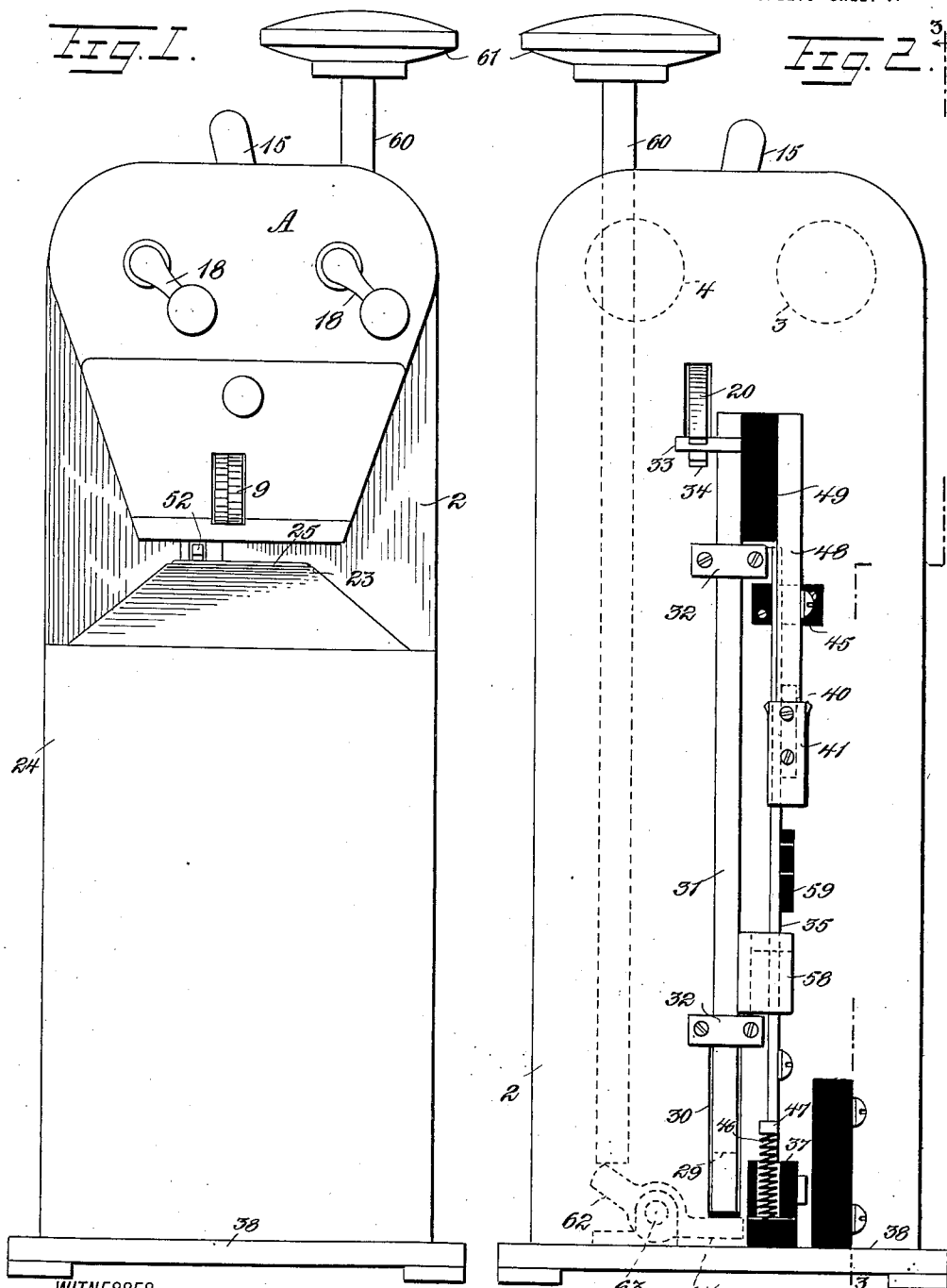


H. LUNDGREN & F. TEBERG.
TICKET CANCELING MACHINE.
APPLICATION FILED FEB. 23, 1917.

1,273,390.

Patented July 23, 1918.

