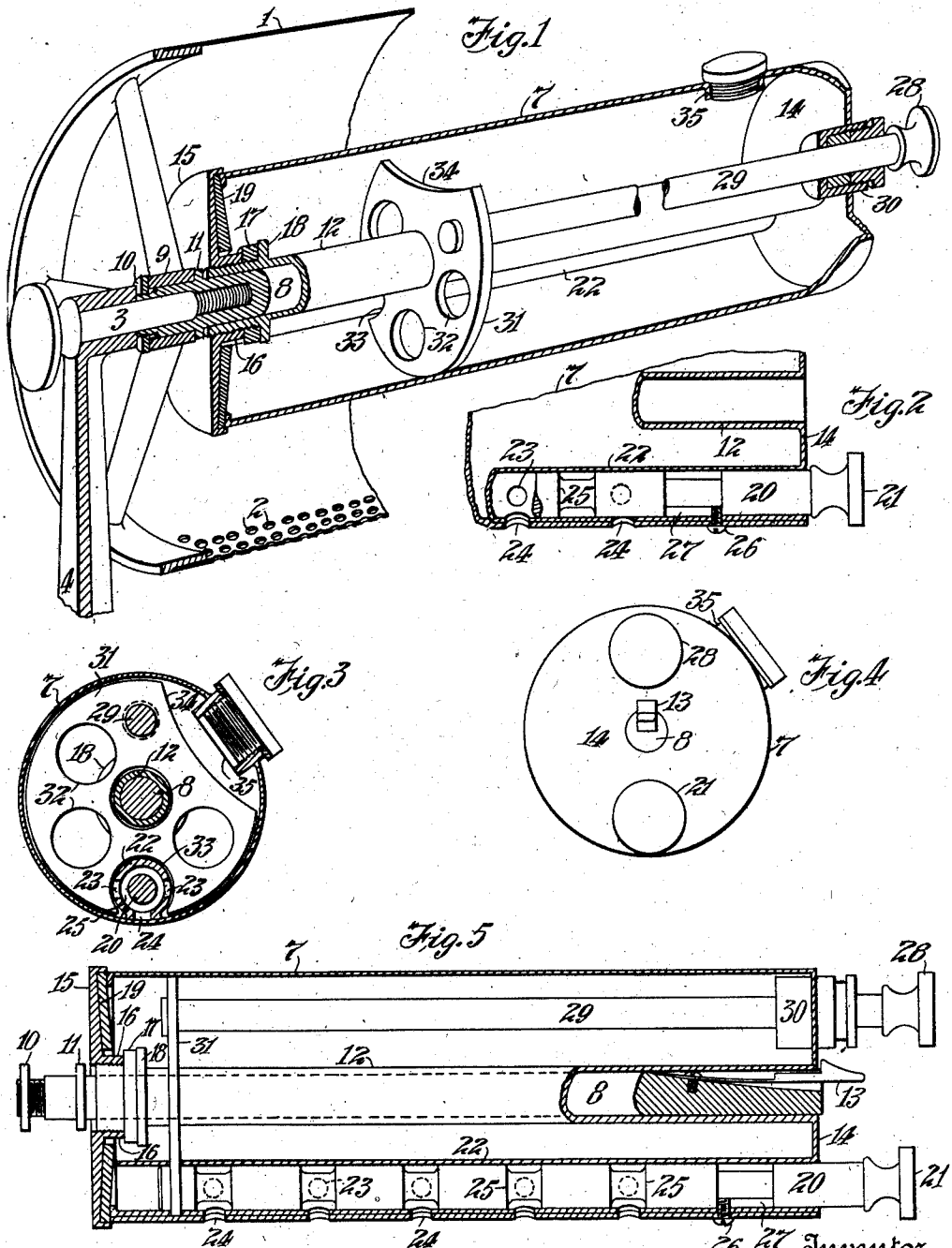


A. J. SMITH.
STENCILING MACHINE.
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1,044.426.

Patented Nov. 12, 1912.



