

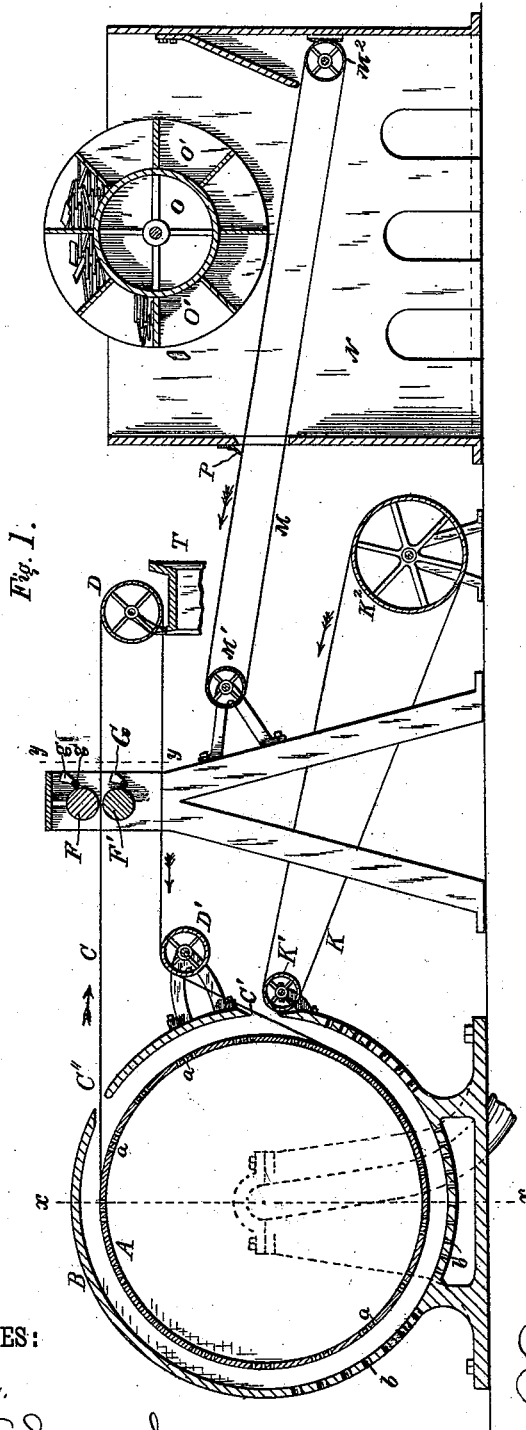
(No Model.)

2 Sheets—Sheet 1.

J. S. FIELDING.  
APPARATUS FOR HANDLING LETTERS AND CANCELING STAMPS  
THEREON.

No. 423,472.

Patented Mar. 18, 1890.



WITNESSES:

*H. G. Phillips.*  
*Edw. E. Church*

INVENTOR

*John S. Fielding*

BY *Charles A. Church*

*his* ATTORNEYS.

(No Model.)

