(Model.)

J. R. KENWORTHY.

Cash Register.

No. 230,022. Patented July 13, 1880.

Fig. 1

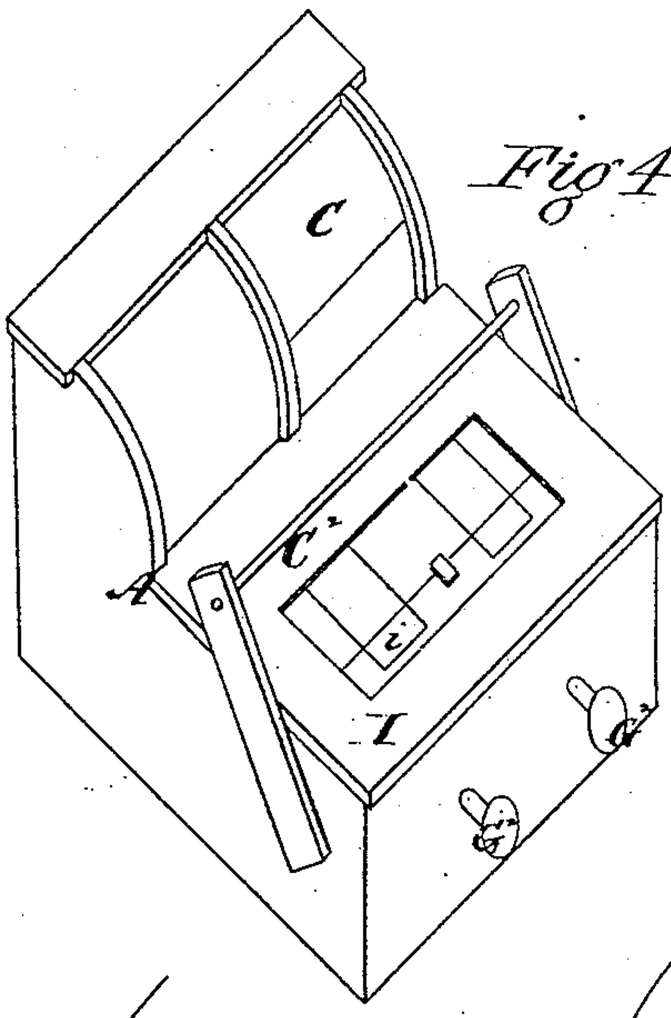


Fig. 4

