

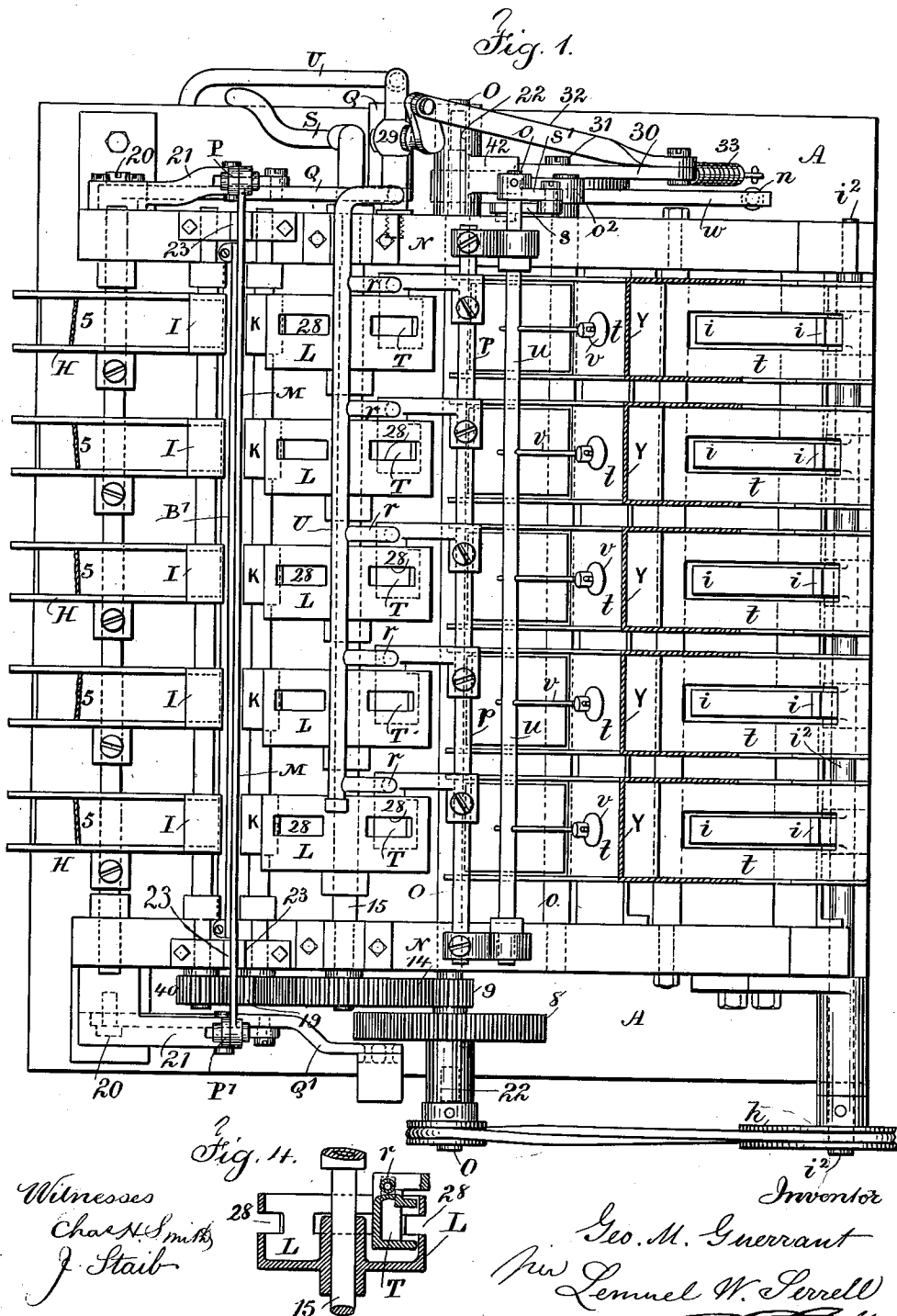
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3 Sheets—Sheet 1.

G. M. GUERRANT.  
MACHINE FOR APPLYING STAMPS.

No. 555,644.

Patented Mar. 3, 1896.



