No. 763,025. PATENTED JUNE 21, 1904.

R. & W. SCHNEIDER.

CASH CONTROLLING APPARATUS.

APPLICATION FILED NOV. 3, 1902.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 2.

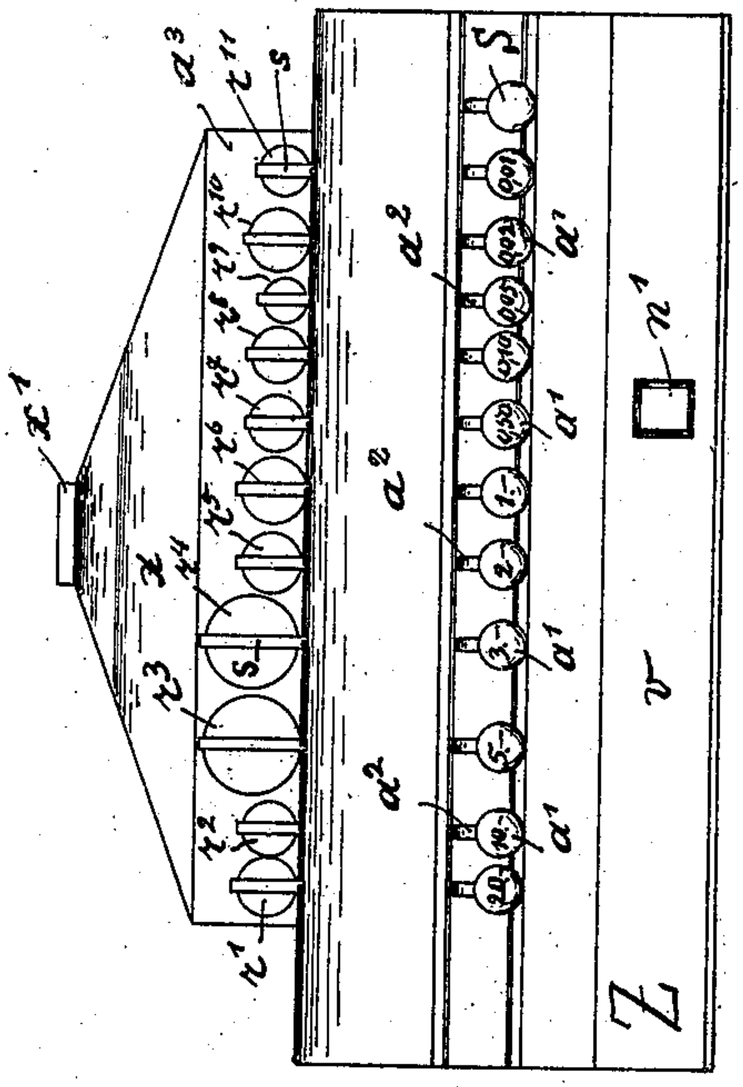
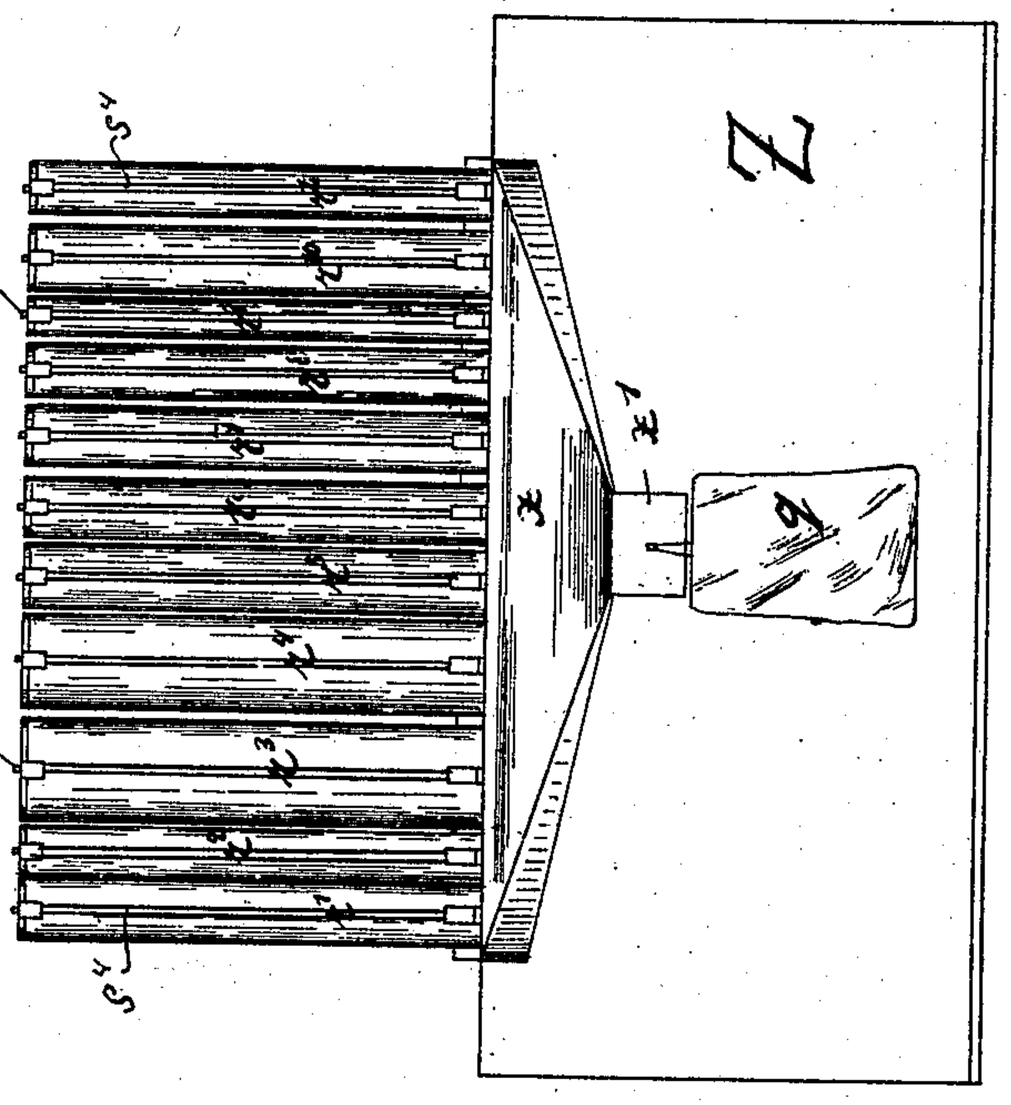


