism in connection with which the device here shown may be used.

Connected to one end of the stamp carriage or frame 13 by screws 42 are one or more curved flat flexible springs 43, and connected to the opposite ends 44 of these springs is a U-shaped clip 45, having wings or fingers 46 extending normally upward from the spring on each side of the stamp-base 21, as is shown in detail in Figs. 1, 3, and 4. Journaled in both of the wings 46 just described is a small pipe 47, having its end journaled in an upturned pipe 48, held against rotation by a strap 60 on one clip-wing 46. In the pipe 47 are perforations 49, adapted to have printing-ink passed through them. Secured to this pipe 47 between the clips 46 are two gears or pinions 50, meshing with racks 51 on opposite sides of the bottom of the stamp-base 21. One of these gears is rigidly fastened, while the other is removably fastened, to the pipe 47, so that it can be removed to renew the roller material 52, to be hereinafter described. Mounted upon this pipe 47 between the pinions 50 is the inking-roll proper, made of cloth or other suitable material capable of absorbing ink and having ink pass through it, so that as the ink-roller is rotated printing-ink contained in the pipes 48 and 47 will flow through the holes 49 into the material 52 forming this roller and pass through it onto its outer surface, by which it is communicated to the type 28 as the roller is moved over the type.

The end of the stamp-case 21 away from where the type-slugs are inserted and around which the spring or springs 43 pass is made in the form of a curve 54, so that the stamp-roller may move over it around the end of the stamp-base when the parts are in printing position, as in Fig. 2. A portion of this curve 54 at least is in line with the racks 51, and the curve has no gear-teeth upon it, so that when the gears or pinions 50 travel off

from the racks 51 onto these portions 54 the gears 52 are not rotated. The parts are so proportioned that, as shown in Fig. 1, when they are in normal position, with the stamp-case 21 in contact with the carriage or frame 12, the spring 43 extends around the curved portion 54 and along the entire length of the type-face 28 and the racks 51 and the ink-roller 52 is at the opposite end of the stamp-base 21, as shown in Fig. 1. The parts are also so proportioned that when the handle 17 is depressed to the other extreme position for printing, as shown in Fig. 2, the act of depression will cause the gears or pinions 50 to travel from the position of Fig. 1 along the entire length of the racks 51, thereby rotating the ink-roller 52 over the type-face 28 and up the curve 54, heretofore described, to the position of Fig. 2, in which position the ink-roller is entirely out of the way of the type-face 28. By making the track 51 54, on which the pinions 50 travel from the position of Fig. 2 to the position of Fig. 1, part of the way in the form of the rack 51 and part of the way in the smooth portion 54 the ink-wheel 52 is positively rotated all of the time that it is passing over the type, (while the pinions 50 are in contact with the racks 51,) thereby preventing the material of which the ink-roller is made being dragged over the face of the type, thus smearing the ink, unevenly distributing it, and perhaps tearing said material upon the type, and when the pinions strike the smooth portion 54 they partially rotate and partially slip along it, thereby changing slightly the relative position of a particular pinion-tooth to the rack, so that when the operation is reversed and the roller is returned from the position of Fig. 2 to that of Fig. 1 the same rack-tooth is not in contact with the same pinion-tooth as the pinion passes back over the rack, and consequently the same portions of the roller 52 and the type 28 are not a second time in contact with each other. By this construction and operation we can print several thousand tickets with the same type in the stamp-holder without the roller 52 being impressed with the type, thereby destroying the efficiency of the roller, as would be the case were the track 51 54 made a rack all of the way and the same portion of the face of the roller 52 thus always returned to exactly the same position upon the type.

In the general operation of the device the operator first obtains slugs of type having the wording which he desires to print. He raises the handle 39 and slips his type slugs or bars 27 inside the recesses 24, 25, or 26 in the stamp base or holder 21 and lowers the latch 36 to secure them in position, as shown and described. He now places ink inside the tube or pipe 47, the same passing through the holes 49 into the material 52 of the ink-roller. The stamp frame or carriage being

now held stationary by a suitable support, the operator depresses the handle 17 against the action of a spring (not shown) inside the tubular member 15, and thus moves the stamp block or case to the position of Fig. 2, where it prints. In so doing the pinions 50 have traveled along the racks 51, thereby rotating the ink-roller 52 in the manner heretofore described and inking the type 28 in the holder 21. As soon as the stamping is thus completed the operator releases the handle 17 and the spring in the member 15 forces the parts to return to the position of Fig. 1, when the operation can be repeated.

We do not wish to be understood as limiting ourselves to exact details of construction, which may be varied within reasonable limits without departing from our invention.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type held normally adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type and a curved flat spring having one end rigidly connected to the roller and the other end rigidly connected to the frame adapted to hold the roller in rolling contact with the type as the stamp-base is moved toward printing position.

2. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type held normally adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type, spring mechanism connecting the roller with the frame adapted to hold the roller in rolling contact with the type as the stamp-base is moved toward printing position, a pinion positively connected to the ink-roller, and a rack on the stamp-base adapted to have the pinion move over it as the stamp-base is moved to and from printing position.

3. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type held normally adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type, spring mechanism connecting the roller with the frame adapted to hold the roller in rolling contact with the type as the stamp-base is moved toward printing position, a pinion positively connected to the ink-roller, and a track along the stamp-base over which the pinion is adapted to travel as the stamp-base is moved toward and from printing position, said track being composed of a rack for the length of the type on the base and made smooth beyond the end of the type.

4. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type held normally adjacent to the frame and adapted to be moved

away from it to print, an ink-roller bearing on the type, spring mechanism connecting the roller with the frame adapted to hold the roller in rolling contact with the type as the stamp-base is moved toward printing position, a pinion positively connected to the ink-roller, and a track along the stamp-base over which the pinion is adapted to travel as the stamp-base is moved toward and from printing position, said track being composed of a rack for the length of the type on the base and made smooth beyond the end of the type, the smooth portion of the track being curved out of the plane of the type-face so that the ink-roller while traveling on it is moved away from the plane of the type-face, as described.

5. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type normally adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type, a U-shaped clip or guide in which the roller is journaled extending upward on the opposite sides of the stamp-base, and a curved flat spring connecting the base of said U-shaped clip with the stamp-carriage adapted to hold the ink-roller in rolling contact with the type.

6. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type normally held adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type, a U-shaped clip or guide in which the roller is journaled extending upward on the opposite sides of the stamp-base, a curved spring connecting the U-shaped clip with the stamp-carriage adapted to hold the ink-roller in rolling contact with the type, a pinion positively connected to the roller inside said U-shaped clip, and a rack along the stamp-base adapted to have the pinion move over it.

7. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type normally adjacent to the frame and adapted to be moved away from it to print, an ink-roller bearing on the type, a U-shaped clip or guide in which the roller is journaled extending upward on the opposite sides of the stamp-base, a curved spring connecting said U-shaped clip with the stamp-carriage adapted to hold the ink-roller in rolling contact with the type, a pinion positively connected to the ink-roller inside said U-shaped clip, and a track along the stamp-base over which the pinion is adapted to travel, said track being composed of a rack for the length of the type in the base and made smooth beyond the end of the type.

8. In mechanism of the class described, the combination of a stamp carriage or frame, a stamp-base carrying type normally adjacent to the frame and adapted to be moved away

from it to print, an ink-roller bearing on the type, a U-shaped clip or guide in which the roller is journaled extending upward on the opposite sides of the stamp-case, a curved
5 spring connecting said U-shaped clip with the stamp-carriage adapted to hold the ink-roller in rolling contact with the type, a pinion positively connected to the ink-roller inside said U-shaped clip, and a track along the
10 stamp-case over which the pinion is adapted to travel, said track being composed of a rack for the length of the type in the base and made smooth beyond the end of the type, the smooth portion of said track being curved
15 out of the plane of the type-face so that the ink-roller traveling on it is moved away from the plane of the type-face, as described.

9. In a self-inking stamp, in combination with a suitable support 46 therefor; an ink-
20 ing-roller 52, of material through which printing-ink may pass, mounted on a rotatable hollow shaft or tube 47, said tube having in it perforations 49 inside the roller proper 52 and a pipe 48, adapted to contain
25 a supply of printing-ink, rigidly secured to said support and having one end forming a journal bearing for one end of said rotatable tube 47 as described.

10. In mechanism of the class described, the combination of a stamp carriage or frame 30 suitably supported, a stamp-rod adapted to slide up and down in the frame, a stamp-base 21 mounted on the lower end of said stamp-rod, said stamp-base having printing-type upon its lower surface, a track upon said
35 stamp-base 21 composed of a rack 51 extending along the base the length of the type-face, and an upwardly-curved portion 54 in line with the rack 51, as described, a spring 43 having one end connected to the stamp
40 frame or carriage, and an ink-roller journaled on the other end adapted to pass over the type upon said stamp-base 21, and a pinion 50 rigidly connected to the inking-roller adapted to travel along said track, all of the
45 parts being shaped, arranged and disposed substantially as shown and described for the purposes set forth.

In witness whereof we have hereunto subscribed our names in the presence of two
50 witnesses.

JOHN P. EASTMAN.
TRACY F. HAWLEY.

Witnesses:

DWIGHT B. CHEEVER,
HOWARD M. COX.