

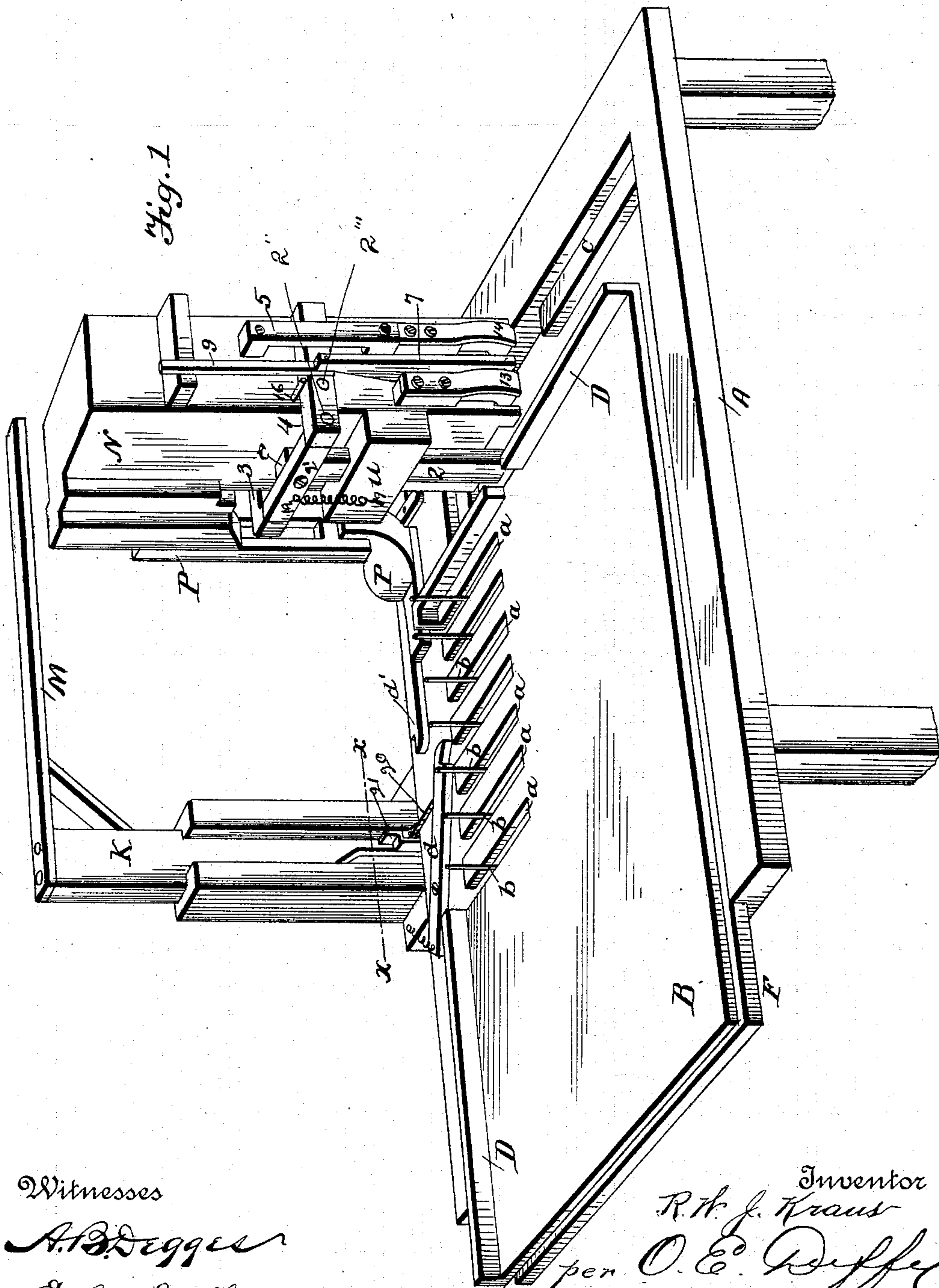
No. 615,394.

R. W. J. KRAUS.
STAMP AFFIXING MACHINE.

Patented Dec. 6, 1898.

(No Model.)