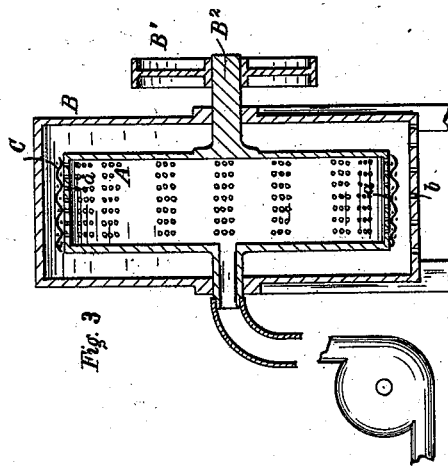
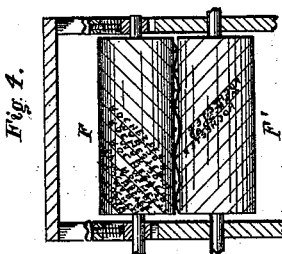
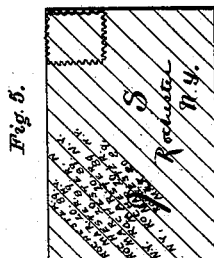
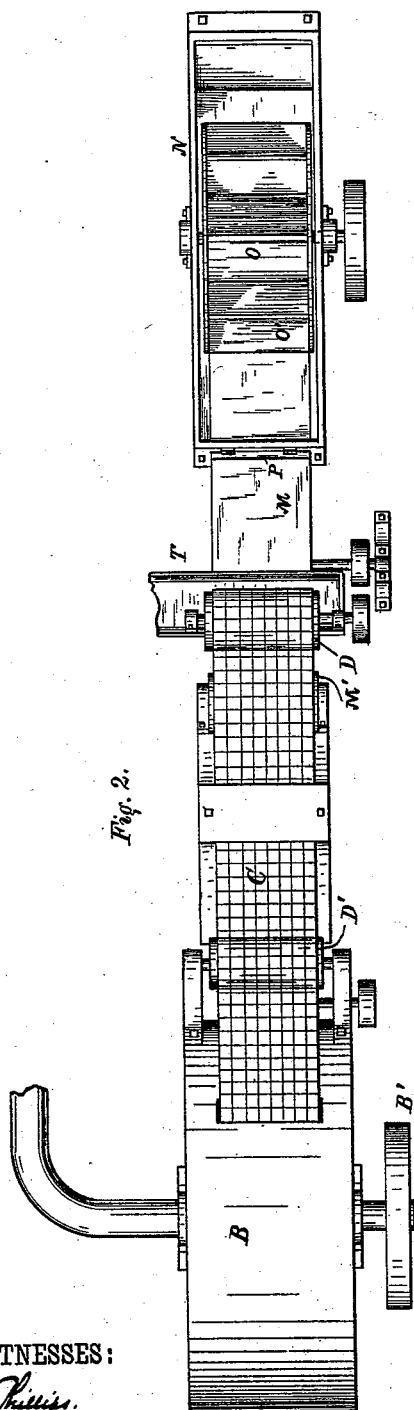
2 Sheets—Sheet 2.

J. S. FIELDING.

APPARATUS FOR HANDLING LETTERS AND CANCELING STAMPS  
THEREON.

No. 423,472.

Patented Mar. 18, 1890.



**WITNESSES:**

H. G. Phillips.

Fred T. Church

INVENTOR

INVENTOR  
John S. Fielding

BY

Church & Church  
his ATTORNEYS

ATTORNEYS

# UNITED STATES PATENT OFFICE.

JOHN S. FIELDING, OF ROCHESTER, NEW YORK.

APPARATUS FOR HANDLING LETTERS AND CANCELING STAMPS THEREON.

SPECIFICATION forming part of Letters Patent No. 423,472, dated March 18, 1890.

Application filed March 23, 1889. Serial No. 304,564. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. FIELDING, of Rochester, county of Monroe, and State of New York, have invented certain new and useful Improvements in Apparatus for Handling Letters and Canceling Stamps Thereon; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to letters of reference marked thereon.

My invention has for its object to provide a machine or apparatus for handling letters or similar articles, arranging or manipulating them in such manner as to permit of their ready inspection and the cancellation of stamps or placing any peculiar brand or mark upon them, and, while particularly adapted for use in post-offices for canceling the postage-stamps and marking the letters with the post-office mark and the date, said apparatus could readily be used for other purposes.

To these ends the invention consists in certain novel constructions and combinations of parts, all as will be hereinafter described, and the novel features pointed out in the claims at the end of the specification.

In the drawings, Figure 1 is a longitudinal sectional view of an apparatus constructed in accordance with my invention; Fig. 2, a top plan view; Fig. 3, a sectional view on the line *x x* of Fig. 1; Fig. 4, a sectional view on the line *y y* of Fig. 1; Fig. 5, a view of a letter marked by the apparatus.

Similar letters of reference in the several figures denote similar parts.

As the invention relates principally to the devices for arranging the letters in proper position for being operated upon and the devices for marking them and canceling the stamps thereon, if desired, I will first describe this part of the machine, and then refer to the auxiliary devices employed in the present arrangement for bringing them into engagement with it.

The letter A indicates a hollow drum or cylinder mounted in bearings in a casing B and arranged to be rotated by a driving-belt passing around a pulley B' on one of its journals B<sup>2</sup>, the other journal being connected by a suitable trunk or conduit with an exhaust fan or pump operating to draw the air from

the interior of the drum. The outer surface of the containing-casing is preferably perforated, as at *b*, to permit free access of air to the interior, particularly on the bottom and sides, and the periphery of the drum A is also provided with perforations *a*, preferably arranged in groups a comparatively short distance apart, through which the air drawn in by the suction-fan passes to the interior.

