

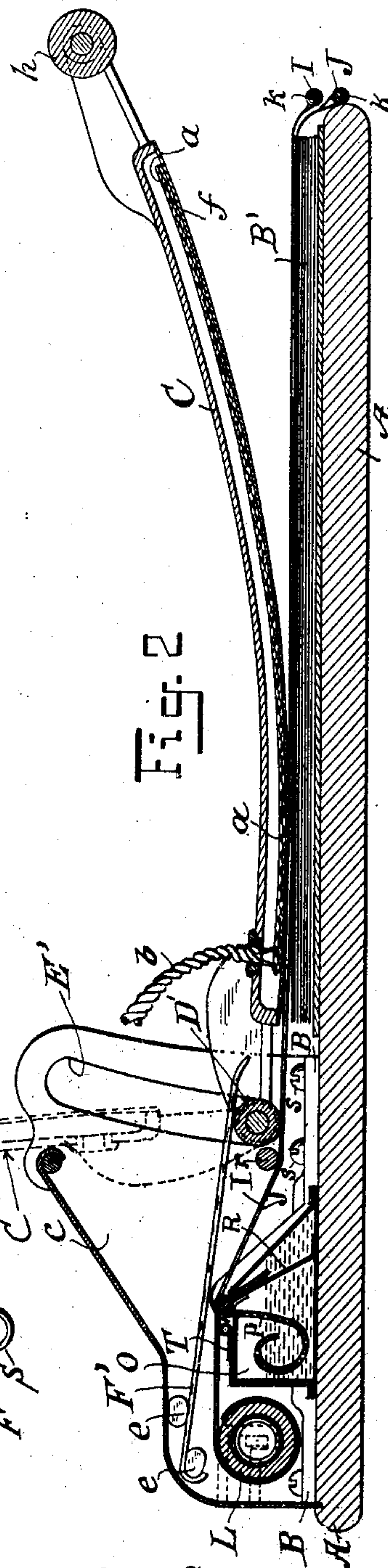
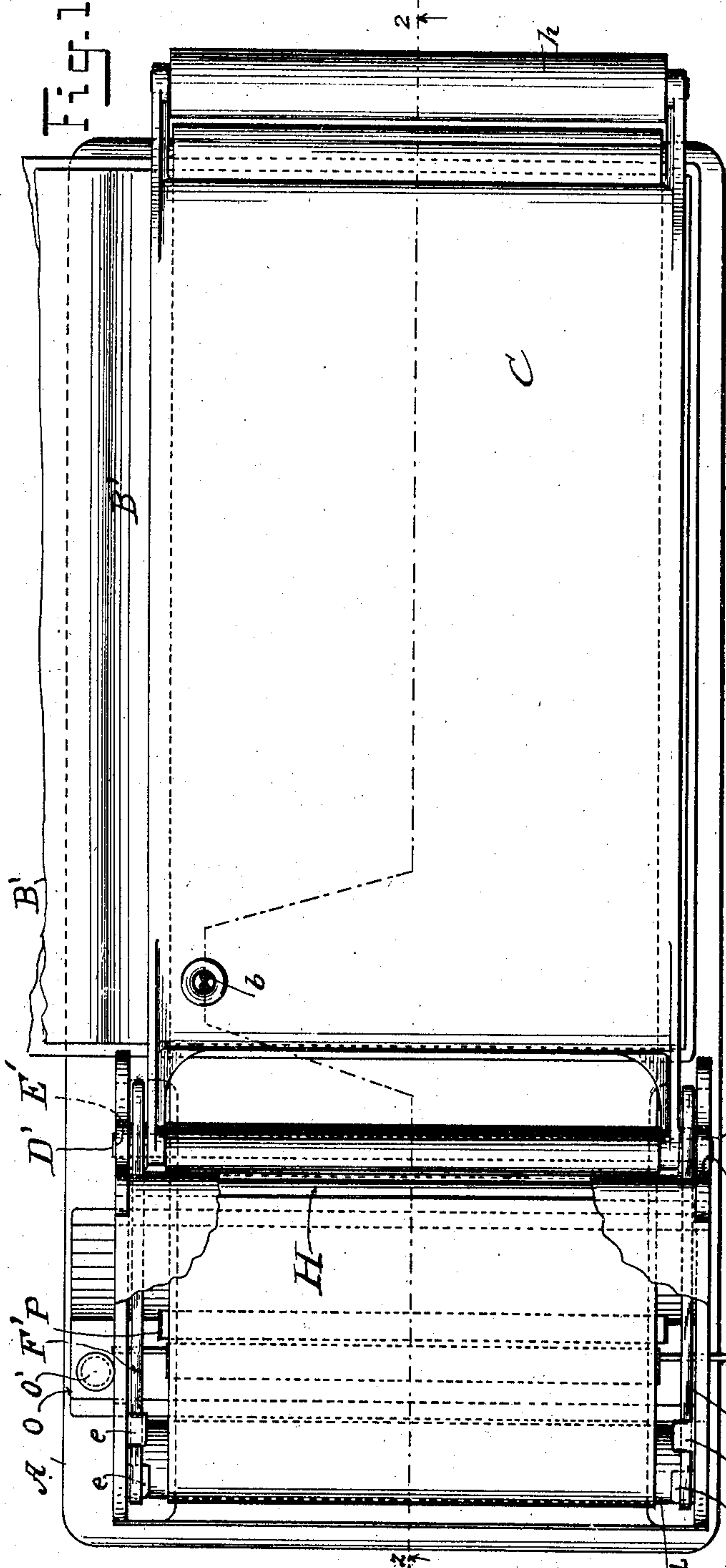
No. 768,297.

