

(No Model.)

V. F. LAKE.

# INKING MECHANISM FOR TYPE WRITING MACHINES.

No. 565,357.

Patented Aug. 4, 1896.

FIG. 1.

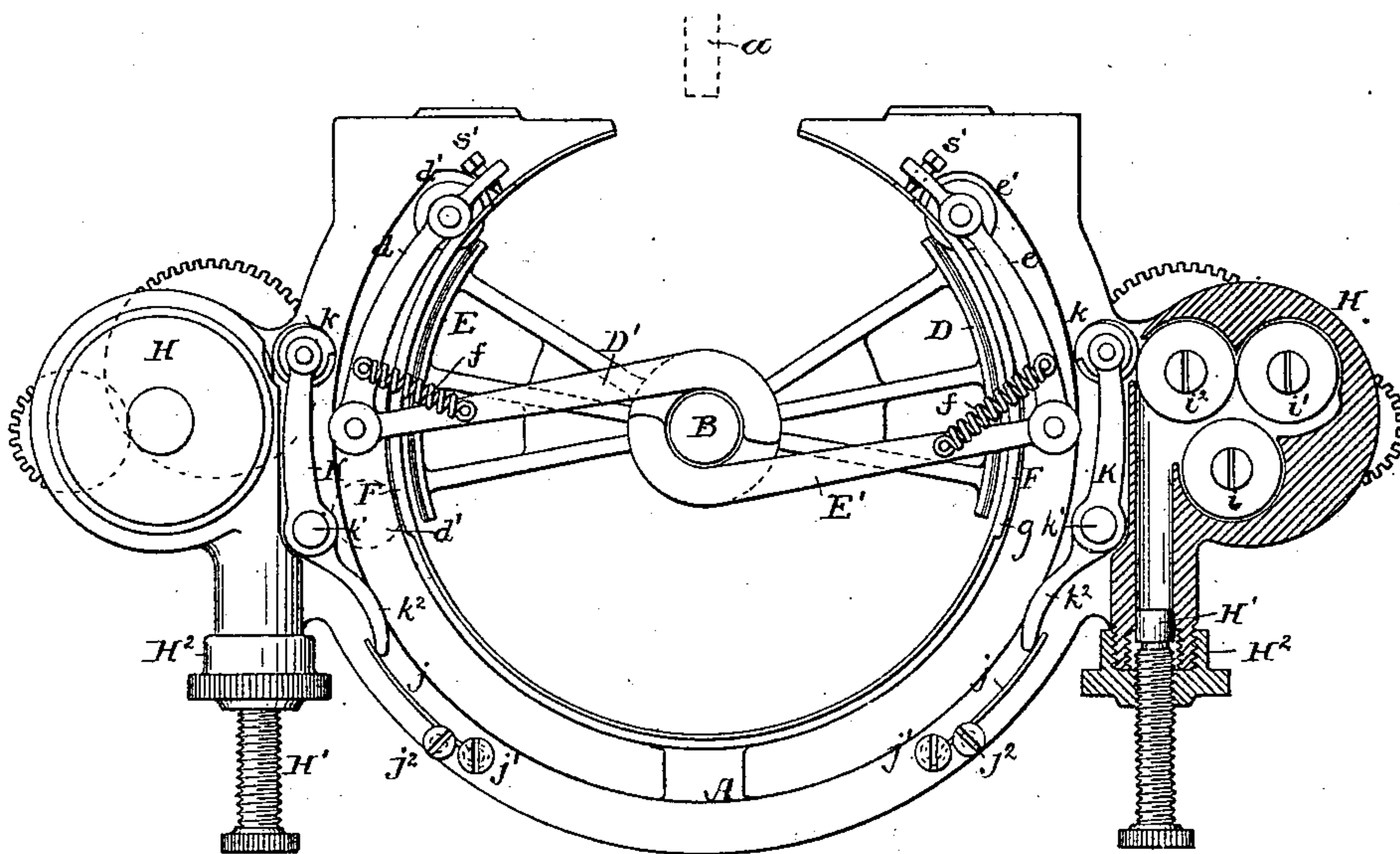


FIG. 2.

