

No. 824,920.

PATENTED JULY 3, 1906.

J. H. ERICKSON.
CLEARING HOUSE MACHINE.

APPLICATION FILED DEC. 19, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

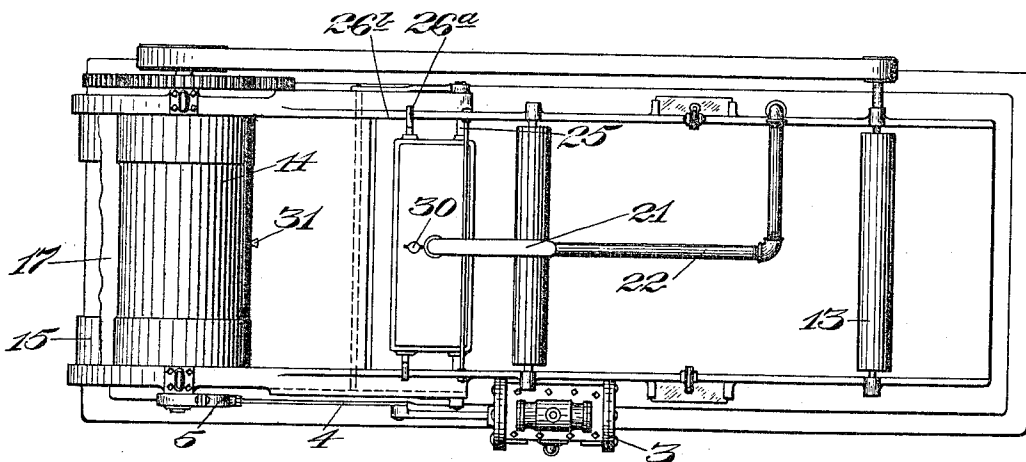
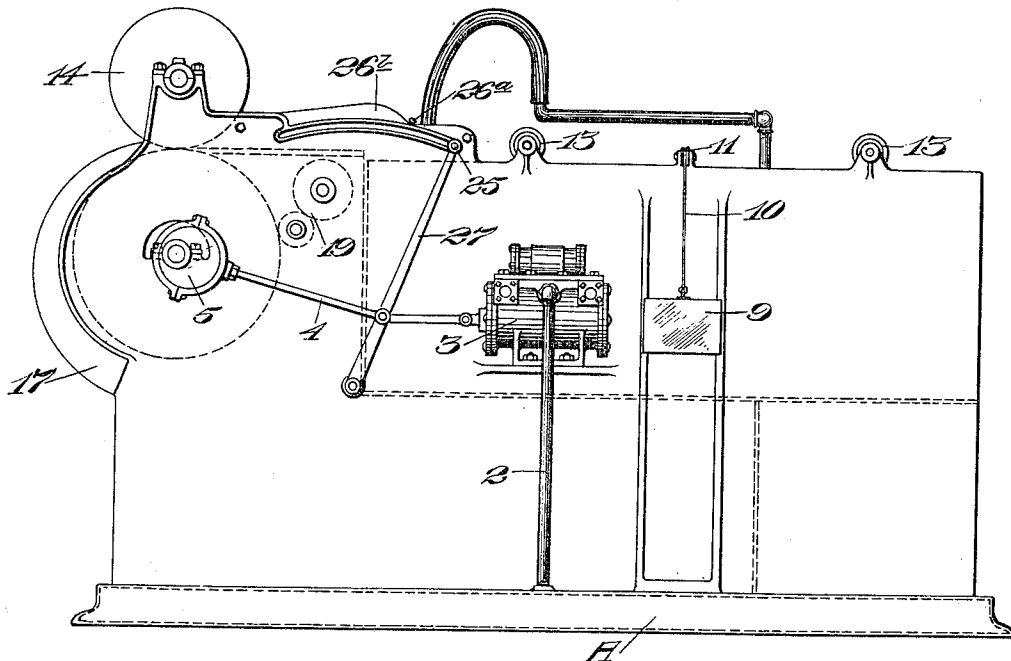


Fig. 2.

Witnesses:
H. H. H. H.
J. H. H. H.

