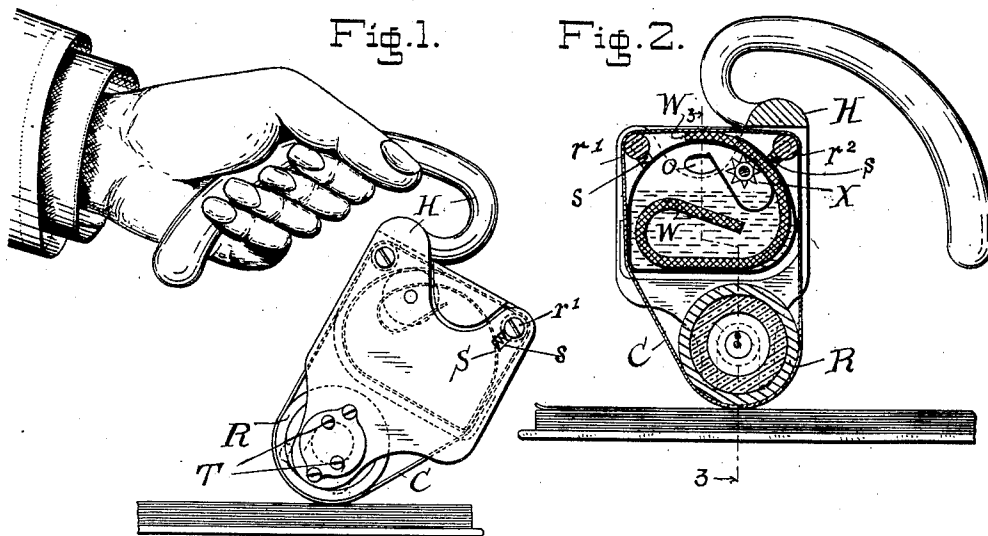
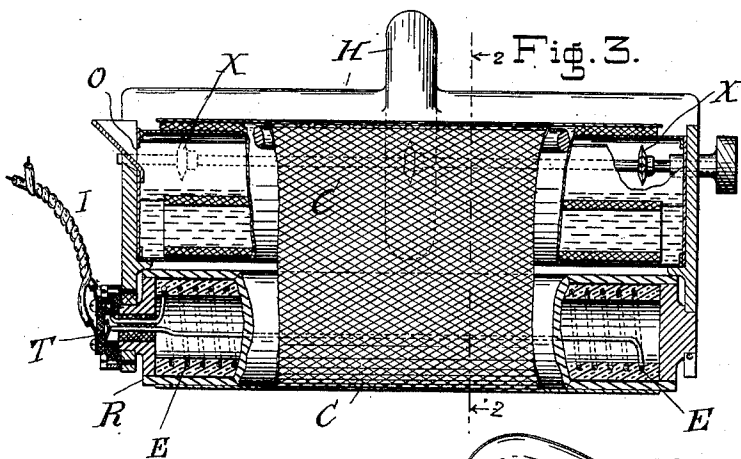
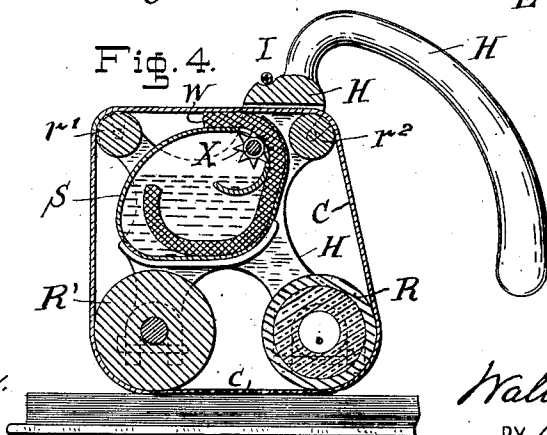


No. 756,522.

PATENTED APR. 5, 1904.

W. E. PECK.
LETTER COPYING MACHINE.
APPLICATION FILED FEB. 2, 1903.

NO MODEL.



WITNESSES:
Edward J. Kautner,
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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. 756,522, dated April 5, 1904.

Application filed February 2, 1903. Serial No. 141,434. (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 and without the use of the inconvenient and objectionable wet cloths, water-dish and brush, 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 is an end view of one form of my invention. Fig. 2 is a sectional view of the same on the line 2 2, Fig. 3. Fig. 3 is partly a front elevation of the same and partly a longitudinal sectional view of the same on the line 3 3, Fig. 2. Fig. 4 is a sectional view of a slightly-modified form of my invention.

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

My invention consists primarily of the utilization of heat from a heated surface for copying letters or other subject-matter onto dampened copying-paper.

