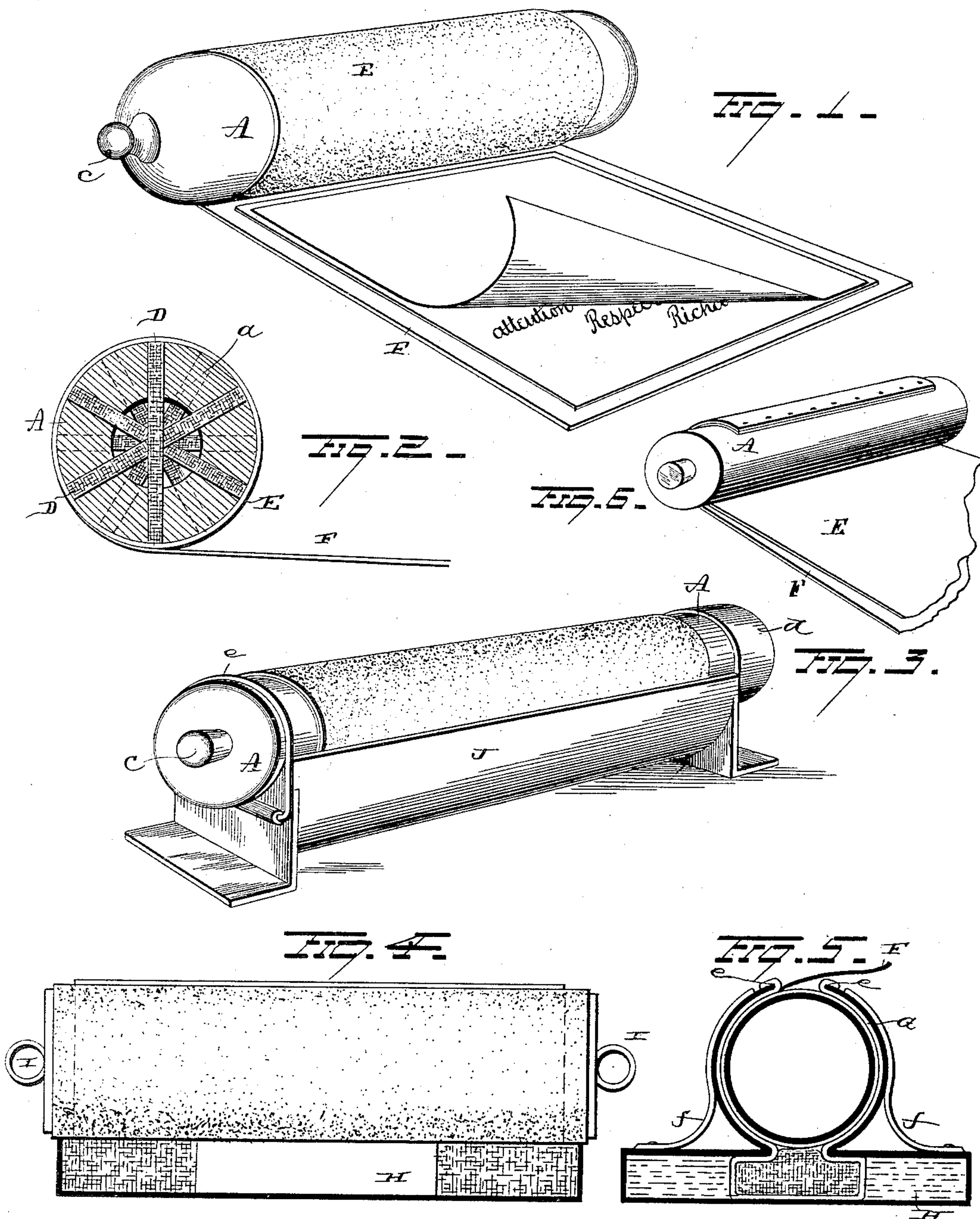


(No Model.)

W. GRIFFITH.  
COPYING DEVICE.

No. 339,166.

Patented Apr. 6, 1886.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

WILLIAM GRIFFITH, OF PITSTON, PENNSYLVANIA.

## COPYING DEVICE.

SPECIFICATION forming part of Letters Patent No. 339,166, dated April 6, 1886.

Application filed October 28, 1885. Serial No. 181,165. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GRIFFITH, of Pittston, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Copying Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in devices for copying letters, and more particularly for copying letters in the ordinary tissue-paper letter-book.

Hitherto it has been customary to use a brush or its equivalent to dampen the paper which is to receive the imprint, and then press the letter to be copied into contact with the dampened sheet. The two steps in this process require considerable time, and the moistening of the sheet is liable to be imperfectly done.

The object of my present invention is to provide a device for simultaneously moistening the sheet and taking the imprint, and to provide a device which shall do its work perfectly, a further object being to provide a self-dampening device which shall be ready for constant use for several days without care or attention, and which shall be convenient, durable, and inexpensive; and with these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of one form of the device in perspective. Fig. 2 is a section through the roller. Fig. 3 is a view of a modified form in perspective. Figs. 4, 5, and 6 represent modifications.

