

No. 897,004.

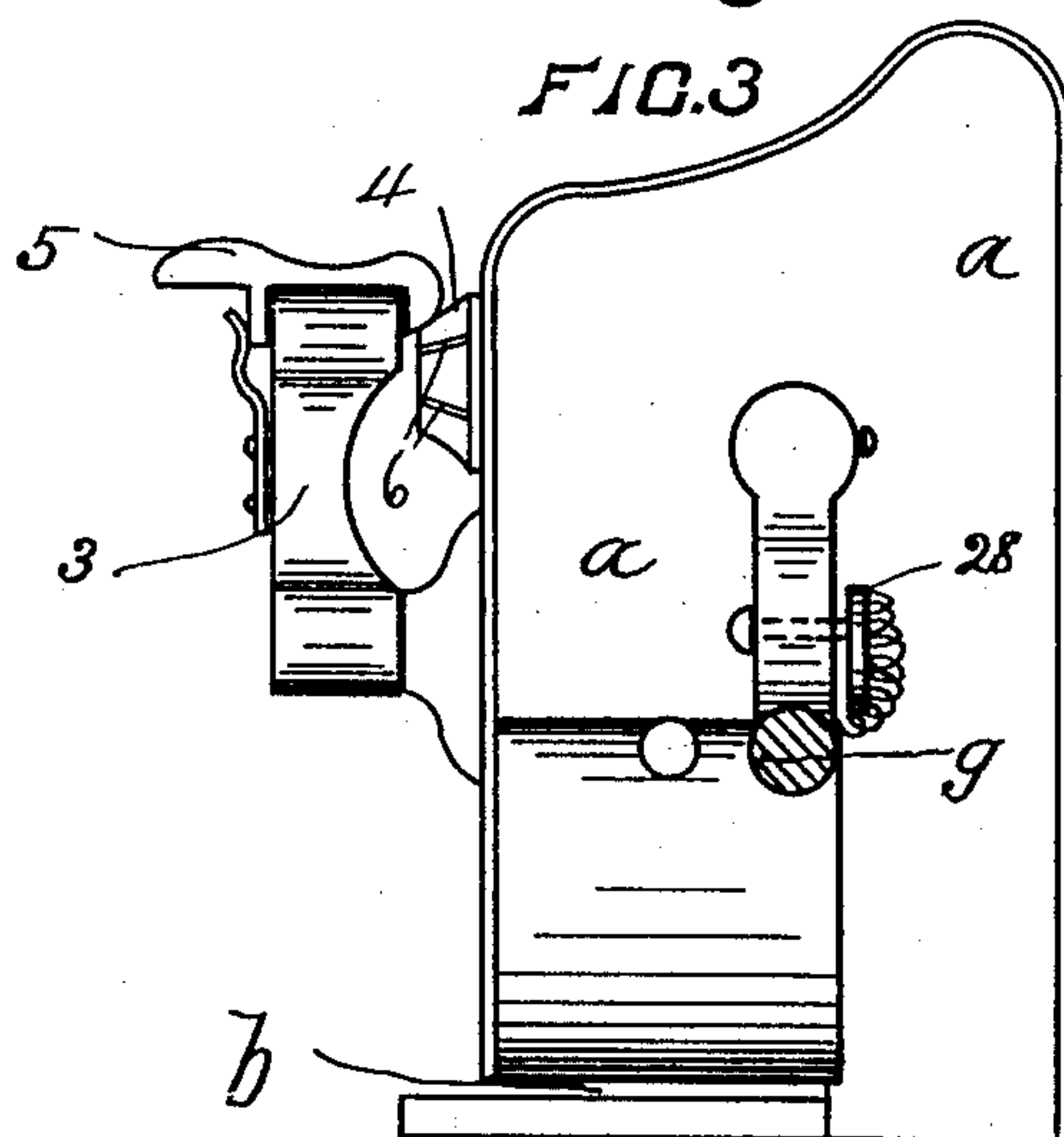
