

No. 721,522.

PATENTED FEB. 24, 1903.

C. S. MCGIRR.
MARKING MACHINE.

APPLICATION FILED SEPT. 3, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.

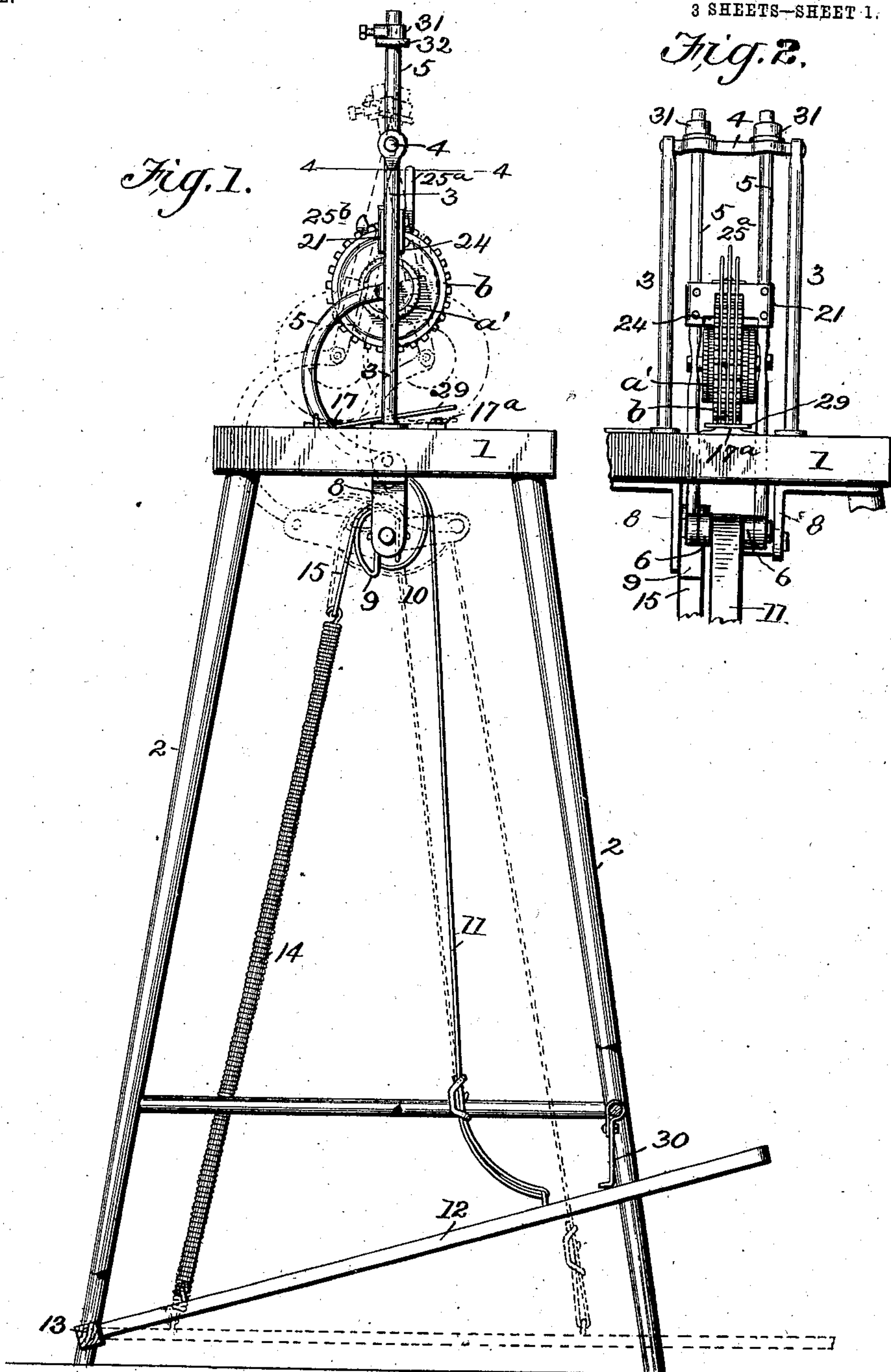
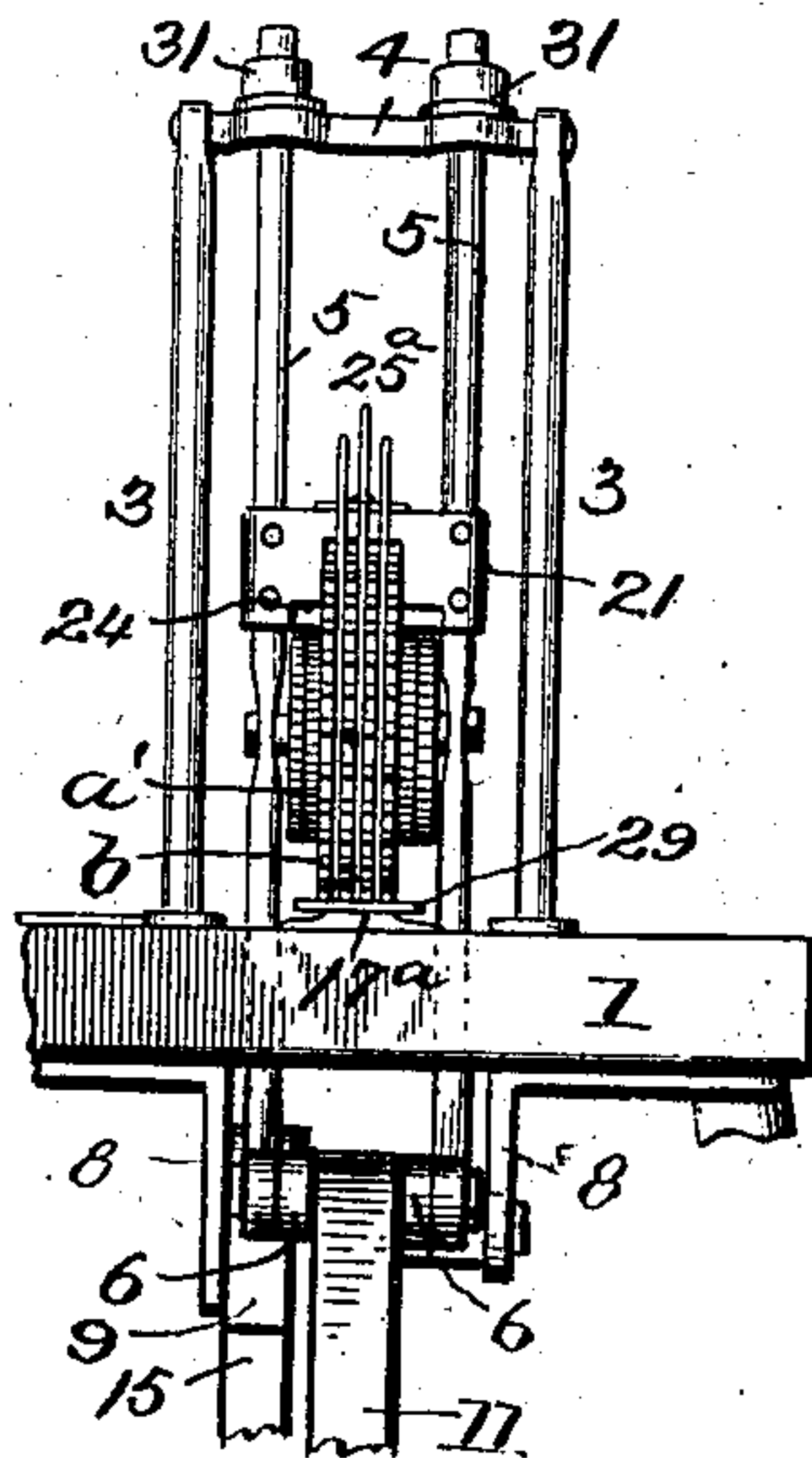