4 Sheets—Sheet 1.



Witnesses
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Inventor
R. W. J. Kraus
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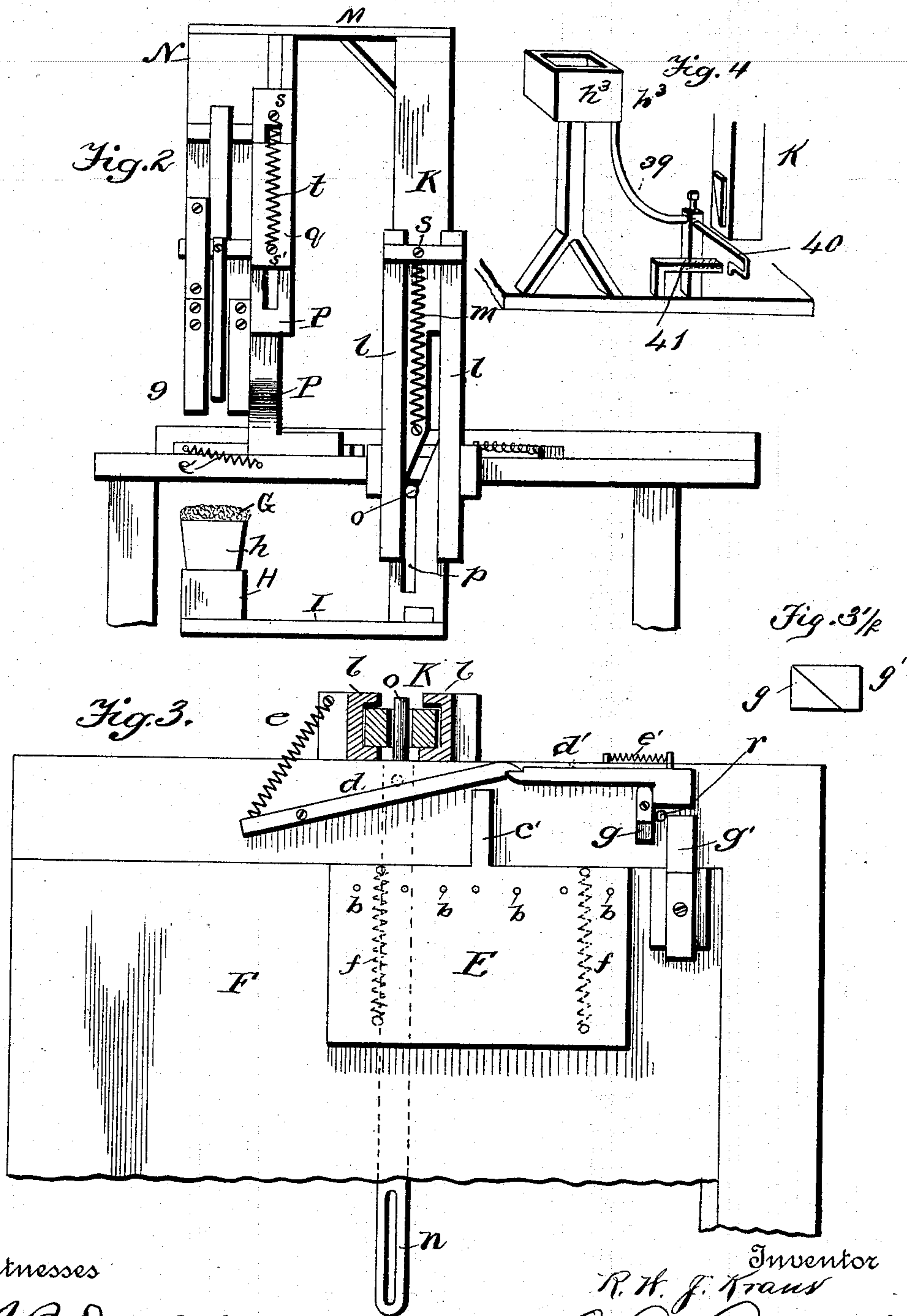
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4 Sheets—Sheet 2.