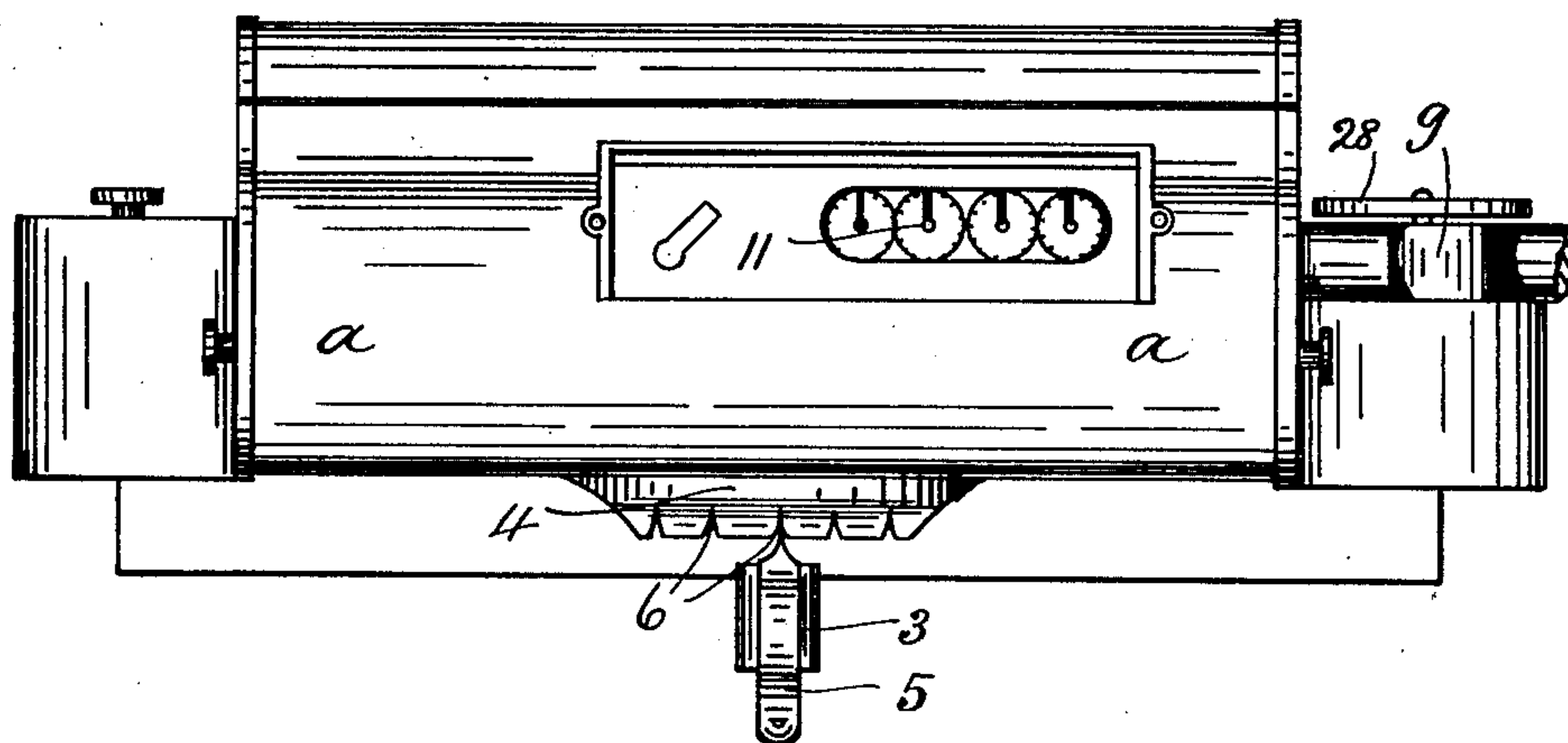
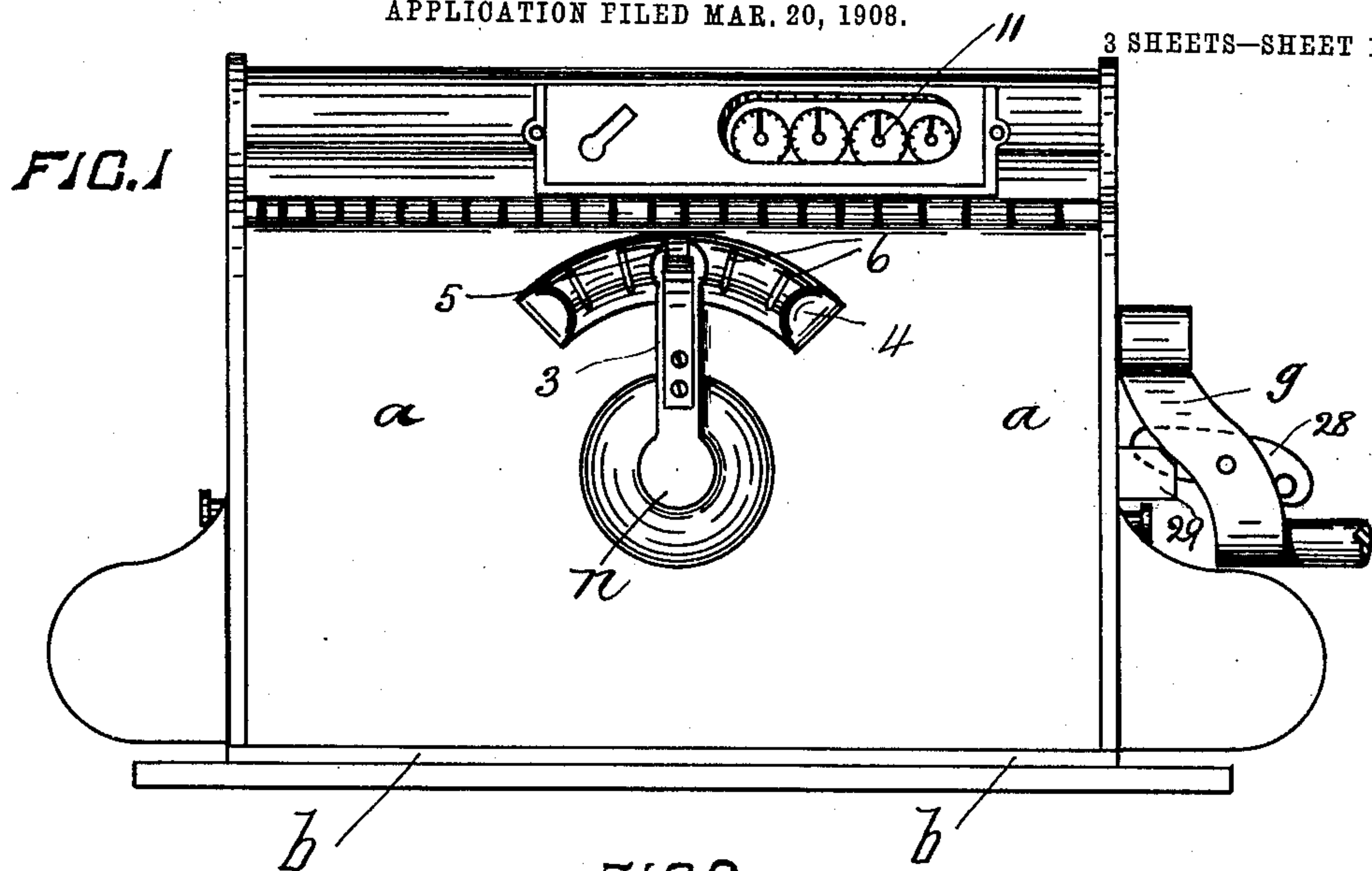
E. MOSS.

