

No. 773,081.

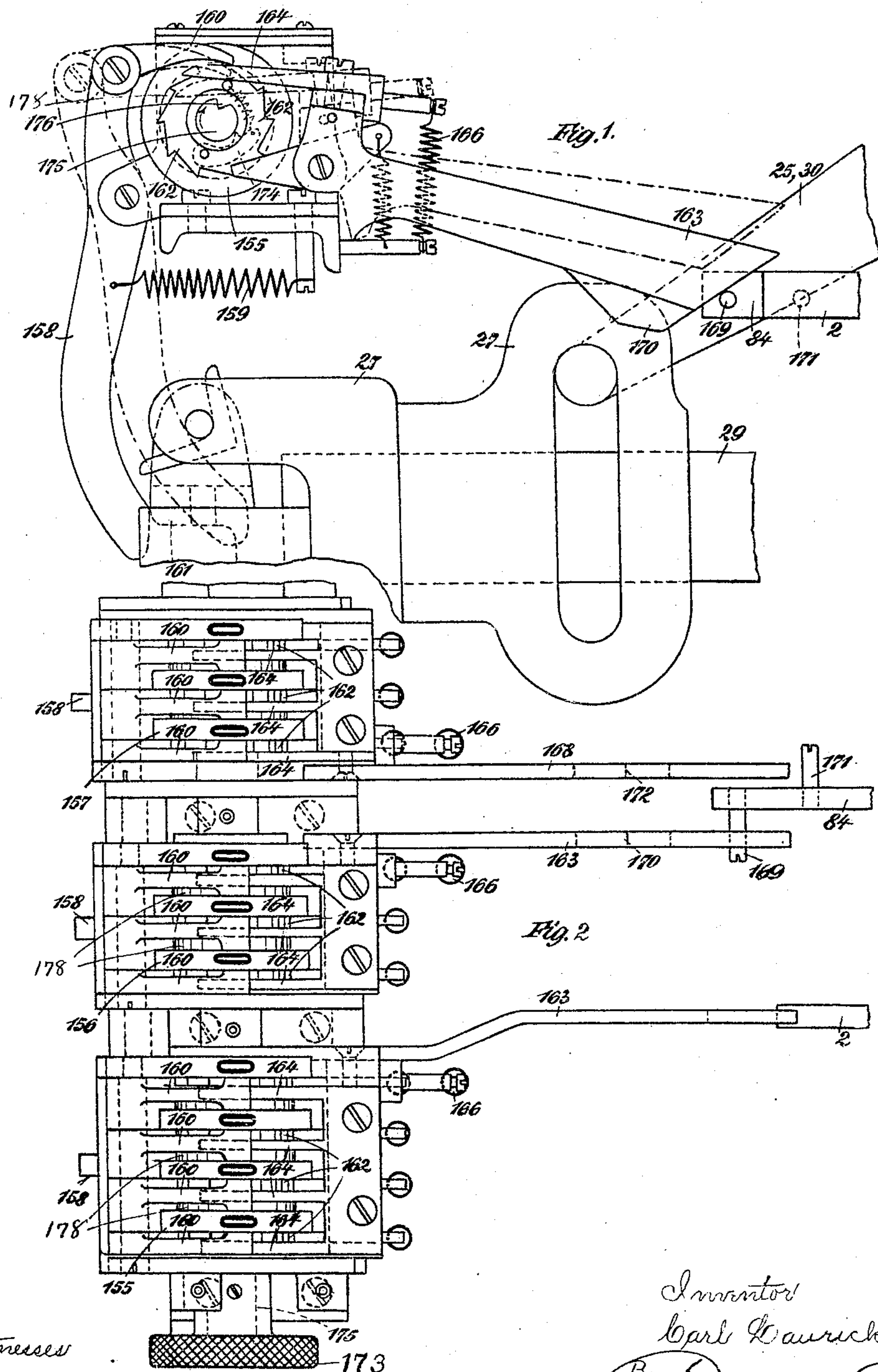
PATENTED OCT. 25, 1904.

C. LAURICK.
CASH REGISTER.

APPLICATION FILED APR. 25, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
Chas. M. Aldom
Adaide Claire Gleason.

Inventor
Carl Laurick
By *Richard R.*
Attorneys

No. 773,081.

PATENTED OCT. 25, 1904.

C. LAURICK.
CASH REGISTER.

APPLICATION FILED APR. 25, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3.