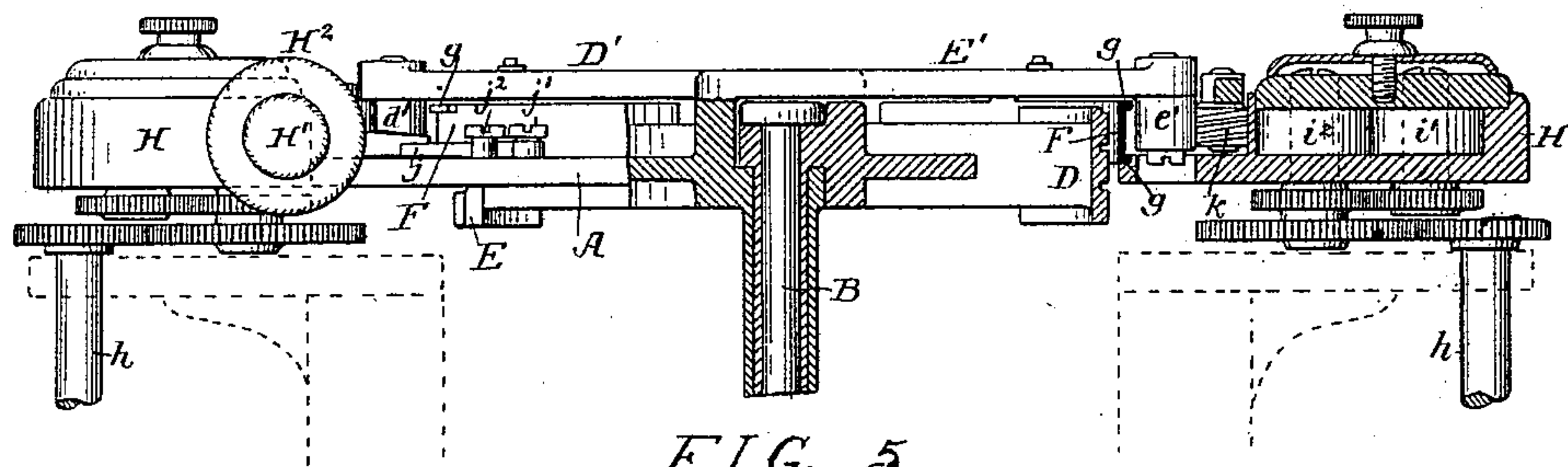


FIG. 5.

