

No. 766,001.

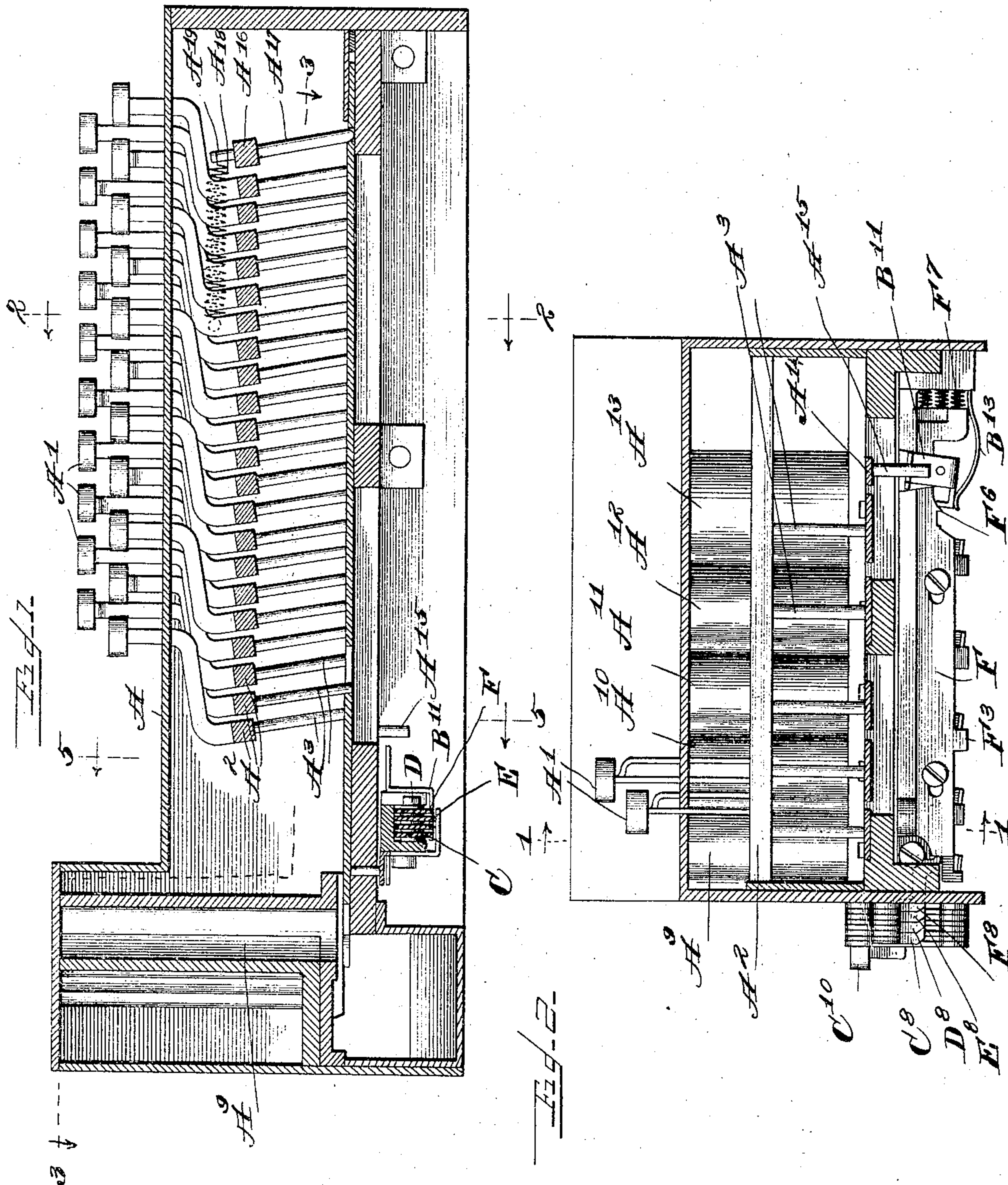
PATENTED JULY 26, 1904.