2 SHEETS—SHEET 1.



WITNESSES
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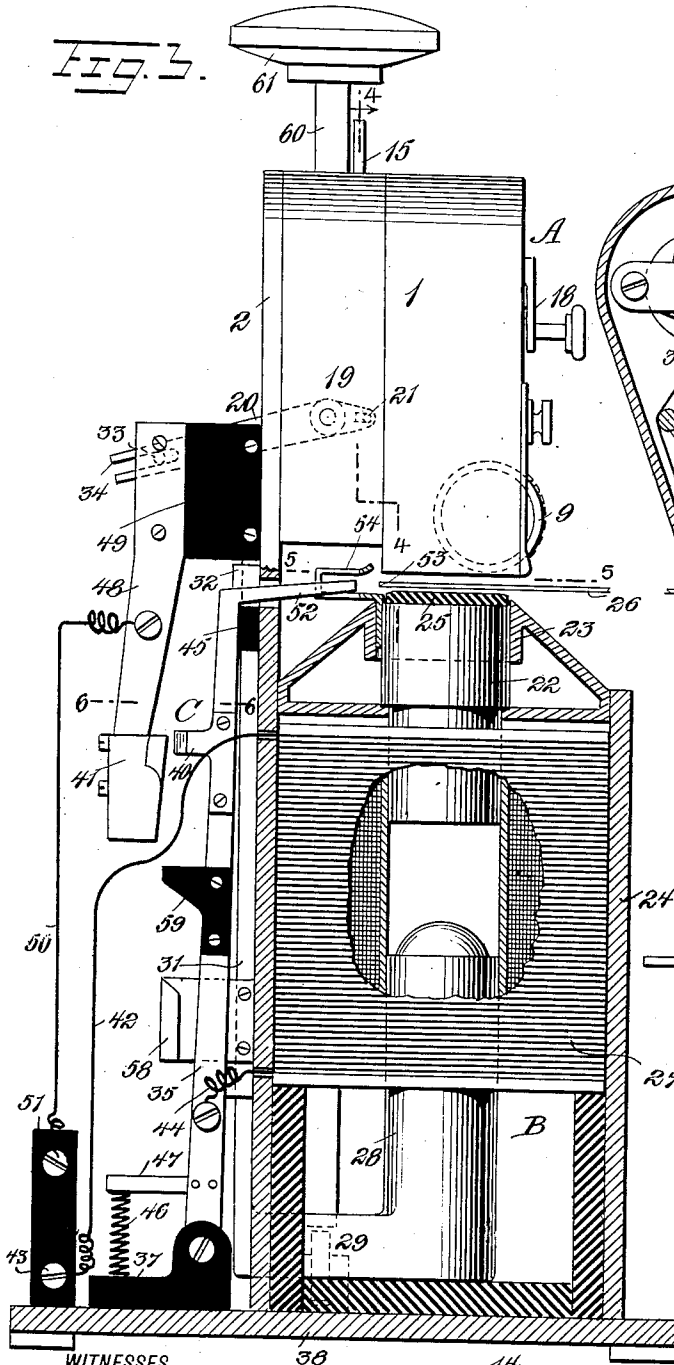
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2 SHEETS—SHEET 2.

Fig. 3.



WITNESSES

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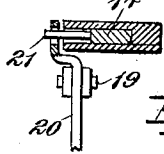


Fig. 8.

Fig. 4.

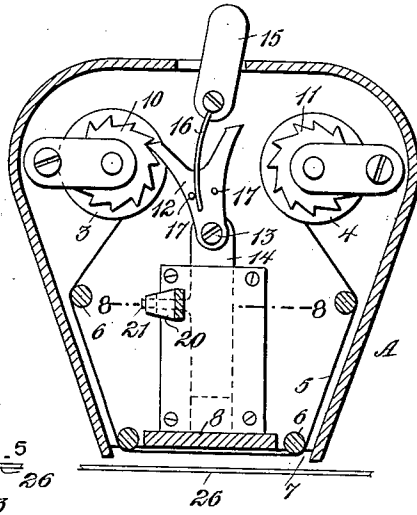


Fig. 5.

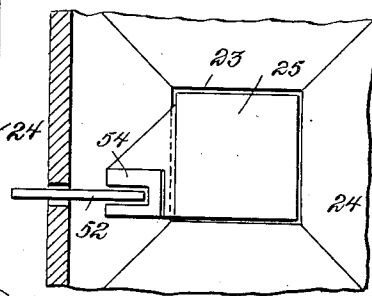


Fig. 6.

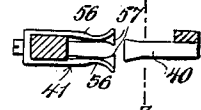


Fig. 7.



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HARRY LUNDGREN AND FRANK TEBERG, OF OAKLAND, CALIFORNIA.

TICKET-CANCELING MACHINE.

1,273,390.

Specification of Letters Patent.

Patented July 23, 1918.

Application filed February 23, 1917. Serial No. 150,454.

To all whom it may concern:

Be it known that we, HARRY LUNDGREN and FRANK TEBERG, citizens of the United States, and residents of Oakland, in the county of Alameda and State of California, have invented a new and Improved Ticket-Canceling Machine, of which the following is a full, clear, and exact description.

