

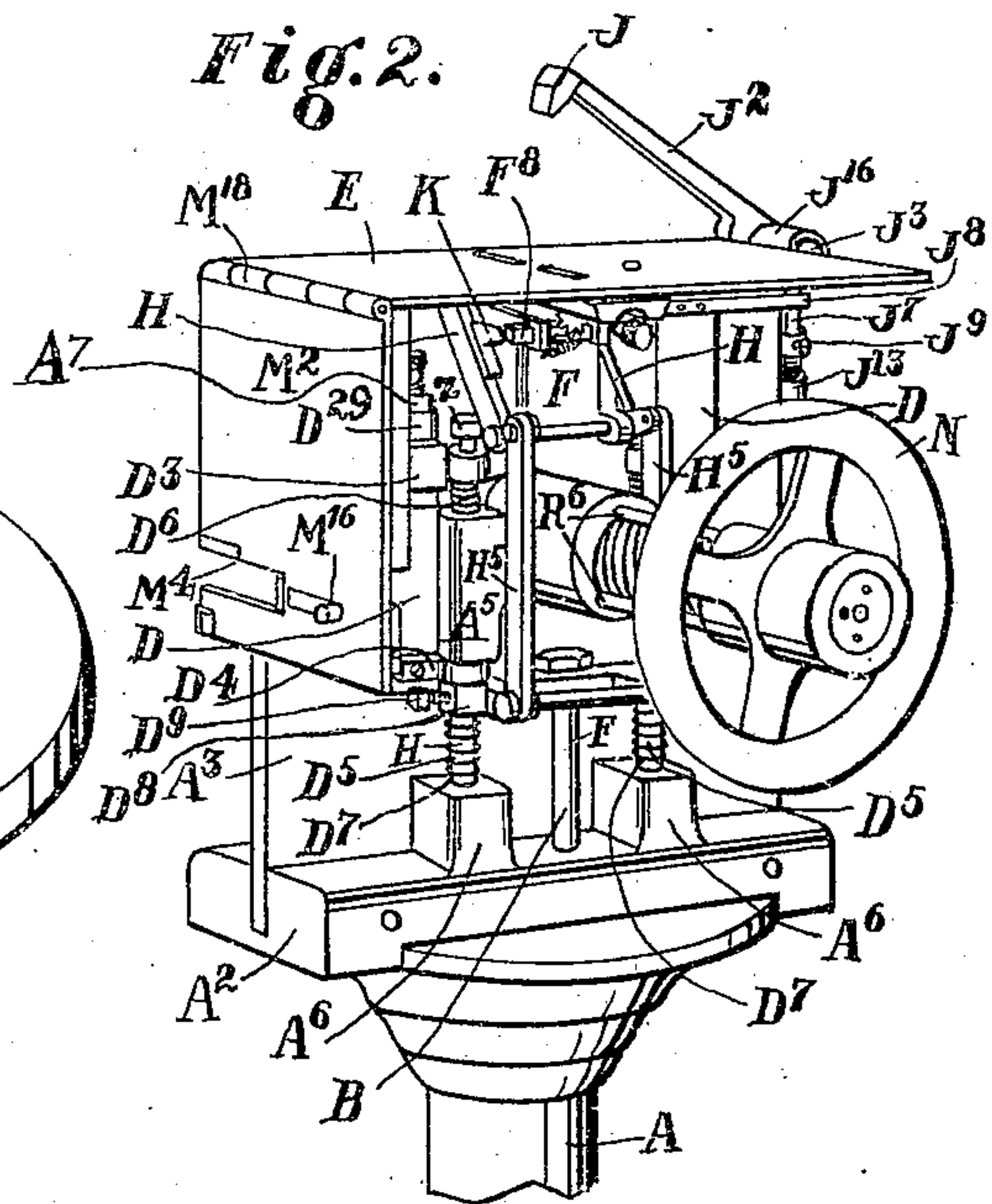
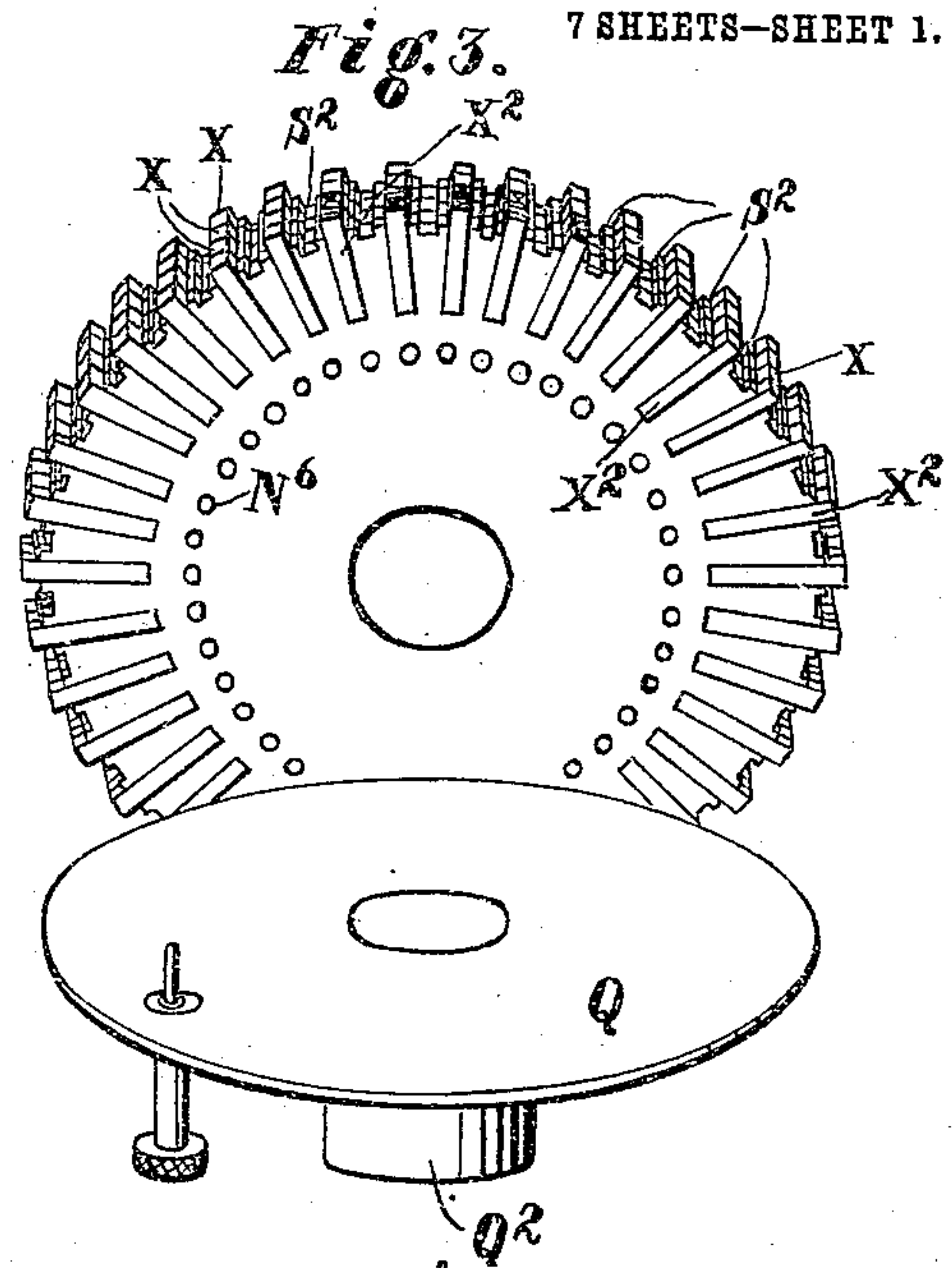
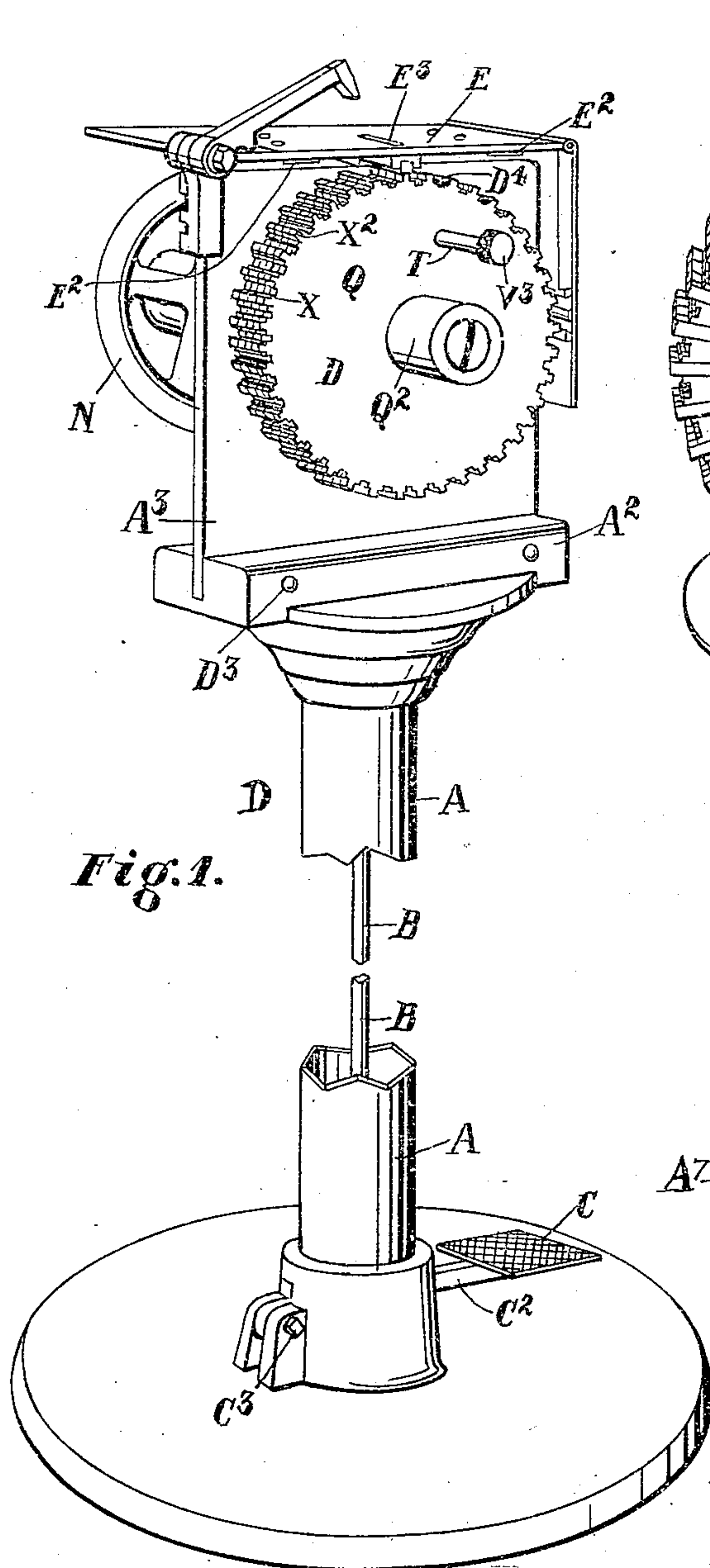
H. HIGGIN.  
MACHINE FOR MARKING LAUNDRY TAGS, CLOTHES, AND OTHER ARTICLES MADE  
OF TEXTILE FABRICS.

APPLICATION FILED SEPT. 21, 1906.

959,860.

Patented May 31, 1910.

7 SHEETS—SHEET 1.



WITNESSES:  
Peter Rodman  
M. L. L. McQueen,

INVENTOR:  
Henry Higgin  
BY Wm. Hubbell Fisher,  
ATTORNEY.



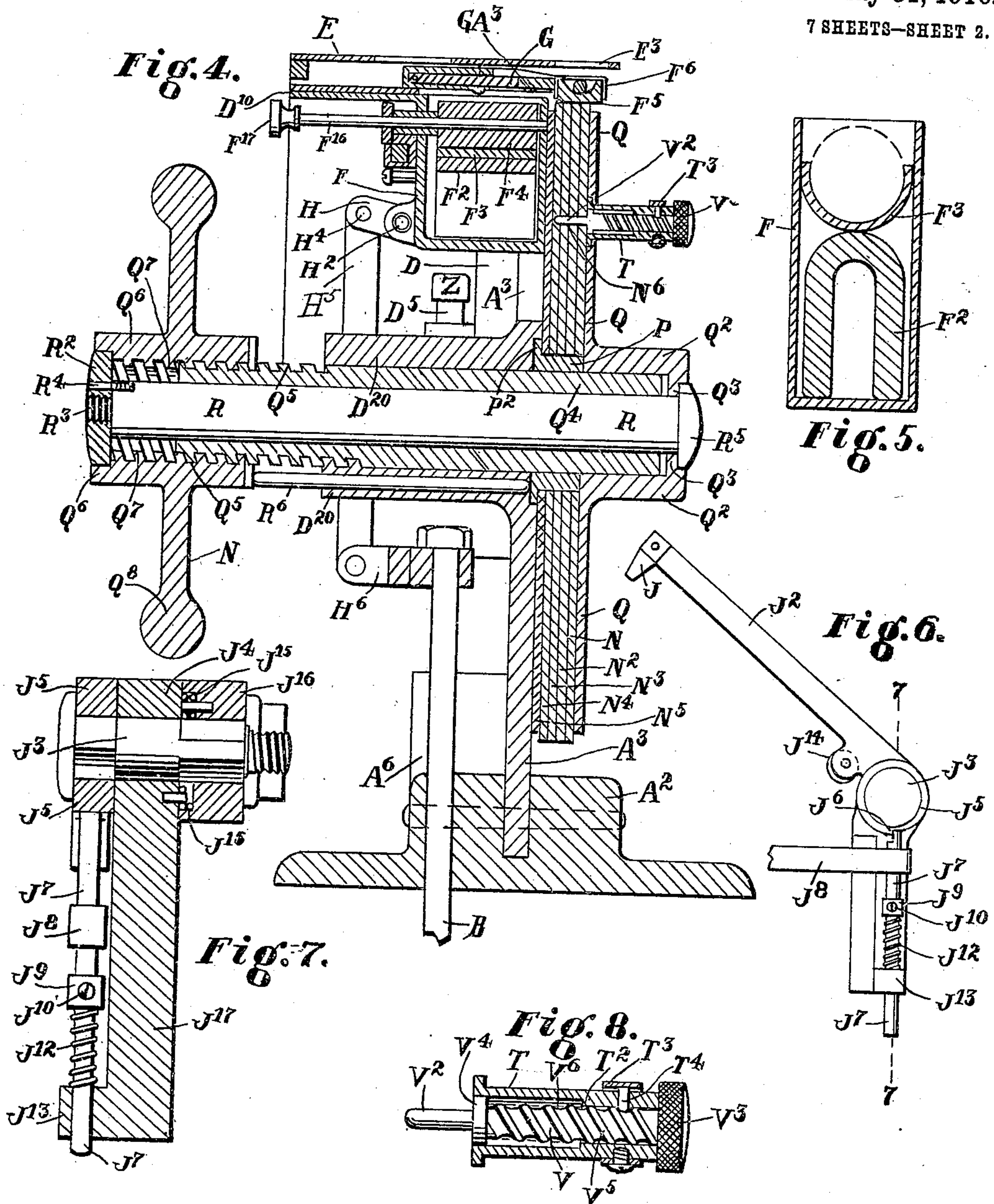
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M. L. L. McQueen,

