

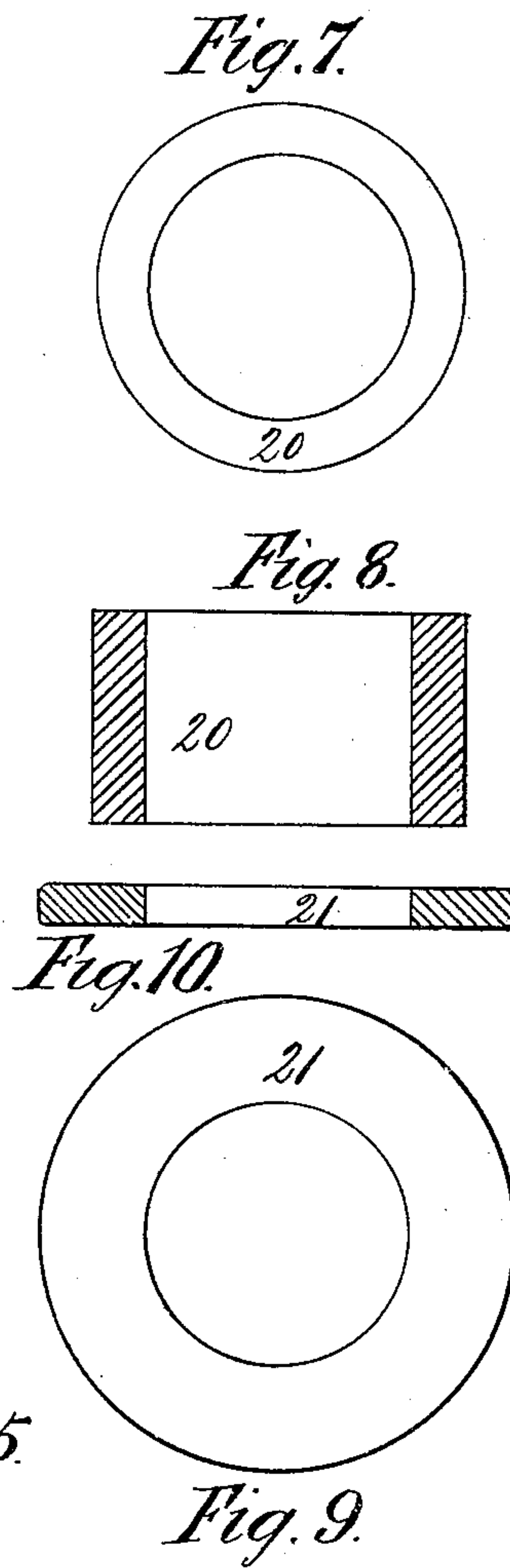
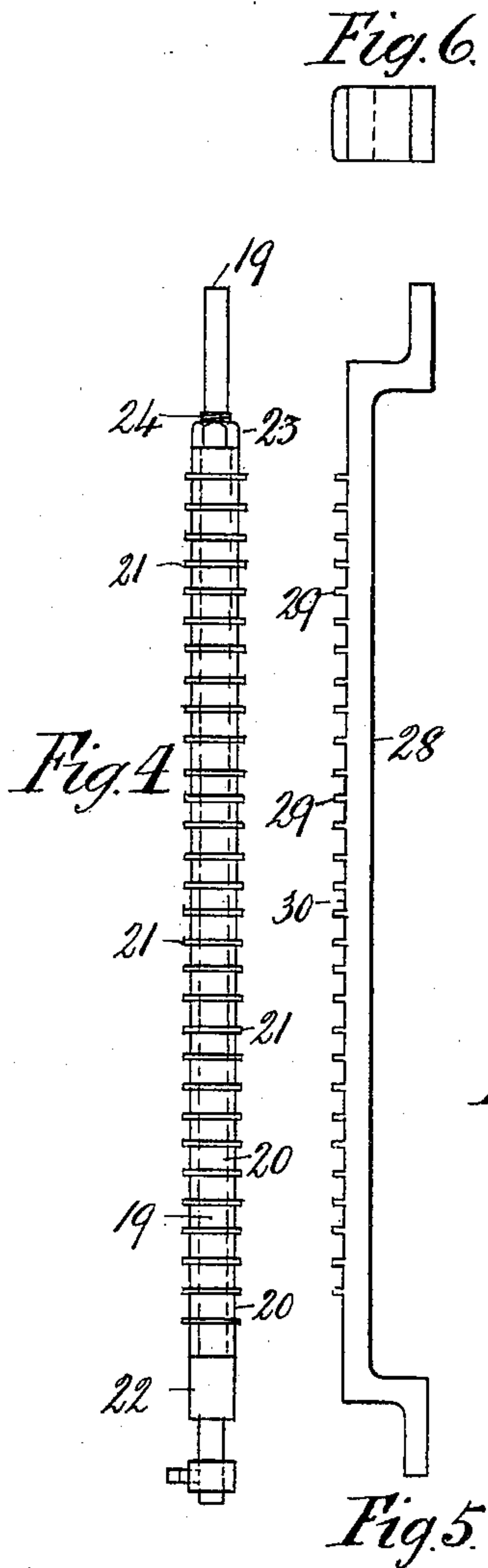