PATENTED AUG. 25, 1908.

MACHINE FOR USE IN STAMPING AND FRANKING LETTERS, TELEGRAMS,
AND THE LIKE.

APPLICATION FILED MAR. 20, 1908.

3 SHEETS—SHEET 1.



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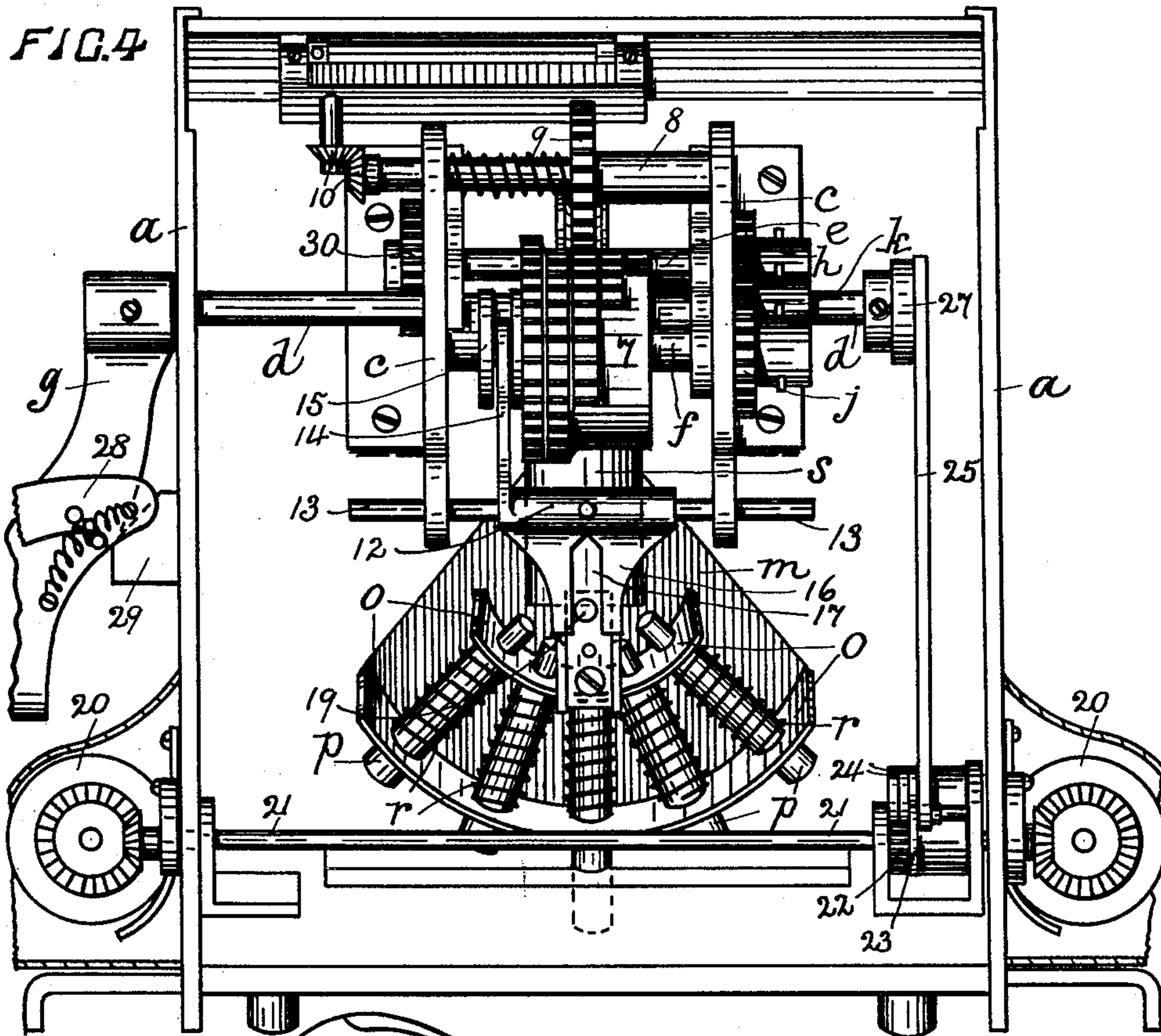
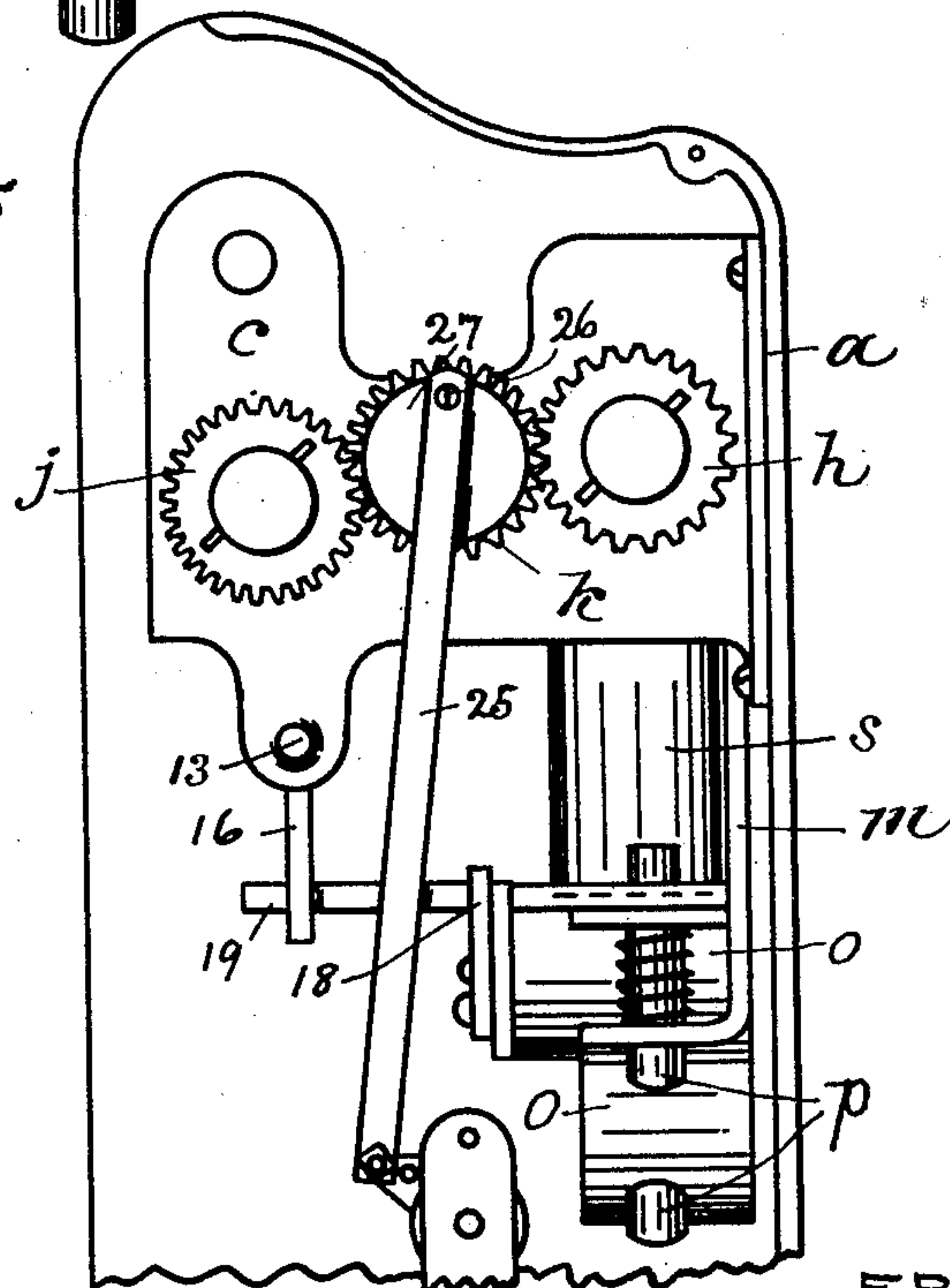