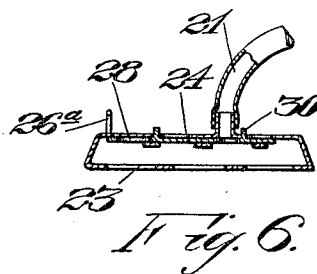
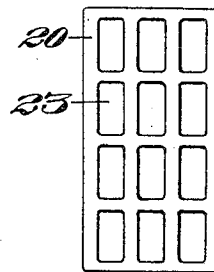
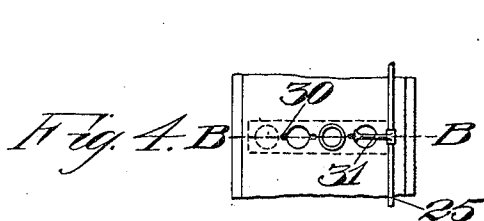
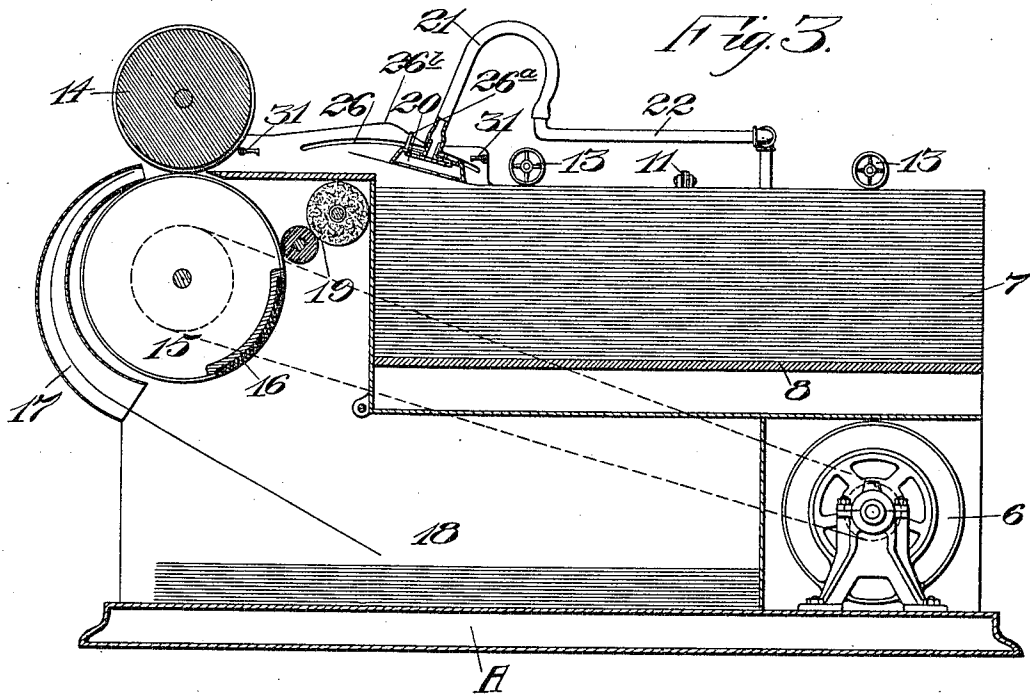
Inventor:
Joseph H. Erickson
By Geo. H. Strong. atty

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOSEPH H. ERICKSON, OF SAN FRANCISCO, CALIFORNIA.

CLEARING-HOUSE MACHINE.

No. 824,920.

Specification of Letters Patent.

Patented July 3, 1906.

Application filed December 19, 1905. Serial No. 292,503.

To all whom it may concern:

Be it known that I, JOSEPH H. ERICKSON, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Clearing-House Machines, of which the following is a specification.

My invention relates to an apparatus which is designed for the rapid disposal of checks and the like in the transactions of clearing-houses.

It consists in the combination of mechanism and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a longitudinal vertical section. Fig. 4 is a plan view of the suction-shoe, partially broken away. Fig. 5 is a bottom view of same. Fig. 6 is a section on line B B of Fig. 4.

It is the object of my apparatus to provide a mechanism by which the large numbers of checks which are handled through clearing-houses may be rapidly and correctly marked and disposed of.

In the mechanical construction as here shown A is a hollow base having a pipe connection 2 with any suitably-disposed vacuum-producing apparatus. Such an apparatus may be in the form of a pump, as shown at 3, and the piston reciprocating within the pump may be connected by rods 4 with an eccentric or crank 5 on the main shaft, whereby the constant movement of the pump when the apparatus is in use will create a vacuum within the chamber A. Motion may be communicated to the moving parts by any suitable motor, as at 6.

