

No. 876,913.

PATENTED JAN. 14, 1908.

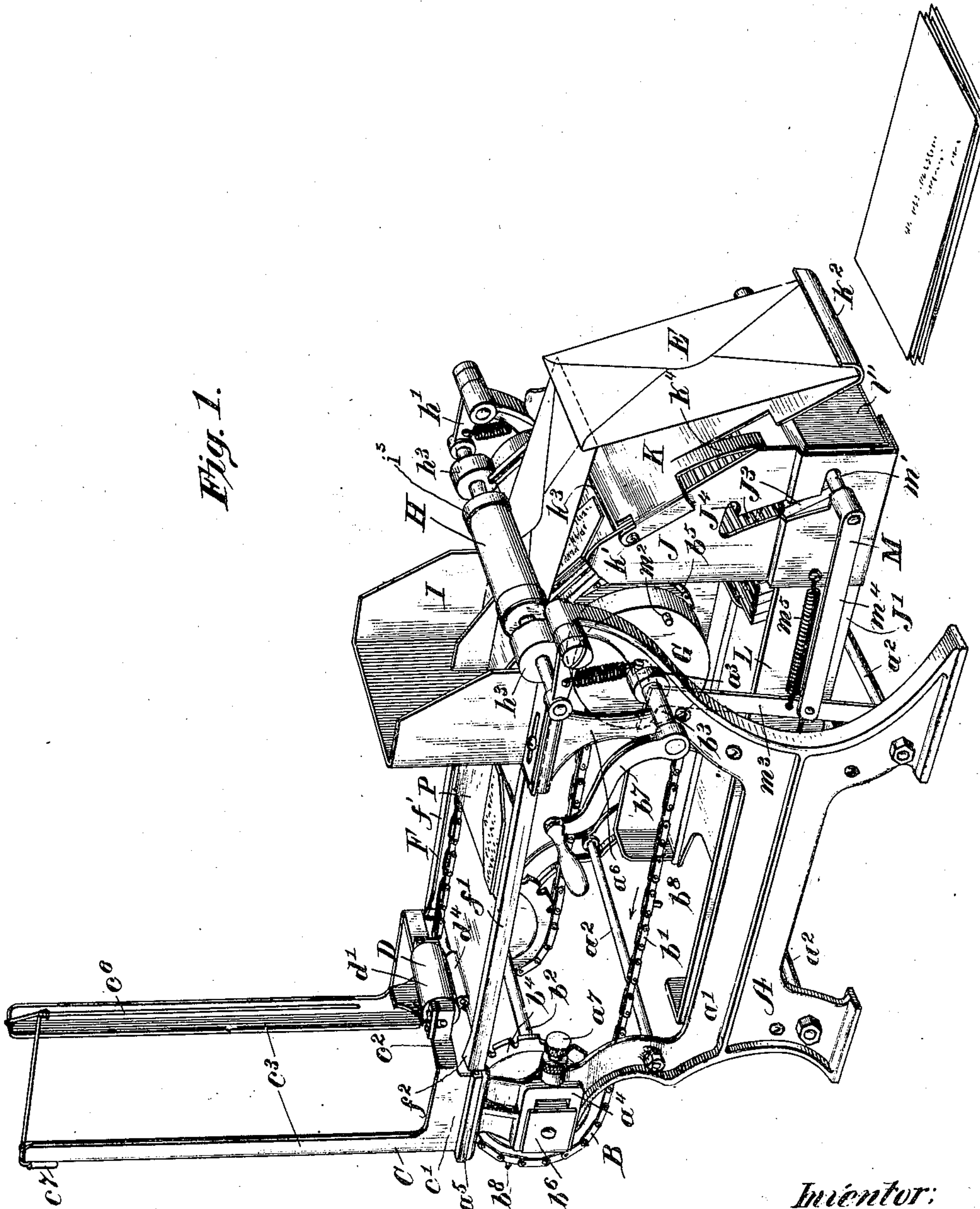
R. N. ROGERS.

ENVELOP ADDRESSER.

APPLICATION FILED JAN. 20, 1906.

5 SHEETS—SHEET 1.

Fig. 1.



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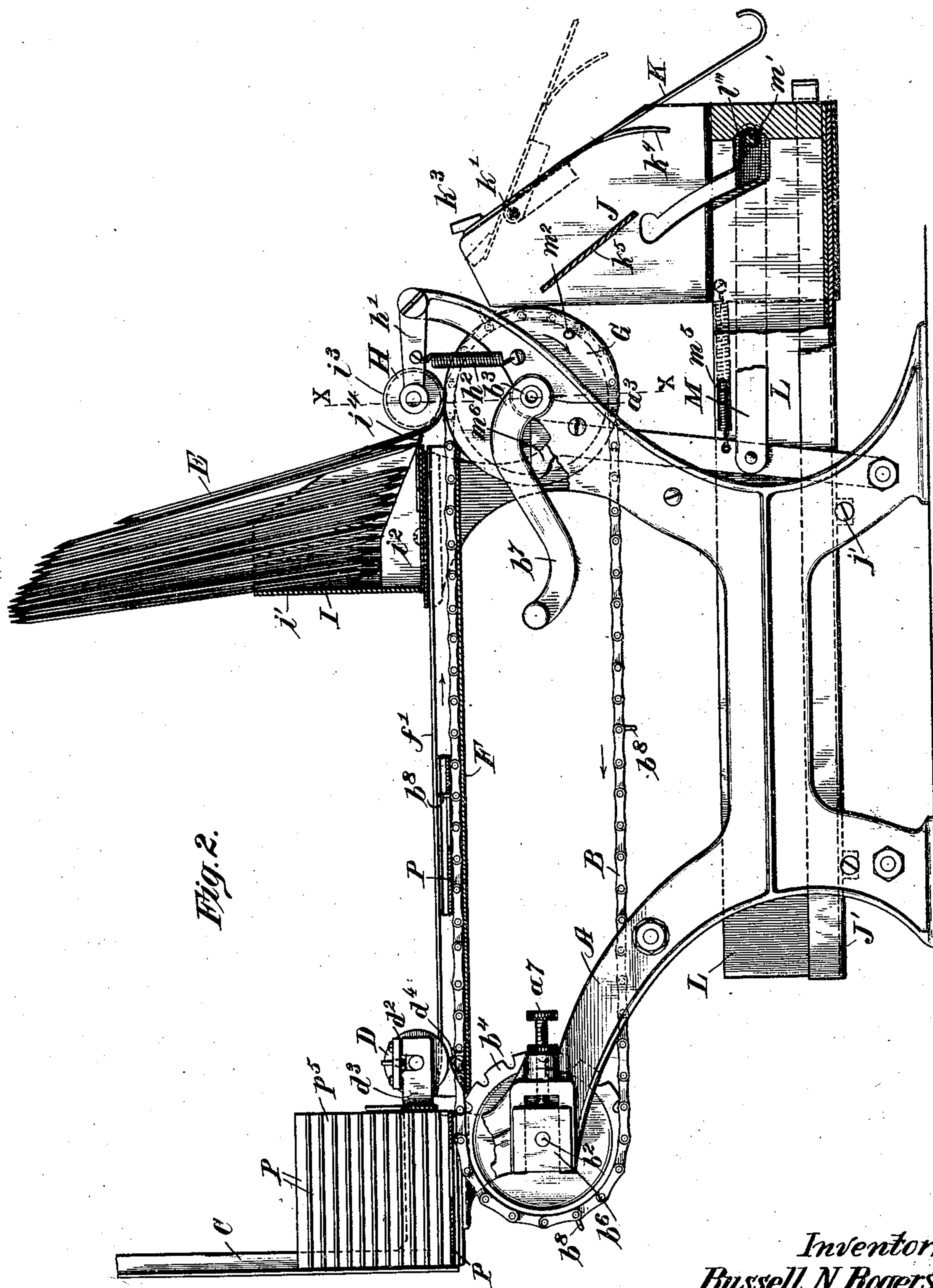
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5 SHEETS—SHEET 2.



Witnesses;

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5 SHEETS—SHEET 3.

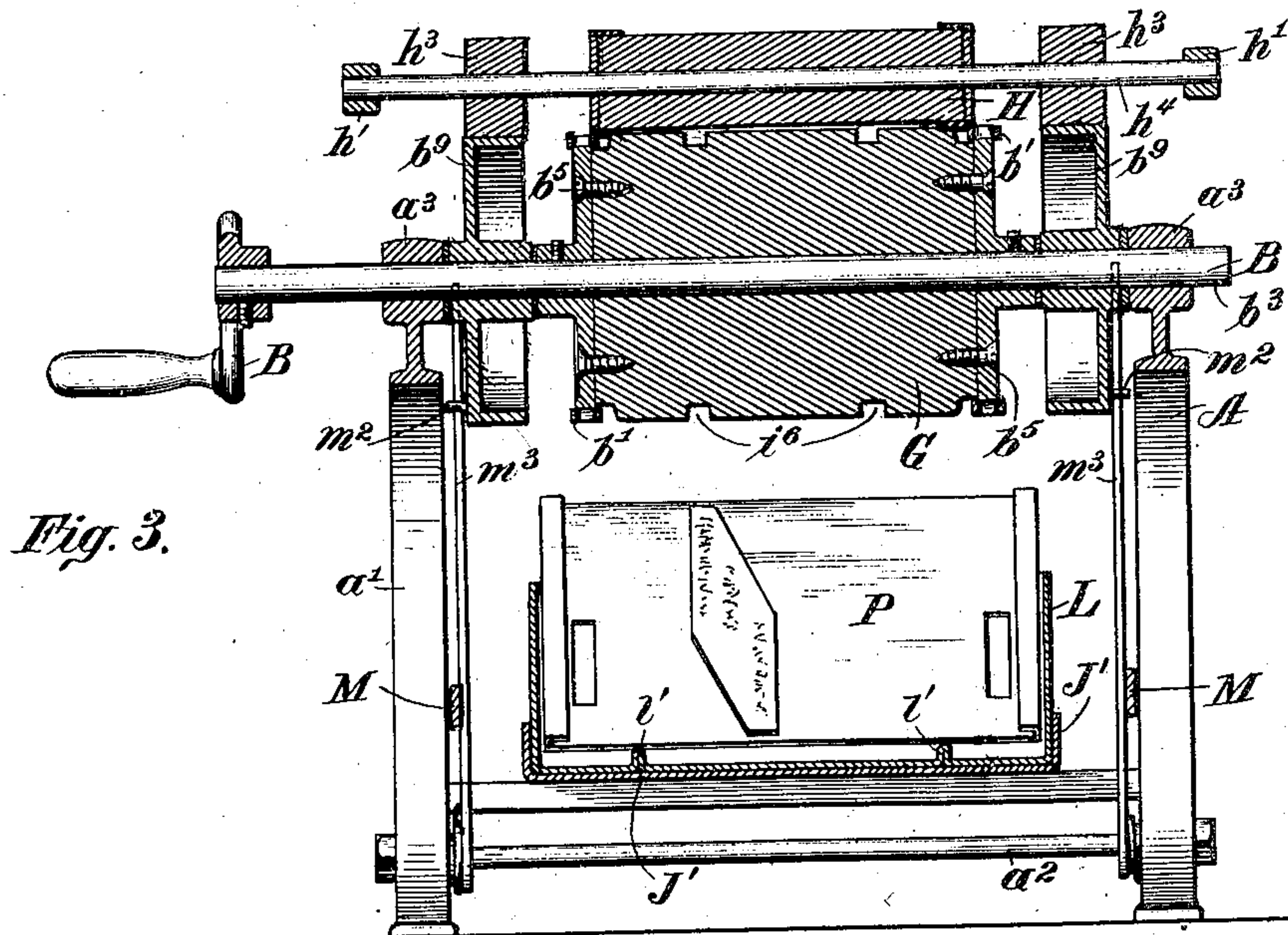


Fig. 3.

