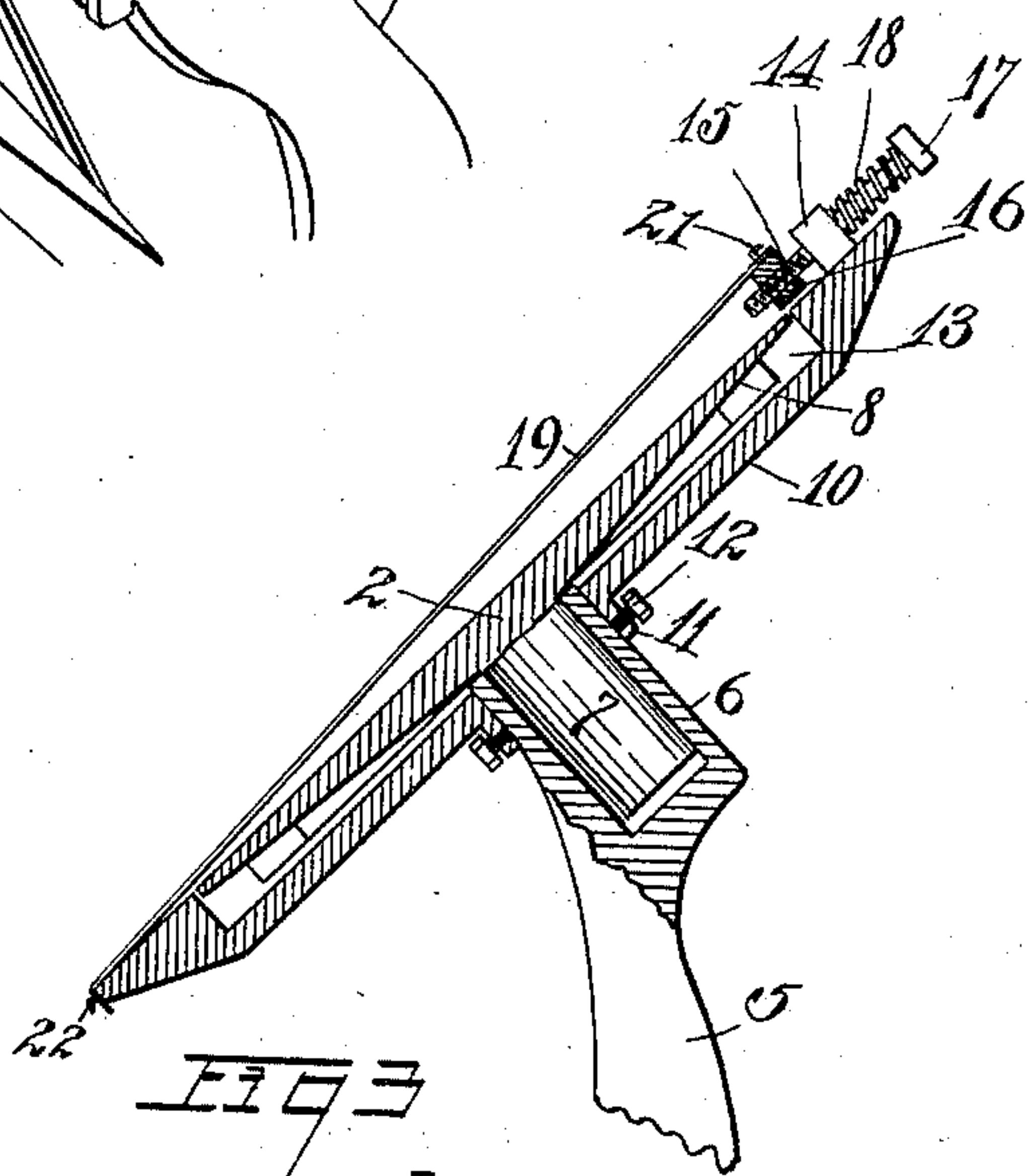
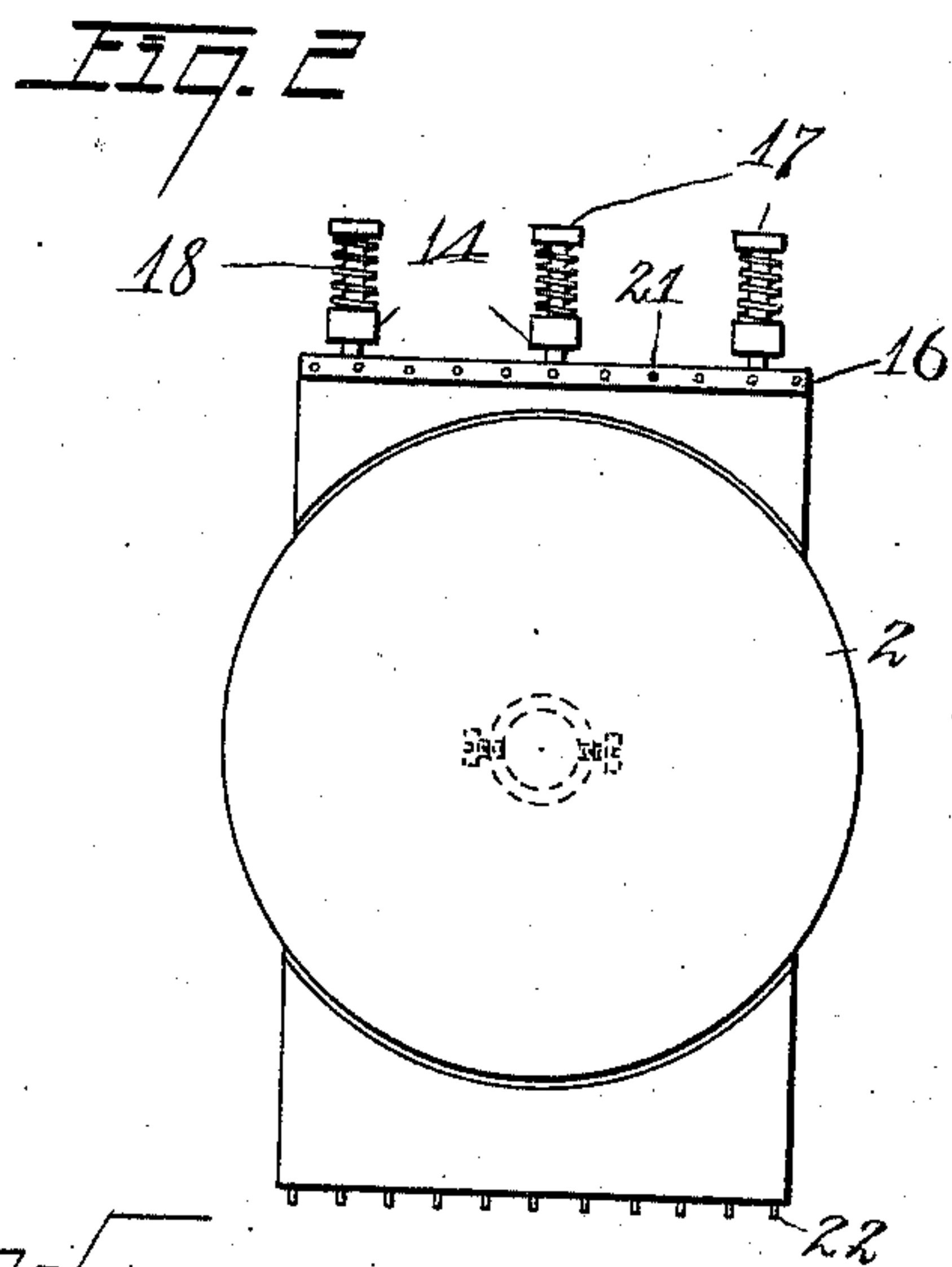
