No. 756,797. PATENTED APR. 5, 1904.

W. E. PECK.

LETTER COPYING MACHINE.

APPLICATION FILED JULY 31, 1903.

NO MODEL.

Fig. 1.

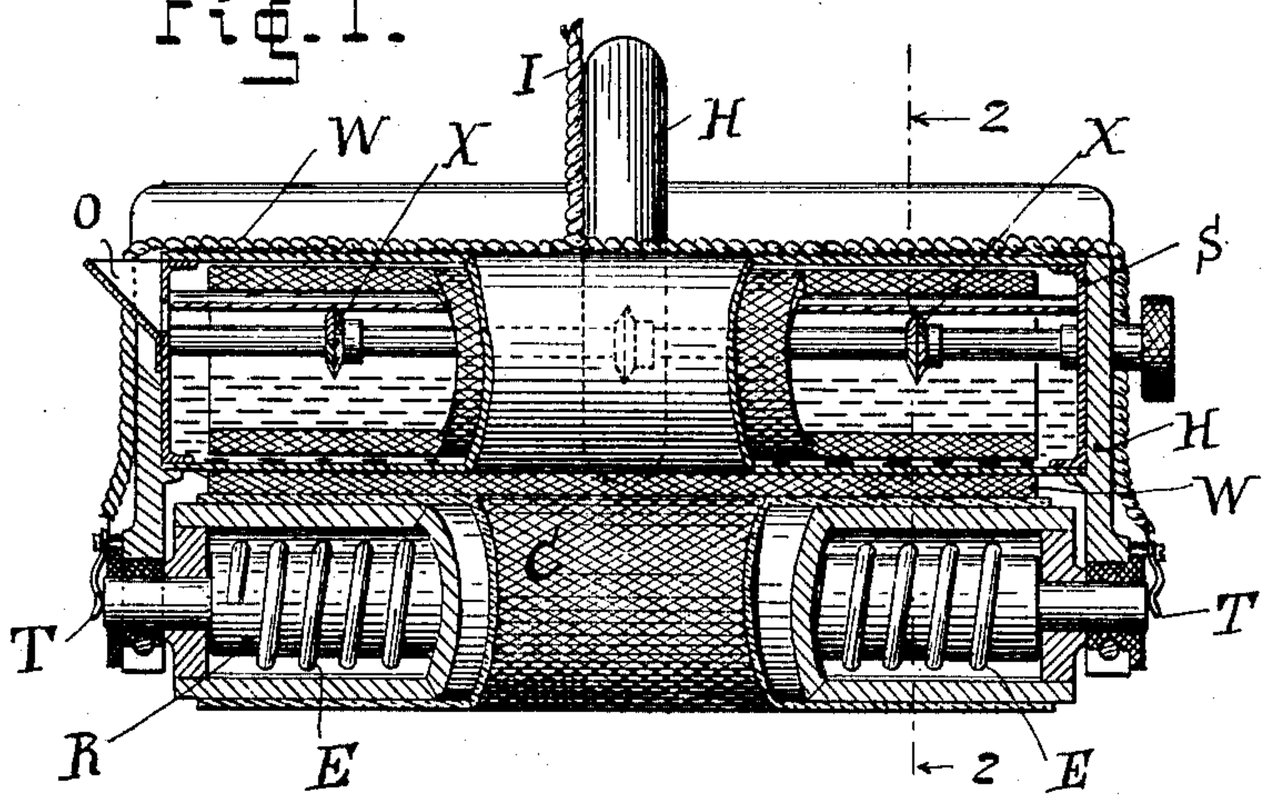
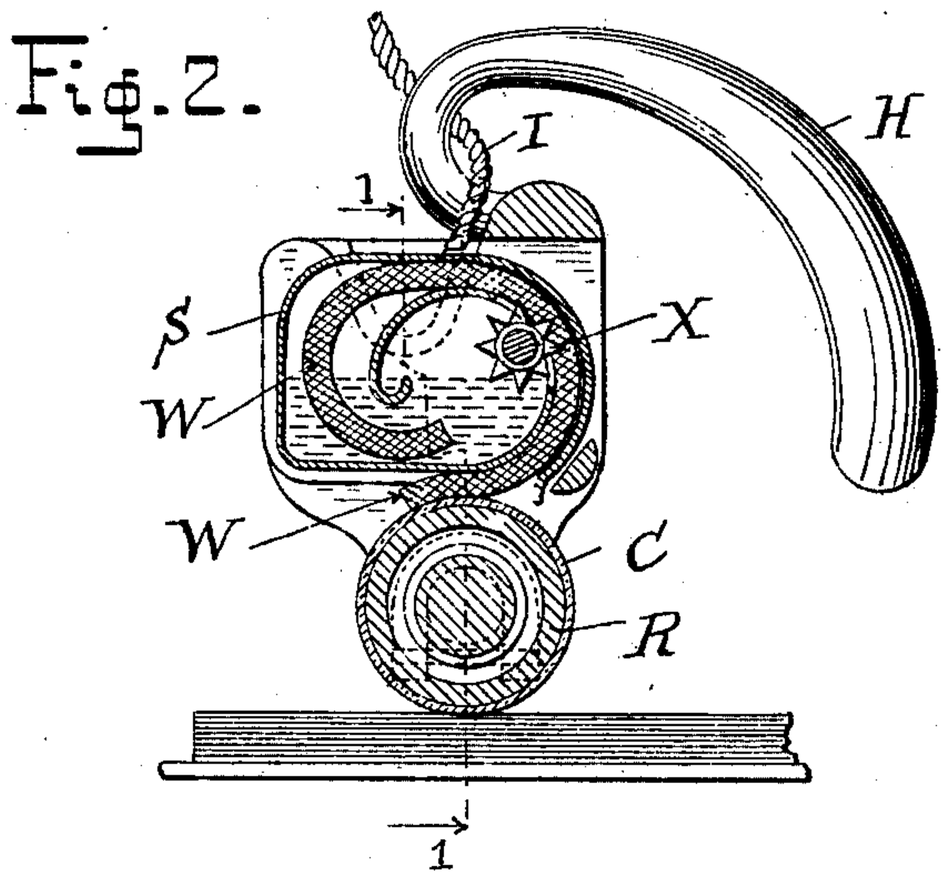