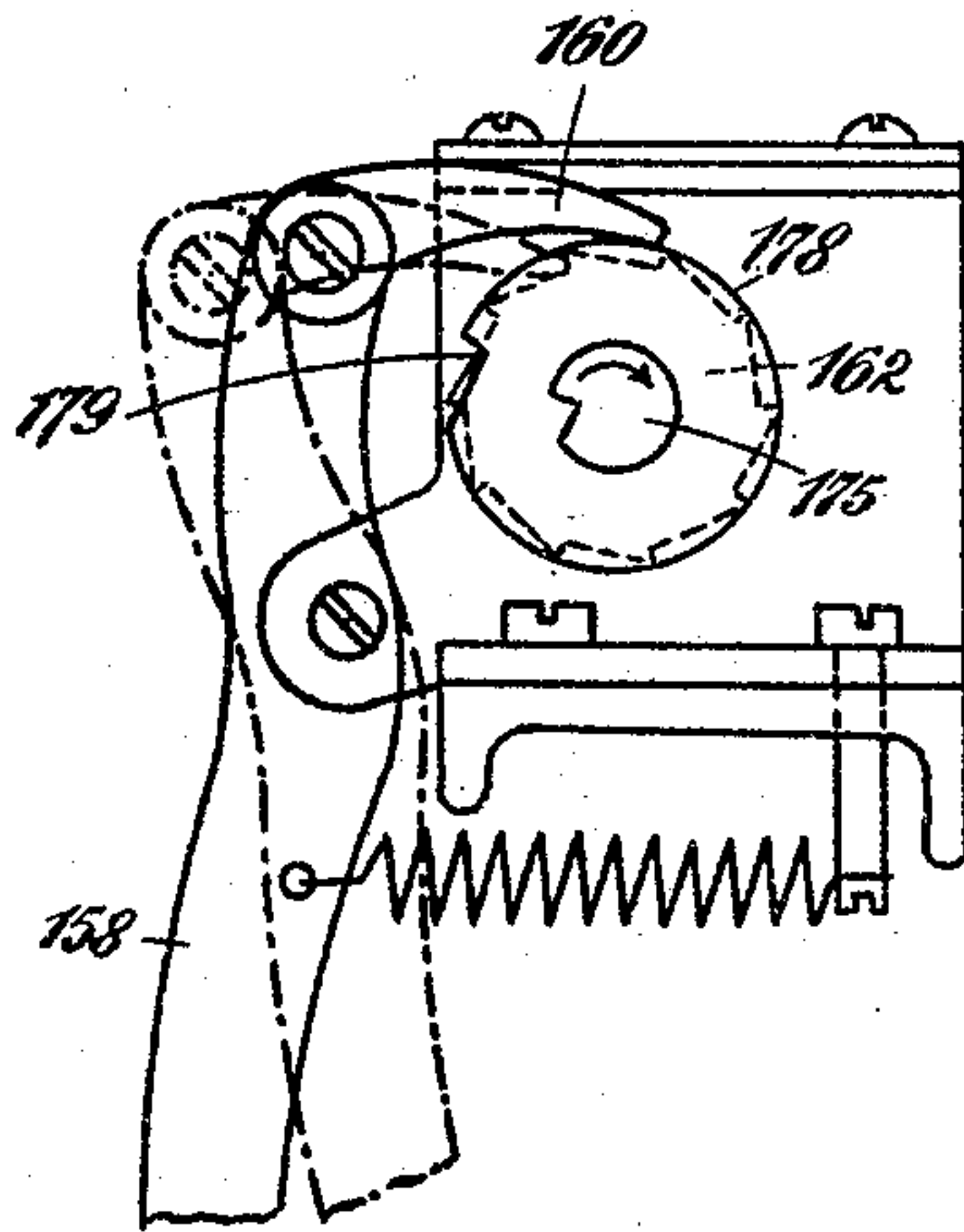
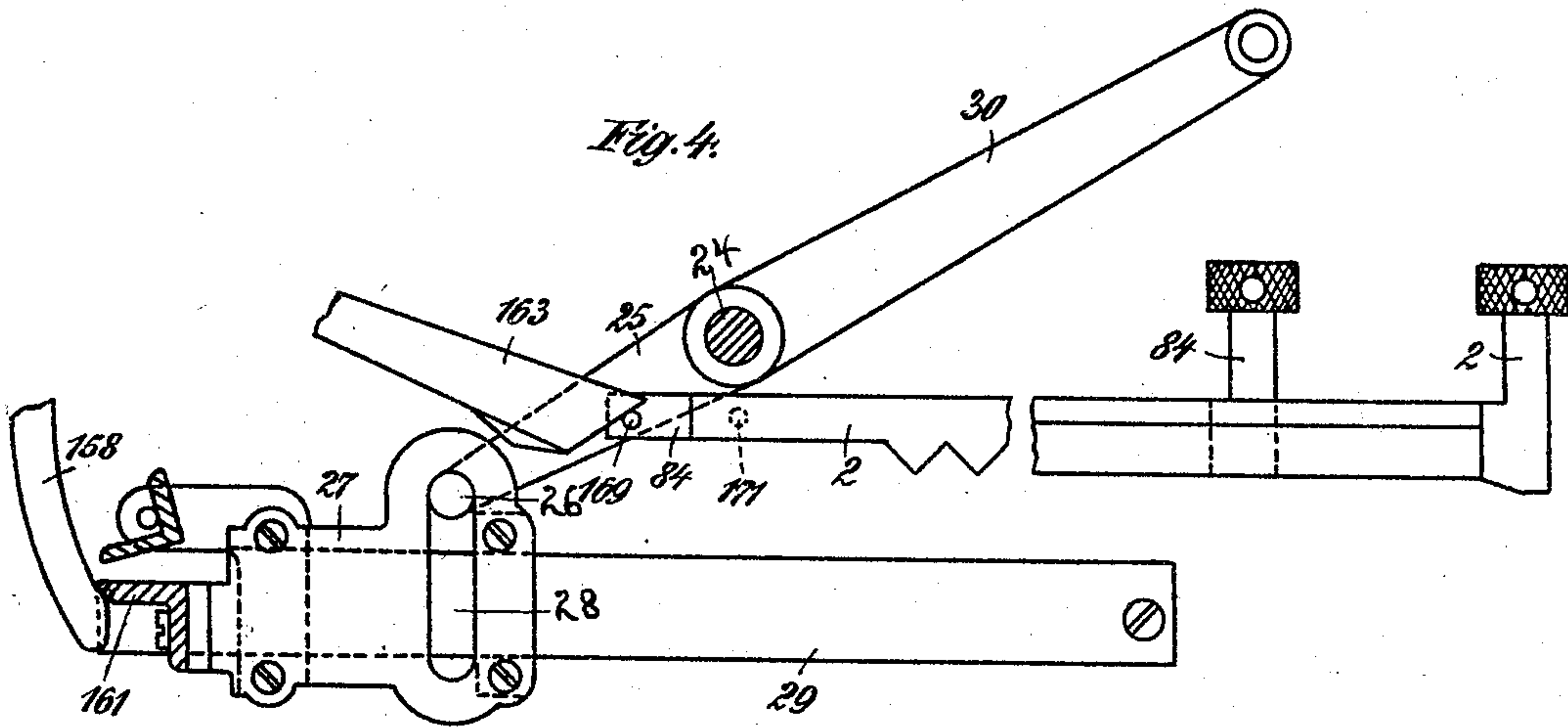


