

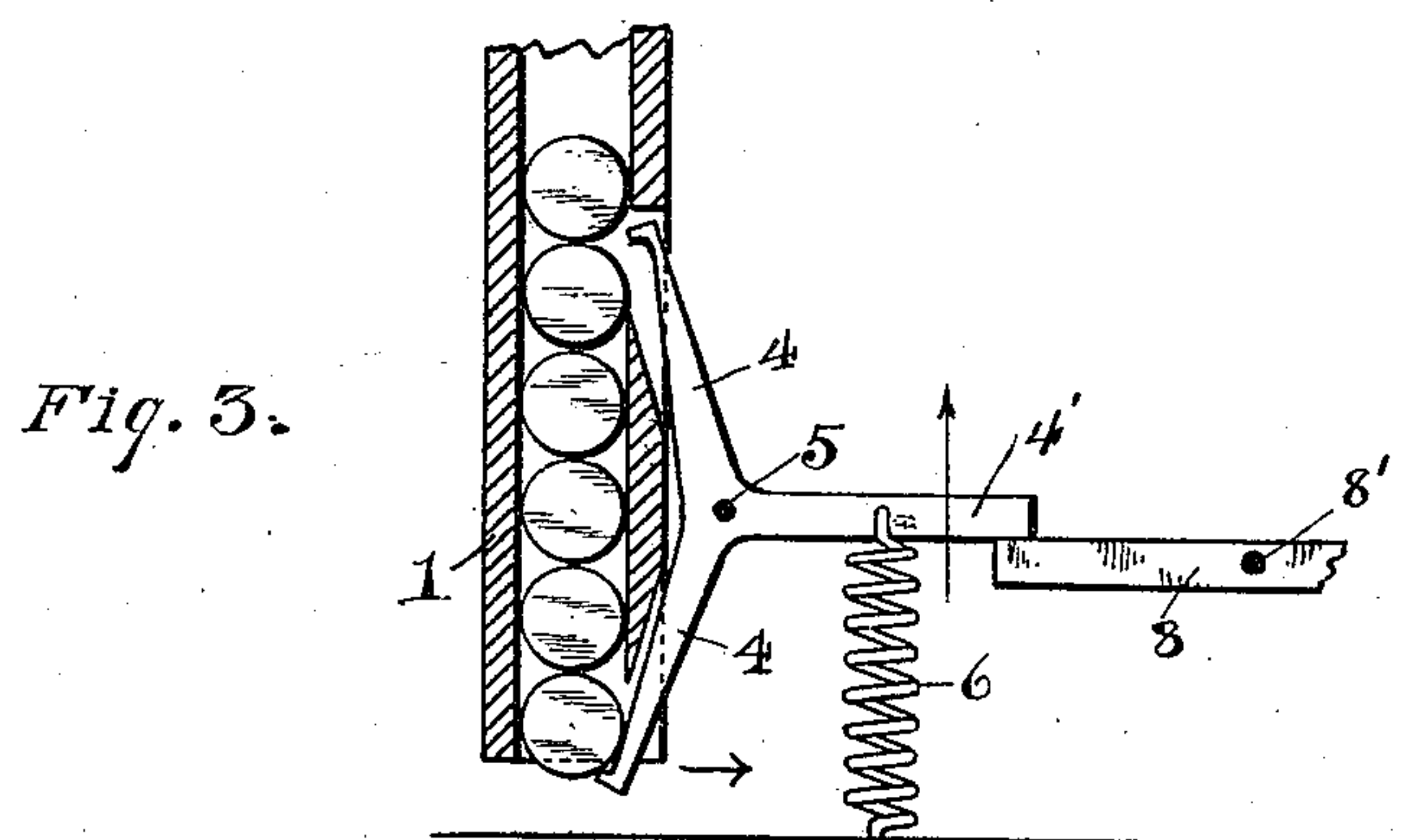
