

No. 858,982.

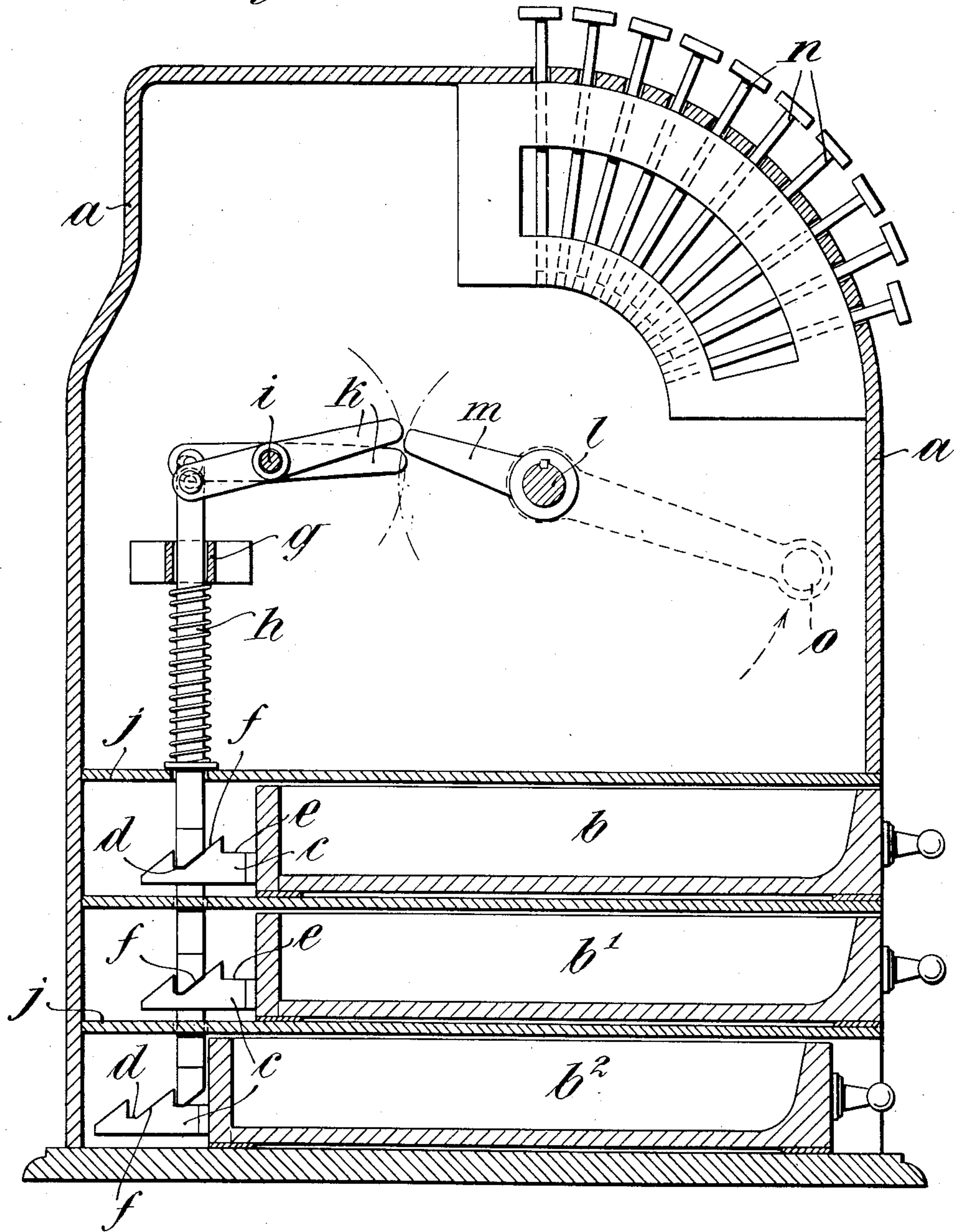
PATENTED JULY 2, 1907.