Fig. 1.



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NO MODEL. 4 SHEETS—SHEET 2.

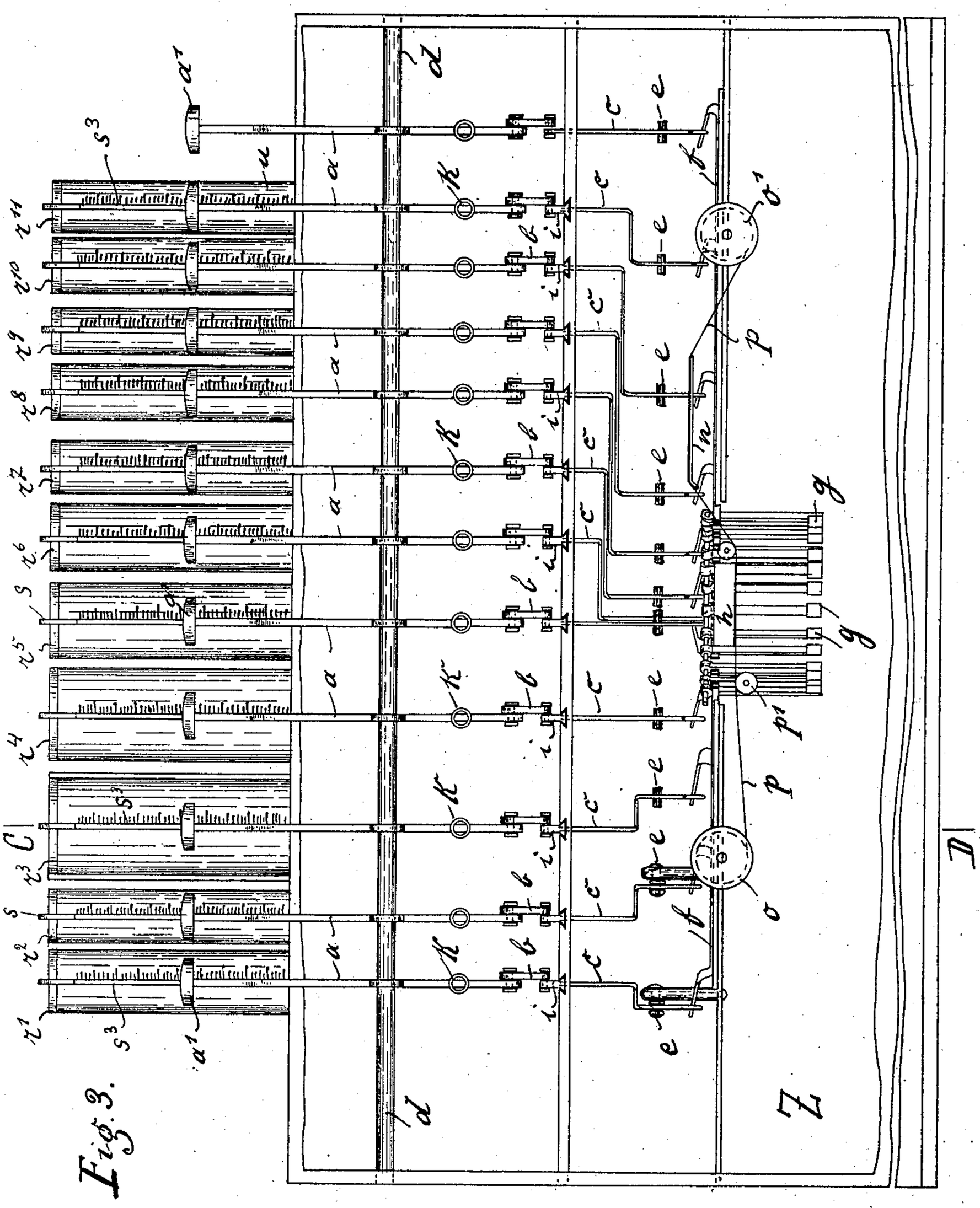

Fig. 3.

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NO MODEL. 4 SHEETS—SHEET 3.