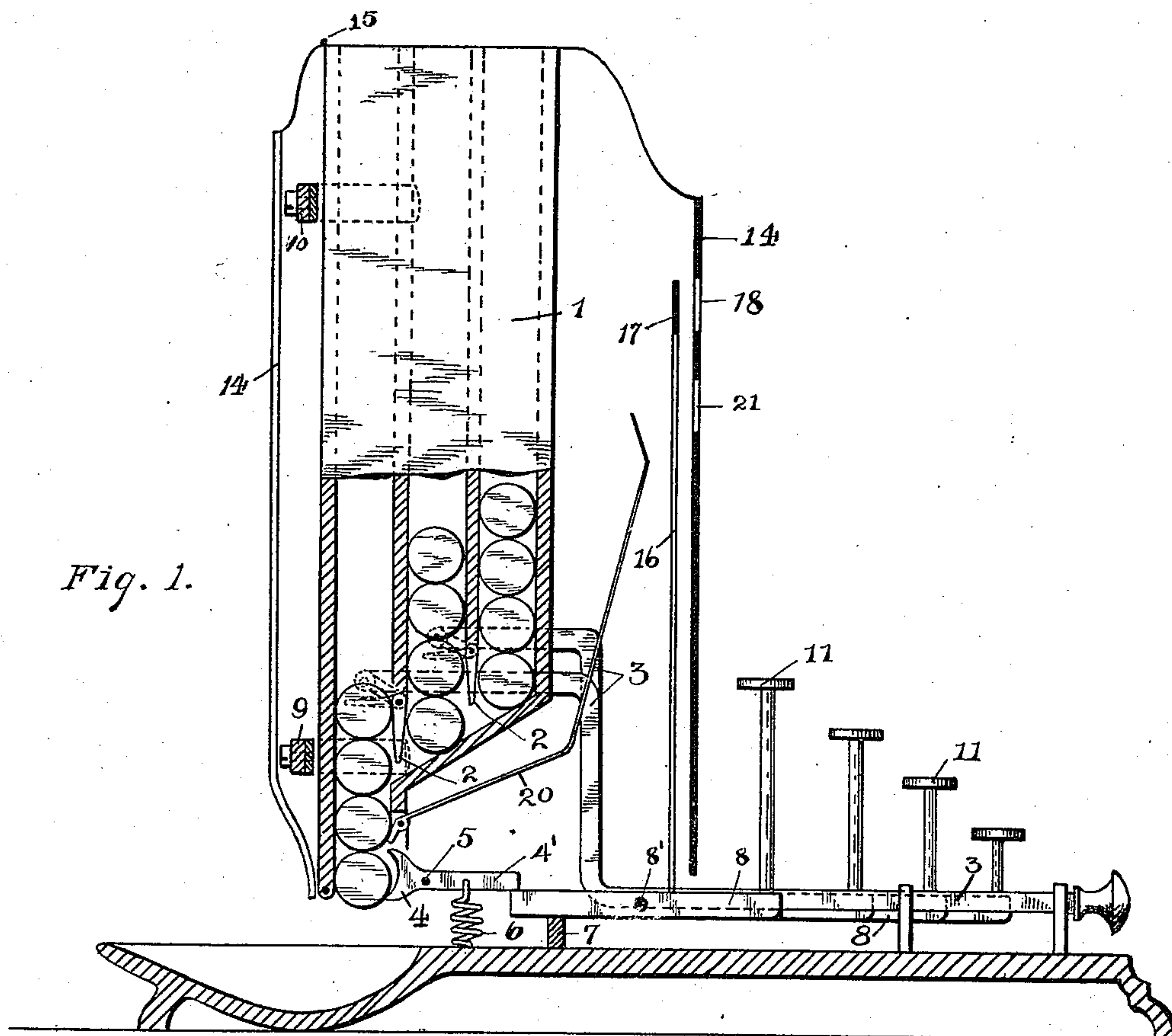
(No Model.)

