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Patented Jan. 2, 1900.

E. MORIARTY.

MACHINE FOR RECEIVING, SORTING, AND INDICATING COINS.

(Application filed Dec. 27, 1897.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 6.

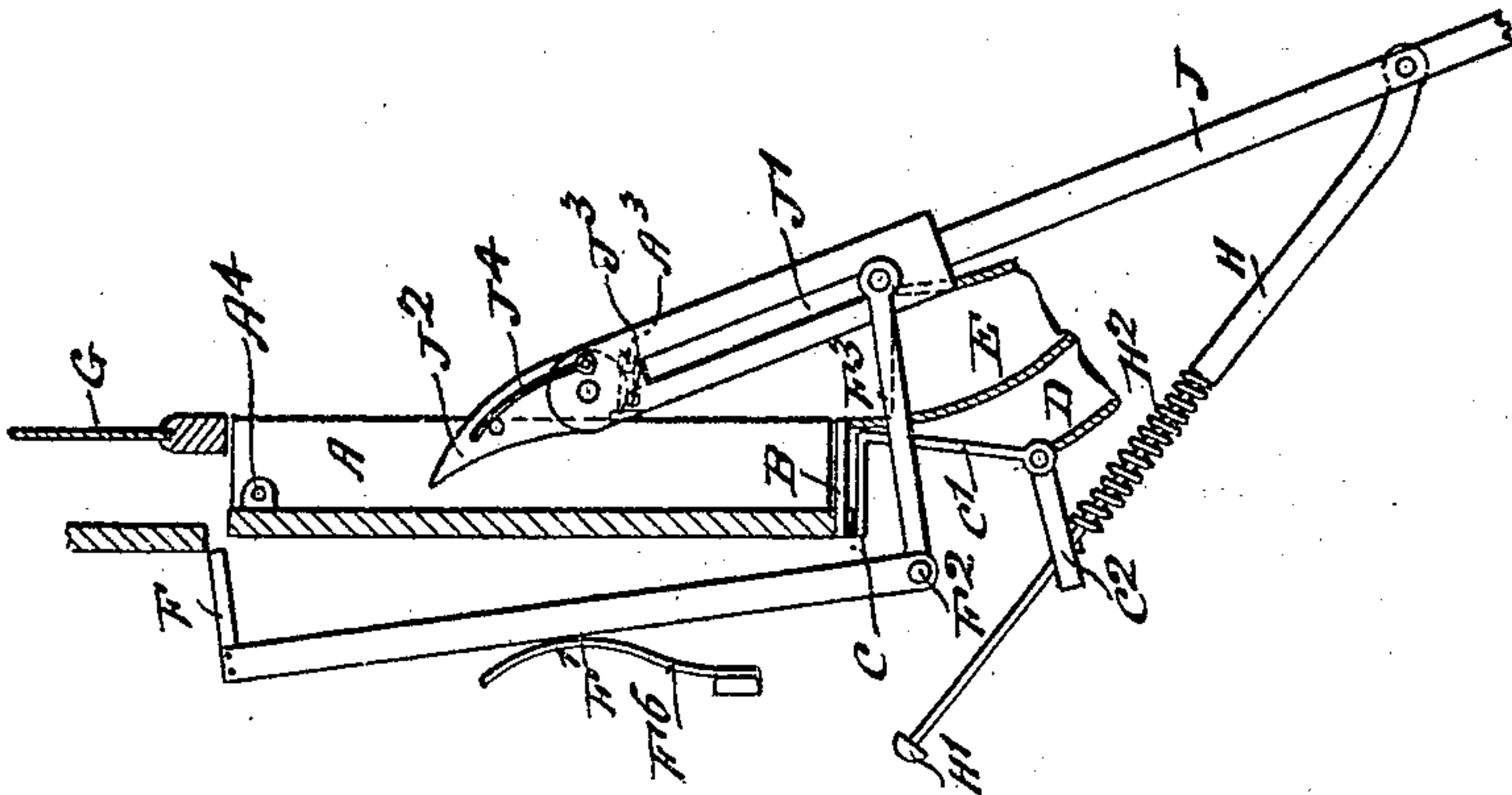


Fig. 5.