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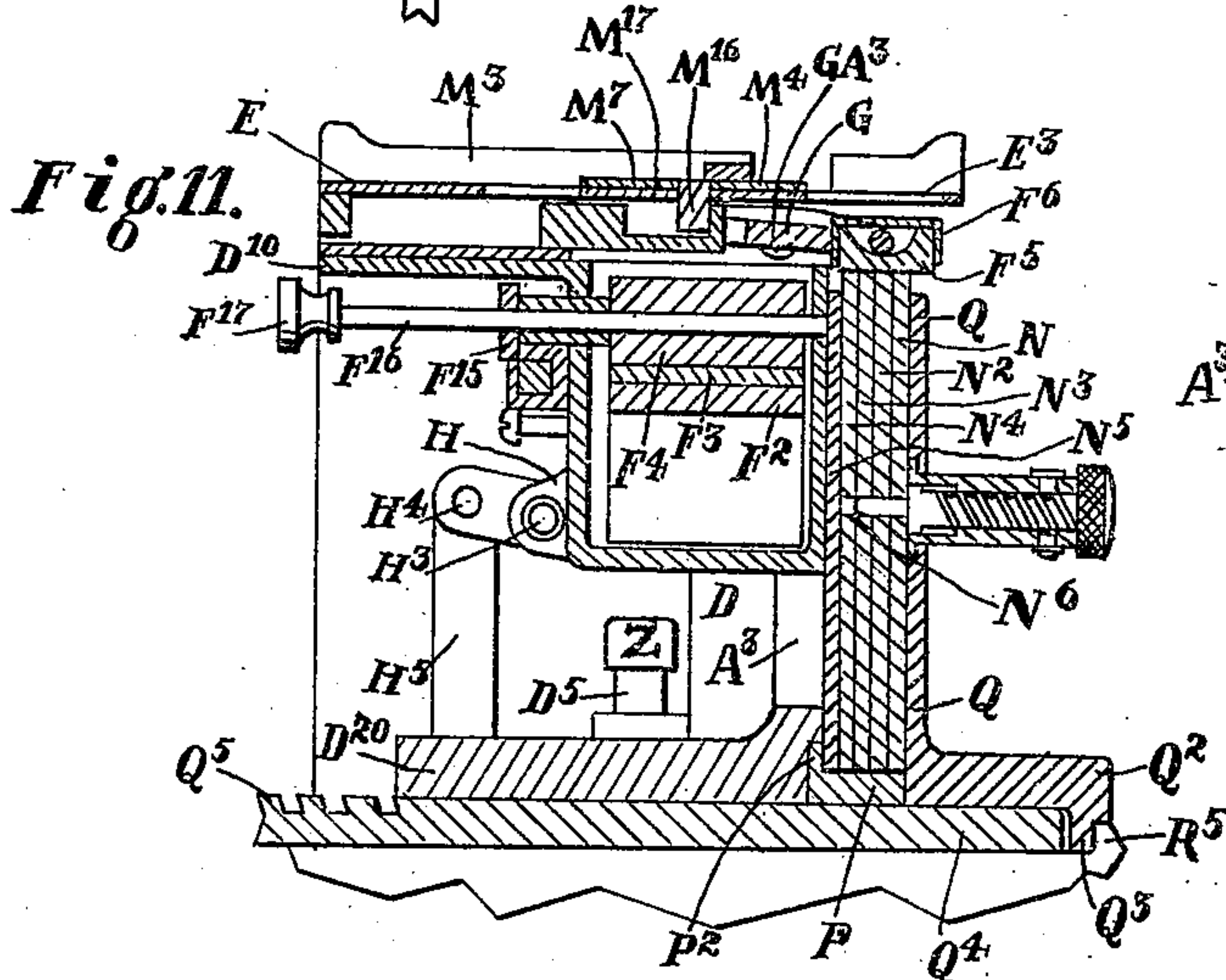
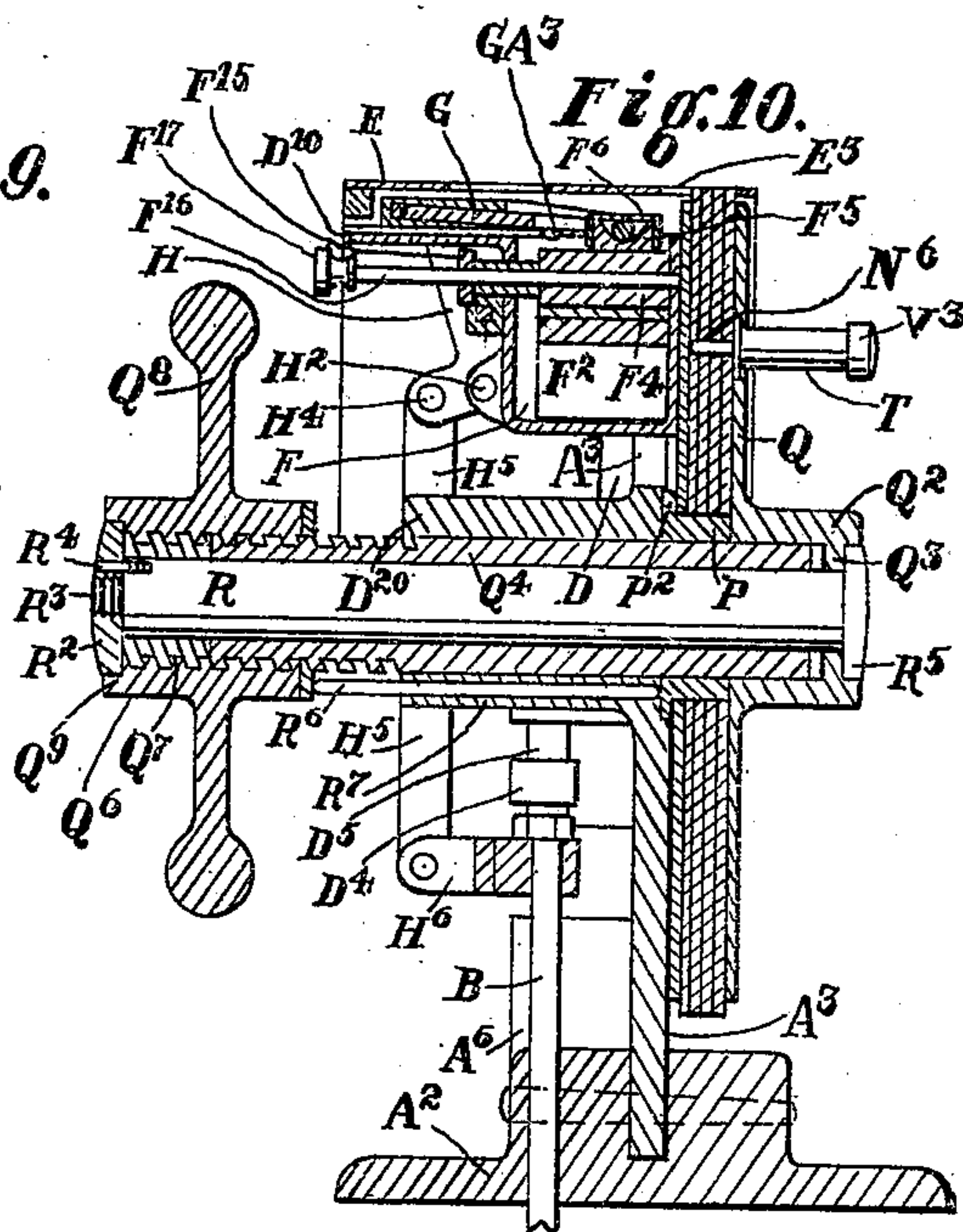
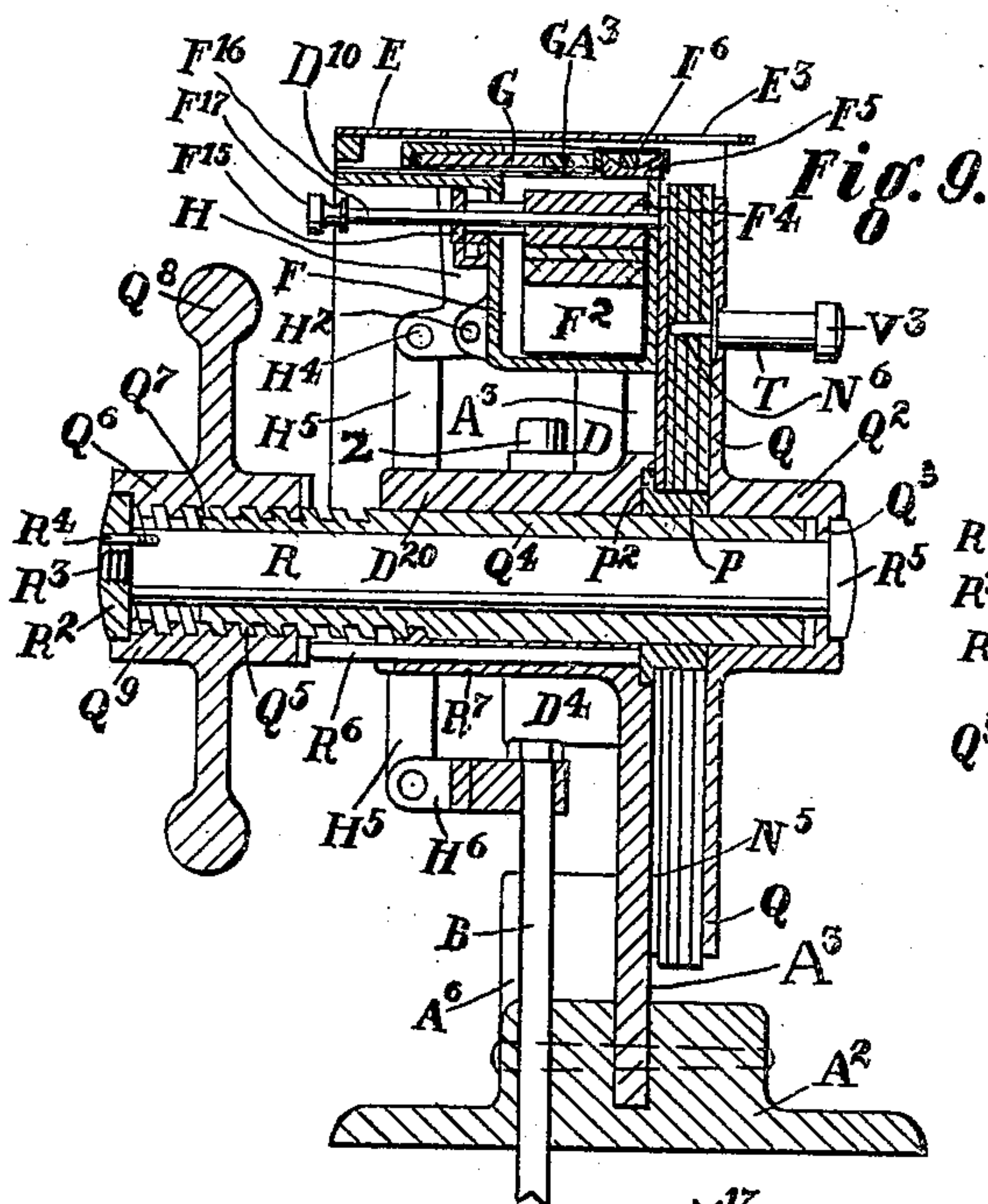
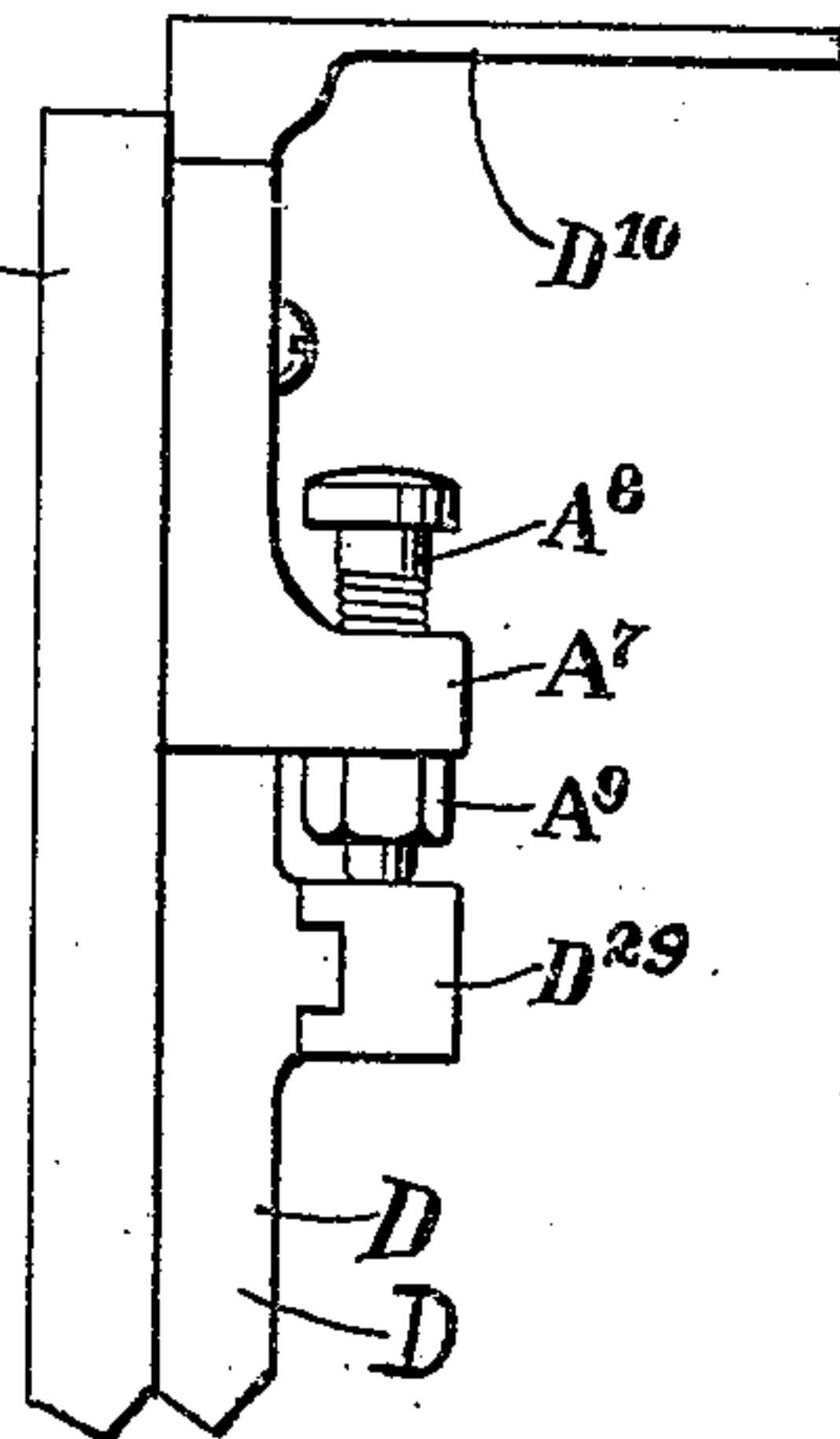


Fig. 12.