2 Sheets—Sheet 1.

R. HERTZBERG.  
CASH APPARATUS.

No. 575,715.

Patented Jan. 26, 1897.



**WITNESSES:**

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***INVENTOR***

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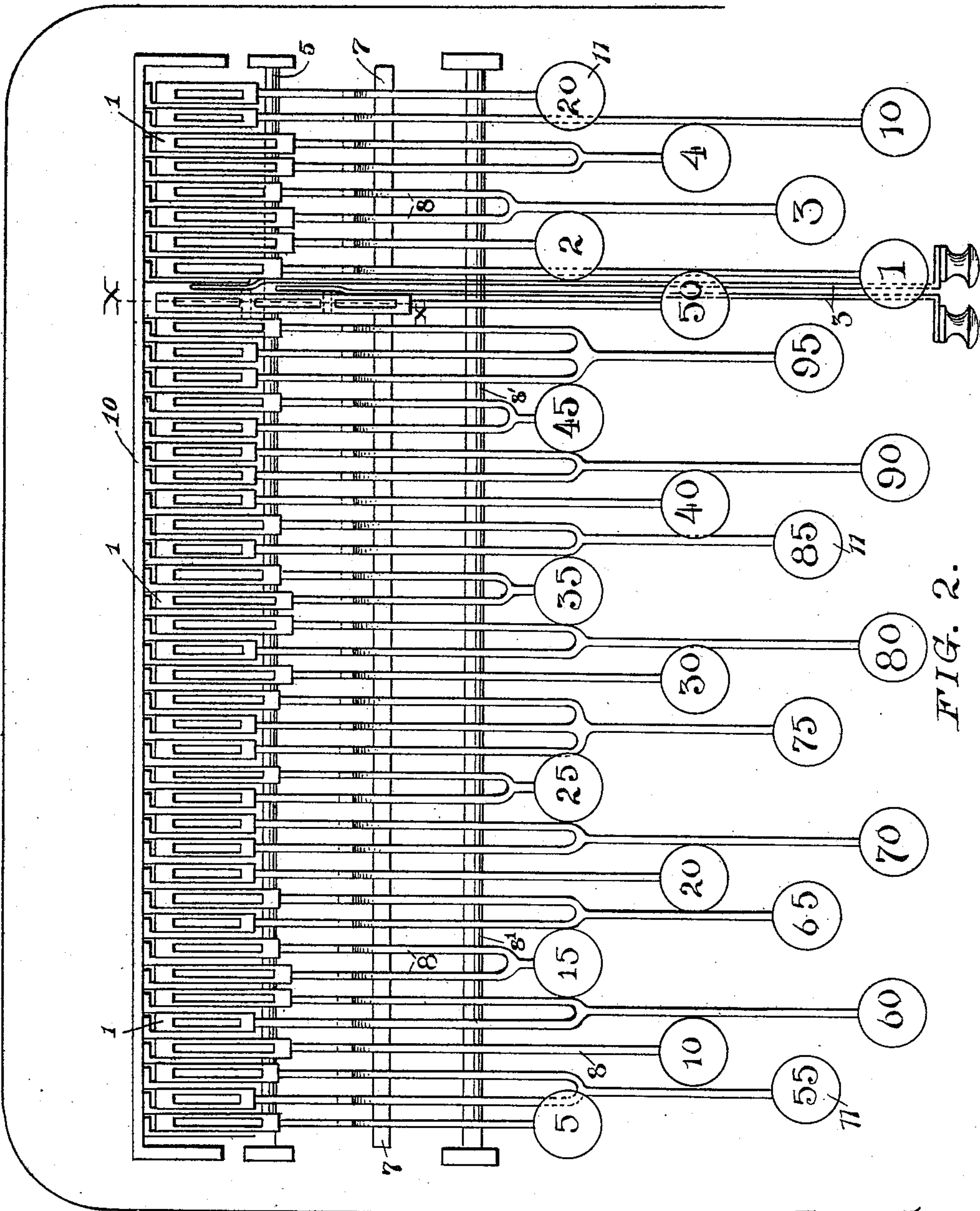
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# UNITED STATES PATENT OFFICE.

RAFAËL HERTZBERG, OF HELSINGFORS, RUSSIA.

## CASH APPARATUS.

SPECIFICATION forming part of Letters Patent No. 575,715, dated January 26, 1897.

Application filed December 11, 1895. Serial No. 571,756. (No model.)

*To all whom it may concern:*

Be it known that I, RAFAËL HERTZBERG, doctor of philosophy, a subject of the Grand Duke of Finland, and a resident of 37 Norra Esplanadgatan, Helsingfors, in the Grand Duchy of Finland, Russia, have invented certain new and useful Improvements in Cash Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

This apparatus, which has been called the "liquidator," is an apparatus for delivering money. It chiefly consists of a number of flat tubes, serving as magazines for the coins, and of a corresponding number of key-levers which are combined with blocking arrangements situated at the lower ends of the magazines and which permit a coin or a certain number of coins to fall down upon a tray belonging to the apparatus when the keys are acted upon.

Figure 1 is a cross-sectional elevation of a liquidator along the line X X in Fig. 1, while Fig. 2 is a plan view of the same. Fig. 3 is a modified detail.

