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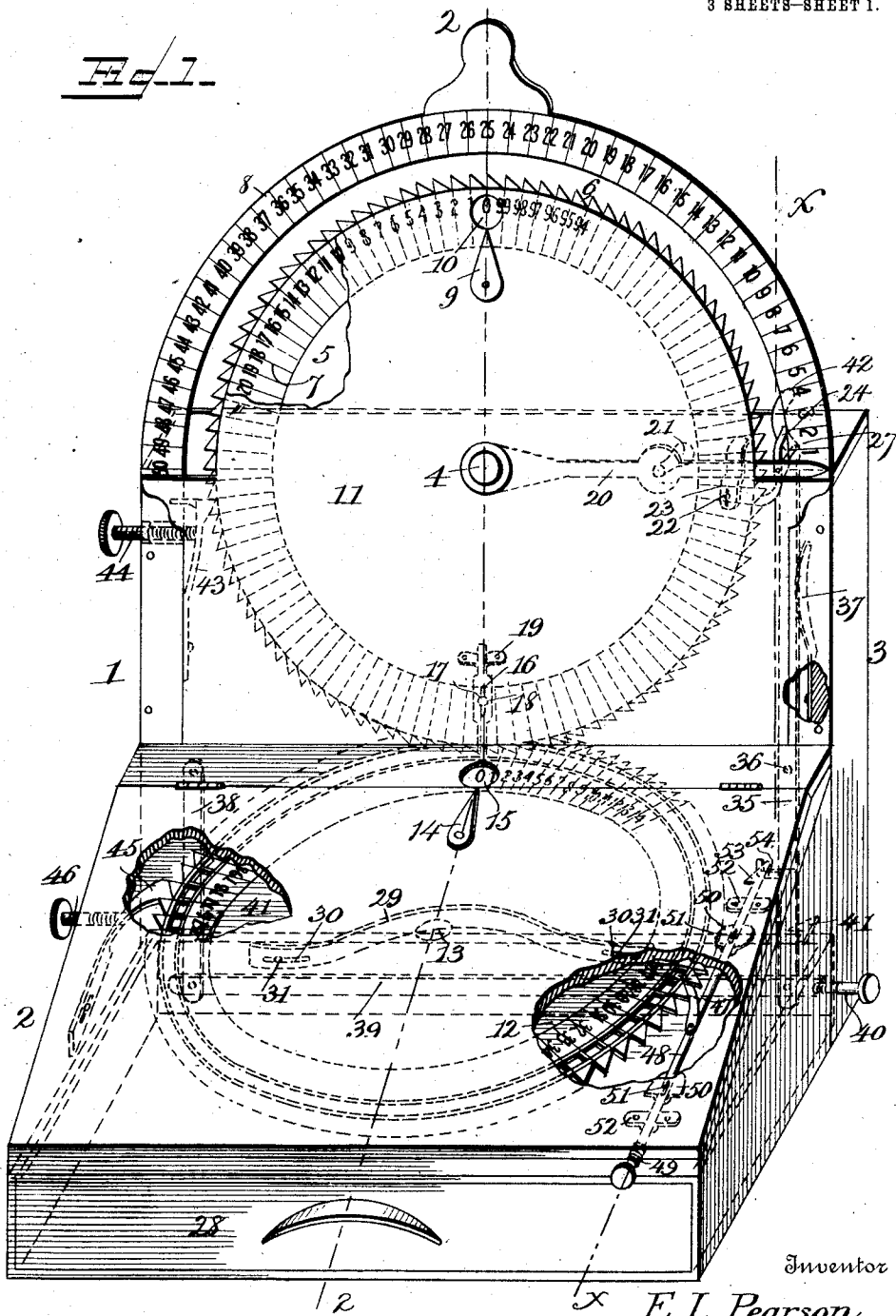
CASH REGISTER.

APPLICATION FILED MAR. 30, 1910.

Patented Mar. 28, 1911.

3 SHEETS-SHEET 1.

987,908.



