W. R. HEINITZ.

CASH REGISTER.

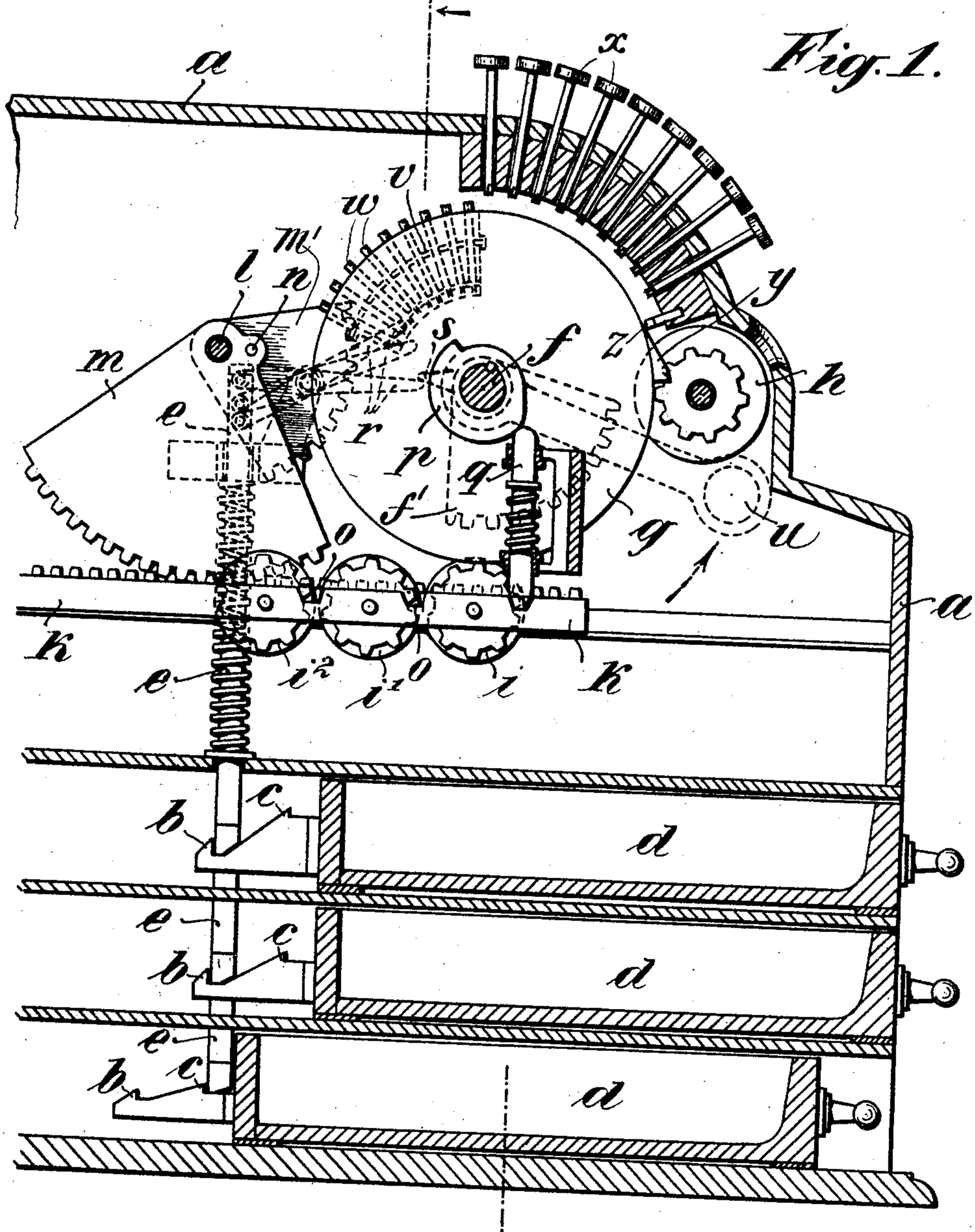
APPLICATION FILED MAR. 26, 1907.

905,072.

Patented Nov. 24, 1908.

3 SHEETS—SHEET 1.

Fig. 1.



