No. 715,247. Patented Dec. 9, 1902.

J. W. DAVIS.

COIN COUNTER.

(Application filed June 12, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

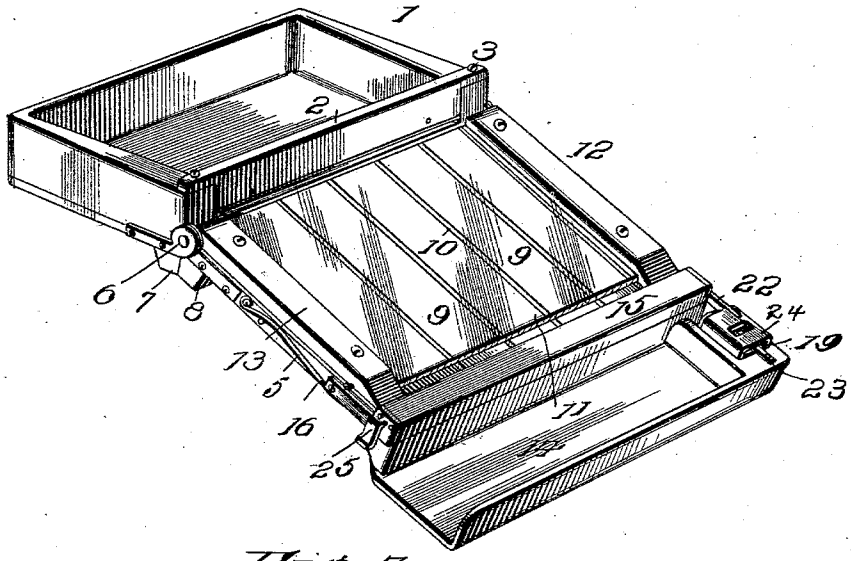


Fig. 4.

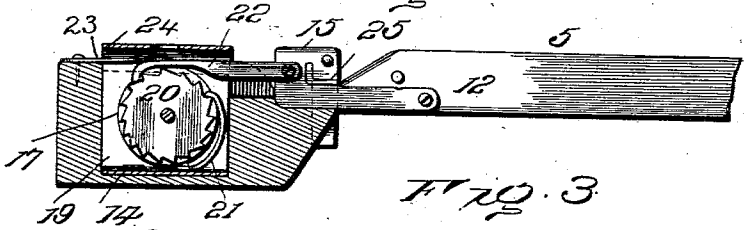
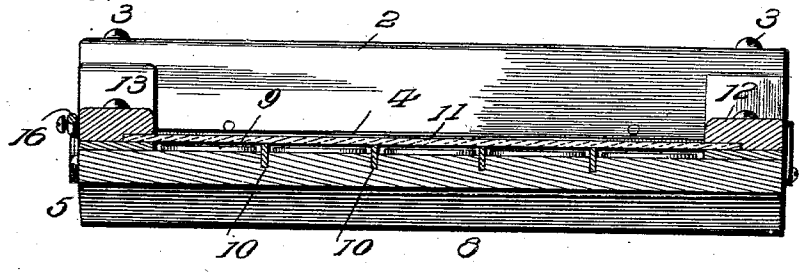


Fig. 3.



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

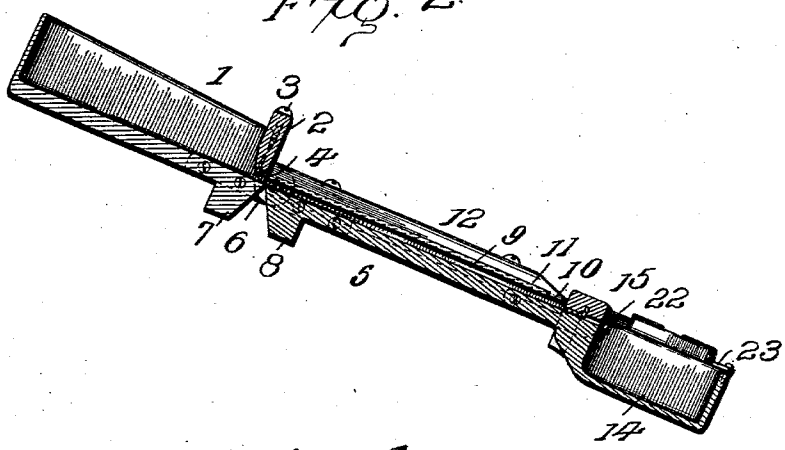


Fig. 5.