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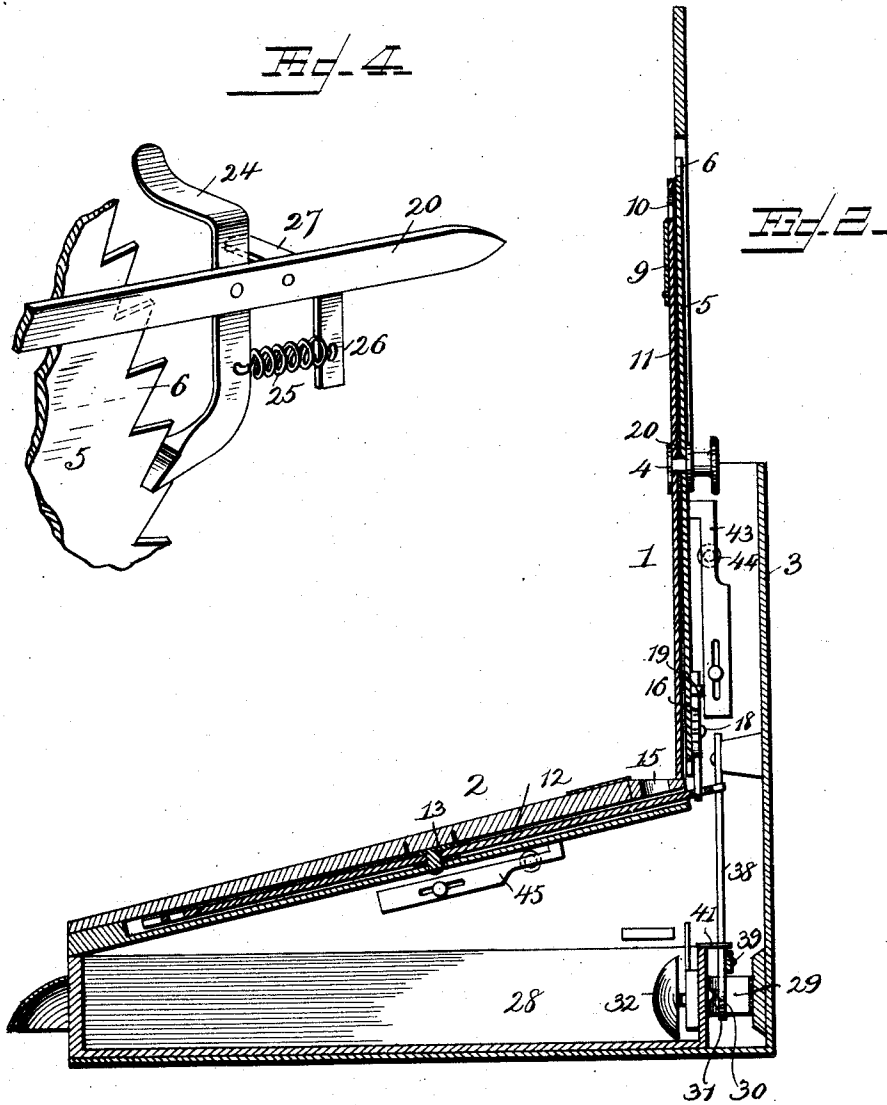
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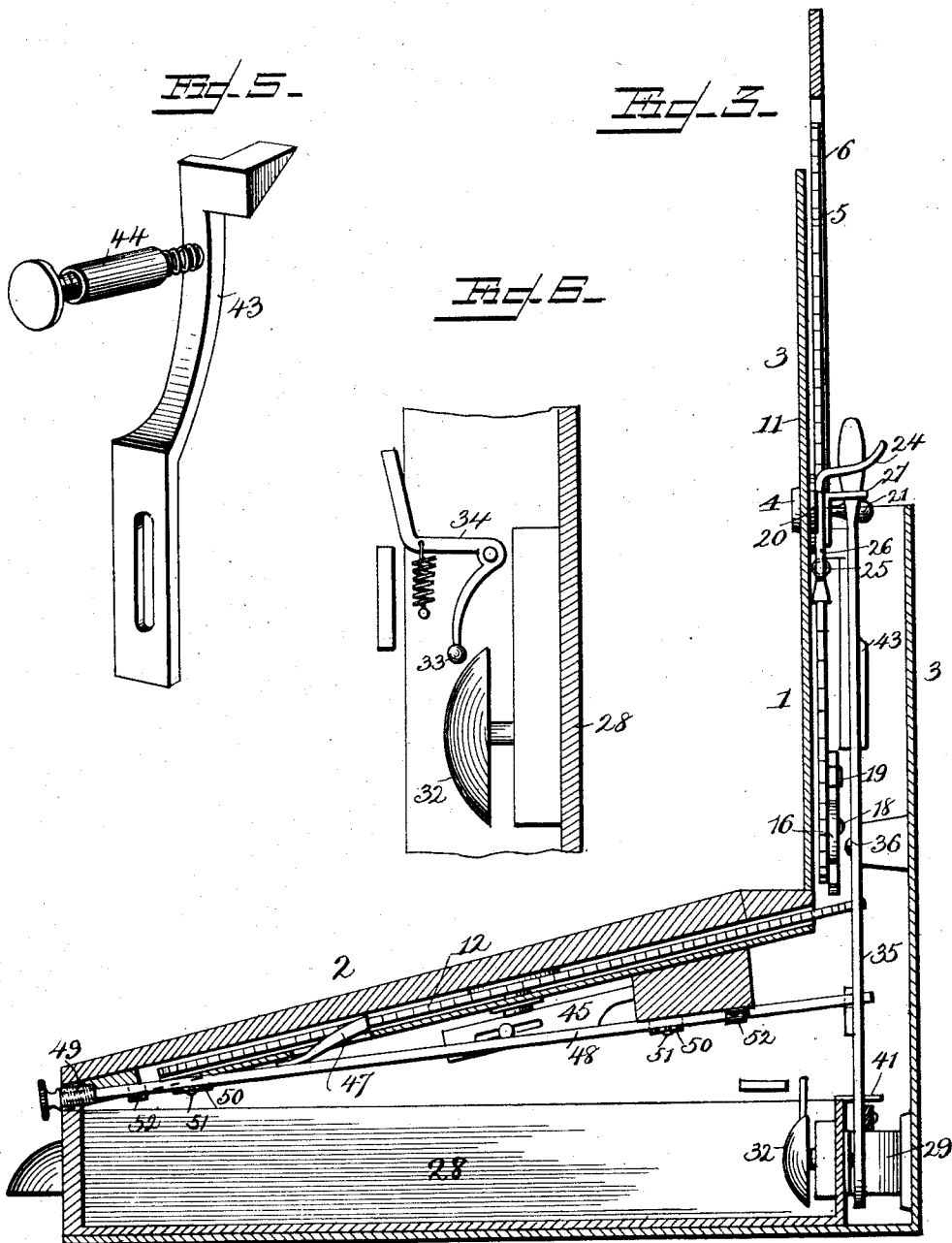
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UNITED STATES PATENT OFFICE.