PATENTED AUG. 23, 1904.

W. E. PECK.
LETTER COPYING MACHINE.
APPLICATION FILED JULY 31, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
Edward J. Kastner.
Arthur H. Deambelain

Walter E. Peck Inventor
By his Attorney Samuel F. Watson

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2 SHEETS—SHEET 2.

Fig-3.

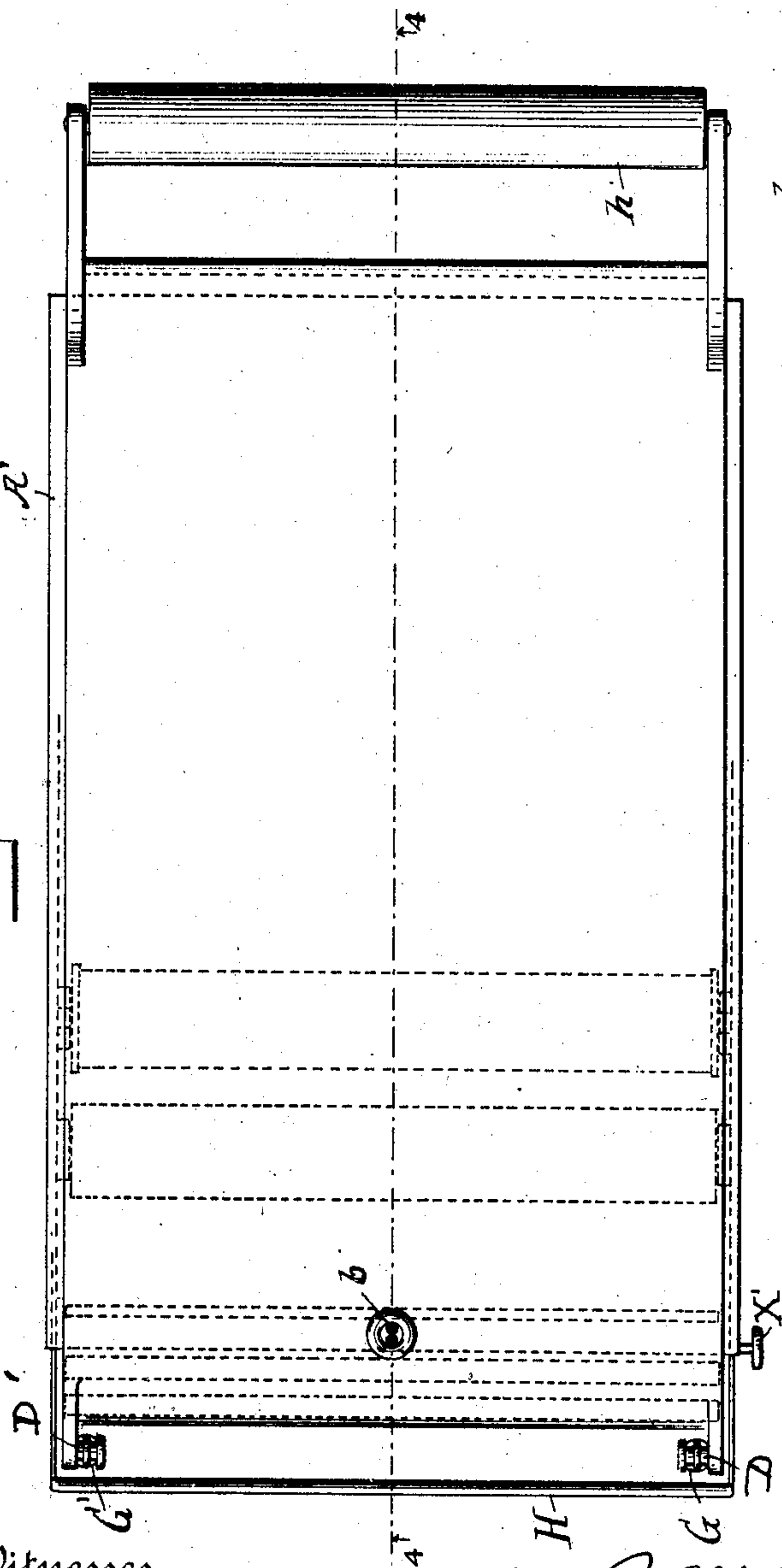
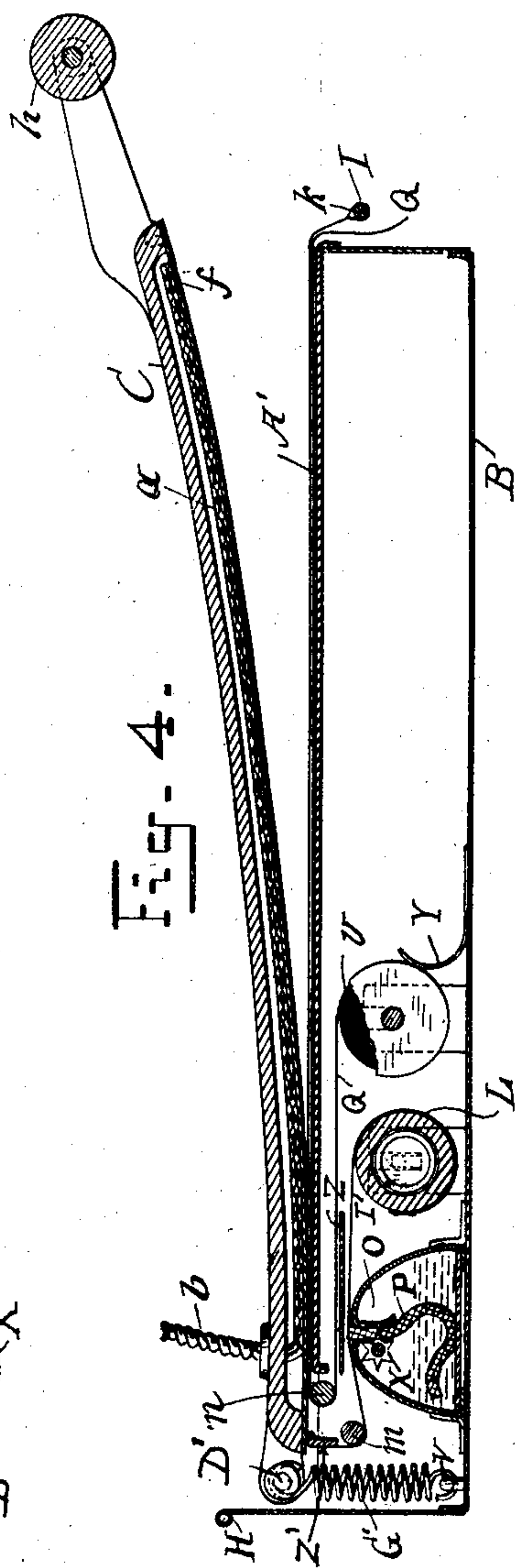