W. R. HEINITZ.  
CASH REGISTER.

APPLICATION FILED JAN. 30, 1906.

3 SHEETS—SHEET 1.

*Fig. 1.*



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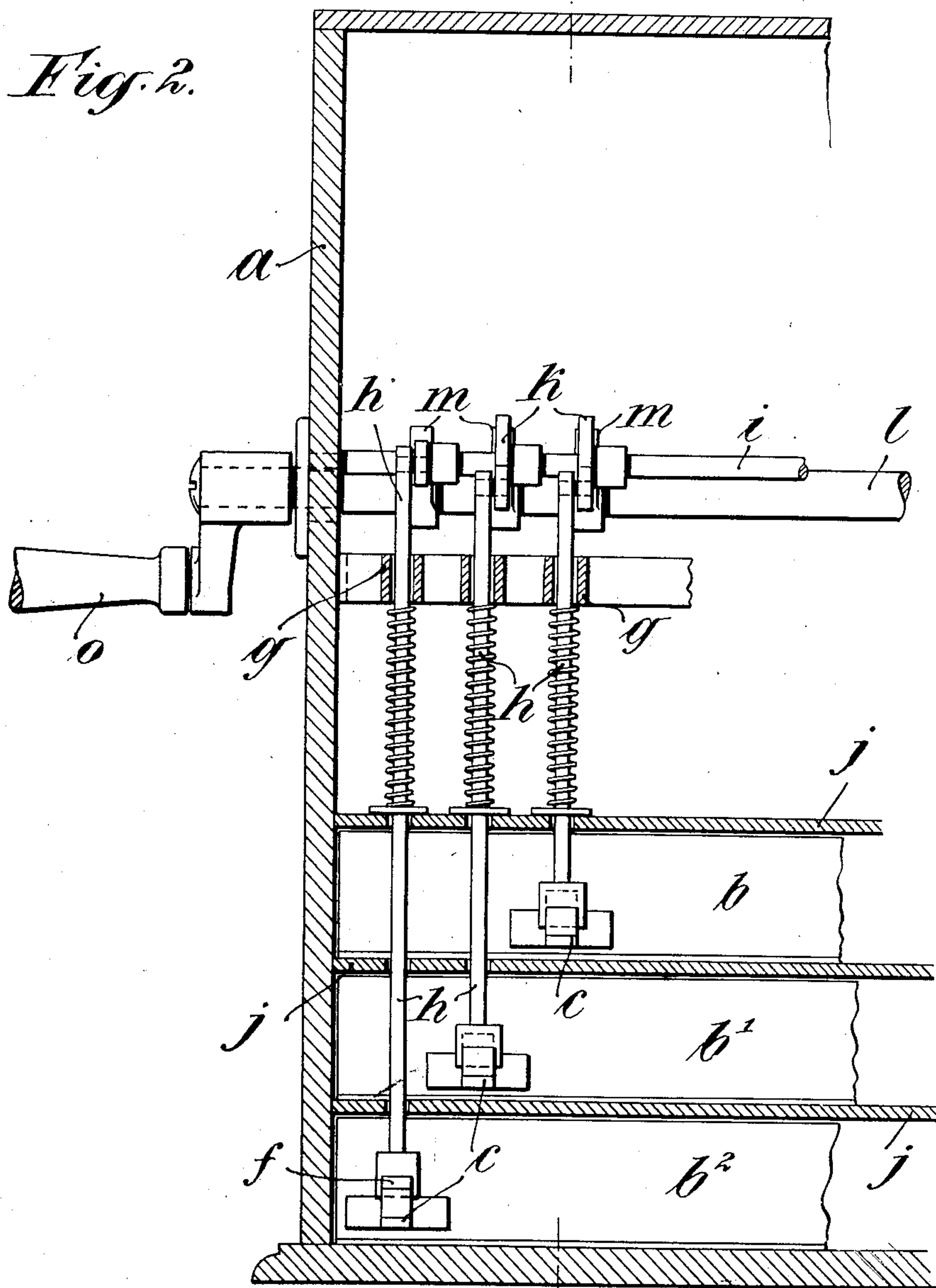
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3 SHEETS—SHEET 2.