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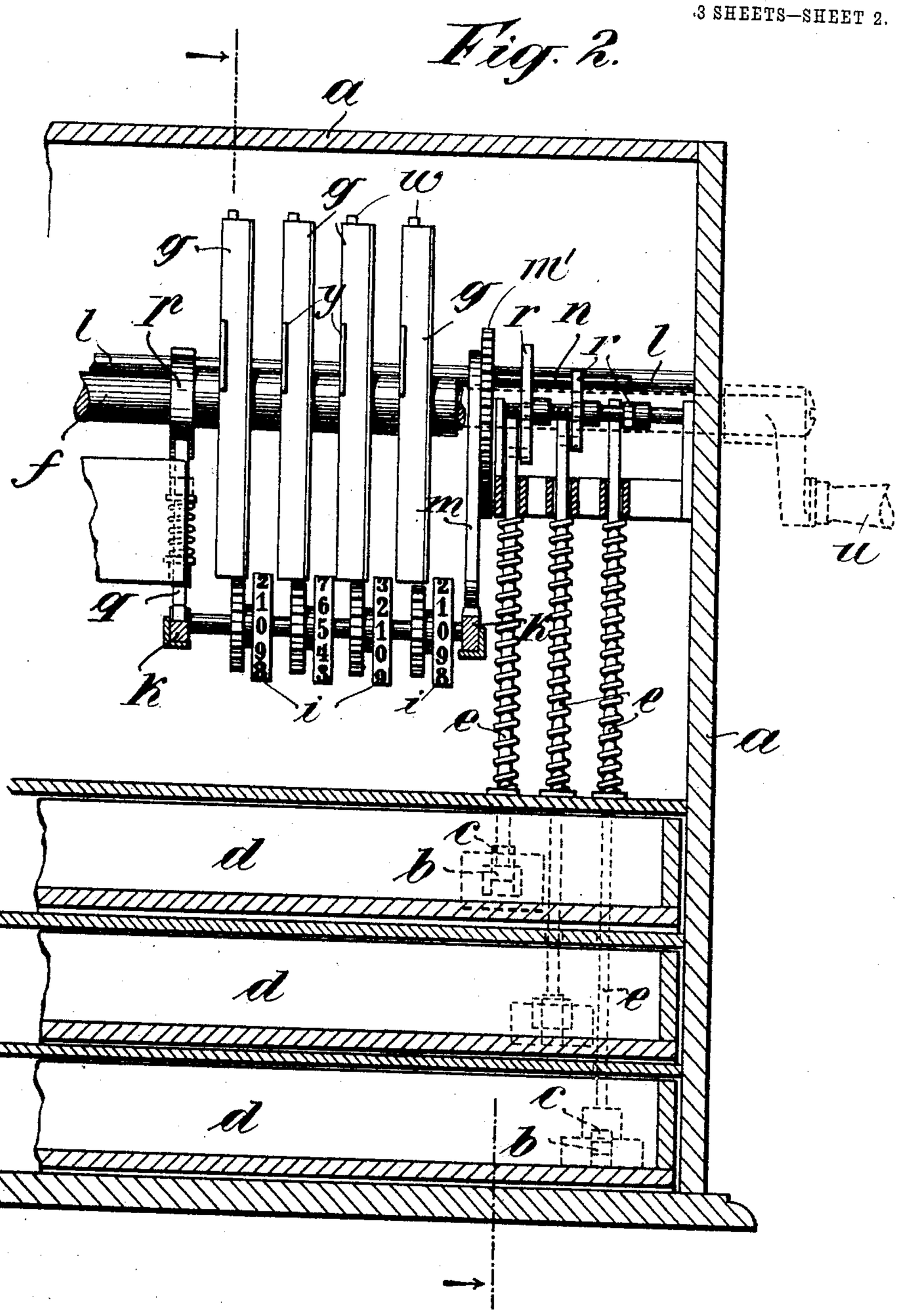
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