Fig-4.



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UNITED STATES PATENT OFFICE.

WALTER E. PECK, OF NEW YORK, N. Y.

LETTER-COPYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 768,297, dated August 23, 1904.

Application filed July 31, 1903. Serial No. 167,689. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. PECK, a citizen of the United States, residing in the city of New York, county of New York, and State of New York, have invented a new and useful Improvement in Letter-Copying Machines, of which the following is a specification.

The purposes and objects of my invention are to provide a machine or a device by means of which pen, pencil, or type-written matter may be copied onto any ordinary copying-paper. This copying-paper may be contained in book, roll, or other convenient form. By the use of my invention letters or other written or printed matter may be copied upon such copying-paper by a much simpler and easier method than now known and without the use of a letter-press and without the use of the inconvenient and objectionable water-dish and brush. It provides an extremely simple and practical method for readily copying letters with great ease, certainty, convenience, and cleanliness.

I attain the purposes and objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my device. Fig. 2 is a view of my device, partly in elevation and partly in cross-section, on the line 2 2, Fig. 1. Fig. 3 is a plan view of a slightly-modified form of my device. Fig. 4 is a cross-sectional view of the same modified form on the line 4 4, Fig. 3.

Similar letters refer to similar parts throughout the several views and figures.

My device consists of a bed-frame A, which may be the top of a table or stand or a separate piece, as shown in Fig. 2, made of wood or any other suitable material. To this bed A is secured in any convenient manner, as by the screws s, a frame B, which has a heated lever C, firmly secured to the frame by the ends D D'. The lever C preferably has a slightly-circular surface, in which case the two sides of the frame B preferably contain guide-slots E E', in which the ends or bearings D D', carrying the rear end of the lever C, move up and down against the pressure of springs. Any ordinary kind of springs

F F', Fig. 2, secured to the frame B by any convenient means, as by the pegs e and e' or by a spiral form of springs G G', secured in any convenient manner, as to the frame B, as shown at V in Fig. 4. The springs in whatever form are so arranged that their spring force is constantly exerted to keep the ends D D' at the lowest point of the bearings, Fig. 4, or of the guide-slots E E', Fig. 2. When the lever C is pressed down onto the copying-paper by pressure upon the handle h, the ends D D' are forced upward against the pressure of the springs, and as soon as the pressure is removed from the handle h the force exerted by the springs carries the ends or bearings D D' back to the lowest point of the bearings, Fig. 4, or to the lowest point of the slots E E'. The frame B preferably has a stop H in the form of a rod, as shown in the drawings, for the purpose of making a stop or support for the lever C when it is raised in the position shown in dotted lines, Fig. 2, and forms a support against which the lever C rests when it is in this raised position.

My device is preferably provided with one or more absorbent strips I J of cloth or other suitable material, supplied at their free end with rods k, of wood, metal, or other suitable material, to keep them flat. These absorbent strips are preferably made of a material sufficiently flexible that they may be rolled upon the roller L, which may be attached to the frame B in the manner shown in Figs. 2 and 4. This spring is preferably of the common automatic variety.