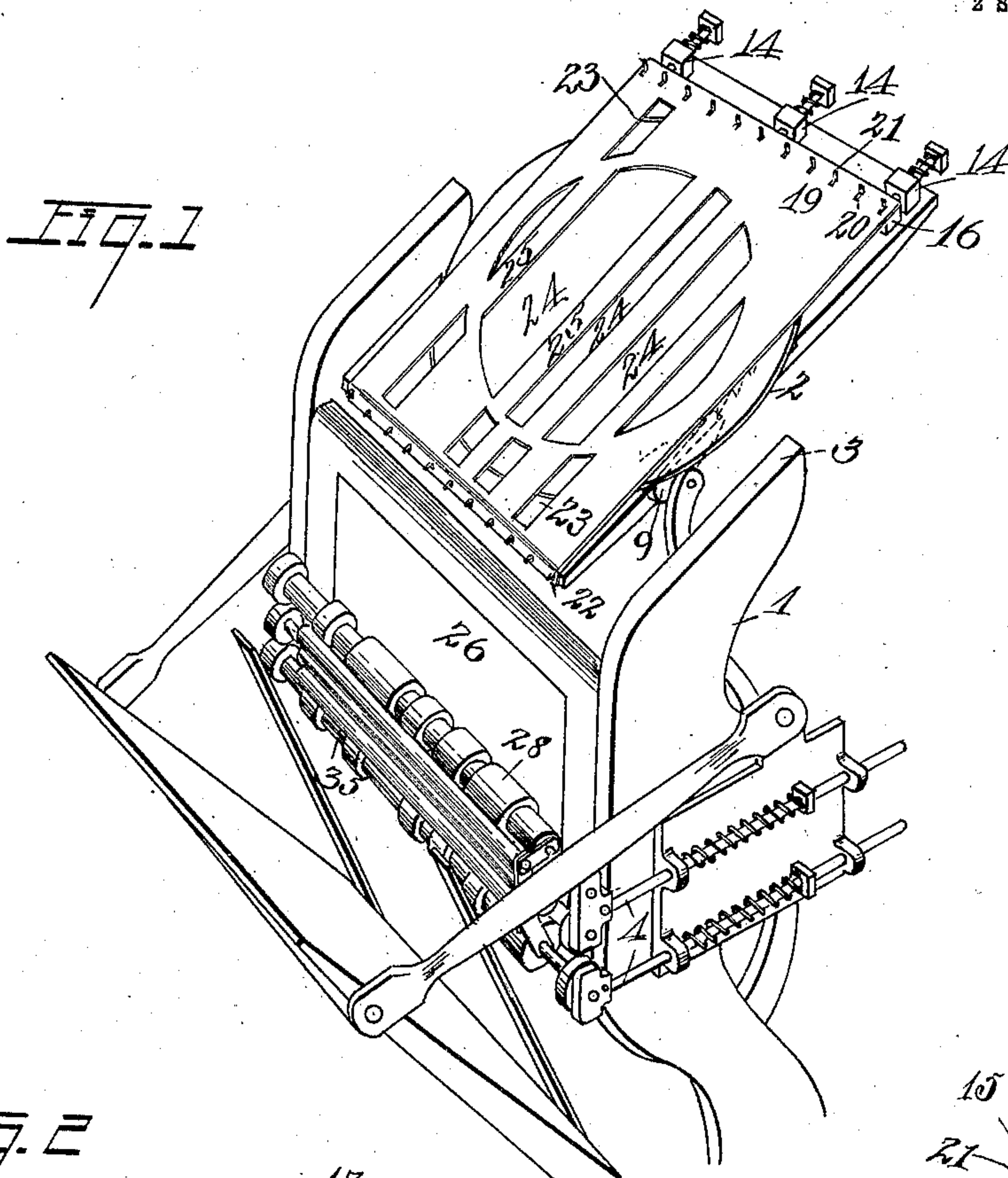