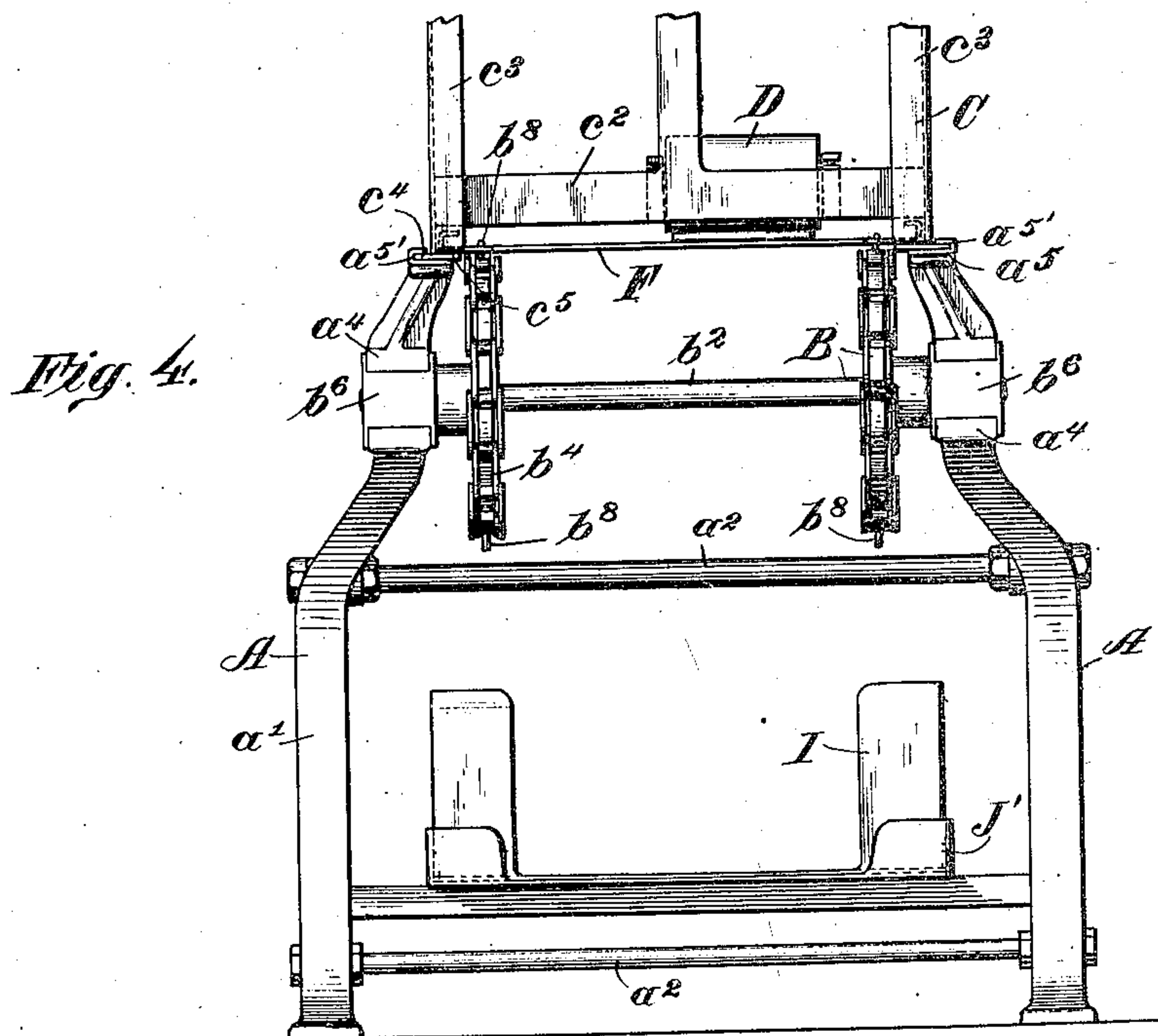


Fig. 4.

Witnesses;

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5 SHEETS—SHEET 4.

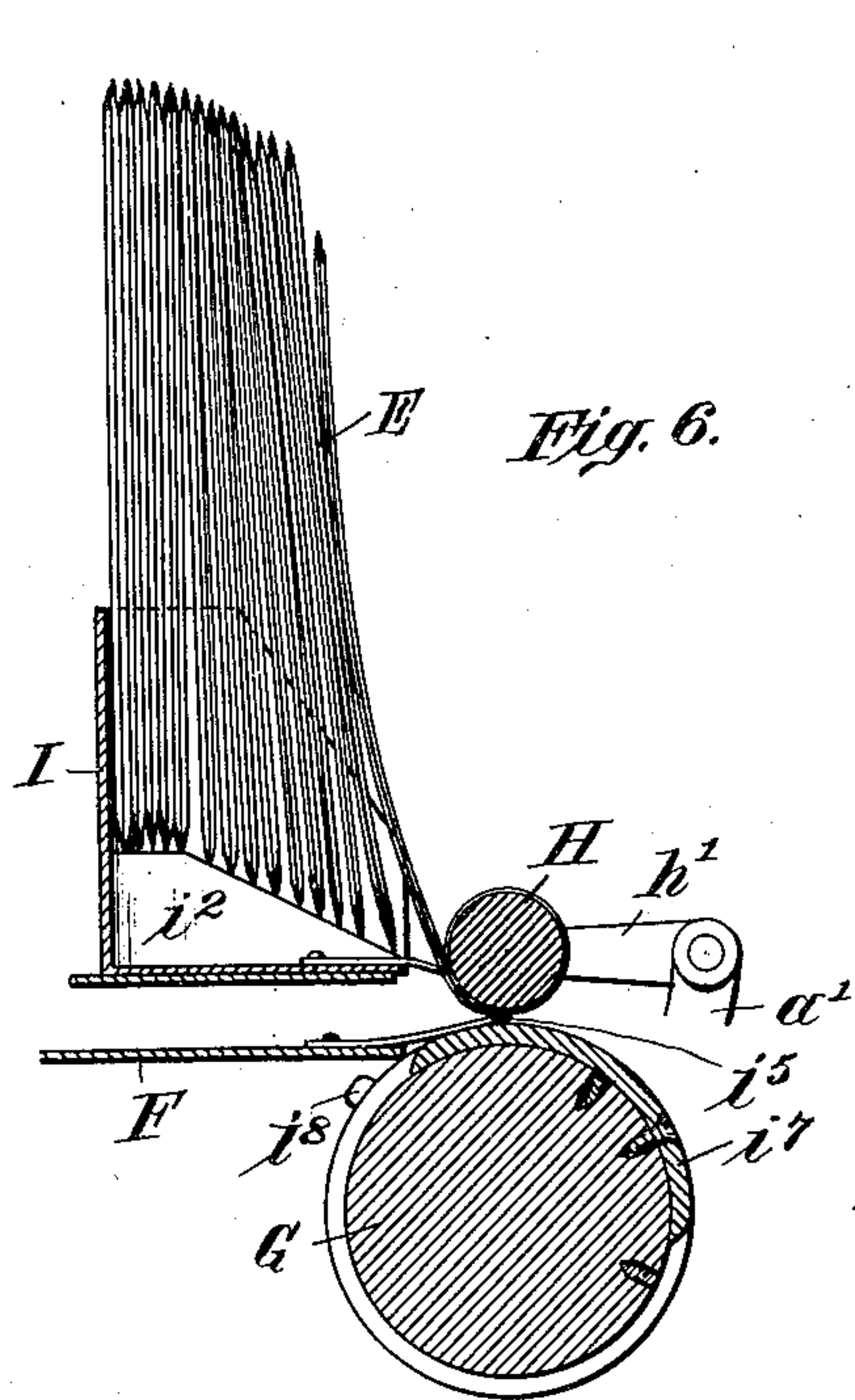


Fig. 6.