Fig. 2.



Witnesses
Arthur H. Chamberlain
William A. Bridgman

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

No. 756,797. Patented April 5, 1904.

UNITED STATES PATENT OFFICE.

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

LETTER-COPYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 756,797, dated April 5, 1904.

Original application filed February 2, 1903, Serial No. 141,434. Divided and this application filed July 31, 1903. Serial No. 167,690. (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 ordinary copying-paper. This copying-paper may be contained in a book or other convenient form. My invention enables the operator to copy letters or other matter upon such copying-paper by a much simpler and easier method than now known and without the use of a letter-press, water-dish, brush, &c., and provides an extremely simple, practical, and inexpensive device for rapidly copying letters with greater certainty, convenience, cleanliness, and economy than by any method now known.

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

Figure 1 shows one form of my invention, partly in front elevation and partly in longitudinal section, on the line 1 1, Fig. 2. Fig. 2 is a sectional view of the same on the line 2 2, Fig. 1.

Similar letters refer to similar parts throughout both figures.

My device as illustrated by the figures of the drawings consists of an electrically-heated roller R, supplied with a frame and handle H of any convenient form and an absorbent covering C around the roller to convey water in proper quantities from a water-supply to the copying-paper upon which the subject-matter is to be copied for the purpose of dampening the paper. The water-supply may be contained in the reservoir S and conducted from such reservoir to the absorbent covering C by any convenient means, as by means of the wick W. The roller R is made of metal, glass, or other suitable material and of any size convenient for the purposes required. For ordinary use a roller an inch to an inch and a half in diameter will be found satisfactory. This roller is constructed with a smooth or approximately smooth exterior surface, as shown in the drawings, and is heated by any convenient means, as by the insertion within the roller of an electrical resistance-coil E, which may be connected with an electric current by the insulated wire conductor I. One end of this insulated electrical conductor may be connected in any convenient manner, as by a swivel-joint or a frictional-contact joint in the form shown at T, Fig. 1, with the resistance-coil E within the roller R, and the other end of this insulated conductor may be supplied with an ordinary plug to be inserted in any ordinary electric-light socket.