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 APPLICATION FILED FEB. 3, 1910.

986,530.

Patented Mar. 14, 1911.  
 2 SHEETS-SHEET 1.



Witnesses.  
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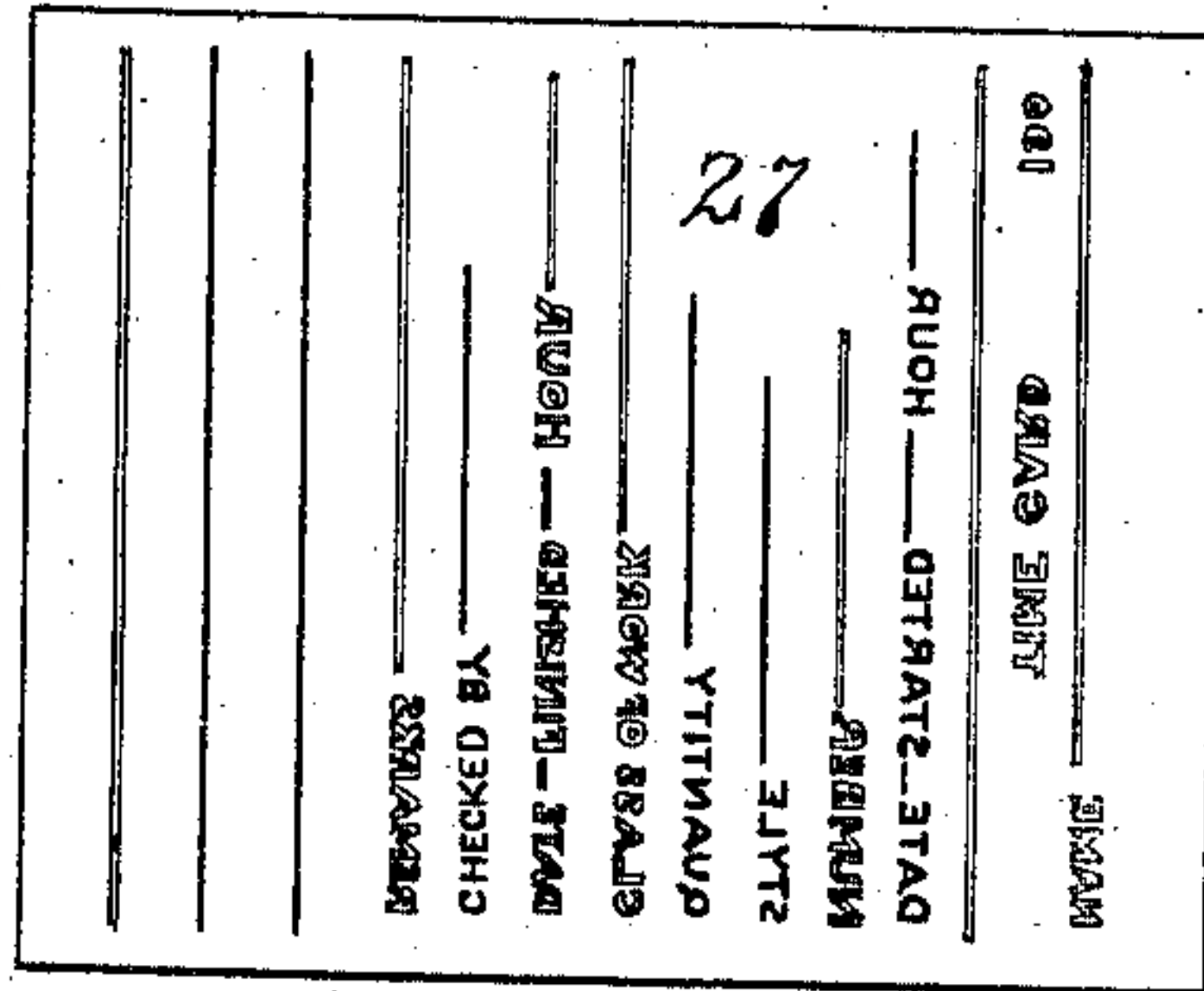
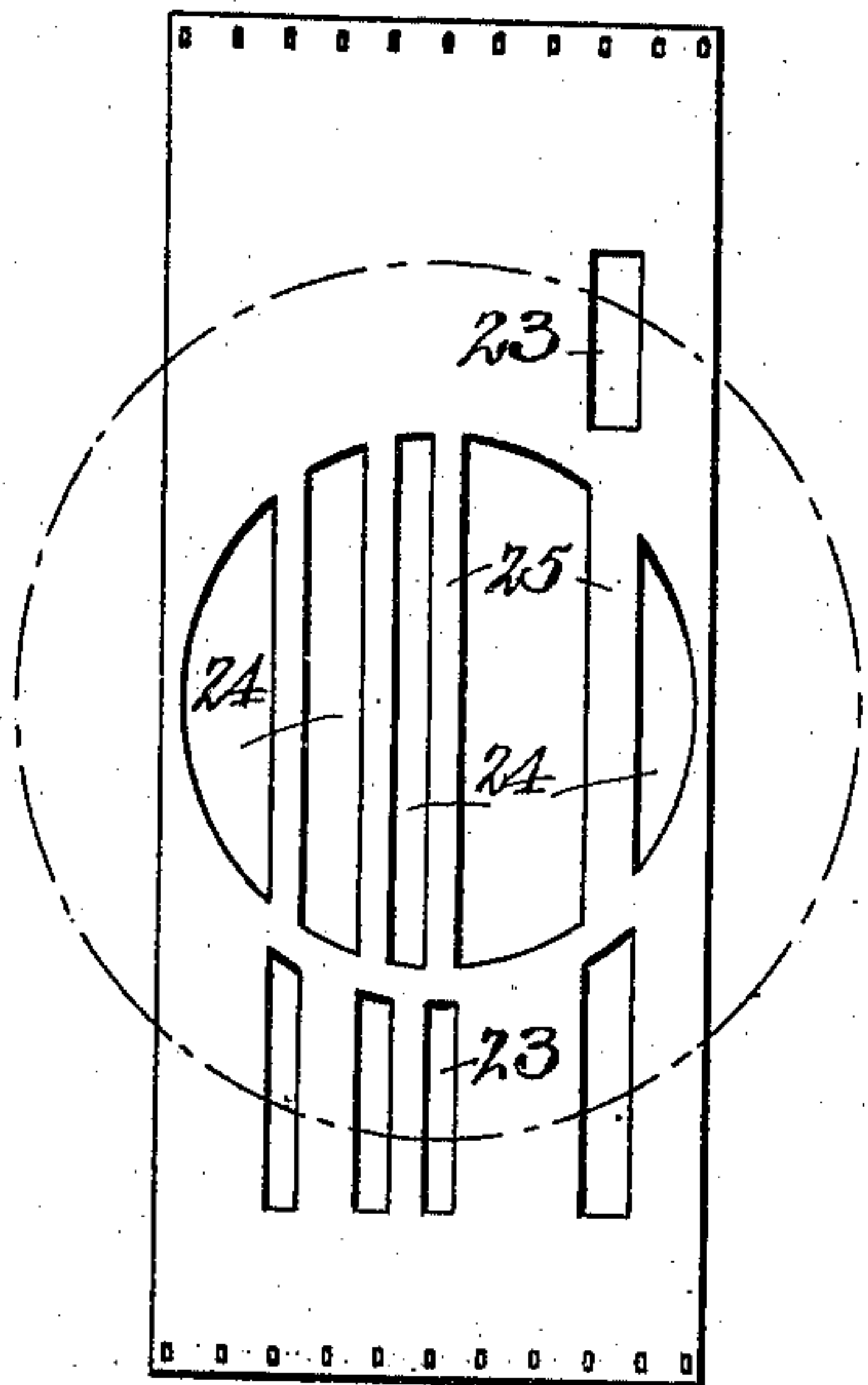