WITNESSES:

Patte Rodman  
M. L. L. McQueen

INVENTOR:

Henry Higgin  
BY Wm. Hubbell Fisher  
ATTORNEY.



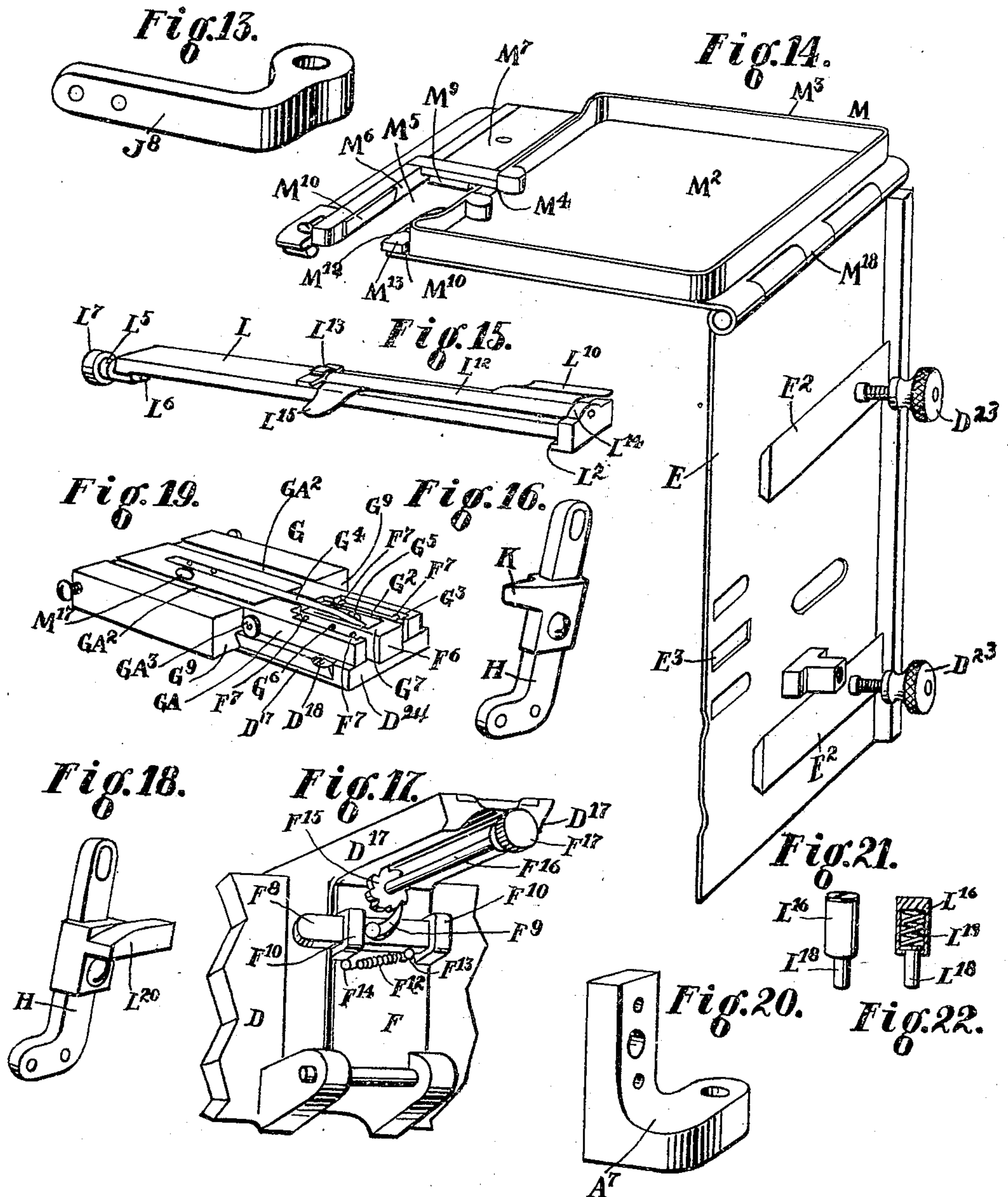
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M. L. L. McQueen.

INVENTOR.  
Henry Higgin  
BY Wm. Hubbell Fisher,  
ATTORNEY.



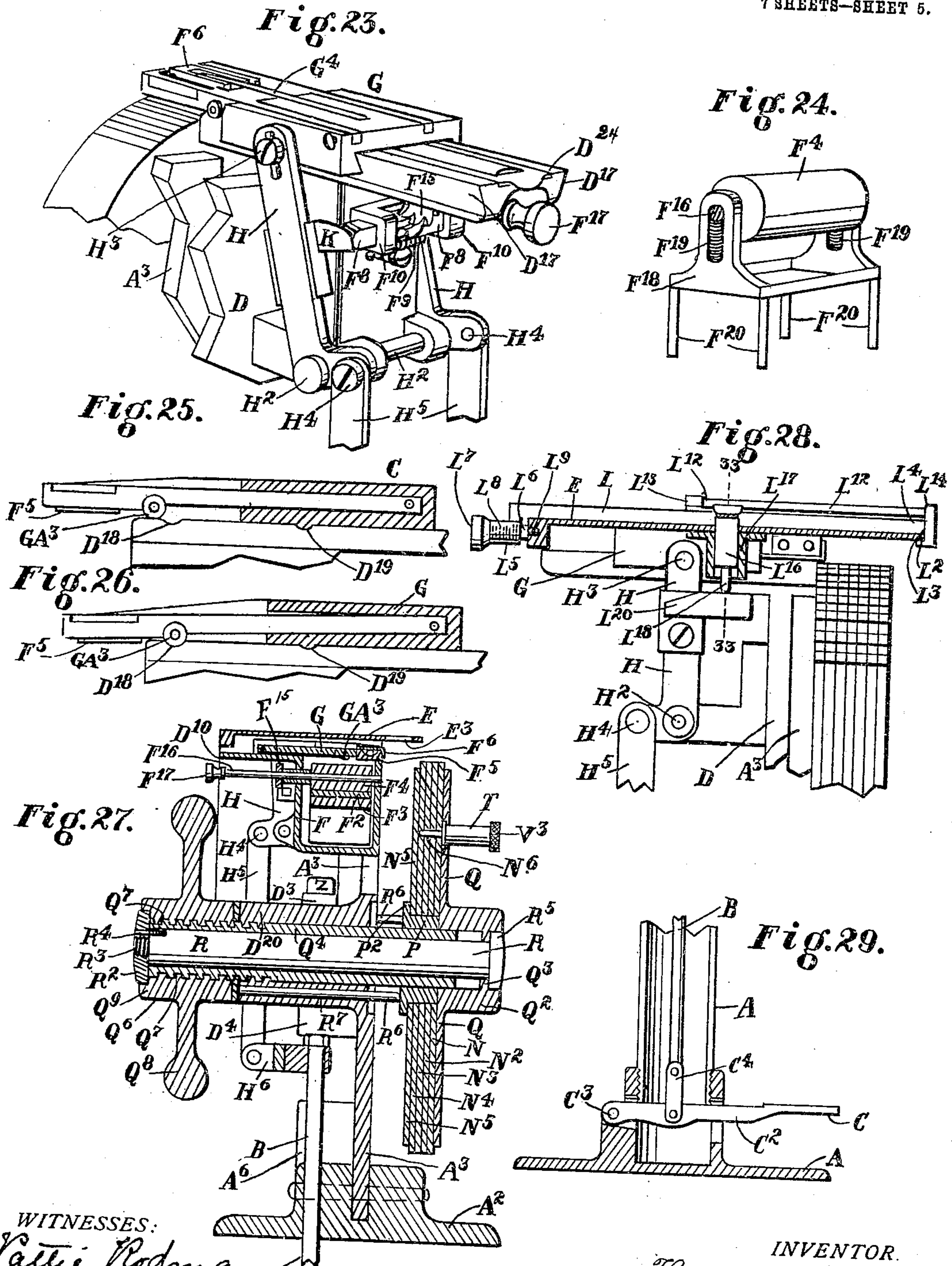
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M. L. L. McQueen,

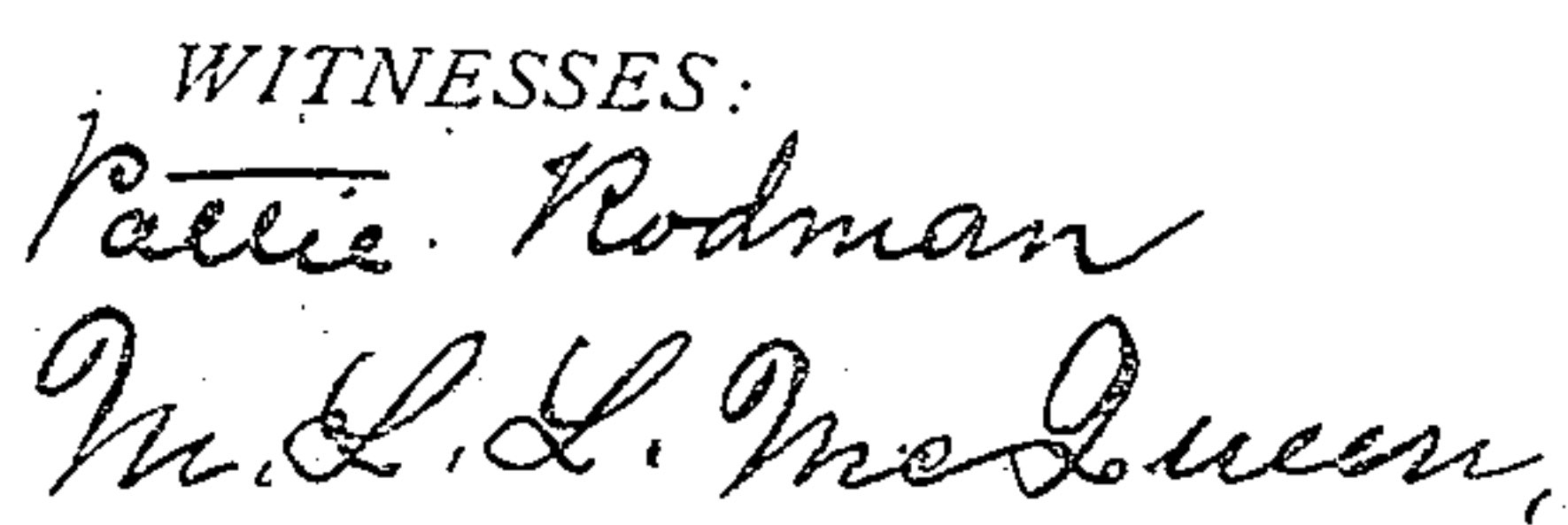
INVENTOR.  
Henry Higgin  
BY Wm. Hubbell Fisher  
ATTORNEY.



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7 SHEETS--SHEET 6.



INVENTOR.  
BY *Henry Higgin*  
*Wm. Hubbell Fisher,*  
ATTORNEY.



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7 SHEETS—SHEET 7.

Fig. 34.

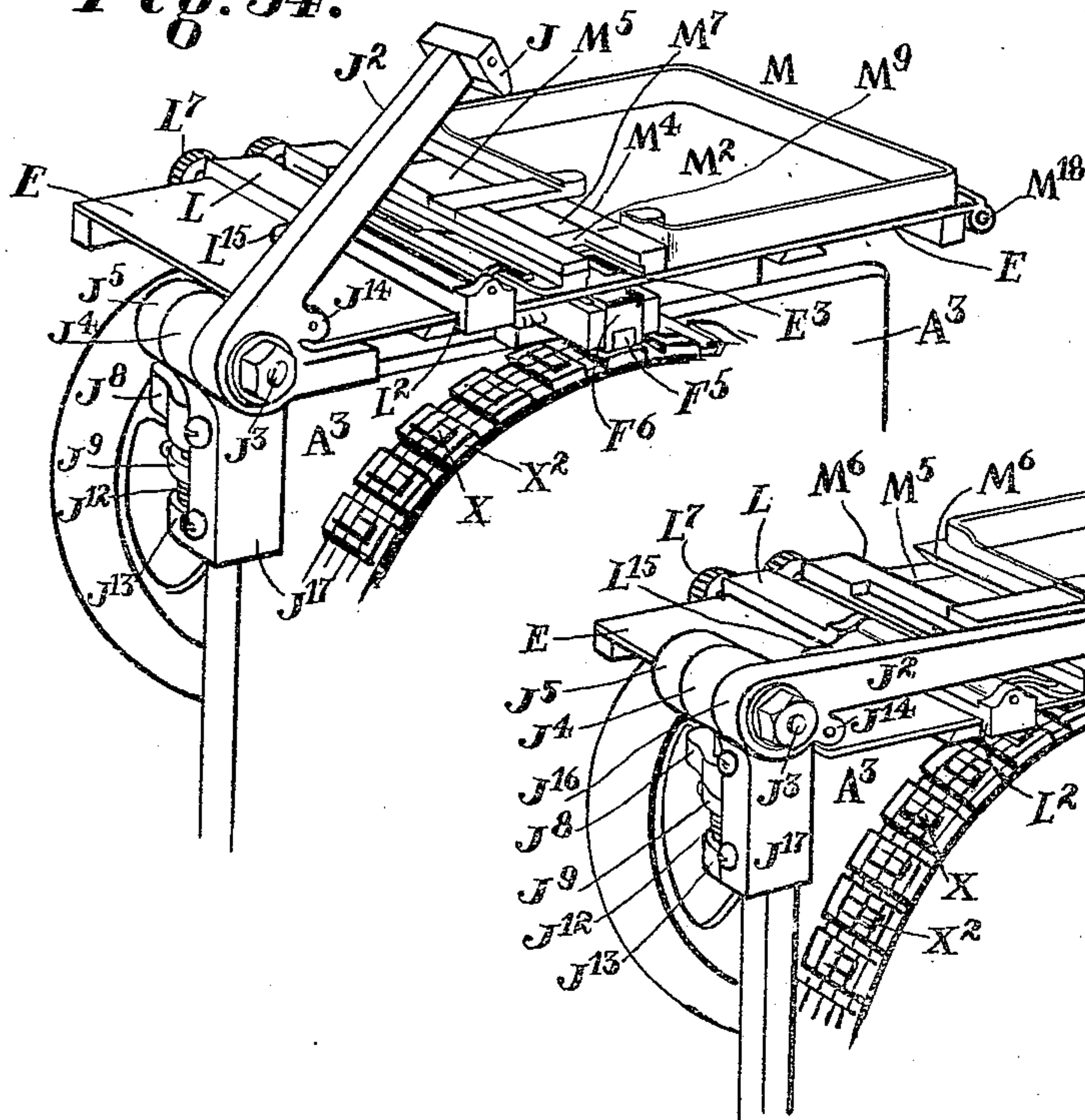


Fig. 39.