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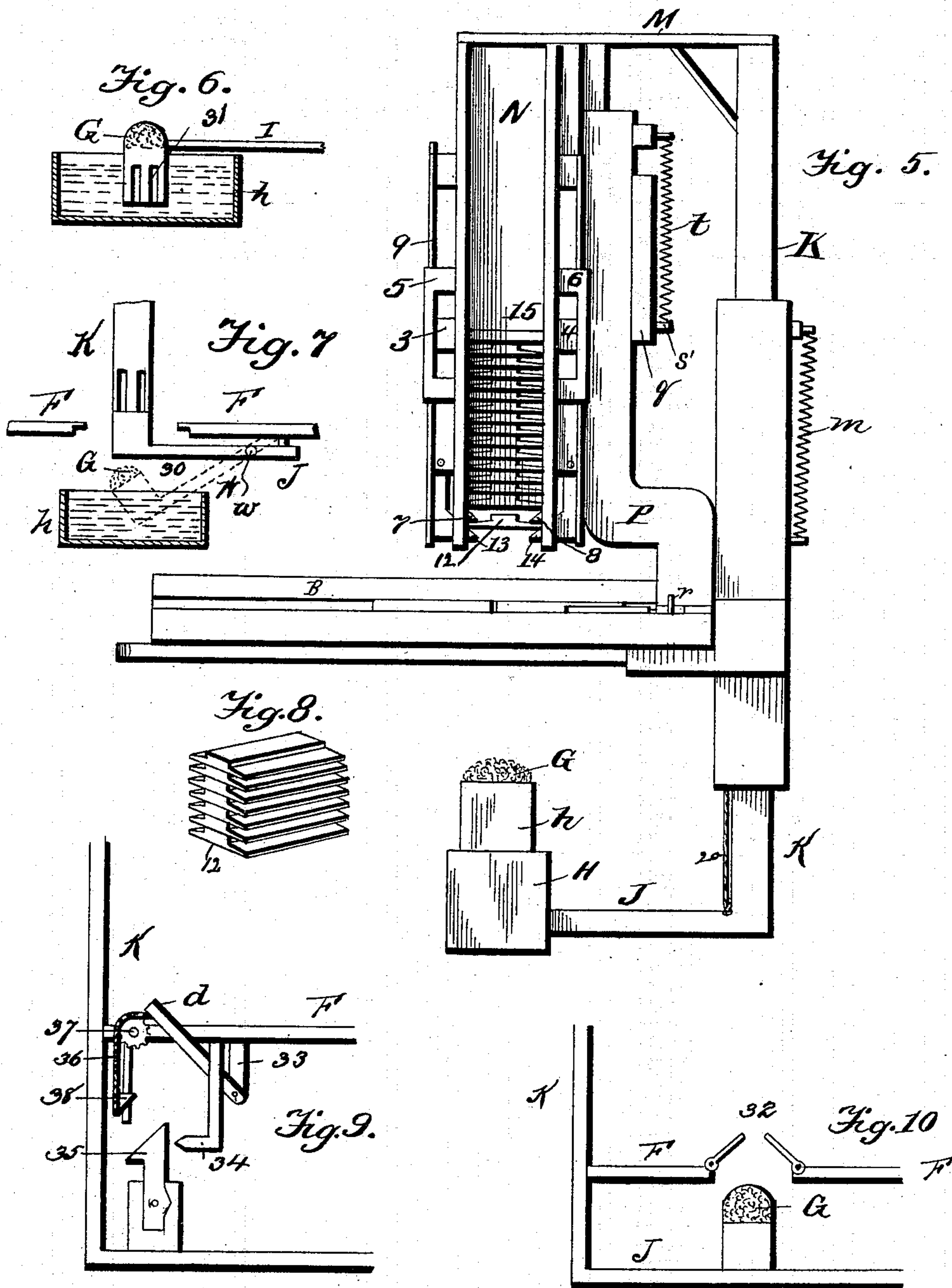