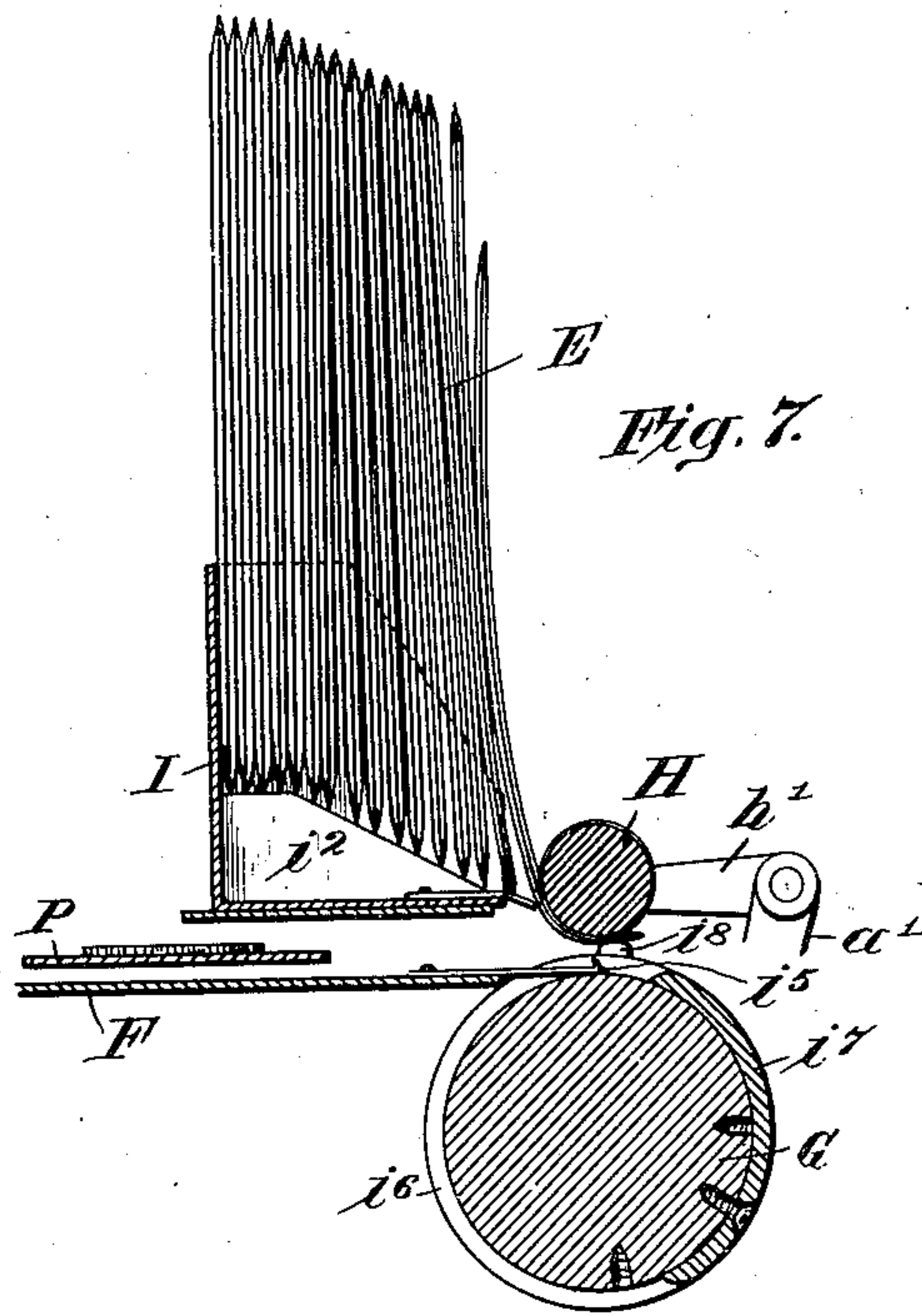


Fig. 7.

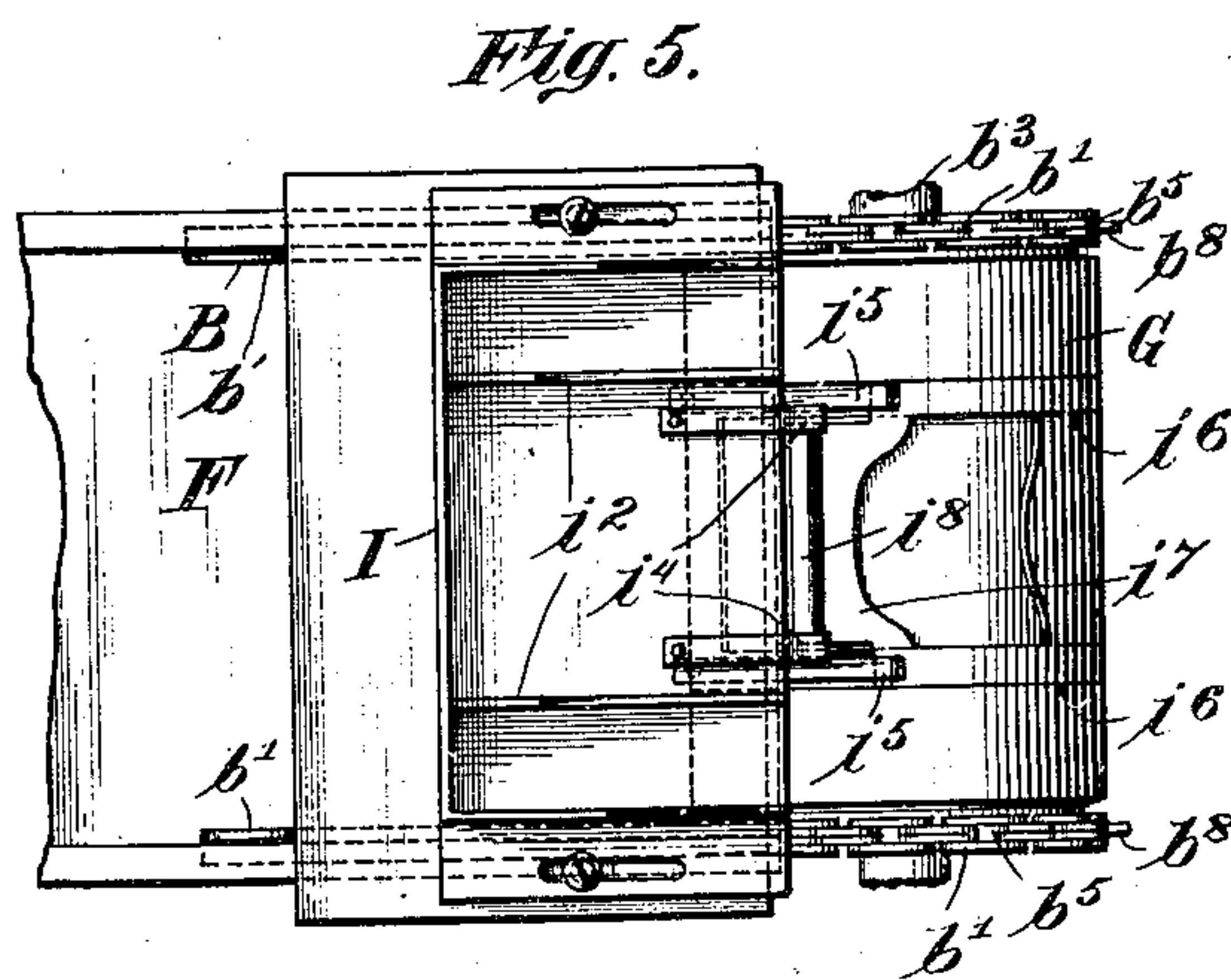


Fig. 5.

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5 SHEETS—SHEET 5.

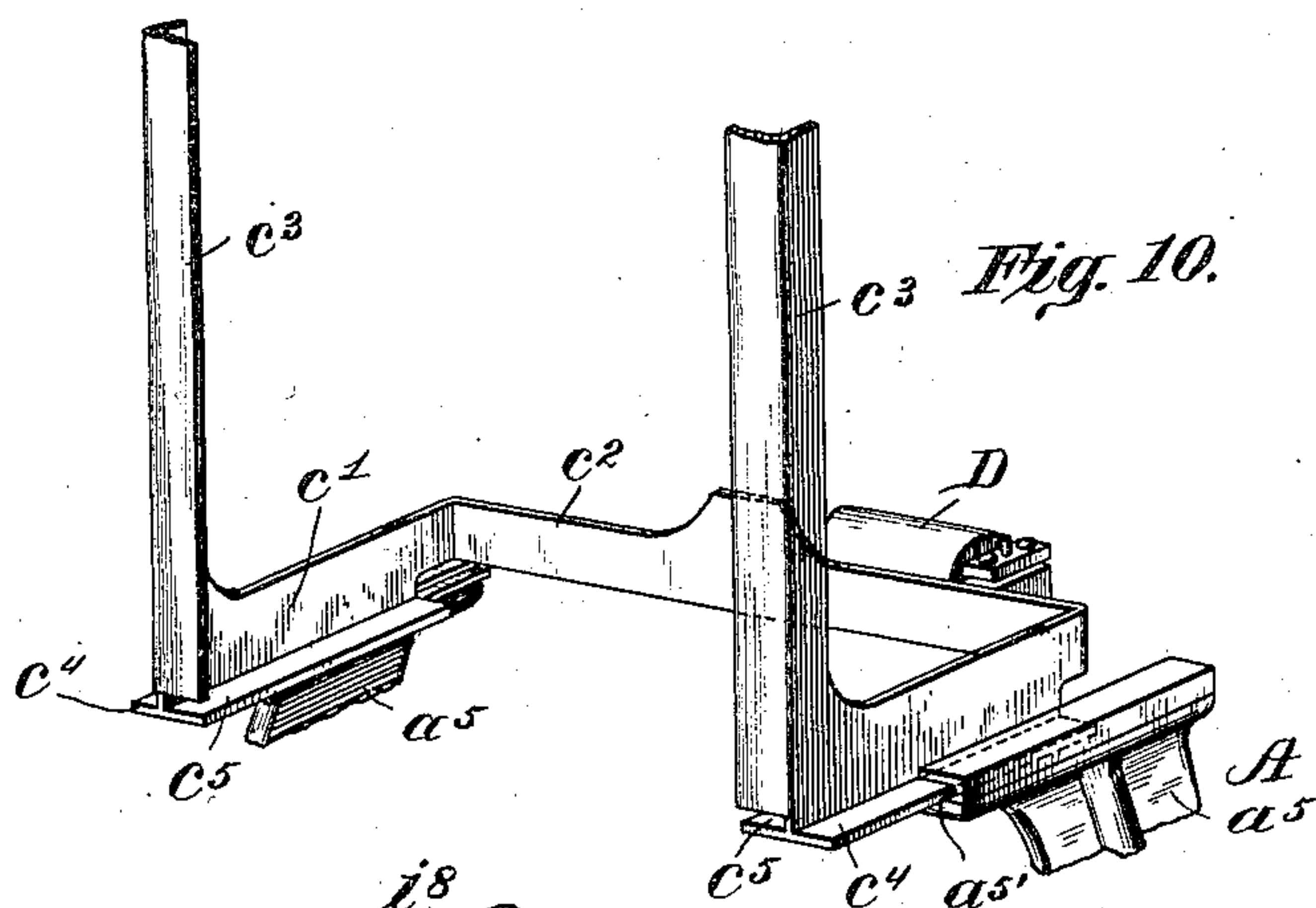


Fig. 10.