Fig. 4.



Witnesses

James M. Shan
Malcolm Donaldson

Inventor

Carl Laurick

By *Richard H. Co*
Attys

UNITED STATES PATENT OFFICE.

CARL LAURICK, OF BERLIN, GERMANY, ASSIGNOR TO NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 773,081, dated October 25, 1904.

Application filed April 25, 1902. Serial No. 104,709. (No model.)

To all whom it may concern:

Be it known that I, CARL LAURICK, a subject of the King of Prussia, German Emperor, and a resident of Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Cash-Registers, of which the following is a full, clear, and exact description.

My invention has more particular relation to cash-registers having a plurality of independent registering devices or counters, and has for its object to provide means in a machine of this character for controlling the operativeness of said counters, whereby to pre-determine which counter or counters shall be operated.

In the accompanying drawings, Figure 1 represents a side elevation of the counters and the operating mechanism therefor. Fig. 2 represents a plan view of the same. Fig. 3 represents a detail view of the counters, and Fig. 4 represents a detail view of the main operating-handle and the setting mechanism.

In this particular instance I have shown my improvements as applied to a type of machine in which setting elements are moved to predetermine which counter shall be operated and then the proper counter or counters are actuated upon the subsequent operation of an operating-handle, and I have used these counters more specifically for the purpose of securing a registration of the number of operations of the machine of a special character, such counters being ordinarily known as "special counters," although, of course, I do not wish to limit myself in the claims merely to the use of my improvements as applied to special counters.