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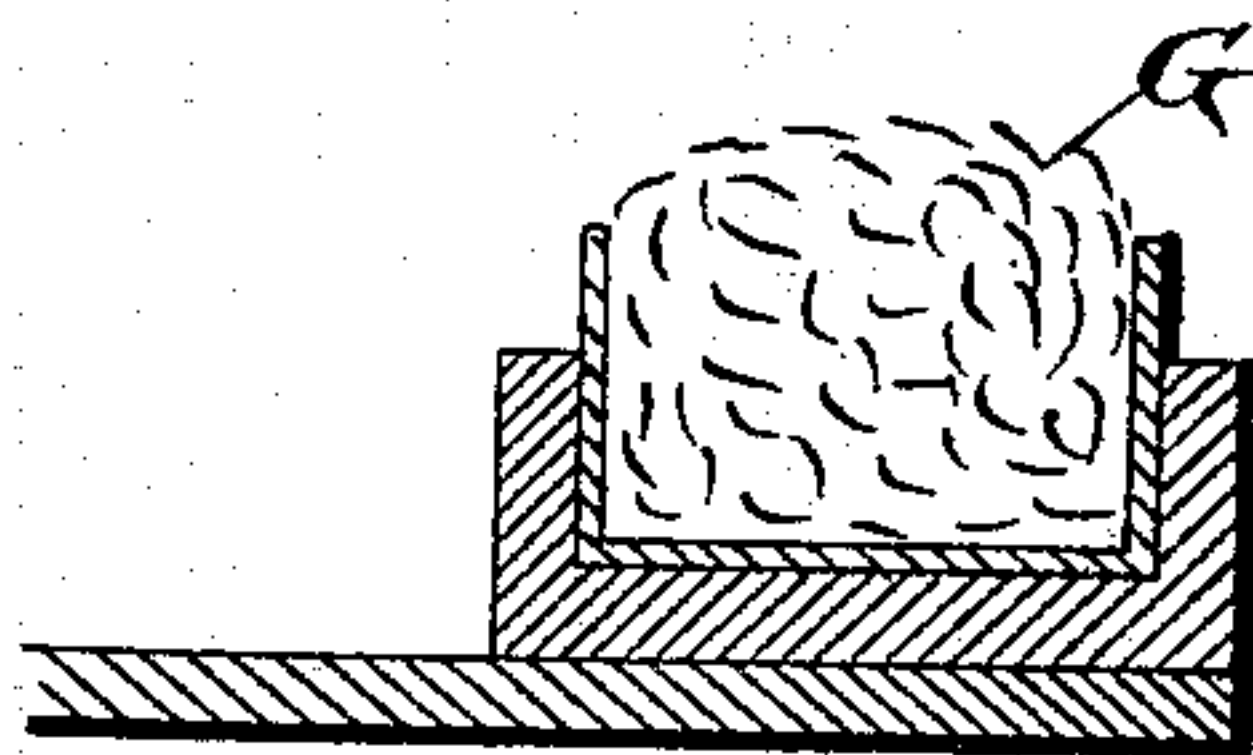
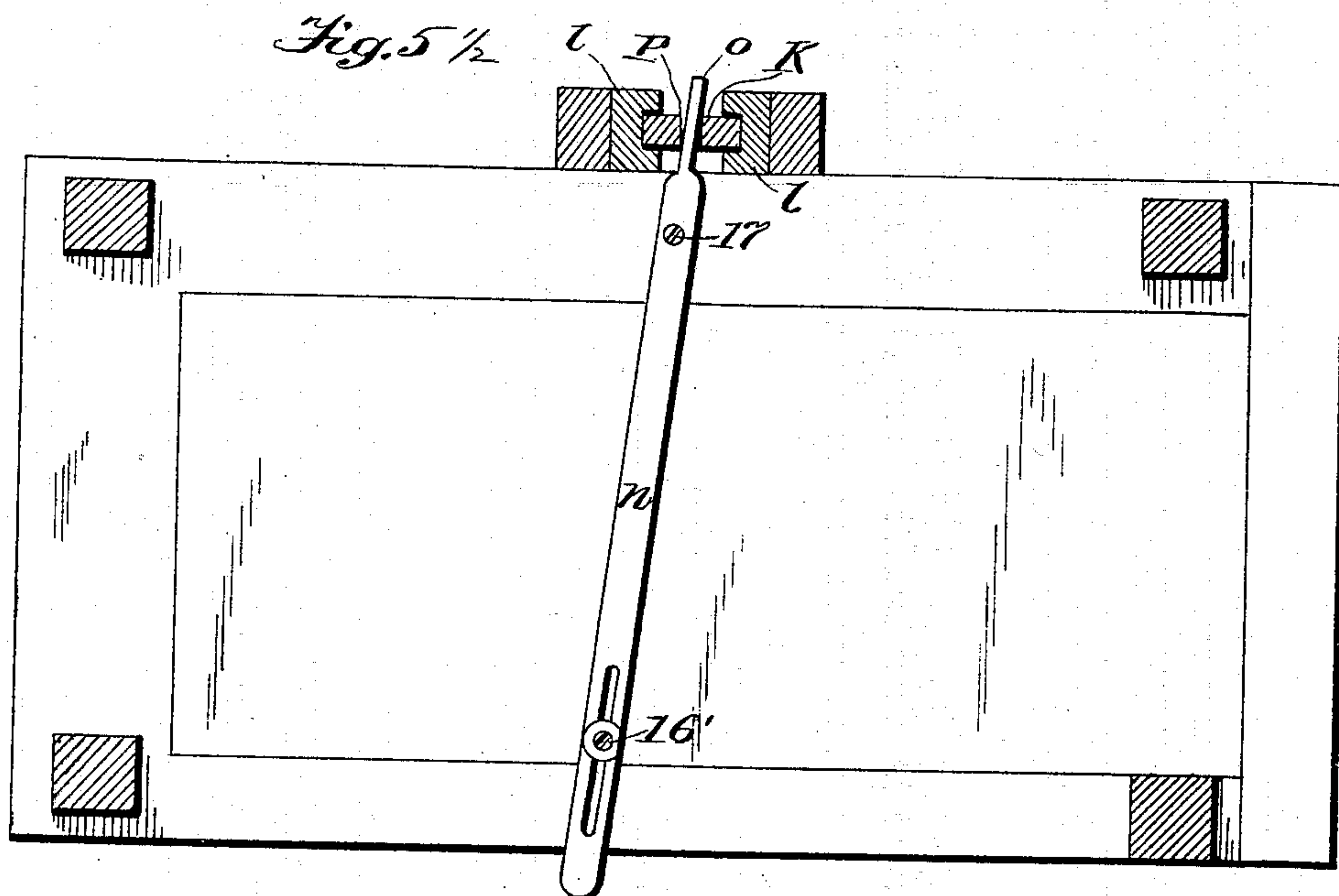