FIG. 5



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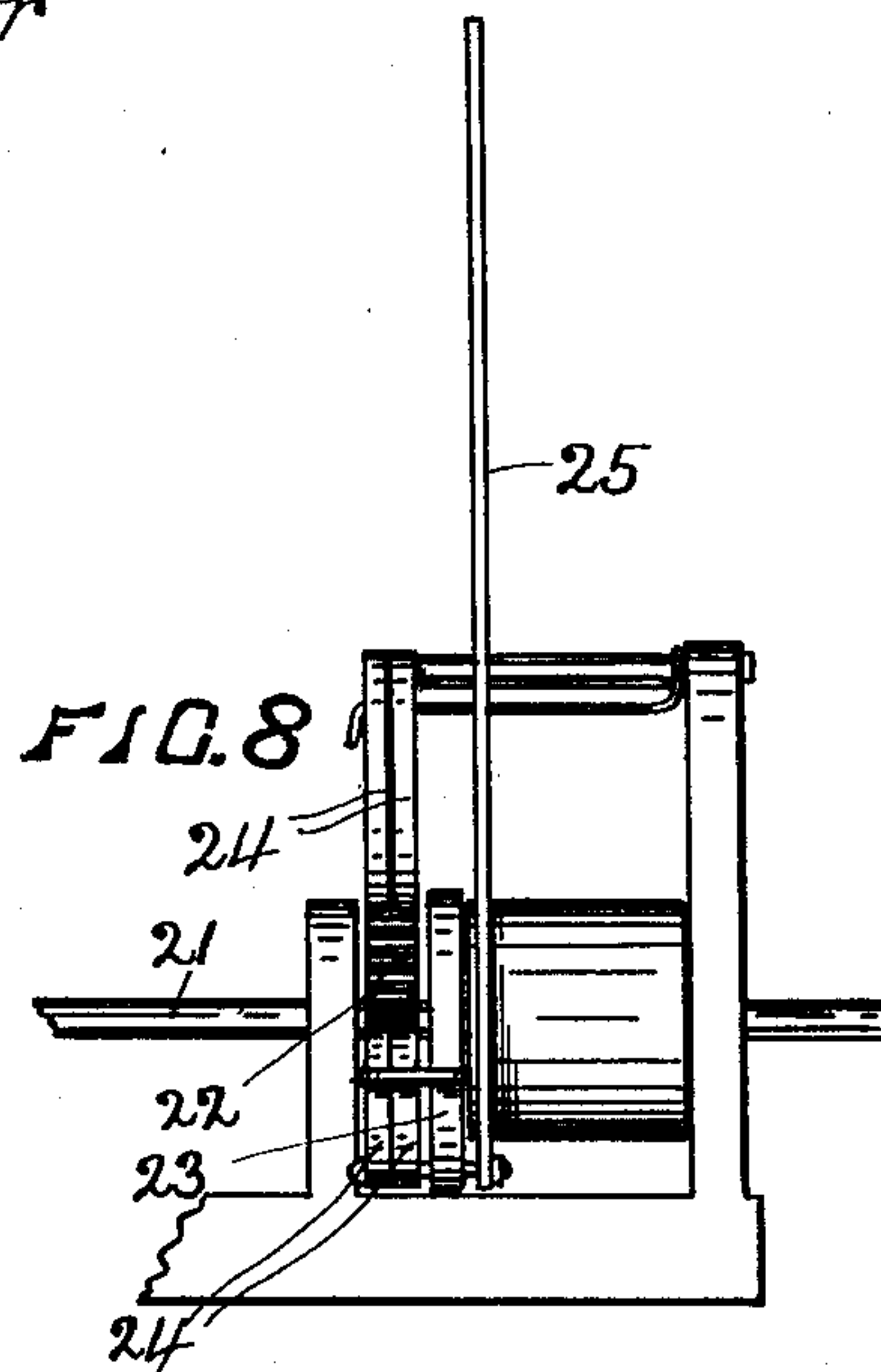
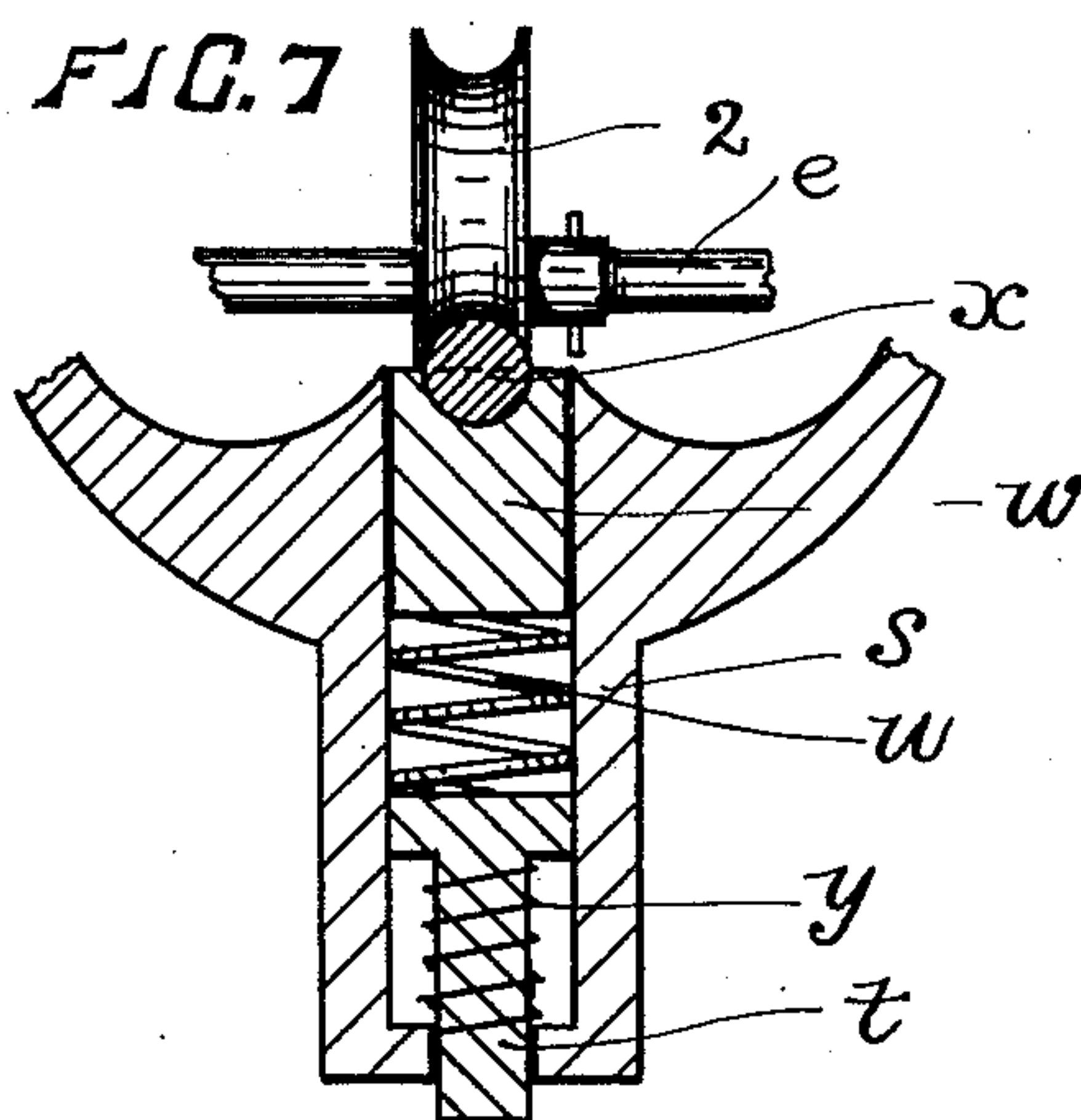