FIG. 5

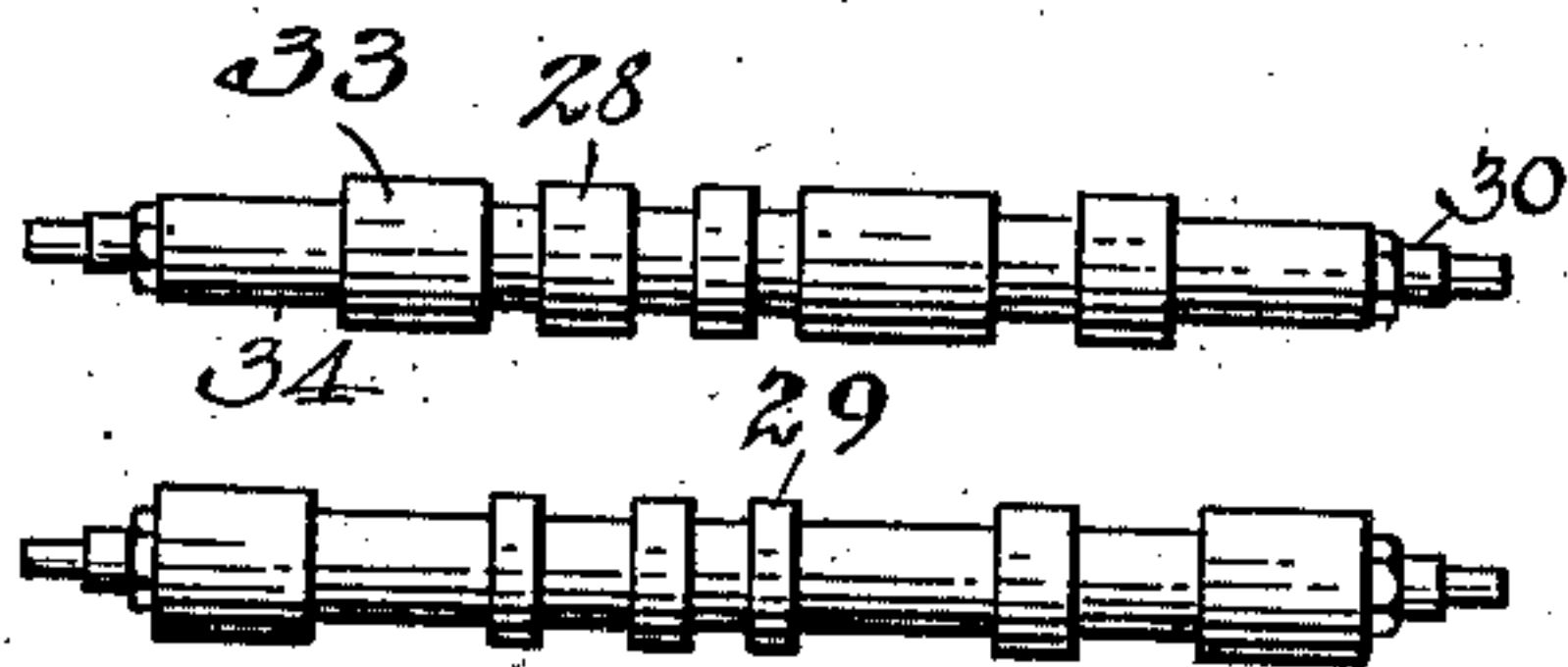


FIG. 4

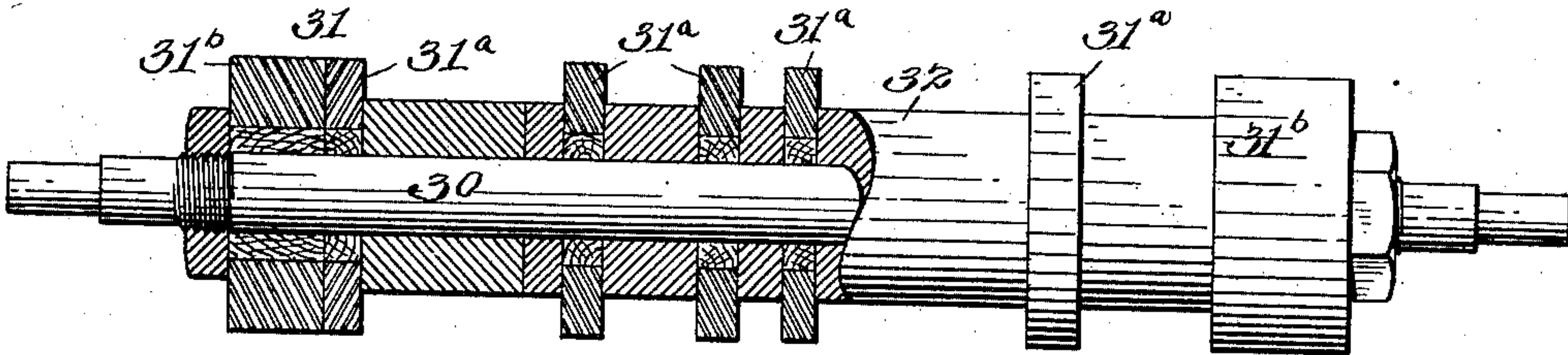


FIG. 3

Witnesses

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# UNITED STATES PATENT OFFICE.

IRVING L. WILD, OF RED BANK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO THEODORE S. CLARK, OF BROOKLYN, NEW YORK.

## PRINTING COLOR ATTACHMENT.

986,530.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed February 3, 1910. Serial No. 541,780.

*To all whom it may concern:*

Be it known that I, IRVING L. WILD, a citizen of the United States, residing at Red Bank, in the county of Monmouth and State of New Jersey, have invented a certain new and useful Improvement in Printing Color Attachments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to color printing attachments for presses and has for its object to provide a construction which may be conveniently and economically applied to presses, especially of the "Gordon" type and which will enable ink of different colors to be applied to the type.