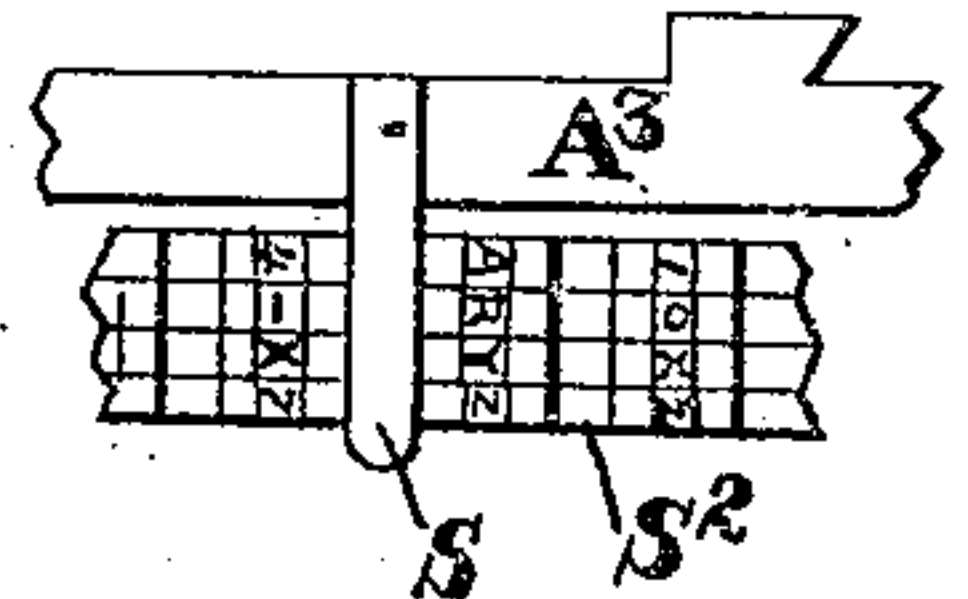


Fig. 35.

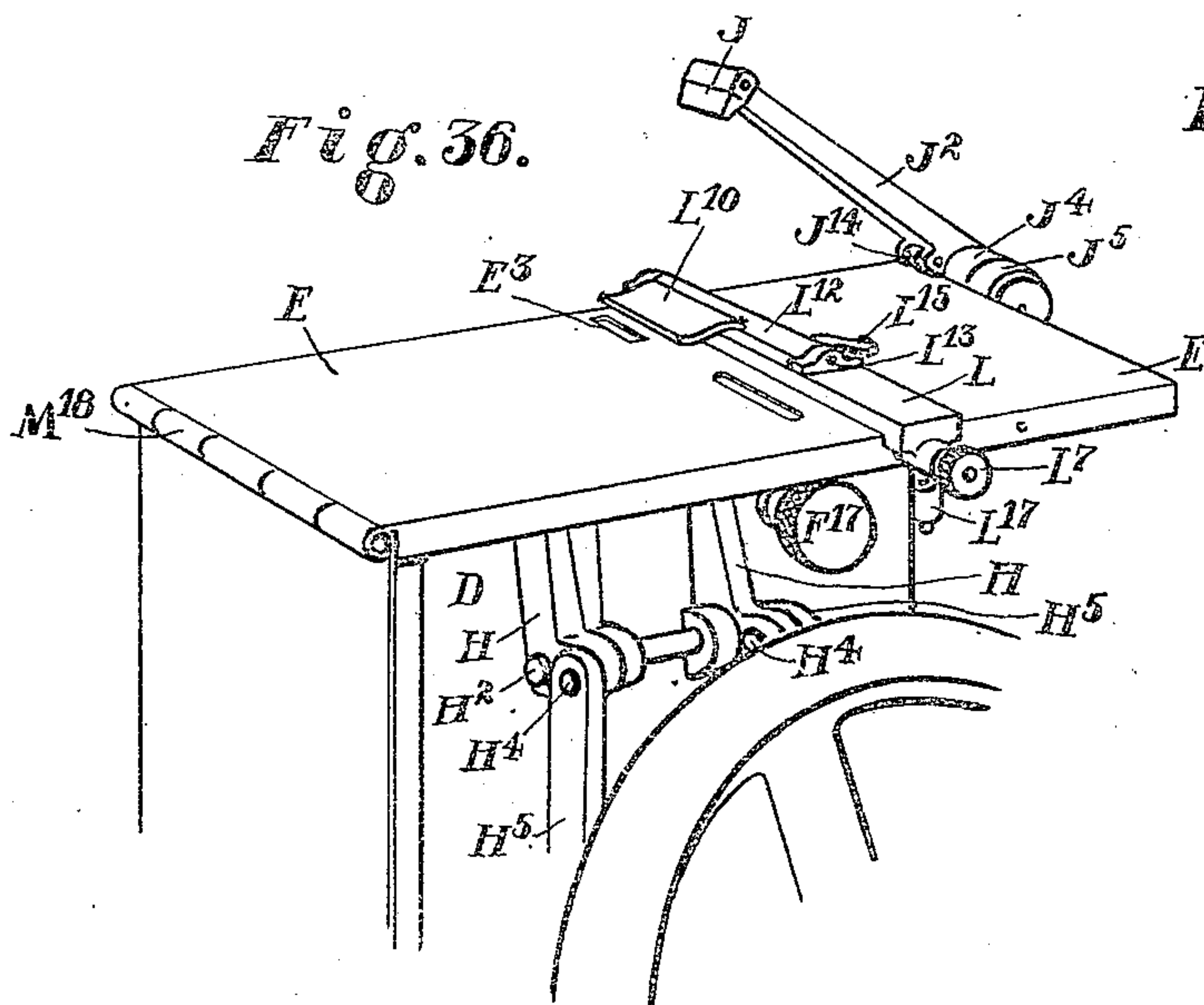


Fig. 36.

Fig. 37.

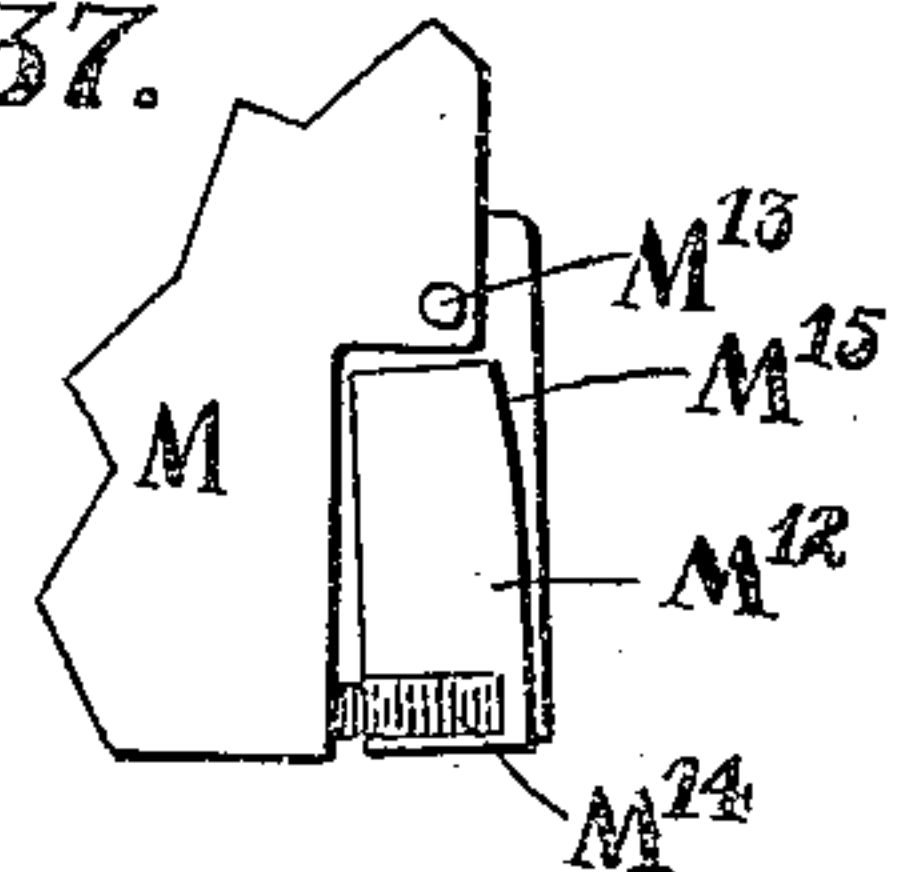
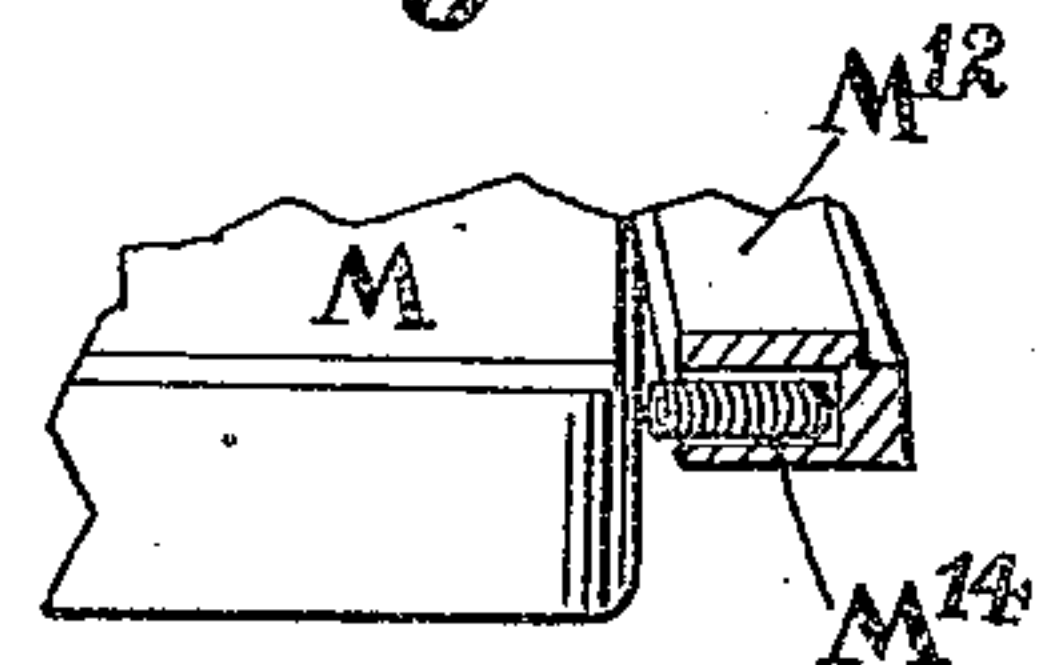


Fig. 38.



WITNESSES:  
Pattie Rodman  
M. L. L. McQueen,

INVENTOR.  
Henry Higgin  
BY Wm. Hubbell Fisher,  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

HENRY HIGGIN, OF NEWPORT, KENTUCKY.

MACHINE FOR MARKING LAUNDRY-TAGS, CLOTHES, AND OTHER ARTICLES MADE OF TEXTILE FABRICS.

959,860.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed September 21, 1906. Serial No. 335,644.

*To all whom it may concern:*

Be it known that I, HENRY HIGGIN, a citizen of the United States, and a resident of the city of Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Machines for Marking Laundry-Tags, Clothes, and other Articles Made of Textile Fabrics, of which the following is a specification.

The several features of my invention and the various advantages resulting from their use conjointly or otherwise will be apparent from the following description and claims.

