(No Model.) 2 Sheets—Sheet 1.

J. H. VOSS.

CASH INDICATOR AND REGISTER.

No. 387,193. Patented July 31, 1888.

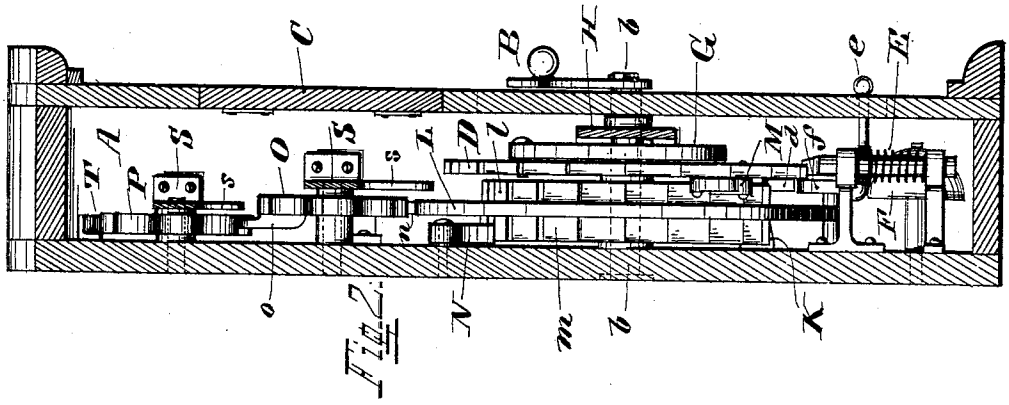

Fig. 2.

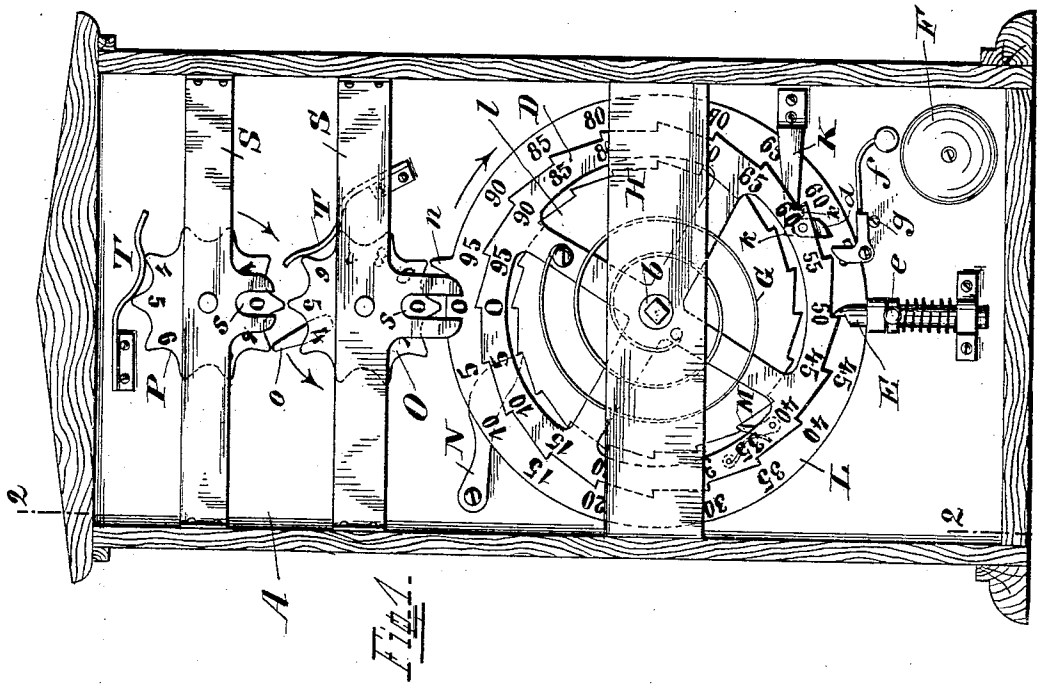

Fig. 1.

Witnesses.
Francis M. Biddle
F. E. Woolverton.

Inventor,
Joseph H. Voss.
By his Attorney
Carl Spengel.

(No Model.) 2 Sheets—Sheet 2.