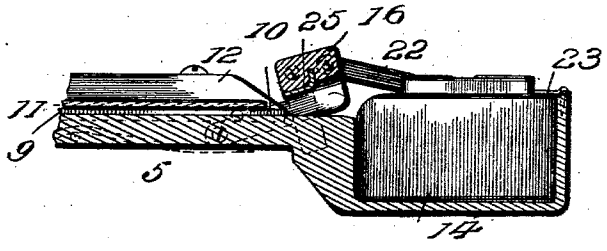
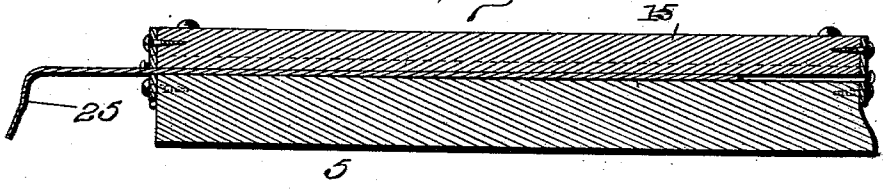


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN W. DAVIS, OF STEELTON, PENNSYLVANIA.

COIN-COUNTER.

SPECIFICATION forming part of Letters Patent No. 715,247, dated December 9, 1902.

Application filed June 12, 1901. Serial No. 64,319. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DAVIS, a citizen of the United States, residing at Steelton, in the county of Dauphin, State of Pennsylvania, have invented a certain new and useful Improvement in Coin-Counters, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in coin-counters, and has for its object a counter arranged to receive a quantity of coins of like value and accurately count and deliver them with small effort on the part of the operator. It has heretofore been proposed to use a board or support provided with a series of channels of a depth equal to the thickness of the coins to be counted, and the coins were placed in these channels and the hand rubbed over them to brush off any coin or coins that happened to be on top of those in the channels, and the latter were then run off in any suitable manner. It is my object, however, to provide a counter that will deliver only a single thickness of coins, and it is provided with a gate to hold or deliver them and also with means for shutting off the supply, so that when the channels are filled they can be easily emptied by opening the delivery-gate.

My invention therefore consists of a counter of such description, which will be now more particularly described in the embodiment in which I now prefer to make it, and then definitely set forth by the claims at the end hereof.

In the accompanying drawings, Figure 1 is a perspective view of my counter with the supply or coin receiver dropped downward in the position it will occupy when the channels are filled preparatory to being emptied. Fig. 2 is a longitudinal section showing the parts in the position which will allow the coins held in the holder or receiver to pass into the channels. Fig. 3 is a cross-section. Figs. 4 and 5 are detail views of the delivery-gate, and Fig. 6 is a detail showing the slide hereinafter described.

Referring now to the details of the drawings by numerals, 1 indicates the coin receiver or holder into which the mass of coins of similar denomination are placed, and at the front of this holder is secured a feed-bar 2, which is preferably screwed therein, as indicated at 3, and has a metallic wearing-strip 4, under which the coins may pass, this strip 4 leaving a feed-opening of just about the thickness of the coin, so as to prevent the piling up of the coins and the consequent jamming of the mouth of the channels. This receiver or holder 1 is hinged to the main part of the counter 5 by means of the hinges 6, the holder and the main or body portion 5 being so hinged that they may be moved into the same plane with each other, as shown in Fig. 2, and so that the holder may also be dropped downward, as shown in Fig. 1. These parts 1 and 5 are provided with transverse ribs 7 and 8 along the line of the hinge, which ribs are designed to prevent the parts from moving farther than is necessary. The main or body portion 5 is divided off into a plurality of chambers 9, which are preferably formed by countersinking metallic partitions 10 therein. A sheet of glass or other transparent material 11 rests on these partitions 10 and is secured in place by the side bars 12 and 13. At the front end of the main or body portion 5 is a transverse trough 14, preferably closed at one end and open at the other. Interposed between the channels 9 and this trough 14 and pivotally connected to the sides of the main or body portion is a pivoted delivery-gate 15, normally held in a closed position by means of a spring 16.