C represents a belt or apron of wire-netting or similar foraminous material having large meshes or openings therein, passing around the drum to the exterior of the casing through an aperture C'', around a guide-roller D, preferably at some distance, and back again to the drum through an aperture C', a suitable guide-roller D' being provided at this point for directing the belt close to the periphery of the drum. The tops of the drum and roller D are preferably on a level, so that the apron is practically horizontal between these points, forming a good support for the letters, and above and below the belt between these points locate two marking-rollers F F', preferably of rubber or some soft composition—such as ordinary inking-rollers are made of—having marks thereon and supplied with ink by means of any suitable or preferred form of inking device—such, for instance, as shown in Fig. 1, represented by the letter G, and embodying a well *g* and distributing-roller *g'*, adapted to apply a coating of ink to the surface of rollers F and F' as they are rotated. These rollers F F' are connected so as to be rotated at substantially the same surface speed as the belt C, so as to mark letters contained on the belt C on both sides without smearing, the openings in said belt being sufficiently large to permit the surface of the roller to co-operate with the letters on the upper side of the belt; or, if desired, the surface of this lower roller could be provided with recesses corresponding to the mesh of the belt, and thus permit the marking portion to project up through.

A suitable opening C is provided in the casing B just below the point where the belt returns to the drum, through which the letters are passed by any suitable delivering apparatus. In the operation of this portion of the invention the exhaust-fan is operated, drawing air in through the perforations in the drum-surface, the drum rotated, and the belt

moved in the direction of the arrow in Fig. 1. The letters or articles to be operated upon are passed in through the aperture H in the casing, and, the blast of air catching them, they are drawn toward the drum and held against the belt C interposed between.

The groups of perforations in the periphery of the drum are preferably so arranged that a single letter will cover one group, and the space between them will be too large to be bridged by one of ordinary size, thus insuring an even distribution of the letters without liability of their lapping. The letters thus held pass up the side of the drum until they reach the top, where the belt leaves the drum, when they will be lifted or stripped from it by the belt and carried out of the casing, passing along on the horizontal portion, where they may be inspected and marked, if desired, by hand; but, as stated, I prefer that they pass through between the marking-rollers F F', which will serve to mark both sides at once. Beyond the marking-rollers and at the point where the belt turns over roller D is arranged a chute T, into which the letters drop, and by which they may be deposited in receptacles and be sorted for transportation or distribution.

I prefer that the marking-rollers be constructed with a series of ribs on their surface arranged to make a series of parallel lines or dots on the letter covering its whole surface, which lines contain the characters or letters indicating the mailing-station and the date, if used in a post-office—as shown, for instance, in Figs. 4 and 5 of the drawings.

The object in having the rollers arranged in both sides of the belt and marking the letters on both sides is to insure the proper canceling and marking should they be turned over with the face resting against the belt when drawn toward the drum; but it is obvious that if care is taken in bringing them into proper relation, so as to have the faces of all of them project outward from the belt, a single roller in the top, as F, could be employed alone.

The ink applied to the marking-rollers is preferably some semi-transparent aniline color that will effectually cancel the stamps and yet will not serve to obliterate the address; or the lines may be very fine and black, which would serve the same purpose; or the marking may consist of a number of dots or points.

It will be noted that the casing extends close to the drum, particularly on the side in proximity to the feeding-opening G', and that it is perforated at this point, thus insuring the letters being drawn to and held upon the drum as soon as they are placed in said opening; or, if they should by reason of their numbers fall to the bottom of the casing, the air passing through the perforations therein would carry them up in contact with the drum-surface.

As a convenient means for feeding letters

to the arranging and canceling devices, I provide a belt or apron K, traveling in the direction indicated by the arrow, passing around rollers K' K<sup>2</sup>, the former arranged at the bottom of the aperture G' in the casing, so as to discharge the contents through said opening and close to drum A.

M represents another belt or apron passing around rollers M' M<sup>2</sup>, arranged to discharge its contents upon belt K, extending through the side wall and forming the bottom of a chamber N, and driven in the direction indicated at a speed less than that at which the belt K moves, the relative speeds being indicated by the difference in the size of rollers K<sup>2</sup> and M', which are connected by a belt passing around pulleys the same proportional sizes as the rollers. In the upper portion of chamber N is arranged a wheel or drum O, having pockets or chambers O', adapted to receive letters either from a mailing-chute or placed in it by hand, arranged to be rotated at a comparatively slow speed, so as to deposit the contents of the pockets O' upon belt M, which latter will carry them forward out of the chamber, a suitable hinged distributing board or flap P being provided for equally distributing them on the surface and preventing too many passing at once.