Fig. 2.



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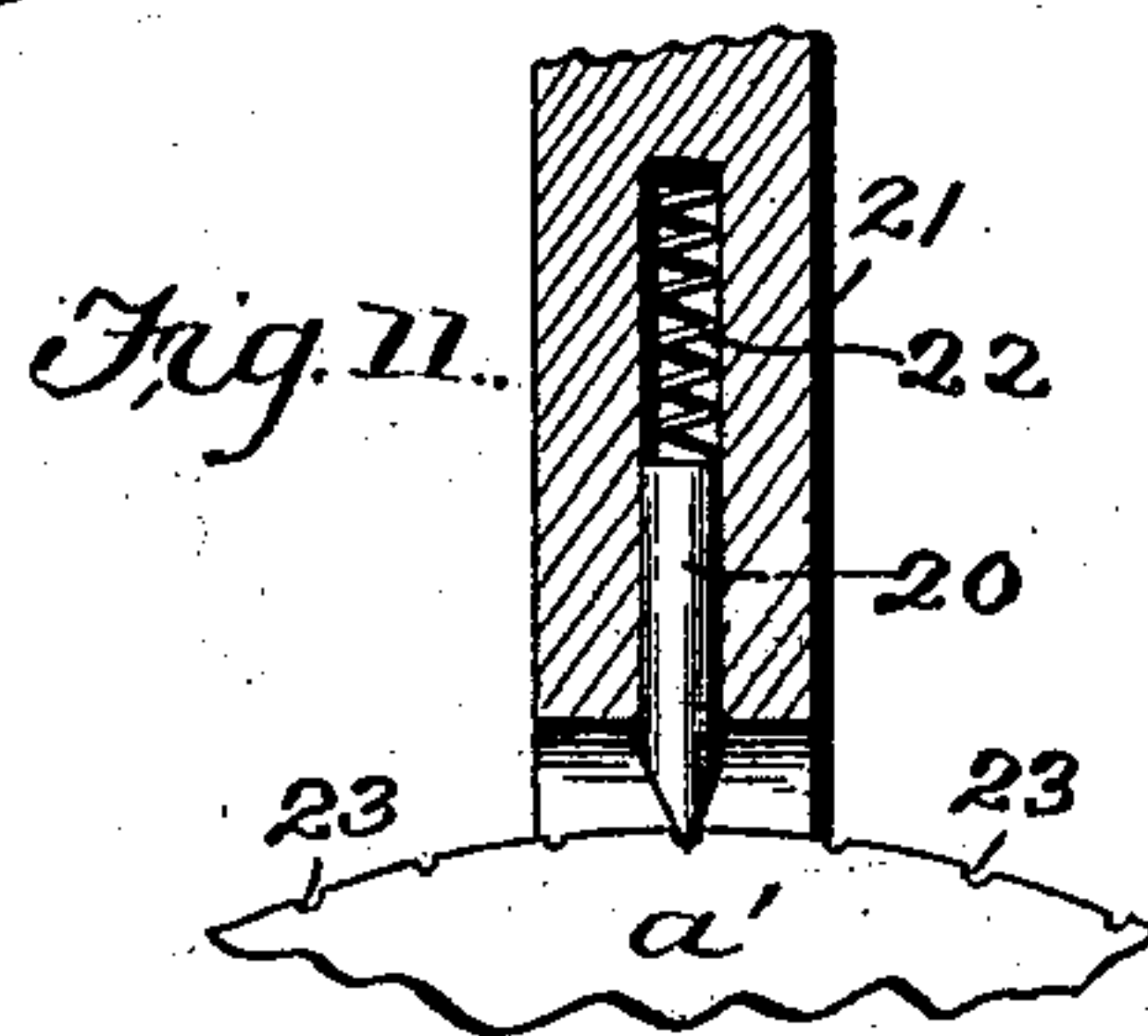