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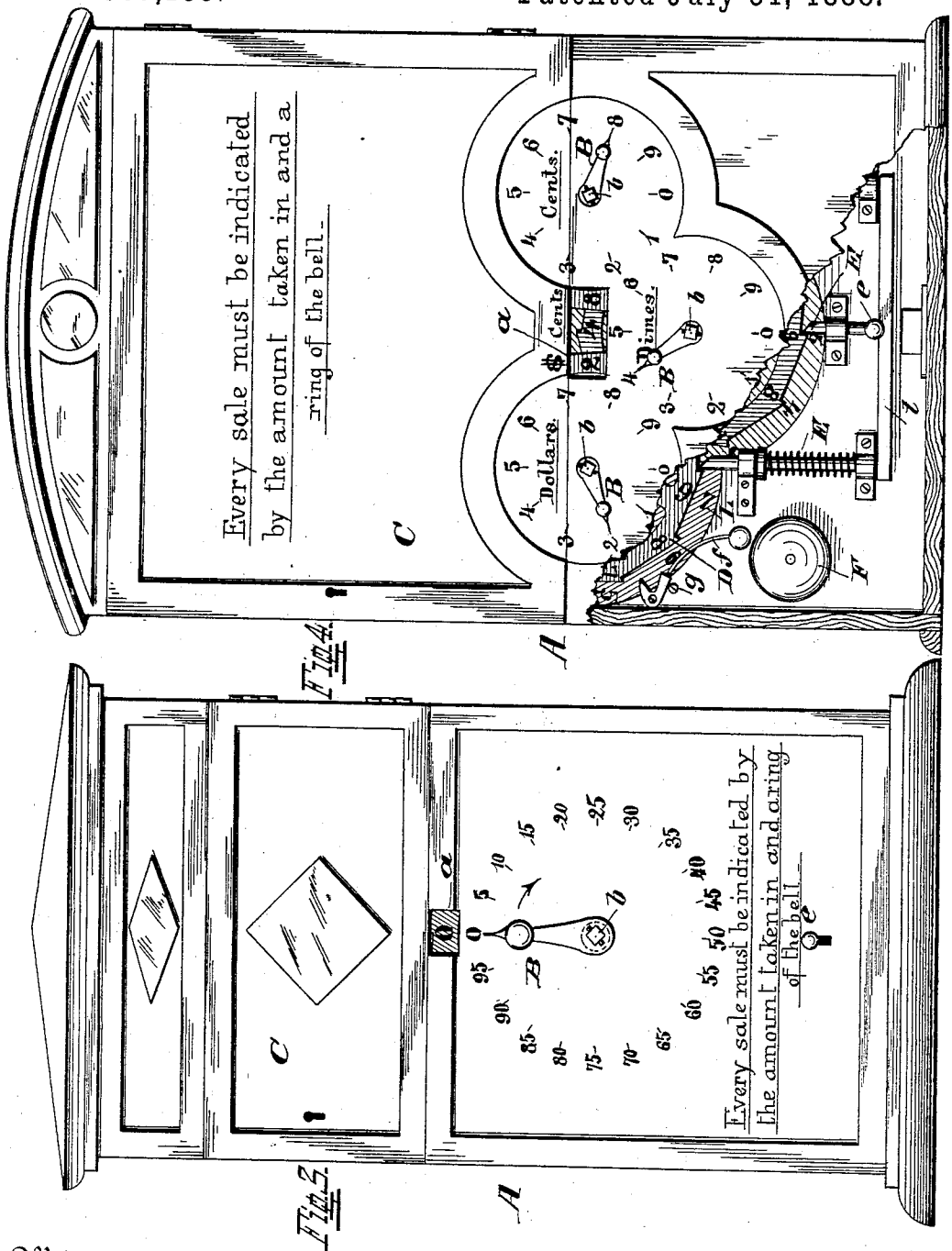

Fig. 1.

Fig. 2.

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Francis M. Biddle
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UNITED STATES PATENT OFFICE.

JOSEPH H. VOSS, OF CINCINNATI, OHIO.

CASH INDICATOR AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 387,193, dated July 31, 1888.

Application filed October 18, 1887. Serial No. 252,677. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. VOSS, a citizen of the United States, residing at Cincinnati, Hamilton county, State of Ohio, have invented a new and Improved Cash-Indicator and Adding Device, of which the following is a specification.