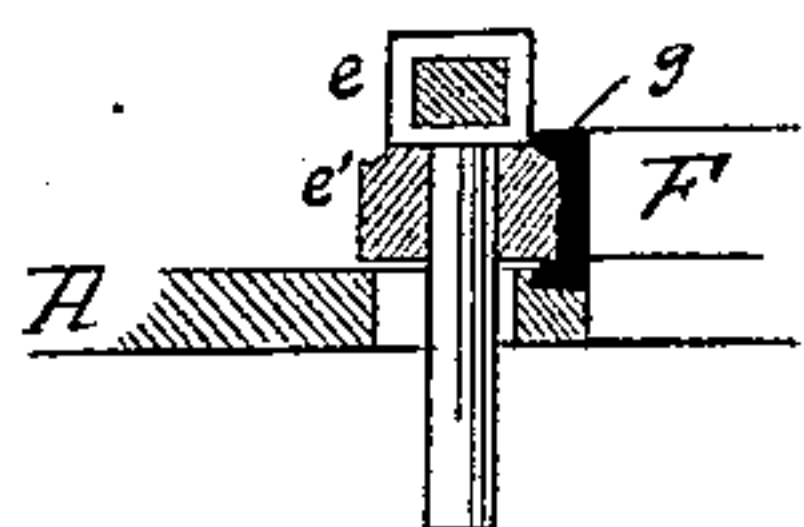
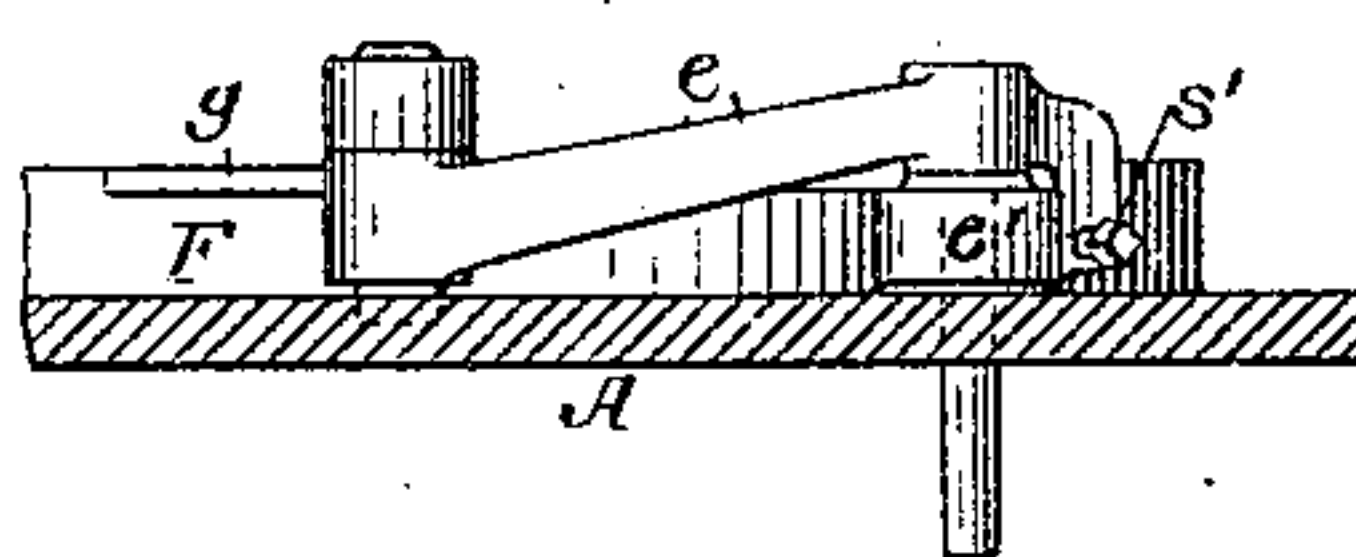
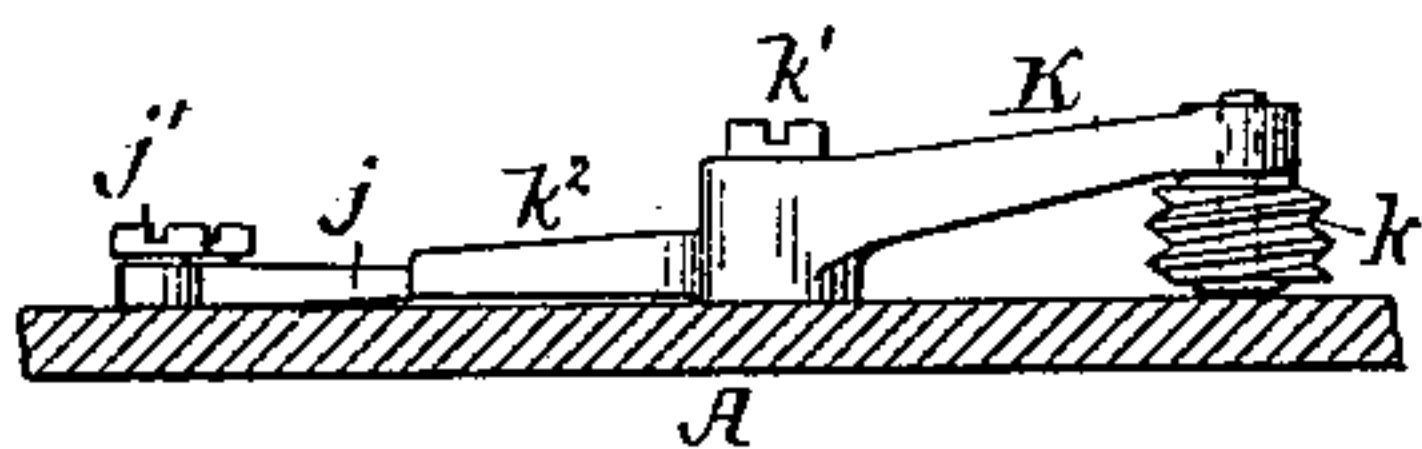


FIG. 3.

FIG. 4.



*Witnesses :*

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Vincent F. Lake  
by his Attorneys

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# UNITED STATES PATENT OFFICE.