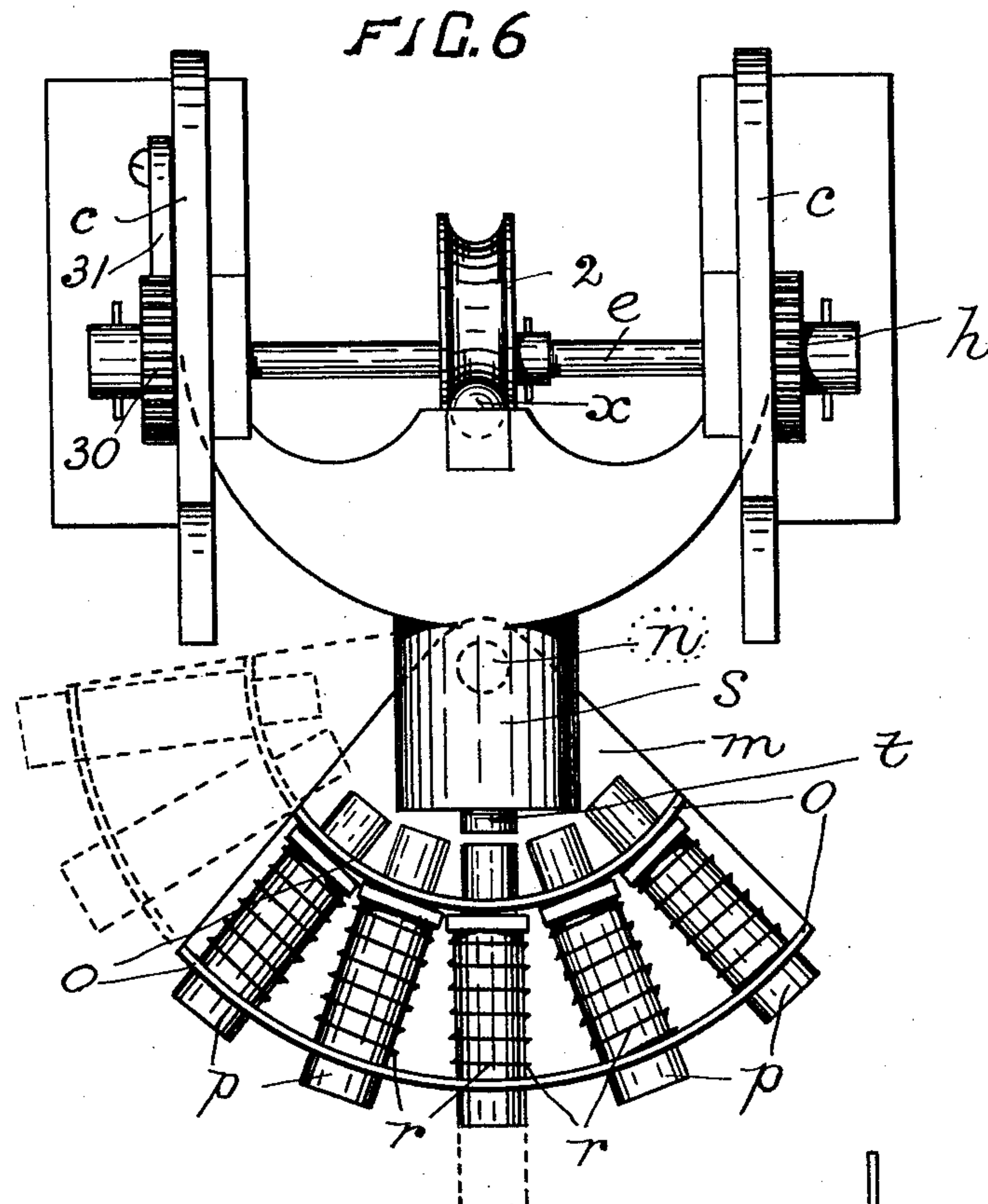
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UNITED STATES PATENT OFFICE.