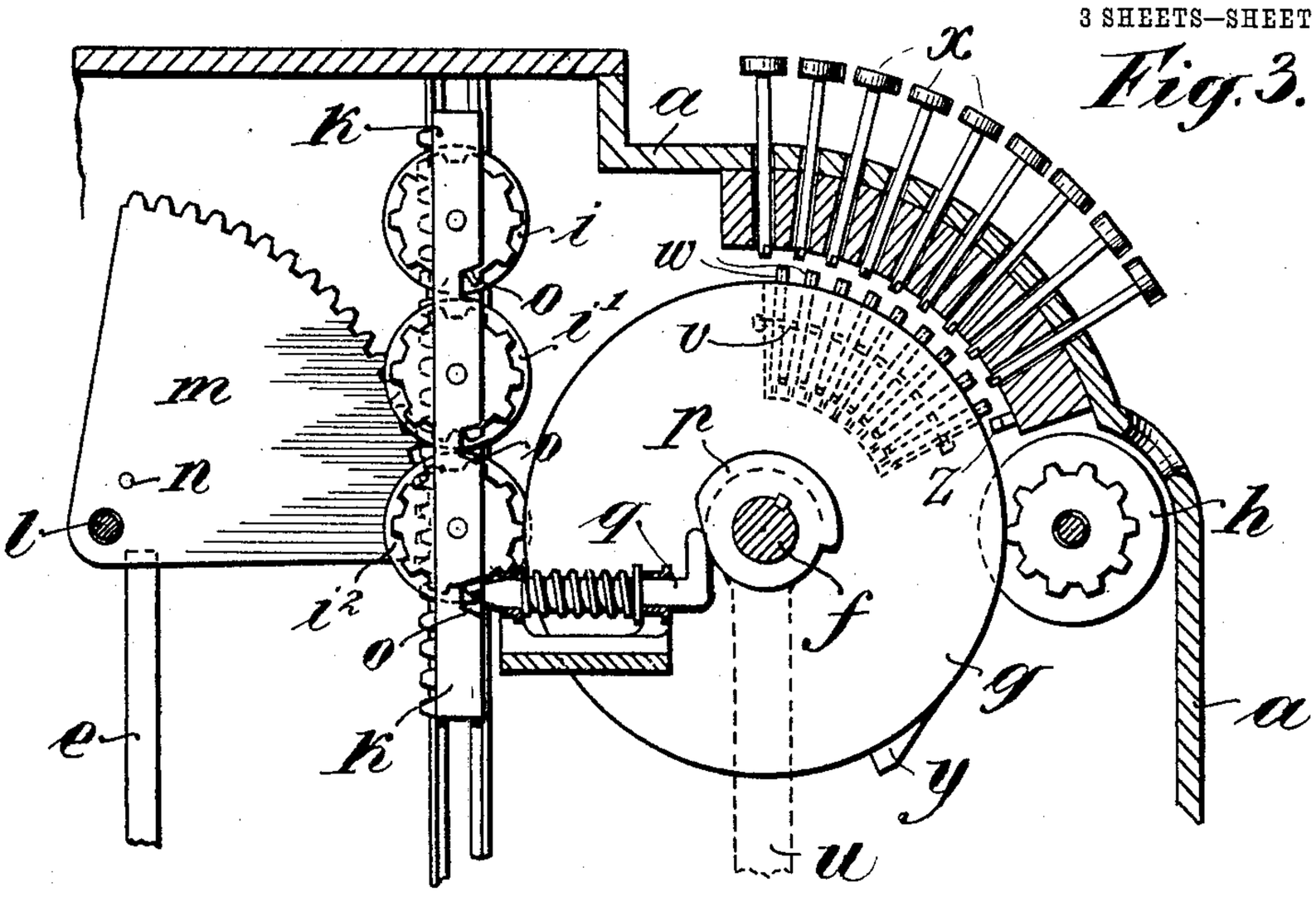

Fig. 3.