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CASH-REGISTER.

987,908.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed March 30, 1910. Serial No. 552,417.

To all whom it may concern:

Be it known that I, ELIPHALET L. PEARSON, a citizen of the United States, residing at Bedford, State of Indiana, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification.

My invention relates to improvements in what are termed cash registers.

It has for its object, among other things to compensate for lost motion, as would otherwise result from wear or action of the parts, to greatly simplify the construction and operation of the machine; to insure accuracy in the registering action or operation; to promote facility and expedition in the use of the machine; to provide for readily effecting the registration of a dollar, or number of dollars, without disturbing the previous registration of the cash; to provide for readily disengaging the retaining pawls or dogs when necessary to reset the registering mechanism; also to carry out said objects in an effective and inexpensive way.

The invention consists of certain instrumentalities or features substantially as hereinafter fully disclosed and defined by the claims.

In the accompanying drawings illustrating the preferred embodiment of my invention: Figure 1 is a perspective view thereof, parts being broken away; Fig. 2 is a vertical central section of the same; Fig. 3 is also a vertical section produced upon line *w-w* of Fig. 1; Fig. 4 is an enlarged broken detailed sectional view showing the hand or index of the machine, together with adjunctive parts thereof; Fig. 5 is an enlarged detached sectional view of the pawl disengaging device or dog for the cent-registering dial or mechanism; Fig. 6 is a detached plan view, showing the cash-drawer bell or gong and sounding or actuating mechanism therefor.

In carrying out my invention I provide a suitable cabinet 1, including an inclosure in the form of a desk 2 having an upward extension 3 at its back-end; and suitably arranged and pivotally supported in upright position with relation to said desk-extension, upon a stud or pivot 4, is a circular plate or disk 5, so as to be rotatable

thereon, said plate or disk being termed the cent-wheel. It has thereon a circular arrangement of one hundred peripheral beveled teeth 6, in continuation of a corresponding number of radial lines or spaces 7 produced upon the face of the disk or wheel, said spaces or lines having marked thereon numerals ranging consecutively from 0 to 99 and readable from right to left, the unit-value of which is cents. Also the upward extension or member 3 has, itself a further upward extension 8 being preferably of arcuate or semi-circular outline and upon the face of said member beyond the face of the disk is a semi-circular arrangement of fifty radial lines or spaces, correspondingly marked with numerals consecutively ranging from 0 to 50 and also readable from right to left, the purpose of which will presently appear.