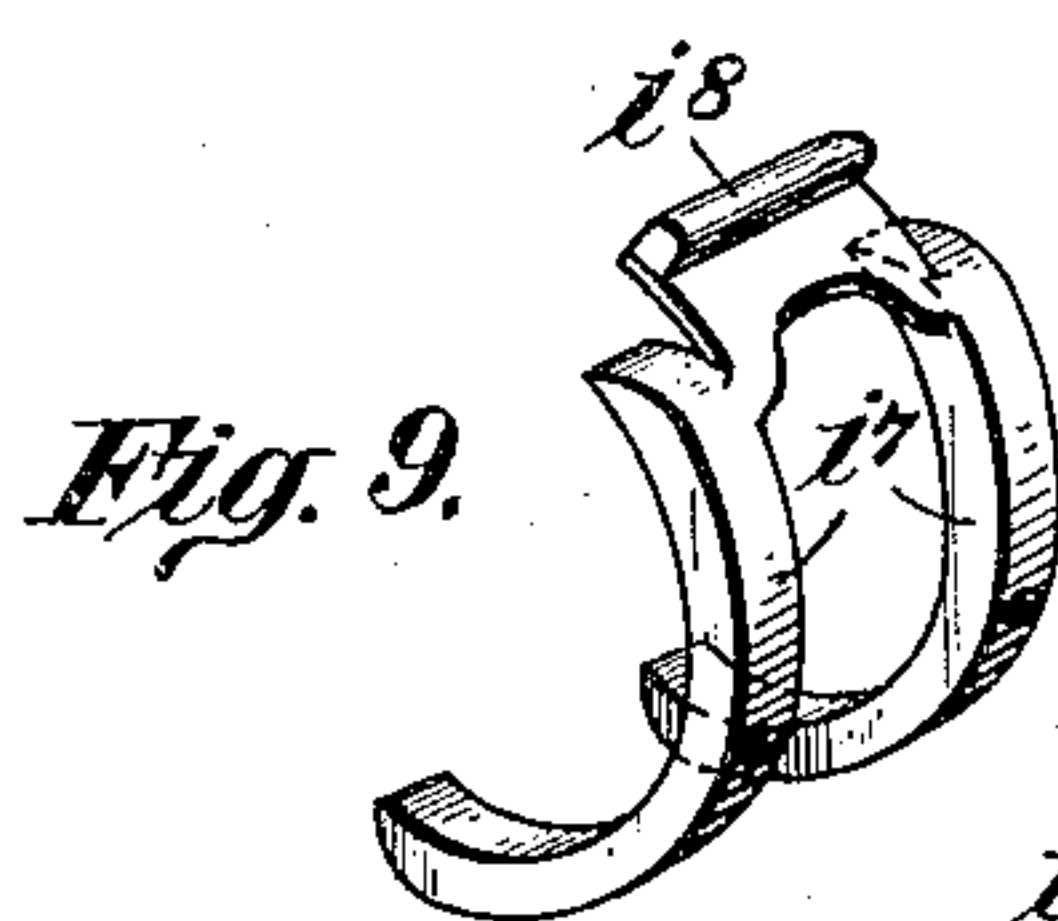


Fig. 9.

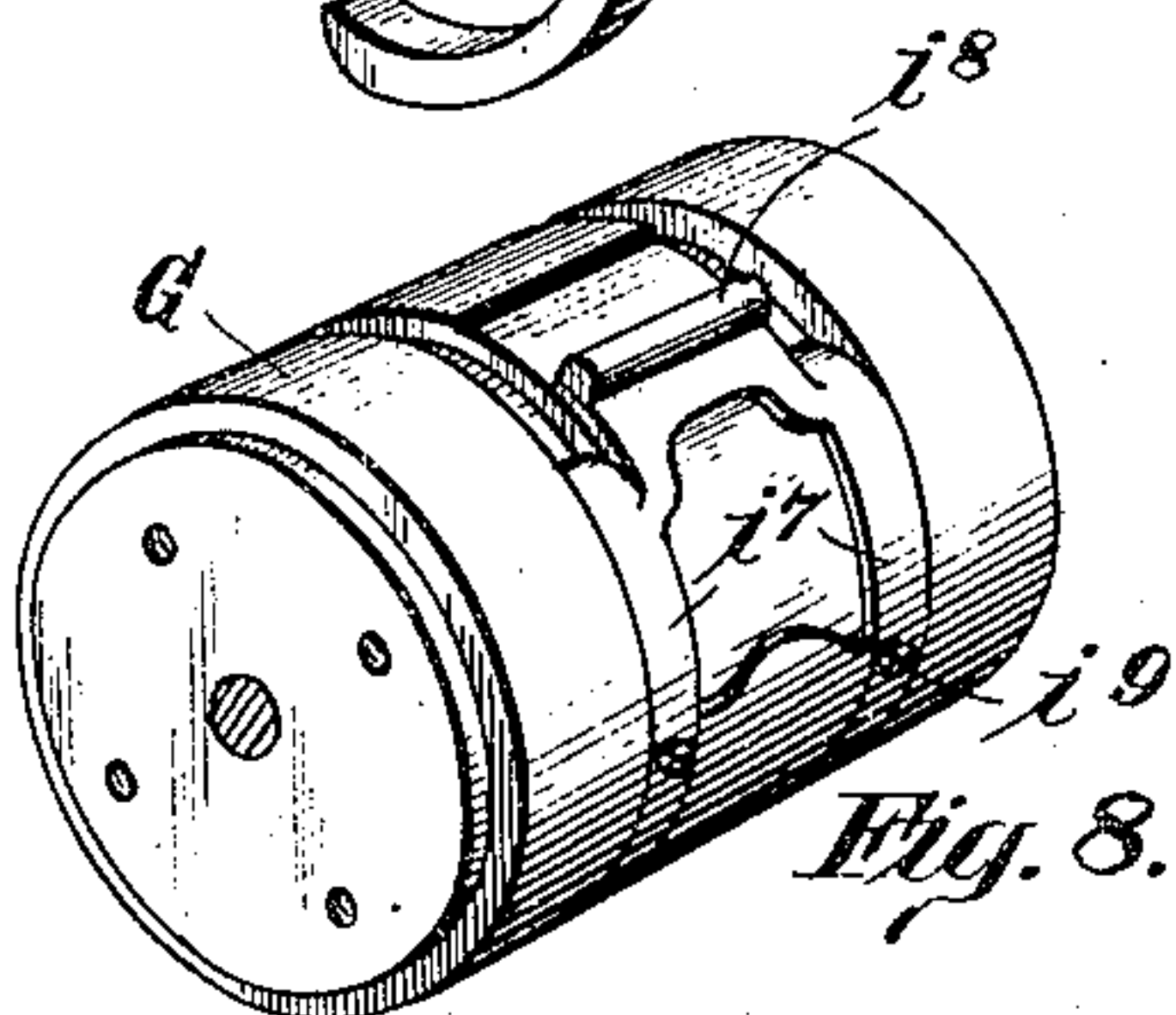


Fig. 8.

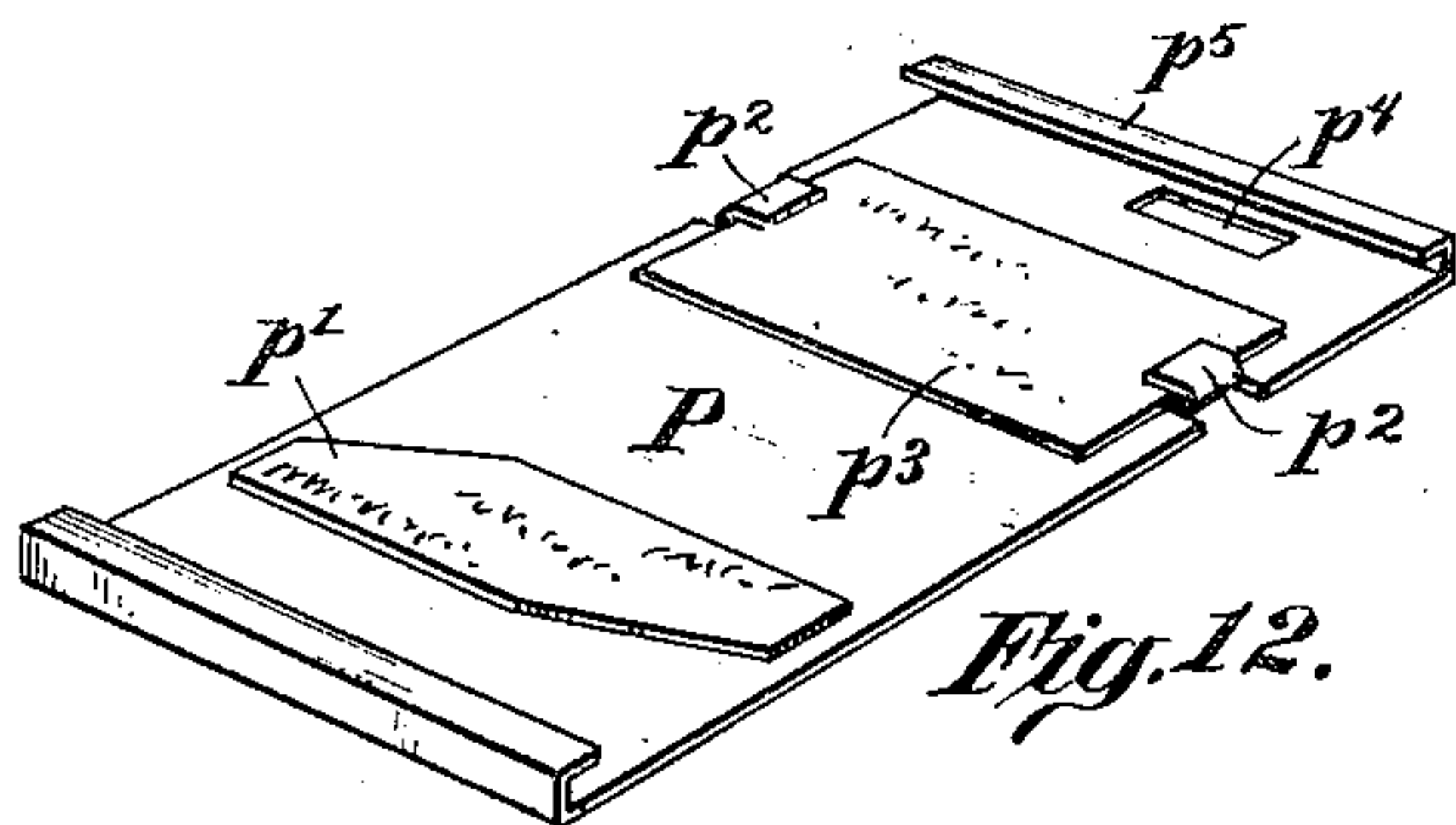


Fig. 12.

