

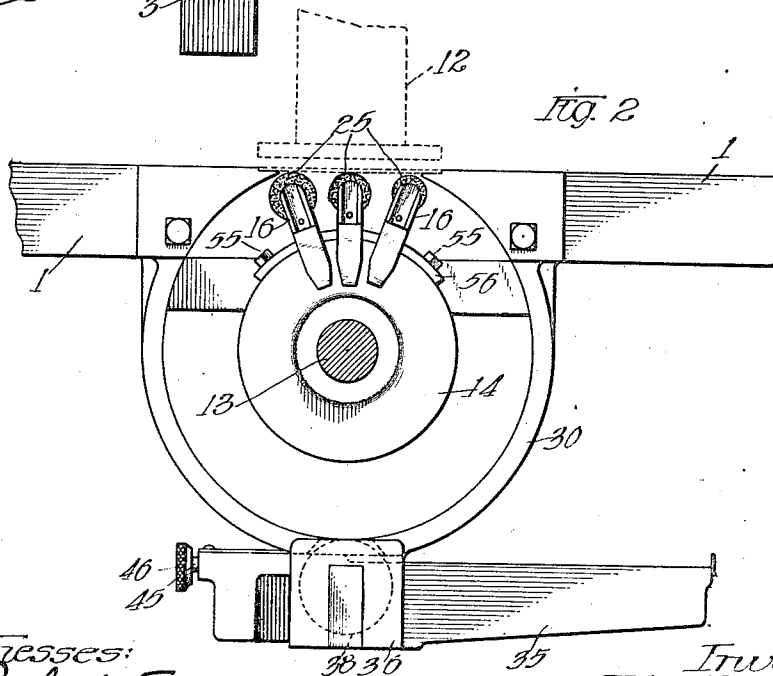
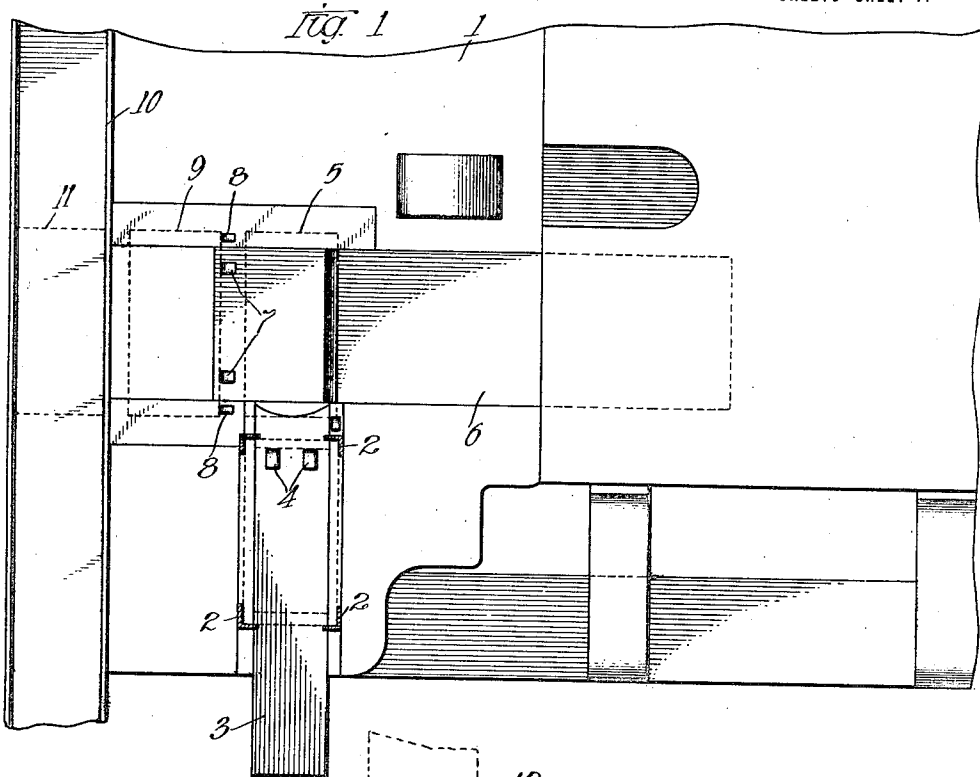
J. HUNEKE.
STENCILING APPARATUS.