An indicator 9, is suitably arranged to cooperate with the circular arrangement of numerals of the cent-wheel 5, it standing radially to a viewing opening 10 in a plate 11 secured in position to the upward extension 3 of the desk 2, said indicator being secured to said plate and said opening being arranged at a central point at the top of the casing or cabinet parallel with the arc or circle described by the movement of said cent-wheel. A second disk 12, termed the dollar-wheel, is centrally pivoted to suitably rotate within the desk 2, its pivot 13 being of the outline disclosed especially by Fig. 2 and keyed or secured in place to an inner or supplemental top of the desk, upon which is mounted said disk or wheel. Said dollar-wheel, like the cent-wheel, is also provided with a circular arrangement of one hundred peripheral beveled teeth designated or ranging from 0 to 99 and readable from left to right, the face of said wheel or disk having marked thereon lines radiating from said teeth and accordingly producing a corresponding number of spaces thereon bearing said numerals; the upper top or top proper, of said desk bearing the dollar indicator 14 standing radially to a viewing opening 15 similarly arranged with relation to said circular arrangement of numerals as above described regarding the viewing opening for the numerals of the cent-wheel.

A bevel-ended dog or pawl 16 is slidably

or adjustably applied to the underside of the cent-wheel 5, being provided with a longitudinal slot 17 receiving an adjusting screw 18 entering said wheel, said dog also being 5 guided and held in position against lateral displacement by a keeper 19 receiving an end-portion of said dog or pawl, and secured to said wheel. Said dog or pawl has its beveled end projecting sufficiently beyond the 10 perimeter of the cent-wheel 5 to provide for its engagement with the teeth of the dollar-wheel 12 and whereby as said cent-wheel makes a full revolution, said dollar-wheel is caused to make a fraction of a rotation 15 which will expose a numeral of the dollar wheel the latter thus making one registration for each hundred registrations of the cent-wheel, the purpose of which is apparent.

20 A hand or pointer 20, having its inner end pivoted, or adapted to be turned, upon the same stud or pivot 4 bearing the cent-wheel 5, extends partially over the face of said wheel beyond the same, and over or in 25 front of the arcuate arrangement of numerals of the upward extension 8 of the casing 1, said hand having a suitable finger grip or hold 21 for its convenient movement. Said hand is also adapted to be frictionally held 30 to the cent-wheel by means of a spring-metal stop 22 adjustably applied to the latter, as at 23, and having one end adapted to allow the hand to ride thereupon, and be thus held under upward pressure therefrom against a 35 shoulder at the other end-portion of said stop. Also said hand is provided with a pivoted manually actuated dog or pawl 24 adapted to engage the teeth 6 of the cent-wheel 5, such engagement being automati- 40 cally effected by means of a spring 25 delivering pressure upon said dog or pawl and secured to a fixture or arm 26, projecting from said hand. The manually actuated pawl or dog 24 has also obliquely outstand- 45 ing therefrom a stud 27, the purpose of which will be made fully apparent presently.

A till or money drawer 28, suitably inclosed within the desk-member 2 of the casing is automatically ejected for ready access 50 to its contents by a suitable approximately bow shaped spring 29 interposed between the back-end of the drawer and the desk, initially under stress or compressed, said 55 spring being preferably flat and having longitudinal slots 30 therein receiving suitable securing screws or fastenings 31 entering the casing or drawer inclosure. The slots 30 in the spring 29 it will be understood, of course 60 permit of the requisite flexing action of the spring as it is subjected to pressure and the relaxation thereof. Also at the back end of the till or drawer, within the casing or desk, is arranged as usual, an alarm in the form 65 of a gong or bell 32, with its supporting stem

or member suitably fixed in position upon the drawer and the hammer or clapper 33 therefor carried at one end of a spring-pressed bell-crank lever 34 applied to the casing and actuated by the opening of the 70 till or drawer as is well understood.