Fig. 11

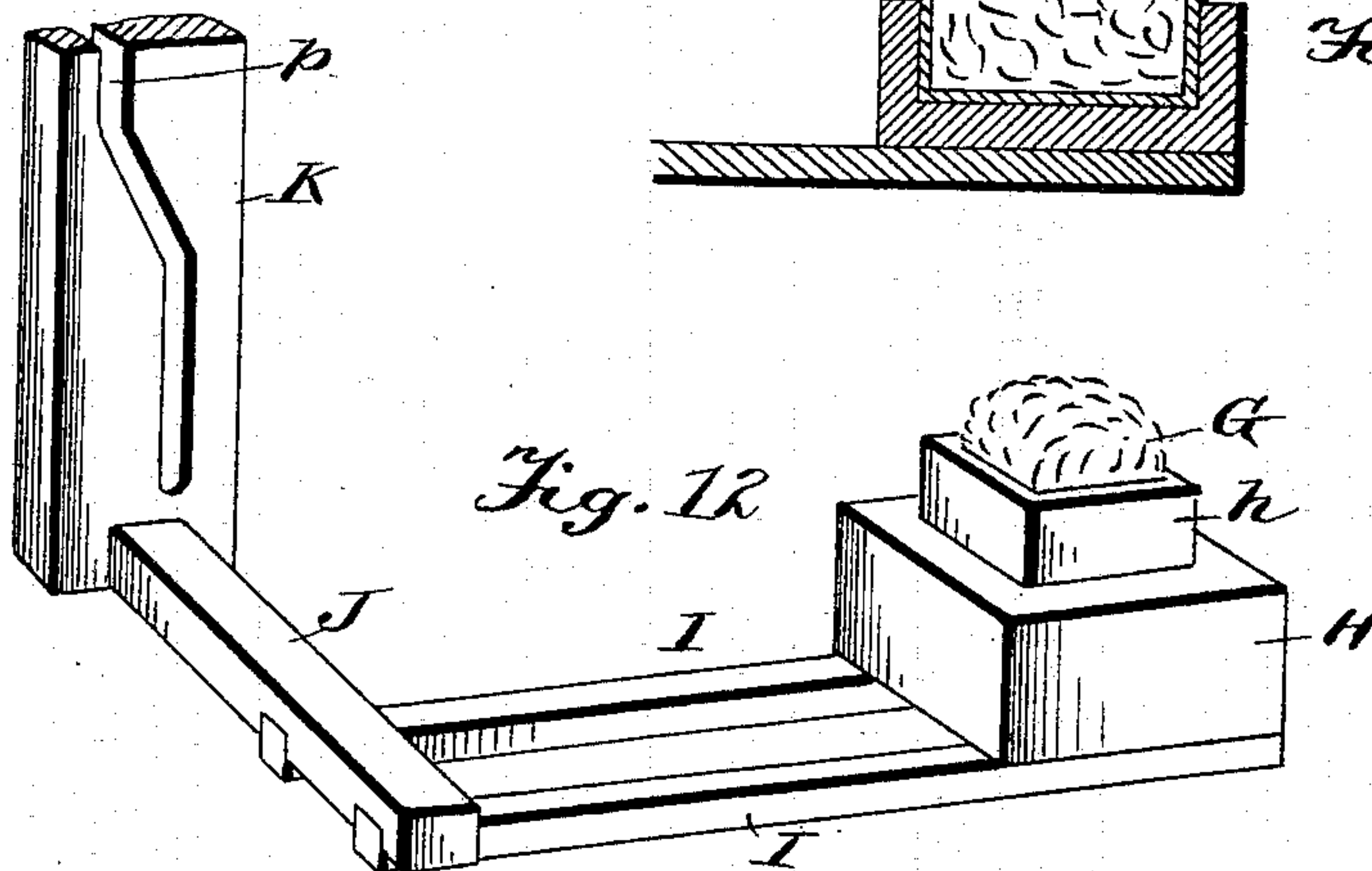


Fig. 12

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UNITED STATES PATENT OFFICE.

ROBERT W. J. KRAUS, OF NEW YORK, N. Y.

STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 615,394, dated December 6, 1898.

Application filed April 23, 1896. Serial No. 588,730. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. J. KRAUS, of New York, in the county and State of New York, have invented certain new and useful
5 Improvements in Stamp-Affixing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and
10 use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

This invention has relation to stamp-affixing machines which by the movement of certain parts of the machine moistens the stamp and affixes it to the letter. This letter is then thrown out to be replaced by another letter to receive its stamp in the same manner. The stamps are placed in a chamber in
20 bundles and are separated by certain wooden strips or holders which prevent the moistening of more than one stamp at a time. The strips are thrown out simultaneously with the
25 stamp after the letter receives its stamp.

The object of the invention is to rapidly stamp the letters and to place the stamps in their proper position upon the envelopes; and to this end the invention consists, first, in the
30 construction of the stamp-holder by and through which the stamp is properly placed on the letter; second, in means for releasing the stamp from its bundle; third, in means for holding the stamps within the bundle and
35 chamber; fourth, in means for moistening the stamp to be affixed; fifth, in tripping devices by which the letter is thrown from the table after it is stamped; sixth, in the movement of the table by which the letter is carried to have its stamp affixed; seventh, in
40 means for operating all the parts of the machine by a single movement of the hand, and, lastly, in certain details of construction and arrangements of parts, as will be more fully
45 hereinafter described.

Referring to the accompanying drawings, Figure 1 represents a perspective and complete view of my machine as far as it can be shown by a single figure. Fig. 2 shows a side
50 elevation of the machine, showing the operating movable upright or rod provided with the cam-like throwing-slot. This figure also

shows the moistener in position, the frame which carries the stamp-chamber, and its releasing mechanism. Fig. 3 shows a plan view
55 with the upper table removed and partly in section, taken on the line $x x$, Fig. 1, also the throwing-table and tripping device. Fig. 3½ is an end view of triggers g and g' , g being secured to the frame and g' to the table. 60 (See Fig. 3.) Fig. 4 is a perspective view of one form of modification of my stamp-moistener. Fig. 5 shows an end elevation of the whole machine, the stamp-chamber, the movable upright or rod, the spring lifting device, 65 the end of the table for carrying the letter, the end of the throwing-table and the end of the tripping device, and the toes or stamp-holding and pusher-releasing device, also the springs for operating the stamp-carrying 70 chamber, the thrower, and their guides. Fig. 5½ is an inverted or bottom plan view of the table F, provided with slotted bar or lever n and pin 16'. This lever is fulcrumed at pin 17, having rod o , which projects into slot P of rod K, (see Fig. 3,) and by the up-and-down movement of rod K the table F is operated by giving it a to-and-fro motion. Fig. 6 shows a vertical longitudinal section of a modified form of stamp-moistener. Fig. 7 is 80 also a modification of another form of stamp-moistener, partly in section and partly in elevation. Fig. 8 is a detail perspective view of a bunch of stamp-separators, (the stamps not being shown,) which also act as operating 85 means for the toes or throwers. Fig. 9 is a detail view showing a modified form of mechanism for operating the letter-throw-off table. Fig. 10 is a detail view showing a modified form of stamp-moistener. Fig. 11 is a detail 90 view, in vertical section, of my stamp-moistener; and Fig. 12 is a detail view in perspective, showing the stamp-moistener and upright slotted rod by which it is carried.

Like letters and numerals of reference indicate like parts in the different figures. 95

Referring to Fig. 1, A is the frame, which, as shown, is supported upon legs, but may be mounted upon any suitable platform.