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MACHINE FOR USE IN STAMPING AND FRANKING LETTERS, TELEGRAMS, AND THE LIKE.

No. 897,004.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed March 20, 1908. Serial No. 422,360.

To all whom it may concern:

Be it known that I, ERNEST MOSS, mechanic, a subject of the King of Great Britain, residing at Christchurch, in the Dominion of New Zealand, have invented a new and useful Improved Machine for Use in Stamping and Franking Letters, Telegrams, and the Like; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to an improved machine by means of which letters, telegrams and the like may have a stamp or franking impression stamped thereon. The machine provides for an impression being made by any one stamper of a number of stampers of different values and for an indicator record being kept of the total aggregate value of all the impressions made by the machine.

In describing the invention reference will be made to the accompanying drawings in which:—

Figure 1 is a front elevation. Fig. 2 a plan, and Fig. 3 an end elevation thereof. Fig. 4 is a rear elevation of the machine the back of the containing casing being removed. Fig. 5 is an end view of the mechanism looking from the right of Fig. 4. Figs. 6, 7 and 8 are detail views of parts that will be herein- after more fully referred to.

The machine devised consists of a casing *a* having a slotted aperture *b* in its front face to allow of a letter or the like being inserted so as to lie upon the inside bottom of the casing.

To the inside front of the casing are secured a pair of brackets *c c* (Figs. 4, 5 and 6) which form bearings to carry the operating shaft *d* and the countershafts *e* and *f* arranged one on each side thereof. The shaft *d* is carried through one end of the casing and is provided with a handle *g* for turning it. The three shafts *d e* and *f* are geared together within the casing by means of the gear wheels *h* and *j* mounted respectively upon the ends of the shafts *e* and *f* and the gear wheel *k* secured upon the shaft *d* with which they gear as shown in Fig. 5. These wheels are so arranged as to provide for each countershaft making a complete revolution for each complete revolution of the operating shaft.

A swinging quadrant *m* is suspended upon the inner end of a pivot pin *n* (Figs. 1 and 6) that extends through from the front of the casing to the inside thereof. This quadrant

is formed with two concentric flanges *o* (Figs. 4 and 6). Carried on these flanges are the impression stampers, each one of which consists of a circular rod *p* arranged within the flanges in a direction radial to the central pivot of the quadrant. Each of the stampers is mounted so as to be capable of an up and down radial movement and is kept normally up by means of the spring *r* surrounding it. The bottom of each stamper is formed or provided with a die of the value of the postage to be impressed, each die being of different nominal value from the others. Any number of such dies and of any desired values may be employed.

Secured within the casing and arranged vertically and centrally in a line with the swinging quadrant *m* is a cylindrical casing *s*. Within the casing is mounted a plunger *t* that projects out the bottom thereof (shown in Figs. 6 and 7). A spring *u* overlies the plunger and a block *w* is placed on top of this spring, such block having a small antifriction ball *x* let into its top face. A spring *y* encircles the plunger *t* and serves to keep such normally drawn upwards. This plunger is so disposed that it directly overlies the line in which the tops of the stampers swing, when the quadrant is swung on its pivot so that any one of such stampers may be placed in a vertical line directly beneath the plunger and may then be engaged by and depressed by such plunger when it is moved down.

To provide for the plunger being depressed, the countershaft *e* is provided with a grooved eccentric cam 2 which fits over the antifriction ball *x* in the top of the block *w* and is kept in close contact with it by means of the springs *u* and *y*. A full rotation of the countershaft *e* by the turning of the handle *g* will thus cause the plunger to be depressed which in turn will depress the stamper beneath so that such stamper may be caused to descend upon an envelop or the like placed on the bottom of the casing. The springs will serve as cushions to the impression and thus provide against any jar, while serving also to draw the various parts up to their normal raised position again so as to be ready to make another impression.

To provide for the correct stamper being placed under the plunger an indicator pointer handle 3 (Figs. 1 and 2) is attached to the outer end of the pivot pin *n*. This pointer

moves over an indicator plate 4 secured on the casing concentrically with the pin *n* and divided regularly into spaces which correspond in their distance apart, as regards the movement of the pointer across them, with the distances necessary to turn the pin *n* and to swing the quadrant so that each stamper will be beneath the plunger. These spaces are marked correspondingly with the values of the different stampers. Attached to the pointer is a spring tooth 5 which is adapted to spring into notches 6 arranged in the indicator plate 4 at the proper intervals thereon and will thus serve to lock the pointer handle and consequently the quadrant in any one of the required positions. Thus there will be no liability of the desired stamper swinging from its proper position to receive the full depressing force from the plunger.

Mechanism is provided whereby the total aggregate value of the impressions made in the machine will be recorded and indicated. This mechanism is shown in Fig. 4. Upon the countershaft *f* is secured a drum 7 which is provided on its periphery with a number of parallel rows of teeth which in reality form a like number of toothed pinions. In one of these rows the teeth extend all the way round the drum while in the others they extend for varying proportions of the drum's circumference. These proportions vary directly to the full circumference and approximate to the proportions borne by the various stamp values provided for by the machine, to the stamper of greatest value. For instance, if the machine provides for stamps valued 2s. (two shillings), 1s., 6d. (six pence), 3d. and 1d., being impressed then the proportion of the circumferential distances at which the several rows of teeth extend around the drum will be $1\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ of the circumference.

The drum is made capable of sliding movement along its shaft. Carried by the brackets *c* above the drum is a shaft 8 on which a toothed wheel 9 is secured. This wheel is adapted to gear with the teeth of each row on the drum and any one of such rows may be placed in gear with it by adjusting the drum longitudinally on its shaft. Thus when the drum is turned by the operation of the main shaft *d*, it will be given a full revolution for each full revolution of the main shaft and it will convey a full revolution or part revolution to the shaft 8 according to which row of teeth is in position to gear with the wheel 9. Consequently this shaft will be given proportions of revolutions approximating to the proportions borne by the different stamp values to the highest value.

The shaft 8 through the miter gearing 10 operates an ordinary indicator counter 11 which is so arranged as to be seen through the top of the casing as shown in Figs. 1 and 2. This counter is of any known construction and principle of operation and will be con-

structed so that the smallest amount of movement of the operating shaft 8 will record 1 while the other proportional movements will indicate proportional records. Thus the total aggregate amount of values impressed in the machine will be indicated, and may be read at any time.