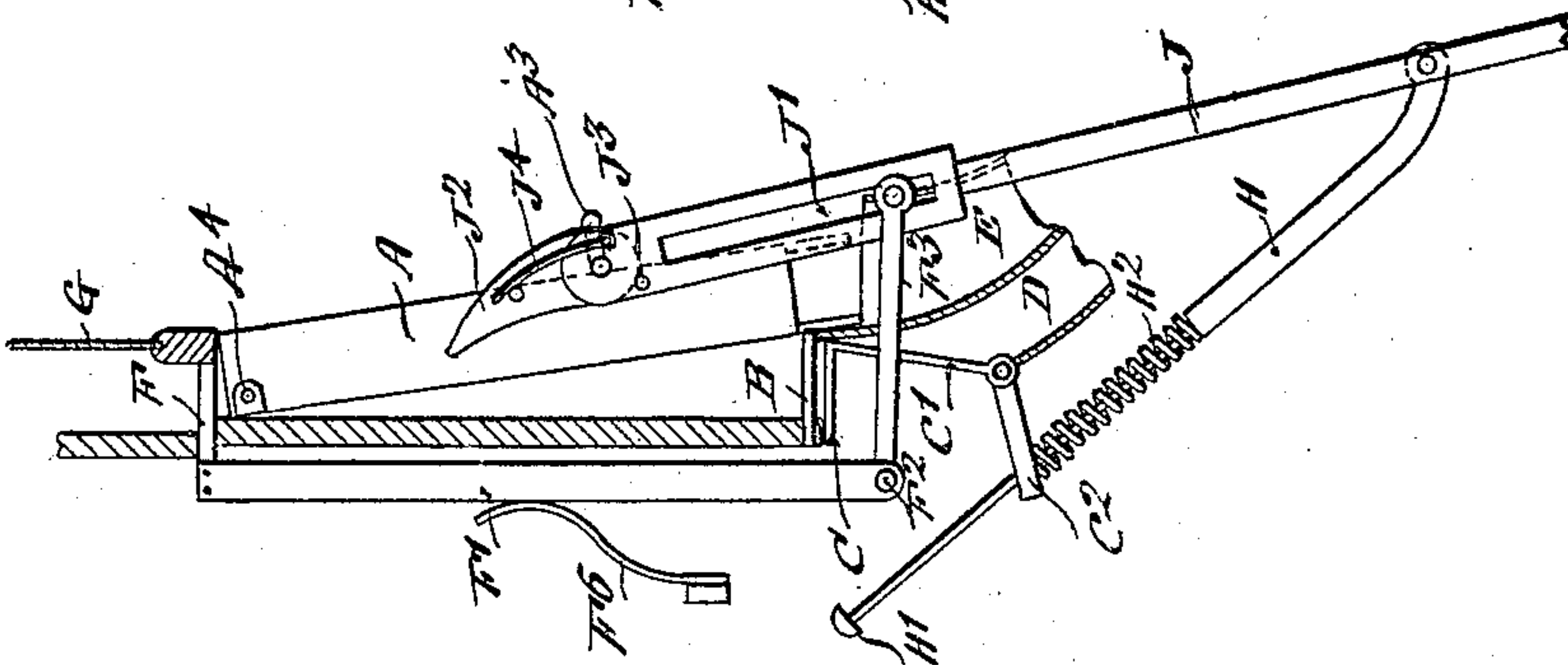


Fig. 4.