As stated, belt K moves at greater surface speed than belt M, so that letters dropped upon it from the latter will be separated somewhat and carried to the casing to be caught by the drum separately without liability of lapping, which object is also attained by the groups of perforations in the drum.

By employing the wheel O having the pockets the letters placed in the chamber will not be allowed to fall directly on the belt M, clogging the apparatus, but will fall in small quantities and will be spread by the distributing-board P, under which it moves.

Of course suitable confining plates or boards may be provided at the sides of the belts for preventing the lateral displacement of their contents and any desired supporting-frame for the belt-rollers provided; but these and other small details and accessories I do not deem it necessary to specify herein, as they, as well as other modifications, will occur to any skilled mechanic.

As stated, the whole apparatus can be employed in post-offices to cancel stamps upon and mark letters mailed, and it is preferred for this purpose; but the arrangement of the drum and belt could be used by itself or in connection with other devices for the purpose of handling and arranging suitable light material, as letters or circulars.

While I have described the belt as having large meshes, permitting the cancellation of the letters on both sides, it will be understood that, if desired, a woven or any suitable belt could be employed sufficiently porous to permit the passage of air and operating to strip the letters from the drum simply or to carry them off on a substantially level portion, as

shown, where they may be canceled on one side or submitted to any further operation desired.

I claim as my invention—

5 1. The combination, with the hollow drum or wheel having the perforations in its periphery and devices for exhausting the air therefrom, of a pervious belt or apron passing around said drum, substantially as described.

10 2. The combination, with the hollow drum or wheel having the perforations in its periphery and devices for exhausting the air therefrom, of a pervious belt or apron passing around said drum and extending substantially horizontal from the top thereof, substantially as described.

15 3. The combination, with the hollow drum or wheel having the perforations in its periphery and devices for exhausting the air therefrom, of a pervious belt or apron passing around said drum and extending substantially horizontal from the top thereof, and a marking device operating upon the top of the belt, substantially as described.

20 4. The combination, with the hollow drum or wheel having the perforations in its periphery and devices for exhausting the air therefrom, of a belt having large apertures therein, passing around said drum, and extending substantially horizontal from the top thereof, and marking devices—such as rollers—operating upon the top and bottom of the belt, arranged to mark both sides of letters thereon, substantially as described.

35 5. The combination, with the hollow drum or wheel having the perforations in its periphery arranged in a series of groups and devices for exhausting the air therefrom, of a pervious belt or apron passing around said drum, substantially as described.

40 6. The combination, with casing perforated near the lower portion, the hollow drum or wheel in the casing, having perforations in its periphery, and devices for exhausting the air from the interior of the drum, of a pervious belt passing around the drum and extending substantially horizontal from the top thereof, substantially as described.

50 7. The combination, with the casing perforated near the lower portion, the hollow drum

or wheel operating in the casing, having perforations in its periphery, and devices for exhausting the air from the interior of the drum, of a pervious belt passing around the drum, 55 a feeding-aperture in the casing, and a conveying-belt passing through said aperture arranged to deposit letters, &c., within the casing, substantially as described.

8. The combination, with the hollow drum 60 provided with perforations in its periphery, a device for exhausting the air therefrom, and a pervious belt passing around said drum, of a conveying-belt arranged to deliver its contents in proximity to the portion of the surface of the drum around which the belt passes, 65 and a relatively slower moving conveying-belt arranged to deliver upon the last-mentioned one, substantially as described.

9. The combination, with the hollow drum 70 provided with perforations in its periphery, a device for exhausting the air therefrom, and a pervious belt passing around said drum, of a conveying-belt arranged to deliver its contents in proximity to the portion of the surface of the drum around which the belt passes, 75 a relatively slower moving conveying-belt arranged to deliver upon the last-mentioned one, and a rotating wheel having pockets in its periphery arranged above said slowly-moving belt, substantially as described. 80

10. In a letter canceling and marking machine, the combination, with a supporting belt or apron having large openings therein, of two canceling or marking rollers arranged 85 above and below said belt operating upon both sides the letters contained thereon, substantially as described.

11. In a letter canceling and marking machine, the combination, with a supporting 90 belt or apron having large openings therein, of two canceling or marking rollers arranged above and below said belt, the one below being soft enough to mark through the openings in the belt, said rollers operating to mark 95 both sides of the letters on the belt, substantially as described.

JOHN S. FIELDING.

Witnesses:

FRED F. CHURCH,  
Z. L. DAVIS.