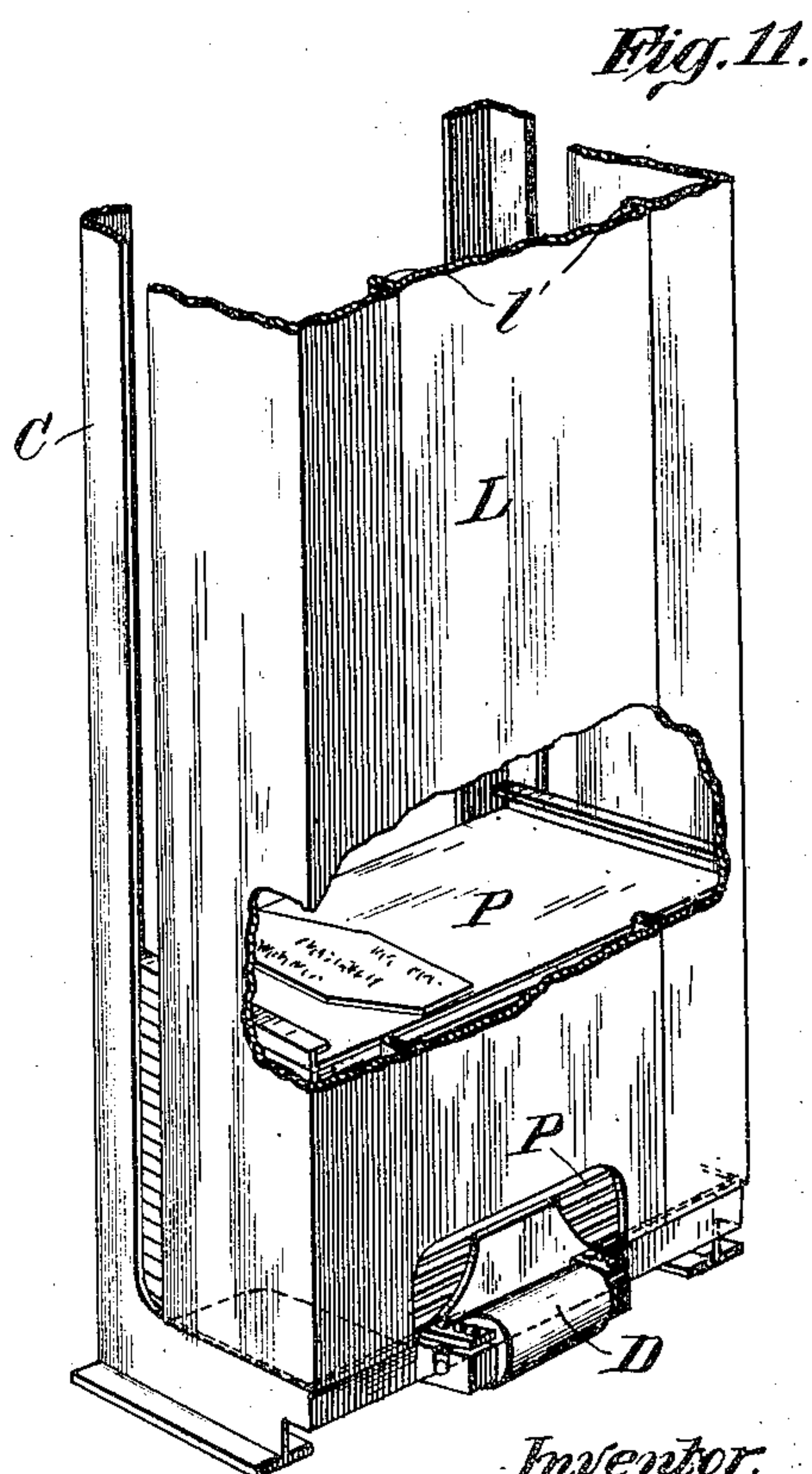


Fig. 11.

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UNITED STATES PATENT OFFICE.

RUSSELL N. ROGERS, OF CHICAGO, ILLINOIS, ASSIGNOR TO ROGERS ADDRESSER COMPANY,
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ENVELOP-ADDRESSER.

No. 876,913.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed January 20, 1906. Serial No. 297,001.

To all whom it may concern:

Be it known that I, RUSSELL N. ROGERS, a citizen of the United States, and a resident of Chicago, Cook county, Illinois, have invented
5 a certain new, useful, and Improved Envelop-Addresser, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to improvements in addressing machines, and has special reference to machines of that class wherein address carriers or type plates are employed.

The primary object of my invention is to
15 provide an addressing machine that shall be of very simple construction and of comparatively small cost and which shall be capable of performing its work with great neatness and despatch.

20 The special objects of the invention are to provide a small, durable and rapid addressing machine to be operated by hand or by power. Also to provide an addressing machine which shall be adapted to take address
25 plates from a stack, and, after they have performed their functions, place or re-stack the same in a receptacle for further use upon the machine.

A further object of the invention is to pro-
30 vide an addressing machine which shall not only re-stack its type plates but which shall also invert and stack the addressed envelopes or cards as they leave the machine.

Still another object of the invention is to
35 provide a reliable self-feeding mechanism for delivering the envelopes to the printing mechanism.

Other objects of the invention will appear hereinafter.

40 My invention consists generally in an addressing machine of the construction and combinations of parts hereinafter described and particularly pointed out in the claims; and will be more readily understood by ref-
45 erence to the accompanying drawings, forming a part of this specification, and in which

Figure 1 is a perspective view of an addressing machine embodying my invention; Fig. 2 is a side elevation of the machine, the
50 plate guide and the envelop-feeding device being shown in section; Fig. 3 is a vertical section on the line $x-x$ of Fig. 2; Fig. 4 is a rear end elevation of the machine; Fig. 5 is a detail plan view of the printing end of the
55 machine, showing the envelop-feeder, the up-

per, pressure, roll being removed; Fig. 6 is a sectional, vertical detail of the envelop-feeding device; Fig. 7 is a similar view showing the parts as they appear at the moment when an envelop is started between the printing
60 rolls; Fig. 8 is a perspective view of the lower printing roll; Fig. 9 is a perspective detail of the adjustable envelop-drawing member belonging to the printing roll; and Fig. 10 is a perspective detail of the plate stack frame
65 and inking roll, showing how the same are joined to the frame of the machine; Fig. 11 is a perspective view of the front side of the plate or stack holder, showing how the plates are taken from the drawer and placed in the
70 holder; and Fig. 12 is a perspective view of a novel type plate which I employ with my machine.

My invention is capable of embodiment in many different forms and its essential ele-
75 mentary mechanisms, while distinctly co-dependent in the machine herein illustrated, are capable of employment alone or in conjunction with less than the whole number of elements; and, as will be understood from the
80 following, my invention is not confined to the certain or specific constructions illustrated in the drawings, as both the construction and arrangement of the elements and parts of my machine may be readily modified
85 by one skilled in the art without departing from the spirit of the invention.

I have here illustrated, and shall describe, my invention as comprised or presented in the form of a small, compact machine,
90 adapted to be placed upon a table or desk and operated by a person standing or sitting beside it.

A thorough understanding of the invention will be facilitated by brief mention and
95 description of the principle elements and elementary mechanism composing the machine herein shown.

An endless conveyer, B, preferably occupying a horizontal plane, is arranged in a
100 light frame, A, and means (preferably a crank) are employed for rotating the conveyer. Above the rear end of the conveyer is a holder, C, to receive a stack of type plates, P. In front of the holder is an inking
105 device, D. The conveyer, B, is provided with lugs or pins which engage the bottom plate, P, in the holder. Thereby the plates are successively extracted from the holder, C, the type being inked as the plates pass be-
110

neath the inking device, D. Associated with the upper part of the conveyer is a light bed or plate, F, having flanges which protect and guide the ends or edges of the type-plates, P, during their forward movement.

The printing mechanism which coöperates with successive type-plates, to impress the addresses upon envelops, E, which are suitably fed thereto, is arranged at the forward end of the conveyer and preferably comprises two simple rolls, G and H, between which the plates, P, and envelops, E, pass. The larger (G) of the printing or pressure rolls is preferably mounted on the shaft at the forward end of the conveyer, B, that is, the larger roll is co-axial with the forward end of the belt conveyer and the other roller, H, is yieldingly held against the same, to afford the necessary pressure upon the type.

An envelop receptacle or feeder is arranged above the conveyer, B, near the upper printing roller, H, and by means of a simple mechanism operating automatically, the envelops, E, are taken between the rolls, G and H, one by one, in time to meet the type plates.

An envelop-inverting device, K, is arranged in front of the printing rolls. The parts of this device are of very simple form. They do not partake of any movement and are little more than guides, so arranged that each envelop dropping thereon will be discharged and inverted by the envelop which follows. The type-plate recovering or restacking device has for its chief element a drawer or slide, L, placed in the lower part of the frame, A, beneath the conveyer, B, in position to receive the type-plates as they fall away from the forward end of the conveyer. A mechanism, M, actuated from the conveyer shaft and operating in the forward end of the drawer, L, engages each plate as it drops into the drawer and moves it back to make room for the next plate. The equipment of my machine includes a number of these drawers filled with type-plates, and in operating the machine a stack of plates are first emptied from a drawer, L, into the holder, C, at the rear end of the machine. The empty drawer is then placed in the lower part of the machine in readiness to receive the same plates as fast as they are used. Thus the machine is completed and made ready for use. A number of envelops, E, are now placed in the feeder, I, at the forward end of the machine. When the conveyer, B, is operated (by the crank shown) the type plates and the envelops are automatically fed between the printing rolls, G and H, the operation of the machine being completed by the inversion and stacking of the envelops and the replacing of the type-plates in the plate drawer, L. The refilled drawer is then removed from the machine and the operation is, or may be, repeated with the contents of another drawer.

Referring again to the drawings for the details of construction, it will be seen that the frame, A, comprises two side frames, a' , connected by three or more brace rods, a^2 . The side frames have bearings, a^3 , and portions, a^4 , a^5 and a^6 , which will be referred to later. The conveyer, B, comprises the two endless chains or belts, b' , the shafts, b^2 — b^3 , and the sprocket wheels, b^4 and b^5 . Upon the conveyer chains are equi-distant pins or lugs, b^8 , to engage the type-plates, as hereinafter explained. The shaft, b^2 , is held in the bearing blocks, b^6 . These are slidable in the jaws or portions, a^4 , of the side frames and the conveyer belts are held under proper tension by set screws, a^7 , in the side frames and pressing against the bearing blocks, b^6 . The forward shaft, b^3 , is journaled in bearings, a^3 , in the frame, and to this shaft I attach a crank, b^7 , for rotating the conveyer.