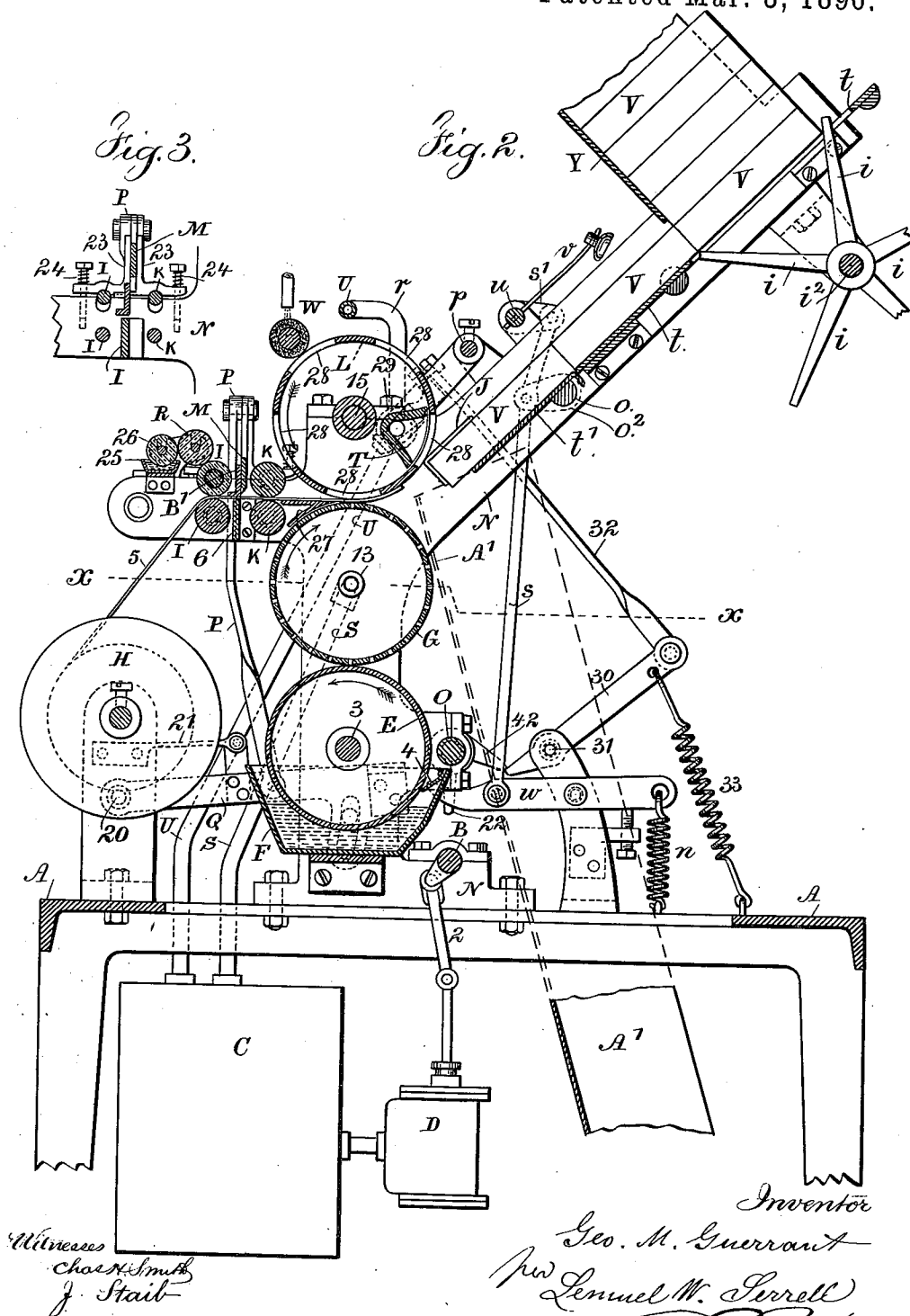
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Inventor

Geo. M. Guerrant

per Lemuel W. Perrell  
Att'y.