APPLICATION FILED OCT. 15, 1915.

1,312,481.

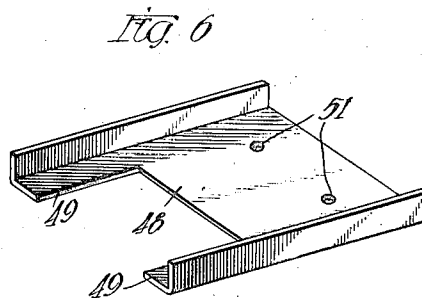
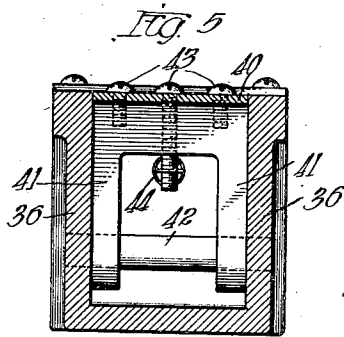
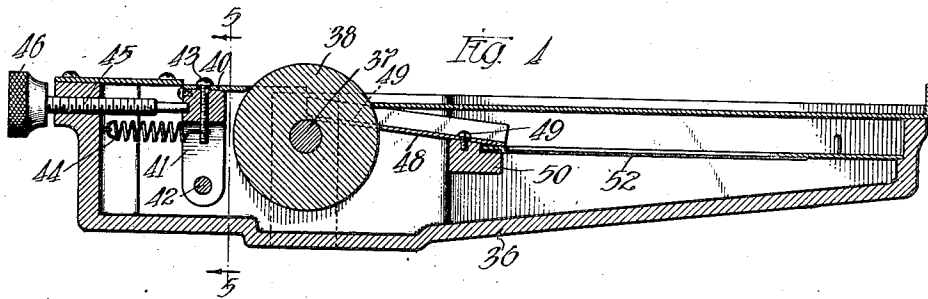
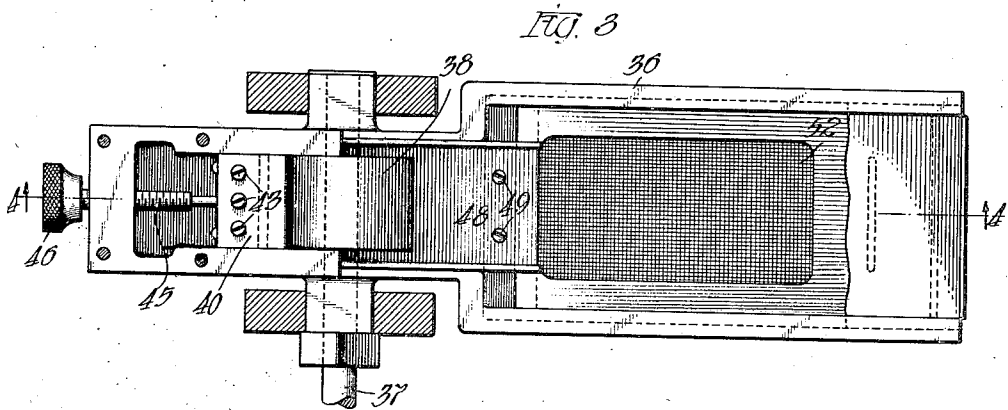
Patented Aug. 5, 1919.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 3.

Fig. 7.