*Fig. 2.*



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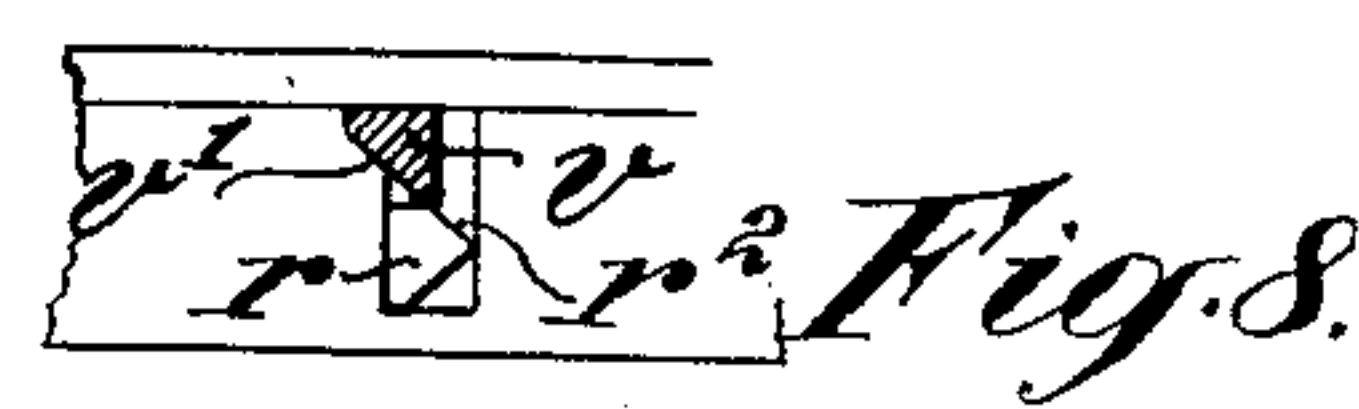