Referring to the accompanying drawings, I have shown three of such counters, each being mounted upon the shaft 175, and of these three counters 155 represents the so-called "customers-counter," being intended to register the number of successive operations of the machine, 156 represents the so-called "cash-counter," being intended to represent the number of cash transactions registered upon the machine, and 157 represents the so-called "credit-counter," being intended to

register the number of credit sales. The actuating mechanism for each of these counters is the same. Therefore I shall describe it only for counter 155, as shown in Fig. 1. The operating-lever 158 is suitably pivoted to the main frame of the machine at its middle portion and at its upper end carries three operating-pawls, one for each of the wheels of the counter 155. These pawls are arranged to engage ratchet-wheels 162, formed upon the sides of the counter-wheels; but the pawls are normally held out of engagement with their ratchet-wheels by means of fingers 164, which are attached to the rearward end of a lever 163, these fingers 164 extending between the ratchet-wheels 162. When the lever 163 is rocked into the position shown in dotted lines in Fig. 1, these fingers 164 are depressed below the level of the ratchet-wheels 162, and thereby the pawls 160 are allowed to drop down for the purpose of engaging their respective ratchet-wheels; but in order to have only one unit add upon the counter at each successive actuation the pawl 160 for the units-wheel is the only one which engages its ratchet 162 normally, and the transfer from the units-wheel to the tens-wheel after the units-wheel has made one complete revolution and also the transfer from the tens-wheel to the hundreds-wheel is effected by the device shown in Fig. 3. The units-wheel has fast upon it a disk 178, which has formed in it a notch 179, and the operating-pawl 160 for the tens-wheel rests upon this disk 178, so that it is kept out of engagement with its respective ratchet-wheel 162 until the said units-wheel and the disk 178 have made one complete revolution, whereupon the pawl 160 for the tens-wheel drops into the notch 179, and thereupon with the actuation of the lever 158, as hereinafter described, both the units-wheel and the tens-wheel will be moved, thereby effecting the transfer, and similarly the tens-wheel has a disk 178 with a notch 179, upon which the operating-pawl for the hundreds-wheel rests, so that the hundreds-wheel is actuated only when the tens-wheel has made a complete revolution, and thereby brought the notch into position to allow the operating-

pawl for the hundreds-wheel to engage its respective ratchet and operate its counter-wheel.

The method of reciprocating the levers 158, and thereby reciprocating the pawls 160 to add a unit upon each counter at each successive operation, provided the counter is set for operation in the manner to be described, will now be set forth. The main operating-handle of the machine (see Fig. 4) oscillates about a shaft 24, and its lower arm 25 carries a pin 26, which engages a slot 28, formed in a sliding carriage 27, which slides upon guide-pieces 29. The rearward end of this carriage 27 has attached to it a horizontal bar 161, which extends across the path of the lower end of all of the operating-levers 158. In the normal operation of the machine the operating-handle 30 is given an oscillation backward and forward, and the consequent reciprocatory movement of the carriage 27 will cause the bar 161 to engage the levers 158, and upon the return of the handle 30 to normal position the levers 158 will all be forced rearward into the position shown in full lines in Fig. 1, and if any of the levers 163 have been operated, as later described, to depress the fingers 164 for any particular counter then the movement of the lever 158 for that counter will cause one unit to be added thereon, whereas in the counters where the fingers 164 remain elevated the operating-pawls 160 will slide idly over said fingers without having any operative effect upon the counter. Upon the forward movement of the carriage 27 and the consequent withdrawing of the bar 161 from contact with the levers 158 the lower ends of said levers are drawn forward by means of springs 159, so as to permit the actuation of said levers upon the return movement of said carriage.

I will now describe the mechanism used to predetermine which of said counters shall be operated. I have provided an adjustable setting element or slide 2, which is intended to be adjusted at each operation of the machine, and the rearward end of said slide coöperates with the beveled portion on the forward end of the lever 163 for the customers-counter 155. It will thus be seen that when said slide 2 is adjusted rearward the rearward end of the slide will force the lever 163 upward into the position shown in dotted lines in Fig. 1, thereby permitting the operation of the customers-counter in the manner hitherto described. This slide 2 may be used as a clerks-lever, having various adjusted positions for the separate clerks, so that each clerk will move the same upon each operation of the machine, and thereby since the customers-counter will be operated at each operation of the machine a complete record will be left of the number of times the machine has been operated, and, if desired, a suitable locking mechanism could be used to compel the movement of this slide at each operation of the machine.