The type-plate which I prefer to employ with my machine is of the form best shown in Fig. 12. The plate is made of sheet metal. The type, p^1 , are applied to the face of the plate, extending crosswise thereof to occupy a longitudinal position in the machine. Portions of the plate are turned up to form clips, p^2 , for securing a reading or information card, p^3 , thereon. At the ends of the plate are slots, p^4 , which, when the plate is placed in the machine, overlies the conveyer chains, in position to receive the lugs or pins, b^8 . Supporting ridges, p^5 , are provided on the ends of the plate, by turning the ends upward and inward. The height of the ridges slightly exceeds the height of the type, to prevent mutilation of the type when the plates are stacked, one upon the other in the manner shown in Fig. 2. A number of these plates are placed, face upward, in the plate-holder, C, the lower plate lying close to the top of the conveyer. The conveyer is rotated in the direction of the arrows—Fig. 2—and the arrangement is such that each pair of pins, b^8 , on the conveyer, will engage a respective bottom plate in the stack and move the same forward toward the printing mechanism.

The plate or stack holder, C, is of simple construction, being preferably a simple frame, comprising a light base portion, c^1 , a cross bar, c^2 , and the corner, angle bars, c^3 . If desired, the angle bars, c^3 , may be connected across the back. The base portion, c^1 , has outwardly extending flanges, c^4 , which are accommodated in the horizontal slots, a^5 , in the frame portions, a^5 . I resort to this construction in order that the holder, C, may be readily detached from the frame of the machine, for convenience in packing and shipping the machine. The holder also has inwardly extending base flanges, c^5 . These form a partial floor in the holder and support the plates, P, above the conveyer. The cross bar, c^2 , is elevated sufficiently to form

the space or slot needed to permit the bottom plate to move out through the front of the holder, the lower edge of the cross bar being above the floor flanges, c^4 , a distance slightly exceeding the total thickness of a single plate, P. A light guard or retainer, c^6 , formed of wire and held in sleeves, c^7 , at the tops of the angle bars, c^3 , serves to prevent the accidental dislodgment of the upper plates in a high stack.

The inking mechanism preferably comprises an ink roller, d^1 , pressed upon by springs, d^2 , arranged in small bearings, d^3 , provided on the front of the cross bar, c^2 . An auxiliary to the inking mechanism is provided in the form of an incline, riser or wedge surface, d^4 , provided on the guard plate, F, beneath the inking roll. The type plate on leaving the holder rides over the incline, d^4 , and is thereby held up against the inking roll, d^1 ; uniformity of inking is thereby insured.

The conveyer is in itself capable of supporting the type plates, but to prevent the accidental displacement of the latter, I prefer to provide means for securing the plates upon the top of the conveyer and for protecting the ends of the plates while in motion. This means comprises the bridge or bed plate, F, preferably formed of sheet metal. The edges, f^1 , of this plate, are bent upwardly and inwardly to overhang the conveyer belts and the ends of the type plates, P. The plate, F, is attached to the rear, upper end of the frame and may also be attached to the frame portions, a^6 . The rear ends of the guide flanges, f^1 are preferably flared—see f^2 —adjacent to the exit slot of the plate-holder to facilitate the entrance of the plates. The guides thus formed serve to hold the plates in place over the pins or lugs on the conveyer, and guide the ends of the plates so that they cannot be dislodged during their movement across the top of the conveyer.

The printing mechanism is arranged at the forward end of the conveyer. As before stated, the printing roll, G, is preferably arranged on the conveyer shaft, b^3 . It is thus co-axial with the end of the conveyer and occupies the space between the sprocket wheels, b^5 . The circumference of this wheel preferably somewhat exceeds the length of the longest envelop to be addressed or printed and is equal to the external circumference of the sprocket wheels. The top of the conveyer therefore approaches the printing roll at a tangent thereto, so that as the type plate leaves the upper part of the conveyer it is supported by the printing roll, G. The upper roll, H, may be of less diameter, and is arranged upon the swinging arms, h^1 . Springs, h^2 , or gravity, hold the pressure roll against the roll, G. An envelop which is laid over a type-plate about to enter between

the rolls, will move between the rolls therewith and the pressure being sufficient for the purpose will receive the imprint of the inked type. During the time that the plate and the envelop are passing between the rolls, the upper roll will yield to the movement thereof—that is, be rotated thereby. To drive the roll at other times and to support it out of contact with the lower roll, I use large and small drive wheels or pulleys, b^9 and h^3 , upon the shafts, b^3 and h^4 . Another reason for thus supporting the pressure roll is that the latter is made of a soft composition, adapted to yield to the type and would be distorted if pressed directly against the roller, G.

My machine may be used without means for automatically feeding the envelops, the latter in such cases being fed by hand; but as it is primarily intended to be automatic in every particular, I equip the machine with an envelop feeding mechanism, which is adapted to supply one envelop for each type-plate as the latter is fed to the printing mechanism. This mechanism comprises a small box or tray, i' , bridging the top of the conveyer, supported upon the frame portions, a^6 , and operating in conjunction with the stop and restraining fingers shown in Figs. 2, 5, 6 and 7.

The envelops are placed on end in the tray or envelop holder, i' , resting upon the inclines, i^2 , provided in the bottom thereof.

Observe that the back plate i' extends less than half way up the envelop. The tendency of the whole pack of envelops is to tip backwardly at the top and this is only prevented by the lateral pressure of the first envelop when there are quite a number in the holder or tray as shown; but when only those upon the horizontal part of i^2 remain, the supporting action of the preceding envelops being absent, the remaining envelops will tip backwardly at their upper ends and thus their lower ends will slip off said horizontal surface onto the inclined surface and against the feed-roll H. The effect of the incline is to thrust the lower or forward envelop against the rotating pressure roll, H. The latter is preferably provided with rubber surfaces or bands, i^3 , upon its ends, and these serve to draw down the envelop which is in contact therewith. Small spring fingers, i^4 , which extend from the bottom of the holder to a point close to the pressure roll, permit a single envelop to pass downward between the fingers and the rolls, meantime holding back the second envelop, as shown in Figs. 6 and 7. The bands or elevations, i^3 , on the pressure roll, coöperate with the springs, i^4 , to bend the envelop transversely and thus assist in holding the second envelop away from the ends of the fingers, i^4 . The pull of the pressure roll, H, and its end bands, is sufficient to feed the envelop forward as soon as it comes

in contact with the roll, but as this would result in the substantially continuous feeding of the envelopes, it is necessary to provide means for making the feed intermittent in order that the movement of the envelopes shall correspond with the arrival of successive printing plates at the rolls. To this end I provide stop fingers, dogs or hooks, i^5 , beneath the roll, H, and adapt them to rise and drop to retard and release an envelop which has been drawn down by the roller, H. The fingers, i^5 , are preferably attached to the end of the guard plate F, and are operated by cams on the roller, G. As shown, said cams are formed in and upon said roll, i^6 being the cam grooves into which the fingers or dogs may fall, and i^7 being the cams proper whereby the dogs are raised into the path of the envelop to stop its movement until the arrival of a type-plate, P. The dogs or fingers, i^5 , sink into the grooves during the passage of the type-plate and the envelop, and are then raised by the cams in time to catch and hold back the next envelop, to await the arrival of the next type plate.

To insure the starting of the envelop at exactly the right moment, a flexible or rubber piece, i^8 , is provided on the roll, G, to engage the end of the envelop at the moment it is released from the stops, i^5 . The rotation of the roll, G, has a definite relation to the positions of the plate lugs or pins b^8 , on the conveyer, hence the relation of the starting or draft piece, i^8 , to an approaching type plate is also fixed. This being the case, the point at which the imprint of the type will be applied to the envelop and the adaptation of the machine to envelopes of different sizes may be determined and accomplished by simply shifting the draft piece, i^8 , backward or forward upon the roll, G. To adjust the machine for short envelopes, the piece, i^8 , is moved rearwardly, while for longer envelopes it is moved forward on the roll, G. It should be observed that the adjustment of the draft piece makes necessary the adjustment of the cams, i^7 , for the reason that the stops, i^5 , must always be dropped away before the draft piece engages the envelop; otherwise there would be danger of tearing the envelop. As like adjustments of the parts, i^7 and i^8 are required they are preferably formed in one piece, as shown in Figs. 5, 8 and 9. Screws, i^9 , serve to secure the parts in either of three or more positions.

It will be understood that the envelop starts between the rolls somewhat in advance of the type-plate, and, being longer than the type plate, emerges therefrom after the passage of the plate. The plate, upon being released from the rolls, falls into the drawer, L, and the envelop is projected over the inverting device, K.

The plate drawer and the inverting device

are supported upon a sub-frame, comprising a shallow tray, J^1 , and the side pieces, J, rising from the forward end thereof. The tray is attached to the frame by screws or rivets, j' , and the parts J' and J, are stationary.

The forward edges of the plates or side pieces, J, are beveled or inclined at a suitable angle, and support the plate, K, the latter being preferably pivoted on pins or screws, k' , near its upper end to permit the drawer L to be drawn out. The lower end of plate, K, has a foot or ledge, k^2 , to receive the envelopes as shown in Fig. 1, and at the upper end of the plate is a strip of rubber or the like, k^3 . The strip, k^3 , is slightly below the top of the roll, G. The rolls hold the forwardly moving envelop off the rubber strip until the envelop is about to leave the rolls. Then it drops upon the rubber strip and is retarded thereby—that is, the frictional resistance of the rubber strip is sufficient to prevent the quick flight of the envelop when discharged from the rolls and being retarded, the envelop topples over the upper end of the plate, K, and drops upon the ledge, k^2 . The plate, K, is shorter than the envelop so that the upper end of the latter is left standing above the retarding strip, k^3 . As a natural result, the next envelop that is projected from the rolls strikes the standing envelop and inverts it by causing it to topple over the ledge, k^2 , and to fall, face upward, upon the table or into a receiver (not shown), at the end of the machine. This operation is clearly indicated in Fig. 1.

The type-plate drawer is well shown in Figs. 1 and 2; it is also partially shown in Figs. 3, 4 and 11. When the lower end of the plate, K, is elevated, the drawer may be either slipped in or withdrawn from the drawer guides or sub-frame, and when first placed therein, is empty, the plates having been previously emptied into the plate-holder, C, in the manner indicated in Fig. 11. The drawer is preferably made of metal and its bottom is provided with longitudinal ribs or rails, l' . These ribs support the type plates, as shown in Fig. 3 and reduce the friction between the same and the bottom of the drawer. The plates therefore slide freely in the drawer, which is provided with a supporter of suitable form, such as is used in card index drawers. The rear end of the drawer may be cut away, if desired, to avoid interference with the inking roll, and to lessen the drop of the plates when the drawer is being emptied—see Fig. 11. The forward end of the drawer is formed by a separate piece, l'' , suitably attached to the sides and bottom and usually having a handle. The slotting of the rear end of the drawer and the separate formation of its forward end permits the crimping of the bottom to form the integral ribs or rails, l' . (See Figs. 3 and 11.) The plates as they fall from the conveyer

are guided by the underside of the plate, K, and also by curved spring fingers, k^1 , formed thereon, these, with an auxiliary incline or plate, k^2 , adjacent to the roll, G, forming a plate chute to direct the plates into the end of the drawer. These cause the plate to drop into the forward end of the drawer in upright position.

