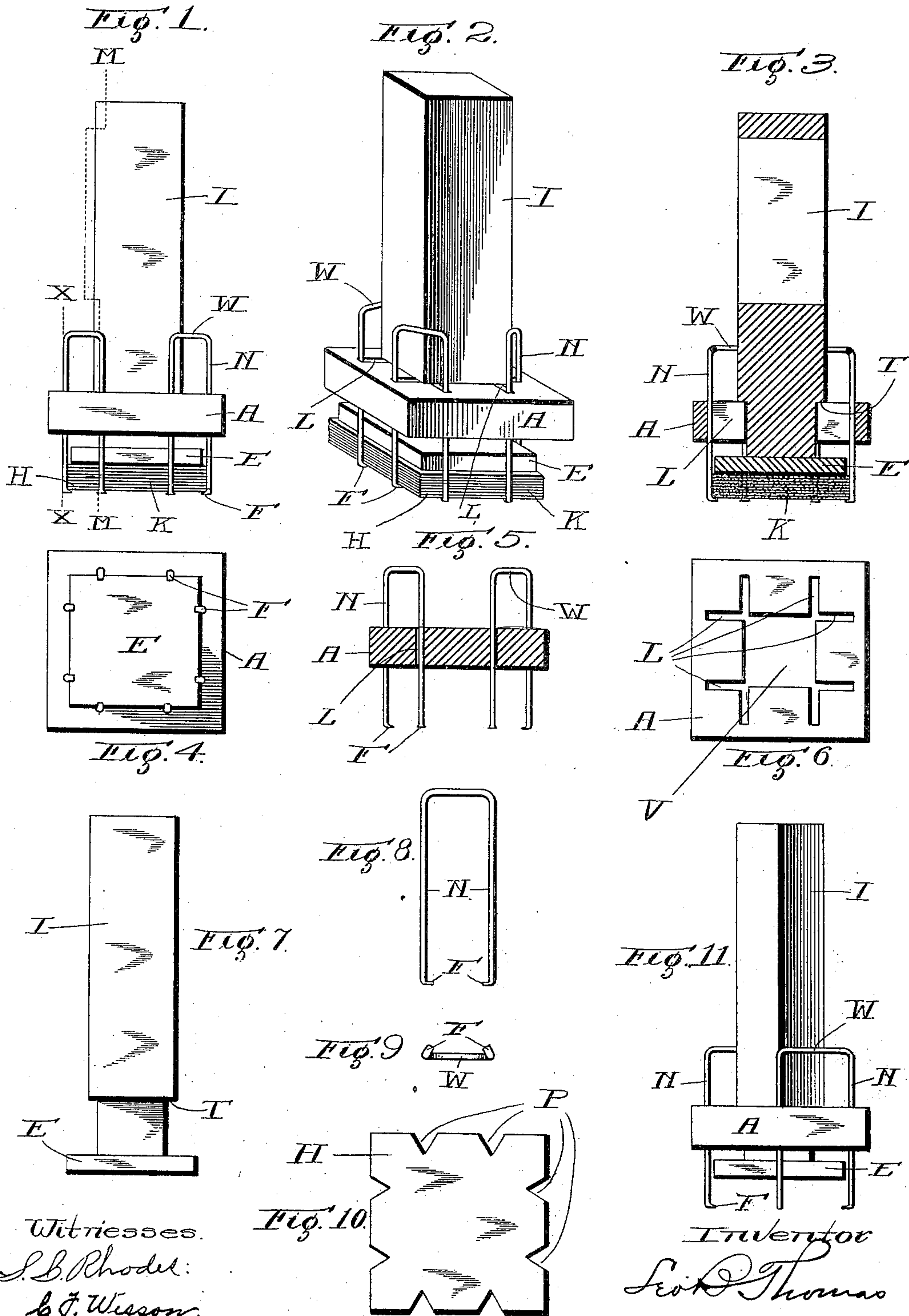


No. 688,801.