A is a roller, made of wood or any porous material, which is capable of retaining water in a central chamber, *a*, formed therein, against a rapid waste, and will at the same time allow the water to escape slowly through its pores. When the wood used in constructing the roller has large pores and is hollowed out on the inside, leaving a thin shell only between the internal reservoir and the surface, the water will creep through the wood

and keep the surface of the roller constantly damp; but when the shell is thicker, as represented in Fig. 2, it is necessary to provide the shell of the roller with manifold perforations, D, in which I place some absorbent material—such as candle or lamp wick—which extends down into the chamber *a*. An envelope of absorbent material, E, is wound around the roller, and rests in contact with the absorbent material that fills the perforations D, and the flap F, of canvas, oil-cloth, or other material, is secured at one edge to the face of the roller; or the surface of the roller, when the roller is constructed of a porous wood capable of taking and retaining a smooth surface, may be used without the absorbent envelope, the wood combining in itself the power to transmit the moisture to the surface and retain it there for constant use. The chamber *a* within the roller is closed at the end by means of a cork, *c*, or other suitable stopper, which may be readily removed and adjusted when it is necessary to fill the roller with water. The roller is intended to be of such circumference that a single revolution will move it over the sheet in the letter-book, and the flap F large enough to form a rest for the letter-book sheet.

The device operates and is used as follows: The water which occupies the chamber *a* is gradually absorbed by the envelope E through the medium of the absorbent material in the perforations D, and thereby keeps the envelope evenly and continually moist. The roller is placed close to or in contact with the edge of the letter-book, and the flap F is spread smoothly on the leaf in the letter-book adjacent to the one which is to receive the copy. The letter is then spread on the flap with writing uppermost, and the tissue-leaf is laid thereon. The roller is now revolved toward the back of the book with more or less pressure, which brings the tissue-leaf in contact with the moist envelope C, and thereby causes it to receive the copy of the letter.

The gist of my invention being the self-moistening surface of or envelope on the roller, it follows that many modifications may be resorted to for supplying the water to the sur-



face or envelope. One of these modifications is represented in Figs. 4 and 5, in which the roller A is formed of metal and provided with an absorbent envelope and a flap, as in the construction already explained. The water, however, is supplied to the absorbent envelope in this instance by means of an outer absorbent envelope, G, connected with a reservoir, H, and adapted to draw the water therefrom by capillary attraction. The outer envelope, G, is conveniently constructed in two half-sections, *e*, which are backed by sheet metal and held in a yielding adjustment by the spring-standards *f*, secured to the top of the reservoir H, the upper edges of the half-sections *e* are a slight distance apart, to admit the flap F, and the roller is provided with rings or handles I on its ends, for removing the roller from the envelope or casing G. The roller rests in its position in the casing G when not in use, and its absorbent envelope receives its moisture from the outer envelope, G, being always ready for use.

Instead of securing the absorbent envelope around the roller, the envelope or sheet of absorbent material E can be secured at one end to the roller in close proximity to the flap F, as shown in Fig. 6. This sheet of absorbent material can be supplied with water from the interior of the roller, as previously described, can be moistened at the time of copying, or can be moistened by an outer envelope of case J, as shown in Fig. 3, within which the roller is constructed to fit. This envelope or case J is preferably made of sheet metal, (glass or crockery-ware might also be used to good advantage,) open throughout its entire length and provided with a cylindrical cap, *d*, at one end adapted to snugly embrace one end of the roller, and provided at its other end with a movable ring, *e*, adapted to be turned over the opposite end of the roller. This envelope or case J is adapted to receive cloths or any waste material that will absorb and retain water, and the loose envelope E is adapted to rest in contact with the moistened material in the case, and consequently be in condition for copying when removed from the case. In the construction shown in Fig. 6 the non-absorbent flap is on the outside. This brings the absorbent flap next to the roller and in a position to be moistened by the water contained within the roller.

When it is desired to moisten the absorbent flap by means of the envelope J, the flap and absorbent envelope can be wrapped around the roller in a direction opposite to that shown

in Fig. 6, so as to bring the absorbent envelope on the outside.

In the devices previously described, wherein the envelope is wrapped around the roller, the roller is necessarily of such circumference that a single revolution will move it over the sheet in the letter-book, while in this device, wherein a loose absorbent envelope is employed, the roller can be of any desired size without reference to the size of the sheets.

Other devices might be resorted to for feeding the water to the absorbent envelope, differing in form and construction from those shown and described; hence I do not wish to limit myself strictly to any particular device for this purpose; but,

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

1. The combination, with a roller and absorbent envelope or sheet for receiving and retaining moisture, of a flexible flap secured thereto and adapted to form a rest for the letter and leaf and hold the latter in contact with the moistened envelope, substantially as set forth.

2. The combination, with a roller and absorbent envelope or sheet for receiving and retaining moisture and means, substantially as described, for furnishing a constant supply of moisture to the said envelope, of a flexible flap secured to the roller and adapted to hold the leaf and letter in contact with each other and the leaf in contact with the moistened envelope, substantially as set forth.

3. The combination, with a roller having a central reservoir and passages from said reservoir to the periphery of the roller, of an absorbent envelope or sheet and a flap secured to the roller and adapted to hold the leaf and letter in contact with each other and the leaf in contact with the moistened envelope.

4. The combination, with a roller having a central reservoir, passages leading from said reservoir to the periphery of the roller, and absorbent material located within said passages, of an absorbent envelope surrounding the roller and a flap secured to the roller, substantially as set forth.

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

WM. GRIFFITH.

Witnesses:

C. M. HILEMAN,  
J. K. GRIFFITH.