In the accompanying drawings making a part of this application, and in which similar letters of reference indicate corresponding parts, Figure 1 is a perspective front view of the marking machine. Fig. 2 is a perspective back view of the upper portion of the machine. Fig. 3 is a perspective view of a disk, and also of the wheels, carrying the letters, numbers, characters or marks which are to be impressed upon the fabric to be marked. The purpose of this view is to assist in illustrating the mode of changing the distinguishing marks to be made upon the cloth. Fig. 4 is a vertical section of the upper portion of the machine. This section is taken in the plane of the axis of the shaft around which the marking wheels revolve. This shaft and certain other portions of the mechanism are shown in elevation. Fig. 5 is a cross sectional view of the ink well, and of the pieces of the absorbent material therein. Fig. 6 is a side elevation (enlarged) of the hammer, and of the immediate mechanism employed for unlocking the hammer when elevated and for allowing it to descend, and force the goods against the inked marking letters, etc. Fig. 7 is a view, partly in section and partly in elevation, of the mechanism shown in Fig. 6. The section of those parts shown in section is taken in the plane of the dotted line 7, 7, of Fig. 6. This Fig. 7 is upon a larger scale than that upon which Fig. 6 is made. Fig. 8 is a view, partly in section and partly in elevation, of the stop pin, for setting the marking type wheels, so as to mark a given word, number, or the like. This figure is on an enlarged scale to better illustrate the construction of the parts shown. Fig. 9 is a view, partly in vertical central section and partly in elevation, of the upper portion of

the machine. The operating parts occupy the position where the ink dauber (or inking pad) has been retracted away from the marking characters, but has not reached the ink distributing roller, and is in a position midway between these marking characters and this inking pad. This figure is on a small scale, comparatively speaking. Fig. 10 is a vertical central section similar to that of Fig. 9, the operating parts being shown in the position where the inking pad or dauber has been fully drawn back and rests upon the top of the device which imparts ink to it, namely: upon the ink distributing roll. Fig. 11 is a vertical central section through the vertical plane of the axis of the shaft of the marking wheels, only that part of the mechanism which is above the axis of that shaft being shown. Parts of the mechanism are shown in elevation. The scale of this figure is larger than that of Figs. 9 and 10. The arrangement of devices for enabling tags to be marked is also present. Fig. 12 is a view showing a preferred means for the elevation of the table. Fig. 13 is a view in perspective of the arm which aids in holding the vertical shaft which is a part of the mechanism for locking the hammer in an elevated position. Fig. 14 is a perspective view of the devices for holding the tags, for advancing them forward, and guiding them to the marking characters. In this view, the under side of that table of the machine which is used when clothes or paper are marked directly is shown at the right hand side hereof, in a vertical position. This latter table is shown in proper place in Fig. 1, and there the table for operating the tags is shown hanging down at the right and out of use. In practice, the table shown in Fig. 1 is never vertical, but the table for marking tags when in use is located on the table shown in Fig. 1, and when in use appears substantially as shown in Fig. 34. When not in use, it preferably hangs down at the side as illustrated in Fig. 1. Fig. 15 is a top perspective view of the clamp that holds the collars in place. Fig. 16 is a perspective view of the lever and incline which moves the pawl that rotates the inking roller. Fig. 17 is a perspective view of a portion of the mechanism that rotates the ink distributing roller, thus causing it to receive ink in preparation for the latter inking the inking pad



or dauber. Fig. 18 is a view in perspective of the lever and incline that causes the clamp which holds collars and like articles to be marked. Fig. 19 is a perspective view of the top end and side of the mechanism that carries the inking pad, which latter inks the marking characters. Fig. 20 is a view of the arm that carries the screw whereby the upward vertical movement of the mechanism for inking the marking characters and for operating the hammer, and for advancing the tags is duly limited. Fig. 21 is an elevation of the upper portion of the reciprocatory pin that impinges against an arm of the collar clamp, and elevates said arm to depress the clamp. Fig. 22 is a view partly in elevation and partly in vertical central section of the same pin shown in Fig. 21. Fig. 23 is a view in perspective of the mechanism which operates the inking pad, and of parts of the frame and of the marking wheels. Fig. 24 is a perspective view of the preferred device for upholding the ink distributing roller, which latter occupies the upper portion of the ink well or reservoir. Fig. 25 shows partly in elevation and partly in section the preferred means for elevating and lowering the inking pad. In this figure, the inking pad is in a position where it is raised. Fig. 26 shows partly in elevation and partly in section the same device as of Fig. 25, but herein the inking pad is in a position where it is lowered. Fig. 27 shows in vertical section in a plane through the axis of the shaft of the marking wheels, the upper mechanism and its position when the inking pad is retracted part way, and the marking wheels are moved forward and out from under the table, so as to be reset. Fig. 28 is a view, partly in elevation and partly in section, of the mechanism for operating the collar clamp. Fig. 29 is a vertical central section illustrating the preferred construction of the treadle and its lever and shaft for operating certain portions of the machine. Fig. 30 is a perspective view of the upper portion of the machine, showing the rear side, and that side of the machine which is at the right in Fig. 2. Fig. 31 is a view in perspective of the preferred construction of the devices for holding the inking pad and for pressing it down alternately on the marking characters and on the ink distributing rollers. Fig. 32 is a vertical central section of the mechanism for locking the table in position, and for unlocking the table, to enable the latter to be removed. Fig. 33 is a vertical cross section of the mechanism for operating the collar clamp, taken in the plane of the dotted line 33, 33, of Fig. 28. Fig. 34 is a perspective view of the upper portion of the machine showing the tag table in working position and the parts in readiness for the hammer to descend. Fig.

35 is a similar view, but showing the hammer down after it has descended, and in the act of striking down the tag or analogous article onto the marking characters and thus causing the tag to be marked with the print of such characters. Fig. 36 is a view of the main table and the collar clamp thereon in position for holding the goods it is used to hold while such goods are being marked. Fig. 37 is a view of the underside of a guide-piece constituting one side of the guideway, whereby the laundry-tag is guided to place over the marking characters, and held there. This view also shows the adjacent portion of the laundry-tag table, and the spring for elastically pressing a part of this guide-piece into the guide-way. Fig. 38 is a perspective view of that end of the laundry-tag table, which in Fig. 37, faces toward the bottom of the drawing sheet. This Fig. 38, also affords a view partly in perspective and partly in section of the guide-piece shown in Fig. 37. Fig. 39 is a top view of a part of each of the marking wheels, and of a part of the adjacent stationary frame, and of the stud which is fixed to said frame and adapted to enter any slot of any of the marking wheels, as the latter are brought toward the frame. In this view, the disk in front of the wheels, and the disk behind said wheels are omitted as unnecessary to the understanding of the functions of this stud.

I will now proceed to describe my invention in detail.

The machine is supported upon a foundation A of any suitable kind. In the drawings, Fig. 1, it is shown as circular and to be carried with the machine. The machine can be operated by any kind of power. A convenient kind of power for common use is illustrated in Fig. 1, and consists of the treadle C.

B is a reciprocatory rod, for moving the mechanism at the upper portion of the machine. A preferred manner of connecting the treadle to the reciprocatory rod B is as follows: The treadle C has a lever bar C<sup>2</sup>, pivotally fulcrumed at C<sup>3</sup>. The free end of the treadle bar C<sup>2</sup> is pivotally connected to one end of a link C<sup>4</sup>. The other end of this link C<sup>4</sup> is pivoted to the lower end of the rod B. Depressing the treadle C draws down the rod B, and the latter draws down the mechanism which is to be lowered. Suitable means are provided so that this last named mechanism may move up and down in a regular path. A preferred means is as follows: There is a general carrying plate D to which all of said vertically reciprocating mechanism is attached. This carrying plate has beveled guides D<sup>2</sup>, D<sup>2</sup>, which engage beveled guides A<sup>4</sup>, A<sup>4</sup>. These last named guides A<sup>4</sup>, A<sup>4</sup> project from the vertical frame plate A<sup>3</sup>, which latter extends



up from the base piece  $A^2$  on the foundation A.

In my preferred construction, and as shown, the carrying plate D carries the table on which the articles to be marked are supported. It also carries the mechanism for inking the marking wheels, and the means for elevating the marking hammer and for setting free this hammer so that it can descend and press the cloth upon the marking characters and thus mark the goods. When the machine is provided, as it is here, with means for holding and advancing tags to be marked, the carrying plate carries the means whereby this may be done. These means include the table on which the tags are held until marked.

The means for moving the inking or marking wheels, and the means for clamping the collars, and the means for holding and moving the tags constitute features of invention. They may be respectively located otherwise on appropriate supports, and there be appropriately operated; but I prefer to support them on this carrying plate D in the novel manners shown, and thus enable the machine to gain greatly in compactness, and in economy of construction and in facility of operation. The support for the marking hammer is stationary, and the support for the marking wheels is stationary. None of these moves with the carrying plate D.

It is desirable that the table and the other mechanism supported on the carrying plate should stand elevated when the goods (cloth or other fabric) is not being marked. One object in elevating the table is that the type inking pad which works beneath the table shall have opportunity to move out and over and down onto the marking characters, and ink them, and then rise off from them, and move back out of the way, so that the table carrying the article to be marked may descend and put the article close over the marking characters, in position for the hammer to impress the article upon them, and support them there, while the hammer thereupon marks the article.

I have provided mechanism, so that when the treadle is not depressed, the table and mechanism carried by the carrying plate will be automatically elevated and held elevated until again lowered by the treadle. The preferred construction for this object is as follows: From the vertical frame plate  $A^3$  extends a projection or lug  $A^5$ . Suitable means for limiting and regulating the upward movement (travel) of the carrying plate D are provided, and are preferably as follows: An arm  $A^7$  is fixed to the frame plate  $A^3$ . This arm carries a set screw  $A^8$ , screwed into and through this arm  $A^7$ . The lower end of this set screw  $A^8$  projects below the arm  $A^7$ , and the distance it projects down regulates the height to which the

frame D carrying the lug  $D^{29}$  will rise. This lug or projection  $D^{29}$  is the part that comes into contact with the bottom of the set screw  $A^8$ . Thus the amount of upward movement of the carrying plate D can be regulated at will. A clamping nut  $A^9$  to prevent the set screw  $A^8$  from turning is provided. The vertical frame plate  $A^3$  carries two arms  $D^3$ ,  $D^4$ , one above and the other below the projection  $A^5$ . These arms  $D^3$ ,  $D^4$  serve as stops respectively when they impinge against the projection  $A^5$  of the vertical frame plate  $A^3$ . The lower arm  $D^4$  limits the forward movement of the carriage which holds the inking pad. The upper arm  $D^3$  limits the downward movement of the carrying frame plate D. A rod  $D^5$  is connected to the arms  $D^3$ ,  $D^4$ , and passes through the projection  $A^5$ , and is slidable up and down through the projection  $A^5$ . The foot of this rod  $D^5$  preferably enters loosely the block  $A^6$  of the foundation  $A^2$ . A coiled spring  $D^6$  supported on the projection  $A^5$  incloses the rod  $D^5$ . This spring  $D^6$  is below the upper arm  $D^3$  and tends to always lift the arm  $D^3$  and the carrying plate D, whenever the treadle is not held down. Another coiled spring  $D^7$ , performing a similar office may be (and preferably is) employed below, viz: This spring embraces the rod  $D^5$ , rests on the block  $A^6$ , and is below a sleeve  $D^8$  set fast on the rod  $D^5$ . This sleeve  $D^8$  had better be adjustable on this rod  $D^5$ . I have, therefore, made it slidable on this rod  $D^5$  and have provided it with a set screw  $D^9$ . By setting this sleeve  $D^8$  up or down on the rod  $D^5$ , the spring  $D^7$  can be more or less compressed, and its consequent elasticity be proportionately increased or diminished. The sleeves  $D^8$ , at opposite sides, the construction being symmetrical, are preferably united as one, and this cross piece so made, performs a convenient means of attachment of the rod B. A rod  $D^5$ , projection or lug  $A^5$ , arms  $D^3$  and  $D^4$ , springs  $D^6$ ,  $D^7$ , sleeve  $D^8$  and set screw  $D^9$ , are found in a like construction on the other side of the shaft of the marking wheels. This duplicate construction is present to better equalize the impelling force which at all times tends to raise the carrying plate D. When the treadle C is not depressed, the table and the other mechanism carried by the carrying plate D will, by the action of this spring mechanism, be elevated and will continue elevated until the treadle C is again depressed. The table could be stationary on the carrying plate D. It is, however, important to inspect and reach the mechanism located beneath it. Especially is this the case regarding the inking apparatus, because the ink well must be, from time to time, replenished, and the inking pad renewed.

A preferred manner of enabling the table



to be removed and replaced is as follows: The upper part of the carrying plate D is provided with arms  $D^{10}$ ,  $D^{10}$ , which extend out as shown. Each arm contains a guide-  
 5 way  $D^{12}$ . On the under side of the table E are corresponding guide pieces  $E^2$ ,  $E^2$ . These respectively interfit with the guide-ways  $D^{12}$  of the arms  $D^{10}$  of the plate D. Thus the table can be drawn out on the  
 10 guideways  $D^{12}$ ,  $D^{12}$ , so as to uncover the inking mechanism, etc., below, and when its removal becomes necessary, it can be taken away from the guideways. It can be easily replaced in position. For when partially  
 15 drawn out, it can be slid back on the guideways  $D^{12}$ ,  $D^{12}$ , or when altogether removed, its guides can readily be inserted in the guideways  $D^{12}$ ,  $D^{12}$ , and the table then slid to place.

20 To prevent the table from being accidentally moved out of its proper working position, I provide a set screw or a catch. The latter I prefer, and have illustrated. The catch or latch consists of a long and sub-  
 25 stantially flat spring  $D^{13}$  fastened at one end portion by rivets or screws  $D^{14}$ ,  $D^{14}$ , to the adjacent arm  $D^{10}$ . The free end of this spring carries a detent knob or lug  $D^{15}$ .

In the under surface of the adjacent guide  
 30 piece  $E^2$  of the table E is a depression  $E^3$  so located that when the table is slipped forward to place, the detent knob or lug  $D^{15}$  will enter this depression and hold the table securely in position. The spring  $D^{13}$  is pro-  
 35 vided with a handle  $D^{16}$ . When the table is to be unlocked from the adjacent guideways  $D^{12}$ , the handle  $D^{16}$  is depressed by the operator, and the detent  $D^{15}$  is thereby disengaged from the notch. The table can then  
 40 be drawn out on the guideways  $D^{12}$ ,  $D^{12}$ , as first mentioned. Obviously, the guideways may be on the table, and the guide pieces be on the arms, without substantially altering this feature of my invention.

45 As means for securing the table E in position, on the arms  $D^{10}$ ,  $D^{10}$ , either additional to the latch  $D^{15}$  shown in Fig. 32, or otherwise, I provide the set screws  $D^{23}$ ,  $D^{23}$ . The shank of each of these is respectively  
 50 received in the adjacent slots  $D^{21}$  of the arm  $D^{10}$ . Then each set screw  $D^{23}$  is tightened and contributes to hold the table fast to the arms  $D^{10}$ ,  $D^{10}$ .

Mechanism for inking the type employed  
 55 in my machine is, of course, necessary. Various kinds of such mechanism for inking the type may be employed. In the drawings and in the following description, I have set forth a preferred mechanism for carrying  
 60 into effect the inking of the type. Inasmuch as this mechanism cannot be claimed independently of its coöperation with other mechanism herein, on account of the divisions of the Patent Office, I intend to protect  
 65 the same by claims in a division hereof.

The preferred kind of mechanism relating to the operation of inking the marking characters consists in general of the following parts,—an ink reservoir, means for taking up this ink and distributing it upon a  
 70 proper primary pad, a device for delivering this ink from this primary ink pad to a reciprocating pad which moves therefrom to the marking characters and puts ink upon them, mechanism for moving this pad to the  
 75 marking characters, applying it to them, lifting it from them, and retracting it and applying it to the primary inking pad.