My device is intended to be used by the salesman or clerk of a store or similar establishment for the purpose of showing to the buyer or owner of the place the amount of money taken in every time a sale is made. At the same time the device adds the amounts of each sale, so that the proprietor, at any time he chooses, by opening it may know the exact amount of cash taken in without counting the latter. Finally, by comparing the added amount indicated inside with the counted cash he is enabled to discover any losses caused by mistakes or dishonesty of his employés.

The construction of my device is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of it, the face of the case being removed. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 shows a front view of the complete device, and Fig. 4 is a modified form of it.

A is the casing.

B is an indicator provided with a knob and intended to be manipulated by the clerk or salesman in connection with a dial on the face of the casing.

C is the locked portion of the front, only accessible to the proprietor, and shows him, when opened, in figures the aggregate of cash on hand.

B is the indicator on the square end of arbor *b* of wheel D, carrying numbers corresponding with the ones on the dial outside.

The clerk, selling, for instance, ten cents' worth, turns the knob until the hand or indicator points to 10 on the dial. This brings the number 10 on wheel D opposite the opening *a* in the face and displays it there to the buyer or proprietor.

In order to call the attention of the buyer or proprietor more readily to any non-performance of the duty on the part of the salesman, an alarm-bell, F, is provided, which must be sounded every time a sale is to be indicated, as explained to the public by a notice on the outside of the case. In order to bring the parts which sound the bell in proper position to be operated before the indicator is turned, wheel D has connected to it one end of a spiral spring, G, whose other end is connected to some stationary part, preferably the bridge H. Every time indicator-wheel D is turned from left to right this spring is partly wound and drives the wheel back against a stop, K, when released from spring-catch E, which engages in ratchet-teeth on the periphery of said wheel. The object of this spring-catch is to hold indicator-wheel D, displaying the numbers in opening *a* in the position to which it has been turned in order to give the public time to observe the numbers. The parts may stay in such positions until the next sale is made, when, before indicating the amount of cash taken in, knob *e* of the spring-catch has to be pushed down, in order to release indicator-wheel D and to allow it to swing back in such a position as to be able to operate the bell when turned forward again. This manipulation of knobs has to precede the indication of a sale for the purpose already explained. The bell-hammer *f* operates by its weight and is lifted by a swinging pawl, *d*, on wheel D. This pawl swings, however, only one way, being kept from swinging the other direction by a stop, *k*, on the wheel. When wheel D is turned from left to right, this pawl becomes operative on the end of the bell-hammer by lifting it, being held against it by stop *k*. After pawl *d* has passed over the end of the bell-hammer the latter is liberated, and, dropping down, strikes the bell. On the return swing of wheel D pawl *d* is inoperative, and swinging loosely over the heel of the bell-hammer drops in position again behind it. Stop *k* on wheel D serves also as abutment against stationary stop K. The two stops are so located with reference to each other that they stop the wheel D in such a position that it shows 0 in the display-opening when at rest.

g is a stop, against which the bell-hammer rests, preventing it from laying against the bell after having struck it.

The adding of the different amounts taken in during a certain time is accomplished as follows:

L is a registering-wheel loose on arbor *b*, having numbers and two ratchet-wheels, *l* and *m*, one of them on each side.

M is a spring-pawl on the rear side of wheel D, engaging with ratchet-wheel *l* on the front side of wheel L, turning the latter every time wheel D is turned from left to right.

N is another pawl engaging with ratchet-wheel *m* on the rear side of registering-wheel L, and keeps it in the position to which it has been advanced by the other pawl on wheel D, when this latter wheel swings back on being released by the spring-catch. The numbers on the two wheels D and L correspond.