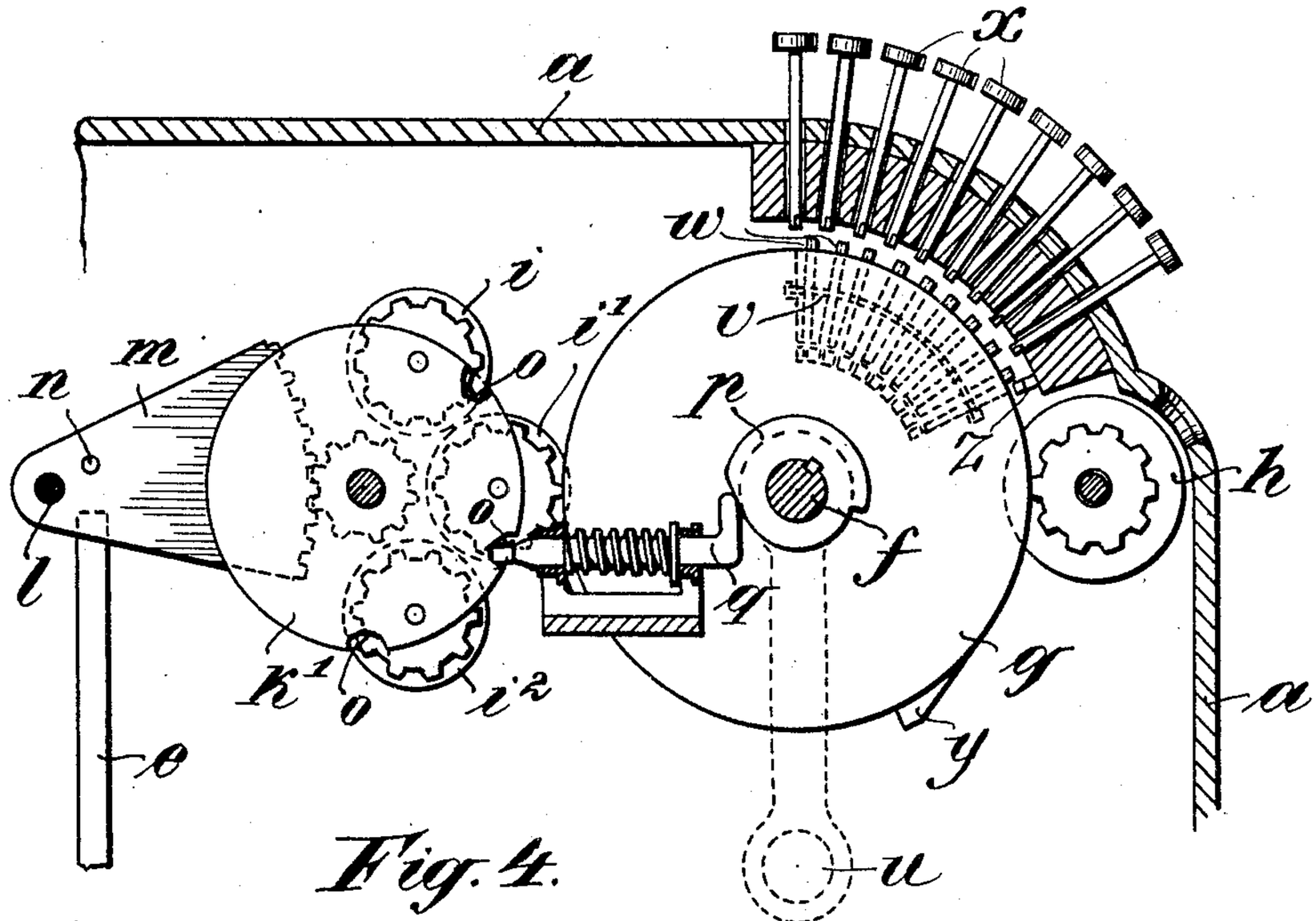

Fig. 4.

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UNITED STATES PATENT OFFICE.

WOLDEMAR REINHOLD HEINITZ, OF CHEMNITZ, GERMANY, ASSIGNOR TO THE FIRM OF SCHUBERT & SALZER MASCHINENFABRIK AKTIENGESELLSCHAFT, OF CHEMNITZ, GERMANY.

CASH-REGISTER.

No. 905,072. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed March 26, 1907. Serial No. 364,582.

To all whom it may concern:

Be it known that I, WOLDEMAR REINHOLD HEINITZ, a citizen of the Kingdom of Saxony, and resident of Chemnitz, Germany, (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 having a plurality of tills and in which besides the main counting device, special-devices for counting, and the like are provided for each till.