In the form of my device shown in Fig. 2, a small roller r is employed to hold the absorbent strips in place. My device is supplied with a water tank or reservoir O, which may be secured in any convenient manner, as to the frame B, as shown in Figs. 2 and 4. This reservoir may be provided with any convenient means for filling, as the orifice O', Fig. 1. The absorbent strips are moistened and dampened by the water in the reservoir O by passing the absorbent strips in contact with a wick P, which is arranged in the reservoir O in any convenient manner, so that one end extends into the water in the reservoir and the other end comes into contact with

the absorbent strips as they are unwound from the roller L. The width of the capillary wick should preferably be approximately the same as the width of the absorbent strips, either as one wick or by the use of a number of narrow wicks. A convenient means for keeping the wick in place and in proper position is by the use of the support R, made of metal, wood, or other suitable material, as shown in Fig. 2. A flat shield T, of metal or other suitable material, may be provided and so arranged that it may be turned by means of the knob S, so that the shield covers the end of the wick outside the reservoir. This shield when turned over the wick raises the absorbent strips and keeps them out of contact with the wick P when the device is not in use, or the wick may be provided with a toothed wheel X, as shown in Fig. 4, so that it may be raised and lowered from contact with the absorbent strips by turning the knob X', in the same way that the wick of a lamp is raised and lowered. When the reservoir is full, the water is raised by the wick more freely into contact with the absorbent strips than when the reservoir is nearly empty, so that on some accounts the toothed wheel X for raising and lowering the wick is preferable, for by keeping the wick low when the reservoir is full and raising it slightly as the water is lowered in the reservoir a uniform supply for properly wetting the absorbent strips may be maintained at all times.

In the form of my device shown in Figs. 3 and 4 (which, like the form shown in Figs. 1 and 2, may be conveniently employed to copy upon paper contained either in a book B' or a roll U) the paper roll U may be held in the manner shown in these figures and the friction-spring Y may be employed to prevent the paper from unrolling too rapidly. The thin sheet of wood or metal Z, Fig. 4, may be used to keep the paper Q from coming into contact with the dampened wick P, and the additional sheet of wood or metal Z', Fig. 4, may be used to keep the paper and the dampened cloth separated. The paper Q may be made to pass more easily by using the roller *n*. By the use of the roller *m* the cloths are more readily wound and unwound. The back portion of the frame B, Fig. 2, may be provided with a case or covering *c*, which conceals the detail mechanism from view and protects it from dirt, accident, and injury. The lever C is provided (preferably just within its lower surface, Figs. 2 and 4) with an electrical resistance-coil *a*, which may be connected with an electric current in any convenient manner, as by an insulated-wire conductor *b*, as shown in Figs. 2 and 4. One end of this insulated conductor is connected with the resistance-coil within the lever C, and the other end is supplied with a plug which may be inserted in any electric-light socket. The lever C has a smooth or approximately smooth face or

lower surface *f*, preferably slightly circular in form, as shown in Figs. 2 and 4, and made of metal, glass, or other suitable material to stand a high temperature. The resistance-coil should be of such size that the face of the lever C may be heated to a temperature of from 350° to 500° Fahrenheit. A lower temperature than 350° gives fairly good results, while a temperature of more than 500° is apt to scorch the paper. The requisite temperature may be readily obtained with any good resistance-coil from any ordinary electric-light socket. The lever C is provided with a handle *h*, of wood or other non-heat-conducting material, for raising, lowering it, and for pressing it down upon the copying-paper, under which has been placed the subject-matter to be copied.

The mode of operation of my device is simple. The reservoir is filled with water, the electric current turned into the electric resistance-coil in the lever C, the matter to be copied placed under the copying-paper in roll or book form on the frame or platform A, the dampened absorbent strip laid across the copying-paper in the manner shown in Figs. 2 and 4, the lever lowered by the operator from the raised position shown by the dotted line in Fig. 2, and the handle end *h* pushed or pressed down until the lower surface *f* of the lever is brought into contact with all the surface of the copying-paper under which the matter to be copied has been placed. The absorbent strips moisten or dampen the copying-paper against which they are laid or pressed, the copying-paper in turn dampens the ink, the lever C presses the dampened copying-paper and the dampened ink into close contact, the heat of the lever draws the ink into the dampened copying-paper and at the same time partially or entirely dries the paper. The action of the heated surface under the slight pressure exerted on the handle *h* necessary as against the pressure of the springs F F' to bring the surface *f* of the lever C into contact with the dampened copying-paper under which the subject-matter to be copied has been placed will be sufficient to make an excellent copy.