To prevent the piling of the plates beneath the conveyer, and for the purpose of repacking them neatly in the drawer, I employ a packer-bar, m' , which reciprocates in the forward end of the drawer. Normally this bar occupies a groove, l''' , in the end of the drawer, but as soon as a plate drops upon the bottom of the drawer, the bar, m' , moves back, and, engaging the plate, pushes it and all of the others, toward the rear end of the drawer, to make room for the next plate. The bar operates in notches at the forward end of the drawer, and in slots, J^3 , in the side plates, J. The packer-bar is operated from the conveyer shaft, b^3 , the connection being through the cam pins, m^2 , the upright levers, m^3 , and the horizontal connecting rods, m^4 . Springs, m^5 , maintain the bar in its forward position except when engaged and operated by crank pins, m^2 . The lever, m^3 , is pivoted on the frame beneath the drawer, preferably upon the brace bar, a^2 .

I utilize the upper ends of the levers, m^3 , to prevent the conveyer from being turned backward, providing them with lateral extensions or lugs, m^6 , to form stops for the crank pin, m^2 , when the rotation is reversed.

The packer bar—or displacement bar as it may be termed—occupies a position midway of the height of the drawer, and to permit the free insertion and withdrawal of the drawer, this bar must be raised. I therefore arrange slots, J^4 , in the side pieces, J, wherein the bar may be raised and locked during the manipulation of the drawer.

As a general statement of the operation of the invention precedes the foregoing detailed description of the parts, and as the operation of the several elements has been fully defined in connection with the description of their form and arrangement, it is deemed unnecessary to further summarize or define the use and operation of the machine, beyond stating that the operation is very rapid and that the machine performs its work with a degree of neatness and accuracy hitherto unattained.

It is obvious that the several component parts or elementary mechanisms comprised in my machine—as for example, the plate-feeding mechanism, of the envelop inverting mechanism, or the restacking mechanism—may be employed separately or in connection with fewer associated mechanisms than herein shown, and that so much of my invention as pertains to each is not confined to its association with the others, although all are re-

quired in substantially the manner specified in the case of the specific machine under special consideration.

It is also obvious that numerous modifications and alterations may be made in the specific structure without departing from the spirit of my invention, and I do not confine my invention to such specific structure or to the specific construction of the several elementary mechanisms entering into the same.

Having described my invention, I claim as new and desire to secure by Letters Patent:

1. In an addressing machine, a type plate holder or magazine, in combination with plate inking means, a rotary printing mechanism, rotary plate feeding means operating to convey plates from the magazine to said printing mechanism, an envelop holder, one member of said mechanism being in position to frictionally engage and draw down the front envelop in said holder, and intermittent feed controlling means below said member and co-acting with said mechanism to complete the withdrawal of an envelop from said holder after it has been drawn down by said member.

2. In an addressing machine, printing rolls, in combination with means for feeding type-plates between said rolls, an envelop holder adjacent to said rolls, one of said rolls adapted to draw envelops from said holder, envelop stops for preventing the passage of envelops between said rolls, and means for retracting said stops upon the arrival of a printing plate at the printing rolls.

3. In an addressing machine, the combination of a printing mechanism with automatic means for feeding envelops, face down, to said printing mechanism, and means whereby each envelop while leaving the printing mechanism is caused to invert the next preceding envelop, substantially as described.

4. In an addressing machine, the combination of a printing mechanism with an envelop holder adjacent thereto a portion of said mechanism being adapted to withdraw envelops from said holder, intermittent envelop stopping and releasing means actuated by said mechanism, and envelop inverting means upon the delivery side of said printing mechanism, substantially as described.

5. In an addressing machine, two rolls, in combination with means for feeding type-plates between said rolls intermittently, an envelop holder so positioned that one of said rolls is adapted for frictional engagement with the forward envelop in the holder, intermittent envelop stopping and releasing means, and means for rotating the said rolls, substantially as described.

6. In an addressing machine, a pair of pressure rolls, in combination with means

for feeding printing plates thereto, a printing plate receiver on the opposite side of said rolls from said feeding means, intermittent envelop feeding means, an envelop receiver upon said opposite side of said rolls, adapted to receive envelopes in an inclined position, and a retarder on said envelop receiver for causing the envelops to lodge upon the latter in position to be inverted by the succeeding envelop, substantially as described.

7. In an addressing machine a rotary printing mechanism and means for feeding envelops thereto, in combination with an inclined envelop receiver provided at the opposite side of said mechanism and having a retarding device at its upper end, and an envelop receiving ledge at its lower end, substantially as and for the purpose specified.

8. In an addressing machine, a frame, in combination with a type-plate holder or magazine, said frame and magazine being slidably engaged, an inking device provided on said magazine and therewith removable from said frame, and a type-plate feeding means operating in said frame beneath said holder, substantially as described.

9. In an addressing machine, the combination of an endless belt type-plate conveyer, with a type-plate holder or magazine arranged above the rear end of said conveyer, printing rolls arranged at the forward end of said conveyer, intermittent envelop feeding devices arranged between said rolls, and an envelop holder or magazine arranged above said conveyer at the intake side of said rolls, substantially as described.

10. In an addressing machine, a printing mechanism, in combination with type-plate feeding means, envelop feeding means, a type-plate receptacle beneath said printing mechanism, and a packer provided in said receptacle, and operable therein, said packer being adapted to be raised out of said receptacle to permit the withdrawal thereof, substantially as described.

11. In an addressing machine, a rotary printing mechanism, in combination with respective automatic means for intermittently feeding type-plates and envelops thereto, a type-plate receiver arranged beneath said printing mechanism, a packer provided in said receiver and automatically operated in time with the envelop and plate feeding means, and an envelop receiver arranged in front of said plate receiver, substantially as described.

12. In an addressing machine a rotary printing mechanism, in combination with respective means for intermittently feeding type-plates and envelops thereto, a type-plate receptacle arranged beneath said printing mechanism, a packer provided in said receptacle, and envelop inverting means to

receive the envelops from the printing mechanism, substantially as described.

13. In an addressing machine, the combination of rotary printing rolls with respective automatic means for simultaneously feeding type plates and envelops to and between said rolls, the arrangement being such that the envelops are superimposed upon the type plates and are freed therefrom by the fall of the type plates at the discharge side of the lower roll, and a repacking device arranged and operating beneath said rolls to receive the discharged type plates, substantially as described.

14. In an addressing machine, the combination of rotary printing rolls with respective means for simultaneously feeding type plates and envelops between said rolls a type-plate repacking device arranged and operating beneath said rolls, and an envelop receiving and inverting device arranged above and in front of said repacking device, substantially as described.

15. In an addressing machine, a frame, in combination with a type-plate holder or magazine, inking means, an envelop holder, a type-plate feeder operating beneath said magazine and envelop holder, a printing mechanism cooperating with said feeder, a drawer or tray removably arranged in the frame beneath said mechanism, to receive printing plates therefrom, and a packer operating in said drawer, substantially as described.

16. In an addressing machine, a type plate feeder, in combination with a printing mechanism adapted to simultaneously receive an envelop and a type plate and also adapted to discharge both the type plate and the envelop, envelop guiding means at the discharge side of said mechanism, means beneath the envelop guiding means, adapted to guide or direct the type plate downward at the discharge side of said mechanism, a drawer beneath said mechanism to receive the plates from the last mentioned guiding means, a reciprocating packer operable in said drawer and means through the medium of which said packer is actuated by said printing mechanism, substantially as described.

17. In an addressing machine, a suitable frame and a type-plate feeder operable therein, in combination with a type-plate holder having plate supporting flanges above said feeder and provided with a plate exit slot, an ink roll arranged above said slot, and plate elevating means arranged beneath said roll, substantially as described.

18. In an addressing machine, a pair of rolls, in combination with plate feeding means, an envelop holder having inclined ribs or ways in its bottom and adapted to present envelops against one of said rolls,

and suitable cooperating envelop stop and releasing means actuated in time with said feeder, substantially as described.

19. In an addressing machine, the combination with a printing mechanism and type plate feeding means, of a plate receiving drawer arranged beneath said mechanism, a packer normally positioned in said drawer, means for actuating said packer, and means for supporting said packer in non-operating position, substantially as described.

20. In an addressing machine, a printing mechanism, in combination with means for feeding type plates thereto, an envelop holder adjacent to said mechanism, said mechanism being adapted to withdraw envelops from said holder, one at a time, envelop stops for controlling the feed of envelops between the members of said mechanism and means for retracting said stops upon the arrival of a printing plate at said mechanism; substantially as described.

21. In an addressing machine, a printing mechanism including an envelop drawing roll, in combination with means for feeding type plates to said mechanism, an envelop holder adjacent to said roll, said roll acting continuously to draw envelops from said holder and means preventing the forward movement of an envelop by said roll except upon the arrival of a printing plate at said mechanism; substantially as described.

22. In an addressing machine, the combination of a printing mechanism with an envelop holder adjacent thereto, a portion of said mechanism being adapted to withdraw envelops from said holder, envelop stopping and releasing means actuated by said mechanism and suitable printing plate feeding means; substantially as described.

23. In an addressing machine a printing mechanism and means for feeding envelops thereto, in combination with an inclined envelop receiver provided at the opposite side of said mechanism and having a retarding device at its upper end, and an envelop receiving ledge at its lower end; substantially as and for the purpose specified.

24. In an addressing machine a printing mechanism in combination with an inclined envelop receiver provided at the discharge side of said mechanism and having a retarding device at its upper end and an envelop receiving ledge at its lower end; substantially as and for the purpose specified.

25. In an addressing machine, a suitable frame, in combination with a type plate holder, bridging the rear end of said frame, a rotary plate conveyer operating beneath said plate holder to extract type plates therefrom, printing mechanism at the forward end of said frame, an envelop holder adjacent to the intake side of said printing mechanism, between the printing mechanism and the type plate holder, said printing mechanism

being adapted to withdraw envelops from said envelop holder and suitable means, between the members of said printing mechanism, controlling the envelop feeding action of said mechanism, substantially as described.

26. In an addressing machine, the combination with printing mechanism, of a drawer to receive the type plates as they fall from said mechanism in upright position, a transverse packer bar passing through slots in the sides of the drawer, means to oscillate said bar horizontally after the fall of each type plate, and means permitting the elevation of the packer bar and the removal of said drawer, substantially as described.