C. C. SPENGLER.  
CHANGE MAKER.

APPLICATION FILED OCT. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses—

*W. A. Mauberschnitt*  
*George L. Chindahl*

INVENTOR—

*Charles C. Spengler*  
*By Luther L. Miller*

*Att'y*

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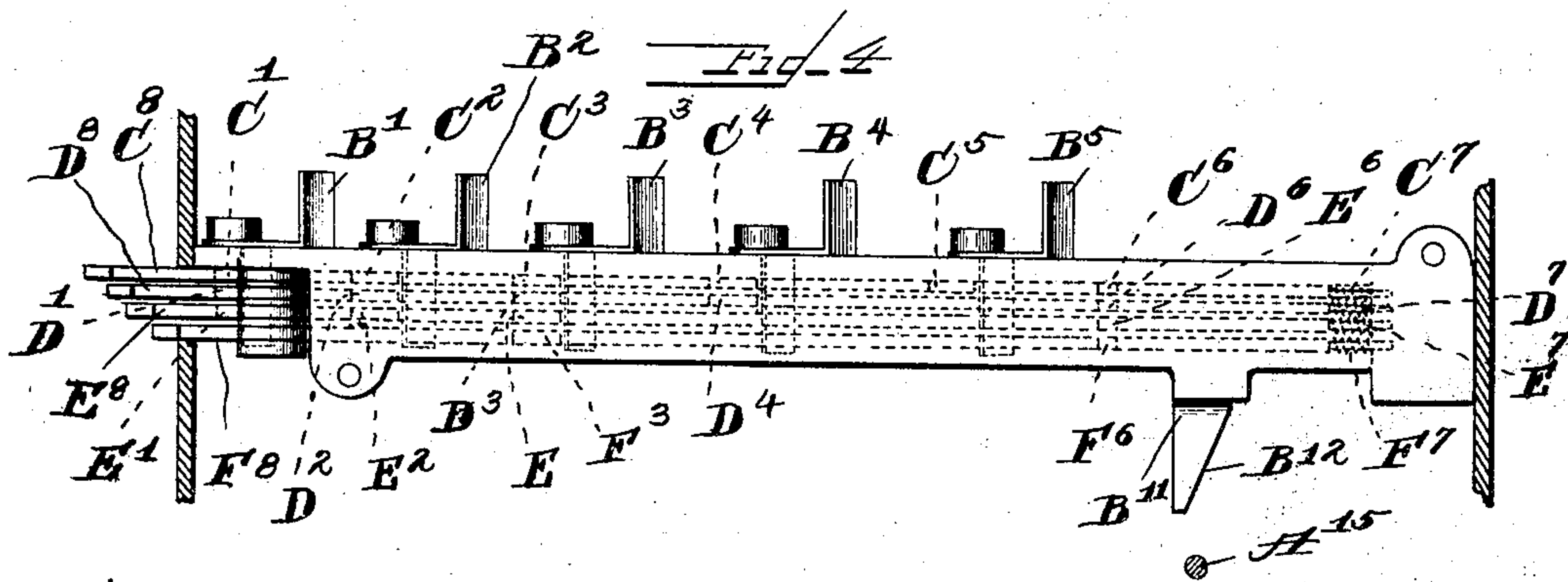
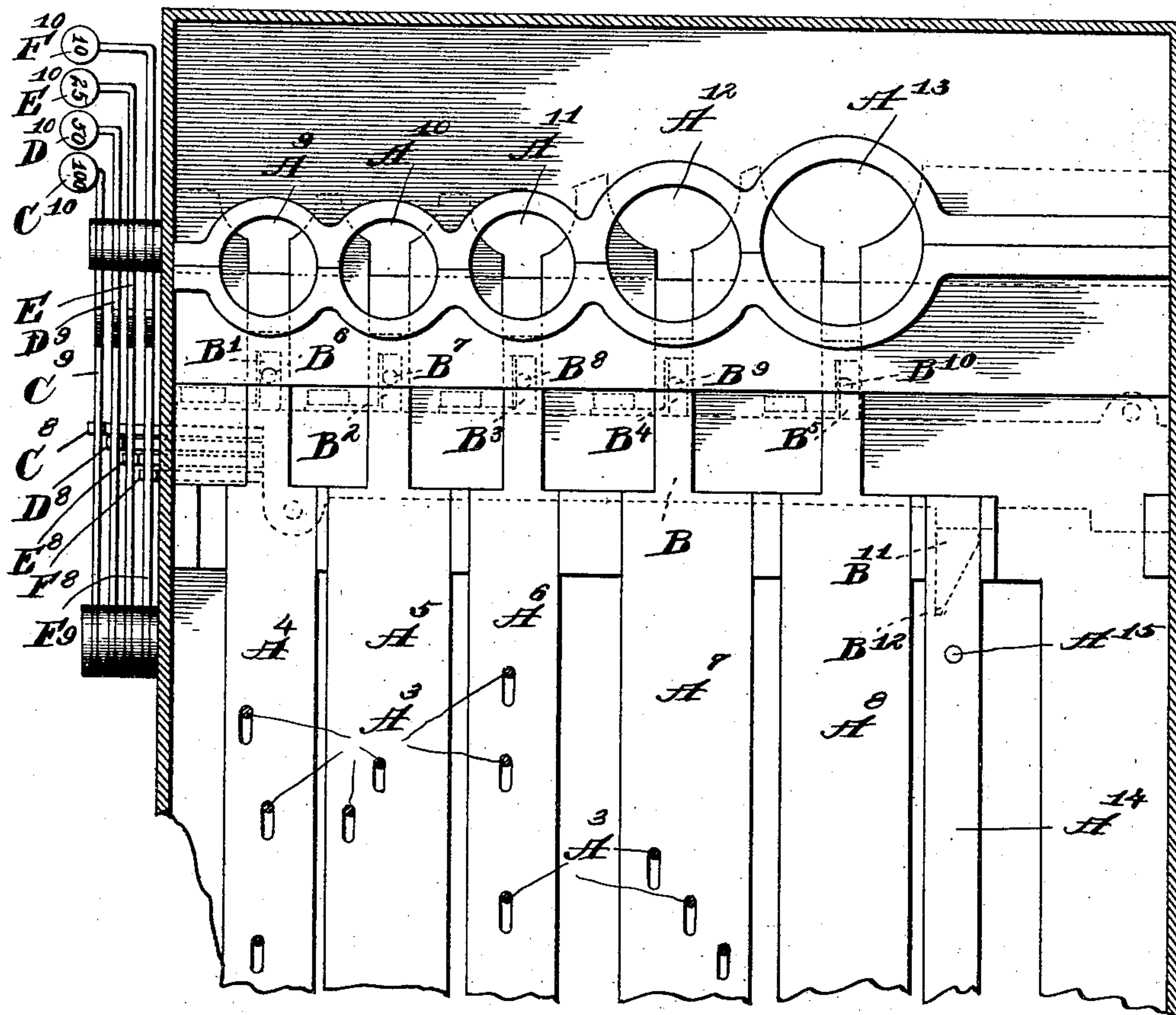
C. C. SPENGLER.  
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3 SHEETS—SHEET 2.