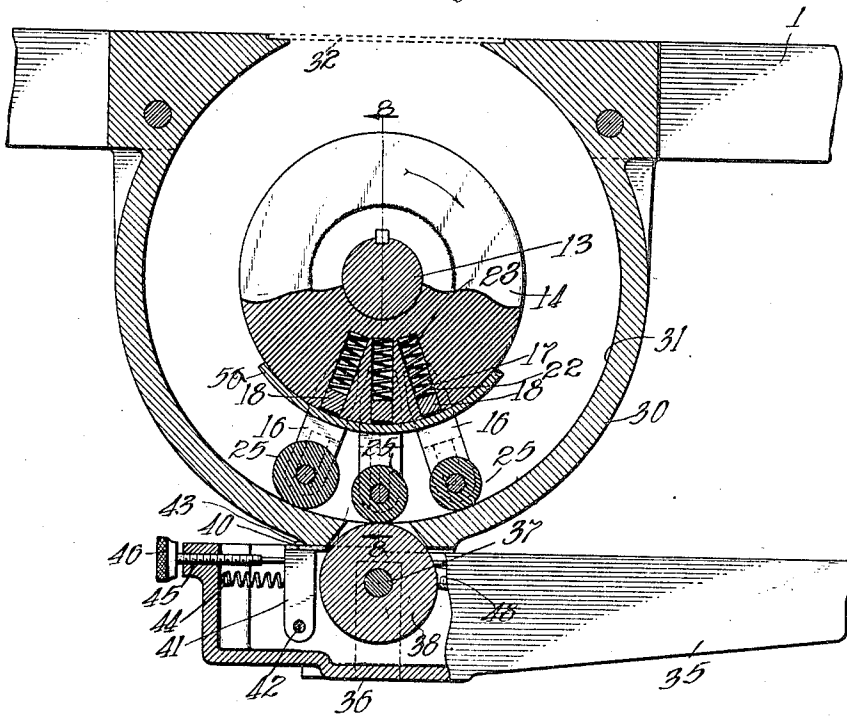


Fig. 8.

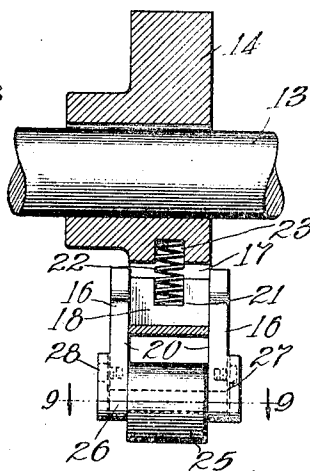
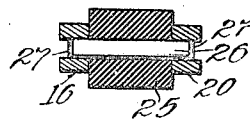


Fig. 9.



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UNITED STATES PATENT OFFICE.

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STENCILING APPARATUS.

1,312,481.

Specification of Letters Patent.

Patented Aug. 5, 1919.

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To all whom it may concern:

Be it known that I, JOHN HUNEKE, a citizen of the United States, residing at Melrose Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stenciling Apparatus, of which the following is a specification.

This invention relates to apparatus for stenciling addresses and other matter and consists substantially in the combination and arrangement hereinafter described, illustrated in the accompanying drawings and more particularly set forth in the appended claims.

In the drawings, Figure 1 is a fragmentary plan, partly in section, of a portion of an addressing machine to which this invention is applied; Fig. 2 is a fragmentary side elevation of the ink applying mechanism included in this invention; Fig. 3 is a plan view of the ink container and supply device; Fig. 4 is a section on line 4—4 of Fig. 3; Fig. 5 is a section on line 5—5 of Fig. 4; Fig. 6 is a perspective of the ink remover used in this invention; Fig. 7 is a view similar to Fig. 2 with parts sectioned to show the details of construction; Fig. 8 is a section on line 8—8 of Fig. 7, and Fig. 9 is a section on line 9—9 of Fig. 8.

Referring to the drawings, the numeral 1 represents a support or table top carrying the various appliances which constitute the present invention. Fig. 1 shows in a diagrammatic way the mechanism for supplying the perforated stencils which are used in connection with this invention for printing addresses or other matter for which the device may be used. As shown in this figure the angle-irons 2 form the corners of a magazine for holding a stack of the perforated stencils which feed down by gravity on top of a reciprocating slide 3. This slide is provided with spring catches 4 which bear against the perforated stencil as the slide moves forwardly beneath the magazine and pushes the stencils one at a time into the position shown in dotted lines at 5 (Fig. 1). While the stencils are in this position the printing takes place in the manner which will be described. After a copy is made from the stencil it is moved from the position shown at 5 by means of the slide 6 and spring catches 7. Spring detents 8 prevent any tendency of the stencils to be drawn backwardly during the return movement of the slide 6. From the position shown at 9 (Fig. 1) the stencil is moved into the slide-way 10, as indicated by the broken lines at 11. Further description of the mechanism for supplying the stencils is thought to be unnecessary as this supplying mechanism forms no part of the present invention except as it enters into the combination as a means for supplying stencils. Any other device for accomplishing the same purpose may be used in the place of that shown and described above. The material to be stenciled is held in position on top of the perforated stencils when located at 5 (Fig. 1) by the head shown in broken lines at 12 (Fig. 2).