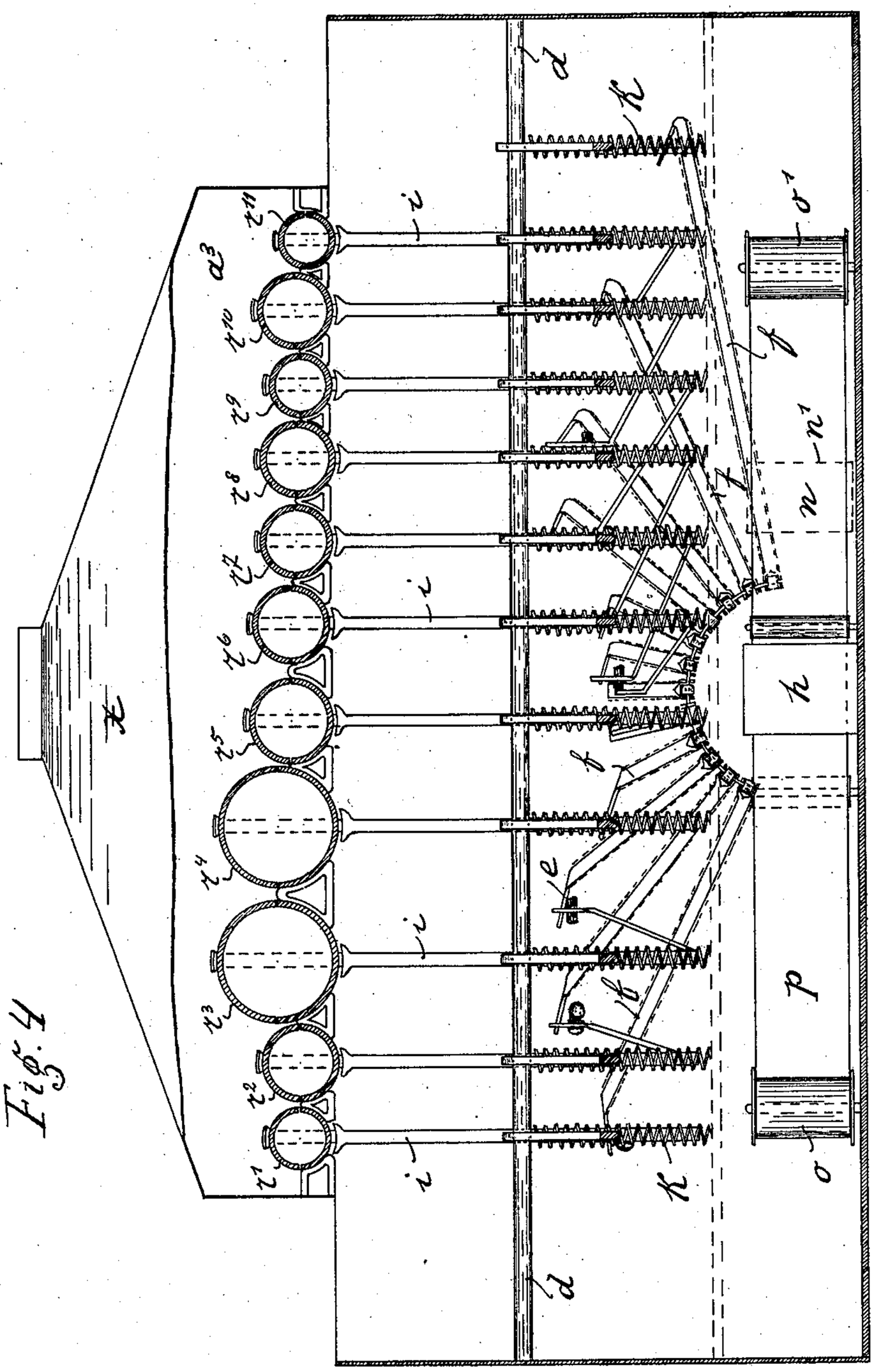

Fig. 4

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APPLICATION FILED NOV. 3, 1902.

NO MODEL. 4 SHEETS—SHEET 4.

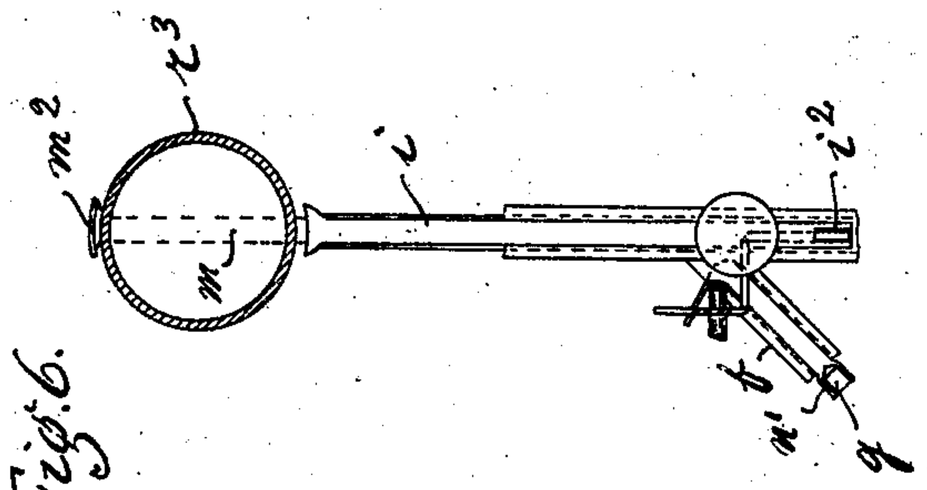

Fig. 6.