Fig. 3.



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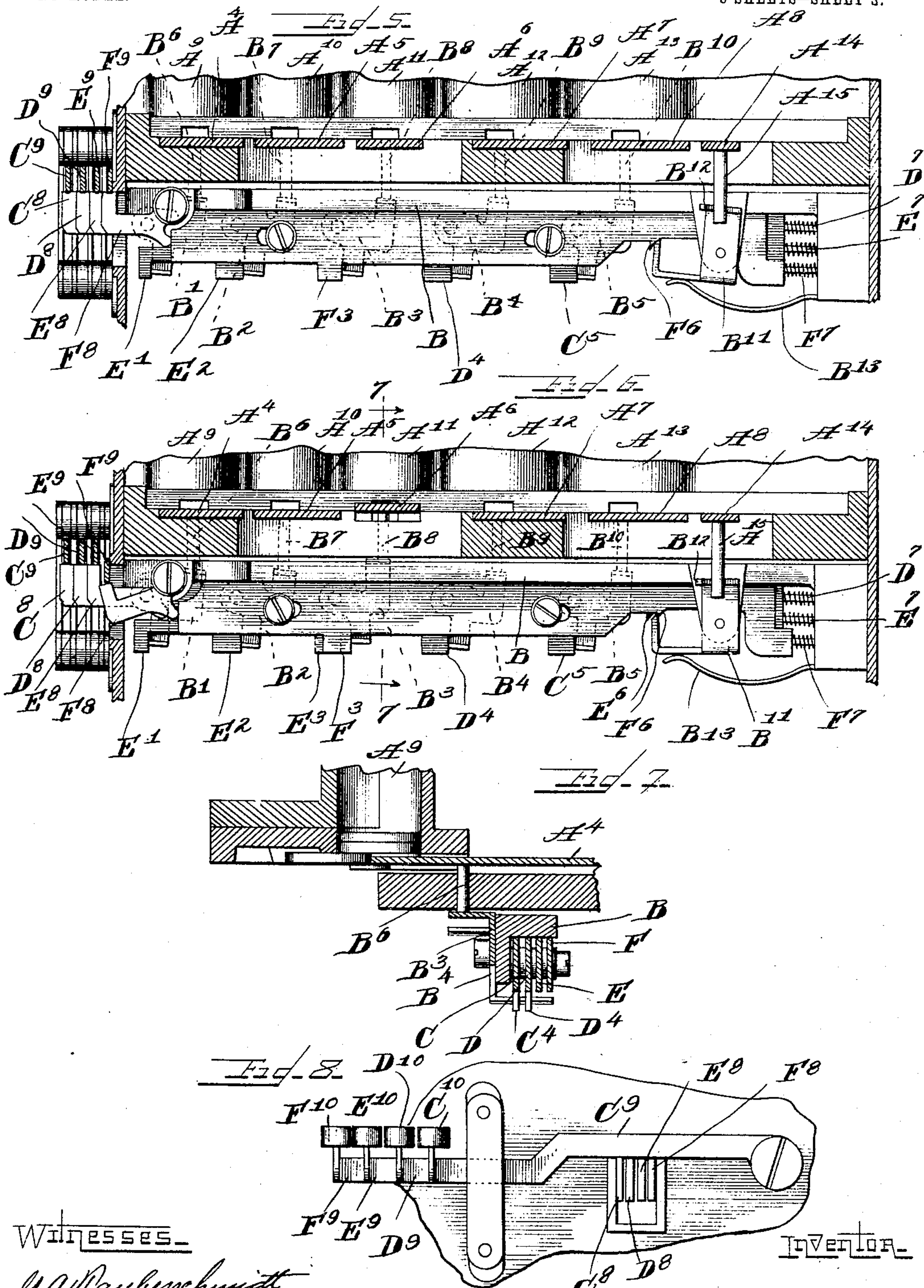
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APPLICATION FILED OCT. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 3.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

CHARLES C. SPENGLER, OF ROCKFORD, ILLINOIS.

## CHANGE-MAKER.

SPECIFICATION forming part of Letters Patent No. 766,001, dated July 26, 1904.

Application filed October 12, 1903. Serial No. 176,758. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. SPENGLER, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Change-Makers, of which the following is a specification.

This invention relates to change-makers, and refers particularly to improvements in the basis-changing mechanism of such change-makers—that is to say, the mechanism that adapts the machine to give change from any one of the several different bases within its scope. In the present embodiment these bases are one dollar, fifty cents, twenty-five cents, and ten cents.