The ink reservoir or ink well F is attached to the carrying plate. In this well  
 80 F is the ink and also means for carrying the ink up to the distributing pad  $F^5$ , herein-after mentioned. In the ink well F, I locate a piece  $F^2$  of felt or other suitable fabric or substance capable of capillary attraction.  
 85 In the present instance, I have bent the piece  $F^2$  into the form of an arch. Above this I have located another absorbent piece  $F^3$  and have formed the latter into a semi-circle, whose convex and under side is  
 90 against the top of the piece  $F^2$  and its concave side uppermost. Above this semi-circular piece  $F^3$  is a cylinder or roll  $F^4$  adapted to be rotated automatically by means, in  
 95 turn moved by a part of the mechanism which advances and retracts the inking pad. The ink rises in piece  $F^2$ , and thence goes into piece  $F^3$ . The roll  $F^4$  is in contact with the piece  $F^3$  and receives ink therefrom. As  
 100 it revolves, the ink is quite evenly distributed on its surface, and is in condition to be given off evenly to the inking pad  $F^5$ . This inking pad consists of one or more layers of felt. This pad  $F^5$  is held in a  
 105 holder  $F^6$ . For convenience of handling in cases of repair and of renewing of the felt, this holder is in a separate piece from the mechanism that moves it back and forth. The holder has on each side pins or lugs  $F^7$ ,  
 110 and these lugs rest on ledges or shoulders  $G^2$  in the carriage G. Stops  $G^3$ , at each end of these ledges  $G^2$ , prevent the lugs from slipping from the shoulders  $G^2$ , and therefore hold the pad holder in place. This  
 115 pad holder  $F^6$  is held elastically down in place in the carriage G, and the preferred means for doing this is the flat spring  $G^4$ , connected at one end to the carriage and at the other end bearing down on the pad  
 120 holder. That portion of the pad holder which I prefer it (this spring  $G^4$ ) shall rest upon, is a roller  $G^5$  which I have located in the holder above and at about the midlength of the pad. This roller  $G^5$  prevents friction  
 125 between the holder and the carriage. When the inking pad  $F^5$  comes down upon the marking characters, of which there are usually several, the pad holder being pressed down at one middle point and only one, to  
 130 wit: by this spring on the roller, the pad is



free to come down upon all of the line of marking characters and ink all equally and evenly.

For convenience of reaching the pad  $F^5$ , I locate the roller  $G^5$  and the journal bearings of the journals of this roller  $G^5$  in a separate box  $G^7$ , provided with upper flanges  $G^8, G^8$ . This box rests in the pad holder  $F^6$ , and the flanges  $G^8, G^8$  rest on the edges of the side walls of the pad holder  $F^6$ . When the operator wishes to reach the pad  $F^5$  proper, he lifts out this box  $G^7$  containing the roller  $G^5$ . The pad holder can now be reached. The operator can change it for a new pad, or can otherwise manipulate it as necessary. Then he replaces the box  $G^7$  in the pad holder  $F^6$ .

The mechanism for moving the carriage which carries the pad and its holder back and forth is as follows:  $D^{24}$  indicates an arm carried by the carrying plate  $D$ , and having beveled sides  $D^{17}, D^{17}$ . The carriage  $G$  has low down on it side beveled flanges  $G^9, G^9$ , which respectively overlap the beveled sides  $D^{17}, D^{17}$ , and engage them. Thus the carriage  $G$  slides back and forth, guided by the sides or guides  $D^{17}, D^{17}$  of the plate  $D$ , and by its own flanges  $G^9, G^9$ . A lever  $H$ , pivotally fulcrumed at  $H^2$  to the frame plate  $D$ , is connected at one end by a pivot  $H^3$  to the carriage  $G$ , and at the other end by a pivot  $H^4$  to one end of the link  $H^5$ . This link  $H^5$  is, at its other end, pivotally connected to a plate  $H^6$ . The upper end of rod  $B$  (which rod has been mentioned as moved by the treadle  $C$ ) is connected to this plate  $H^6$ . It should be noted that the opening in lever  $H$  to receive the pivot  $H^3$  is slotted, so as to allow the arcal movement of that end of the lever  $H$  to take place. The set nut or sleeve  $D^8, D^9$  aforementioned, which is fixed on the rod  $D^5$  is connected rigidly with the plate  $H^6$ . I have thus described the mechanism on one side of the vertical center of the mechanism for reciprocating the carriage. This mechanism, for the purpose of equalizing the movement, is in duplicate, and is repeated on the other side of the machine.

The movement of the carriage  $G$  (which moves the inking pad  $F^5$ ) relatively to the movement of the carrying plate  $D$  is as follows: When the operator by depressing the treadle, draws down the rod  $B$ , this rod being directly attached to the plate  $H^6$  draws this down. As the plate  $H^6$  is depressed, it draws down the link  $H^5$ . As the latter moves down, it draws down the adjacent arm of the lever  $H$ . The upper arm of this same lever  $H$  moves the carriage  $G$  and with it the inking pad  $F^5$  back and away from the marking characters and brings this ink pad  $F^5$  over and in contact with the ink distributing roll  $F^4$ . At this juncture, the carriage  $G$  stops, because the

plate  $H^6$  has moved the stop sleeve  $D^8$  set on rod  $D^5$  downward, and this rod  $D^5$  moved by the descent of the stop sleeve  $D^8$  has moved down, and the head or nut  $Z$  on this rod has reached the arm  $D^3$  of the carrying plate  $D$ . Now the pull of the rod  $B$  draws on the plate  $H^6$ , and the latter pulls on the head  $Z$ , and the latter pulls on the arm  $D^3$  and draws it down. But the arm  $D^3$  is a part of the carrying plate  $D$ . Therefore the carrying plate  $D$  descends, and no movement of the lever  $H$  can take place. The descent of the carrying plate carries down the table  $E$ . There is a slot (opening)  $E^3$  in this table, and when the table is down this slot  $E^3$  is close to the marking characters in use, and the marking characters are reachable through this slot  $E^3$ . At this juncture, the hammer  $J$  descends, and the cloth to be marked having been, of course, put on the table, that part of the cloth to be marked having been placed over this slot  $E^3$  and consequently over the marking characters previously to operating the machine, this hammer presses the cloth against the marking characters and thus marks the cloth. The operator now releases his pressure on the treadle. The springs  $D^6$  being free to act, elevate the carrying plate  $D$  and the table  $E$  to their first position. The arm  $D^4$  of this plate  $D$  strikes against the lower end of the projection  $A^5$ , and can rise no farther. The springs  $D^7$  still acting, elevate plate  $H^6$ , and the latter moves the links  $H^5$  upwardly, which in turn operate the levers  $H$ . These last move the carriage  $G$  forward and thereby carry the inking pad  $F^5$  over and allow it to be applied to the marking characters.

The preferred mode of lowering and of raising the inking pad  $F^5$  is as follows: The carriage  $G$  is made up of two principal parts. One of these  $GA$  carries the pad holder  $F^6$ . This part  $GA$  carries two backwardly extending rods  $GA^2, GA^2$ , and pivoted near their rear ends to the complementary part of the carriage. Therefore the forward end portion of the carriage part  $GA$  is free to rise and fall. This carriage part  $GA$  carries two wheels, each marked  $GA^3$ . One of these wheels is on one side of the part  $GA$ , and the other wheel  $GA^3$  is on the other side of the part  $GA$ . These wheels are opposite each other.

In the upper surface of the arm  $D^{24}$ , which extends out from plate  $D$  to sustain the carriage  $G$ , there are depressions to receive these wheels or rollers. One pair of these depressions  $D^{18}, D^{18}$ , is forward, so that when the inking pad is over the marking pad, the wheels  $GA^3$  fall into these forward notches, and thus allow the carriage part  $GA$  to descend. The lowering of this part  $GA$  lowers the inking pad holder and the inking pad and the latter drops onto



the marking characters. The spring also adds to the pressure of the pad on said characters. It also insures prompt action in the descent of the carriage GA and of the pad holder. The other pair of these depressions 5  $D^{19}$ ,  $D^{19}$ , is located as shown, so that when the carriage G is at the back end of its movement, the wheels  $GA^3$  will respectively drop into and rest in these depressions. When 10 the wheels  $GA^3$  are thus in these depressions  $D^{19}$ ,  $D^{19}$ , the carriage G is lowered and the ink holder  $F^6$  correspondingly lowered, and the ink pad  $F^5$  is resting on the inking roll  $F^4$ . While the carriage G remains at rest, 15 at the rear, as it will obviously do after the carriage has reached the limit of its backward travel, and the frame plate D is completing its downward movement, and subsequently that part of its upward movement 20 which occurs before the carriage G begins to move forward, this inking pad  $F^5$  is upon the inking roll  $F^4$ , held down thereon by the spring  $G^4$ .

It is to be noted that the carriage G has 25 a little travel forward after the wheels  $GA^3$  come over the forward depressions  $D^{18}$ ,  $D^{18}$ . Consequently the wheels  $GA^3$ , after dropping into the depressions  $D^{18}$ ,  $D^{18}$ , and allowing the inking pad  $F^5$  to come into 30 contact with the marking characters, rise up again onto the surface of the arm  $D^{24}$ , and lift the inking pad  $F^5$  away from the marking characters. As the carriage G moves back, it drops, the wheels  $GA^3$  entering the 35 depressions, and the inking pad again drops on the marking characters. But the continual backward movement of the carriage G immediately lifts the wheels  $GA^3$  out of the said depressions, and this carriage G and 40 the inking pad  $F^5$  rise, and move back to the rear, where, as aforementioned, the wheels  $GA^3$  drop into the depressions  $D^{19}$ , and the carriage G sinks, and the inking pad  $F^5$  drops into the ink distributing roll  $F^4$ , 45 and therefrom receives a fresh supply of ink.

It is to be observed that the pins or supports  $F^7$ ,  $F^7$ , which set into the recess  $G^5$  are not on either side, as far apart as the recess is long. The same is true in Fig. 31 of the 50 flanges  $G^8$ ,  $G^8$ . The space from end to end of the flange and from one of the pins  $F^7$  to the other pin  $F^7$  is less than that of the recess  $G^6$  in which the said pins, or the flange  $G^8$  which is the equivalent thereof 55 rest. The primary object of having this space  $G^6$  longer than the space occupied between the pins  $F^7$  or the ends of the flange  $G^8$  is as follows:—When the carriage G having the pad holder falls into one of the 60 recesses which enables it to thus lower the inking pad and bring it down at one end of its course upon the type, or at the other end of its course upon the distributing ink roll, if this extra length of the recess  $G^6$  were not 65 present, the pad would be compelled to slip

somewhat as the carriage descended. The same is true when the carriage rises. Thus by this arrangement which I have made, the pad holder does not push it along in order to accommodate the rise or fall of the 70 carriage, and it remains stationary during such rise or fall of the carriage, and does not smear the type at the time when it is resting upon them and has been applied to them for giving them ink. The same of 75 course is true as to its action upon the distributing ink roller. It does not rub the ink on that roller longitudinally along the roller and tend to roll up the ink at one point thereof. 80

While the carriage G and this ink pad  $F^5$  are moving backward, the inking roll  $F^4$  is partially rotated. Thus a fresh portion of the inking roll  $F^4$  is presented to the inking pad  $F^5$ , each time this pad  $F^5$  re- 85 turns to it after inking the marking characters. This rotation is accomplished as follows: Fixed on the end shaft of the inking roll  $F^4$  is a ratchet wheel  $F^{15}$ . There is a slide  $F^8$  carrying a spring pawl  $F^9$ . The 90 latter is in engagement with the ratchet wheel  $F^{15}$ . The slide travels in the guideways  $F^{10}$ ,  $F^{10}$ , supported by frame D, but preferably by the intermediate means of the ink well F. On the upper arm of one of the 95 levers H is a wedge or an incline K. The latter bears against the rounded end of the slide  $F^8$ . A suitable spring  $F^{12}$ , here shown as a coiled one, is strained between a screw stud  $F^{13}$  on the slide  $F^8$ , and a screw stud 100  $F^{14}$  on the guideway  $F^{10}$ , which is next to the incline K. This spring  $F^{12}$  keeps the slide  $F^8$  continually against the incline K. This ratchet wheel is fixed concentrically on the shaft  $F^{16}$ . This shaft is the one on 105 which the distributing roll  $F^4$  is located. Rotation of the shaft  $F^{16}$  rotates the roller  $F^4$ . It may be desirable often to rotate the distributing roller  $F^4$  independently of the movement of the machine. To conveniently 110 enable this operation to be performed, I provide the shaft  $F^{16}$  with a thumb wheel  $F^{17}$ .

As the upper arm of the lever H moves forward, the slide  $F^8$  moves out toward the 115 plane in which said lever travels, and the pawl  $F^9$  passes one tooth on the ratchet wheel  $F^{15}$ . As this upper arm of the lever H moves backward, the slide  $F^8$  is moved 120 positively by the incline K in the opposite direction from that in which it just heretofore moves, and it, the slide  $F^8$ , through the agency of the pawl  $F^9$ , moves the ratchet wheel  $F^{15}$ , turning it the distance of one 125 tooth. This operation is repeated at every reciprocation of the lever H. Thus the inking roll  $F^4$  is partially rotated, and presents a fresh surface of ink to the inking pad  $F^5$ , each time the latter comes back and descends into contact with it. 130



The mechanism for operating the hammer which on its descent presses the cloth or article to be marked against the marking characters is as follows: The hammer J has a shank J<sup>2</sup>, journaled on a shaft J<sup>3</sup>, rotatable in a bearing J<sup>4</sup> fixed on the frame plate A<sup>3</sup>. This shaft J<sup>3</sup> carries a disk J<sup>5</sup> having a peripheral latch lug J<sup>6</sup>. A latch rod J<sup>7</sup> slides in an arm J<sup>8</sup>. On this rod J<sup>7</sup> is fixed a sleeve or stud J<sup>9</sup>, preferably capable of being set at any desired place on this rod J<sup>7</sup> by means of the set screw J<sup>10</sup>. A coiled spring J<sup>12</sup> is compressed between the arm J<sup>13</sup> and the set stud J<sup>9</sup>, J<sup>10</sup>. The degree in which the spring is compressed will regulate the degree of upward elastic push which shall be communicated to the latch rod J<sup>7</sup> toward its prompt engagement with the latch lug J<sup>6</sup>. On the carrying plate D is fixed an arm J<sup>8</sup>. The outer end of this arm embraces the latch rod J<sup>7</sup>, above the set stud J<sup>9</sup>, J<sup>10</sup>.

The preferred means for the elevation of the hammer is as follows: A stud, preferably a roller stud J<sup>14</sup> is located on the shank J<sup>2</sup> of the hammer near the base of the shank. As the table E rises, it meets this roller stud J<sup>14</sup> and thereby raises the latter and with it the shank J<sup>2</sup> and its hammer J.