This invention relates to canceling machines adapted to be used in post offices, ticket offices, banks and other places where the canceling of stamps, tickets, papers and the like is necessary.

The invention has for its general objects to improve the construction of apparatus of this character so as to be reliable and efficient in use, comparatively simple and inexpensive to manufacture, and so designed that it can be operated by one hand.

A more specific object of the invention is the provision of an electrically operated canceling device which includes a switch so sensitive that it is automatically set into action by contact with the edge of a thin piece of paper, ticket or other article which is to be stamped or canceled.

Still another object of the invention is the provision of a novel, simple and effective form of switch which is automatically closed by the insertion of the article to be impressed with a canceling stamp, whereby the switch will close the circuit of the solenoid which actuates the plunger that presses the ticket or other article against the type ribbon to receive the canceling imprint, the said switch being automatically held closed during movement of the solenoid core, and automatically released when the impression has been made, so that the switch will automatically open the circuit and allow the core of the solenoid to return to normal position.

Still another object of the invention is the employment of a feeding device for the impression tape of the canceler, which feeding device is actuated step by step by the reciprocations of the solenoid core.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawings, which illustrate one embodiment of the invention

and wherein similar characters of reference indicate corresponding parts in all the views,

Figure 1 is a front view of the machine; 60

Fig. 2 is a rear view thereof;

Fig. 3 is a side view with a portion in vertical section to show the interior arrangement, the section being taken on the line 3—3, Fig. 2; 65

Fig. 4 is a vertical section of the canceling device on the line 4—4, Fig. 3;

Fig. 5 is a horizontal section on the line 5—5, Fig. 3;

Fig. 6 is a detail sectional view on the line 6—6, Fig. 3; 70

Fig. 7 is a detail sectional view on the line 7—7, Fig. 6; and

Fig. 8 is a horizontal section on the line 8—8, Fig. 4. 75

The canceling or printing device A comprises a casing 1 which is mounted on the upper portion of a vertical back plate 2, and mounted within the casing are spools 3 and 4 which carry the inking tape or ribbon 5, the latter unwinding from one spool and winding on the other. A portion of the tape passes over guide pulleys or rollers 6. The bottom of the casing 1 is open at 7, Fig. 4, and passes under the horizontal type block 8, the latter having associated with it date wheels 9 which partly project from the front of the casing so as to facilitate the adjustment of the wheels for changing the date. The spools 3 and 4 have ratchet wheels 10 and 11, respectively, with one of which coöperates a pawl 12 pivoted at 13 on a vertical slide 14. A shifting lever 15 is pivoted in the casing and projects upwardly out of the same and carries a spring 16 engageable with one or the other of two pins 17 on the pawl 12, whereby the latter can be thrown into engagement with one ratchet wheel or the other so as to reverse the travel of the inking ribbon. The slide 14 is adapted to move with each canceling operation so that the ribbon has a step by step movement under the type block and date wheels. The ribbon spools can be operated by hand if desired, and for this purpose each has an operating crank 18 at the front of the casing 1. Fulcrumed at 19 in the casing 1 is an operating lever 20 that is connected at 21 with the slide 14 so as to actuate the same. 110

The operating mechanism comprises a plunger 22 slidable vertically in a guide 23

mounted on the top of the casing 24. The top of this plunger carries a rubber or equivalent pad 25 to engage the ticket or other article 26 and press the same against the ribbon 5, so as to receive the impression of the canceling stamp.

Within the casing 24 is a solenoid winding 27 which has a vertically movable core 28 that is normally in lowered position, and when the solenoid is energized the core is raised and strikes the plunger 22, so that the latter will cause a canceling stamp to be impressed on the ticket 26. The bottom of the core 28 has an arm 29 which projects laterally out of the slot 30 in the back plate 2 adjacent the bottom thereof, and a rod 31 slidable in guides 32 extends upwardly from and is connected with the arm 29 so that the rod moves with the solenoid core. The upper end of this rod carries a horizontal pin 33 that engages the bifurcated end 34 of the lever 20, so that every time the solenoid core is actuated the lever 20 will operate the ribbon feed of the canceling device A.