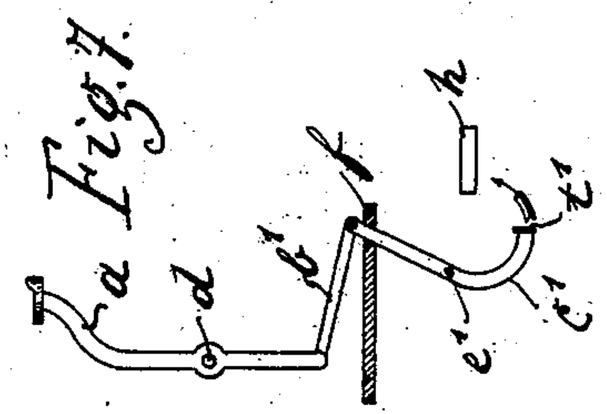

Fig. 7.

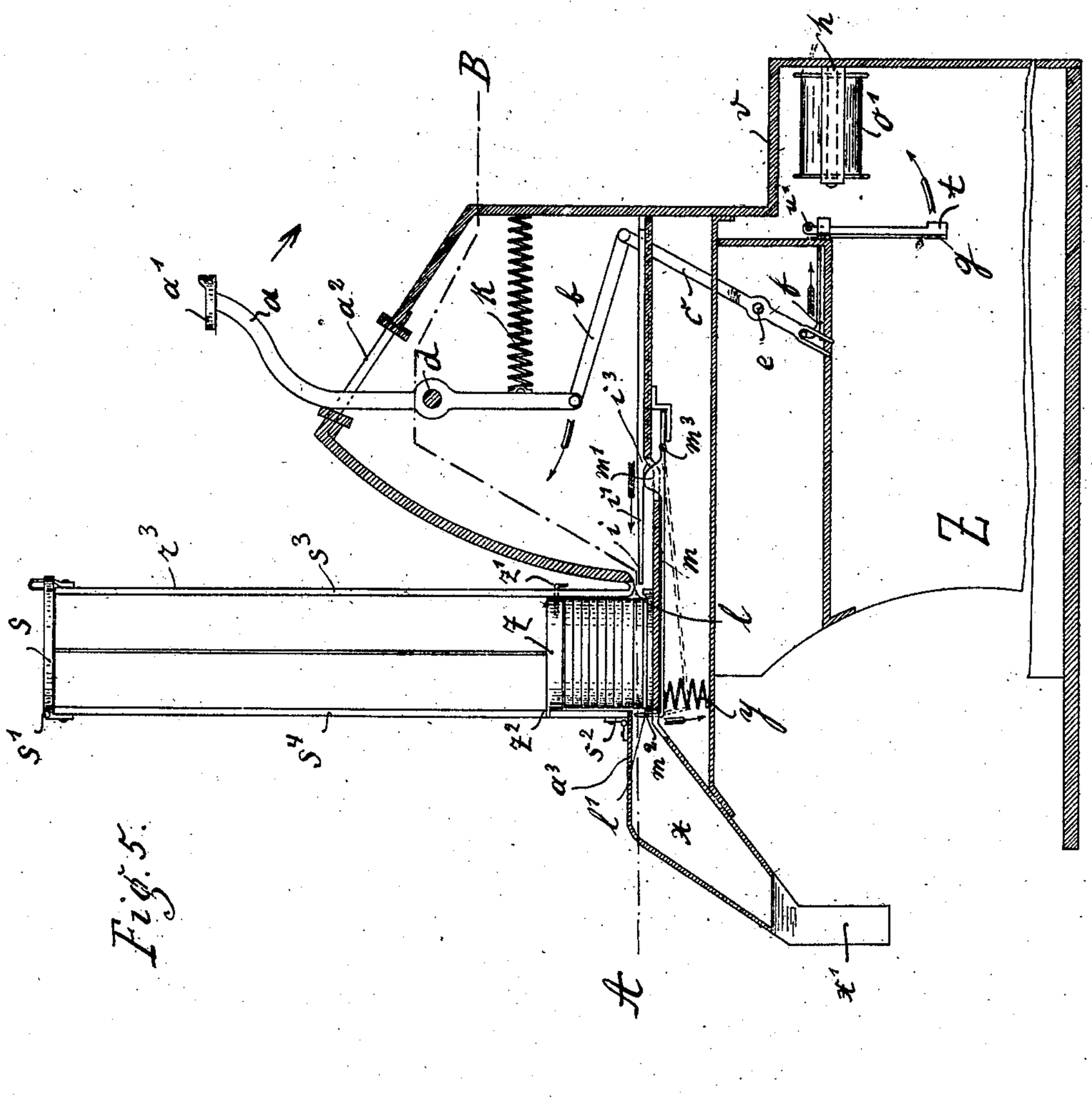

Fig. 5.

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No. 763,025. Patented June 21, 1904.

UNITED STATES PATENT OFFICE.

RICHARD SCHNEIDER AND WALTER SCHNEIDER, OF DANZIG, GERMANY.

CASH-CONTROLLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 763,025, dated June 21, 1904.

Application filed November 3, 1902. Serial No. 129,916. (No model.)

To all whom it may concern:

Be it known that we, RICHARD SCHNEIDER and WALTER SCHNEIDER, citizens of the Empire of Germany, residing at Danzig, in the Empire of Germany, have invented a new and useful Cash-Controlling Apparatus, of which the following is a specification.

Our invention relates to a cash-controlling apparatus specially suitable for paying wages and similar purposes; and the objects of our invention are, first, to provide a plurality of key-levers in parallel vertical planes and arranged in a series; second, to provide a plurality of vertical cylinders in said parallel planes for receiving the various sorts of coins and arranged in a series; third, to provide a plurality of horizontal slides in said parallel planes and arranged for throwing the lowermost coins out of said cylinders; fourth, to provide a chute for collecting the coins thrown out and conducting them to a wages-bag or other receptacle; fifth, to provide an endless paper band and means for feeding same; sixth, to provide a plurality of type-levers for printing off the respective figures on said paper band; seventh, to so connect said printing-levers with said key-levers and said horizontal slides that on moving either key-lever not only the respective coin is thrown out, but also the corresponding figure is printed on said paper band, and, eighth, to afford facilities for noting the number of the wages-bag or other receptacle on said paper band. We attain these objects by the mechanism illustrated diagrammatically in the accompanying drawings, in which—

Figure 1 is a rear elevation of a cash-controlling apparatus according to our invention. Fig. 2 is a plan of the same. Fig. 3 is a front elevation of the same on an enlarged scale, part of the front casing-wall being removed to show the mechanism proper. Fig. 4 is a horizontal section through the same on the broken line A B in Fig. 5 on an enlarged scale. Fig. 5 is a vertical cross-section of the same on the line C D in Fig. 3. Fig. 6 shows in a plan, on an enlarged scale, a key-lever, a horizontal slide, a type-lever, and means for connecting these parts, the respective vertical cylinder being shown in a horizontal cross-section, and Fig. 7 shows in an elevation a modification of the type-lever in combination with the key-lever and the horizontal slide.

Similar letters of reference refer to similar parts throughout the several views.

The apparatus shown is arranged in accordance with the German monetary system; but it will be understood that it can be so modified as to suit any other money-standard.