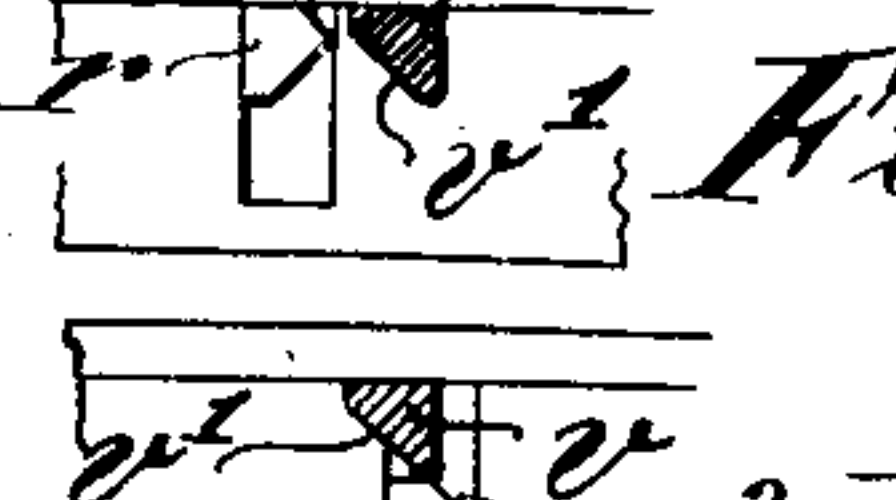
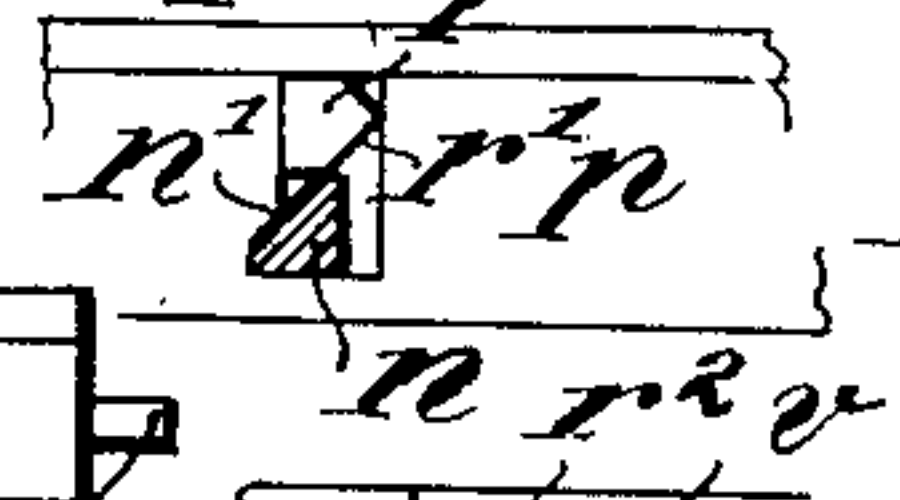