The improved apparatus differs from prior registers, in that for motion of these special devices into the working position, special levers or like members are dispensed with, motion of the tills themselves effecting initial adjustment of the corresponding device into its working position, whereupon registration can be effected by operating crank, lever, key or the like.

The manner in which the cash keys of the register are actuated, whether arranged for depression, turning, as setting-levers or the like, is of no importance. The novel feature of the new register is that for initial adjustment of the desired special device, adjustment-members are dispensed with, the till bringing the respective device into the working position direct. The succeeding operation of the mechanism of the special device, however, is not effected by, for instance, continued motion of the till, but by rotation of a crank, setting of levers, depression of keys or the like, which preferably simultaneously perform the other functions of the register (addition and printing with the main mechanism etc.)

Three forms of construction of the new register are shown in the accompanying drawings.

Figure 1 is a cross section and Fig. 2 a longitudinal section illustrating a register in which the special counting devices are shifted horizontally; Fig. 3 illustrates in vertical section a register in which the special counting devices shift in vertical direction, and Fig. 4 by a similar view illustrates a register in which the special counting devices are mounted in a rotary frame.

In the case *a* of the register are located the tills *d*, each provided with a catch having two notches *b*, *c*, in which vertical spring-actuated rods *e* engage and thus lock the till. The said rods are pressed and held down by compression springs *e'* bearing upward against a fixed abutment on the frame and downward against a collar e^2 on the rod. On the main shaft *f* is mounted the operating mechanism *g*, which can act both on the main counting mechanism *h* and on the special counting mechanisms *i*, i^1, i^2. The latter are mounted in a horizontal (Figs. 1 and 2) or a vertical (Fig. 3) slide *k*, or in a frame k^1 (Fig. 4), provided with teeth. On a second shaft *l* is mounted a toothed segment *m*, from which projects laterally a pin *n*. The latter is located above the rods *e* and is of such length that each rod *e* can engage it.

The toothed segment meshes with the rack of the slide *k* or the toothed wheel of the frame k^1. On the main shaft *f* is also mounted a cam disk *p* which acts on a sliding pin *q*. In the slide or frame notches *o* are provided, into which the pin *q* can be pressed by the cam *p*, so that unintentional shifting of the special counters cannot take place during actuation of the register.

r are levers jointed to the rods *e* and each engaged by an arm *s* mounted on the main shaft, when brought into the path of the arm by a rod *e* being raised from the lower notch *b* to the higher one *c*, by the till being pushed back as shown in the case of the lowermost till.

When a till is pushed in, and its rod *e* thus raised, the latter will strike the pin *n*. The segment *m* will thus be turned, corresponding to the lift of the rod *e*, and the slide *k*, or frame k^1, will be actuated, so that the special counter corresponding to the till pushed in will entirely be brought into the engagement position. On the rod *e* dropping into the upper notch *c*, the top end of the rod will retreat from the pin *n* again (Fig. 1). Upon the main shaft being now rotated, the special counter which has just been set will be actuated by the actual operating mechanism and at the same time the rod *e* will be raised from the upper notch by the arm *s* acting on the lever *r*, without, however, again striking the pin *n*. The till is thus released and can be automatically opened in well-known manner by means of a spring or the like.

Toward the end of the complete rotation of the main shaft *f*, a toothed segment f^1 fixed on the latter comes into engagement

with a second toothed segment m^1 mounted on the shaft l and rigidly connected with the toothed segment m. The latter is thus turned back again, and the slide k, or frame k^1, therefore, returned to the position in which all the special counters are out of engagement with the actual operating mechanism.

Instead of the rods e acting directly upon the segment, intermediate members may naturally be provided for adjusting the special mechanisms. The means employed for transmission of the motion of the rods to the slide or frame carrying the special mechanisms may in fact be any desired.

The essential feature of the invention, as already remarked, is the shifting of the special mechanisms into the working position solely by means of the movement of a till without the use of special setting-members. Such tills may manifestly be assigned to the use of separate clerks or salesmen so that the transactions of each salesman will be registered not only on the main counting mechanism, but also on the separate counting mechanism assigned to such salesman and which is brought into operative position by the manipulation of his particular till, as already explained.