B is the feeding-table and is designed to 100 move to and from the stamp-affixing chamber and affixer. This table works freely in slides and when up under the affixer rests upon ledges C. The table B on two of its

sides is provided with upwardly-projecting sides D D, by which the letters are prevented from falling off, and the bed of the table is also provided with slots *a a a a a a*, through which project pins *b b b*, which are secured to a throwing-table E. (Plainly shown in Fig. 3.) These pins are operated by the table E and serve to throw the letters from the table B instantaneously as soon as they are stamped. The device (see Fig. 3) is provided with spring tripping devices *d d'*. The tripper *d* is operated by rod K in one direction—that is, when the rod is pushed down it pulls the trip *d* back by means of a cord 20, passing over pulley 21, which cord is fastened at its other end to frame J of the moistener. The pins in turn throw the letter off the table B. Springs *f f* draw the table E back to its position after the letter has been thrown off table B and the pins *b b* to their position to throw the next letter that is stamped, and springs *e e'* hold the tripping devices *d d'* in engagement until the tripper *d'* is drawn back out of contact with the tripper *d*, which is effected by the trigger being struck back of its pivot by the trigger *g'* during the backward movement of table F. When by the backward movement of the table F the trip *d'* is released, the trip *d* will strike tongue C', throwing table E back, carrying the pins *b b* with it, and by the sudden and rapid action of the tripper *d* against the tongue a sudden motion is imparted to the table E, and pins *b b* rapidly displace the stamped letter and throw it off the table.

I will now proceed to describe the stamp-moistening device. (See Figs. 2, 5, and 6.)

G is the moistener, held by the cup *h*, which contains water. The sponge-holder and water vessel may be separated, if desired. This cup is supported by box H and this box in turn by arms I, Fig. 2, and J, Fig. 5. The arms I and J are arranged at right angles to each other, so that the spring-moistener G is brought directly beneath the stamp-carrying chamber which will be more fully hereinafter described. This moistener, carrying arms I and J, is shown on an enlarged scale in Fig. 12, and the operation of the moistener is as follows: The movable upright or rod K operates the entire device; but in this instance I will only describe it in connection with the moistener. The rod K is located at the side of the machine and works in upright guides *l l* and carries at its top a cross-bar M. This rod K is held up in a vertical position, as shown in Figs. 2 and 5, by means of spring *m*. Beneath the table F is located a lever *n*, having a rod *o*, which may be provided with friction-rollers and which projects into and works in slot *p* of the rod K. This rod, through its slot, operates the rod *o* of lever *n*, and by its cam-shaped slot produces four distinct movements of separate parts. The rod K, by its spring *m*, raises the moistener G. The cam or diagonal portion moves all the tables. When raised, it throws them backward.

When pushed down, it brings them forward; but while throwing them backward a tripping device throws the table E and the pins *b b* laterally, throwing off the stamped letter. It will be observed that table E receives its motion from the movement of table F, which carries tripping device *g'*, which imparts motion to *g*, and *g* in turn to *d'*, and *d'* to *d*, and then in turn to table E. The resiliency of the several springs of course produce the several motions of the parts when released. Thus it will be seen that the up-and-down movement of the rod K operates the entire machine. When the moistener G comes up, all the tables move backward, and the moistener is brought into contact with the back of the stamp, which is in the stamp chamber or carrier N, and moistens it ready to be placed on the letter. Triggers *g* and *g'* have oppositely-beveled edges, so that they will readily slip over each other freely. By means of the incline of the bevels the upper one, *g'*, yielding vertically, slides over the lower one. They also have square or flat sides, which catch or clutch each other when holding the table forward. The trigger *g* is pivoted to the frame and adapted to be operated by tripper *d'*, but is held in position against the tension of spring *e'* by stop-pin *r*. The trigger *g'* operates by gravity.

I will now proceed to describe the stamp-carrying chamber.

N shows the stamp-carrying chamber mounted upon upright or support P, which is slotted to carry guide Q. This guide is secured to the carrier by any suitable means. The support P is provided with pin *s*, to which the upper end of a spring *t* is attached, its lower end being attached to a similar pin *s'* and guide Q, the object of which is to elevate the carrier after it has deposited its stamp upon the letter. The tension of the spring permanently holds the carrier in an elevated position, except while it is forced down by means of rod K and cross-bar M to deposit its stamp. The cross-bar M, which is rigidly secured to the upright or rod K, extends over the top of the carrier N, and by bearing on the top of the bar M it is pushed down, the cross-bar M also forcing the stamp-carrying chamber down, which is again raised by the spring *t* through the medium of guide *q*. On the back of the carrier I also place a guide *u*, securely and rigidly fixed to said carrier, through which a bar 2 works. This bar or rod 2 carries a rock-shaft 2', which is journaled in two side bars 3 and 4 at 2'', which are pivoted to the side of carrier N at 2''' and which work in guides 5 and 6. (See Fig. 1.) These guides in turn guide the stamp-pushers 7 and 8, which, as described, are provided with springs 9, which are secured to the stamp-carrying chamber, extending downwardly and carrying at their lower ends toes or pushers, which are operated by the interposing pieces between the stamp, one on each side. These springs permit the pushers to yield outwardly when the stamp and piece 12 pass to

the toes or holders 13 and 14; but after the stamp and piece are released the throwers immediately fly back to their position ready to throw out the next adjacent stamp and piece.