Patented Dec. 10, 1901.

L. B. THOMAS.
STAMP AFFIXING DEVICE.
(Application filed May 13, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

LEO BOONE THOMAS, OF WORCESTER, MASSACHUSETTS.

STAMP-AFFIXING DEVICE.

SPECIFICATION forming part of Letters Patent No. 688,801, dated December 10, 1901.

Application filed May 13, 1901. Serial No. 60,083. (No model.)

To all whom it may concern:

Be it known that I, LEO BOONE THOMAS, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Stamp-Affixing Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to devices for storing and affixing adhesive stamps and among such devices to that general type which comprises an upright magazine adapted to receive a stack of stamps and a plunger or stamp-pusher vertically movable therein.

The object of the invention is to produce a device of improved construction, which device shall possess superior advantages with respect to simplicity, economy, and convenience in use, and is, more specifically stated, to produce a device of the above general type which shall do away with coiled springs and all complicated or expensive parts and which shall, while providing the necessary storage for the stamps used, also provide means for preventing their mutual adhesion, a device which in its action shall relieve the stack of stamps of pressure before the receptacle containing said stamps is withdrawn from the surface to which the stamp is being affixed, but which shall retain the plunger or stamp-pusher in such proximity at all times to the stamps as to prevent said stamps from falling out of place should the device assume other than the upright position. Of the two last-named advantages the former, I believe, is gained in the device covered in Letters Patent No. 635,203, but the latter is not. The latter seems to be gained in the device covered by Letters Patent No. 637,393, but the former is not. My invention combines both these advantages, together with others, including a marked improvement in simplicity of parts.

The invention comprises in its structure a stamp-receptacle for containing the stamps, a vertically-moving plunger therein, and wafers prepared with non-adhesive surface to be inserted between the stamps in stack, and consists in certain peculiarities of construction and combination of parts hereinafter

particularly set forth with reference to the accompanying drawings and subsequently claimed.

In the accompanying drawings, Figure 1 is an elevation of an adhesive-stamp-affixing device constructed in accordance with my invention, the end and side elevation being identical in appearance when the device is equal as to length and breadth, as is the case with the example represented in the drawings; Fig. 2, a perspective view of the device; Fig. 3, a sectional view of such device, the view being indicated by the lines M M in Fig. 1; Fig. 4, a detail bottom view of the device; Fig. 5, a sectional view of the stamp-magazine element of said device, the view being indicated by the line X X in Fig. 1; Fig. 6, a detail bottom or top (the two being identical in appearance) view of the cross-head; Fig. 7, a view of the plunger-rod with the plunger attached. Fig. 8 is a detail view of one of the bars which serve to inclose the stamp-magazine chamber, being a view of the same in normal or vertical position. Fig. 9 is a view of the same, being a bottom view, the bar lying horizontally or at a right angle with said normal position. Fig. 10 is a detail view of one of the non-adhesive wafers. Fig. 11 is an elevation of the device as constructed in a simplified form, the stack K being omitted in Figs. 5 and 11.

Similar letters refer to similar parts throughout the several views.

In the said drawings the reference-letter A designates a cross-head of a form similar to that of the stamps used, but of a size somewhat larger than said stamps and formed with an opening V central of and extending through said cross-head from top to bottom. Said cross-head is furthermore formed with deep vertical grooves L, the sides of said grooves extending inward in a horizontal direction from points adjacent the outside edges of said cross-head, the two sides in the case of each groove extending in a direction at a right angle with that of the outside edge adjacent to which that particular groove lies, said grooves opening into the opening V and extending through the cross-head vertically. The grooves L are adapted to serve as guides

for the upright arms N, hereinafter described, the cross-head being of such a height as to allow such adaptability.