In the accompanying drawings, Figure 1 is a longitudinal vertical sectional view on dotted line 1 1, Fig. 2, taken through a change-maker, showing the improved basis-changing mechanism of my invention in its application to said change-maker. Fig. 2 is a transverse vertical sectional view through said change-maker, taken on dotted line 2 2, Fig. 1. Fig. 3 is a detail top plan view taken on broken dotted line 3 3, Fig. 1. Fig. 4 is a top plan view of said basis-changing mechanism. Fig. 5 is a sectional view on dotted line 5 5, Fig. 1, taken through the change-maker, showing in side elevation the basis-changing mechanism. Fig. 6 is a view similar to the preceding one of the basis-changing keys depressed. Fig. 7 is a transverse sectional view taken on dotted line 7 7, Fig. 6. Fig. 8 is a detail face view of the change-maker, showing the operating-levers for the basis-changing mechanism.

In the drawings a change-maker of common construction is shown, of which change-maker A refers to the framework, A' to the operating-keys, A<sup>2</sup> to the rock-shafts for supporting said keys, A<sup>3</sup> to the arms extending downwardly from said rock-shafts, and A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup> to coin-slides for dimes, dimes, nickels, quarter-dollars, and half-dollars, which coins are adapted to lie in the coin-receptacles A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup>, A<sup>12</sup>, and A<sup>13</sup>, respectively. The coin-slides are suitably mounted to have an endwise movement in the frame- work and so that one end of said slides re-

ciprocates beneath said coin-receptacles. A releasing-slide A<sup>14</sup> for the basis-changing mechanism is also provided, which releasing-slide has a releasing-stud A<sup>15</sup> near one end of said slide. As in other change-makers of a similar kind, pressure exerted upon one of the operating-keys A' oscillates the rock-shaft which supports said key and produces a reciprocation of one or more of the coin-slides. All of the coin-slides and their actuating-keys are restored to a normal position by means of the restoring rock-shaft A<sup>16</sup>, having pins A<sup>17</sup> extending downwardly from said rock-shaft into suitable openings in all of the coin-slides A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup>, and the releasing-slide A<sup>14</sup>, which restoring rock-shaft is held in a normal position by the coil-spring A<sup>18</sup>, secured at one of its ends to an arm A<sup>19</sup> on said shaft and at its other end to a stationary point on the supporting-frame A. In the mechanism herein shown the coin-slides do not engage the coins within the receptacles A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup>, A<sup>12</sup>, and A<sup>13</sup> unless the forward ends of said slides are raised slightly, and this raising movement is accomplished by means of the basis-changing mechanism of this invention, which mechanism and the manner of operating it will next be described.

The basis-changing mechanism is mounted principally upon an angle-bar B, fixed in any suitable manner in the framework A. On one side of the angle-bar five two-arm angle-levers B<sup>1</sup>, B<sup>2</sup>, B<sup>3</sup>, B<sup>4</sup>, and B<sup>5</sup> are pivotally mounted, the lower arm of each of which levers extends transversely beneath said angle-bar. The upper arms of said angle-levers project outwardly to underlie pins B<sup>6</sup>, B<sup>7</sup>, B<sup>8</sup>, B<sup>9</sup>, and B<sup>10</sup>, slidably mounted in suitable openings within the supporting-frame A and beneath the coin-slides A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup>. The pawl B<sup>11</sup>, pivotally mounted upon the angle-bar B, has a laterally-extending operating-wedge B<sup>12</sup>, adapted to be engaged by the releasing-stud A<sup>15</sup>, and is held upwardly in engagement with its work by a flat spring B<sup>13</sup>.