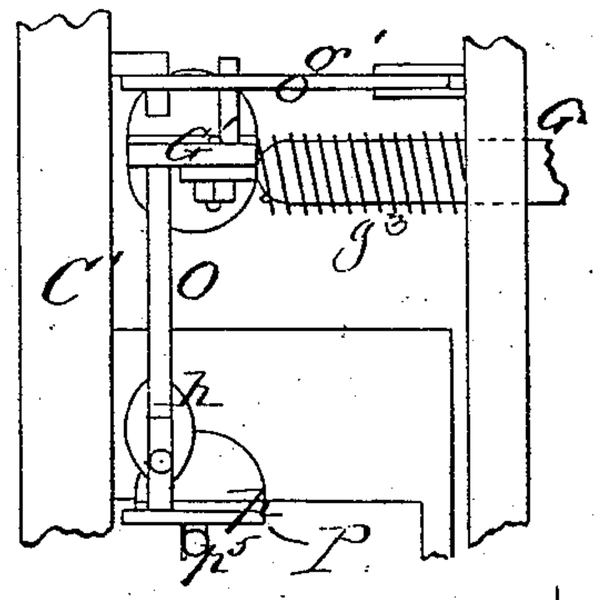


Fig. 2

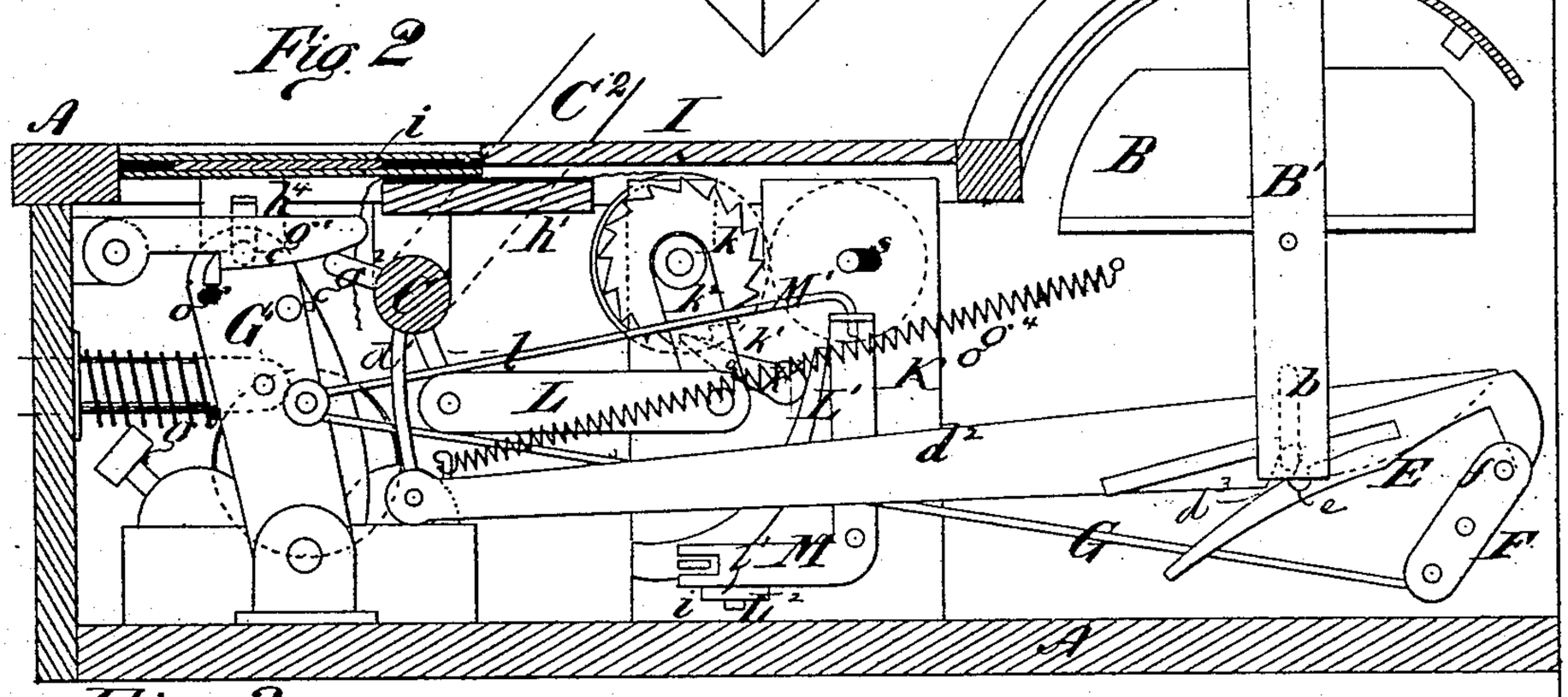
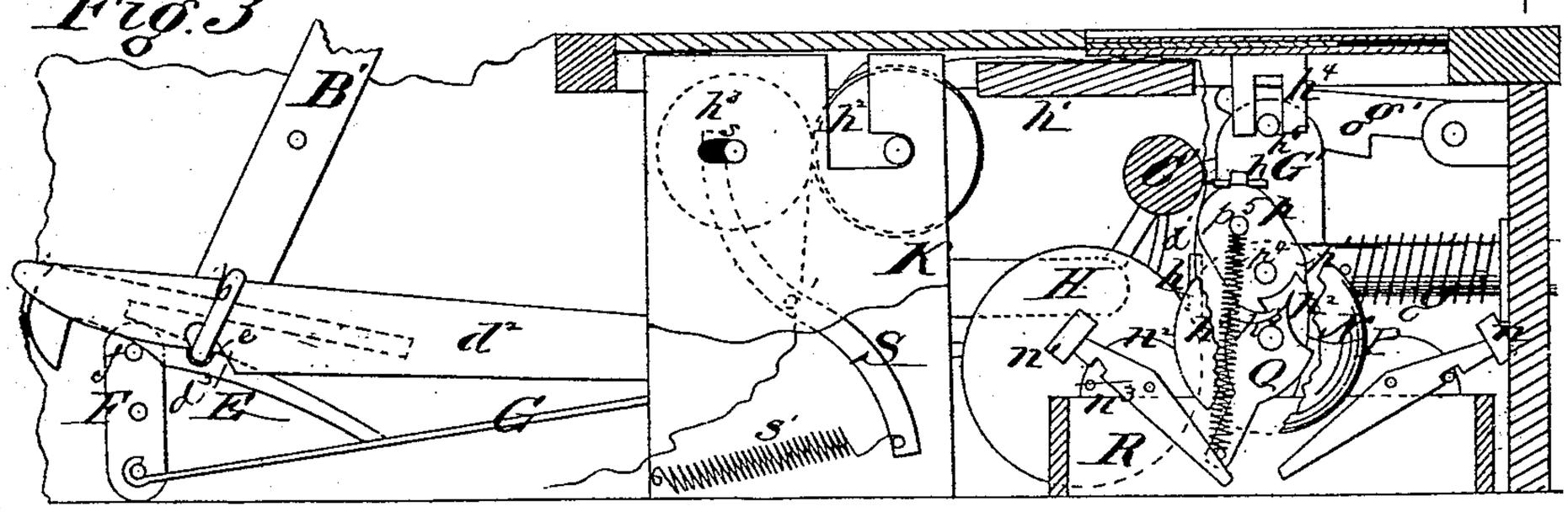