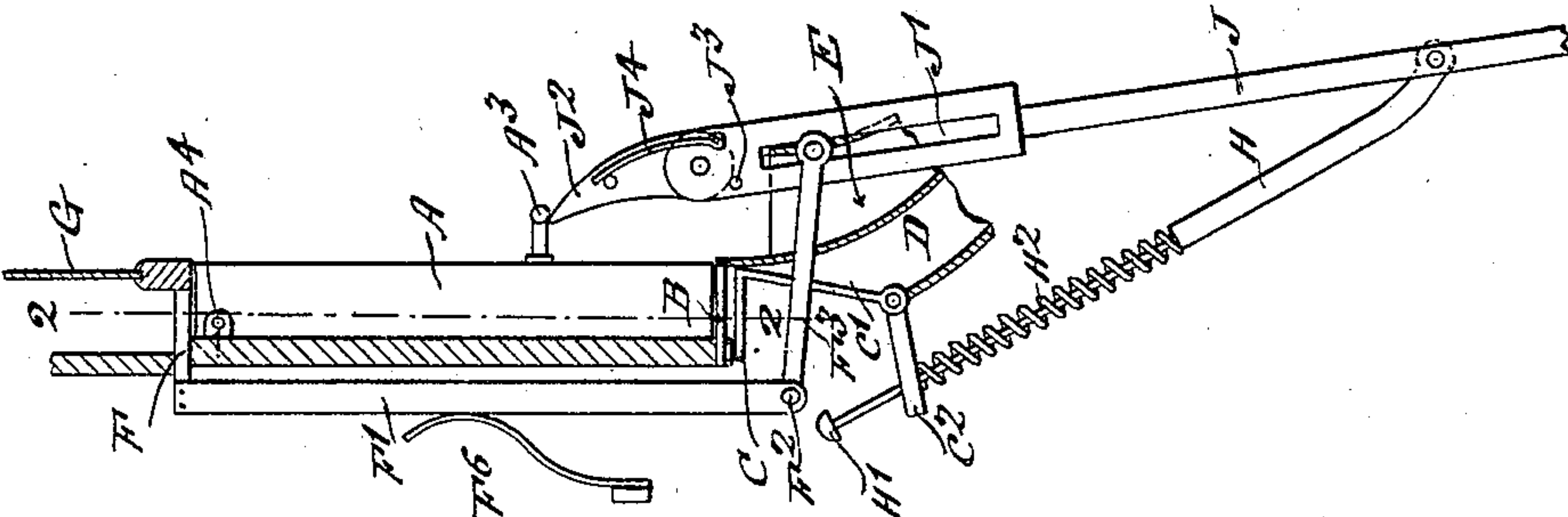
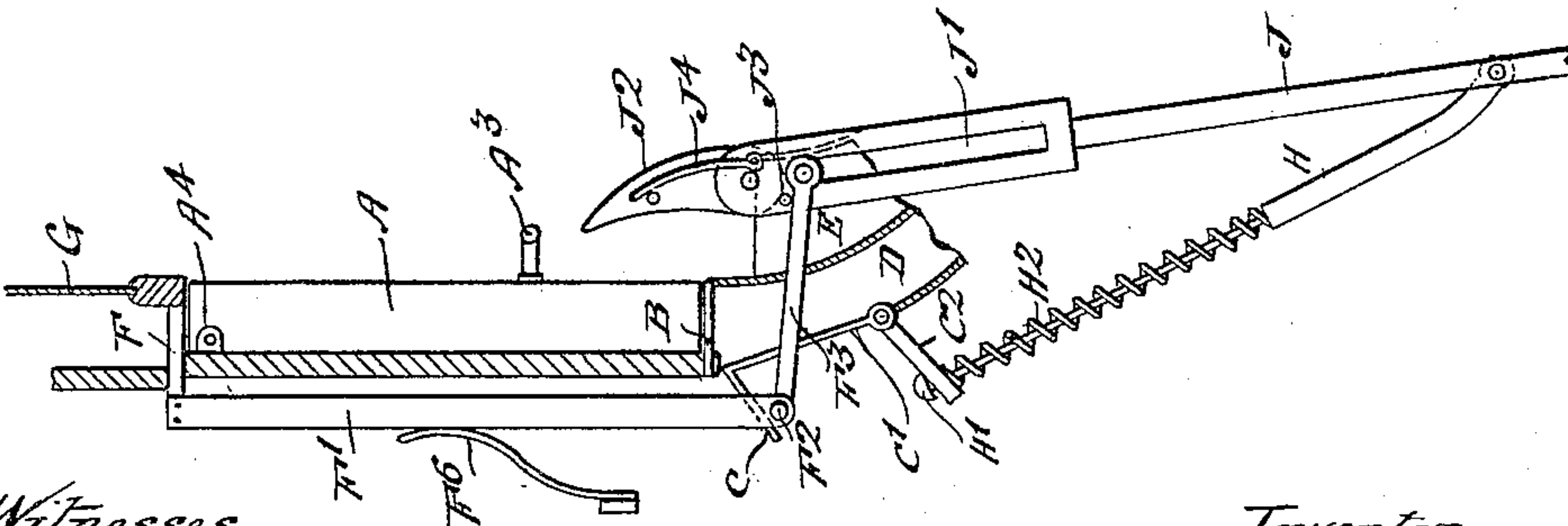


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD MORIARTY, OF LONDON, ENGLAND.

MACHINE FOR RECEIVING, SORTING, AND INDICATING COINS.

SPECIFICATION forming part of Letters Patent No. 640,683, dated January 2, 1900.

Application filed December 27, 1897. Serial No. 663,795. (No model.)

To all whom it may concern:

Be it known that I, EDWARD MORIARTY, a subject of the Queen of Great Britain, residing at 180 North End road, Fulham, London, England, have invented certain new and useful Improvements in and Relating to Machines for Receiving, Sorting, and Indicating Coins and for Delivering Goods or Change in Coins Therefor, (for which I have obtained Letters Patent in Great Britain, No. 14,156, dated July 21, 1893,) of which the following is a specification.

This invention relates to a till for dealing with coined money and for sorting and storing the coins received.