An upright lever 35, suitably fulcrumed, as at 36, in the back end of the desk or casing, has applied thereto, above its pivot or fulcrum the upper or free end of a preferably flat stiff metal spring 37 suitably secured within the upward extension 3 of the desk or casing thus holding said lever under stress or pressure tending to deflect the lower end of the lever outwardly or toward 80 the right, the purpose of which will presently appear. To the back end of the desk, at the opposite side, is pivotally connected the upper end of a bar or strap 38 depending contiguously to the drawer or till 28; 85 and to said strap or bar, at its lower end, is connected one end of a horizontal bar or rod 39, said bar 39 being connected, near its opposite end, to the lower end of the lever 35. Said bar or rod 39 has applied to one end 90 thereof a spring-pressed knobbed member or handle 40 extending through one side of the desk or casing and adapted to be manually actuated or engaged upon the outside thereof by the hand of the operator, for actuating 95 the drawer or till as will be more fully hereinafter seen, without affecting the registering mechanism.

Suitably applied or fixed to the upper back edge of the drawer or till 28 are beveled catches 41 for engagement with the lever 35 and bar or strap 38, for primarily holding the drawer or till in locked position. The lever 35 has its upper end provided with a rounded lateral cam-actuating shoulder 42 adapted to be engaged by the stud 27 100 of the hand 20 and whereby as said lever is disengaged from the spring-stop 22, applied to the cent-wheel 5, as is done by moving said hand to the right, it will be noted that 105 such engagement between said cam or shoulder 42 and stud 27 will have the effect to throw or move the lower end of said lever inwardly or to the right, which will result in disengaging said lever and the bar or 110 strap 38 thus releasing the drawer or till 28 when the spring 29 will instantly and automatically eject the drawer or till for ready or convenient access to its contents. The lever 35 after the disengagement of the stud 115 27 from the shoulder or cam 42 by the continued movement to the right of the hand 20 will be at once and automatically returned to its initial position, by the action of the spring 37, carrying with it the bar or straps 120 38 by the aid of the horizontal bar 39 in readiness for the reengagement with said lever and strap of the drawer catches 41 when the drawer shall be manually moved 125 to its closed position and thus be again 130

locked in such position. It will be also observed that, as the hand 20 is moved as above indicated but engaged by the action of the spring-stop 22 with the cent-wheel 5, said wheel will be suitably moved as in effecting a registration thereon of a corresponding visible numeral of the semi-circular member 8 according to the amount of change wanted or sale negotiated. Also, it is noted that when the maximum number of registrations have been made upon the cent-wheel 5, the dog 16 of the latter will engage a tooth of the dollar-wheel 12, and thus also effect the movement there of a tooth, and accordingly indicate the total in dollars upon said dollar-wheel of all the registrations of each complete rotation of said cent-wheel as will be readily appreciated.

A spring-metal detaining pawl or dog 43 suitably or adjustably secured by a screw and slot to the casing or upward-extension 3, is adapted to engage the teeth of the cent-wheel 5 to prevent reverse rotation thereof; and to said dog or pawl is applied a spring-pressed adjusting screw 44 for suitably controlling the pressure of said pawl or dog and also providing for compensating for wear and accordingly preventing lost motion occurring between the pawl or dog 43 and the teeth of the cent-wheel. A like detaining pawl or dog 45 similarly applied to the desk 2 whose action or pressure upon said pawl or dog is controlled by an adjusting screw 46, is adapted to engage the teeth of the dollar wheel 12 and which also provides in like manner for compensating for wear accordingly preventing lost motion occurring between said pawl or dog and the teeth of the dollar wheel. An additional propelling pawl 47, is adapted to engage the teeth of and directly actuate the dollar-wheel 12 when it may be required to effect the registration of and to obtain a dollar or two more dollars without disturbing the previous or already produced registration said pawl or dog being pivoted to, or carried by a manually actuated push rod or bar 48 and suitably held in effective engagement with the teeth of said wheel. Said push rod or bar has its knobbed or headed end projecting through the front end of the desk or casing and engaged by a spring 49 interposed between said end and the knob or head of said rod to provide for automatically ejecting said end from the desk. Said push rod or bar is slidably supported in position in any suitable way preferably as disclosed by slotted arched beaming plates 50 suitably secured in place and embracing said rod the slots of said plates receiving upstanding pins or projections 51 from said rod; also additional means may be used for aiding the retention of the push rod in effective position as keepers or straps 52 also embracing said rod and suitably secured in po-

sition. The extreme inner end of the rod 48 has a bevel-ended lateral stud 53 for engagement with the upstanding portion of a right angled lug 54 fixed to the lever 35, whereby as the push rod 48 is pushed or moved inwardly against the action of its spring 49 the inclined or beveled end of said stud will suitably engage the upstanding terminal of said lug, which will result in moving the lower arm of the lever 35 together with the bar 38 to the left and accordingly disengage the same from the catches 41 of the till or drawer 28, thus releasing the latter and allowing it to be suitably ejected for gaining convenient access to the contents thereof as in removing the required amount or number of dollars therefrom.