Inside the casing Z a horizontal shaft *d* is secured, on which twelve two-armed key-levers *a a* are mounted to rock. The upper arm of each key-lever *a* projects through a slot a^2 of the casing Z and is thereby guided. The upper arm carries a key-plate *a'*, and the lower arm is pivotally connected with a bent two-armed lever *c* by means of a rod *b*. On the rear side of the casing Z a series of eleven vertical coin-cylinders r' r^2 r^3 r^4 r^5 r^6 r^7 r^8 r^9 r^{10} r^{11} are arranged in the same vertical parallel planes as eleven of the key-levers *a a*. In the said planes are also arranged eleven horizontal slides *i*. (See Fig. 6.) The front end of each slide is provided with a slot i^2, through which the end of the upper arm of the respective bent two-armed lever *c* projects. Thereby the slide *i* is obliged to partake in the movement of the lever *c*, and hence also in that of the key-lever *a*.

The rear end of the slide *i* is widened and curved to the periphery of the coins in the respective coin-cylinder, (r^3 in Fig. 6.) It is also cut out at *i'* from below, so as to form a shoulder i^3. This end of the slide *i* can pass through a suitable slot *l* of the cylinder, so as to engage the lowermost coin. On the rear side of the cylinder a slot *l'* is provided to allow of the lowermost coin going out of the cylinder. The said slots in the cylinder are slightly higher than the thickness of a coin, and the rear end of the slide *i* is slightly thinner, so as to insure but one coin being thrown out by the slide *i* at a time. Each slot a^2 in the casing Z is made so long that on moving the respective key-plate *a'* downward in the direction of the arrow in Fig. 5 the rear end of the slide *i* passes quite to the external periphery of the coin-cylinder *r* on the rear side, so as to entirely throw out the low-

ermost coin. The latter falls down the collecting-chute x and through the tunnel x' into the wages-bag q or other receptacle. Beneath the bottom of each coin-cylinder a detent m is arranged, which is hinged at m^3 to a convenient horizontal partition-wall of the casing Z and is provided on its free end with a vertical nose m^2. Normally the detent is pressed upward by a helical spring y, so that its nose m^2 closes the slot l' and prevents the lowermost coin from passing out of the cylinder r. The detent m is provided near its axis with a projection m', against which the shoulder i^3 of the slide i can strike to depress the detent against the action of the spring y, when the detent will occupy a position indicated by the dotted lines in Fig. 5 and uncover the slot l', so that the lowermost coin can be thrown out by the slide i. On releasing the key-lever a it is returned to its initial position by a spiral spring k, attached with its other end to the wall of the casing Z. Then the detent m will again be raised by the spring y and close the slot l'.

Each coin-cylinder (r^3 in Fig. 5) is made in two halves, of which the front one is fastened on the casing Z, while the rear half is hinged at s^2 to a plate a^3, secured on the casing, so that the rear half can be turned downward. Thereby the introduction of a coin-roll into the cylinder is facilitated, whereupon the hinged cylinder-half is again closed and secured by a lock s, hinged to it at s'. In order to enable the operator to see at once how many coins are in the cylinders, each cylinder is provided on the rear side with a longitudinal slot s^4 and on the front side with a slot s^3 and a scale. (See Fig. 3.) On the uppermost coin in each cylinder a plate z of similar shape is made to rest, which is provided with two arms z' and z^2, projecting through the two slots s^3 and s^4, the front arm z' serving as an indicator to the scale. The divisions of each scale being equal to the thicknesses of the respective coins, the operator will be enabled to read off the scale the number of the coins contained in the cylinder.

The casing Z is on the front so shaped as to form a table v, beneath which two paper-rolls o o', Fig. 3, are mounted to turn on suitable pins. By any known feeding mechanism actuated by the key-levers a a the endless paper band p is fed forward from the roll o over a guiding-roll p' and beneath the printing-plate or pillow h and under a guiding-roll and over the supporting-plate n to the other roll o', or vice versa. The supporting-plate n is arranged immediately below the table v, and the latter is provided with an aperture n', Fig. 2, to allow of the operator noting the number of the respective wages-bag q or receptacle on the upper side of the paper p. Around the printing-plate h twelve type-levers g (see Figs. 3, 4, 5, and 6) are mounted to turn on pins u', secured in a convenient manner to the casing Z. Twelve rods f f are arranged radially around the printing plate or pillow h and are linked to the lower arms of the bent two-armed levers c c, already mentioned above, and move in straight lines toward the type-levers g. The pivots u' of the type-levers g are a little above the horizontal rods f, so that the latter can strike against the type-levers g and cause them to turn upward and print off their types t on the paper band p from below.