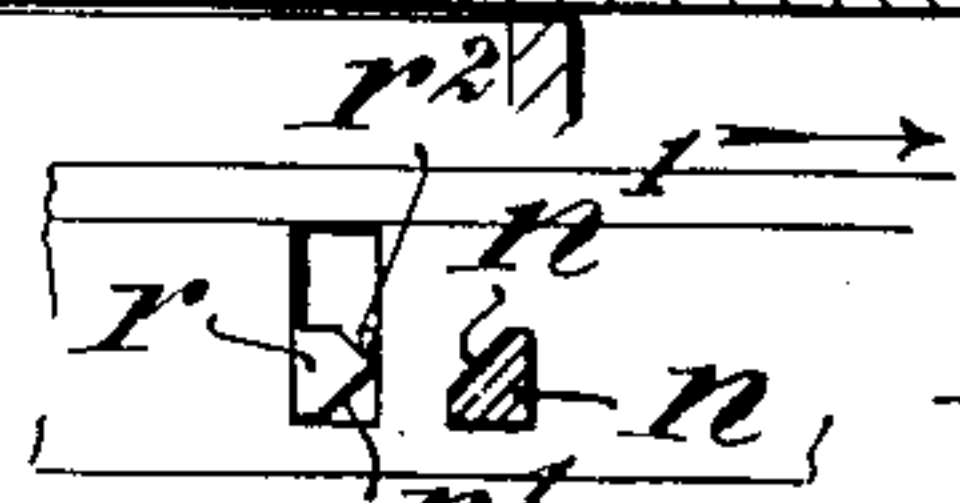
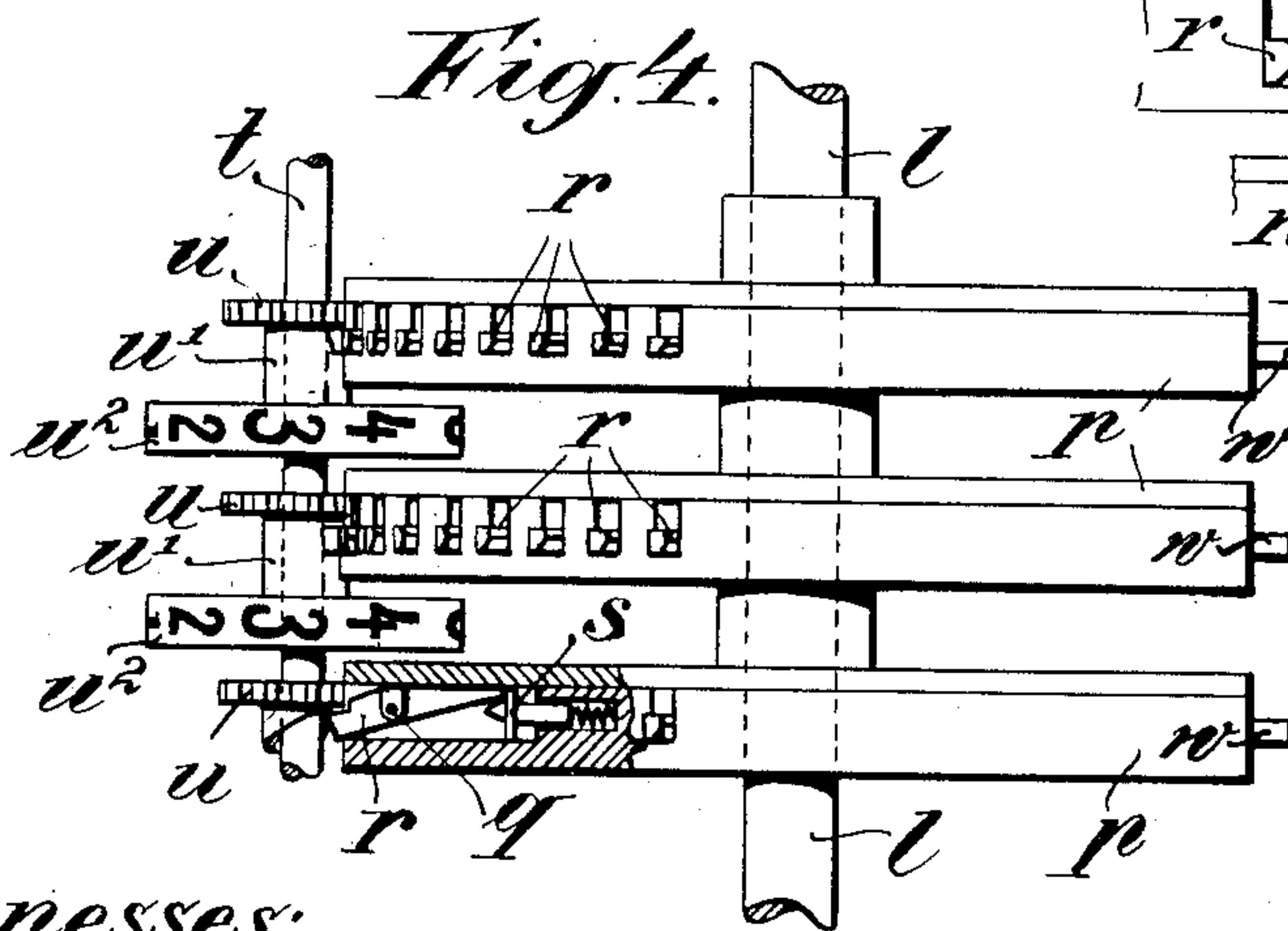