In the upper part of the apparatus is a receptacle 7 of sufficient length and width to contain checks of all the sizes which it may be needed to handle. These checks are laid in as smoothly as possible upon a rigid movable bottom 8. This bottom is normally lifted by the action of weights, as at 9, cords 10 passing over pulleys, as at 11, at the opposite sides of the chambers 7 and connecting with the bottom 8. Pressure is applied upon the checks to keep them smooth, and by means of rollers or other pressure attachments, as at 13, which limit the upward movement of the checks, holding them in one position, and the pressure of the plate 8 keeps them sufficiently smooth for further operation. This operation consists in draw-

ing one check at a time from the top of the pile and delivering it between rollers 14 and 15, the roller 15 carrying a stamp 16, which impresses the clearing-house mark and date upon each check as it is passed between the rollers. In the present case I have shown the upper roller 14 as having the central portion slightly less in diameter than the end portions, and the end portions contact with corresponding end portions of the roller 15, thus bringing sufficient pressure upon the edges of each check or paper to insure its being passed between the rollers and the stamp 16. Its curved face having such a radius from the center it will impress each check against the central portion of the roller 14 as it passes, thus making the required imprint. After passing between the rollers the checks may be delivered in their order into a chute, as at 17, and passed down into a receiver beneath, as at 18, or they may be otherwise disposed of. It will be understood that the stamp 16 will be kept in constant condition for use by means of inking-rollers, as at 19, disposed in any suitable or well-known manner.

In order to lift and deliver the checks from the chamber 7 to pass between the rollers 14 and 15, the rollers 13 are so located as to allow the ends of the checks to be exposed.

20 is a suction shoe or foot connected by a flexible pipe 21 and other suitable conductors, as at 22, with the vacuum-chamber A, previously described. The flexible tube 21 allows for a sufficient reciprocating movement of the shoe or foot, as will be hereinafter described. This part 20 has openings made in the bottom, as at 23. These may preferably be made, as shown in Fig. 5, with a sufficient number of intervening bars or surfaces to prevent the thin paper of the check being sucked up into the shoe, and the openings may be made of such size that when the device is placed upon the check the suction will be sufficient to cause the check to adhere while the device is being advanced to pull the check from beneath the rollers 13. This part 20 may have a valve, as at 24, and which may be constructed in any suitable manner. As here shown, the valve 24 has one opening which may be made to coincide with the suction-pipe 21 by sliding the valve until the ports coincide. This is done when the device 20 is resting upon the check, and the suction thus produced will cause the check to adhere. The next movement will

be a forward movement of the device 20. The device has arms or guides, as at 25, which enter curved slots 26 in plates upon either side of its line of travel.

- 5 26^a represents arms on the part 20, which arms riding on the raised edges 26^b act to lift the front end of 20, with its adherent check, at the beginning of its forward movement.
- 10 The ends of the arms 25 project through the slots 26 to be connected with fulcrumed arms 27. The fulcrum of these arms is below the crank or eccentric-rod 4, and the upper end connecting with the arms 25 it will be
- 15 seen that the reciprocation of the connecting-rods 4 will cause the arms 27 to move and carry with them the device 20. The curvature of the guide-slots 26 is upon the same radius as that of the arm 27. The first forward
- 20 movement of the part 20 will raise it and the front end of the check which is adherent to it, and it will be advanced with the end of the check projecting, as shown, sufficiently so that when the device has reached
- 25 the end of the slot 26 the end of the check will have entered between the rollers 14 15. At this instant the valve 24 is shifted so as to close the suction-port and to bring another
- 30 port 28 to coincide with an open port in the top of the device 20, thus allowing the pressure to be equalized within the part 20 and the check to be released just at the instant when the rollers take hold of it, and it will then be
- 35 free to pass between the rollers and receive its stamp. The return reciprocation of the connecting-rod 4 acts through the arm 27 to return the device to its position and depress it again upon the surface of the pile of checks. The operation will then be continued, the
- 40 checks being constantly lifted and held with a light pressure against the rollers 13 and being at the same time sufficiently yielding to be drawn out one by one by this apparatus.

- The movement of the valve 24 may be effected in any desired manner. I have here
- 45 shown a method in which projections 30 extend from the top of the valve through slots or channels in the top of the shoe 20, and these projections contact with suitable stops
- 50 31 at each end of the travel of the shoe, and thus act to shift the valve. As the valve slides air-tight against the top of the case, it will be understood that the slots will not be exposed so as to cause leakage through them.
- 55 By the use of the chute 17 or an equivalent device the checks or other papers are placed in the receiver 18 in the same relative position as when in the receiver 7, and their consecutive members are maintained in the
- 60 proper order.