The bent two-armed levers c c are mounted to turn on suitable pins e e, which are secured to the casing Z in any known manner. These levers transmit the movements of the key-levers a a to the slides f f and the type-levers g g.

As is indicated in Fig. 2, the first coin-cylinder r' is destined for the German golden coins of twenty marks each, the second cylinder r^2 for the golden coins of ten marks each, the third cylinder r^3 for the silver coins of five marks each, the fourth cylinder r^4 for the silver coins of three marks each, the fifth cylinder r^5 for the silver coins of two marks each, the sixth cylinder r^6 for the silver coins of one mark each, the seventh cylinder r^7 for the silver coins of fifty pfennigs each, the eighth cylinder r^8 for the nickel coins of ten pfennigs each, the ninth cylinder r^9 for the nickel coins of five pfennigs each, the tenth cylinder r^{10} for the copper coins of two pfennigs each, and the eleventh cylinder r^{11} for the copper coins of one pfennig each.

The apparatus is operated as follows: The labor to be paid may be assumed to be on the rear side and to have attached his wages-bag q to the tunnel x', Fig. 1. Then the operator moves down the respective key-levers a a in correspondence with the amounts to be paid, when the respective coins are thrown out of their cylinders, and at the same time the corresponding type-levers g g are struck against to print off their types t t on the paper band p. To finish the printing, the operator moves down the key-lever marked "S" in Fig. 2 to print off a point or other finishing-sign, and afterward he writes down on the paper in the aperture n' the respective number. Of course he may first note this number and then move the various key-levers a a. When in any coin-cylinder all the coins have been thrown out, the plate z will rest on the bottom of the cylinder, and owing to its thickness it will prevent the slide i from moving, so that the key-lever a will be checked.

The bent two-armed levers c c may be modified, as is shown in Fig. 7, the upper arms of the levers c' being pivotally connected with the key-levers a by means of rods b' and the lower arms being provided with types t' and serving themselves as type-levers.

Having now described our invention, that

which we wish to secure by Letters Patent of the United States is—

In a cash-controlling apparatus, the combination with a plurality of two-armed key-levers; a horizontal shaft upon which said levers are mounted so as to turn in parallel vertical planes; a plurality of vertical coin-cylinders located in said planes and arranged in a series; two opposite slots provided in each of said cylinders immediately above the bottom of the same; a plurality of horizontal slides also located in said planes and adapted each to enter the slot upon one side of the respective cylinder so as to throw out a coin through the opposite slot; a plurality of spring-pressed hinged detents located beneath the said cylinders; projections provided upon said hinged detents near to the axes of same; noses also provided upon the said hinged detents upon the free ends of the same and adapted to normally close the last-mentioned slots of the said cylinders; shoulders provided upon said horizontal slides and adapted to strike against said projections so as to depress the detents and allow them to let the coins be thrown out; a plurality of check-plates resting upon the coins in the said coin-cylinders and adapted to check the said horizontal slides after all coins have been thrown out; a receptacle adapted to collect the coins; a chute adapted to receive the coins thrown out and to conduct them into said receptacle; a printing-plate; a plurality of stationary pins arranged in an area around said printing-plate; a plurality of type-levers mounted to turn upon said stationary pins; a plurality of horizontal rods arranged radially around said printing-plate and adapted to strike against said type-levers so as to throw them upward and cause them to print off their types from below; means for positively connecting said horizontal rods with said horizontal slides and with said key-levers, and means for returning the latter to their initial position after they have been acted on, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

RICHARD SCHNEIDER.
WALTER SCHNEIDER.

Witnesses:
EDUARD M. GOLDBECK,
ALFRED MATTHEI.