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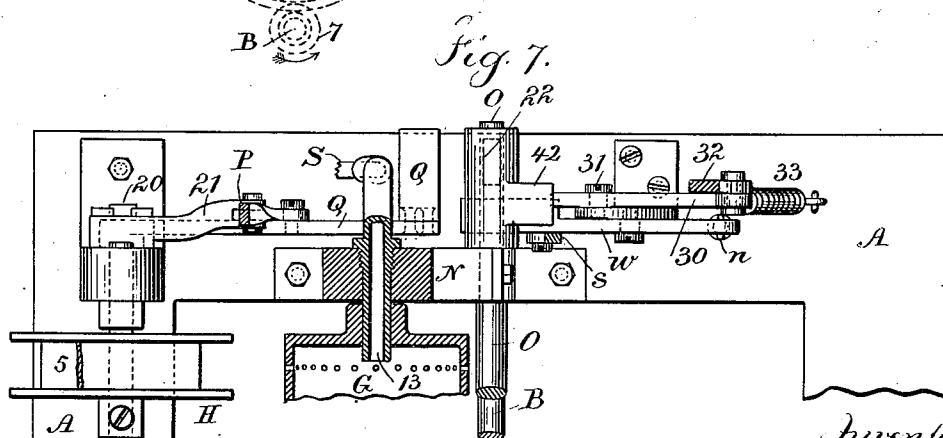
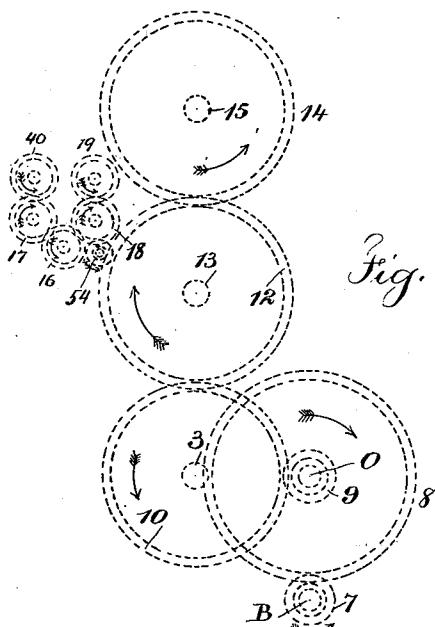
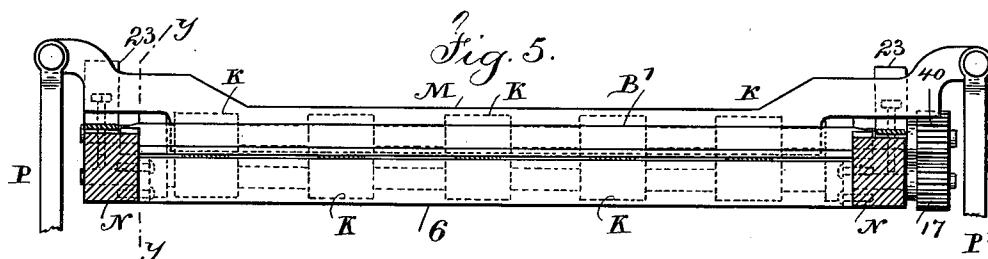
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# UNITED STATES PATENT OFFICE.

GEORGE M. GUERRANT, OF DANVILLE, VIRGINIA.

## MACHINE FOR APPLYING STAMPS.

SPECIFICATION forming part of Letters Patent No. 555,644, dated March 3, 1896.

Application filed January 29, 1894. Renewed December 24, 1895. Serial No. 573,200. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. GUERRANT, a citizen of the United States, residing at Danville, in the county of Pittsylvania and State of Virginia, have invented an Improvement in Machines for Applying Revenue or other Stamps, of which the following is a specification.

The object of this invention is to apply adhesive material to the back of a stamp and to cause such stamp to adhere to the surface of a cigarette-box, package of cigarettes, bags, packages, and this machine may be used for putting labels or stamps on bottles, boxes, or packages.

In carrying out this invention the stamps are supplied preferably from a printed ribbon or strip fed in by rollers and cut off between one stamp and the next and brought into contact with a roller to the surface of which paste or other adhesive material is applied, and the stamp is forced away from this roller by currents of air passing through perforations in the roller and the stamp is directed against a second roller and carried by it to the box or package upon which it is to be applied, and then it is projected against such box or package by the action of air under pressure, thus avoiding the handling of the stamp, and such stamp can be directed upon the angle or edge of the box so as to lap upon the same to prevent the box being opened without mutilating the stamp, and this apparatus is adapted to use with a single ribbon or strip of stamps or with numerous ribbons or strips at suitable distances apart, so as to be adapted to simultaneous application upon several boxes or packages.