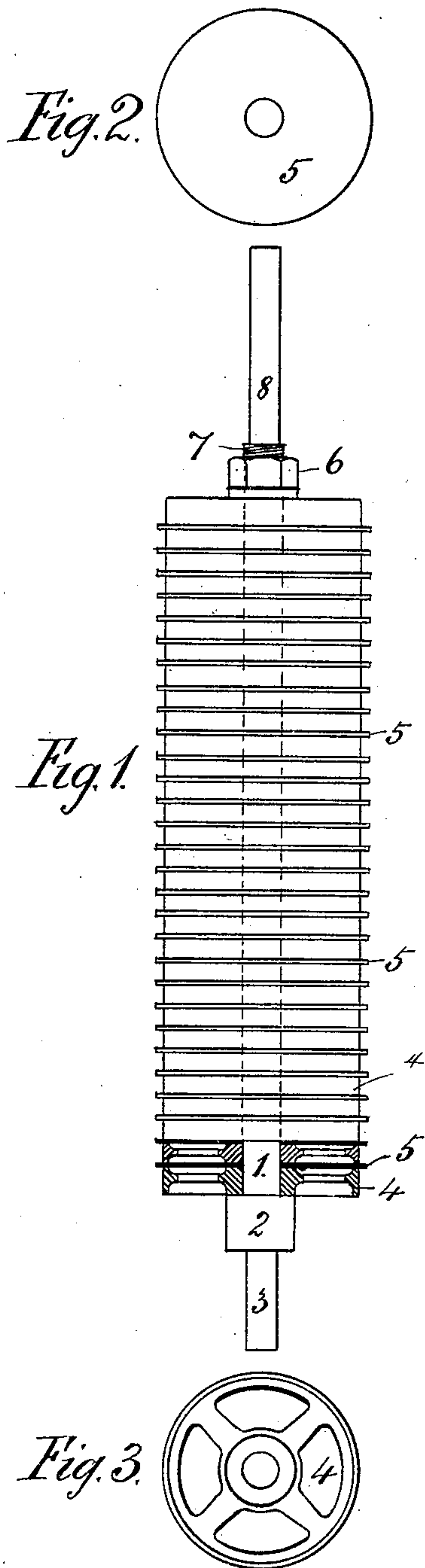
(No Model.)