From the foregoing and the accompanying drawings it will be seen that if a number of coins of the same value are dropped into the holder or receiver 1 and the whole device is held on a slight incline and shaken rapidly while the receiver is in the same plane with the body portion the coins will gradually settle down into the channels 9, and when the same are all filled the operator moves the holder or receiver downward until its floor is inclined rearward, so that the remainder of the coins therein slide backward away from the feed-bar 2. Of course no more coins can now enter into the channels 9, and the operator then lifts the pivoted delivery-gate 15 and allows the coins which have been held in the channels 9 to run by gravity into the trough 14, from which they can be allowed to drop into the hand or into any convenient place.

It will be obvious that by properly proportioning the channels 9 so as to hold a certain number of coins each time the foregoing operation is repeated a predetermined number of coins is separated from the bulk contained in the holder or receiver, and thus automatically counted. In the counter shown in my drawings there are five channels, each arranged to hold five pennies, and therefore each time the channels are filled and emptied the result will be a pile of twenty-five pennies. It will be evident that the number of these channels may be increased or decreased or the channels lengthened or shortened, so that the counters may be manufactured to count any number of coins desired.

In order to keep tally of the number of coins counted, I connect a register with the counter, which in the present instance is shown as being actuated by the raising of the pivoted delivery-gate. This register may be made in any desired way; but, as shown in my drawings, it consists of counting-wheel 17, suitably journaled in an opening 19 in the end of the trough 14. This wheel has the usual ratchet-disk 20 and spring-pawl 21 for holding it from movement in one direction and allowing it to be turned in the forward direction. An actuating-pawl 22 is pivotally connected to the pivoted delivery-gate 15 and has its tail engaging the teeth of the ratchet, so that every time the pivoted gate 15 is raised it draws the actuating-pawl 22 and moves the wheels 17 one notch. A spring 23 is provided to hold the pawl 22 in contact with the wheel 17, and a cover 24, with a slight opening, is provided for the frame 18, so that the parts are not exposed. While I have shown only a units-wheel, it is obvious that "tens" and "hundreds" wheels may be added, if desired.

It will be manifest that if the counter is arranged to count one hundred coins each time the pivoted delivery-gate 15 is raised to deliver the coins to the trough the wheel of the register will be rotated one notch, and a record can thus be kept of the total number of coins counted.

Sometimes it is desirable or necessary to count out a lesser number of coins than all the channels hold. To provide for such a contingency, I arrange a slide 25 in the pivoted gate 15, which is so located that when withdrawn it uncovers as many of the channels as desired, allowing the pennies in the channels thus uncovered to drop into the trough. For instance, suppose it is desired to deliver three dollars and twenty cents and the counter contains ten channels, each holding ten pennies. The counter is then filled four times, and instead of being completely emptied the fourth time the slide 25 is pulled out sufficiently far to uncover and deliver the pennies from the two end channels only, thus delivering the desired amount.

I wish it to be distinctly understood that the counter, as herein illustrated and described, is the form in which I now desire to make it, and that changes and alterations may be made as may be convenient or desirable without departing from the salient features of my invention, and I therefore intend the following claims to cover such modifications as naturally fall within the lines of my invention.

What I claim as new is—

1. In a coin-counter, a plurality of flat coin-channels of uniform size, means common to all of said channels for delivering coins by gravity to the channels, and a gate for simultaneously controlling the delivery therefrom, substantially as described.

2. In a coin-counter, a plurality of flat coin-channels of uniform size, a transparent cover over said channels, in combination with a holder common to all of said channels for delivering coins by gravity thereto, and a gate for controlling the delivery therefrom, substantially as described.

3. In a coin-counter, a plurality of coin-channels of uniform size, and a transparent cover over said channels preventing more than a single thickness of coins from entering therein, in combination with a holder for simultaneously delivering coins by gravity to said channels, the said holder being pivotally arranged with relation to said channels, substantially as described.

4. In a coin-counter, a plurality of flat coin-channels of uniform size, and a transparent cover over said channels preventing more than a single thickness of coins from entering therein, in combination with a holder common to all of said channels for delivering coins by gravity thereto, and a gate for controlling the delivery therefrom, substantially as described.