In the drawings, Figure 1 is a general plan view of the apparatus, some of the parts being in section. Fig. 2 is a vertical section illustrating the improvement. Fig. 3 is a transverse section of the cutting device at the line *y y*, Fig. 5. Fig. 4 is a horizontal section of one of the rolls from which the stamp is discharged by the action of the air. Fig. 5 is an elevation of the cutting-knife with the frame in section. Fig. 6 is a diagrammatic illustration of the gears that may be employed to connect the respective parts. Fig. 7 is a plan

view at one end of the machine near the line *x x*, Fig. 2.

Upon reference to Fig. 1 it will be observed that the machine can be adapted to a number of strips of paper forming the stamp, but as the parts are simply duplicated in the respective ranges it will only be necessary to describe the construction and operation of one range of devices.

The table A is supported in any suitable manner, and I have illustrated a driving-shaft B as adapted to give motion to the respective parts, and this may be actuated by any suitable power, and the reservoir C may be charged with atmospheric air under considerable pressure by any desired mechanism. I have illustrated a connection 2 to a crank upon the shaft B to move the piston of the air-pump D.

The paste-roller E is of any suitable material, and is upon the shaft 3 and revolves in the trough F holding paste, mucilage, or any suitable adhesive material, and it is advantageous to employ a scraper 4 to remove surplus adhesive material from the surface of the roller E, so that such roller E may only transfer to the perforated roller G the proper quantity of adhesive material for the under surface of the strip of paper upon which the stamps are printed. This strip of paper 5 is upon a roller H, and is drawn off advantageously by the pairs of rolls I and K, which draw the strip of paper along and pass the same through between the perforated roller G and the shell-roller L, and the cutter M for separating one stamp from the next is advantageously applied between the pair of rolls I and the pair of rolls K, and the bed-shear 6 is suitably supported for the cutter M to act against.

I have represented end frames N for supporting the shafts or axes of the respective rolls, and by reference to Fig. 6 it will be observed that a train of gearing can be employed for rotating the respective rolls—that is to say, upon the driving-shaft B a pinion 7 may be provided to the wheel 8 upon the cam-shaft O, that has also a pinion 9 to the gear-wheel 10 upon the shaft 3 of the paste-roll E, and this gear to the wheel 12 upon the shaft

13 of the perforated roll G and the gear 14 engages the wheel 12 and is upon the shaft 15 of the shell L, and the gears 16, 17, 18, 19, 40 and 54 are adapted to driving the feed-rolls I and K in the proper direction.

In order to actuate the cutter or knife M any suitable mechanism may be employed, but as the movement of the same is advantageously rapid when cutting the stamp the cutter should remain stationary while the stamp is fed along by the rolls, and convenient devices for actuating the cutter are represented in Figs. 1 and 2, in which the links P P' from the ends of the cutter pass down to the levers Q Q' that are pivoted at 20 and acted upon by springs 21 to hold the levers and cutter in the normal position, and upon the shaft O are cams 22 that act upon the projecting ends of the levers Q Q' at the proper time to raise the levers and cutter against the action of the springs 21, and as soon as the cams 22 separate from the ends of the levers Q Q' the springs 21 bring the cutter down suddenly and separate the stamp, and by the recoil of the springs to their normal position the cutter is raised sufficiently for the stamped strip of paper to be fed along by the rolls I and K.

It is advantageous to provide guides 23 for the ends of the cutter M, and these guides 23 can be upon the frame of the machine or upon a yielding bearing (shown in Fig. 3) with springs 24 to press upon the yielding bearing and apply to the axes of the upper rolls in the pairs of feed-rolls I and K the necessary pressure to act upon the stamped strip. The cross-bar B' prevents the paper being lifted by the upward movement of the knife.

Where desired to cancel the stamps in the action of applying the same, the upper roll in the pair of feed-rolls I may be made with a rubber surface having the proper canceling design, and this roll may be inked by the roll R, which receives ink from the trough 25 and intermediate roll 26.

