No. 861,227. PATENTED JULY 23, 1907.

H. SPINGLER.

PRESS COPYING ROLLER.

APPLICATION FILED JULY 6, 1904.

Fig. 2.

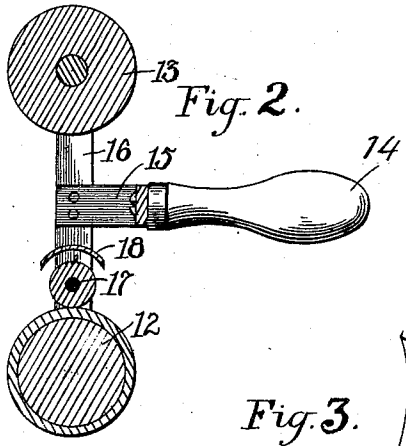


Fig. 1.

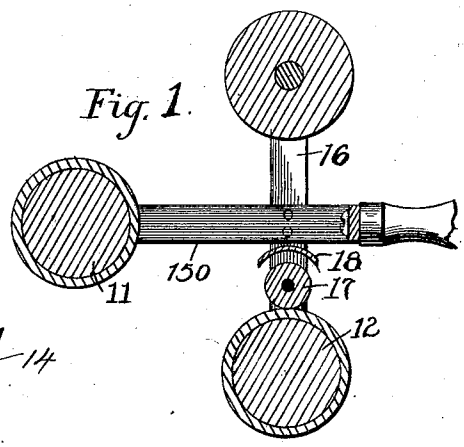
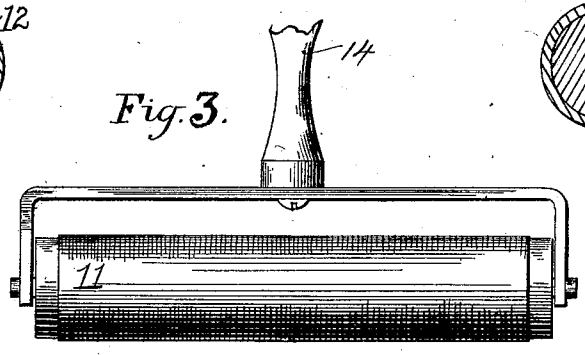


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY SPINGLER, OF NEW YORK, N. Y.

PRESS-COPYING ROLLER.

No. 861,227. Specification of Letters Patent. Patented July 23, 1907.

Application filed July 6, 1904. Serial No. 215,557.

To all whom it may concern:

Be it known that I, HARRY SPINGLER, a citizen of the United States, and a resident of New York, New York county, State of New York, have invented certain new and useful Improvements in Press-Copying Rollers, and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with a claim particularly specifying the novelty.

This invention relates to devices for copying letters; and the object of the same is to produce a set of rollers especially adapted to this purpose, and capable of storage in and use in connection with a moistener and casing which forms the subject matter of a companion application filed by me on May 23, 1905, Serial Number 261,809, and allowed Oct. 18, 1905.

The present invention consists in the detailed construction of the rollers and their supporting frame-work as more fully set forth hereinafter and illustrated in the accompanying drawings wherein—

Figure I is a sectional view of the preferred construction of my improved roller, showing the three working rollers, the wringer roller, and the trough—all mounted in one frame. Fig. II is a cross section of a modified form of this roller, showing the use of a wringer roller and trough. Fig. III is a plan view of the blotter roller.

The rollers which constitute the gist of the present invention are preferably three in number. The blotter roller 11, best seen in Fig. III, is of usual construction, being preferably a frame-work within which is mounted revolubly a wooden core, and the latter is surfaced with a covering of felt, asbestos, webbing or other suitable fabric which will absorb moisture. The moistening roller 12 is similarly constructed. The pressure roller 13 is preferably of moderately soft rubber, being made in practice by securing thick rubber tubing on a core and mounting the latter revolubly within the frame-work. In Fig. II the moistening and pressure rollers are mounted in a single frame consisting of a handle 14 secured to the center of a yoke 15, and cross bars secured rigidly to the ends of the latter and carrying the bearings for the stub shafts of the cores. The handle is by preference removably attached to the yoke in order that these parts can be disconnected for storage within the casing. Often a wringer roller 17 is added to this construction. By preference it consists of a rubber roller of smaller diameter journaled within the frame-work and in contact with the moistening roller, its purpose being to wring out of the latter the surplus liquid. This view also shows how a trough 18 may be mounted in the frame-work in addition. Fig. I shows the preferred construction of my roller, wherein projections 150 from the ends of the yoke form bearings in which are journaled the stub shafts of the blotter or absorbent roller 11. This form may also carry the wringer roller or trough, or both. The materials of the parts are not essential, and their size should be proportionate to that of the casing.

The use of this roller in its various forms will be clear to those who are experienced in making press copies. The moistening roller 12 is to be dampened by any proper means, and when reciprocated over a plane surface the wringer roller 17 will take out the excess of moisture. The moistening roller may then be passed over the tissue sheet. The letter to be copied is inverted and laid thereon, and the pressure roller 13 is brought into use to cause the copying to take place. To operate the pressure roller the handle and the frame-work shown in Figs. I and II must be inverted. This brings the moistening roller and wringer roller to the top but the presence of the trough 18 under the wringer roller will prevent any drippings from falling on the back of the letter. The blotter roller 11—whether in the same frame-work or secured to a separate handle of its own—is useful for taking up excessive moisture which may have been imparted to the tissue sheet. If the latter be a page of a press-copy book, some base will be inserted beneath that page before it is moistened and the copy taken. By preference, however, these rollers are used in connection with the casing covered by the companion patent above referred to.

What is claimed as new is:

1. In a letter-copying device, a single frame containing a moistening roller as of felt, a soft pressure roller as of rubber, and means interposed between the rollers for keeping the pressure roller dry.

2. In a hand roller copier, a moistening roller, a wringer roller in contact with it, and a frame in which both rollers are journaled.

3. In a hand roller copier, a pressure roller, a moistening roller, a wringer roller in contact with the latter, and a frame supporting them all.

4. In a hand roller copier, a pressure roller, a moistening roller, a single frame in which they are journaled, and a trough supported in the frame between the rollers for the purpose set forth.

5. In a hand roller copier, a pressure roller, a moistening roller, a wringer roller in constant contact with the latter, a single frame in which they are all journaled, and a trough supported in the frame between the wringer and pressure rollers.

6. In a hand roller copier, a pressure roller, a moistening roller, a blotter roller, and a single frame-work in which they are all journaled.

7. In a hand roller copier, a handle, a yoke centrally secured to the handle and having downturned ends, a blotter roller journaled between said ends, cross bars secured

across the latter between the handle and the journals of the blotter roller, a pressure roller journaled between one end of the cross bars, and a moistening roller journaled between the other end thereof.

8. A roller for the purpose described comprising a handle, a yoke carried rigidly thereby, cross bars carried by the yoke at right angles to it and to the handle, and three rollers journaled between said cross bars, two of them being a moistening roller and a wringer roller in contact with it.

9. A roller for the purpose described comprising a handle, a yoke thereon, cross bars on the yoke at right angles to it and to the handle, two rollers journaled between the opposite ends of the cross bars, and means carried by the bars for preventing liquid on one roller from falling upon the other, for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature this the twenty ninth day of June, A. D. 1904.

HARRY SPINGLER.

Witnesses:

JOHN M. GALER,

CHARLES J. STOCKING.