VINCENT F. LAKE, OF PLEASANTVILLE, NEW JERSEY, ASSIGNOR TO JOSEPH H. BORTON, TRUSTEE.

## INKING MECHANISM FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 565,357, dated August 4, 1896.

Application filed March 29, 1893. Serial No. 468,179. (No model.)

*To all whom it may concern:*

Be it known that I, VINCENT F. LAKE, a citizen of the United States, and a resident of Pleasantville, Atlantic county, New Jersey, have invented certain Improvements in Inking Apparatus for Writing-Machines, of which the following is a specification.

The object of my invention is to dispense with the ink-ribbon usually employed upon type-writing machines in which two type-segments are used, the Hammond machine being a machine of this character.

My invention is based on the device set forth in the application for patent filed by me on the 29th day of March, 1893, Serial No. 468,178.

A machine of the type above described has two type-segments each operated by a set of characters at the keyboard. When the right-hand character-keys are manipulated, the right-hand type-segment responds and the left-hand type-segment remains at rest; but if the left-hand characters are used, only the left-hand type-segment responds while the right-hand segment remains at rest.

The main feature of this invention is the mounting of an inking-roller upon each of the said type-segments in a manner that the roller mounted upon one segment is held in position to ink the type upon the opposite segment, the roller carried by the segment in use in the meantime passing to and fro over the distribution-slab, as fully described hereinafter.

In the accompanying drawings, Figure 1 is a plan view of sufficient of a type-writing machine illustrating my inking attachment. Fig. 2 is a sectional elevation. Figs. 3, 4, and 5 are detail views of portions of the mechanism.

The machine to which this special mechanism is adapted is the machine known as the "Hammond" type-writer, but it will be evident that the invention can be applied to any machine using the two segments. In the drawings I have omitted the key-levers and connections in order to avoid confusion.

A is the frame of the machine.

a is the striker, which presses the paper against the type selected, thereby making the impression.

B is the spindle, carrying the type-segments

D and E, the type-segment D being the right-hand segment and the segment E the left-hand segment. In the present instance there are three rows of letters on each segment, the letters being divided between the two segments, so that when the keys on the keyboard (not shown) are depressed one of the segments, will move to the position in front of the striker a, as is common in type-writers of this character. An arm D' is carried by the segment D, and an arm E' is carried by the segment E. Pivoted to the outer end of each of these arms are roller-carrying arms d and e, carrying at their outer ends, respectively, inking-rollers d' and e'. The roller e' inks the type on the segment D, while the roller d' inks the type on the segment E. Springs f tend to hold the arms against the type, while set-screws s' limit the movement of the arms so that the rollers will bear a proper relation to the type. It will thus be seen that when the segment D moves to print a character its arm D' will draw the inking-roller d' back to the position shown by dotted lines in Fig. 1. The same will be the case when the segment E is moved.

Situated in the path of each inking-roller is an inking-slab F. As the roller d is withdrawn it passes over this inking-slab, consequently thoroughly working the ink on the roller, so that when the ink is applied to the type it will be distributed evenly thereon. Each ink-slab F has a flange g at its upper edge tending to hold the ink-roller always in proper position when drawn over the slab. When the inking-roller is in the position shown in Fig. 1, it projects through an opening in the flange on which the ink-slab is formed so as to be in line with the type. The spindle of the roller is fixed to the arm e, but is free to move vertically in the roller, as clearly shown in Figs. 4 and 5, so that when the type-segments are raised or lowered to bring into line certain letters of the upper or lower character lines the arm with its spindle will move vertically with the segment, but the roller being confined by the frame and by the flange g will remain fixed as regards vertical movement.

H H are the ink-reservoirs situated on each side of the machine, and are provided with



plungers  $H'$ , having screws adapted to the screw-threaded cap  $H^2$ , which is also screwed upon the reservoir. When it is wished to fill the ink-reservoirs, the plunger and cap are removed and an ink-tube of any suitable form may be screwed into the nozzle of the reservoir  $H$  and squeezed sufficiently to force the ink from the tube and to fill the reservoir, after which the tube is removed and the plunger and cap adjusted in position.