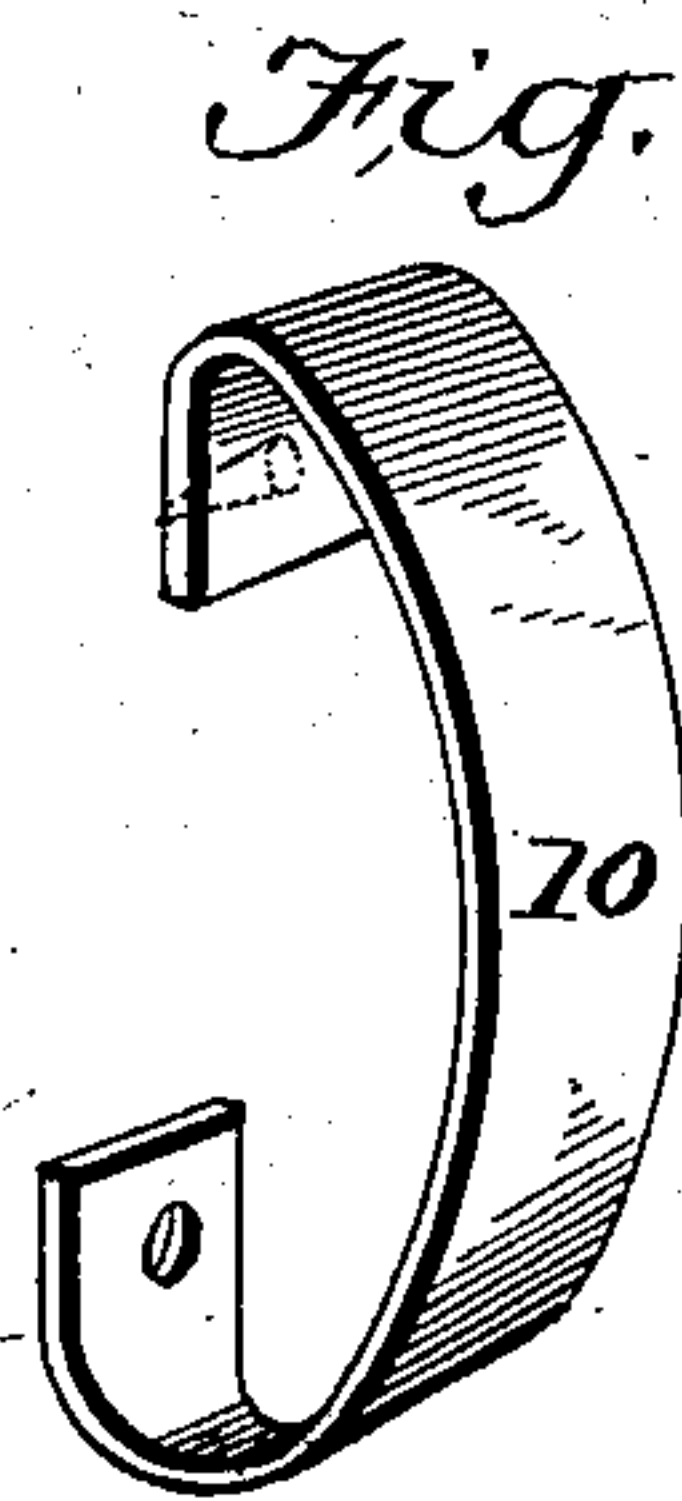
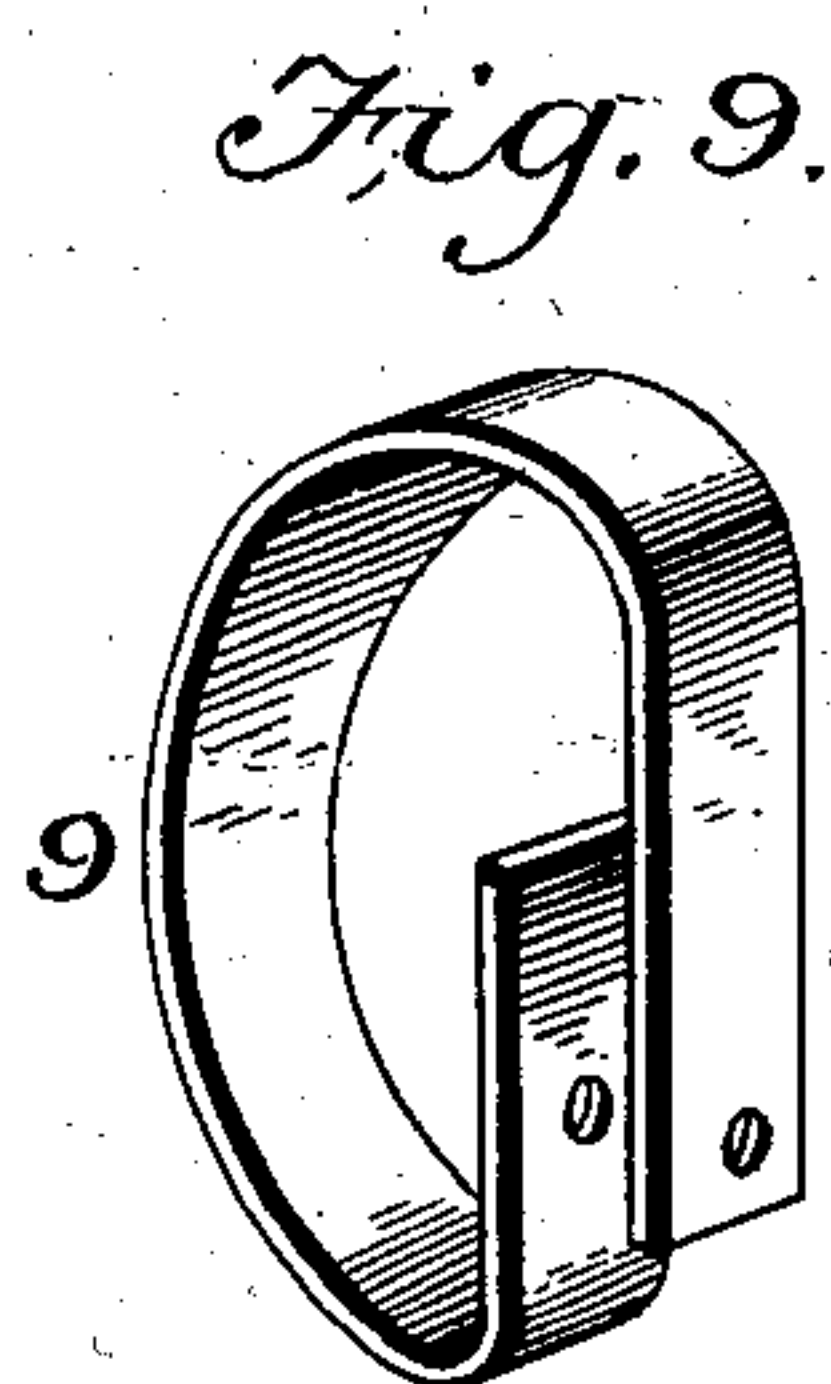
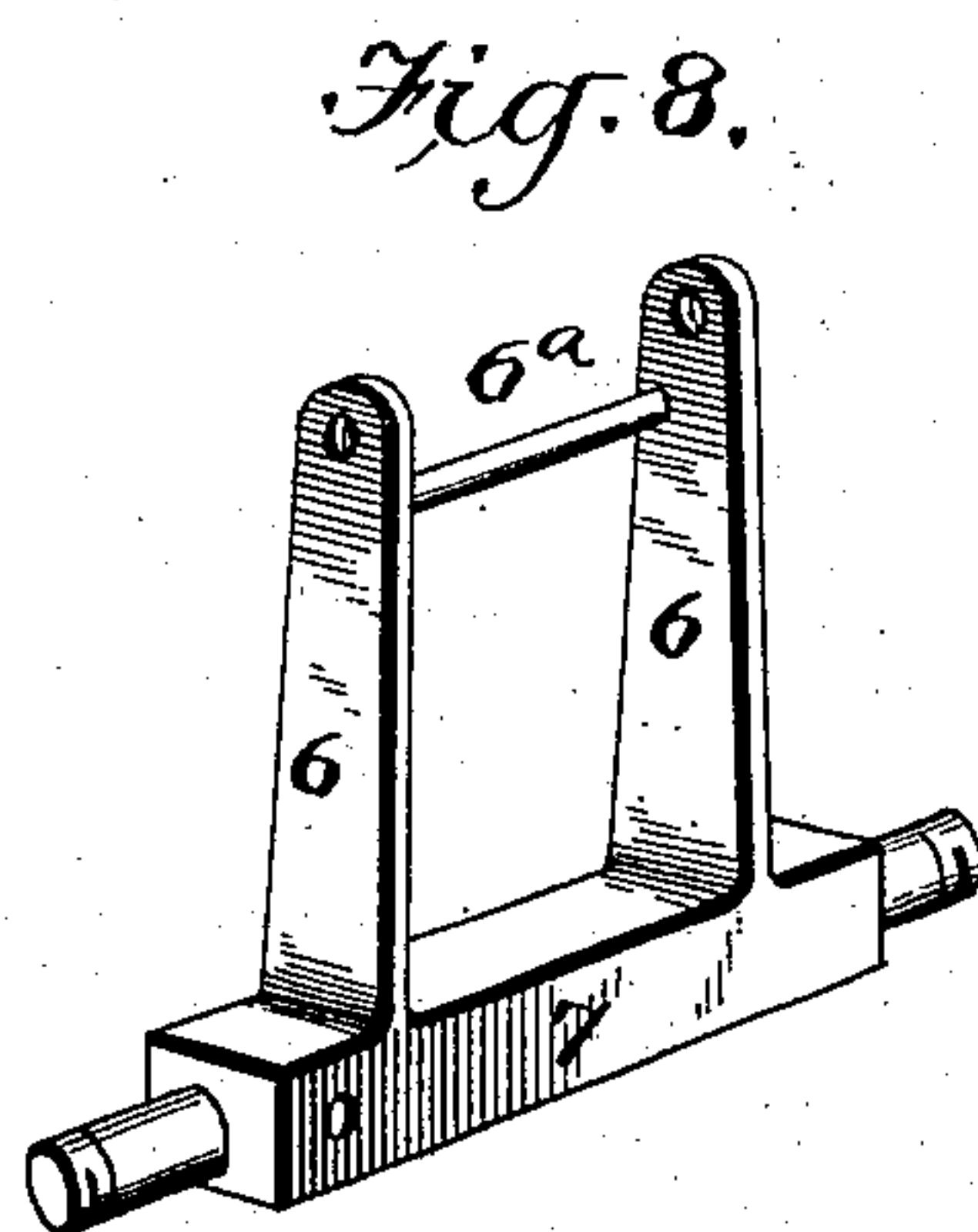
