Oct. 27, 1931. J. R. BEACH 1,829,579

DUPLICATING MACHINE

Original Filed Aug. 8, 1928

Fig. 1.

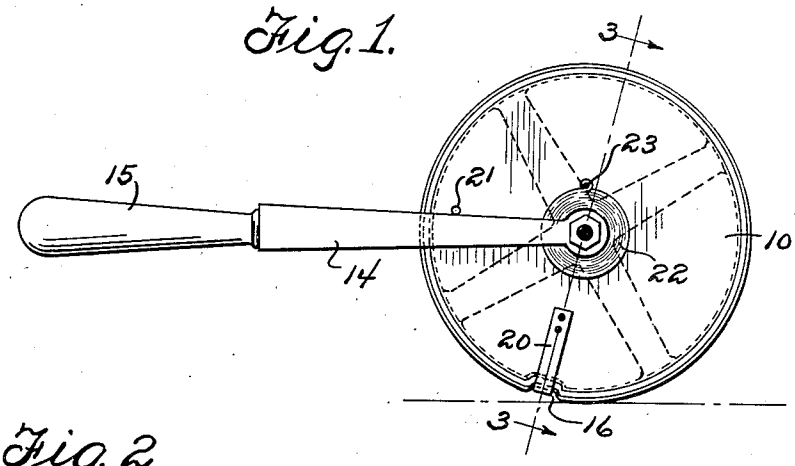


Fig. 2.

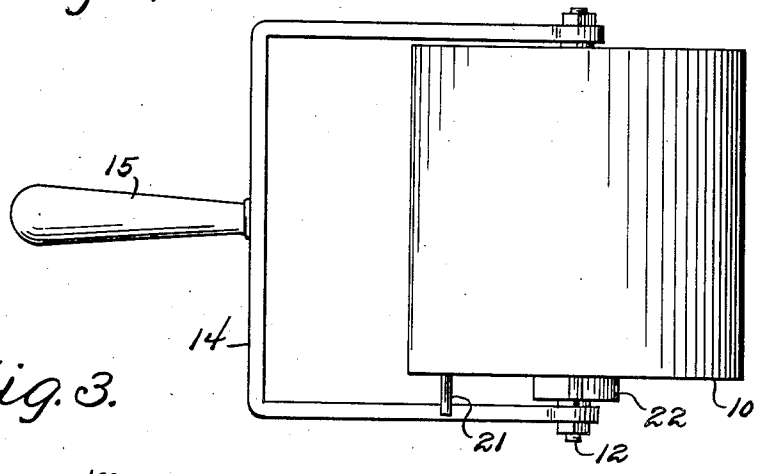


Fig. 3.

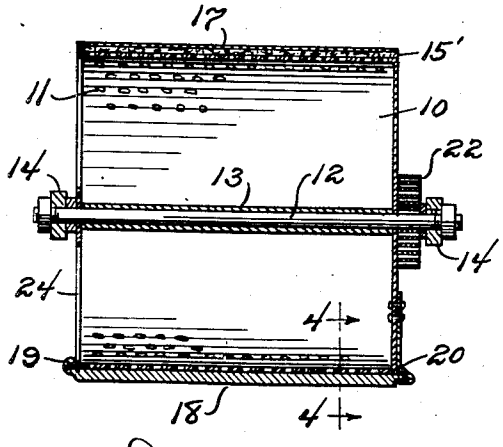
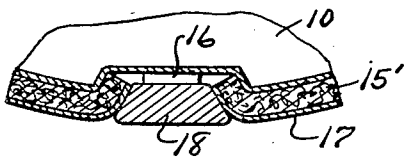


Fig. 4.



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UNITED STATES PATENT OFFICE

JOHN R. BEACH, OF LAWRENCEVILLE, VIRGINIA; E. P. BARROW ADMINISTRATOR OF SAID JOHN R. BEACH, DECEASED

DUPLICATING MACHINE

Application filed August 8, 1928, Serial No. 298,322. Renewed June 3, 1931.

This invention relates to duplicating machines of the hand operated type, wherein a number of printed copies may be cheaply and quickly made by passing a roller over the blank stock.

An object of the present invention is the provision of a machine of the above character wherein the roller will be normally held to properly position a stencil at the beginning of each operation and automatically returned to such position at the end of each operation.

Another object of the invention is the provision of a duplicating machine which utilizes a perforated roller, an inking pad and a stencil, all arranged so that excess ink upon the pad will pass into the cylinder instead of blotting and blurring the printed matter, the perforated cylinder also providing means for applying ink to the pad without removing either the stencil or the pad.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—

Figure 1 is an elevation of a duplicating machine constructed in accordance with the invention.

Figure 2 is a top plan view.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is an enlarged fragmentary section on the line 4—4 of Figure 3.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a hollow cylinder which is preferably formed of metal and whose periphery is perforated as indicated at 11. This cylinder has a shaft or spindle 12 extending therethrough which is surrounded by a sleeve 13. Secured upon the ends of the spindle 12 are the outer ends of a yoke 14 and the latter is provided with a handle 15, by means of which the cylinder may conveniently pass over a surface to be printed.

Secured around the periphery of the cylinder is an inking pad 15 whose opposite ends enter a depression 16 which extends across the periphery of the cylinder. This pad is covered by a stencil 17 of suitable make whose ends also enter the depression 16. A latch bar 18 extends across the periphery of the cylinder and has one of its ends hingedly mounted as shown at 19, while its opposite end is engaged by a spring latch 20 so as to clamp the ends of the inking pad and stencil in place. By reference to Figure 4 it will be seen that the depression and bar 18 are so constructed in proportion that a practically unbroken printing surface will be provided.

In order to properly position the stencil at the beginning of each printing operation, the cylinder has extending from one end a pin 21 which is adapted to engage the yoke 14 and limits rotation of the cylinder in either direction. The spindle 12 is surrounded by a coiled spring 22 which has one of its ends secured to the cylinder as shown at 23 and its opposite end secured to the spindle 12.

At the beginning of the printing operation, the pin 21 will position the stencil properly so that the roller may be conveniently passed over the surface to be printed. During this movement of the roller, the spring 22 will be tensioned, and when the cylinder is raised from the work at the end of the stroke, the spring will automatically return the cylinder to starting position. This greatly facilitates operation of the machine and materially increases its output.

By perforating the cylinder, excess ink (if any) within the pad 15 will be forced into the cylinder instead of blotting or blurring the work. In addition, the end 24 of the cylinder is in the form of a spider, so that the end of the cylinder is open and by the use of a brush, ink may be distributed over the inner periphery of the cylinder and will pass through the openings to ink the pad 15 without removing either the pad or the stencil.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention what is claimed is:

In a hand operated duplicating machine, a cylinder having a depression in its periphery, a stencil secured to the periphery of said cylinder for movement over a surface to be printed when the cylinder is revolved in one direction, a bar having one of its ends pivotally secured to one end of the cylinder at one end of the depression, a spring latch secured to the other end of the cylinder for removable engagement with the other end of the bar to clamp the stencil upon the cylinder, a handle for said cylinder, means carried by the cylinder and engaging the handle to limit rotation of the cylinder in opposite directions, and means to yieldingly resist rotation of said cylinder in one direction and return said cylinder to starting position at the completion of each printing operation.

In testimony whereof I affix my signature.

JOHN R. BEACH.