The actual operating mechanism of the register may be of any desired description and in itself forms no part of my invention. In the particular constructions illustrated the main shaft f is shown as being provided with a crank u, and the adjusting disks g have mounted in them, on an axis v, spring-actuated teeth w. The latter lie normally in inoperative position, but are on contacting with a depressed cash key x forced laterally into an operative position, so that during rotation of their disks g they may engage the toothed wheels mounted on the shafts of the figure wheels of the main counting device h and the special counters i, i^1, i^2. The lateral movement of the respective teeth w to cause them to engage the counting wheels as above stated, is effected by the contact of the beveled end of the tooth with the selected and depressed key x in a manner well known in the art and one mode of effecting which is described in Letters Patent No. 858,982, granted to me the 2nd July, 1907. This particular operation has no essential connection with the particular improvement herein claimed. The depressed keys x are returned to their initial position by means of a cam y on each adjusting disk, while the teeth w are restored to their inoperative position on striking a stationary projection z.

Having thus described, what I claim as new and desire to secure by Letters Patent is:

1. In a cash register, in combination a plurality of sliding tills, a plurality of rods, means for elevating the said rods on recession of the tills, a special counting device for each of the tills, means for transmitting the motion of the said rods to the said special counting devices for the purpose of initially adjusting the latter, and means for operating the initially adjusted special device, substantially as described.

2. In a cash-register, in combination, a plurality of sliding tills, a plurality of rods, means for elevating the said rods on recession of the tills, toothed means, special counting devices for the tills mounted on the toothed means, a toothed segment meshing with the latter and turned by the elevated rod, whereby the segment initially adjusts the special counting device corresponding to the elevated rod and means for operating the initially adjusted special device, substantially as described.

3. In a cash register, in combination, a plurality of sliding tills, a plurality of rods, means for elevating the said rods on recession of the tills, a toothed case presenting notches, special counting devices for the tills mounted in the toothed case, a toothed segment meshing with the latter and turned by the elevated rod, whereby the segment initially adjusts the special counting device corresponding to the elevated rod, a sliding pin engaging in the notches of the said toothed case, a crank shaft and a cam on the latter actuating said pin, whereby the toothed case can be temporarily locked in position, and means for operating the initially adjusted special device, substantially as described.

4. 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, special counting devices for the tills, means for transmitting the motion of the initially actuated locking devices to the said special counting devices for the purpose of initially adjusting the latter, means for operating the initially adjusted special counting device and means for disengaging the initially actuated locking device, substantially as described.

5. 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 by recession of the till which it controls, toothed means, special counting devices for the tills mounted on the toothed means, a toothed segment meshing with the latter and turned by the initially actuated locking rods, whereby the segment initially adjusts the special counting device corresponding to the actuated locking rod, means for operating the initially adjusted special counting device and means for disengaging the initially actuated locking rod, substantially as described.

6. In a cash register, the combination with a series of independent counting devices, of a series of cash receptacles for different clerks, arranged to be operated by hand, means controlled by the cash receptacles for setting the counting devices, according to the movement of the receptacles, and means for operating said counting devices.

7. In a cash register, the combination of a series of independent counting devices, a series of cash receptacles for different clerks or salesmen and setting means for the said counting devices, controlled by the several cash receptacles, serving to set either of the independent counting devices in operative position, by the manipulation of the corresponding cash receptacles.

8. In a cash register, the combination of a series of independent counting devices resting normally in inoperative position, a series of cash receptacles for the different clerks, arranged to be operated by hand, independent setting means for each of said counting devices, controlled by the several cash receptacles and serving to shift a particular counting device into operative position by the manipulation of the corresponding cash receptacle, and means for operating said counting devices.

9. In a cash register, the combination with a series of independent counting devices, of a series of cash receptacles for different clerks arranged to be operated by hand, means controlled by the cash receptacles for setting the counting devices according to the movement of the receptacles, and means to lock said counting devices in adjusted position.

The foregoing specification signed at Chemnitz this 12th day of March 1907.

WOLDEMAR REINHOLD HEINITZ.

In presence of—
FREDERICK J. DIETZMAN,
JOHANNES BLEICHE.