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

1. In an apparatus for the transfer of checks, 65 a containing-chamber, means for maintaining

the upper surface of the checks at a substantially constant level, a shoe, connections between the shoe and means for producing a vacuum, a valve slidable longitudinally having 70 two ports one of which is adapted to alternately connect its interior with the vacuum device, and to close the vacuum device, and the other is adapted to open a port leading to the atmosphere when said vacuum device is closed, means by which the shoe is first 75 placed upon the top of a check and the vacuum produced and subsequently moved to withdraw the check from its position, said valve having a projecting member, and a stop fixed in the path of travel of the shoe and 80 adapted to be engaged by said projecting member at substantially the end of the travel of the shoe whereby the valve is shifted to cut off the vacuum and release the check.

2. In an apparatus for transferring checks, 85 a containing-chamber, an upwardly-acting pressure-plate upon which the checks are laid within the chamber, guide-rollers in the upper part against which the upper check contacts and by which a constant level is maintained 90 with the ends of the check projecting beyond one of the guide-rollers, a hollow shoe having a flexible connection with a vacuum-producing device, means by which the shoe is pressed upon the surface of the upper check and sub- 95 sequently raised and moved forward, connection between the shoe and the vacuum-producing device, a valve within the shoe having ports, means by which one of said ports is brought to coincide with the vacuum-tube 100 when the shoe rests upon the surface of the check, and means by which the valve is shifted to close the vacuum connection and open the shoe to the atmosphere at the end of the forward travel of the shoe whereby the check 105 is released.

3. In an apparatus for transferring and stamping checks, a chamber adapted to receive and contain checks, means by which 110 the upper surface of the checks is maintained at a constant level, a shoe having a flexible connection between itself and the vacuum-producing device, means whereby the shoe is pressed upon the uppermost check, and a vacuum produced to cause the check to ad- 115 here to the shoe, means by which the shoe is moved forward to withdraw the check from its position, said last means including a fulcrumed reciprocating lever, connections between said lever and the shoe, and connections between 120 the lever and the vacuum-producing device, rollers between which the end of the check is presented and an impression-stamp carried by one of the rollers.

4. An apparatus for stamping checks, a 125 chamber within which the checks are placed, a vertically-movable bottom to said chamber and means by which it is raised, rollers forming a guide to maintain the surface of the papers at a constant level, a shoe and flexible 130

connections between it and a vacuum-producing device, a valve and operating means whereby the interior of the shoe is alternately connected with the vacuum device and with
5 the open air, means for raising and reciprocating the shoe, said means consisting of a fulcrumed reciprocating lever, connections between said lever and the shoe and guides between which the shoe is movable.

10 5. In an apparatus for transferring papers, a containing-chamber for the papers, a vertically-movable platform upon which the pile of papers rests, pressure devices against which the upper paper of the pile is pressed whereby
15 the upward movement of the papers is limited, a vacuum-shoe, means for alternately applying it to the topmost paper and removing said paper, and means by which the front end of the shoe is lifted at the instant of its first
20 forward movement said last means including substantially a cam-track and a member on the shoe traversable thereon.

6. In an apparatus for transferring checks, a containing-compartment, means for main-
25 taining the upper surface of the checks at a normal level, a vacuum-shoe, means by which it is depressed upon the exposed end of a check, a valve in said shoe, means by which the valve is moved and an internal vacuum
30 produced when the shoe rests upon the check,

means including substantially a cam-track and a member on the shoe traversable thereon by which the forward end of the shoe is tilted upward, and moved forward with the adhering check, impression-rollers between
35 which the end of the check is placed, and a chute and receiver by which the relative position of the checks is maintained.

7. In an apparatus for transferring and stamping checks a unitary casing having two
40 chambers one serving as an initial container for checks, and the other a receiver for stamped checks, a vacuum-producing mechanism and a transferring-shoe connected therewith, impression-rollers and means by
45 which the shoe is reciprocated to deliver the checks successively from the container to the rollers, and a conducting-chute into which the checks are delivered from the rollers back
50 into the casing and into the receiving-chamber thereof and by which they are successively placed in their original order.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH H. ERICKSON.

Witnesses:

S. H. NOURSE,
J. MEININGER.