In carrying out my invention, I employ a plurality of strips, which may be formed as part of a stencil yieldingly supported above the inking disk or platen, said stencil having slits so arranged as to permit the rollers operating thereover to receive ink through the slits, certain of the slits and the corresponding roller being appropriated to one color of ink while certain other slits and the corresponding roller are appropriated to ink of another color.

Generally speaking, the invention may be further defined as consisting of the combinations of elements set forth in the claims hereto annexed and illustrated, in one exemplification, in the drawings forming a part hereof, wherein—

Figure 1 represents a perspective view of a "Gordon" press having my invention applied thereto; Fig. 2 represents a plan view of the inking disk or platen and the frame which supports the stencil; Fig. 3 represents a sectional view taken through the central portion of the disk and frame; Fig. 4, a diagrammatic plan view of the rollers, disk and stencil. Fig. 5 is a plan view of a form, showing the arrangement of the lines of type therein, whereby they may be inked in accordance with my invention, and Fig. 6 is an enlarged detail, partly in elevation and partly in section, of one of the inking rollers.

Describing the parts by reference characters, 1 represents the upper portion of a press

of the "Gordon" type, the same having the ordinary rotatable inking disk or plate 2, roller tracks 3 and pivotally supported roller arms 4.

5 denotes a standard having at its upper end a journal 6 for the stud 7 carried by the inking disk or platen 2. This inking disk is provided with the ordinary ratchet 8, by means of which and the pawl 9, step-by-step movement is imparted to the inking disk in a manner well known in the art.

The above mentioned parts are of ordinary construction and need no detailed description.

The inking attachment which I provide consists generally of a stencil supported above the disk, the disk having ink applied thereto in concentric circular bands and the stencil having apertures, spaced in accordance with the arrangement of the lines of type in the form, above the portions of the platen or disk which carry the different colored inks, with rollers having projections that register only with the slits in the stencil corresponding to the desired color of ink.

10 denotes a frame having a short sleeve 11 by means of which and screws 12 the frame may be supported by the journal 6. This frame is provided with a recess which receives the inking disk 2. At its upper end, the frame is provided with a plurality of apertured lugs 14 through which there extend bolts 15. The lower ends of these bolts are threaded into a cross bar 16. Each bolt has applied thereto, between a lug 14 and its head 16, a spiral spring 18, by means of which the cross bar is yieldingly supported by the bolts.

19 denotes a stencil, which may be formed of any suitable material, as heavy stencil paper. This stencil may be secured at its upper end to the cross bar 16 by means of slits 20 adapted to be applied to pins 21 carried by the bar. The lower end of the stencil may be secured, as by means of pins 22, to the lower edge of the frame 10. The parts are so arranged that, as the inking disk revolves, the stencil will be out of contact therewith, as indicated in Fig. 3.

The manner of using the stencil with two colors of ink, say black and red, is as fol-



lows:—Suppose the inking disk to be twenty inches in diameter. The stencil will not completely cover the disk but will leave about five inches of the outer edge exposed on each side thereof. To this outer exposed portion, one color of ink will be applied, say red. To the inner central portion of the disk there will be applied ink of another color, say black, such ink covering a circular area of about ten inches in diameter. A suitable number of slits 23 will be cut in that portion of the stencil which is above the outer circle of the disk and a suitable number of slits 24, alining with the spaces between the slits 23, will be formed in the stencil above the central portion of the disk. Strips 25 of the same width as the slits 23 extend across the inner portion of the disk; that is to say, across that portion of the disk which receives the black ink.

27 denotes a form to be used with the inking attachment. In this form, the lines of type 27 extend up and down, or in the same direction as the slits 23 and 24. With this attachment, I employ a special form of cooperating inking roller. Three such rollers are shown. These rollers are of the same general construction and comprise each a plurality of roller sections mounted on a mandrel, said roller sections being separated by recesses and the sections being adapted to receive ink through the slits in the stencil. Two of these rollers are shown at 28 and 29 respectively, and the latter roller is shown in detail in Fig. 6. With the arrangement of colors selected for illustration herein, the roller 29 may be referred to as the "red ink" roller and the roller 28 as the "black ink" roller. The roller 29 comprises a mandrel having thereon a suitable number of roller sections 31, 31<sup>a</sup>, 31<sup>b</sup> and 32. The roller sections 31, 31<sup>a</sup> and 31<sup>b</sup> project beyond the roller sections 32 and are so arranged as to take ink from the exposed side edges of the disk and through the slits 23. The roller 28 is made up in like manner of projecting portions 33 and reduced portions 34, the projections and recesses of one roller being arranged complementarily with respect to the projections and recesses on the other roll. If desired, three rollers altogether may be used, as shown, two of which will necessarily be of identical construction. With the rollers 28 and 29, there may be employed small distributing rollers 35, which serve to distribute on the projections of the rollers 28 and 29 the ink which may be taken from the exposed portions of the disk.