27. In an addressing machine, in combination with printing mechanism, a drawer to receive type plates as they fall from said mechanism, type plates in said drawer, a transverse packer bar passing through slots in the sides of the drawer, means to move said bar and type plates after the entrance of each type plate, and means permitting the removal of the packer bar and the removal of said drawer; substantially as described.

28. In an addressing machine, a frame and a pair of drawing rolls therein, in combination with a type-plate conveyer operating over the lower roll, a type-plate magazine, an envelop holder having an inclined bottom terminating close to the intake side of the upper roll, whereby the latter is adapted to continuously engage and draw down upon the outermost or "first" envelop in the holder, "second" envelop supporting devices at the bottom of said holder to support or hold back the envelop following the first, and said upper roll having enlarged ends adjacent to said devices, substantially as and for the purpose specified.

29. In an addressing machine, a drawing roll of soft material having enlarged ends, in combination with an envelop holder having an inclined bottom and flexible fingers projecting therefrom into substantial, but not actual, contact with the middle portion of said roll at points adjacent to the enlarged ends thereof, a coacting roll beneath the first mentioned roll and means for delivering inked type plates upon said coacting roll in time with the feeding of envelops, substantially as and for the purpose specified.

30. In an addressing machine, a drawing roll, in combination with an envelop holder having an inclined bottom, to present the sides and lower ends of successive "first" envelops against the side of said roll, restraining devices comprising yieldable fingers projecting from the lower part of said holder toward the middle portion or body of said roll, to support "second" envelops, and intermittent envelop draft means and type plate feeding means, both means co-acting with said roll, substantially as described.

31. In a machine of the class described, a tray or holder, provided with a bottom adapted to receive a pack of envelopes and automatically feed them forward, "second-envelop" restraining-devices projecting from said bottom, a pair of drawing rolls, the upper of which presents its intake side to the free ends of said restraining devices, in position to engage and draw down the "first" envelop, feed controlling dogs or fingers beneath said restraining devices, a type plate holder and means for feeding plates therefrom to said rolls and for operating said dogs to release an envelop upon the arrival of a plate at the rolls, substantially as described.
32. In an addressing machine, a box or holder having a bottom and open at the front, in combination with "second envelop" restraining devices at the edge of said bottom, a drawing roll having its side in close proximity to the ends of said restraining devices and adapted to continuously engage the "first" envelop in the holder, and to draw the same down past said restraining devices, means beneath said devices automatically limiting the initial down draft or movement of the "first" envelop, a coacting roll having cams adapted to operate said means and a type plate feeder operating over said means and coacting roll, substantially as described.
33. In an addressing machine, a holder to receive a pack of articles such as envelopes, placed on edge therein, said holder having an open front towards which the articles are pressed, in combination with restraining means projecting from the bottom of said holder, a drawing and pressure roll presenting its intake side thereto, a coacting draft device, stop and releasing means inserted and removed from the path of each article withdrawn from the holder by said roll in advance of the operation of said draft device thereon, a coacting pressure roll, and means for feeding address plates between said rolls, substantially as described.
34. In an addressing machine, an envelop holder or magazine having an open front, in combination with a frictional drawing roll adjacent to said holder to engage the "front" envelop therein, "second" envelop supporting withholding devices at the bottom of said holder, "first" envelop stopping and releasing means arranged beneath said holder and roll and periodically actuated, a cooperating drawing and pressure roll for extracting an envelop from the holder when released, and mechanism for feeding inked type-plates between said rolls, substantially as described.
35. In an addressing machine, a pair of rolls suitably pressed together, in combination with an envelop holder having an inclined bottom terminating adjacent to the intake side of the upper roll, envelop stop and releasing means beneath said bottom and actuated by the lower roll, and mechanism for feeding address plates between said rolls, substantially as described.
36. In a machine of the class described, a pair of drawing rolls, in combination with a tray containing means for therein feeding the articles to be printed upon forward against the intake side of the upper roll, whereby the latter is adapted to draw envelopes from said holder, supporting devices at the bottom of said tray permitting the passage of only one article at a time, feed controlling means beneath said devices, at the intake opening of said rolls, a type plate holder, inking means, and a type-plate feeder adapted to deliver plates to said rolls at a point between said devices and said controlling means, substantially as described.
37. In a machine of the class described, the combination of a printing mechanism, with an envelop holder adjacent thereto, a portion of said mechanism being adapted to withdraw envelopes from said holder, intermediate stopping and releasing means actuated by said mechanism, and a type-plate feeder, substantially as described.
38. In an addressing machine, a frame, in combination with shafts therein, belt wheels thereon, belts operating on respective pairs of wheels, and provided with lugs at intervals, an address plate holder above said belts wherefrom said lugs are adapted to remove address plates, printing rolls, envelop stop dogs arranged between said rolls, and beneath the tops of said belts, means upon the lower roll for operating said dogs, and an envelop tray presenting a flexible edge to the intake side of the upper printing roll, as and for the purpose specified.
39. In an addressing machine, a frame, in combination with a printing roll, the circumference of which substantially equals the length of an envelop, a coacting printing and drawing roll of less diameter and above the first roll, stop dogs attached to the frame, extending between said rolls and periodically actuated, means for periodically feeding address plates between said rolls over said dogs, and an envelop holder for feeding envelopes to said drawing roll, and presenting a flexible edge to the intake side thereof, substantially as described.
40. In an addressing machine, a frame, in combination with a printing roll, the circumference of which substantially equals the length of an envelop, a draft device or rib upon said roll, a coacting printing and drawing roll of less diameter and above the first roll, stop dogs attached to the frame, extending between said rolls and periodically actuated, means for periodically feeding address plates between said rolls over said dogs, and an envelop holder for feeding envelopes to said drawing roll, and presenting a

flexible edge to the intake side thereof, substantially as described.

41. In an addressing machine, a frame, in combination with a printing roll, the circumference of which substantially equals the length of an envelop, a draft device or rib upon said roll, a cam provided on said roll, a coacting printing and drawing roll of less diameter and above the first roll, a stop dog attached to the frame, extending between said rolls and actuated by said cam, means for periodically feeding address plates between said rolls over said dog, an envelop holder adapted to feed upstanding envelops against the intake side of said drawing roll, and means interposed between the bottom of the holder and the side of said drawing roll, preventing the withdrawal of more than one envelop at a time, substantially as described.

42. In an addressing machine, a type-plate holder to contain a stack of plates in combination with a belt conveyer, having lugs to remove plates from said holder, a pair of printing rolls at the opposite end of the conveyer, distant from said holder, one of said rolls being coaxial with its end of the conveyer, inking means between the ends of the conveyer and above the same, an envelop holder also above said conveyer and between the ends thereof, said holder adapted to present the lower ends of upstanding envelops to the intake side of the upper printing roll, to be withdrawn thereby, means preventing the withdrawal of more than one envelop at a time, and stop dogs operating beneath the top of said conveyer and between said rolls to engage and periodically release envelops for passage between said rolls, with respective type-plates, substantially as described.

43. In an addressing machine, a type-plate holder to contain a stack of plates, in combination with a belt conveyer, having lugs to remove plates from said holder, a pair of printing rolls at the opposite end of the conveyer, distant from said holder, one of said rolls being coaxial with its end of the conveyer, inking means between the ends of the conveyer and above the same, an envelop holder also above said conveyer and between the ends thereof, said holder adapted to present the lower ends of upstanding envelops to the intake side of the upper printing roll, to be withdrawn thereby, means preventing the withdrawal of more than one envelop at a time, stop dogs operating beneath the top of said conveyer and between said rolls to engage and periodically release envelops for passage between said rolls, with respective type-plates, an envelop receiver at the discharge side of said rolls, and a type plate receiver beneath the lower roll, substantially as described.

44. In an addressing machine, a type-plate holder to contain a stack of plates, in combination with a belt conveyer, having

lugs to remove plates from said holder, a pair of printing rolls at the opposite end of the conveyer, distant from said holder, one of said rolls being coaxial with its end of the conveyer, inking means between the ends of the conveyer and above the same, an envelop holder also above said conveyer and between the ends thereof, said holder adapted to present the lower ends of upstanding envelops to the intake side of the upper printing roll, to be withdrawn thereby, means preventing the withdrawal of more than one envelop at a time, stop dogs operating beneath the top of said conveyer and between said rolls to engage and periodically release envelops for passage between said rolls, with respective type-plates, an envelop receiver at the discharge side of said rolls, a type plate receiver beneath the lower roll, and a packer, periodically operated at the front end of said plate receiver, to force the plates backward therein, substantially as described.

45. In a machine of the class described, a printing mechanism adapted to eject the printed article in a horizontal plane, in combination with an upstanding receiver adjacent to said mechanism and having a retarder upon its upper end, to receive the article from the mechanism and whereon the article is tilted by gravity and deposited upon the receiver, substantially as described.

46. In a machine of the class described, a printing mechanism adapted to discharge printed articles in a horizontal plane, in combination with an upstanding receiver having a retarder at its upper end to receive said articles, and provided with a ledge at its lower end whereby successive articles are held in position to be struck and turned over by those following, substantially as described.

47. In an addressing machine a frame, and a type plate feeder operable therein, in combination with a type plate holder arranged above said feeder, an ink roll arranged above said feeder to ink plates thereon, and a plate elevating part on the frame beneath said roll, as and for the purpose specified.

48. In an addressing machine, a frame, in combination with a type-plate feeder comprising a pair of endless belts, a holder or magazine adapted to contain a stack of type-plates, and from which the plates are removed successively by said belts, plate guides adjacent to respective belts and overhanging the same, an ink roll above the belts, a raised surface beneath said roll for supporting the plates against the pressure thereof, and suitable printing means, substantially as described.

49. In an addressing machine, a type-plate feeder and coacting printing members, in combination with a plate receiver having its receiving end beneath said members, to

receive plates therefrom, a packer bar extending across said receiver, guides for said bar, and means at the sides of the receiver for operating said bar, substantially as described.

50. In an addressing machine a type-plate feeder in combination with a printing mechanism adapted to simultaneously receive an envelop and a type plate beneath the envelop and also adapted to discharge both the type plate and the envelop, an envelop guiding means at the discharge side of said mechanism, means adapted to guide or

direct the type plate downwardly beneath the envelop at the discharge side of said mechanism, a drawer adapted to receive the plates from the last mentioned guiding means, and a reciprocating packer operable in said drawer, substantially as described.

In testimony whereof, I have hereunto set my hand, this 15th day of January, 1906, in the presence of two subscribing witnesses.

RUSSELL N. ROGERS.

Witnesses:

CHARLES GILBERT HAWLEY,
CHAS. F. MURRAY.