The switch C comprises a swinging member 35 pivoted at its bottom on a block of insulation 37 fastened to the base plate 38. This lever carries a contact 40 which is adapted to enter a contact 41 so as to close the circuit of the solenoid. One terminal of the solenoid is connected by a wire 42 with a binding post 43. The other terminal is connected by a wire 44 with the lever 35, which is a conductor and on which the contact 40 is grounded. The lever 35 is prevented from grounding on the frame of the machine by means of a block of insulation 45 against which the lever is normally held by a spring 46 pressing upwardly on a lug 47 extending from the bottom of the lever. The contact 41 is carried by an arm 48 fastened by a block of insulation 49 to the rod 31, and the arm 48 is connected by a wire 50 with the other binding post 51 of the machine. The binding posts 43 and 51 are adapted to be connected with a source of current supply of any suitable character, and when the contacts 40 and 41 engage, the solenoid is energized, and when they disengage, the solenoid will be deenergized.

The switch is adapted to be closed by the insertion of the ticket or other article to be canceled, and for this purpose the lever 35 has a forwardly extending finger 52 at its upper end which terminates just behind the type block or plunger 22, and the front end of the finger lies just above the level of the top of the plunger. The rear edge 53 of the ticket, paper or the like 26 engages the tip of the finger 52 and causes the latter and lever 35 to move rearwardly and make engagement with the contact 41. To guide the ticket into engagement with the finger a suitable guiding device 54 is employed and

into which the finger extends. It is desirable to maintain the electrical engagement between the contacts 40 and 41 throughout the movement of the plunger 22, and for this purpose the contact 41 is made of spring jaws 56 which curve oppositely at their upper ends so as to form a mouth into which the contact 40 can readily enter, and below the mouth the jaws have inwardly extending lips 57 which interlock with the sides of the contact 40, which latter is dove-tailed, as shown in Fig. 6. The contact 40 is moved laterally into engaging position with the contact 41, and the latter moves upwardly with the core 28 and rod 31, and during this time the contact 41 slides on the contact 40. During the last part of the upward movement of the plunger the contact 41 moves upwardly out of engagement with the contact 40, whereupon the latter and lever 35 move forwardly by reason of the spring 46. As the contact 41 descends with the dropping of the solenoid core 28 it will pass clear of the contact 40. To insure the forward movement of the lever 35 to normal position the bar 31 has a cam or abutment 58 which engages with a cam 59 made of insulation and carried by the lever 35. The engagement of the cam 58 with the cam 59 moves the lever 35 forwardly and restores the lever 52 to normal position.

In order that the machine can be operated manually when no current is available, a vertical push rod 60 is provided which has a pushbutton 61 at its upper end, and the lower end is engaged with a lever 62, Fig. 2, fulcrumed at 63 and having an arm 64 which engages on the bottom of the rod 31 so that by pressing downwardly on the pushbutton 61, the solenoid core 28 and rod 31 are actuated, so that the pushbutton performs the same function as a solenoid winding.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while we have described the principle of operation, together with the apparatus which we now consider to be the best embodiment thereof, we desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a machine of the class described, a circuit closer for an electrically operated element, a contact carried element, a second contact normally urged away from the first-mentioned contact, means on the second

contact adapted to be engaged by an article to be acted on by the element for moving the second contact into engagement with the first, whereby the said element is actuated and the first contact has a sliding interlocking engagement with the second contact, and means for separating the contacts when the first contact finishes its sliding engagement.

2. In a machine of the class described, a circuit closer for an electromagnetic device, an element actuated device, a member connected with the element, a contact carried by the member, an arm, a contact on the arm, a spring acting on the arm to move the second contact laterally from the first, means on the arm adapted to be engaged by an article acted on by the element, whereby the contact on the arm is engaged with the contact on the said member, one contact having jaws for maintaining a sliding interlocking engagement between the contacts while the said member moves, and cam means on the member and arm for moving the arm in a direction to disengage the contacts to open the circuit of the electromagnetic device.

3. In a device of the class described, the combination of an electrically-operated device, a contact connected in circuit therewith and movable laterally by the article to be acted on by the device; a second contact having members between which the first contact engages, and means movable with

the device and carrying the second contact, the members of the second contact having a yielding sliding engagement with the first contact and interlocking therewith during a certain range of movement of the device, and the second contact being movable out of engagement with the first contact to permit the circuit to open.

4. In a machine of the class described, an electrically operated device, in combination with a circuit closer therefor, said circuit closer including a contact in circuit with the device, a spring-pressed member carrying the contact to hold the same in open circuit position and adapted to be moved to closed circuit position by engagement with the article to be acted on by the said device, a second contact in circuit with the said device and including a pair of jaw members between which the first contact engages by a lateral movement, the jaw members being shaped to hold the first contact in the position to which it is moved by the article acted on by the said device, and a member connected with the device and supporting the second contact to move out of engagement with the first contact in a direction at approximately right-angles to the movement of the first contact, whereby the first contact moves to open circuit position.

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