The means for depressing the hammer is an elastic one. The means employed consist of a coiled spring J<sup>15</sup>, located within the hub J<sup>16</sup> of the shank J<sup>2</sup> at the journal J<sup>4</sup>, one end of this spring being attached to the hub J<sup>16</sup> and the other end to the journal bearing J<sup>4</sup>. The bearing J<sup>4</sup> and the perforated arm piece J<sup>13</sup> on which is rod J<sup>7</sup>, may be integral with the frame plate A<sup>3</sup>, but they are preferably in a separate piece J<sup>17</sup>, duly secured to the frame plate A<sup>3</sup>. The mode of operating this hammer J is as follows: The hammer J being elevated, as illustrated in Fig. 2, it is ready for work. The operator places the cloth to be marked on the table and over the marking characters, as heretofore mentioned. The operator now depresses the treadle. This action depresses the carrying plate D. The table E is therefore lowered to place. At the same time the carrying plate D carries down arm J<sup>8</sup>, fixed to the carrying plate D. This arm J<sup>8</sup> after the table has reached its lowest position, continues (moved by plate D) to descend, strikes set stud J<sup>9</sup>, J<sup>10</sup>, and moves the latch rod J<sup>7</sup> down and out of contact with the latch lug J<sup>6</sup>. The hammer J being no longer held back, is free to descend and impelled by the coiled spring J<sup>15</sup>, descends rapidly and the head of the hammer J strikes the cloth and presses it against the inked marking characters and thus marks it. As the table and plate D are again thereupon allowed to rise, the table presses from below upward against the roller stud J<sup>14</sup> and lifts the hammer, while the peripheral lug J<sup>6</sup> is out of the way of the latch rod J<sup>7</sup>. Thereupon the

latch rod impelled upwardly by the coiled spring J<sup>12</sup>, passes up behind the latch lug J<sup>6</sup>, and thus engaging it prevents the hammer J from descending until the plate D and table are again depressed, to repeat the operation of again marking an article.

In marking collars and other narrow articles, it is desirable that they be held down in place by the machine, while being marked. When thus held, the operator is spared the vexation and delay of first getting the collar into final position and then holding it there. The clamping mechanism which I employ for this purpose is as follows: I provide a metal bar L. In order that it may be readily put in position, I provide the overlapping edge at one end with the groove L<sup>2</sup>. In this groove L<sup>2</sup> is a rounded projecting lug L<sup>3</sup> adapted to enter a corresponding recess L<sup>4</sup> in the adjacent edge of the table E. At the other end of the bar is an arm L<sup>5</sup> containing a draw stud L<sup>6</sup> operated by a thumb handle L<sup>7</sup>. This draw stud L<sup>6</sup> is capable of being drawn back. What then advances it to its first position is a coiled spring L<sup>8</sup> within this arm L<sup>5</sup>. In the adjacent edge of the table E is an opening L<sup>9</sup> adapted to receive the forward end of this draw stud L<sup>6</sup>. In adjusting this bar L to the table, the draw stud L<sup>6</sup> is retracted and the bar laid on the table E, its lug L<sup>3</sup> fitting into recess L<sup>4</sup>, and the groove L<sup>2</sup> embracing that adjacent edge of the table E. The draw stud L<sup>6</sup> is now allowed to enter the opening L<sup>9</sup>. The bar L is now set in position. On this bar is a presser foot L<sup>10</sup>, whose forward edge is adapted to press on the collar. The rear edge of this presser foot is connected to a rod L<sup>12</sup> journaled at one end in a bearing L<sup>13</sup> of the bar L, and the other end is journaled in a bearing L<sup>14</sup> of the rod L<sup>12</sup>. To this rod L<sup>12</sup> is fixed an arm L<sup>15</sup>, which extends over beyond the side edge of the bar and downward. The free end of this arm L<sup>15</sup> is over a reciprocatory pin L<sup>16</sup>. This pin L<sup>16</sup> sets loosely in a sleeve L<sup>17</sup>. The latter is fixed to the under side of the table. This pin L<sup>16</sup> has a supplemental pin L<sup>18</sup> which is in its lower portion and can slide down beyond the lower end of the pin L<sup>16</sup>. A coiled spring L<sup>19</sup> within pin L<sup>18</sup> tends to keep the supplemental pin L<sup>18</sup> elastically out. On the upper arm of the adjacent lever H for moving the carriage G is an inclined piece L<sup>20</sup>. The lower end of the supplemental pin L<sup>18</sup> rests on this incline. A spring L<sup>21</sup> between the presser foot and the bar tends to raise the presser foot and keeps it lifted until by the elevation of the free end of the arm L<sup>15</sup>, it is depressed. The operation of this portion of my machine is as follows: The collar or other article to be marked is laid on the table and alongside the bar L and under the lifted presser foot L<sup>10</sup>, and moved over the marking characters. As the



plate D and table E are lowered, and the lever H moves, the incline  $L^{20}$  moves and pushes the supplemental pin  $L^{18}$  upward. The latter lifts the pin  $L^{16}$ , and this pin  $L^{16}$  lifts the free end of the arm  $L^{15}$  and depresses the presser foot onto the collar. The latter is so held until the hammer J has descended and marked the collar, or the goods. Then as the carrying plate D and table E rise, the incline  $L^{20}$  with lever H moves back and the compound pin  $L^{16}$ ,  $L^{18}$ , drops down. The free end of the arm  $L^{15}$  is free to descend. The presser foot  $L^{10}$  impelled by its spring  $L^{21}$  rises up off from the goods and the free end of the arm  $L^{15}$  correspondingly falls down to the table E. It is to be noted that the spring  $L^{19}$  between the pin  $L^{16}$  and the pin  $L^{18}$  is present so that when the presser foot  $L^{10}$  is down and can go no farther, the pins  $L^{16}$  and  $L^{18}$ , by reason of the spring  $L^{19}$ , can yield when the incline forces them up, so that nothing can be broken by the positive action of the inclined piece  $L^{20}$ .

Inasmuch as the special mechanism shown in the drawings for feeding laundry tags to the marking mechanism has, under the ruling of the Commissioner of Patents, been judged to belong to a different class than that in which the mechanism herein claimed is classified a description of such special feeding mechanism is omitted herefrom.

I will now describe the marking characters or type, the means of supporting them, the mechanism for enabling the desired characters to be assembled and to be set to constitute the desired mark or indicating characters, for marking the article on which said mark is to be printed. I provide wheels or disks N, etc. At the periphery of each of these marking wheels I set or mount the characters. These project beyond the face of the periphery of their respective wheels. These characters may be letters or numbers, or characters of other forms desired. In the machines as I construct them, these character carrying wheels or "type wheels", as I denominate them, are so large that I am enabled, when desired, and as I prefer to do, to put type on them, which shall successively bear every letter of an alphabet, and also the numerals from 1 to 9, and a naught, and also a number of other characters. As such a variety of characters enlarges the variety of markings which I can employ, I avail myself of this opportunity and provide a large number of various characters of desired kinds. These character carrying wheels or disks I indicate respectively in this specification by the letters N,  $N^2$ ,  $N^3$  and  $N^4$ . I indicate the marking characters on these wheels by the letter X. I prefer to raise the base of these characters X somewhat above the periphery of the wheels they are on. I therefore raise each one on a stem or base

$X^2$ . These marking or type wheels N,  $N^2$ ,  $N^3$  and  $N^4$  are all mounted on a common shaft P. When free from a stop herein-after specified, the wheels are so mounted on the sleeve shaft P, that each wheel can be rotated independently of the others, and also two or more of all of these wheels can be rotated simultaneously. The preferred mode of mounting them on the shaft P is thus: The sleeve P surrounds the sleeve shaft  $Q^4$  and on it the wheels N,  $N^2$ ,  $N^3$ ,  $N^4$  rotate. This sleeve P has a rear flange  $P^2$ . To protect the rear face of the rear wheel  $N^4$  from possible injury and for other obvious reasons, I prefer to back this rear wheel  $N^4$  with an iron or steel disk  $N^5$ . The latter is attached fixedly to the wheel  $N^4$ . So these parts  $N^4$  and  $N^5$  rotate together. The flange  $P^2$  of the sleeve P is behind the disk  $N^5$ . In front of all the wheels is a disk Q, provided with an axial hub  $Q^2$ , having a flange  $Q^3$  extending toward the axial line of the hub.

In the frame  $A^3$  is a hub  $D^{20}$  fixed thereto. The sleeve  $Q^4$  is fixed in this hub  $Q^2$  and extends out in front and also out at rear beyond this hub  $Q^2$ . The rear end portion of this sleeve  $Q^4$  carries a peripheral screw thread  $Q^5$ . On this screw thread  $Q^5$  is a sleeve  $Q^6$ , whose female screw  $Q^7$  engages the screw thread  $Q^5$  of sleeve  $Q^4$ . This screw sleeve  $Q^6$  is turned by a crank or wheel  $Q^8$ . Through the sleeve  $Q^4$  extends a shaft R. At its rear end is fastened a disk or projection  $R^2$ . A convenient mode of securing this disk  $R^2$  to the shaft R is by screwing it on to a small axial screw  $R^3$  projecting from the rear of shaft R. A small set screw  $R^4$  located in the disk and screwed into the end of the shaft R near the periphery of the latter prevents the disk  $R^2$  from being accidentally unscrewed from the shaft R. The outer edge of this disk  $R^2$  engages a shoulder  $Q^9$  on the sleeve  $Q^6$ . The forward end of the shaft R projects beyond the end of the hub  $D^{20}$ , and is provided at its forward end with a flange  $R^5$  which overlaps the flange  $Q^3$  of the hub  $Q^2$ . Rods  $R^6$ ,  $R^6$ ,  $R^6$ , respectively pass through holes  $R^7$ ,  $R^7$ ,  $R^7$  in the hub  $D^{20}$ , and are capable of being slid back and forth in the said hub  $D^{20}$ . The forward ends of these rods  $R^6$ ,  $R^6$ ,  $R^6$  are connected to the sleeve P, at the flange  $P^2$  of this sleeve. The rear ends of these rods  $R^6$ ,  $R^6$ ,  $R^6$  are connected to the screw sleeve  $Q^6$ ,  $Q^8$ , at the rear of the machine.

By the foregoing description, it will be perceived that when the operator rotates the screw sleeve  $Q^6$ ,  $Q^8$  in one direction, viz.; from the left over to the right, the screw sleeve  $Q^6$  will advance toward the carrying plate D and its hub  $D^{20}$  and by means of the disk  $R^2$  will advance the shaft R and move its end out forward. At the same time, by means of the rods  $R^6$ ,  $R^6$ ,  $R^6$ , it will ad-



vance the flange  $P^2$  and its sleeve  $P$  and carry the disk  $N^5$ , the disk  $Q$  and the wheels  $N$ ,  $N^2$ ,  $N^3$  and  $N^4$  which are between these disks forward as the shaft  $R$  advances. This advance position is shown in Fig. 11. Rotating the screw sleeve  $Q^6$ ,  $Q^8$  in the contrary direction, will move the shaft  $R$ , the sleeve  $P$ ,  $P^2$  back and carry the said disks  $N^5$  and  $N^4$  and the wheels  $N$ ,  $N^2$ ,  $N^3$  and  $N^4$  back to their first position. It is to be noted that by the rotation of the screw sleeve  $Q^6$ ,  $Q^8$ , the distance of the forward or backward travel of the wheels  $N$ ,  $N^2$ ,  $N^3$  and  $N^4$  can be regulated. The screw  $Q^5$  could readily be replaced by an eccentric, but as the use of the one is like the other, further mention thereof is omitted.

The object of having the wheels  $N$ ,  $N^2$ ,  $N^3$ ,  $N^4$  separate is obviously to enable each of them to present a desired character in combination with the characters of the other wheels. It is desirable that each of said wheels after being rotated so that the desired character shall be under the marking hammer, shall be held, in turn, so that it cannot rotate while the other wheels are rotated. To this end I provide a stud  $S$  fixed to the stationary frame  $A^3$ . In the periphery of each wheel  $N$  and in the disks  $N^5$  and  $Q$ , I provide transverse notches  $S^2$ , capable of receiving said stud  $S$ . Thus when the disks and marking wheels are advanced away from frame  $D$ , and the stud  $S$  is out of engagement with said disks and wheels, the disk  $N^5$  and wheel  $N^4$  is turned till the right character on the wheel  $N^4$  is under the hammer  $J$ , then the screw sleeve  $Q^6$ ,  $Q^8$ , is turned and the disks and wheels are retracted until the free point of the stud  $S$  has entered the adjacent notch  $S^2$  of the disk  $N^5$  and wheel  $N^4$ . Then these two pieces will be nonrotatable. Wheel  $N^3$  is now rotated till the desired character on it is under the hammer. It is then fixed so as to be nonrotatable, moving it with the other marking wheels and disks toward stud  $S$  so that the latter will enter the adjacent slot  $S^2$  of it (wheel  $N^3$ ). In like manner, wheel  $N^2$  is rotated till its desired character is under the hammer and then it is made nonrotatable by the stud  $S$  being caused to enter the slot  $S^2$  of it. Lastly the wheel  $N$  is likewise turned, until its desired character is under the hammer, and then it is made nonrotatable by being moved toward the stud  $S$  until the latter enters its adjacent slot  $S^2$ . Of course the same procedure would be followed, if there were more marking wheels present.

Now all of the marking wheels  $N$ ,  $N^2$ ,  $N^3$ ,  $N^4$  being set, the screw sleeve is further rotated, if it be necessary, and the wheels are drawn closely up in accurate position under the slot in the table  $E$  to be used in marking the cloth, etc. It is difficult to grasp the

marking wheels and rotate the marking wheels, as aforementioned. I therefore provide a wheel turning device, which is as follows:  $T$  indicates a sleeve, fixed to the outer (front) side of the disk  $Q$ . In this sleeve is a screw shaft  $V$ , having a stud end  $V^2$ . This shaft  $V$  is provided at the other (outer) end with a thumb wheel  $V^3$  for turning it. A shoulder  $T^2$  on the sleeve  $T$  and a flange  $V^4$  on the screw shaft  $V$  prevent the screw shaft from being pulled out of the sleeve  $T$ . A spring  $T^3$  fixed on the sleeve has a tooth  $T^4$  which extends through the sleeve and into the groove between the threads  $V^5$ ,  $V^5$  of the shaft  $V$ . In the groove there are depressions  $V^6$ , capable of receiving the end of the tooth  $T^4$  of the spring. This tooth  $T^4$  constitutes the screw thread or the equivalent for moving the screw shaft  $V$  lengthwise. The stud end  $V^2$  extends through disk  $Q$  and wheel  $N$  and is adapted to enter an adjacent hole  $N^6$  in one or more of the wheels  $N^2$ ,  $N^3$ ,  $N^4$ ,  $N^5$ . There are such holes  $N^6$  in radii, corresponding to every marking character on such wheels.