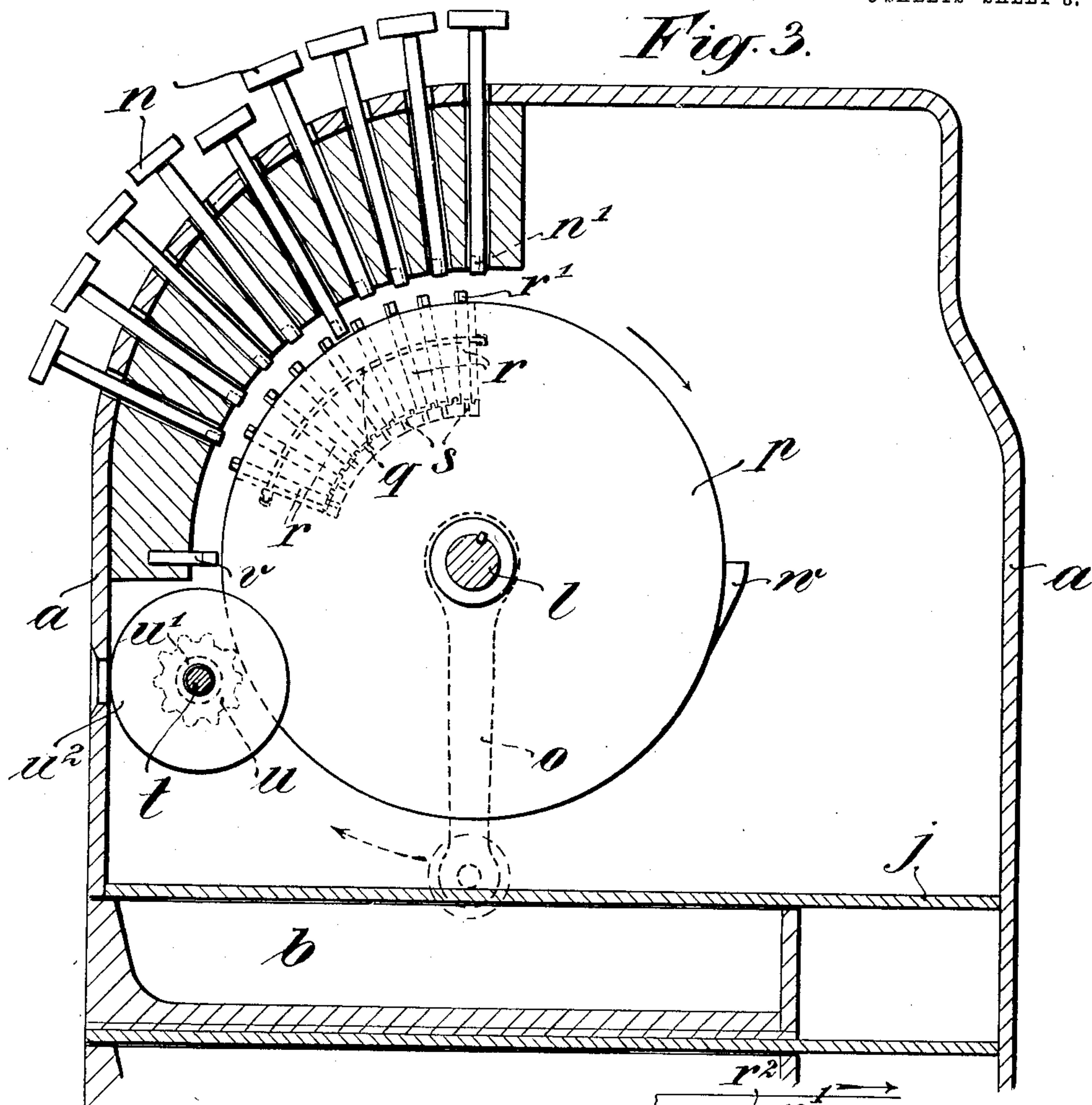
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