In operation, the rollers 28 and 29 are moved along the tracks 3 and over the inking disk in the usual manner. The spring support for the stencil enables the latter to be pressed downwardly against the disk as the rollers move over the same, and the pro-

jecting portions of the rollers will engage the side portions of the disk and the portions which are exposed through the slits in the stencil. The provision of the strips 25, extending from the slits 23, enables the roller 29, after receiving ink through the slits 23 to be moved across the disk without bringing its projections into contact with the central portion of the disk, which portion carries ink of another color from that taken through the slits 23. Furthermore, the strips 25 serve to distribute the ink on the projecting portions of the roller 29. As no strips are provided corresponding to the slits 24, it will probably be desirable to use two inking rollers 28 to insure proper supply of ink to the form. A further distribution of the ink on the projecting portions of the rollers is secured by the distributing rollers 35.

By the construction disclosed, the strips 25 are pressed upon the surface of the disk only at the time when the disk is not rotated. Furthermore, the inking of the under surfaces of these strips by the disk does not affect the color of the ink which may be distributed on the upper surfaces thereof. It will be understood that the depth of the recesses formed between the projections of a roller will be greater than the thickness of the stencil or the strips 25, so that there will be no rubbing of the upper surface of the stencil or the strips by the recessed portions of the rollers.

By reference to Fig. 6, it will be seen that the individual projections 31 are built up of one or more independent sections 31<sup>a</sup>, 31<sup>b</sup>. The sections 31<sup>a</sup> are of the width of a line of type while the sections 31<sup>b</sup> are a multiple of such width. By this construction, I am enabled to build up very quickly rolls for use in color printing, which rolls will be provided with surfaces of sufficient length to receive ink through slits of varying width, the variation in the width of the slits corresponding to the matter to be printed. For instance, the left hand projection of the roller shown in Fig. 6 may comprise a section 31<sup>a</sup> which is of the width of a single line of type and a section 31<sup>b</sup> which is of the width of three lines of type, the whole projection being equal to the width of four lines of type. The projections 31<sup>a</sup> may be of the width of a single line of type, while the projection 31<sup>b</sup> at the right-hand end of the roller is of the same width as that at the left. The roller 28 may be built up in like manner to form projections complementary to those on the roller 29. The construction as a whole provides a particularly economical means whereby a plurality of colors may be applied to the type locked in the form, maintaining the various colors separate from each other and effectively distributing the ink on the respective roll-



ers. While for the purposes of illustration two colors of ink are selected, it will be apparent that more than two colors may be used and that these colors may be arranged differently on the printing disk than described herein.

Having thus described my invention, what I claim is:—

1. In a printing press, the combination of an inking disk, a plurality of strips extending thereabove and spaced apart, and a pair of inking rollers, one of said rollers having a plurality of sections of substantially the same width as the strips with recesses intermediate between said sections and the other roller having sections corresponding to the spaces between strips with recesses therebetween.

2. In a printing press, the combination of an inking receiving device, a plurality of strips extending thereabove and spaced apart, a pair of inking rollers, one of said rollers having a plurality of sections of substantially the same width as the strips, with recesses intermediate between said sections and the other roller having sections corresponding to the spaces between strips with recesses therebetween.

3. In a printing press, the combination of an inking disk, a plurality of strips mounted thereabove and spaced apart, a pair of inking rollers, one of said rollers having sections corresponding in width and arrangement to said strips with recesses intermediate of said sections and the other roller having sections corresponding in width and arrangement to the spaces between strips with intermediate recesses, and means for yieldingly supporting said strips.

4. In a printing press, the combination of an ink-receiving device, a plurality of strips mounted thereabove and spaced apart, and a pair of inking rollers alternately and complementarily reduced in diameter and arranged to pass over said strips and said device.

5. In a printing press, the combination of an inking disk, a plurality of strips extending thereabove and spaced apart, a pair of rollers cooperating with said disk and strips, one of said rollers having sections corresponding in width and arrangement to said strips with recesses between said sections and the other roll having sections and recesses arranged complementarily to the sections and recesses on the former roll, a bar upon which the upper ends of the strips are secured, and means for yieldingly and adjustably supporting said bar.

6. In a printing press, the combination of an ink-receiving device, a plurality of strips extending thereabove and spaced apart, a pair of alternately enlarged and reduced inking rollers cooperating with said disk and

strips respectively, and means yieldingly supporting said strips above said device.

7. In a printing press, the combination of an inking disk, a frame, a stencil supported by said frame and extending across said disk, said stencil being provided with a plurality of slits located above the outer portion of the disk and with a plurality of slits located above the central portion of the disk, the latter slits being staggered with respect to the former, strips extending in line with the former slits and across the central portion of the disk, and a pair of inking rollers, one of said rollers having projections so located as to roll on said strips and above the first set of apertures and the other roller having projections corresponding in width and arrangement with the second set of slits.

8. In a printing press, the combination, with a disk and a frame having roller tracks, of a frame mounted in operative relation to said disk, one or more strips yieldingly supported by the latter frame above the disk, inking-receiving mechanism cooperating with said strip or strips and the disk, and means whereby said strip or strips may be adjusted at one end with reference to said disk.