The operation of this device is as follows: When the wheels are to be set, they are moved away from the frame plate  $A^3$ , and so as to be free from the holding stud  $S$ . The stud end  $V^2$  extends through all of the wheels. The entire combination is rotated until the wheel  $N^4$  (and disk  $N^5$ ) are so moved as the desired character on said wheel  $N^4$  is under the hammer. The wheels are then retracted until the stud  $S$  has entered the notch  $S^2$  of the disk  $N^5$  and wheel  $N^4$ . They then are nonrotatable and are set. The operator now rotates the screw shaft  $V$  and thus moves the latter out so that the stud end  $V^2$  is withdrawn from the disk  $N^5$  and wheel  $N^4$ , but remains in wheels  $N^3$ , and  $N^2$  and  $N$ . As he turns this screw, one of the first of the depressions  $V^6$  nearest the wheel  $N^4$  aids him in knowing when he has moved the screw shaft  $V$  out far enough to release the wheels  $N$ ,  $N^2$  and  $N^3$  from connection with wheel  $N^4$ , because the tooth  $T^4$  drops into such depression and the operator would need to add more force in rotating the screw shaft  $V$  to lift the tooth out of this depression  $V^6$ , and continue the rotation of the screw shaft  $V$ . He now turns the wheels  $N$ ,  $N^2$  and  $N^3$  until wheel  $N^3$  is in position and its desired character is under the hammer. He then moves the wheels so that the stud  $S$  engages the adjacent slot  $S^2$  in this wheel. He now rotates the screw shaft  $V$  until it stops at the next depression  $V^6$ , and thus frees wheels  $N$  and  $N^2$  from wheels  $N^3$ ,  $N^4$ . He then rotates the wheels  $N$  and  $N^2$ , and sets wheel  $N^2$  so that its desired character will be in position to be printed. He now sets that wheel  $N^2$  in engagement with the stud  $S$ , by means of the adjacent slot  $S^2$  of wheel  $N^2$ .



Finally he again turns screw shaft V to the last depression V<sup>6</sup> of the shaft V, and releases wheel N (with disk Q) from engagement with the wheels N<sup>2</sup>, N<sup>3</sup>, and N<sup>4</sup>, disk N<sup>5</sup>. He rotates this wheel (with disk Q) until its desired character is under the hammer. The wheels are now still further retracted and the stud S enters the adjacent notch S<sup>2</sup> of the wheel (N, Q). The setting of the wheels is now completed, and they are ready to be used in marking the cloth, etc., as aforementioned. The screw shaft V may now be turned in the opposite direction and the end stud V<sup>2</sup> enter the alined adjacent holes of the wheels N<sup>2</sup>, N<sup>3</sup> and N<sup>4</sup>. When the wheels are to be reset, the aforementioned operations are repeated.

The spring T<sup>3</sup> as used is a flat curved one, fastened to the sleeve T, and carrying at its other end the tooth T<sup>4</sup>. But the particular kind of spring herein employed to keep the tooth T<sup>4</sup> elastically between the threads V<sup>5</sup>, V<sup>5</sup>, and in the depression V<sup>6</sup>, may obviously be varied, without departing from this feature of my invention.

As a substitute for the absorbent piece F<sup>2</sup> and the concave absorbent piece F<sup>3</sup>, I propose, when desired, to use the device shown in Fig. 24. This device will stand in the ink well, on shoulders of the ink well walls, or preferably on legs. Thus F<sup>18</sup> indicates the main frame. F<sup>19</sup>, F<sup>19</sup> indicate the springs, one at each end of the frame, and in a slot of the frame. The roller is the same roller F<sup>4</sup> heretofore mentioned, and the shaft F<sup>16</sup> is the same shaft as that heretofore mentioned. The legs which may be employed are marked F<sup>20</sup>. As the inking pad is pressed down on this distributing roller F<sup>4</sup>, the contact is always designedly a gentle one, by reason of the elastic yielding of the springs F<sup>19</sup>, F<sup>19</sup>, under the shaft of said distributing roller.

What I claim as new, and of my invention and desire to secure by Letters Patent, is:—

1. In a marking machine, the vertical frame, and the carrying plate movable relatively thereto, the guides between said frame and said plate for enabling the plate to move in a regular path, a table, a hammer, a spring for speeding the hammer in its descent, a latch for releasing the hammer at a given moment, and mechanism between the carrying plate and the latch for enabling this plate to unlock the latch from the hammer, substantially as and for the purposes specified.

2. In a marking machine, the vertical frame, and the vertically reciprocatory plate, the frame and the plates respectively provided with guides that interfit, and means for depressing the plate, and means for elastically elevating this plate and holding it elevated until lowered by human

agency, in combination with a table, carried by the plate, and an inking mechanism united to the plate, substantially as and for the purposes specified.

3. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate between which the said lug of the frame is located, guide for keeping the arms in alinement with the lug, and a spring between the arm and the lug for elastically elevating the carrying plate, substantially as and for the purposes specified.

4. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate, one of said arms above the said lug and the other arm below the said lug, a rod connected to the arms and passing through the said lug, and a spring between the arm and the lug for elastically elevating the carrying plate, substantially as and for the purposes specified.

5. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate between which the said lug of the frame is located, a rod connected to the arms and passing through the said lug, and a set sleeve on the rod, and a spring between the sleeve and a part of the stationary frame, for elastically elevating the carrying plate, substantially as and for the purposes specified.

6. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate between which the said lug of the frame is located, a rod connected to the arms and passing through said lug, a spring around said rod between the upper arm and this lug, a set sleeve on this rod below this lug, and a spring on this rod between the set sleeve and the frame below, substantially as and for the purposes specified.

7. In a marker, the table provided with guide pieces E<sup>2</sup>, E<sup>2</sup>, and the carrying plate provided with the arms D<sup>10</sup>, D<sup>10</sup>, the latter provided with guideways D<sup>12</sup>, D<sup>12</sup>, adapted to engage said guide pieces, and the elastic plate D<sup>13</sup>, secured at one end to one of the arms D<sup>10</sup>, and provided with the vertical latch D<sup>15</sup>, extending up through an opening in said arm D<sup>10</sup> and above the said arm, the table being provided with a recess for the reception of the said latch D<sup>15</sup>, and the latch finger D<sup>16</sup> fixed to an extension of the plate D<sup>13</sup> located beyond the edge of the table, substantially as and for the purposes specified.



8. In a marker, the table provided with guide pieces  $E^2$ ,  $E^2$ , and the carrying plate provided with the arms  $D^{10}$ ,  $D^{10}$ , the latter provided with guideways  $D^{12}$ ,  $D^{12}$ , adapted to engage said guide pieces, and the elastic plate  $D^{13}$ , secured at one end to one of the arms  $D^{10}$ , and provided with the beveled vertical latch  $D^{15}$ , extending up through an opening in said arm  $D^{10}$  and beyond the said arm, the table being provided with a recess for the reception of the said latch  $D^{15}$ , and the latch finger  $D^{16}$  fixed to an extension of the plate  $D^{13}$  located beyond the edge of the table, substantially as and for the purposes specified.

9. In a marking machine, the combination of the carrying plate, the hammer means for inking the marking characters, said means carried by this plate, means for operating the hammer, in part carried by this plate, means for regulating the vertical uplift of the carrying plate and consisting of the arm  $A^7$ , fixed to the frame, the screw  $A^8$ , engaging said arm, arm  $D^{29}$  of the carrying plate, substantially as and for the purposes specified.

10. In a marking machine, the combination of the carrying plate, the hammer means for inking the marking characters, said means carried by this plate, means for operating the hammer, in part carried by this plate, means for regulating the vertical uplift of the carrying plate and consisting of the arm  $A^7$ , fixed to the frame, the screw  $A^8$ , engaging said arm, the clamping nut  $A^9$ , and arm  $D^{29}$  of the carrying plate, substantially as and for the purposes specified.

11. In a marking machine, the hammer disks or wheels carrying the marking characters, mechanism for advancing these characters out and away from under the hammer, and for retracting them into their first position under the hammer, each wheel provided with recesses or grooves, and a stud fixed to the frame and adapted to enter any one of these recesses and maintain a marking character on the periphery of each wheel, in a given position relatively to the hammer, substantially as and for the purposes specified.

12. In a marking machine, the wheels carrying the marking characters, a sleeve shaft on which these wheels are mounted, a stop on said shaft for preventing said wheels from slipping rearwardly, a hollow or sleeve shaft upon which the first named sleeve shaft is mounted, a forwardly located hub, means for connecting the latter rigidly to the forward one of the marking wheels, this hub provided with a flange extending toward the axial line of the hub, the carrying plate of the machine, a hub on said plate, the first named sleeve fixed in this hub and extending out in front and also at rear, beyond this hub, a peripheral screw thread on

the rear portion of this sleeve, a third sleeve whose interior screw thread engages the screw thread of said second named sleeve, crank for rotating said last named sleeve, a shaft extending through the second named sleeve, a disk or projection on its rear end portion, means for securing this latter disk to said second named sleeve, the third named sleeve having a shoulder engaged by this last named disk, the forward end of the shaft which extends through the second named sleeve projecting beyond the hub of said carrying plate, a flange on the forward end of this shaft, and which overlaps the flange of the hub of the carrying plate, rods slidable in this hub of the carrying plate, and connected at their forward end to the first named sleeve  $P$ ,  $P^2$ , and their rear ends to the third mentioned sleeve  $Q^6$ ,  $Q^8$ , substantially as and for the purposes specified.

13. In a marking machine, wheels or disks, carrying marking characters, means for holding them in place when rotated to a proper position, the mechanism for respectively and successively rotating them, namely: a sleeve connected to the forward marking wheel, a screw shaft located in this sleeve, thumb wheel with means for rotating said shaft, this shaft having depressions between screw threads, a shoulder on said screw shaft to prevent it from being pulled out of said sleeve, a spring fixed on the sleeve provided with a tooth which extends through the sleeve and into the groove between the threads of the said screw shaft, the marking wheels having holes corresponding to the marking characters on their periphery, the screw shaft being adapted to enter any one of said holes of each wheel or disk as said hole comes opposite it, substantially as and for the purposes specified.

14. In a marking machine, a hammer disks or wheels carrying the marking characters, mechanism for advancing these characters out and away from under the hammer, and for retracting them into their first position under the hammer, each wheel provided with recesses or grooves, and a stud fixed to the frame, and adapted to enter any one of these recesses and maintain a marking character on the periphery of each wheel in a given position relatively to the hammer, in combination with wheels or disks carrying marking characters, means for holding them in place when rotated to a proper position, the mechanism for respectively and successively rotating them, namely: a sleeve connected to the forward marking wheel, a screw shaft located in this sleeve, thumb wheel with means for rotating said shaft, this shaft having depressions between screw threads, a shoulder on said screw shaft to prevent it from being pulled out of said sleeve, a spring fixed on the sleeve provided



with a tooth which extends through the sleeve and into the groove between the threads of the said screw shaft, the marking wheels having holes corresponding to the marking characters on their periphery, the screw shaft being adapted to enter any one of said holes of each wheel or disk as said hole comes opposite it, substantially as and for the purposes specified.

15. In a marking machine, a table, the bar of the collar clamp, this bar provided with a groove at one end, a rounded projecting lug in this groove, the table provided at its edge with a recess to admit said lug, an arm at the other end of said collar clamp bar, a draw stud of said arm, provided with a handle, a coiled spring in the said arm, the table provided with an opening adapted to receive the draw stud, a presser foot connected to the collar clamp bar, a spring under the presser foot and on the collar clamp bar, a rod of the presser foot, bearings for this rod located in the bar of the collar clamp, an arm fixed to this rod, a reciprocatory pin, a sleeve in which this reciprocatory pin sets, a supplemental pin located in the lower portion of the reciprocatory pin, coiled spring for keeping the supplemental pin out, inclined piece, arm holding this inclined piece and mechanism for reciprocating it, substantially as and for the purposes specified.

16. In a marking machine, a table, the bar of the collar clamp, this bar provided with a groove at one end, a rounded projecting lug in this groove, the table provided at its edge with a recess to admit said lug, an arm at the other end of said collar clamp, a draw stud of said arm, provided with a handle, a coiled spring in the said arm, the table provided with an opening adapted to receive the draw stud, a presser foot connected to the collar clamp bar, a spring adapted to elastically raise the presser foot from the goods when extraneous pressure to depress the presser foot is released, a rod of the presser foot, bearings for this rod located in the bar of the collar clamp, an arm fixed to this rod, a reciprocatory pin, a sleeve in which this reciprocatory pin sets, a supplemental pin located in the lower portion of the reciprocatory pin, coiled spring for keeping the pin out, inclined piece, arm holding this inclined piece and mechanism for reciprocating it, substantially as and for the purposes specified.

17. In a marking machine, the table having the guides, and the carrying plate, the

arms  $D^{10}$ ,  $D^{10}$ , and the slots  $D^{21}$ ,  $D^{21}$ , and the screws  $D^{23}$ ,  $D^{23}$ , received in said slots, substantially as and for the purposes specified.

18. In a marking machine, a hammer, a hammer shank, a rotatable shaft connected to the hammer shank, a bearing in which the shaft is journaled, a disk fixed on the shaft, and having a latch lug, a reciprocatory latch rod for engaging said latch lug, a stud fixed on the latch rod, an arm, a coiled spring between said arm and said set stud, a carrying plate, a hub on the hammer shank, a coiled spring located within the hub of this shank, and means for elevating the hammer, substantially as and for the purposes specified.

19. In a marking machine, a hammer, a hammer shank, a rotatable shaft connected to the hammer shank, a bearing in which the shaft is journaled, a disk fixed on the shaft, and having a latch lug, a reciprocatory latch rod for engaging said latch lug, a stud fixed on the latch rod, an arm, a coiled spring between said arm and said set stud, a carrying plate, a hub on the hammer shank, a coiled spring located within the hub of this shank, and means for elevating the hammer, a roller stud at the foot of the hammer shank and means for elevating the hammer so as to relatch it in readiness to give another blow, substantially as and for the purposes specified.

20. In a marking machine, a hammer, a hammer shank, a rotatable shaft connected to the hammer shank, a bearing in which the shaft is journaled, a disk fixed on the shaft, and having a latch lug, a reciprocatory latch rod for engaging said latch lug, a stud fixed on the latch rod, a set screw to set this stud on the latch rod, an arm, a coiled spring between said arm and said set stud, a carrying plate, a hub on the hammer shank, a coiled spring located within the hub of this shank, and means for elevating the hammers, substantially as and for the purposes specified.

21. In a marking machine, a reciprocatory table, a hammer and shank, adapted to be elevated by the table as it rises, elastic means for causing the descent of the hammer when the latter is released, a latch for enabling reciprocatory mechanism of which the said table is a part to release the hammer, and allow it to descend, substantially as and for the purposes specified.

HENRY HIGGIN.

Attest:

W. J. JOHNS,  
K. SMITH.