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN R. KENWORTHY, OF RICHMOND, INDIANA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 230,022, dated July 13, 1880.

Application filed March 10, 1880. (Model.)

To all whom it may concern:

Be it known that I, JOHN R. KENWORTHY, of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Cash-Registers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical longitudinal section looking toward left. Fig. 3 is a vertical longitudinal section looking toward right. Fig. 4 is a plan view of certain details of the apparatus detached or broken away.

This invention has relation to cash-registers, and is to be considered as an improvement, specially, upon the subject of Letters Patent No. 218,276, granted to me.

The improvement consists in the novel construction, combination, and arrangement of details, as hereinafter described and claimed.

As in the contrivance patented to me, I use again a second slip or ribbon of paper, which is exposed upon the removal of a covering slide or plate when a knob is manipulated at the front of the register. Upon this slip or ribbon the salesman notes the item of sale, and then pushes back a lever-frame, whereby the lid of the drawer is opened, the slide or covering plate caused to fly back to place, and the slip made to travel beneath the slide-opening, conveying the memorandum out of sight or beyond possibility of alteration. Simultaneously the knob is retracted and certain mechanism brought into action, so that access can only be had to the record slip or ribbon upon the adjustment of mechanism which, upon a reopening of the cash-drawer, will effect another movement of the slip or ribbon. The withdrawal of the knob and the subsequent raising of the drawer-lid sounds an alarm-bell, which serves to call the attention of the proprietor to the fact that the register is being manipulated.

In the accompanying drawings, A designates the register. B is a cash-till at the back thereof, and C is a segmental sliding lid to said till. B′ is a radially-arranged lever attached to the lid and fulcrumed or pivoted to the side wall of the register. Below the fulcrum or pivot is a loop or staple, *b*.

C′ is a transverse shaft operated by a lever-frame, C^2, and armed with various projections for the several purposes to be described. The arm *d′* is connected to a bar, d^2, extending back and alongside of lever B′, and having a notch, d^3, adapted to engage with loop or staple *b*. The lower edge of rear portion of bar d^2 is curved to a cam shape, as shown. When the loop *b* is in engagement with bar d^2, through notch d^3, a movement of the lever-frame and shaft C′ causes an opening or closing of the drawer-lid, the lever B′ being then turned on its pivot and the lid moved with it. When the rear end of the bar d^2 is lifted no movement of the lever B′ or lid can take place; hence the drawer is locked.

E is a lever of peculiar shape, pivoted to the side of the register, and notched at *e* to engage with loop or staple *b* and at times prevent the lever B′ from moving. A plate, F, is pivoted to the side of the register and has a stud, *f*, which ordinarily supports the rear end of the bar d^2, keeping it out of engagement with the loop or staple *b*, and at the same time keeps the forward portion of the notched lever E in engagement with said loop.

A rod, G, connects the lower end of plate F with a pivoted standard, G′, which is connected to the shank of the knob G^2. When the knob is withdrawn the plate F is tilted, so that lever E falls out of engagement with loop or staple *b*, while bar d^2 takes hold. Then, when the lever-frame and main shaft are moved toward the till, the consequent movement forward of the bar d^2 effects a corresponding movement of the lever B′, and throws back the lid of the till.

g is a stud on standard G, which, when the knob is withdrawn, engages with a pivoted and notched catch, *g′*, attached to the front wall of the register, and so holds in the positions to which the movement of the knob adjusts them all the connections of said knob and standard. This catch is lifted, when the lever-frame and main shaft are moved to open the till-lid, by a stud, g^2, projecting from the main shaft, and the parts held thereby released.