Four basis-changing slide-bars C, D, E, and F are slidably mounted within the angle-bar B upon suitable guide-studs, each of said slide-bars being provided with integral projections adapted to engage the lower trans-



verse arms of certain of the levers B', B<sup>2</sup>, B<sup>3</sup>, B<sup>4</sup>, and B<sup>5</sup>. The slide-bar C, being the one that controls the dollar basis, has projections C', C<sup>2</sup>, C<sup>3</sup>, C<sup>4</sup>, and C<sup>5</sup> for all of said angle-levers, respectively. The bar D, controlling the fifty-cent basis, has projections D', D<sup>2</sup>, D<sup>3</sup>, and D<sup>4</sup> for the angle-levers B', B<sup>2</sup>, B<sup>3</sup>, and B<sup>4</sup>, respectively. The sliding bar E for the twenty-five cent basis has projections E', E<sup>2</sup>, and E<sup>3</sup> for the angle-levers B', B<sup>2</sup>, and B<sup>3</sup>, respectively, and the bar F for the ten-cent basis has one projection only—to wit, the projection F<sup>3</sup> for engaging the angle-lever B<sup>3</sup>. Each of the bars C, D, E, and F has an inclined tooth C<sup>6</sup>, D<sup>6</sup>, E<sup>6</sup>, and F<sup>6</sup>, respectively, for engaging with the pawl B<sup>11</sup>, whereby any one of said bars is held in a rearward position against the action of its respective coil-springs C<sup>7</sup>, D<sup>7</sup>, E<sup>7</sup>, and F<sup>7</sup>. To move said bars C, D, E, and F rearwardly, four bell-cranks C<sup>8</sup>, D<sup>8</sup>, E<sup>8</sup>, and F<sup>8</sup> are provided, said bell-cranks being pivotally mounted on the angle-bar B, each having an arm to impinge against the forward end of each one of said bars, also another arm forwardly extending to underlie one of the four operating-levers C<sup>9</sup>, D<sup>9</sup>, E<sup>9</sup>, and F<sup>9</sup>, pivotally mounted on the front face of the supporting-framework A and provided with indicating-keys C<sup>10</sup>, D<sup>10</sup>, E<sup>10</sup>, and F<sup>10</sup>.

As hereinbefore indicated, this basis-changing mechanism has four standards or bases—to wit, a one-dollar, a fifty-cent, a twenty-five-cent, and a ten-cent basis. To set the mechanism for any basis of the four mentioned, one of the basis-changing keys C<sup>10</sup>, D<sup>10</sup>, E<sup>10</sup>, and F<sup>10</sup> is depressed. For the sake of illustration let it be assumed that the dollar-key C<sup>10</sup> be depressed. The downward movement of the lever C<sup>9</sup> oscillates the bell-crank C<sup>8</sup> upon its pivot, moving the basis-changing bar C rearward against the action of its spring C<sup>7</sup> until its tooth C<sup>6</sup> is thrown rearward of the point of the pawl B<sup>11</sup>. As soon as this occurs said pawl is thrown upward by the flat spring B<sup>13</sup>, holding said bar in its rearward position. This rearward movement of the bar C brought the projections C', C<sup>2</sup>, C<sup>3</sup>, C<sup>4</sup>, and C<sup>5</sup> of said bar into contact with the lower arm of each of the angle-levers B', B<sup>2</sup>, B<sup>3</sup>, B<sup>4</sup>, and B<sup>5</sup>, imparting to said levers an oscillatory movement. This oscillatory movement of the levers B', B<sup>2</sup>, B<sup>3</sup>, B<sup>4</sup>, and B<sup>5</sup> raises the pins B<sup>6</sup>, B<sup>7</sup>, B<sup>8</sup>, B<sup>9</sup>, and B<sup>10</sup>, which in turn raises the ends of the coin-slides A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup>. The mechanism is now placed in position to give change from one dollar—to wit, upon purchases wherein a dollar is given in payment for purchases of a smaller amount. The coin-slides A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup>, or certain ones of said slides, are moved forward by depressing the operating-keys A' of the change-maker. The releasing-slide A<sup>14</sup> is connected to move forward by the depression of any one of the operating-keys A', and