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STENCILING-MACHINE.

1,044,426.

Specification of Letters Patent.

Patented Nov. 12, 1912.

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To all whom it may concern:

Be it known that I, ALEXANDER J. SMITH, a citizen of the United States, residing in Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Stenciling-Machines, of which the following is a specification.

This invention relates to stenciling machines, and is partly in the nature of an improvement upon certain ink-fountain supporting and ink-feeding devices shown in Patent No. 975,471, of November 15, 1910. In said patent a detachable cylindrical ink fountain is provided within the stencil cylinder, being attached at its end to the inner end of the cylinder, and also having feed openings for the ink, said openings closable at the will of the operator.

One object of the invention is to improve and simplify the means for controlling the feed of ink from the fountain. For this purpose I provide a cylindrical multiplex valve, which is slidable endwise to and fro, to open or close the ink feeding perforations in the fountain; said valve being housed in a tube contained in the ink fountain, and having suitable perforations for the passage of ink.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a perspective sectional view of a stencil cylinder provided with the present improvements. Fig. 2 is a sectional view to illustrate a portion of the ink-feeding valve, etc. Fig. 3 is a cross section of the fountain. Fig. 4 is an elevation of the outer end of the fountain. Fig. 5 is a longitudinal central section of the fountain.

A stencil cylinder 1, having throughout perforations 2, is usually mounted at one end by means of a screw stud or journal 3 upon a post 4, forming part of the framework; the other end of the cylinder being usually supported upon rolls, (not shown).

The stenciling ink is supplied in a long cylindrical box or fountain 7. The ink may be sold in this fountain ready to slip in place upon the stencil cylinder.

The ink fountain is slipped upon a central stud or axle 8, the end of which is inserted in a hub 9 of the stencil cylinder 1. A nut 10, threaded upon the projecting end of the stud 8, draws a shoulder 11 on said stud

against the end of the hub 9, thus giving the stud a firm mounting. The screw journal 3 is threaded into the end of said stud 8, and may be easily withdrawn to permit detachment of the stencil cylinder from the machine.

The ink fountain 7 is provided with a central tube or hollow core 12, which slips loosely upon the stud 8, the latter extending preferably the full length of the fountain, and having a spring latch 13 to catch over the end of the ink fountain (Fig. 5) to secure the latter against accidental detachment.

It will be understood that when it is desired to take the fountain out, it is only necessary to depress the latch 13 to release the fountain, which may then be slipped off from the stud 8. In replacing the fountain it is only necessary to slip it onto the stud 8 as far as it will go.

The outer end or head 14 of the ink fountain may be permanently secured to or formed upon the cylindrical body thereof; and the inner head may be in the form of a cap 15 removable for convenience in inspecting and cleaning the interior of the fountain. Said cap may have a hub 16 threaded upon the inner end of the tubular core 12; a soft washer 17 being pressed by the hub 16 against an annular shoulder 18 on the core 12, to prevent leakage of ink at this joint. A soft disk or gasket 19 may be forced by the cap 15 against the end of the box 7 to prevent leakage.

The feed of the ink from the cylinder is controlled by a valve rod 20 having a button 21 on its outer end and fitting in a tubular housing 22 within the ink fountain and extending from end to end thereof; the outer head 14 of the fountain being perforated and the rod 20 projecting therefrom. Ink flows from the fountain into the tubular housing 22 through pairs of perforations 23 formed in opposite sides of the latter, Figs. 2 and 3; and the ink feeds out of said housing through perforations 24 registering with the perforations 23 and extending in a line along the bottom or side of the ink fountain.