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## CASH-REGISTER.

No. 858,982.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed January 30, 1906. Serial No. 298,725.

*To all whom it may concern:*

Be it known that I, WOLDEMAR REINHOLD HEINITZ, a citizen of the Kingdom of Saxony, and a resident of Chemnitz, (whose post-office address is Neefestrasse 24,) have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification.

The subject of my invention is a cash register presenting a plurality of tills, the initial step for opening each of the latter being effected by the said till itself, while the actual opening is brought about by the rotation of the crank requisite for effecting addition, etc., in well known manner.

One form of construction of the new register is illustrated in the accompanying drawing, in which

Figure 1 is a vertical cross section of the apparatus, looking toward the right. Fig. 2 a fragmentary vertical longitudinal section. Fig. 3 is a vertical cross section of the apparatus looking toward the left and showing the addition mechanism actuated by the crank. Fig. 4 is a plan, partly in section, showing some of the adjusting-disks and figure wheels of the addition mechanism. Figs. 5-8 are sectional views, on an enlarged scale, illustrating the manner in which the teeth of the adjusting-disks are brought into and out of engagement.

In the case *a* of the register are located three tills *b*, *b*<sup>1</sup>, *b*<sup>2</sup>. At the back of each till is a peculiarly shaped catch furnished with two notches *d*, *e*, separated by an inclined plane *f*. *h* are three vertical spring-actuated rods, which receive guidance from the partitions *j* separating the several tills and also from the guide-piece *g*; the bottom ends of these rods normally engage in the notches *d* of the catches *c*. *k* are two-armed levers turning on the spindle *i*. On the main shaft *l* are mounted levers *m* corresponding in number to the number of tills provided. The levers *m* lie in the same plane as the levers *k*. On the main shaft *l* there are also mounted the adjusting-disks *p* (Fig. 3) of the mechanism for effecting addition, by means of which disks the cash values set by the keys *n*, or like means serving the same purpose, are registered in sequence. In each of these disks *p* nine teeth *r* are located, turning on an axis *q*, with their outer ends projecting beyond the circumference of the disk. These teeth *r* are retained in their end-position by means of spring-actuated pins *s* provided inside the disk and acting on the inner ends of the teeth.

Parallel with the main shaft *l* an auxiliary shaft *t* is mounted in the case *a*, and on this shaft *t* there are loosely mounted the toothed wheels *u*, each of which is rigidly connected to the figure-wheel *u*<sup>2</sup> by means of a boss *u*<sup>1</sup>. These toothed wheels *u* are so arranged relatively to the teeth *r*, that the latter, when in the posi-

tion shown in Fig. 4, on rotation of the disk *p* pass the toothed wheels *u* without engaging them. If, however, by means of the keys *n* or the like a cash value which is to be registered is set, in each row of keys a key, corresponding to the value being depressed in the ordinary manner in such cash registers, the bottom end of the key, which has a chamfer *n*<sup>1</sup>, comes into the path of the teeth *r* (chamfered at *r*<sup>1</sup> to correspond with the chamfer *n*<sup>1</sup> of the keys) which, in the direction of rotation lie behind the depressed key. When, therefore, the crank *o* is rotated in the direction of the arrow, the teeth *r*, which in the direction of rotation lie behind the depressed key, with their chamfered end strike in succession against the chamfered end *n*<sup>1</sup> of the depressed key. In this manner the teeth *r* are forced out of the inoperative position shown in Fig. 5 into the operative position shown in Fig. 6. In such operative position, the teeth *r* on further rotation of the crank engage with the wheels *u* of the addition mechanism.

The method of operation is as follows:—After the cash keys or other means provided to the same effect have been actuated, the till allotted to the particular cashier serving must be pushed back as shown at *b*<sup>2</sup> (Fig. 1). As will be seen from the drawing, the tills are kept locked by the rods *h* engaging in the notches *d* of the catches. When, however, a till is pushed back, the corresponding rod *h* is elevated owing to its traveling up the receding inclined plane *f*, and will then drop into the second notch *e*, whereby the till will be locked in the new position. Ordinarily the free ends of the levers *k* lie beyond the province of the levers *m*. When, however, one of the levers *k* is actuated by the elevation of one of the rods *h* in consequence of the corresponding till being pushed back, its free end will descend and come into the path of the corresponding lever *m*. By rotation of the crank-handle *o* this lever *m* will depress the free end of the lever *k* still further, so that the rod *h* jointed to its other end will be raised higher and will leave the recess *e* of the catch *d* and release the till. The latter will now be shot forward by means of a spring or opened in any other suitable manner, whereby the cashier can have access to its interior. At the same time, during the rotation of the crank, the number of teeth *r*, corresponding to the cash value set, will be thrown in, in the manner already described, and brought into engagement with the respective toothed wheels *u* of the addition mechanism. If, for instance, in the row of keys *n* shown in Fig. 3, the fifth key has been depressed, the five teeth *r* which lie behind this key in the direction of rotation, will be brought into engagement and will rotate the respective figure-wheel *u*<sup>2</sup> five places further. Simultaneously, during rotation of the crank, the cash value which has



been set is transmitted to the indicating mechanism, visible to the customer, in any suitable manner, as ordinarily in cash registers.