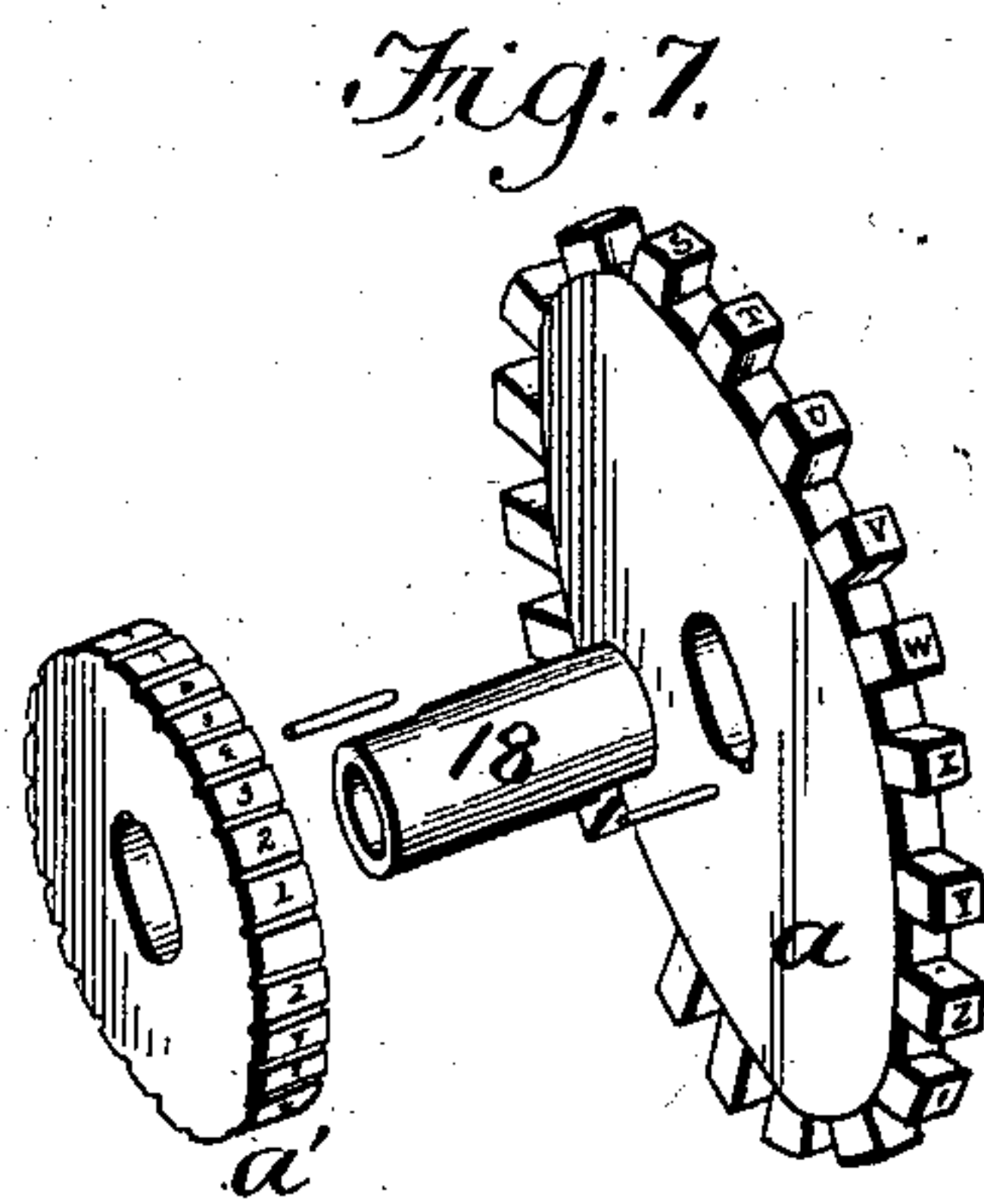
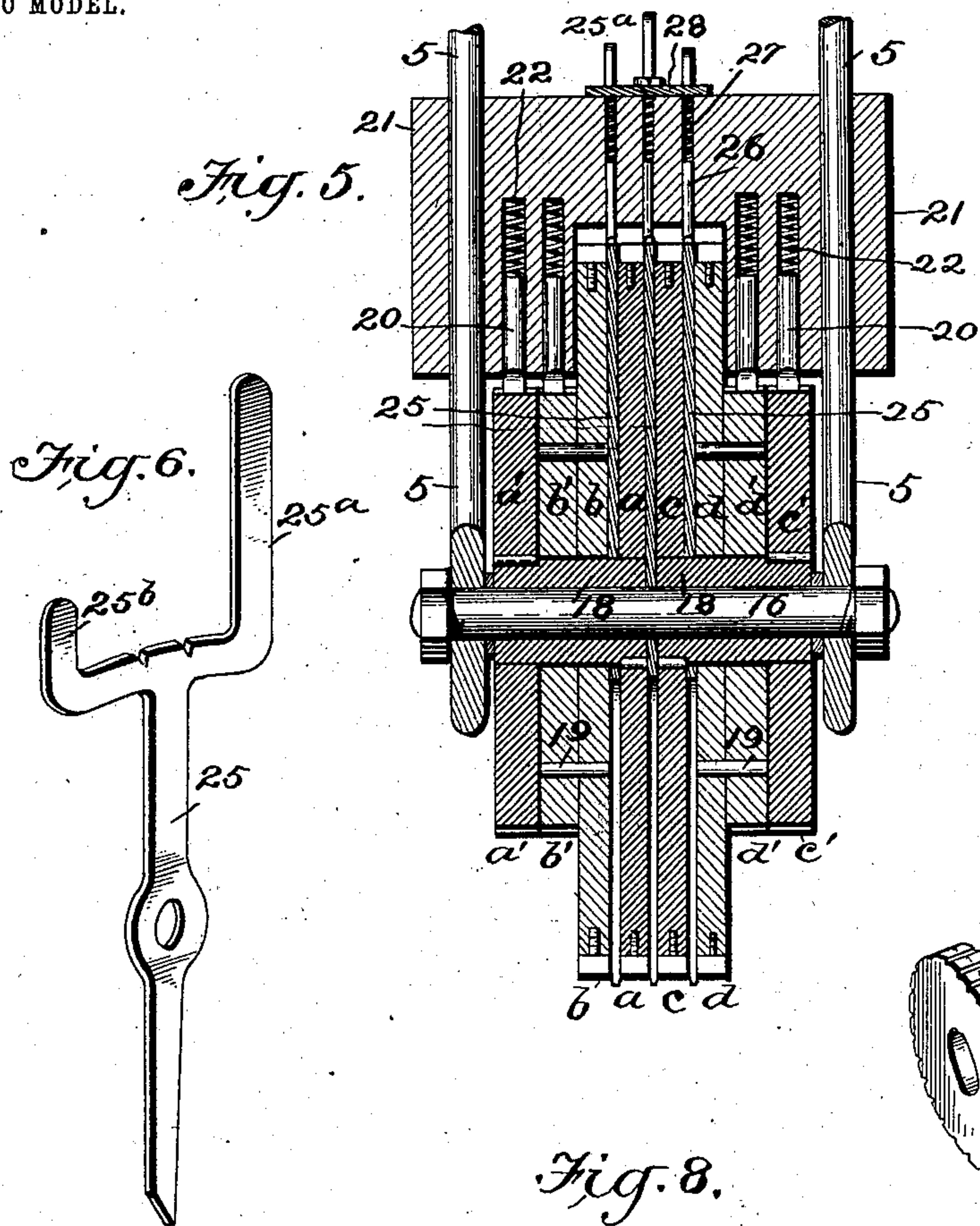
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NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CHARLES SUMNER MCGIRR, OF JUNCTION CITY, KANSAS.

MARKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 721,522, dated February 24, 1903.

Application filed September 3, 1902. Serial No. 121,956. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SUMNER MCGIRR, a citizen of the United States, residing at Junction City, in the county of Geary and State of Kansas, have made certain new and useful Improvements in Marking-Machines, of which the following is a specification.

It is the object of my invention to provide an improved machine for stamping and marking in general, but which shall be particularly adapted for stamping linen or sheets of fabric or other material, the same being interposed between a type-bearing wheel and an elastic pad secured upon the table.

The details of construction, arrangement, and operation of parts are as hereinafter described, reference being had to accompanying drawings, three sheets, in which—

Figure 1 is a side view of my machine. Fig. 2 is a face view of the upper portion of the same. Fig. 3 is an enlarged vertical central section of the upper portion of the machine on the line 3 3 of Fig. 4. Fig. 4 is an enlarged horizontal section on the line 4 4 of Fig. 1. Fig. 5 is an enlarged section of the type-wheels, the connected indicator-wheels, and other parts associated therewith. Fig. 6 is a perspective view of one of the adjustable bars by which periods are printed along-side letters or numerals. Fig. 7 is a perspective view of one of the type-wheels and an indicator-wheel disassociated or separated. Fig. 8 is a perspective view of a rocking shaft to which other parts are connected, as will be hereinafter described. Figs. 9 and 10 are perspective views of two cams whose arrangement and function will be hereinafter indicated. Fig. 11 is an enlarged detail section illustrating the arrangement of one of the friction dogs or detents for the type-wheels.

As shown in Figs. 1 and 2, the operative parts of the machine are mounted upon and suitably connected with a table 1, having legs 2. Standards 3 are fixed parallel in vertical position upon the table 1. A rocking guide-bar 4 is journaled in the upper ends of the standards 3, and through it slide the parallel rods 5, to which the type-wheels are attached. The upper portions of said rods 5 are straight, and the lower portions are curved rearward, as shown, and pass through slots 1^a in the table 1. The lower ends of the curved por-

tions of rods 5 are pivotally connected with the arms 6 (see Fig. 8) of a rock-shaft 7, which is journaled (see Figs. 1 and 2) in pendent brackets 8, attached to the under side of the table 1. Cams 9 and 10 (see Figs. 9 and 10) are secured to the rocking shaft 7, and a strap 11 is attached to the cam 10 and at its lower end to a treadle 12 for the purpose of rocking the said shaft, and thereby drawing down the type-wheels through the medium of the curved bars 5. The treadle 12 is pivoted at 13 to the rear legs of the table 1, and its free end projects between the front legs, as shown in Fig. 1. A spiral spring 14 is attached to the treadle at a point near its fulcrum and is connected by a strap 15 with the cam 9. As shown in Figs. 1 and 3, the said cams are so arranged that the longer arm of each projects upward and the other downward. In other words, they are arranged in reverse position. The cam 9 is secured to one end of the rocking shaft 7 by means of a cross-bolt, and the other cam is secured to the shaft at a point intermediate of the arms 6 of said shaft, and the outer end of said cam engages the cross-rod 6^a connecting the arms 6, (see Fig. 8.) The under side of the table is cut out, as shown in Fig. 3, to allow space for the parts just described when thrown upward by the tension of the spring 14. The type-wheels, which will be presently described in detail, are mounted upon a transverse axis 16, (see Fig. 5,) which connects the rods 5 at the junction of their straight and curved portions. An inking-pad 17 (see Figs. 1 and 5) is attached to the table 1 in rear of the standards 3, and a rubber pad 17^a is similarly arranged in front of the standards. When the treadle 12 is depressed, the rods 5, with the attached type-wheels, are drawn down upon the pad 17^a, or rather upon a piece of linen or other article laid thereon, and thus the required number or letter is stamped or printed. Upon releasing pressure on the treadle the spring 14 draws the rocker-shaft 7 up to the position shown in Fig. 5, and the type-wheels then swing over and come down upon the inking-pad 17.

Having thus indicated in a general way certain features of my invention, I will now describe with more detail the printing mechanism proper.