The reference-letter I designates a vertically-moving plunger-rod formed with a swelling or abrupt enlargement near the lower end of said rod, which enlargement supplies a horizontally-extending abutment T, adapted to engage with and bear downward upon the cross-head A, through which cross-head the lower end of said plunger-rod loosely passes by way of the opening V, which opening V the lower or smaller portion of the plunger-rod loosely fits. The distance between the abutment T and the lower end of the plunger-rod is sufficient to allow the end of said rod to protrude beyond the under surface of the cross-head a distance somewhat less than the width of the stamps used. This is for a purpose hereinafter set forth.

The reference-letter W designates the bars of springy material bent to the form of an inverted U, the perpendicular arms N of which extend downward through the grooves L and serve as walls or guides to inclose the space wherein the stamps are to remain stored. The upright arms N are formed to flare outward slightly from an exact right angle with the horizontal portion of said bars, and thereby to act by pressing stiffly against the outermost part of the grooves L to bind with the cross-head A and so to compel said cross-head to remain in a position stationary relative to the said bars. The two upright arms N of each bar are located in the two grooves which, adjacent to each other, extend at an angle with each other, the horizontal portion of the bar in each case being of a length equal to the horizontal distance between the outermost part of each of the two such grooves. The U-shaped bars W, in conjunction with the cross-head A, which serves to retain the same in effective position, constitute a stamp-magazine and are shown, therefore, with their lower extremities F bent upward to a horizontal position and inward, so as to lie in vertical planes extending at an angle of (45) forty-five degrees with a vertical plane which may be considered as extending through the centers of the upright arms N. Said extremities F, thus adapted to serve as supports for the stack K of stamps and wafers placed in said receptacle in opposition to a plunger E, hereinafter more particularly described, hold said stack K in proper position.

The reference-letter K designates a stack or pile of stamps and wafers, said stamps and wafers being arranged in an alternating series—first a stamp, then a wafer, one above another, the gummed side of the stamps being turned downward, the stack being located as stated above.

To the lower end of the plunger-rod I is made fast a plunger E, located above the stack K and below the cross-head A and within the upright bars N and being of a form

similar to that of the stamps used, but of a size somewhat smaller, so as to allow the free vertical movement of said plunger within the magazine.

The reference-letter H designates the paper-wafers prepared with non-adhesive surface and formed with indentures in the edges at points lying above the supports F when the wafers are in their working position, said indentures P being large enough to allow the free passage of every wafer by the supports F when the stamp next below said wafer is released. With the exception of the indentures P the wafers H are of the exact size and shape of the stamps used.

Fig. 11 in the drawings represents a simpler form of the whole device wherein the number of the bent U-shaped bars W is reduced to two, the four arms N thereof extending vertically in grooves situated adjacent and central of the sides of the cross-head and the ends thereof, which simplified form I believe to be covered by the improvements discovered by me and herein described.

The operation is as follows: The upright bars N are thrust downward through the cross-head as far as possible, and the device is then inverted, a stack of stamps and non-adhesive wafers (an equal number of each and arranged in an alternating series one above the other) is placed within the bars N and allowed to rest upon the plunger E, the gummed sides of the stamps being in this position turned upward. The bars N are now pressed downward till the supports F rest against the stack K of stamps and wafers. The device is then grasped by the plunger-rod I, is brought to the normal position by inversion, and is pressed with the lower end against the tongue of the operator or against other moist surface to moisten the gummed surface of the lower stamp in the series and is then pressed firmly against the surface of the article to which the stamp is to be affixed. Pressure upon the plunger-rod I now bears upon the cross-head A by means of the abutment T, and thereby by way of friction upon the bars W, with the result of retaining said bars in close contact at their extremities with the surface of the article being stamped and so preventing the tendency of the entire stack K to slip past the supports F. Furthermore, the plunger E is acted upon by the pressure on the rod I, and being pushed downward upon the stack K causes the lowest stamp in the stack to be pressed with its wet gummed surface upon and affixed to the surface of the article to be stamped. The pressure on the lowest stamp will be seen to be severer on those portions beneath which the inwardly-extending supports F do not lie, for the wafers being cut away as to their portions that lie above the said supports, indentures being formed in the edges of the wafers H at those points. Said wafers afford no firm medium for the transmission of the pressure at those points, so that the wafers H, with their