This invention is illustrated in the annexed drawings, in which—

Figure 1 is a front elevation of so much of the machine as is necessary for the explanation of this invention. Fig. 2 is a vertical section on line 2 2 of Fig. 4. Fig. 2^a is a section on the line 1 1 of Fig. 2 looking down. Fig. 2^b is a view at right angles to Fig. 2^a. Figs. 3 to 6 are side views, partly in section, illustrating four consecutive positions of the mechanism, as hereinafter explained.

The selecting or sorting till, Figs. 1, 2, and 3, is made with or of a chamber A to receive the coins falling therein and adapted to hold such coins upon their edge. This chamber in itself has no floor, and is therefore open at both its upper and lower end, so that it is virtually like a tube of rectangular section. Below it is a floor in the shape of a grid B of which the bars lie athwart the general length of the chamber and are at such distances apart as to allow certain smaller coins, but not the larger coins, which the till is intended to receive to fall through. The said chamber is hinged near its upper end at A⁴, so as to be capable of rocking, and by so doing of sweeping off from the said grid B the coins sorted thereby, as hereinafter more fully explained. Below the said grid B is another C, of which the bars coincide with the grid above, but are of greater width, so that the intervals between them are of less width than is the grid B. Certain of the coins which would pass through the upper grid B cannot pass through the lower one C. There may be other grids below of increasing thickness of bar;

but in ordinary circumstances the two grids will be sufficient.

I prefer to make the lower grid C movable and place under it a plate or guard C', so that coins falling through this grid are deflected to one side of the plate, as in Fig. 4, to the left; but when the grid C is moved away, as in Fig. 3, the coins which were upheld by the grid C will fall to the other side—for instance, the right, Fig. 3—of the said plate C', and so pass to a different destination—for instance, through chute D. The upper grid B, I prefer to remain fixed, while the chamber A above is made to move or rock, so that when the latter is moved outward, as in Fig. 5, it passes from over the grid B and the larger coins are carried to another destination—for instance, through the chute E.

In applying this principle to cash-receipt tills there may be a separate compartment A' for the copper coins and a separate compartment A² for the silver coins. That for the copper coins is made so that the pennies are retained by the first grid B, the halfpennies by the second grid C, and the farthings or any silver or gold coins that may accidentally be put in smaller than the halfpenny fall through both grids. When the coins are thrown into the chamber, the pennies and halfpennies alone remain there, and upon removing the lower grid C the halfpennies are released and fall into the chute D, the pennies remaining to be dropped into the other chute E when the chamber itself is rocked, as in Fig. 5. This device is of convenience when this till is combined with a change-giving apparatus, since the chutes in which the pennies and halfpennies are stored are apt to become soon depleted unless their contents are reinforced from the cash takings. In applying the principle to the compartment for the silver the only coins necessary to carry to the change-chutes will usually be sixpenny-pieces. The lower grid C here allows threepenny-pieces to fall through, but retains the sixpenny-pieces. The upper grid B retains all coins above the size of the sixpenny-piece. The movement of the lower grid C throws down the sixpenny-pieces to their chute. The subsequent movement of the chamber A itself releases the larger coins

direct to the cash-drawer. If desired, a similar arrangement could be fitted to a gold-receiving compartment. I prefer to arrange above the receiving-chamber A of this till a
 5 movable roof-plate F, above which is a second chamber G with glass front. The cash takings will not then pass directly into the chamber A, but will remain in view in the upper chamber until the next operation of
 10 the machine, when they fall and undergo separation, as previously described. To operate these parts, two rods H J are connected to move together in conjunction with the levers of the machine or with any other hand-
 15 operated part. The rod H passes through a hole in the end of the lever-arm C² on the hinged plate C', which carries the grid C. At the end of the rod H is a head H', and under the arm C² is a spring H² on the rod H.
 20 The floor F is carried by posts F' F⁴, pivoted at F² F⁵, and one of them having an arm F³, whose end engages in a slot J' in the rod J. At the end of the rod J is a pivoted trip-dog J², which is held thrust against a stop-pin J³
 25 by a spring J⁴. On the end of the chamber A, which, as already stated, is suitably pivoted at or near its upper edge at A⁴, is a pin A³. When the rods J H are in the lowest position, the head H' holds down the arm C², Fig. 3, and the grid C is thus moved back. As the
 30 system rises the head H' permits the spring H² to lift the arm C² and the grid C is released, Fig. 4. As the system further rises the outer inclined face of the pawl J² meets the pin A³ and throws out the chamber A, Fig. 5, thus
 35 releasing any coins left therein from the previous operation of the machine. As the system approaches its highest position the pin A³ falls back under the lower end of the trip-dog J² and the chamber A falls back again,
 40 whereupon the arm F³ meets the lower extremity of the slot J', and the floor F is slid back thereby. Any coins now in the chamber G fall into the chamber A, and such as
 45 can pass the grid C fall out at once. When the system moves down again, the floor F is pressed back into its place by a spring F⁶, the trip-dog J² gives for its passage over the pin A³, and eventually the head H' draws down
 50 the arm C², and the grid is removed, so that the middle-sized coins fall through the grid B into the chute D, Fig. 3. In this position the system rests until the machine is again operated, so that it is obvious the larger coins re-
 55 main in the chamber A until the next operation of the machine.