The ink working and distributing rollers  $i$   $i'$   $i^2$  are similar to those described in my former application, and are driven in the same manner by gearing from the driving-shaft  $h$ .

Bearing against the last distributing-roller of the fountain is a transferring-roller  $k$ , preferably grooved, as shown in Fig. 3, and loose on a stud on a lever  $K$ , pivoted at  $k'$  to a stud on the frame of the machine. This lever has an arm  $k^2$ , against which bears a spring  $j$ , hung at  $j'$  to a pin on the frame, which can be adjusted toward and from the arm  $k^2$  of the lever by an eccentric-pin  $j^2$ . The tendency of the spring is to keep the roller  $k$  always in contact with the last distributing-roller of the reservoir, but the arm  $k^2$  of the lever  $K$  is in the path of the arm carried by the segment, so that when the segment is acted upon the arm will strike the arm  $k^2$ , compressing the spring and forcing the roller  $k$  away from the distributing-roller  $i^2$  and move it in the path of the inking-roller  $e'$  or  $d'$ . As it will be understood that the devices, as described, are duplicates, one on each side of the machine, so that each roller  $k$  transfers ink upon each distributing-roller, which in turn work the ink upon the distributing-slabs before inking the type.

It will be noticed that the space for the reception of ink on the rollers  $k$  is limited, but it will be understood that different forms of rollers may be used, depending upon the character of the type on the segments. As heavy-faced type will require more ink and light-faced type less ink the supply of ink is preferably regulated by roller  $k$ . Thus it will be seen that if a character-key were depressed to operate the right-hand segment said segment will be moved to a position opposite the striker, the roller  $e$  distributing ink upon the characters of the segment in line with said roller, while the roller  $d'$  would travel over the distributing-slab and at the same time remove ink from the roller  $k$  after printing, and the segment will return to its normal position. The roller  $d'$ , carried thereby, is also returned to its normal position ready to ink the type on the segment  $E$  when it is actuated.

I claim as my invention—

1. The combination in a type-writing machine, of the two type-carrying segments, one segment carrying inking mechanism to distribute ink upon the type of the other segment, substantially as described.

2. The combination of the pivoted type-

segment, an arm thereon, a roller-carrying arm pivoted to said arm, an ink-distributing roller mounted on said carrying-arm, an ink-slab, a distributing-fountain, and transferring ink-roller situated between the fountain and the inking-roller, substantially as and for the purpose set forth.

3. The combination in a type-writing machine, of the two segments, inking-rollers carried by each segment, the inking-roller of one segment adapted to ink the type of the opposite segment, distributing-slabs over which the inking-rollers pass, substantially as described.

4. The combination of the type-segments  $D$  and  $E$ , having arms, pivoted roller-carrying arms, distributing-rolls on said carrying-arms, ink-reservoirs, ink-working rollers therein, with the transferring-rollers each hung to pivoted levers so acted upon that when one of the inking-rollers is moved opposite to the distributing-roller said distributing-roller will be forced into contact therewith, and the inking-rollers receive their ink therefrom, substantially as set forth.

5. The combination of the frame, an inking-slab thereon having an upper flange, a type-segment, a pivoted arm hung to said segment, a spindle carried by the arm, a type-inking roller mounted loosely on the spindle and adapted to travel over the inking-slab and to be confined as regards vertical motion by the frame and a flange on the inking-slab, when the segment with its pivoted arm is raised and lowered, substantially as described.

6. The combination of the type-segment, with arm projecting therefrom, an arm pivoted to said projecting arm and carrying an inking-roller, a reservoir, a roller therein, a pivoted lever carrying a supplying-roller, having an arm in the path of the arm of the segment, with a spring tending to force the supplying-roller away from the distributing-roller and in contact with the reservoir-roller, substantially as described.

7. The combination of the segment, its arm, roller-carrying arm, an inking-roller thereon, a spring for drawing the inking-roller in the line of the opposite type-segment and a set-screw for adjusting the position of the roller in respect to the segment, substantially as described.

8. The combination of the type-segment, ink-roller carried thereby, a lever  $K$  pivoted to the frame and carrying the supplying-roller, a spring acting upon said lever, with an eccentric-pin for adjusting said spring, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VINCENT F. LAKE.

Witnesses:

HENRY HOWSON,  
JOSEPH H. KLEIN.