9. In a printing press, the combination of a disk, a frame supported in operative relation to said disk, a cross bar adjacent to the upper end of said frame, means yieldingly supporting said cross bar, and a stencil extending across and above said disk and having its upper end secured to said cross bar.

10. In a printing press, the combination of an ink receiving device, a cross bar adjacent to an upper end of said device, means yieldingly supporting said cross bar, and a plurality of strips extending across and above said device and secured to said cross bar.

11. In a printing press, the combination of an inking disk, a cross bar extending across the upper portion of said device, bolts connected to said bar and extending through lugs on said frame, springs interposed between the bolt heads and said lugs, and a plurality of strips extending across said disk and detachably secured to said cross bar.

12. In a printing press, the combination of an inking disk, a frame in operative relation to said disk, a cross bar extending across the upper end of said frame, bolts connected to said bar and extending through lugs on said frame, springs interposed between the bolt heads and said lugs, and a stencil extending across said disk and having its upper end detachably secured to said cross bar.

13. In a printing press, the combination of a disk, a stencil extending across the cen-



- tral portion of said disk, said stencil having a plurality of apertures located above the peripheral portion of the disk, and strips corresponding in width to said apertures and extending across the central portion of the disk, said stencil having apertures between said strips and located over the central portion of the disk, and complementary rollers, one of said rollers having projecting portions corresponding in width and position to said strips, and the other roller having projecting sections corresponding in width and location to the spaces between said strips.
14. In a printing press, the combination of an inking disk, and a stencil extending across the central portion of said disk and having apertures located above the peripheral portion of the disk, and having apertures located above the central portion of the disk, the latter apertures being staggered with respect to the former.
15. In a printing press, the combination of a standard having a journal, an inking disk journaled in said standard, a frame mounted on the journal of said standard, said frame having portions projecting above said disk at the bottom and top thereof, and a stencil extending across said disk and connected to the projecting portions of the frame.
16. In a printing press, the combination of a disk, a plurality of strips extending across said disk and supported above the surface thereof, the width of said strips being a multiple of a line of type, and a pair of built-up inking rollers adapted to cooperate with said disk and strips, each of said rollers comprising a plurality of projecting roller-sections, the length of each section being a multiple of the width of a line of type, and the projecting sections of one roller being arranged complementarily to those of the other.
17. In a printing press, the combination of a disk, a plurality of strips extending across said disk and supported above the surface thereof, an inking roller adapted to cooperate with said disk, and strips, said roller comprising a plurality of projecting roller sections with recesses therebetween, the length of each section and the width of each strip being a multiple of the width of a line of type.
18. In a printing press, the combination of a pair of inking rollers, each made up of a plurality of projecting sections having recesses therebetween, the length of each section being a multiple of the width of a line of type, and the sections of one roller being arranged complementarily with respect to the sections of the other roller, and means for supplying to the sections of one roller ink of a different color from that supplied to the corresponding sections of the other roller, said means comprising an ink-carrying device surmounted by a stencil having strips and slots in alinement, the strips corresponding to the projecting sections of one roller and the slots to the projecting sections of the other.
19. In a printing press, the combination of an ink-receiving device, a stencil extending across said device and having two series of staggered apertures, a pair of rollers, one of said rollers being adapted to receive ink through one series of apertures and the other being adapted to receive ink through the other series of apertures, and a form having lines of type, the said lines extending in the direction of said apertures and arranged to receive the ink from the rollers.
20. In a printing press, the combination of an ink receiving device, a plurality of spaced strips extending above said device, and a pair of rollers, one of said rollers being arranged to receive ink from the strips and the other roller being arranged to receive ink from the spaces between the strips.
21. In a printing press, the combination of an ink carrying member, a shielding member surmounting the same and having openings through it in two sets staggered with relation to each other, and two rollers having respectively projecting sections complementarily positioned, the sections of one roller corresponding to one set of openings and those of the other roller to the other set of openings.
22. In a printing press, the combination of an inking disk, a stencil over the same having apertures located in two sets, staggered with relation to each other, and two rollers, one having projecting portions corresponding to one of the sets of openings and the other having projecting portions corresponding to the other set of openings.
23. In a printing press, the combination of an ink carrying member, a shielding device covering the ink carrying member by two sets of strips, the strips of one set being opposite the spaces between the strips of the other set, and two inking rollers having complementarily arranged projecting portions, those of one roller corresponding to the spaces between one set of strips and those of the other roller corresponding to the spaces between the other set.
24. In a printing press, the combination of an ink carrying member, a shielding device covering the ink carrying member by two sets of strips, the strips of one set being opposite the spaces between the strips of the other set, two inking rollers having complementarily arranged projecting portions, those of one roller corresponding to the spaces between one set of strips and those



of the other roller corresponding to the spaces between the other set, means for carrying the printing form, and means for moving the inking rollers across the form  
5 and across said shielding device with their axes transverse of said strips, whereby the projecting portions of the respective rollers may engage different portions of the ink

carrying member through the spaces between the two sets of strips respectively. 10

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

IRVING L. WILD.

Witnesses:

RUBY B. WILD,  
FRANK D. REED.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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