I claim as my invention—

1. In combination, a receiving-chamber, a removable floor thereto, a rocking chamber,
 60 fixed and movable grids on different horizontal planes, and means for rocking said chamber and moving one of the grids.

2. In a coin-sorting machine, the combination of a coin-arresting grid of the character
 65 set forth, a device arranged above and movable over the grid for sweeping the arrested coins therefrom while the grid remains in po-

sition in the machine, and mechanism for operating said device when required, substantially as described. 70

3. In a coin-sorting machine, the combination of a coin-arresting grid of the character set forth, a coin-chute arranged in operative relation to the grid to receive the coins therefrom, a device suspended above and movable
 75 over the grid to sweep the arrested coins therefrom into said chute, and mechanism for operating said device when required, substantially as described.

4. In a coin-sorting machine, the combination of a coin-arresting grid of the character set forth, a coin-chute arranged in operative relation to the grid to receive the coins therefrom, a coin-receiving chamber arranged
 80 above the grid and movable thereover to sweep the arrested coins therefrom into said chute, and mechanism for operating said chamber when required, substantially as described. 85

5. In a coin-sorting machine, the combination of a stationary coin-arresting grid, a movable coin-arresting grid arranged below the same, coin-chutes arranged in operative relation to said grids, a device arranged above
 90 and movable over the stationary grid to sweep the arrested coin therefrom into one of said coin-chutes, and mechanism for moving said device and shifting the movable coin-arresting grid from under the stationary coin-arresting
 95 grid, substantially as described. 100

6. In a coin-sorting machine, the combination of a coin-receiving chamber, a movable coin-arresting grid below said chamber, a coin-receiving chute located beneath the movable
 105 coin-arresting grid to receive the coins therefrom, and mechanism in operative connection with said movable grid to shift or move the same and cause the coins to fall into said chute, substantially as described.

7. A selecting or sorting till having a rocking coin-chamber located above a series of
 110 grids of successively-decreasing distance between the bars thereof, some of which grids are movable, and means for rocking the said coin-chamber and the said movable grids for
 115 the purpose of removing the sorted coins and directing them into their respective chutes substantially as described.

8. A selecting-till having a coin-receiving chamber, a removable floor thereto, a rocking
 120 chamber below said floor, a fixed grid below said rocking chamber and a removable grid below said fixed grid and means for rocking said chamber and for moving said removable grid for the purpose set forth. 125

9. The combination with a fixed grid B of a movable bottomless chamber A above said
 130 grid or chute D below said grid B a hinged plate C' having at its upper end a grid C and means for rocking said chamber A and plate C' for the purpose set forth.

10. The combination of two chutes E and D of a hinged plate C' forming in one position a continuation of the wall of chute D and in

another position a gate closing said chute D, a grid C at the upper end of plate C', a fixed grid B extending across the upper end of chute D, a pivoted bottomless chamber A adapted to stand above the grid B means for rocking said chamber A from above grid B to a position above chute E and means for rocking the plate C' so as to bring its grid C under and from the grid B for the purpose set forth.

10 11. The combination with the rocking chamber A a fixed grid B, a hinged plate C' and grid C on plate C' of an arm A³ on chamber A an arm C² on plate C' rods J, a trip-dog J² pivoted to said rod J adapted to move and trip
15 the arm A³, and a rod H engaging arm C² and connected to move with rod J.

12. The combination of a rocking chamber

A, a chamber G, a removable floor F to chamber G pivoted posts F', F⁴, carrying said floor F an arm F³ connected to one of said posts, 20 an arm A³ on chamber A, a grid B, a hinged plate C', a grid C on said plate an arm C² connected to said plate, a rod H engaging said arm C², a rod J connected to move with said rod H and having a slot J' engaging said arm 25 F³ and a trip-dog J² on said rod J the said plate being adapted to cooperate substantially as and for the purpose set forth.

In witness whereof I have signed this specification in presence of two witnesses.

EDWARD MORIARTY.

Witnesses:

R. HADDAN,

CHAS. ROCHE.