when the releasing-stud A<sup>15</sup> upon said releasing-slide is brought into contact with the operating-wedge B<sup>12</sup> of the pawl B<sup>11</sup> said pawl is rocked downward upon its pivot against the action of its spring B<sup>13</sup>, withdrawing the point of said pawl from engagement with the tooth C<sup>6</sup> of the bar C. When thus released, the bar C is thrown forward into its normal position by its coil-spring C<sup>7</sup>, and this forward movement of the bar C also restores the other parts of the basis-changing mechanism to their normal positions. When the fifty-cent key D<sup>10</sup> is depressed, only the levers B', B<sup>2</sup>, B<sup>3</sup>, and B<sup>4</sup> are oscillated, and consequently only the pins B<sup>6</sup>, B<sup>7</sup>, B<sup>8</sup>, and B<sup>9</sup> and the coin-slides A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, and A<sup>7</sup> are raised. The basis-changing mechanism is held in position upon the fifty-cent basis by the pawl B<sup>11</sup> engaging the tooth D<sup>6</sup>. It is released by the forward movement of the releasing-slide A<sup>14</sup> and stud A<sup>15</sup>, withdrawing said pawl from said tooth, as hereinbefore described. When the mechanism is set for a certain basis, it may be changed to another basis by simply depressing the key of the desired basis, for in passing the point of the pawl B<sup>11</sup> the engaging tooth of the bar of the desired basis depresses said pawl sufficiently to release the tooth of the bar previously held, releasing said bar to the action of its coil-spring, which latter returns it to a normal position.

It is clear that many changes in and modifications of the mechanism herein shown and described may be resorted to without departing from the spirit and scope of my invention, wherefore I desire to have it understood that I do not limit myself to the particular embodiment thereof herein set forth.

I claim as my invention—

1. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; two levers, each for moving a certain combination of said coin-slides into operative relation with coins in certain of said coin-receptacles; means for retaining said coin-slides in such operative relation; mechanism for reciprocating certain of the coin-slides so moved; and means actuated by the movement of the change-making mechanism for releasing said retaining means.

2. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a plurality of levers, each for raising a certain combination of said coin-slides to place them into operative relation with coins in certain of said receptacles; means for retaining said coin-slides in said operative relation; mechanism for reciprocating certain of the coin-slides so raised; and means actuated by the movement of the change-making mechanism for releasing said retaining means.

3. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a plurality of levers, each for raising a certain combination of said coin-slides;



mechanism interposed between each of said levers and certain of said coin-slides for raising said slides; means for retaining said coin-slides in their said elevated position; mechanism for reciprocating certain of the coin-slides so raised; and means actuated by the movement of the change-making mechanism for releasing said retaining means.

4. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a plurality of operating-levers; a series of slidable bars adapted to be moved by said levers; a mechanism for each of said slidable bars adapted to be actuated by one of said bars for raising a certain combination of said slides to place them into operative relation with coins in certain of said coin-receptacles; means for retaining said coin-slides in such operative relation; and means for releasing said retaining means.

5. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a plurality of operating-levers; a series of slidable bars; a series of angle-levers; a slidable pin for each angle-lever; and means for reciprocating certain of said coin-slides.

6. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a plurality of operating-levers; a series of slidable bars; a series of angle-levers

adapted to be moved by said slidable bars; pins extending between each of said angle-levers and the corresponding one of said coin-slides; a spring for moving each of said slidable bars in one direction; means for holding each of said bars against the action of its spring; and means for reciprocating certain of said coin-slides.

7. In a change-maker, in combination, a plurality of coin-receptacles; a plurality of coin-slides; a series of operating-levers; a series of slidable bars, each bar having one or more projections and a holding-tooth; a spring for each of said bars adapted to move its said bar longitudinally; a pawl adapted to engage the said tooth on each bar to hold said bar against the action of its said spring; a bell-crank for each bar for transmitting motion from each of said operating-levers to one of said bars; a series of angle-levers adapted to be engaged by the projections upon said bars; a slidable pin lying between each of said angle-levers and the corresponding one of said coin-slides; and mechanism for reciprocating certain of the coin-slides.

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Witnesses:

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