The inking device is not shown in Fig. 1 to allow the other parts to be clearly seen.

It will be apparent that the paste-roll E applies to the surface of the perforated roll G the adhesive material and that this roll G is below the stamped strip and is adapted to apply the adhesive material to the back surface of the stamped strip; but such strip would adhere to the roll G and be carried around the same if otherwise unacted upon. I therefore provide a pipe S to supply air under pressure from a suitable reservoir C through one shaft or journal 13 of the perforated roll G, so that such air may issue in jets through the perforations of such roll G and thereby force away from the surface of such roll G the stamped strip after the adhesive material has been applied to the same, and it is advantageous to place a shield 27 between the lower feed-roll, K, and the upper surface of the perforated roll G to prevent the currents of air that pass through the perforations in the roll G blow-

ing against the stamped strip before it reaches such roll G.

The currents of air direct the pasted and stamped strip against the lower surface of the shell roll L. This roll L is in the form of a shell or open at one end in order to receive within the same the stationary air-deflector T, and there are in this roll L openings at 28, which openings are of a suitable size and at the proper places, and air is supplied to the deflector T by a pipe U having in it a cock 29 that is opened at the required intervals by any suitable means—such, for instance, as a lever 30 pivoted at 31 and acted upon by the cam 42, the connecting-rod 32 extending to the arm of the cock 29 and the spring 33 acting to move the arm of the cock in the opposite direction.

It is now to be understood that the box or other article V is to be presented in such a manner that after the stamp has been carried around against the surface of the shell-roll L by the action of the jets of air passing out from the perforated roll G the stamp J can be blown upon the box or other article V by the sudden opening of the cock 29, causing the air under pressure to pass into the stationary deflector T and through one of the openings 28 in the roll L, and this sudden blast of air throws the stamp from the roll L and presses the same upon the proper part of the box or other article to be stamped, and, if desired, a wiper W in the form of a roll or pad may be employed, the same being suitably moistened to wipe from the surface of the shell roll L any adhesive material and thereby prevent the stamp from adhering at its edges to such roll.

I remark that where there are a number of groups of stamp-applying devices, as illustrated in Fig. 1, it is advantageous to support the stationary air-deflector T by the cross-bar p and to pass the air-pipe U across above the rolls L and to connect the branch pipe r from the air-pipe U to the respective stationary deflectors T within the respective shell rolls L, the stationary deflectors being provided with arms that extend out to the cross-bar p and are firmly clamped thereto by suitable devices, such as set-screws.

The boxes or articles to be stamped may be supplied to this machine in any suitable manner. I have, however, represented such boxes or packages V as received into hoppers Y and resting at the lower end of the pile of boxes or packages upon the inclined tables t, down which such boxes, packages or articles are allowed to slide, and a cross-shaft u may be provided with spring-fingers v to rest upon one of the boxes or packages upon the table t and prevent the bottom box or package in the pile from sliding down until such spring-finger is raised, and such spring-finger may be raised periodically by the action of the cam 42 upon a lever w having a connecting-rod s to a crank-arm s' upon the end of the cross-shaft u.

It is advisable to make the table in two

parts, the portion *t'* being supported by a cross-shaft *o* with a crank *o'* upon the outer end thereof receiving its motion from the connecting-rod *s*, so that when the parts *t* and *t'* of the table are in line with each other the box or article can slide down and the lower end of the box or article will come in contact with the stamp, as the same is around the shell *L* immediately before the air is admitted to blow the stamp upon the box and cause it to adhere thereto, and then the action of the cam *42* upon the lever *w* causes the section *t'* of the table to tip downwardly and discharge the box upon which the stamp has been placed, and the upper end of the table momentarily prevents the next box or article upon the table sliding down, and the spring-finger *v* also holds the box at this moment, and after the stamped box has fallen off the section *t'* such table is restored to its position by the action of the spring *n* upon the lever *w* and simultaneously the spring-finger *v* is lifted and the box allowed to slide down upon the table-section *t'* and receive upon it a stamp, as before described.