5 Referring again to rod or bar 2, it will be seen that its end is pivoted to rock-shaft 2' and projects below the lower end of the stamp-carrying chamber N, resting upon the letter to be stamped, so that when the carrier is
10 brought down it forces bar 2 up and, being pivoted to rock-shaft 2', rocks said shaft, which in turn operates the pivoted levers 3 and 4, throwing their forward ends down and with them the pusher-toes 7 and 8, thus releasing
15 the stamp.

A spring 19 is secured to the rock-shaft and guide *u*, so that when the carrier rises the said spring 19 pulls back the rock-shaft and with it the rod or bar 2, again bringing it below the carrier N, and so on repeatedly for each letter stamped.

After the stamp has been placed upon the letter it must be remembered that the letter and the intermediate piece are thrown out
25 together. When another takes its place, these toes or throwers are operated by springs 9, one on each side of the carrier, and they yield sidewise by means of pressure brought against the toes, which are carried by said springs and
30 by which pusher-toes 7 and 8 are actuated by the pieces that carry the stamp to permit the stamp and its piece 12 to pass down; but the throwers 7 8 spring in between and just above the lower stamp and piece 12. Just below
35 the toes or holders 7 8 are located another pair of spring toes or holders 13 and 14 on each side of the stamp-chamber, which yields to permit the stamp and holder to pass, and at their lower ends these toes 13 and 14 hold
40 the stamp and piece 12 in position, the former to receive the moistener, the stamp, gummed side down, being the lowest, so that after the stamp is moistened and the carriers pushed down and the table pushed forward the letter receives its stamp, when it is pushed off
45 by pins *b b b*, and this movement is repeated as long as there are stamps in the carrier-chamber.

The carrier-chamber is provided to carry a
50 large number of stamps at a time.

In order to secure the fall of the stamps and the intermediate pieces, I place weight 15 on top of the same, so that the stamps will be fed as long as any remain in the carrier.

55 Stops or pins 16 control the upper movement of the side pivotal bars 3 and 4.

The front of the stamp-carrier chamber may be of glass, so that the stamp and intermediate pieces may be observed.

60 From the above description it will be seen that by the single down movement of the rod K all the parts are put in motion and replaced by the tension of the springs.

65 In Fig. 4 is shown a modified form of moistener in which I provide a water-tank *h*³, to which is attached a flexible pipe 39, leading downward therefrom and which termi-

nates in standard 39'. To this standard I also attach a rigid pipe 40, having a finger 40'. Between the ends of the pipe 39 and
70 pipe 40, within the standard 39', is an opening registering with both of said pipes 39 and 40, so that when finger 41 strikes finger 40' it opens the joint opening in 39' and permits a small amount of water to drop on the en-
75 velop at each operation, and thus moistens it to receive the stamp.

In Fig. 6 is shown a moistener in which the sponge G is mounted in a box at the end of bar I, said box having openings 31, whereby
80 when it is partially immersed in the water in tank *h* a certain amount will be absorbed at each movement. By this means the carrying of the water with the moistener is rendered unnecessary.

85 In Fig. 7 is shown a modified form of mechanism for operating this class of moisteners. In this instance the rod carrying the moistener-sponge is pivoted to cross-rod J. When rod K descends, the weight of the sponge
90 causes it to drop into the water in tank *h*. When it ascends, the upper end of lever 30 bears against the under side of table F, causing the sponge to be thrown upward to moisten the lower stamp in the carrier.

95 In Fig. 10 is shown a modification of the moistener in which upwardly-opening trap-doors 32 are provided in the table, closing downward, through which the sponge is projected in its upward movement and which
100 automatically close when the sponge passes downward, thus preventing any tendency to wet the top of the table and protecting the sponge from dust, &c.

105 In Fig. 9 is shown a modified form of tripping mechanism for operating the throw-off table. In this the tripper *d* is pivoted to a lug 33, projecting below table F, said table being actuated by a spring to throw it against the tongue *c'* of throw-off table E. (See Fig. 110 3.) When bar K moves upward, the pivoted hook 35 engages hook 38 on cord 36, passing over pulley 37 and secured to tripper *d*. When bar K moves down, projecting toe 34,
115 secured below table or frame, strikes on hook 38 and trips it, releasing the cord and permitting spring (not shown) to actuate tripper *d* against tongue *c'* of throw-off table.

120 It is evident that various slight changes might be made in the forms, constructions, and arrangements of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact constructions herein set forth, but consider myself entitled to
125 all such changes as fall within the spirit and scope of my invention.

What I claim is—

1. The combination in a stamp-affixing machine of a movable stamp-carrier, a frame
130 therefor in which said stamp-carrier is arranged to move, two series of spring-actuated toes projecting into said carrier on opposite sides and supporting a series of stamps and

separators, and a releasing-pusher on each side of the holder engaging the separators for the purpose of releasing the stamps as set forth.

2. The combination in a stamp-affixing machine of a stamp carrier and chamber, spring-toes projecting into the sides thereof, a releasing-pusher, a rock-shaft mounted on one side of the carrier, arms projecting from said rock-shaft and engaging the top of the pusher, and means for operating said rock-shaft substantially as set forth.

3. The combination in a stamp-affixing machine of a vertically-movable carrier and chamber, the releasing spring-actuated pushers projecting into the sides of the chamber, the spring-actuated toes also projecting into the sides of said chamber below the releasing-pushers, and means for operating the said pushers and toes substantially as set forth.