There are four type-bearing wheels *a b c d* and four corresponding indicator-wheels *a' b' c' d'*. (See Fig. 5.) As indicated in said Fig. 5 by shading and also by mechanical means, the type-wheel *a* is rigidly connected with the indicator-wheel *a'* through the medium of a hollow axis 18. (See Fig. 7.) This axis 18 is practically a sleeve, which is journaled and adapted to rotate upon the central supporting-shaft 16. The said wheels *a* and *a'* are keyed upon this sleeve 18, and thus rotate together. The type-wheel *b* is connected with its indicator-wheel *b'* by means of rivets or pins 19. The type-wheel *c* and indicator-wheel *c'* are connected like *a* and *a'*, and the type-wheel *d* and indicator-wheel *d'* are connected by a rivet or pin 19, as in the case of the wheels *b* and *b'*, before described. The wheels *b* and *b'* are arranged side by side and between the type-wheel *a* and indicator-wheel *a'*, and the type-wheel *d* and indicator-wheel *d'* are similarly arranged with reference to each other and to the type-wheel *c* and indicator-wheel *c'*. In other words, while the four type-wheels *a b c d* are arranged adjacently the indicator-wheels *a'* and *c'* are the outer ones, while the indicator-wheels *b'* and *d'* are arranged adjacent to them. Each of the type-wheels is provided on its periphery with radial projections, which are suitably engraved or cut out to represent the letters of the alphabet and numerals "1" to "9." The indicator-wheels are similarly constructed. In order that the type-wheels may be held in any position to which they may be adjusted by rotating them upon their axis, I employ spring dogs or detents 20, (see Figs. 5 and 11,) which slide in bores or sockets provided in a cross-head 21, attached to the lower portion of the rods 5 and pressed outward by means of springs 22, their other ends being beveled to adapt them for frictional engagement with shallow notches 23, formed in the periphery of each of the indicator-wheels intermediately of the several letters and numerals inscribed thereon. The arrangement of these several type-wheels and their indicator-wheels on their axis is such that when a particular letter or numeral on the type-wheel is undermost it will be uppermost on the indicator-wheel. Thus by observing the indicator-wheel it may be known at any time what numeral or letter is in position for printing. The exact position is, however, determined by the appearance of the desired numeral or letter just in front of the cross-head at the point 24. (See Figs. 2 and 3.) It will be observed that the cross-head 21 is beveled at that point to allow due inspection of the indicator-wheels. The said cross-head is applied to the rods 5 before they are inserted through the rocker 4 at the top of the standards 3, and it is clamped upon the rods by means of screws, as shown. It will now be apparent that by bringing the type-wheels down on pad 17^a in front thereof, as shown by full lines, Fig. 2, and dotted lines, Fig. 1,

any desired number or numeral may be printed upon a piece of linen laid upon the pad 17. In order to place periods after any numeral or letter as may be desired, I employ adjustable devices 25, as indicated particularly in Figs. 3, 5, and 6. There are three such devices, the same consisting of a bar having a central opening and bifurcated at its upper end, which is thus provided with two parallel fingers 25^a and 25^b. The lower end is suitably constructed to form a dot which serves as a period in stamping or printing. One of these devices is arranged between the two inner type-wheels *a* and *c* and one of the others between adjacent wheels, as will be seen by inspection of Fig. 5. The space between the arms 25^a and 25^b is considerably greater than the width or thickness of the cross-head 21. As shown in Fig. 6, the arc which supports such arms is provided with notches, and with these friction dogs or detents 26 engage, as shown in Fig. 5, their construction, arrangement, and operation being practically the same as the detents 20, which engage the indicator-wheels, as before described. The springs 27, which bear upon the said detents 26, are held in place by means of a plate 28, which is screwed down upon the top of the cross-head 21. The arms 25^a of the devices 25 project above the cross-head, so that they are readily accessible for adjustment by contact with the thumb or finger. When the period-printing device 25 is arranged vertical, as shown in Fig. 3, its lower end or point is in position for contact with the linen or other article to be marked. It will be seen that in such case the arm 25^a is in contact with the front side of the cross-head 21; but when the device is thrown forward to the position indicated by dotted lines, Fig. 3, it is out of action, or, in other words, its printing end is thrown so far back that it cannot come in contact with the linen or other article which is being printed, and in such case the shorter arm 25^b comes in contact with the rear side of the cross-head 21. It is of course necessary that the notches in the portion of the device which intervenes said arms shall be the same distance apart as the throw of the device, as indicated, so that the detents may properly lock the device in or out of working position.

I will now briefly recapitulate the operation of the machine. The spring 14 normally holds the type-wheels *a b c d* thrown down upon the inking-pad 17, as shown by dotted lines at the left in Fig. 1. Upon applying pressure to the treadle through the medium of the strap 11 and cam 10 the shaft 7 is rocked so that its arms 6 are thrown forward to the right, (see dotted lines, Fig. 1,) and the type-wheels are thereby brought down upon the linen to be printed. Thus by alternately depressing and releasing the treadle 12 the type-wheels are brought alternately in contact with the inking-pad 17 and the article to be printed, which rests upon the pad 17^a. As has already been

sufficiently indicated, the type-wheels may be adjusted rotatably to bring any desired numeral or letter into printing position, and they will be locked in that position by the frictional detents 20. Similarly the periods required after such letters or numerals will be printed by the devices 25 when adjusted in vertical position, as shown by full lines, Fig. 3. In order to prevent contact of the type-wheels with the linen except at the desired point, I interpose a spring-plate 29, (see Figs. 1 and 3,) the same being rigidly secured to the table 1 at a point in rear of the standards 3 and its front end being curved upward and provided with a slot 29^a, through which the printing-wheels come in contact with the linen. So soon as the pressure on the wheels is released the spring-plate 29 rises out of contact with the linen. The purpose of the curve in the lower portion of the rods 5 is apparent from inspection of the dotted lines in Fig. 1. It will be seen that if said rods were straight they would be in position for contact with the linen or other article being printed when the type-wheels are drawn down to the printing position. In other words, by means of the curve due space is provided for the linen in front of the standards 3.

It will be observed that by the arrangement of the cams 9 and 10 reversely, as described, the longer arm of each is horizontal when the type-wheels are in printing position. Thus the spring 14 is enabled to exert its tractive force independently of the degree of its extension, by reason of the greater leverage afforded when the cam is horizontal.

As shown in Fig. 1, a stop 30 is provided for the treadle, the same consisting of a metal plate which is clamped upon one of the rounds connecting the legs 2 of the table.