To provide for the correct row of teeth on the drum being placed in the proper position to gear with the wheel 9 when the corresponding stamper is moved into the position to be operated by the plunger the means shown in Figs. 4 and 5 are provided. These means consist of a sleeve 12 that is freely mounted on the shaft 13 that is carried in the lower part of the brackets *c*. This sleeve is free to slide to and fro along shaft 13 and is provided with an arm 14 that extends upwards at one end of it and fits within a groove formed in a collar 15 attached on one end of the drum, so that the drum and sleeve will be locked together to slide corresponding distances along their respective shafts. The sleeve 12 is also provided with a fixed arm 16 depending therefrom, such arm having a slot 17 extending up its middle from the bottom.

Attached to the swinging quadrant *m* is a plate 18 (Fig. 5) from which extends rearwardly the horizontal rod 19 that passes into the slot 17 of the arm 16 and engages with the edges thereof. It will be seen that when the quadrant is turned on its pivot the rod 19 engaging with the sides of the slot will cause the arm 16 and the sleeve 12 to move along the shaft a distance equal to the horizontal distance through which the rod is moved, the rod sliding up and down the slot to allow for the vertical movement thereof.

The stampers being arranged in regularly decreasing values from right to left and the teeth rows on the drum being reversely arranged it will be seen that when the quadrant is swung to bring the stamper of the highest value beneath the plunger the sleeve and drum will be moved along so as to bring the complete row of teeth into gear with the counter operating mechanism. The movements of the quadrant to bring the other stampers beneath the plunger will also move the drum so as to bring the corresponding rows of teeth into gear.

To provide for an impression being made by the stampers upon an envelop or the like placed beneath an ordinary typewriter ribbon (not shown) is caused to be fed along beneath them. The means for operating this ribbon are shown in Figs. 4, 5 and 8. The ribbon is wound upon spools 20 placed one at each side of the casing *a* and adapted to be rotated by means of a shaft 21 having a miter wheel on each end adapted to gear with a similar wheel upon the spool at the corresponding end. Only one of these wheels is however in gear at one time, the shaft being made capable of longitudinal movement so

that either can be brought into gear and thus allow of the ribbon being wound on to the spool in gear from the other which is out of gear.

5 To convey rotation to the shaft 21 a ratchet wheel 22 is mounted upon a feather key therein and loosely mounted thereon is a collar 23 carrying pawls 24 which are kept in engagement with the teeth of the ratchet
10 wheel. A connecting rod 25 is attached to an arm extending outwards from the collar. The upper end of this rod is fastened to a crank pin 26 upon a disk 27 that is rigidly secured upon the inner end of the main op-
15 erating shaft *d*. The rotation of the main shaft will thus give an up and down movement to the connecting rod 25 which will in turn impart a reciprocal partial revolution to the collar which through the agency of the
20 pawls and ratchet wheel will give an intermittent movement to the shaft 21 so that the inking ribbon will be fed from one spool to the other according to which spool it is geared with. A complete revolution of the operat-
25 ing handle will thus cause a stamper to be depressed, the indicator mechanism to be operated and the inking ribbon to be moved along beneath the stampers, all of these operations being carried out simultaneously.

30 In order to prevent the operating handle turning past the complete revolution and to lock it from movement when desired the means shown in Figs. 1 to 4 are provided. These means consist of a spring lever 28 that
35 is pivoted on the handle and the inner end of which engages with a block 29 fixed to the casing. By depressing one end of this lever it may be caused to free such block thus allowing the handle to be turned. When past
40 the block the lever will be freed and it will fall back so as to lie within the range of the block when the handle reaches the starting point.

45 To prevent the operating shaft being turned in a direction contrary to that required to operate the machine the countershaft *e* is provided with a ratchet wheel 30 (Fig. 6) and a pawl 31 is pivoted to the adjacent face of the bracket *c* and engages with

such wheel so as to allow of the shaft rotat- 50 ing in one direction, but to prevent any reverse movement.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

55 1. In machines for stamping envelopes and the like, a plunger, a countershaft carried in bearings in the machine above the top end of the plunger, an eccentric cam on such countershaft bearing upon such end of 60 the plunger and a main operating shaft geared with the countershaft, in combination with a pivoted swinging quadrant and stampers of different values carried thereby and mounted radially therein and each capa- 65 ble of longitudinal movement, and with means for swinging the quadrant to bring the desired stamper into position to be operated by the plunger.

2. In machines for stamping envelopes and 70 the like, the combination, with a pivoted swinging quadrant and a number of stampers carried radially therein, of a plunger mounted above the stampers, means for swinging the quadrant to bring the desired 75 stamper into position to be operated by the plunger, a main operating shaft for conveying motion to the plunger and having a crank on one end, and means for moving an inking ribbon beneath the stampers and in- 80 cluding a spool mounted on each side of the machine upon which spools the ribbon ends are wound, a shaft for conveying rotary motion to one of such spools at a time, a ratchet wheel secured upon such shaft, a collar 85 loosely mounted on the shaft, pawls upon the collar engaging with the ratchet wheel and a connecting rod extending from the collar to the aforesaid crank on the main operating shaft. 90

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses this 20th day of December, 1907.

ERNEST MOSS.

Witnesses:

PERCY R. CLUNIE,
FLORENCE ALDERSLEY.