The means for controlling the operation of the cash-counter and the credit-counter comprises another adjustable setting element or slide 84, which at its rearward end carries two laterally-projecting pins 169 and 171, the pin 169 coöperating with the beveled portion of the lever 163 for the cash-counter 156 and the pin 171 coöperating with the beveled portion of the lever 163 for the credit-counter 157. When the slide 84 is in one of its adjusted positions for the registration of a cash transaction, the pin 169 engages the lever 163 of the cash-counter and raises said lever into the position shown in Fig. 1 in dotted lines, and thereby depresses the fingers 164 of the cash-counter and permits the operation of said counter when the operating-handle 30 is moved in the manner hitherto described. When the slide 84 is adjusted to its second position, the pin 169 passes on behind the extension 170 of its lever 163 and allows the same to drop back to normal inoperative position; but the pin 171 now engages with its respective lever 163 to move the same into forward position, and thereby permit the operation of the credit-counter. Thus it will be seen that upon the movement of the clerks-slide 2 from normal position the customers-counter will be set for operation, and upon the adjustment of the slide 84 to either one of its two positions for a cash transaction or a credit transaction the counter corresponding thereto will be set for operation, this subsequent operation taking place, as hitherto explained, upon the operation of the main operating-handle 30.

In order to provide for the turning to zero of all of said counters, I have formed a knurled knob 173 (see Fig. 2) upon the outer end of the shaft 175, and I have also formed in the shaft 175 a longitudinal groove 176, (see Fig. 1,) and the various counter-wheels are provided with pawls 174, which are spring-pressed toward the shaft 175, so that upon the rotation of said shaft in the direction shown by the arrow in Fig. 1 the pawls 174 will engage the groove 176 as soon as the groove has been brought into position opposite the various pawls, and thereby the counter-wheels will all be picked up successively and returned to zero position, this zero-setting device being well known in the art.

While the form of mechanism here shown and described is admirably adapted to fulfil the objects primarily stated, it is to be understood that I do not care to confine myself to any one form of embodiment of the invention here disclosed, for it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow.

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

1. The combination with a plurality of independent counters, of independent operat-

ing devices for the respective counters, means for normally holding the operating devices out of operative positions, and a setting-slide controlling said means and movable to different positions in which it will actuate the means to permit the operation of different counters.

2. The combination with a plurality of independent counters, of independent operating-pawls for the respective counters, means for normally holding the pawls out of engagement with the counters, a setting-slide, and devices carried by said slide for operating the aforesaid means to permit the pawls of the different counters to engage the same when the slide is in different adjusted positions.

3. In a register, the combination with a series of independent counters, of a series of operating-levers, one for each counter, operating-pawls carried by the levers, mechanism for operating said levers, devices for normally holding the pawls out of engagement with the counters, and an adjusting-slide having projections arranged to engage said holding devices to render them ineffective as desired whereby the desired pawls will engage their respective counters.

4. In a register, the combination with a series of independent counters, of operating-levers, one for each counter, an operating mechanism for actuating all of said levers, pawls mounted on the respective levers and arranged to engage the respective counters when released, movable devices for normally holding the pawls out of engagement with the counters, and a single adjusting element controlling said movable devices whereby the movement of said element to different positions will permit the operation of different counters.

5. In a register, the combination with a

plurality of independent counters, of an operating-lever for each counter, a pivoted pawl mounted on each lever, a pivoted member arranged to engage each pawl to normally hold it out of engagement with its counter, and an adjusting-slide having projections arranged to successively engage the pivoted members and thereby control the counters.

6. In a multiple adding mechanism for cash-registers or the like, the combination with a plurality of independent counters, of a main actuator; independent operating-levers intermediate said actuator and the respective counters; operating-pawls mounted on said levers; disengaging means for normally holding the pawls out of engagement with the counters; and adjustable devices having a plurality of different operative positions, said devices controlling said disengaging means to permit the desired pawl to engage its respective counter when the corresponding adjustable device occupies any one of said plurality of operative positions.

7. A multiple adding mechanism for cash-registers or the like, the same comprising a main actuating-slide, a series of independent levers actuated upon each operation of the slide, a plurality of independent counters including ratchet-wheels, pawls mounted on the levers and arranged to engage the ratchet-wheels, an independent device for each counter arranged to hold its pawl out of engagement with its ratchet-wheels, and an adjustable element arranged to control a plurality of said independent devices.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CARL LAURICK.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.