It is preferable when the device is in operation that the roller be kept heated to a temperature of from 350° to 400° Fahrenheit, although a lower temperature gives fairly good results. This temperature may be obtained with a proper resistance-coil from the electric current of any ordinary electric-light socket. The absorbent covering C may be made of cloth, felt, asbestos, or other suitable material and preferably should be closely wrapped and secured around the outside surface of the roller R. The reservoir S may be made of sheet metal or other suitable material and has an opening O for convenience in filling with water. Preferably there is a longitudinal slot or opening in the top of the reservoir through which the absorbent capillary wick W passes, one end of the wick being in contact with the absorbent covering C and the other end being in contact with the water in the reservoir. The wick may be of cloth, felt, asbestos, or of the ordinary lamp-wick variety and approximately of the same width as the absorbent covering, either as a single wick or made up of several narrow wicks. The device will operate if the wick is fixed and unadjustable; but it is found preferable to have the wick adjustable—that is, so that it may be raised and lowered by the operation of the toothed wheel X the same as the wick of a lamp is raised and lowered—that it may be removed from contact with the cov-

ering C and the outer end raised above the water-level in the reservoir when the machine is not in use.

My device in any of its forms may be made operative when the absorbent covering is dampened by dipping it into water or by bringing it into contact with a wetted absorbent pad, of felt, asbestos, or other suitable material; but the use of the water-reservoir and wick as a means for dampening the absorbent covering is preferable.

The mode of operation of my device is extremely simple. The electric current is turned on to the resistance-coil within the roller R, the subject-matter to be copied is placed under the copying-paper, the absorbent covering C dampened, and under slight pressure the heated surface of the roller is passed over the copying-paper dampened by the dampened covering. The absorbent covering revolves with the roller R and conveys water to the copying-paper and dampens it, the copying-paper in turn dampening the ink of the subject-matter placed under the copying-paper, and as the heated surface of the roller brings the dampened copying-paper and ink into close contact with each other the action of the heat causes the copying-paper effectively and quickly to absorb the dampened ink, and at the same time the heat partially dries the paper. Thus a copy is made at a single operation and without great pressure by simply passing the heated surface of the roller, with its wetted covering, over the copying-paper under which the subject-matter to be copied has been placed.

The invention herein shown, described, and claimed is an embodiment of another means or construction for producing or attaining the same results set forth in my application filed February 2, 1903, Serial No. 141,434, of which application this is a division.

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

1. In a letter-copying machine, the combination of a heated surface and a wetted absorbent covering for same, for dampening the copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

2. In a letter-copying machine, the combination of an electrically-heated surface and a wetted absorbent covering for same, for dampening copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

3. In a letter-copying machine, the combination of a heated roller and a wetted absorbent covering for same, for dampening copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

4. In a letter-copying machine, the combination of an electrically-heated roller and a wetted absorbent covering for same, for dampening copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

5. In a letter-copying machine, the combination of a heated surface and a wetted cloth covering for same, for dampening copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

6. In a letter-copying machine, the combination of an electrically-heated surface and a wetted cloth covering for same, for dampening copying-paper upon which a letter or other subject-matter is to be copied, substantially as shown and described.

7. In a letter-copying machine, the combination of a water-supply reservoir and a heated surface having an absorbent covering which is wetted from a water-supply in said reservoir, substantially as shown and described.

8. In a letter-copying machine, the combination of a water-supply reservoir and an electrically-heated surface having an absorbent covering which is wetted from a water-supply in said reservoir, substantially as shown and described.

9. In a letter-copying machine, the combination of a heated roller and a dampened absorbent covering revolving with said roller which covering dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

10. In a letter-copying machine, the combination of a heated roller and a dampened cloth revolving with said roller which cloth dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

11. In a letter-copying machine, the combination of an electrically-heated roller and a dampened absorbent covering revolving with said roller which covering dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

12. In a letter-copying machine, the combination of an electrically-heated roller and a dampened cloth revolving with said roller which cloth dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

13. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir, and an absorbent covering revolving with said roller which covering is wetted from a water-supply in said reservoir, substantially as shown and described.

14. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir, and an absorbent cover-

ing revolving with said roller which covering is wetted from a water-supply in said reservoir, substantially as shown and described.

15. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir, a wick which passes into a water-supply in said reservoir and an absorbent covering revolving with said roller and carrying water from said wetted wick to the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

16. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir, a wick which passes into a water-supply in said reservoir and an absorbent covering revolving with said roller and carrying water from said wetted wick to the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

17. In a letter-copying machine, the combination of an electrically-heated roller, a wetted absorbent covering for same, an electrical resistance-coil within said roller, and a frictional-contact joint for connecting said resistance-coil to an electrical conductor, substantially as shown and described.

In witness whereof I have hereunto set my hand, in the presence of two subscribing witnesses, this 28th day of July, 1903.

WALTER E. PECK.

Witnesses:

W. H. BRIDGMAN,

EDWARD J. KASTNER.