Mounted beneath the table top 1 is a rotary shaft 13 and secured to said shaft for rotation therewith is a disk or collar 14 which carries a plurality of spring-pressed slides or holders 16 (Figs. 2, 7 and 8). As shown more clearly in Figs. 7 and 8, the disk 14 has a number of openings or slots 17 extending radially inwardly from the periphery of the disk, and the slides 16 each have a cross-bar 18 mounted in the slots 17 and free to move radially therein. The cross-bars 18 are integral with the side members 20 of the slides 16 and are cut out at 21 to receive a spiral spring 22 which is supported at its other end in an opening 23 in the collar 14. As will be apparent, the spring 22 normally presses the cross-bar 18 outwardly to hold the slide 16 resiliently in its outermost position away from the shaft 13. Carried at the outer ends of the side members 20 is a roller 25 formed of soft rubber or similar material and mounted to rotate on a pin 26. The pin 26 is carried in the outer ends of the side members 20 and is held in place by strips of metal 27 secured to the side members 20 by means of screws 28. It should be noted that the rollers 25 carried by the slides 16 are of three different sizes, there being a large, an intermediate and a small roller. The reason for making these rollers of different sizes will be explained later.

Surrounding the parts just described, and secured to the table top 1 is an ink plate 30, circular in formation and concentric with the shaft 13. This plate 30 is provided with an ink distributing surface 31 upon which the rollers 25 travel during the rotation of

the shaft 13. At the portion of the plate 30 where it coincides with the upper portion of the table 1 an open space 32 is provided over which the stencils are held during the printing operation. Secured to the bottom portion of the ink plate 31 and depending therefrom is an ink fountain or supply vessel 35, shown more clearly in Figs. 3 to 6 inclusive. This vessel includes a hollow container 36 for holding the supply of ink, and mounted on a shaft 37 is a roller 38 adapted to extend partially within and partially above said container so that as it rotates the lower portion of the roller will pass through the ink in the container and carry a portion of the ink adhering to its surface upwardly into position to be transferred to the rollers 25, as shown in Fig. 7. The roller 38 is positively driven by power mechanism connected with the shaft 37 during the operation of the device in order to furnish a continuous supply of ink to the rollers 25. To prevent an excess of ink being carried upwardly a scraping blade 40 is mounted on a pivoted bracket 41 carried by a pivot 42. The blade 40 is adjustably secured to the bracket 41 by screws 43, passing loosely through holes in the blade 40, as shown in Fig. 4, and a spiral spring 44 normally tends to hold the blade away from the roller 38. A screw 45 provided with a thumb-nut 46 bears against the bracket 41 and operates against the tension of the spring 44 to press the blade 40 forwardly toward the roller 38. The slight adjustment permitted by the screws 43 allows the blade 40 to be properly aligned with the surface of the roller 38 and the distance of the blade from the roller can be very accurately regulated by the screw 45. On the opposite side of the roller 38 from the blade 40 is a second scraping blade 48. This blade is secured by means of screws 49 to a cross-bar 50 extending across the casing 36. The scraping blade 48 is shown in detail in Fig. 6 and is provided with openings 51 for the screws 49. These openings are made large enough to permit slight adjustment of the blade 48 to bring it into close contact with the roller 38. The blade 48 has extensions 49 extending toward the shaft 37 so that the blade entirely surrounds one side of the roller 38 and completely removes practically all of the ink adhering to the roller. The blade 48 is inclined away from the roller and the ink that is removed by it gradually flows down the inclined surface of the blade onto a gauze strainer 52 by means of which all of the ink removed from the roller 38 as well as new ink supplies to the fountain, is strained to remove all paper-dust and other impurities which may be contained in the ink. It will be observed that the chamber which contains the ink supplied to the roller 38, is completely inclosed and that all the ink

supplied to this chamber must pass through the strainer 52. In this way the ink is kept clean and in condition to produce the best results when applied to the stencil.

Secured to the periphery of the collar 14 by means of leg screws 55, is a guard plate 56 which extends over the openings 17 in the collar 14 and prevents the cross-bars 18 from leaving these openings as they would do under the influence of the springs 22 if it should happen at any time that there were no stencil in place when the rollers 25 are opposite the opening 32 at the upper portion of the ink plate 30.