The coin-magazines 1 consist, as mentioned above, of flat tubes which are enlarged above for facilitating the introduction of the coins. They are either single or combined, that is to say, they consist either of a single coin-passage or of two or more passages placed edge to edge (see Fig. 1) and below joining to one passage. For causing the coins to fall down one at the time from combined magazines the passage can be closed by means of an arrangement, for instance, the arrangement shown on the drawings, which consists of tongues 2, which are pivotally mounted below on the partitions between the passages and by means of arms connected to sliding bars 3, extending to the front side of the apparatus and which may be put in two positions, in the one of which they form a continuation of the partition, thereby closing the passage situated in front of the same, while in the other position into which the tongue can be brought, when the passage situated behind the same is empty, it forms an angle with the partition, permitting the coins of the front passage to fall down. The tongue may also be made to work automatically by providing the corresponding arm with a weight tending to carry the tongue into the last of the two men-

tioned positions into which it enters automatically when the passage situated behind is empty.

At the lower end of each passage, or the passage to which the other passages of a combined magazine join, is placed the blocking arrangement, by means of which one coin (or a certain number of coins) at the same time is caused to fall down from the magazine. According to Fig. 1 this arrangement may consist of a so-called "anchor" 4, which is revoluble around a shaft 5 and in which the distance between the ends of its shanks is nearly equal to the width of a coin. By means of a spring 6, acting upon the stem 4' of the anchor, which is directed from the magazine, the anchor is kept in such a position that the lower shank enters into the coin-passage, thereby supporting the coin-row in said passage, while the other shank is situated at the side of the passage. When the anchor is turned in the direction of the arrow, the lower shank moves sidewise in the same time as the upper shank enters into the coin-passage between the undermost coin and the next one, which all causes that the undermost coin falls down, while the other coins remain in the passage, supported by the upper shank of the anchor. When the anchor is permitted to return to its shown normal position, the whole coin-row falls down, so as to be supported anew by the lower shank of the anchor.

Fig. 3 shows a modification having for its purpose to facilitate the delivering of two or more coins by turning the anchor only once. As will be seen, the modification consists only therein that the shanks are made so long that two or more coins have room between their ends. The turning of the anchor 4 is performed by means of levers 8, which are revoluble on a bar 8' and with their one ends in contact with the under sides of the anchor-stems 4', these ends resting on a longitudinally-placed rib 7, whereby the anchor as well as the levers are kept in their normal position. The levers, which extend forward to the front side of the apparatus, are on their fore ends provided with buttons 11, of which each has a number of figures, indicating the value, for which the corresponding magazine is adapted or which is to be delivered when pressed down by the key.

In order to be able to deliver coins from two



or more magazines by a single pressing down, the levers of two and two (or more) magazines are connected so as to form a single lever, the key of which is designated with the sum of the values of the coins, which fall down at the pressing down of a key. For instance, for delivering seven pence by a single pressing down the levers of a six-penny magazine and a one-penny magazine are joined.

The apparatus, which is kept together by longitudinal bars 9 and 10, is surrounded by casing 14, the one side of which can be turned on hinges 15.

From each single or combined key-lever projects upwardly an arm 16, carrying a disk 17, on which is applied the same number of figures as on the corresponding key and which disk will be situated opposite an aperture 18 in the front wall of the casing 14 when the key is pressed down, whereby the person attending the apparatus is able to observe the pressing down of the keys.

Near to the lower end of each magazine there is pivotally mounted a light lever 20, the one short arm of which is in contact with one of the lower coins, while the other arm, which is longer, extends upward toward the front wall of the casing. When so many coins have been delivered from the magazine that no coin prevents the short arm of the lever 20 to turn upward, the long arm falls forward toward an aperture 21 in the front wall of the casing 14, thereby signaling that the magazine must be filled.

The whole apparatus rests on a foot-plate in which the tray may be arranged.

Having now described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In a money-delivery apparatus of the character described, one or more magazines, provided with coin-passages, the lower ends of which are provided with blocking devices, and which unite at the bottom, partitions between said passages, revoluble tongues to operate on the coin in said passages, said tongues when in one position retaining the coins in one of the adjacent passages and when in the other position permitting the coins to fall to the blocking device, and sliding bars to actuate said tongues, all constructed and arranged substantially as herein shown and described.

2. A money-delivering apparatus of the character described, consisting of a number of tubes having double passages formed therein, which join the first passage, the partitions between said passages being placed edge to edge and having at the lower ends thereof revoluble tongues to retain the coins adjacent to the passages or to permit the coins to fall upon the blocking attachment, and sliding bars to actuate said tongues and the levers 8 joined to a single lever, whereby by one depression of the key coins of different values are delivered, making the desired amount, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

RAFAËL HERTZBERG.

Witnesses:

JONN SVANLJNOUX,  
WILLE POPPIUS.