No. 695,080. Patented Mar. 11, 1902.

K. J. RAMSPECK.

COIN ASSORTER.

(Application filed July 2, 1901.)

(No Model.)

Fig. 1.

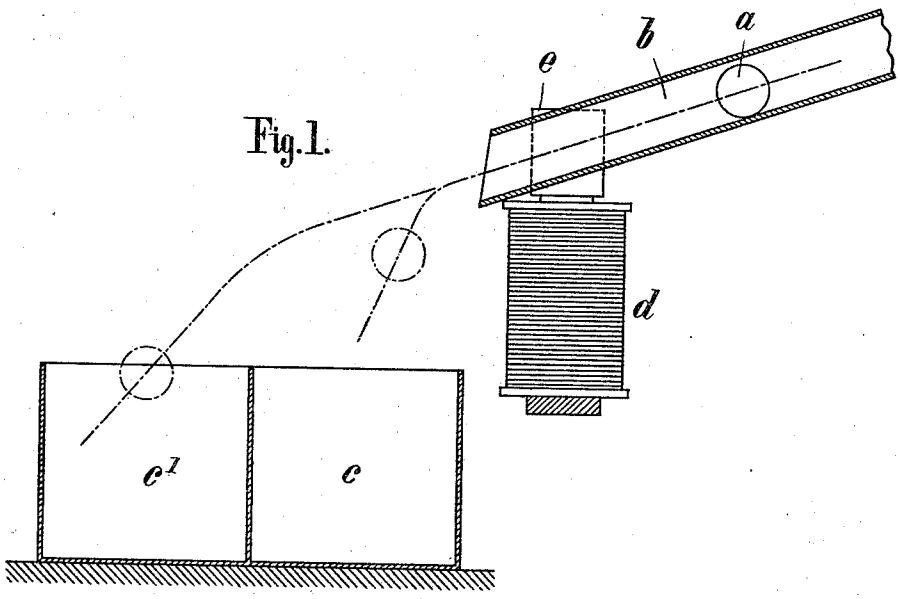
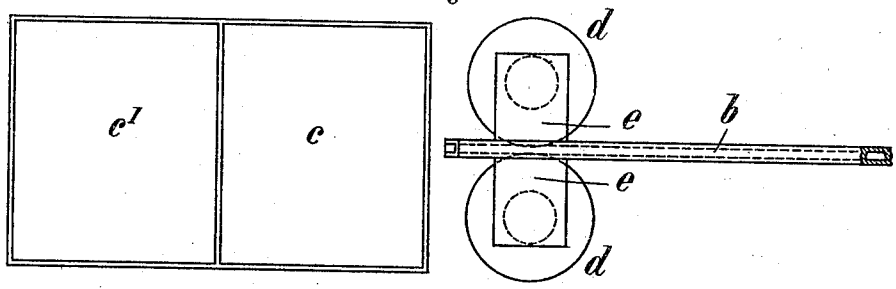


Fig. 2.



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UNITED STATES PATENT OFFICE.

KARL JULIUS RAMSPECK, OF ALTONA-OTTENSEN, GERMANY.

COIN-ASSORTER.

SPECIFICATION forming part of Letters Patent No. 695,080, dated March 11, 1902.

Application filed July 2, 1901. Serial No. 66,910. (No model.)

To all whom it may concern:

Be it known that I, KARL JULIUS RAMSPECK, a subject of the German Emperor, and a resident of Altona-Ottensen, in the German Empire, have invented certain new and useful Improvements in Coin-Assorters, of which the following is a specification.

This invention relates to apparatus for assorting or assaying diamagnetic coins, which invention is particularly applicable for use in automatic selling apparatus.

It is well-known that genuine and base or counterfeit coins can be separated by the aid of magnets. For this purpose a magnet is inserted in the race of the coins—for instance, in the coin-channel of an automatic selling apparatus—in which the coins to be separated roll along upon their edges in such a manner that the said magnet can exert an influence on the genuine or base coins passing such magnet. This influence may be stronger or weaker or missing at all according to the nature of the coins. The coins to be tested must therefore be paramagnetic—that is to say, they must be capable of being attracted by a magnet. Coins which possess this capability or nature are chiefly base coins of iron and coins consisting of pure nickel, the latter being in circulation only in a few countries—Austria and Switzerland. When, however, such coins as are circulating in the most countries of the world—viz., copper, silver, and gold coins and their base substitutes, respectively—are to be assorted or assayed, then of course the above method—viz., the magnetic attraction—cannot be applied, because the said coins and base pieces in question are diamagnetic and are therefore repulsed by the magnet or magnets.

The object of my invention is to provide means whereby also diamagnetic coins or base pieces can be reliably separated and assorted. I attain this object by the improved coin-assorter illustrated in the accompanying drawings, in which—

Figure 1 is a diagrammatical side elevation, partly in section, of my improved coin-assorter; and Fig. 2, a plan view of Fig. 1.

Similar letters refer to similar parts throughout the several views.

The coins *a* to be assorted are inserted at the upper end into an inclined channel *b*, in which they roll along upon their edges toward the lower open end of the channel, so as to drop out on arriving there and to fall into a suitable receptable *c*. The inclined coin-channel *b* is placed or arranged between the poles of a permanent magnet or an electromagnet. In the drawings I have shown an electromagnet *d* arranged in such relation to the coin-channel *b* and close to the lower end that all the coins rolling through the channel must also pass between the poles *e e*—that is to say, through the magnetic field of the said electromagnet *d*. In the coins being capable of electric excitation (copper, silver, gold coins, and the like) are thereby produced or generated electric whirls, (Foucault currents.) These whirls or currents, the intensity of which varies according to the nature of the metal of the coins, have the effect of either retarding or entirely stopping the motion of the said coins, so that the latter drop out of the channel *b* with more or less speed or momentum. This difference in speed and momentum may be utilized for assorting or assaying the coins. In the example shown this object of the invention is carried into practice by means of a series of receptacles or boxes *c c'*, placed in the manner of consecutive settling-compartments beneath the lower end of the channel *b*. According to the different retardation which the coins receive by the action of the magnet or magnets coins of different kinds of metal will therefore drop down at different distances from the mouth of the channel into their appropriate compartments or boxes, thereby causing a separation of the coins according to the quality of their metal or metal composition. Paramagnetic coins and corresponding base pieces must be separated previously, as they might otherwise cause disturbance or interruption in the correct and proper working of my improved coin-assorter.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A coin-selector for separating coins, comprising a coin-chute and means to produce Foucault currents in the coins as they roll past a given point of the chute to modify the speed at which the coins leave the chute, and thereby to alter their natural trajectory when

leaving the chute, and means to collect the coins in accordance with the character of the trajectory, for the purpose set forth.

2. Apparatus such as described, comprising an inclined coin-chute, an electromagnet near the discharge end of said chute with its poles on opposite sides of the coins for producing Foucault currents in the latter and thereby varying their speed of discharge and their trajectory, and receptacles placed at suitable distances from the said discharge end of the chute, for the purpose set forth.

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