From the above description, it is thought that the operation of the device will be apparent. The stencils are periodically moved into the position shown at 5 in Fig. 1. The articles, such as wrapped magazines for example, are fed by mechanism not shown to a position directly above the stencil and are held in this position by the head 12. The rotation of the shaft 13 is so timed as to bring the rollers 25 into position to travel once over the stencil while the article to be marked is held thereon. During the rotation of the shaft 13 the rollers 25 are repeatedly moved over the roller 38 and at each of these movements each of the rollers 25 takes up a certain amount of ink from the roller 38 and carries it forwardly with it as it travels along the surface 31 of the ink plate 30. At each revolution of each roller 25 the portion of the roller which has contacted with the inking roller 38 will be brought into contact with the surface 31 and deposit some of its ink upon this surface. It will be seen that if a single roller were used the ink would thus be deposited in ridges or strips along the surface 31 of the plate. As the shaft 13 continues to rotate, the tendency would be finally to distribute ink over the entire surface of the plate 30, but with a single roller it has been found to be practically impossible to get an even distribution of the ink upon the inking plate, the tendency, of course, being to form a series of ridges upon this surface, which tendency it is practically impossible to overcome by repeated movement of the single roller over this surface. A single roller at best would have a cycle of positions which it would occupy during repeated passages over this surface and this cycle of positions would form a series of ridges of ink upon the surface which makes it impossible to secure uniformity of results in the stenciling operation. To overcome this difficulty, the present invention provides a series of rollers of different sizes and since each of these rollers will travel for each revolution about its own axis a different distance on the surface 31 from that traveled by the others in once revolving on their axes, the ridges deposited by one roller will be obliterated by another

and in this way a uniform distribution of the ink upon the surface is obtained. With this uniform distribution of ink the rollers will carry a similarly uniform amount into contact with the stencil during each passage of the rollers across the stencil and the ink will thus be forced through the openings in the stencils into contact with the article to be marked and a uniform marking will thus be obtained.

I claim:

1. In a device of the character described, an ink supply reservoir, a roller mounted to extend partially into said reservoir, means for rotating said roller to carry ink out of said reservoir, a scraper arranged at an angle to the surface of said roller and having its edge presented to said surface, and positioned to cooperate with a portion of said roller emerging from said reservoir for removing excess of ink from said roller, and a second scraper similarly arranged and positioned to cooperate with a portion of said roller returning to said reservoir to remove the remaining ink from said roller.

2. In a stenciling device, a source of ink supply, an ink applying device, means for transferring ink from said supply to said applying device, and means for removing the remaining ink from said ink transferring means after said ink has passed said ink applying device and for straining said ink before returning it to said supply.

3. In a stenciling apparatus, an ink supply reservoir, an ink applying device, means for transferring ink from said reservoir to said applying device, means for removing ink from said transferring means, and means for straining the ink so removed to remove impurities collected thereby and returning it to said reservoir.

4. In a stenciling device, an inclosed res-

ervoir for supplying ink to be used by said device, means for transferring ink from said reservoir for use by said device, and means for straining all ink supplied to said reservoir to exclude impurities from said reservoir.

5. In a stenciling apparatus, an ink supply reservoir, ink applying mechanism, a roller for transferring ink from said reservoir to said applying mechanism, means for removing unused ink from said roller, and means for straining the ink so removed to remove impurities gathered from said applying mechanism.

6. In a stenciling apparatus, an ink supply reservoir, ink applying mechanism, a roller for transferring ink from said reservoir to said ink applying mechanism, a scraper for removing unused ink from said roller, and a gauze screen for straining the ink so removed before it is returned to said reservoir to remove impurities gathered from said applying mechanism.

7. In a stenciling apparatus, an ink supply reservoir, ink applying mechanism, a roller for transferring ink from said reservoir to said ink applying mechanism, an adjustable scraper for removing excess of ink from said roller before it reaches said ink applying mechanism, a second scraper for removing unused ink from said roller after it has passed said ink applying mechanism, and means for filtering the ink so removed and for returning it to said reservoir.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 13th day of October A. D. 1915.

JOHN HUNEKE.

Witnesses:

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GERTRUDE M. BARNES.