Immediately behind each toothed wheel  $u$  in the direction of rotation there is provided in the case  $a$  a stationary projection  $v$  having a chamfer  $v^1$  (Figs. 3, 7 and 8). After the addition mechanism has operated, the teeth  $r$  which have been thrown in strike with their second chamfer  $r^2$  against the chamfer  $v^1$  of the projection  $v$  and are thereby forced back from the operative position (Fig. 7) into the inoperative position (Fig. 8).

In order, finally, before completion of the rotation of the crank, to return the depressed keys  $n$  or the like into their initial position, each adjusting-disk is provided with a cam  $w$  which comes below the ends of keys  $n$  or the like and presses them outward again.

It will be obvious that the motion of the crank for effecting unlocking of the till may be transmitted in any suitable manner whatsoever, whether by mechanical, electrical, pneumatic or other means.

The essential feature of the invention consists in the initial step for opening of the till being effected by the latter itself—that is to say, by the motion of the same—while actual opening of the till is then brought about by the rotation of the crank requisite for effecting addition, etc.

Naturally devices may be provided, for instance, for preventing the tills from being opened by unauthorized persons. Furthermore, provision is made for hindering release of the crank until one of the tills is pushed back. Pushing in of several of the tills simultaneously can likewise be prevented in any suitable manner.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a cash register, in combination, a plurality of sliding tills, a plurality of devices for locking the latter, each of which devices is initially actuated on recession of the

till which it controls, a crank for effecting the ordinary addition and like operations, and means for transmitting the motion of the crank to the initially actuated locking device, whereby the latter is completely actuated and the till controlled by it released, substantially as described.

2. In a cash register, in combination, a plurality of sliding tills, each presenting a catch, a plurality of locking rods engaging with the said catches and each partially elevated on recession of the till which it controls, a plurality of pivotal levers each turned by one of the said rods on its partial elevation, a crank for effecting the ordinary addition and like operations, and means for transmitting the motion of the crank to the actuated pivotal lever and partially raised locking rod, whereby the latter is fully raised, so as to release the till controlled by it, substantially as described.

3. In a cash register, in combination, a plurality of sliding tills, each presenting a catch possessing two notches separated by an inclined plane, a plurality of locking rods each normally engaging in one of the notches and caused to ascend to the second notch on recession of the till which it controls, a plurality of double-armed pivotal levers jointed to the said rods, a crank for effecting the ordinary addition and like operations, and means for transmitting the motion of the crank to the actuated pivotal lever, whereby the partially raised rod is fully raised, so as to release the till controlled by it, substantially as described.

4. In a cash register, in combination, a plurality of sliding tills, each presenting a catch possessing two notches separated by an inclined plane, a plurality of locking rods each normally engaging in one of the notches and caused to ascend to the second notch on recession of the till which it controls, a plurality of double-armed pivotal levers jointed to the said rods, a crank for effecting the ordinary addition and like operations, a shaft on which said crank is mounted, a plurality of arms projecting from the shaft into the path of which the free ends of the pivotal levers enter on ascent of the locking rods into the second notch, whereby on rotation of the crank the levers are depressed and the rods released from the catches, substantially as described.

The foregoing specification signed at U. S. Consulate, Chemnitz, this 9th day of January, 1906.

WOLDEMAR REINHOLD HEINITZ.

In presence of—

FREDERICK J. DIETZMAN,  
CARL FR. WEBER.