In order to insure the passing out of the bottom box or article from the pile of boxes standing in the hopper or supply-chute, it is advantageous to make use of revolving arms *i* upon a shaft *i'* with a pulley *h* driven by a belt from the shaft *O*, such arms *i* passing through a slot in the bed or table *t*, and the ends of the arms act in succession against the boxes or articles to move the bottom one along the table and out from beneath the pile of boxes or articles, so that the same is in position to slide down the table *t'* into position for receiving the stamp.

The belt employed for driving the pulley *h* and the arms should be crossed and only sufficiently tight to give motion to the arms and the box or article when the preceding box has slipped down upon the table, the belt slipping upon the pulley when the arms remain stationary.

It is to be understood that any desired number of sets of devices such as before described can be made use of in one machine. I have represented in Fig. 1 five of such sets of devices, but the number may be extended, or only one or more sets of devices may be made use of.

The chute *A'* may be provided, as shown in Fig. 2 partially by dotted lines, to prevent the stamped articles striking the paste-roller or the trough when falling down from the table *t'* as the latter is tipped.

The devices for applying the stamp or label to the box, bottle, or package may be employed regardless of the particular devices for supplying paste or other adhesive material to one surface of the stamp or label, and I remark that the size and shape of the hopper *Y* will depend upon the size and shape of the box, bottle, or package and of the direction in which the stamp or label is to be applied, whether endwise, sidewise, or flatwise, upon

such package, and the devices for blowing the stamp upon the package effect that object whether pressure may or may not be applied afterward to the stamp by the hand or otherwise.

I claim as my invention—

1. The combination in a machine for applying revenue or other stamps to boxes or other articles, of a hollow perforated roll for applying the adhesive material to the stamp, means for forcing air into such hollow roll for the issuing jets to press the stamp off the roll against the action of the adhesive material, and mechanism for receiving the stamp and applying the same to the box or other article, substantially as set forth.

2. The combination with a roll for applying adhesive material to a stamp, of means for separating the stamp from the roll, a second roll against which the unpasted side of the stamp is received, such roll having openings in the same, and means for directing a blast of air through one of the openings in the roll to force the stamp away from the surface thereof and upon the box or other article to receive the stamp, substantially as set forth.

3. The combination in a machine for applying revenue-stamps, of rolls for holding the strips of stamped paper, two pairs of forwarding-rolls, an intermediate bed-shear, a cutter above the same, link connections from the ends of the cutter, pivoted side levers to which the links are connected, cams for raising the levers and cutter and springs for bringing the cutter down to cut the paper and then for raising the cutter and holding the cutter separate from the bed-shear substantially as specified.

4. The combination in a machine for applying revenue and other stamps, of a trough for holding paste or other adhesive material, a roll therein for transferring such adhesive material, a hollow perforated cylinder upon the surface of which the adhesive material is applied, feeding mechanism for supplying the stamp, a roll for pressing the stamp against the perforated roller, means for supplying air under pressure into the perforated roller to separate the stamp from the adhesive material upon the perforated roller, a stationary deflector, air-supply pipe and cock for projecting the stamp with the adhesive side thereof against the box or other article upon which the stamp is to be applied, substantially as set forth.

5. The combination in a machine for applying revenue and other stamps, of a trough for holding paste or other adhesive material, a roll therein for transferring such adhesive material, a hollow perforated cylinder upon the surface of which the adhesive material is applied, feeding mechanism for supplying the stamp, a roll for pressing the stamp against the perforated roller, means for supplying air under pressure into the perforated roller to separate the stamp from the adhesive material upon the perforated roller, a station-

ary deflector, air-supply pipe and cock for projecting the stamp with the adhesive side thereof against the box or other article upon which the stamp is to be applied, and an inclined table down which the boxes or other articles are supplied successively, substantially as set forth.

6. The combination in a machine for applying revenue and other stamps, of a roller for applying adhesive material to one side of the stamp, means for directing the stamp to the box or other article to which it is to be applied, an inclined table for supporting such box or article, having a movable section,

mechanism for tipping such section and discharging the box or article after the stamp has been applied, a shaft and projecting arms passing through a slot in the table and acting to forward the boxes or other articles progressively along the table, substantially as set forth.

Signed by me this 23d day of December, 1893.

G. M. GUERRANT.

Witnesses:

W. J. DAUCE,

PETER D. GUERRANT.