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

1. In a letter-copying machine, the combination of a means for dampening the copying-paper, a lever for pressing the dampened copying-paper into close contact with the subject-matter to be copied, and a means for heating the surface of the lever, substantially as shown and described.

2. In a letter-copying machine, the combination of a means for dampening the copying-paper, a lever having a curved surface for pressing the dampened copying-paper into close contact with the subject-matter to be copied, and a means for heating the curved

surface of the lever, substantially as shown and described.

3. In a letter-copying machine, the combination of a means for dampening the copying-paper, a surface in the form of a curved lever one end of which is so secured that it may be moved against the pressure of springs by the movement of its free end thereby causing the arcs of the curved surface successively to press the dampened copying-paper and the subject-matter to be copied into close contact, springs against the pressure of which the secured end moves, and a means for heating the surface of the lever, substantially as shown and described.

4. In a letter-copying machine, the combination of a means for dampening the copying-paper, a surface in the form of a curved lever one end of which is so secured that it may be moved against the pressure of springs by the movement of its free end thereby causing the arcs of the curved surface successively to press the dampened copying-paper and the subject-matter to be copied into close contact, springs against the pressure of which the secured end moves, and an electrical resistance-coil for heating the surface of the lever, substantially as shown and described.

5. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, and a lever having a surface for pressing dampened copying-paper into close contact with the subject-matter to be copied, substantially as shown and described.

6. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, and a lever having a curved surface for pressing dampened copying-paper into close contact with the subject-matter to be copied, substantially as shown and described.

7. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a lever having a surface for pressing dampened copying-paper into close contact with the subject-matter to be copied, and a means for heating the surface of the lever, substantially as shown and described.

8. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said

reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a lever having a curved surface for pressing dampened copying-paper into close contact with the subject-matter to be copied, and a means for heating the surface of the lever, substantially as shown and described.

9. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a lever for pressing dampened copying-paper into close contact with the subject-matter to be copied, and an electrical resistance-coil for heating the surface of the lever, substantially as shown and described.

10. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a lever having a curved surface for pressing dampened copying-paper into close contact with the subject-matter to be copied, and an electrical resistance-coil for heating the surface of the lever, substantially as shown and described.

11. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip for dampening copying-paper secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a curved surface in the form of a lever one end of which is so secured that it may be moved against the pressure of springs by the movement of its free end causing the arcs of the curved surface successively to press the dampened copying-paper and the subject-matter to be copied into close contact, and springs at the secured end of the lever against the pressure of which this secured end may be moved by the movement of the free end of the lever, substantially as shown and described.

12. In a letter-copying machine, the combination of a water-supply reservoir, a wick for raising water from a water-supply in said reservoir, a roller with means for rotating same, an absorbent strip for dampening copying-paper secured to said roller and adapted to be wound thereon and unwound therefrom in contact with said wetted wick, a curved surface in the form of a lever one end of which is so secured that it may be moved against the pressure of springs by the movement of its free end causing the arcs of the curved sur-

face successively to press the dampened copy-
ing-paper and the subject-matter to be copied
into close contact, springs at the secured end
of the lever against the pressure of which this
5 secured end may be moved by the movement
of the free end of the lever, and an electrical
resistance-coil for heating the surface of the
lever, substantially as shown and described.

In witness whereof I have hereunto set my
hand, in the presence of two subscribing wit- 10
nesses, this 30th day of July, 1903.

WALTER E. PECK.

Witnesses:

ARTHUR H. CHAMBERLAIN,
WILLIAM E. SMITH.