My device, as illustrated by the figures of the drawings, consists of a heated roller R, supplied with a frame and handle H of any convenient form, and an absorbent band or strip 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 a reservoir S and conducted from such reservoir to the

absorbent band C by any convenient means, as by the 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, Fig. 3, which may be connected with an electric current by an insulated wire conductor I. One end of this insulated electrical conductor may be connected in any convenient manner, as by the swivel-joint and terminals T, Figs. 1 and 3, 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 electric-lightsocket. It is preferable that when the device is in operation 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 band C may be made of cloth, felt, asbestos, or other suitable material, and to facilitate its passage over the wick and around the heated roller, and thus secure a more perfect operation of the device, the rollers r' and r'' are added. It is desirable that one or both of these rollers should be adjustable, preferably roller marked r'' , as by the springs s. The reservoir is 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 band C and the other end being in contact with the water in the reservoir. This wick may be of cloth, felt, asbestos, or of the ordinary lamp-wick variety and approximately of the same width as the absorbent band, 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. When the reservoir is full, the wick raises the water into contact with the absorbent band more readily or rapidly than when the reservoir is empty or nearly empty; but 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 band may be maintained at all times. It is also desirable to have the wick adjustable in order that it may be removed from contact with the band when the machine is not in use.

The mode of operation of my device is extremely simple. The electric current is turned onto the resistance-coil within the roller R, the subject-matter to be copied is placed under the copying-paper, the absorbent band C dampened, and under slight pressure the heated surface of the roller passed over the copying-paper dampened by the absorbent band. Preferably the absorbent band revolves around the roller R and conveys water raised from the reservoir by the wick to the copying-paper and dampens it, the copying-paper in turn dampening the ink of the subject-matter under the copying-paper. 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 or entirely dries the paper. Thus a copy is made at a single operation and without great pressure by simply passing the heated roller over the dampened copying-paper under which the matter to be copied has been placed.

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 with means for wetting the copying-paper upon which the 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 with means for wetting the copying-paper upon which the 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 with means for wetting the copying-paper upon which the 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 with means for wetting the copying-paper upon which the 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 roller with a dampened ab-

sorbent band for wetting the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

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

7. In a letter-copying machine, the combination of an electrically-heated roller with a dampened absorbent band for wetting the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

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

9. In a letter-copying machine, the combination of a heated surface with a movable absorbent dampened band for wetting 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 an electrically-heated surface with a movable absorbent dampened band for wetting 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 a heated roller with a movable dampened absorbent band for wetting 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 a heated roller with a movable dampened cloth for wetting 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 an electrically-heated roller with a movable dampened absorbent band for wetting the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

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

15. In a letter-copying machine, the combination of a heated roller with a dampened absorbent band movable around said roller which band dampens the copying-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 a heated roller with a dampened cloth movable around said roller which cloth dam-

pens the copying-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 with a dampened absorbent band movable around said roller which band dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

18. In a letter-copying machine, the combination of an electrically-heated roller with a dampened cloth movable around 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.

19. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and a movable absorbent band which carries water from a water-supply in said reservoir to the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

20. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and a movable cloth which carries water from a water-supply in said reservoir to the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

21. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and a movable absorbent band which carries water from a water-supply in said reservoir to the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

22. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and a movable cloth which carries water from a water-supply in said reservoir to the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

23. 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 a movable absorbent band in contact with said wick 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.

24. 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 a movable cloth in contact with said wick 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.

25. 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 a movable absorbent band in contact with said wick 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.

26. 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 a movable cloth in contact with said wick 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.

27. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and an absorbent band revoluble around said roller and dampened from a water-supply in said reservoir, which band dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

28. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and a cloth revoluble around said roller and dampened from a water-supply in said reservoir, which cloth dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

29. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and an absorbent band revoluble around said roller and dampened from a water-supply in said reservoir, which band dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

30. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and a cloth revoluble around said roller and dampened from a water-supply in said reservoir, which cloth dampens the copying-paper upon which the letter or other subject-matter is to be copied, substantially as described.

31. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and a movable absorbent band which is wetted from said reservoir and which passes directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

32. In a letter-copying machine, the combination of a heated roller, a water-supply reservoir and a movable cloth which is wetted from said reservoir and which passes directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

33. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and a movable absorbent band which is wetted from said reservoir and which passes directly between the heated roller and the paper upon which the letter or

other subject-matter is to be copied, substantially as shown and described.

34. In a letter-copying machine, the combination of an electrically-heated roller, a water-supply reservoir and a movable cloth which is wetted from said reservoir and which passes directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

35. 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 a movable absorbent band revolving in contact with said wetted wick and passing directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

36. 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 a movable cloth revolving in contact with said wetted wick and passing directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

37. 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 a movable absorbent band in contact with said wetted wick and passing directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

38. 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 a movable cloth in contact with said wetted wick and passing directly between the heated roller and the paper upon which the letter or other subject-matter is to be copied, substantially as shown and described.

39. In a letter-copying machine, the combination of a means for wetting copying-paper upon which a letter or other subject-matter is to be copied, an electrically-heated roller, and a swivel-joint for connecting an electric conductor to an electrical resistance-coil within said roller, substantially as shown and described.

In witness whereof I have hereunto set my hand, in the presence of two subscribing witnesses, this 30th day of January, 1903.

WALTER E. PECK.

Witnesses:

SAMUEL S. WATSON,
M. A. ALEXANDER.