It is hardly considered necessary to reiterate the advantages of the invention but simply to advert to the same as recited in the prefatory portion of the specification or description which it is believed have been most fully disclosed thereby.

I claim—

1. A cash-register combining an arcuate member having numerals thereon arranged in consecutive order, a cent wheel having peripheral teeth thereon, with correspondingly lined off spaces upon its face, with corresponding numerals in said spaces, a pivoted hand, a retaining member upon said cent wheel for said hand, said hand having a manually actuated pawl with its tooth arranged in a plane parallel with said hand and caused to engage said cent wheel peripheral teeth, said pawl having an outstanding stud, a till or drawer, a bevel ended catch fixed to said drawer or till, a spring pressed lever adapted for engagement with said catch and having a cam extension at its upper end adapted to be engaged by said outstanding stud of said hand.

2. A cash-register combining a cent-wheel having peripheral teeth thereon, with correspondingly lined off spaces upon its face and corresponding numerals in said spaces, a pivoted hand registering with said numerals, a retaining member upon said cent wheel for said hand, said hand having a manually actuated pawl, with its tooth arranged in a plane parallel with said hand and caused to engage said cent wheel peripheral teeth, said pawl having an outstanding stud, a till or drawer having a bevel ended catch, a spring pressed lever adapted to be engaged by said outstanding stud and having a right angled lug and adapted to engage said bevel ended catch, a push rod having a bevel ended terminal adapted to engage said right angled lug.

3. A cash-register combining a cent wheel having peripheral teeth thereon with correspondingly lined off spaces upon its face and corresponding numerals in said space,

a dollar wheel having a series of peripheral teeth, a pivoted hand registering with said numerals, a retaining member upon said cent wheel for said hand, said hand having
 5 a manually actuated pawl, adapted to engage said cent wheel peripheral teeth, said pawl having an outstanding stud, a till or drawer having a bevel ended catch, a spring pressed lever having a right angled lug and
 10 adapted to be engaged by said outstanding stud, and a push rod having a bevel ended terminal adapted to engage said right angled lug, said push rod also having a pawl for engaging the peripheral teeth of
 15 said dollar wheel.

4. A cash-register combining a cent-wheel, a till or drawer having thereon catches, a lever having engagement with one of said catches, a pivoted bar having engagement
 20 with the other catch, means effecting connection between said lever and bar, a pivoted hand adapted to traverse the face of said wheel and having an outstanding stud, said lever having a cam-extension adapted
 25 to engage said stud of the hand.

5. A cash-register combining a cent-wheel, a spring stop applied to said cent-wheel, a pivoted hand adapted to be engaged by said stop, a till or drawer, a spring-engaged
 30 lever, disengageable means of connection between said till and lever, said lever having a cam-extension at one end and said hand having a stud adapted to engage said cam-extension for actuating said disengageable means of connection between said
 35 till and lever.

6. A cash-register combining a cent-wheel having peripheral teeth thereon, with corresponding lined off spaces upon its face, said spaces having consecutively arranged
 40 numerals therein, an arcuate member having correspondingly lined off spaces thereon, with corresponding numerals in said spaces, a pivoted hand adapted to traverse transversely of the face of said cent-wheel
 45 and of said arcuate member, a retaining member upon said cent-wheel for said hand, a spring-stop applied to said cent-wheel for effecting the temporary engagement of said hand therewith, a till or drawer, a spring-pressed lever and disengageable means of
 50 connection between said till and said lever, said lever having a cam-extension at one end adapted to be engaged by a stud upon said hand.
 55

7. A cash-register combining a cent-wheel, means for actuating said cent-wheel, a dollar wheel, means for actuating said dollar wheel from said cent wheel, drawer releasing mechanism including a push-rod
 60 having a lateral stud at one end, a right angled lug of said releasing mechanism being engaged by said stud, and a separate propelling pawl for actuating said dollar-wheel carried by said push-rod.
 65

In testimony whereof I affix my signature, in presence of two witnesses.

ELIPHALET L. PEARSON.

Witnesses:

GEORGE P. PARKS,
 JOHN WHITE.