4. The combination in a stamp-affixing machine of a vertically-movable stamp-carrier, a releasing-pusher on the sides thereof, and springs to project the same into the sides of the chamber, a rock-shaft, arms pivoted to the outside of the chamber, in which are formed bearings for said rock-shaft, and engaging the upper ends of the pushers substantially as set forth.

5. The combination in a stamp-affixing machine of a vertically-movable chamber carrying releasing toes and pushers, the latter projecting into the sides thereof, a rock-shaft, and connecting-arms to operate the said toes and pushers, said rock-shaft being operated by contact with the table in its downward movement, substantially as set forth.

6. The combination in a stamp-affixing machine, of a vertically-moving carrier having a series of stamps and separators, spring-actuated toes projecting through the sides of the chamber to engage the separators, spring-actuated vertically-movable pushers projecting into the chamber above the toes, a rock-shaft, arms secured to the outside of the chamber forming bearings for the rock-shaft and engaging the pushers, and a vertical rod or bar secured to the rock-shaft for actuating the same, substantially as set forth.

7. The combination in a stamp-affixing machine, of a vertically-moving carrying-chamber, spring-actuated toes projecting into the sides thereof, pushers also projecting into the sides of the chamber, means for operating said pushers, a rod moving vertically in guides, the frame carrying said guides and carrier, and a horizontal rod secured to the vertically-moving rod and projecting over the carrier for operating the same, substantially as described.

8. The combination in a stamp-affixing machine of a vertically-movable stamp-carrying chamber having an open bottom, a frame on which it is mounted, a vertically-moving rod mounted on said frame, a spring for holding it normally in its upper position, a bar secured

to said vertically-movable rod and projecting over the carrying-chamber for operating the same and a moistening device carried by said rod and located in line with the open lower end of the carrying-chamber, substantially as set forth.

9. The combination, in a stamp-affixing machine of the frame, a stamp-carrier movable in vertical guides thereon, a vertically-moving rod also mounted in guides on the frame and having an inclined slot, a sliding table, a lever pivoted below said table having one of its ends in said slot for operating the same, and a moistener below the carrier carried by the vertically-moving rod and connecting said rod and movable carrier, as set forth.

10. The combination in a stamp-affixing machine, of a frame, a vertically-moving stamp-carrying chamber mounted in guides thereon and normally held in its upper position, a moistening device below the stamp-carrying chamber, a vertically-movable rod mounted in guides on the table for operating said moistener and normally held in its upper position, and a bar attached to said rod and extending over the carrying-chamber for operating the same, substantially as set forth.

11. The combination in a stamp-affixing machine, of a frame, a table mounted thereon having transverse slots, a stamp-carrier mounted in guides on the frame, a vertically-movable rod mounted in guides on the frame, a throwing-table having pins projecting through slots in the first-named table, and means substantially as set forth whereby the two tables are actuated at right angles to each other, substantially as set forth.

12. The combination in a stamp-affixing machine of a frame, a table thereon having transverse slots, a stamp-carrier vertically movable in guides on the frame, a rod vertically movable in guides on the frame, a moistener carried by said rod in line with the carrier, a throwing-table having pins working in the transverse slots in the main table, and means connecting the vertically-moving rod with the two tables whereby the main table is moved under the carrier and returned, and the throwing-table moved at right angles thereto, as set forth.

13. The combination in a stamp-affixing machine, of a main frame, a vertically-movable stamp-carrier, a main table having transverse slots, a throwing-table having pins projecting through said slots, a vertically-moving rod having an inclined slot, a lever pivoted to the frame having one end in said slot and the other connected to the table, and connections between the throwing-table and the rod whereby said throwing-table is moved at right angles to the main table, as set forth.

14. The combination in a stamp-affixing machine, of a stamp-carrier, a main table for carrying the letter to be stamped, a throwing-table having projecting pins to throw off the letters, a vertically-moving rod, a flexible con-

nection for the throw-off table, and a spring-tripping device for releasing the throw-off table, as set forth.

15 15. The combination in a stamp-affixing machine, of the frame, the main table mounted thereon, the vertically-moving rod K, the auxiliary throw-off table, the spring for actuating it in one direction, a pivoted spring-actuated tripper d , bearing against the throw-off table
10 to actuate it in an opposite direction, the sliding tripper or dog d' mounted on the frame and engaging the end of tripper d , and actuated by the main table for disengaging it therefrom, as set forth.

15 16. The combination in a stamp-affixing machine of the frame, the longitudinally-moving letter-carrying table B, the throw-off table E, having tongue c' , the pivoted spring-actuated lever or tripper d , engaging said
20 tongue, the sliding tripper d' on the frame to

engage and hold tripper d , the pivoted trigger g , carried by the frame and engaging tripper d' , and the tripper g' carried by table B, to operate trigger g and tripper d' to release tripper d , substantially as described. 25

17. In a stamp-affixer, the combination of a movable carrying-chamber adapted to contain stamps and having an open discharge end, retainers for holding the stamps therein and means operated by the movement of the
30 carrying-chamber to release one stamp at a time and press the same upon a letter or similar matter, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of
35 two witnesses.

ROBERT W. J. KRAUS.

Witnesses:

O. E. DUFFY,
E. C. DUFFY.