ıe springs g^3 g^4 cause said parts to fly back o their normal positions.

The record slip or ribbon is contained within a box, H, from which it issues between lips *h*, and thence passes over a cushioned bar or tablet, *h'*, and between the feeding-rollers h^2 h^3. The box H has a removable lid, or is otherwise suitably made, so that the ribbon may be renewed when exhausted.

I is the top of the register, and *i* a slide covering an opening, *i'*, above the tablet *h'*. From this slide depends a notched stud, h^4, which embraces an arm, h^5, projecting from the standard G', so that when the standard is tilted by the movement or withdrawal of the knob said slide will be withdrawn from over its opening and access allowed to the record slip or ribbon.

The feed-rollers are journaled in a frame, K, and the shaft of roller h^2 has a ratchet-wheel, *k*, with which engages a pawl, *k'*, pivoted to a crank-lever, k^2, also upon roller-shaft. A rod, L, connects said crank-lever to a crank-arm, *l*, on main shaft.

A segmental cam, L', is arranged below the pawl, which has a weighted end or tail-piece, k^3, and has a depending rod or guide-piece, L^2, sliding in a socket, *l'*. An elbow-lever, M, fulcrumed to the roller-frame, is connected at its lower end to the cam L', and by its upper end, and through the medium of a rod, M', to the standard G'. Normally the pawl is not in engagement with the ratchet; but when the knob is withdrawn the cam L' is caused to fall, whereupon the pawl adjusts itself to engagement with the ratchet, so that a movement of the main shaft and lever-frame to open the till-lid will effect a movement of the feed-rollers and a travel of the record-slip, conveying the part just written upon from beneath the opening in the top of the register.

N is a bell, and *n n'* two hammers pivoted to plates n^2, having studs n^3, which support the hammer-shanks in upwardly-inclined positions.

The standard G' has a forked arm, O, which embraces a rod, *h*, bent upwardly from a plate, *p*, pivoted to a standard, P. The lower end of said plate has two teeth, *p'*, which, as the plate is moved to the right or left, alternately enter the spaces p^2 p^3 in the periphery of a cam, Q, pivoted to the standard P below the plate *p*, and tilt the cam in opposite directions. A stud, R, projects from the lower part of the cam, and a spring, p^4, connects said stud with a stud, p^5, on the plate *p*.

When the knob is withdrawn the stud R is forcibly brought in contact with the hammer-shank *n* and an alarm sounded. When the standard G' springs back, as upon opening the lid of the drawer, the other hammer is tilted and a second alarm sounded.

The function of the spring p^4 is to cause a sudden and forcible movement of the cam Q toward the side to which its lower or stud-holding end has been moved by the action of the toothed plate *p*.

S are pivoted arms, embracing at their upper ends the shaft of roller h^3, which lies in slots *s*, and is pressed toward roller h^2 by springs *s'*, as shown.

Having described my improvements, I claim—

1. In combination with mechanism, substantially as described, for withdrawing the slide *i*, moving the till-lid C and the record-slip, the bell N, hammers *n n'*, vibrating standard G', and intermediate mechanism, as set forth, whereby said bell will be sounded, both upon the withdrawal and retraction of the knob G^2, as and for the purpose described.

2. The combination, with the feed-rollers, ratchet, and gravity-pawl, of the main shaft, lever-frame, crank on roller-shaft, and intermediate connecting-rod, as described.

3. The combination, with the feed-rollers, ratchet, and gravity-pawl, of the cam L', standard G', and intermediate connections, whereby said pawl is brought into engagement with the ratchet when the standard is tilted.

4. The combination of the feed-rollers, ratchet, gravity-pawl, knob, main shaft, and intermediate mechanism for controlling the engagement of said pawl with the ratchet, so that after the knob is withdrawn and its connections adjusted a subsequent movement of devices to open the till-lid will effect a movement of the record-slip, as described.

5. The till-lid, lever B', having loop *b*, notched bar d^2, notched lever E, pivoted plate F, having stud *f*, standard G', shaft C', and connecting-rod G, combined, substantially as and for the purpose described.

6. The segmental sliding till-lid, radial lever B', shaft C', and connecting-rod d^2, combined with mechanism, substantially as set forth, for moving said lid when the lid is unlocked and the shaft C' turned, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand.

JOHN R. KENWORTHY.

Witnesses:
F. B. HUNT,
FRANK J. HUNT.