5. In a coin-counter, a series of coin-channels of uniform size, a coin holder or receiver common to all of said channels and arranged to feed coins by gravity thereto, and a pivoted gate for controlling the delivery of coins from the channels, substantially as described.

6. In a coin-counter, a series of channels, a coin holder or receiver hinged in proximity to said channels and arranged to deliver coins thereto, and means for simultaneously controlling the delivery of coins from the channels, substantially as described.

7. In a coin-counter, a plurality of coin-channels, a coin holder or receiver hinged in proximity to said channels, a slot-like passage between said holder and said channels, the said holder being arranged to deliver coins through said slot-like passage to the channels, and a pivoted gate arranged at the delivery end of said channels, substantially as described.

8. In a coin-counter, a series of channels, a coin holder or receiver hinged in proximity to said channels, a slot-like passage between said holder and said channels, the said holder

being arranged to deliver coins through said slot-like passage to the channels, and a spring-actuated gate pivoted at the delivery end of said channels, and simultaneously controlling the delivery of coins therefrom, substantially as described.

9. In a coin-counter, a series of coin-channels of uniform size, a coin holder or receiver, common to all of said channels for delivering coins by gravity thereto, a delivery-trough arranged in proximity with the delivery end of said channels, and a gate pivotally mounted between the delivery end of said channels and the said trough, substantially as described.

10. In a coin-counter, a series of channels of uniform size, a coin holder or receiver arranged to deliver coins to said channels, a trough at the delivery end of said channels, and a pivoted gate interposed between the ends of the channels and said trough and simultaneously controlling the delivery of coins from said channels, substantially as described.

11. In a coin-counter, a series of channels, a coin holder or receiver hinged in proximity in said channels, a slot-like passage between said holder and said channels, the said holder being arranged to deliver coins through said slot-like passage to said channels, a delivery-trough and a spring-actuated gate pivoted between the delivery end of the channels and the trough, substantially as described.

12. In a coin-counter, a series of channels of uniform size having a transparent cover over said channels preventing more than a single thickness of coins from entering therein, a coin holder or receiver in proximity to said channels and arranged to deliver coins under said transparent cover, a delivery-trough, and a gate interposed between the ends of said channels and said trough, substantially as described.

13. In a coin-counter, a series of channels of uniform size, a coin-holder arranged to deliver coins to said channels, and a pivoted gate controlling the delivery of coins from said channels, substantially as described.

14. In a coin-counter, a series of channels, a gate controlling the delivery therefrom, and a slide arranged to control the delivery of any of said channels, substantially as described.

15. In a coin-counter, a series of channels, a pivoted gate controlling the delivery therefrom, and a slide arranged to open one or more of said channels, substantially as described.

16. In a coin-counter, a plurality of flat coin-channels of uniform size, means common to all of said channels for delivering coins by gravity to the channels, a gate for simultaneously controlling the delivery therefrom, and a register controlled by the operation of said gate, substantially as described.

17. In a coin-counter, a series of coin-channels, a slot-like passage at the entrance of said channels, a holder or receiver hinged in proximity to said channels, and arranged to deliver coins through said slot-like passage to said channels, and a stop acting with said hinge to limit the movement of the holder with relation to said channels, substantially as described.

18. In a coin-counter, a series of channels, a slot-like passage at the entrance to said channels, a coin-holder or receiver hinged in proximity to said channels, and arranged to deliver coins to said channels through said slot-like passage, a trough at the delivery end of said channels, a pivoted gate interposed between said channels and said trough, and a register controlled by the movement of said gate, substantially as described.

19. In a coin-counter, a series of channels and a coin holder or receiver hinged in proximity to said channels, a slot-like passage between said holder and said channels, the said holder being arranged to be moved in the same plane with said channels to deliver coins through said slot-like passage, or be moved at a downward angle thereto, thereby preventing the coins from entering said slot-like passage, substantially as described.

20. In a coin-counter, a coin holder or receiver, a series of flat channels of uniform size arranged side by side and substantially on the same plane, and a feed-bar controlling the entrance to said channels, the space under said bar allowing only a single coin to pass to each channel at one time, and a delivery-gate controlling the outlet of said channels, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 8th day of June, 1901.

JOHN W. DAVIS.

Witnesses:
CHARLES C. STROH,
FORREST L. YODER.