The descent and contact of the type-wheels with the pad 17^a is regulated by means of clamping-collars 31, (see Figs. 1 and 2,) which are applied to the upper ends of the rods 5, as shown, the same consisting of collars proper provided with clamp-screws. Beneath the collars is arranged a cushion 32, of leather or rubber or some other elastic material. It is apparent that by adjustment of these collars higher or lower upon the slidable rods 5 their contact with the rocker 4 will arrest the type-wheels, so that they give an easy or hard blow upon the pad 17^a. By this means the force of contact of the type-wheels with the linen and pad may be regulated at will. When it is desired to adjust the type-wheels to print particular letters or numerals, they are raised to the position shown by full lines in Figs. 1, 3, and 4, and a locking-pin 33 (see Fig. 4) is slid into position behind one of the arms 5. The said pin slides in keepers 34, secured to the table 1.

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

1. The combination with a table having ver-

tical slots and vertical standards secured to said table, of a rocker pivoted in said standards, parallel rods sliding in said rocker, a rock-shaft arranged transversely in the middle portion of the rods, type-wheels which are mounted rotatably on the shaft, a rocker-shaft journaled below the table and provided with radial arms with which the aforesaid rods are connected, cams applied to the said rocker-shaft, and a spring and treadle connected with the respective cams to operate in the manner shown and described.

2. The combination, with a suitable table and standards secured thereon, and vertically-movable rods arranged parallel and working in a suitable guide, of type-wheels supported upon an axis in the central portion of the rods, an inking-pad arranged on the table in rear of and at a point equidistant from the standards, and means for drawing the rods downward for bringing the type-wheels down upon the said pad, and means for retracting the wheels to the opposite position, substantially as shown and described.

3. The combination with a horizontal table; a supporting-frame fixed thereon, and a rocker journaled in said frame, of rods adapted to slide in said rocker and passing through the table, printing-wheels arranged upon an axis between said rods above the table, an inking-pad and an elastic pad arranged upon the table on opposite sides of the frame, an oscillating shaft hung horizontally in bearings below the table and provided with arms which are pivotally connected with the aforesaid rods, a spring and treadle connected with such shaft on opposite sides thereof so that when the treadle is operated to draw the printing-wheels down for printing, the springs tend to throw the wheels back to the normal position in contact with the inking-pad, as shown and described.

4. The combination with a supporting-table, a rigid frame secured thereto, and having a guide at the top, of rods working in such guide and extending through the table, means for drawing said rods downward, and two pairs of printing-wheels, and two corresponding pairs of indicator-wheels, the outer indicator-wheels being rigidly connected with the inner printing-wheels, and the adjacent indicator and printing wheels being also rigidly connected, substantially as shown and described.

5. The combination with a printing-wheel, and means for depressing it, of a punctuating device which is arranged alongside such wheel and adapted for adjustment for throwing it into and out of working position, substantially as shown and described.

6. The combination with a table, a rigid frame and a guide affixed thereto, of rods adapted to work in said guide and extending below the table, means for drawing the said rods downward and retracting them, printing-wheels mounted rotatably upon an axis

supported in said rods, and a punctuating device mounted on the same axis and consisting of a bar having a printing-point at its lower end and bifurcated at its upper end, 5 and a cross-head arranged above the type-wheels with which the arms of the said devices come in contact and serve as stops for determining the position of said device in or out of work, substantially as shown and de- 10 scribed.

7. The combination with a horizontal table, a supporting-frame and a guide, of rods adapted to slide in the guide and having a cross-head affixed thereto, of printing and indi- 15 cator wheels mounted upon an axis below said cross-head, and spring-detents adapted to engage notches in the indicator-wheels for the purpose of holding the printing-wheels in any required working position, and means 20 for drawing down and retracting the rods with the printing-wheels, as shown and described.

8. The combination with a horizontal table, a frame fixed thereon and provided with a 25 guide, of rods working in the guide and passing through the table, means for depressing and retracting them, one or more type-wheels supported upon an axis in said rods, a punctuating device arranged alongside such 30 wheels and adapted to rotate upon the said axis, the same having its upper portion constructed upon the arc of a circle and provided with notches, and a cross-head secured to the said rods above the printing-wheel, and a 35 frictional detent arranged in said cross-head for coaction with the punctuating device and holding it in or out of working position, as shown and described.

9. The combination with a horizontal table, 40 an ink-pad and printing-pad arranged thereon, and vertical standards supported upon the table and having a rocker-guide at the top, of parallel rods working in such rocker and provided with adjustable collars, print- 45 ing-wheels mounted upon a horizontal axis and carried by said rods, and means for draw-

ing downward and retracting the rods, substantially as shown and described.

10. The combination with a horizontal table having slots and vertical standards pro- 50 vided with a rocker-guide at the top, of parallel rods working in said rocker and having their lower portions curved backward, an inking-pad and printing-block arranged on opposite sides of the standards, printing- 55 wheels supported in and carried by the said rods, means for drawing the rods downward and retracting them to the opposite position, and the slidable stop secured to the table and adapted to be projected behind the curved 60 portions of the rods for supporting the printing-wheels in position for inspection, substantially as shown and described.

11. The combination with a horizontal table, a rigid frame secured thereto, and paral- 65 lel rods working in a suitable guide, of printing-wheels carried by said rods, a rocker-shaft arranged below the table and provided with arms which are pivotally connected with the lower ends of the rods, cams attached to the 70 said shaft and arranged with their longer arms projecting in opposite directions, a treadle arranged below the table, a strap connecting it with the longer arm of one of said cams, and a spring attached to the other cam 75 in the manner shown and described.

12. The combination with a horizontal table, and a frame fixed thereon, of parallel rods working in a suitable guide on said 80 frame, printing-wheels carried by said rods, and means for drawing the latter downward, a printing-pad arranged on the table in front of the frame, and a spring-plate secured at one end to the table and curved upward and slotted at its free end which projects over 85 the said printing-pad, as and for the purpose specified.

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