indentures P, are seen to act advantageously aside from their office of preventing the adhesion of the stamps to one another. The device is then raised by the plunger-rod I. The distance between the abutment T and the plunger E being greater than the thickness of the cross-head A, the plunger-rod is allowed to move freely upward, carrying with it the plunger E until said plunger engages with the cross-head A. The plunger E being thus allowed to move some distance from the stack K before engaging with the cross-head A relieves the stack K from all pressure save that of the stack's own weight before the plunger engaging with the cross-head A begins to lift the bars W from the article being stamped. The stamps being thus relieved of pressure the lowest stamp of the series is prepared to leave the supports F with the least possible friction therewith. The plunger in an upward course then engaging with the cross-head thereby lifts the bars W, and so the whole device is raised from the article being stamped, leaving the lowest stamp affixed thereto, said stamp being drawn from the supports F by adherence to said article. The non-adhesive wafer H next above the said lowest stamp is allowed by the indentures P at its edges to pass the supports F and to remain upon the stamp affixed, thus leaving the gummed surface of the next stamp in the series exposed and the device ready for a repetition of the operation. At all times the cross-head A is acted upon by the flaring arms N, with the result that said cross-head tends to remain in a stationary position relative to said arms and at a constant distance from the upper surface of the stack of stamps equal to the excess of the distance between the abutment T and the plunger E over the thickness or height of the cross-head A. This excess on a condition hereinbefore stated cannot be greater than the width of the stamps used, so that the plunger is enabled to act in preventing the stamps and wafers from falling out of the proper position. The wafers H lying under and immediately against the gummed surface of every stamp, except the lowest one, act to prevent the contact of any two stamps of the series with each other and so serve to prevent the mutual adhesion of said stamps.

While I have shown and described a preferred construction and arrangement of parts constituting a stamp affixing and storing device, the details of the machine may be considerably varied without departure from the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an adhesive-stamp-affixing device the

combination with the upright bars formed as arms of U-shaped bars and provided with inwardly-extending supports at their lower ends, a cross-head provided with deep vertical grooves opening inwardly, these upright bars being in conjunction with said cross-head to form an upright stamp-magazine, of a vertically-movable plunger-rod passing loosely through said cross-head, and a plunger loosely fitting within said upright bars and secured firmly to the lower end of said plunger-rod, all substantially as described.

2. An adhesive-stamp-affixing device comprising an upright vertically-movable plunger-rod formed with a horizontally-extending abutment near the lower end thereof, a plunger made fast to said plunger-rod at the lower end of said rod, a cross-head through which the lower end of said rod loosely passes, said cross-head being interposed between and adapted to engage with and to be acted upon by the abutment on said plunger-rod and the plunger secured to the lower end of said rod, said cross-head furthermore being formed with deep vertical grooves opening inward and adapted to serve as guides for the vertically-movable upright side bars, the bars of springy material bent to the form of an inverted U but with the arms tending to slightly flare outward from relatively parallel positions to enable them to engage frictionally with the cross-head in the vertical grooves through which said bars extend, said bars having their extreme end portions bent upward to such a position as will allow said extremities to serve as inwardly-extending supports for the stamps and wafers used in the device, and the wafers of non-adhesive paper of a shape and size similar to that of the stamps used but formed with indentures in the edges thereof at proper points to allow the free passage of said wafers by the inwardly-extending supports, the plunger and plunger-rod being in conjunction with the cross-head and thereby with the upright side bars so as to retain the several parts in effective positions, all substantially as set forth.

3. The wafers formed of non-adhesive paper of a shape and size similar to that of the stamps employed but formed with indentures in the edges thereof at proper points to allow the free passage of said wafers by the inwardly-extending supports, substantially as described for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LEO BOONE THOMAS.

Witnesses:

HOLLIS W. COBB,
HENRY G. SNYDER.