At the beginning all parts are in about a position as shown in Fig. 1. Supposing the clerk takes in thirty-five cents. He turns the indicator outside to 35, (the bell ringing in the same time,) which brings the number 35 on wheel D to the opening *a* and displays it to the buyer. Pawl M has pushed in the same time registering-wheel L forward to the number 35. Another sale, amounting to fifty cents, is now made. The clerk presses down knob *e*, which restores the indicating-wheel D to its normal position. He now indicates the fifty cents sale in opening *a*, which operation is accompanied by a ring of the bell and an advance of the registering-wheel L, which shows now an aggregate sale of eighty-five cents. Supposing a further sale of forty cents is made. The indicating part of the operation is the same. In the registering part, however, another wheel, O, is included in the operation, registering one dollar when the cent-registering wheel has completed one revolution. Wheel O has as many teeth as it indicates dollars, and is advanced the space of one tooth to every revolution of wheel L by a finger, *n*, on the latter. In the present assumed case wheel O registers one dollar and wheel L twenty-five cents, the two together showing the total of the three sales, which is $1.25.

The number of teeth in wheel O is arbitrary. In this case ten are preferred. In order to be enabled to register a larger amount of money without being compelled to open the case, another wheel, P, has been provided, indicating the number of revolutions of wheel O. The number of teeth in this wheel may also be chosen at will. The number of ten, however, has been found to be the most convenient one. Wheel O has a finger, *o*, which revolves in the plane of wheel P and pushes it one tooth ahead every time wheel O makes a revolution. Notches *s* in the two bridges S serve to facilitate the reading off of the figures on the wheels.

The proprietor, desiring to know how much money is in his drawer at a certain time, opens the case and reads off the figures appearing in the notches. The top figure shows him how many times ten dollars he has, the next figure shows him the dollars, and the lowest the cents.

T are friction-springs which prevent the wheels O and P from turning too freely. This indicator may be used for any amount between five cents and one dollar and when divisible by 5. For other purposes and when desirable to indicate and register sales of any amount, I use a construction as illustrated in Fig. 4. The principles are the same as described. It consists of three devices—one for cents, one for dimes, and one for dollars—all combined in one case. A bar, *t*, is connected with the three spring-catches and has the knob *e*, so that by one operation one or all the spring-catches may be released at the same time. The indicating is the same, except that each denomination is indicated on its respective dial. The registering, which is dependent and coincidental with the indicating, is the same as described before. In counting the registered cash the amounts in each group are added first, as before, and by themselves; then the three amounts are added together, giving the total.

I claim as new and of my invention—

1. In a cash indicating and adding device, the combination of an arbor, an indicator, B, and indicator-wheel D, secured thereto, a spiral spring which is wound when the indicator is turned, a registering-wheel, L, having two ratchet-wheels secured to it and revolving loose around the same arbor, a pawl, M, moving with the indicator-wheel, engaging with one of the ratchet-wheels on wheel L, a retaining-pawl, N, engaging the other ratchet-wheel on wheel L, a spring-catch, E, engaging in ratchet-teeth on indicator-wheel D, a stop, *k*, on the same wheel, and a stationary stop, K, all for the purpose described.

2. A cash indicating and adding device consisting in the combination of an accessible case, A, a display-opening, *a*, therein, an indicator, B, having a knob, a corresponding dial on the outside of the case, an indicator-wheel, D, being fast on the same arbor with indicator B, the two moving together, a spring-catch, E, to keep wheel D in a certain position, spring G, and stops K and *k*, to restore wheel D to its normal position, a bell, F, operated by the indicating mechanism, a registering-wheel, L, provided with two ratchets, *l* and *m*, sitting on same arbor with indicator B and wheel D, but loose therefrom, a spring-pawl, M, on wheel D, engaging in ratchet-wheel *l* of wheel L and revolving it in one direction every time the indicator is turned forward, a pawl, N, engaging the other ratchet-wheel, *m*, of wheel L and keeping it in the advanced position, a finger, *n*, on wheel L, engaging the first one of a series of adding-wheels, O P, turning it the space of one of its teeth to every revolution of wheel L, and a series of adding-wheels, O P, having fingers *o*, each indicating the number of revolutions of the one it is driven by, as and for the purpose described.

3. In a cash indicating and adding device with a series of adding and indicating wheels,

of which the latter are so arranged that compound numbers of as many single figures as there are indicating-wheels may be shown in one opening in a case, all being held in such position in the opening by spring-catches, the combination of these wheels with a bar, to which all these spring-catches are secured, and which has a knob by which all the catches may be operated simultaneously for the release of the indicating-wheels, as explained.

In testimony of which invention I hereunto set my hand.

JOSEPH H. VOSS.

Witnesses:
CARL SPENGEL,
FRANCIS M. BIDDLE.