The valve rod 20 is formed with annular grooves or recesses 25 to register with all of said perforations, as at Fig. 5, to permit ink to flow freely from the fountain through the tubular housing or guide 22, and thence

out through the openings 24 falling to the bottom of the stencil cylinder 1. A stop 26 fixed upon the fountain projects into a wide annular groove 27 formed in the valve rod 20, and limits the throw of the latter. When the rod is pushed in as far as it will go, the grooves 25 are carried entirely out of register with the openings 23, 24, said openings being all closed by the uncut portions of the multiple valve rod 20. By adjusting said rod to different positions, the ink may be caused to flow either freely or slowly. The stop 26 is in the form of a screw to permit its removal, so that the multiple valve rod 15 may be withdrawn from the fountain. If it is desired to cause the ink to flow more freely, the operator may work back and forth a handle 28 provided upon the end of a rod 29, which projects through a stuffing box 30, and carries at its inner end a piston 31 having a number of perforations 32 and cut away at 33 to clear the valve housing 22. This piston may also be cut away on its edge or side at 34, to clear an inwardly projecting supply nipple 35, and also to reduce the area of the piston, so that it may be moved easily.

The handles 21 and 28 are both adapted to lie close to the body of the fountain, which 30 is a great advantage during transportation of the fountain as a separate article of manufacture.

Variations may be resorted to within the scope of the invention, and portions of the 35 improvements may be used without others.

This is a division of my application No. 521,919, filed October 9, 1909 (Patent No. 976,704, of November 22, 1910).

The feature of the ink-stirrer is common 40 to this application and the co-pending application No. 513,377 upon which said Patent No. 975,471 was granted; but it is claimed only in the present application.

Having thus described my invention, I 45 claim:

1. A fountain for an open-ended stencil cylinder of a stencil machine, said fountain in the form of a box, an ink-stirring plunger in said box, and a handle to move said 50 plunger to and fro, said handle arranged to be accessible at the open end of the stencil cylinder.

2. In a stenciling machine, the combination with a stencil cylinder open at one end, 55 of an ink fountain supported within said cylinder, means within the fountain for stirring the ink, and a handle arranged to be accessible at the open end of said cylinder, and connected to said stirring means.

60 3. An ink fountain adapted to be shipped as a unit, comprising a body provided with

openings, a valve closing said openings, a stirring piston, and handles for said valve and said piston adapted to lie close to said body.

4. An ink fountain adapted to be shipped 65 as a unit comprising a body provided with openings and having a hollow core adapted to fit on a stud, a valve for said openings, a stirring piston, and handles for said valve 70 and piston adapted to lie close to said body.

5. An ink fountain adapted to be shipped as a unit comprising a body, a tubular housing carrying openings from said body, a piston valve in said housing, a hollow core 75 in said body adapted to fit over a stud, a stirring piston in said body, and handles for said valve and stirring piston adapted to lie close to said body.

6. An ink fountain for a stenciling machine, said fountain in the form of a box 80 and containing an outlet valve and also having an interior ink-stirrer provided with a handle external to the fountain.

7. A fountain for an open-ended stencil 85 cylinder of a stenciling machine, said fountain in the form of a box having a hollow core to slip upon an arbor within the stencil cylinder, an ink-stirring plunger in said box, and a rod fast to said plunger eccentrically of said core and extending to the 90 exterior of the fountain and having at its extended end a finger-piece.

8. In a stenciling machine, the combination with a stencil cylinder having an open 95 end, of a central stud extending from the closed end toward the open end of said cylinder, an ink fountain having a hollow core and slipped onto said stud, means within the fountain for stirring the ink, a rod connected to said ink-stirring means and extending through the end of the ink fountain, 100 and a handle or finger-piece connected to said rod and accessible at the open end of the cylinder.

9. In a stenciling machine, the combination with a stencil cylinder having an open 105 end, of a central stud extending from the closed end toward the open end of said cylinder, an ink fountain having a hollow core 110 and slipped onto said stud, means within the fountain for stirring the ink, a rod connected to said ink-stirring means and extending through the end of the ink fountain, and a handle or finger-piece connected 115 to said rod and accessible at the open end of the cylinder; said rod eccentric to said hollow core.

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