4 Sheets—Sheet 1.

S. H. SHARP.  
FABRIC PRINTING MACHINE.

No. 599,948.

Patented Mar. 1, 1898.



Witnesses  
Robert Edwin Peacock Craven  
David Edmund Craven.

Inventor.  
Samuel Holt Sharp  
per *J. E. Deft*  
Attorney.

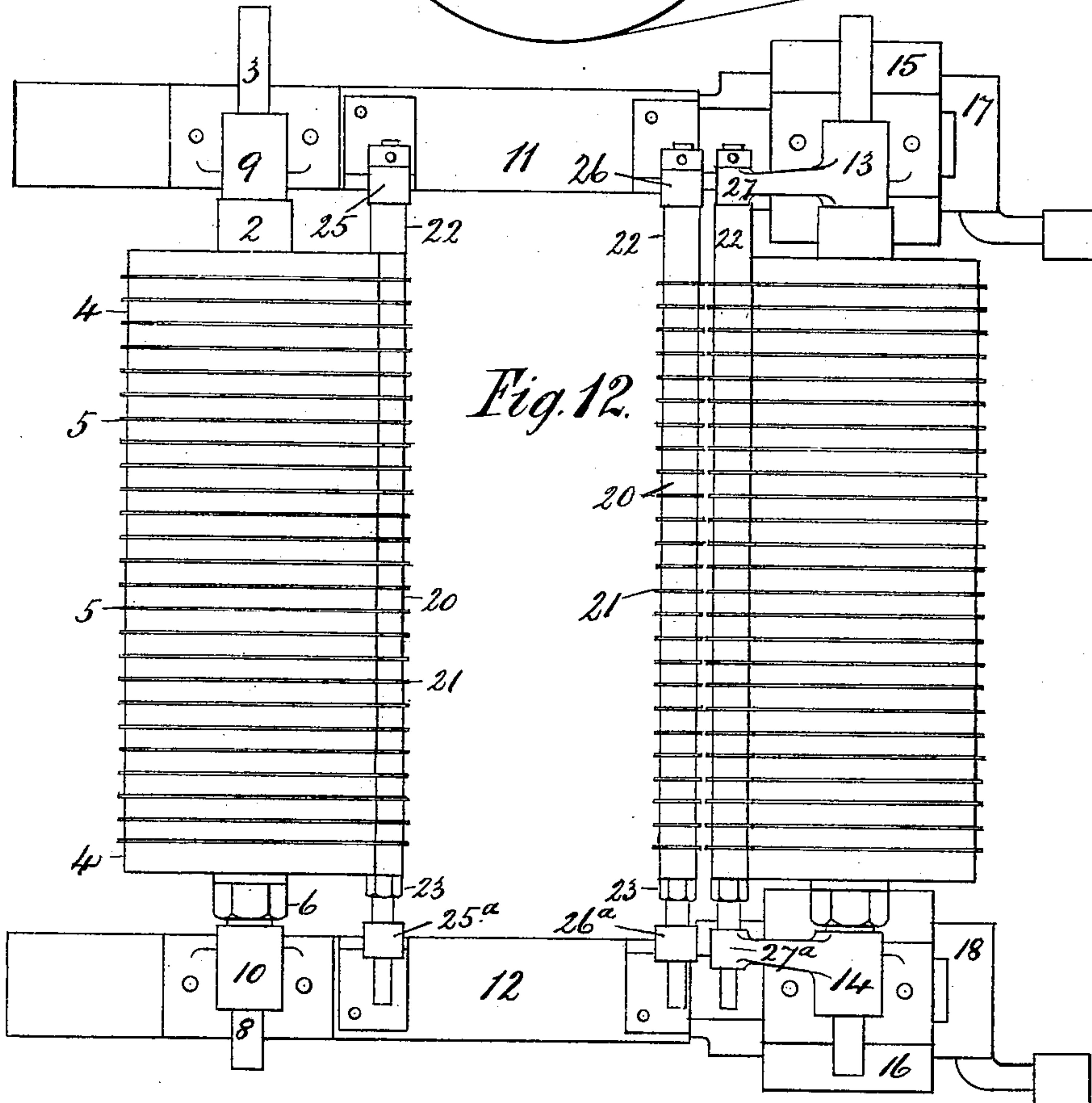
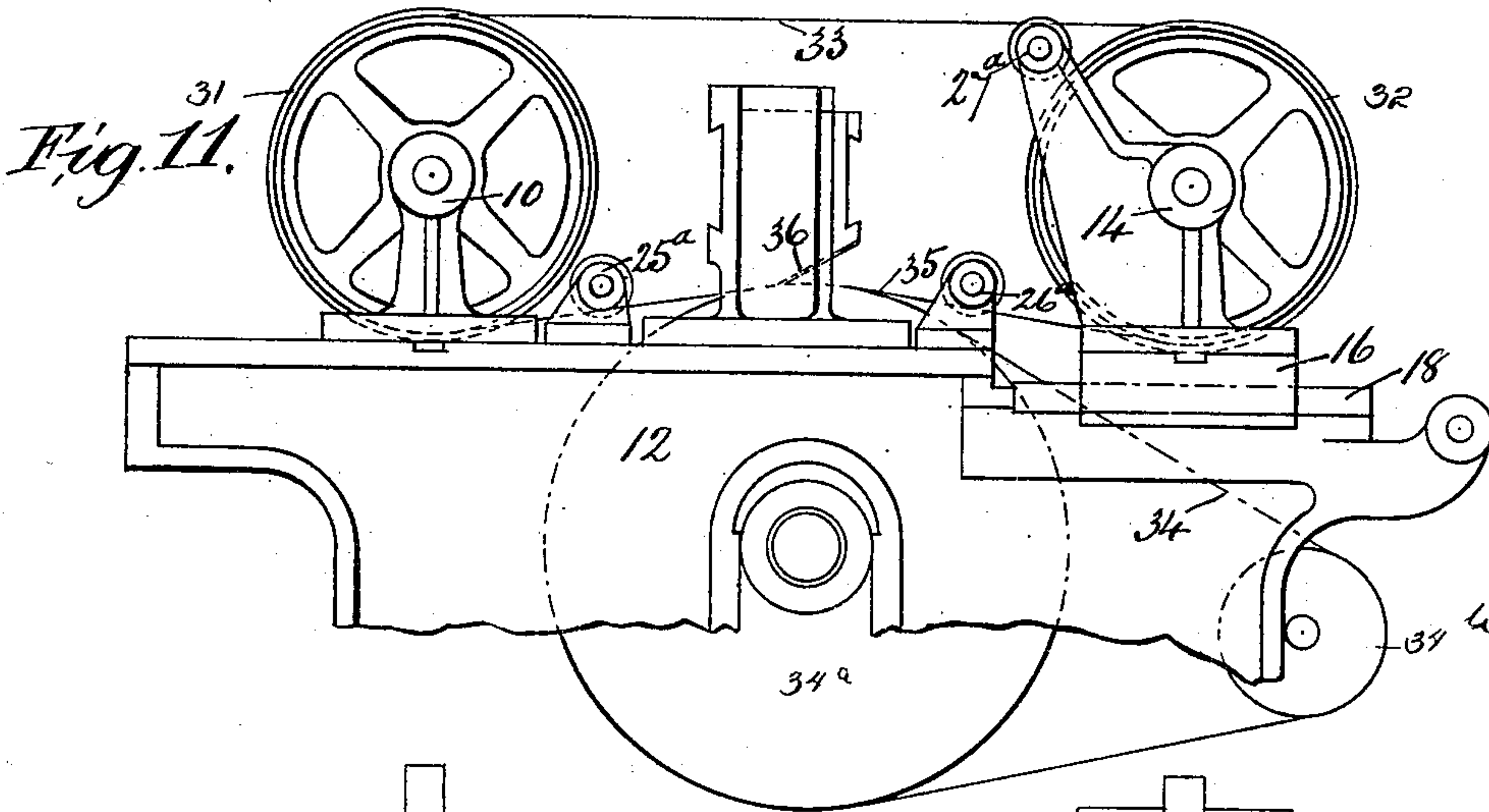
(No Model.)

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*Witnesses:*  
*Robert Edwin Packer Craven.*  
*David Edwin Craven.*

*Inventor.*  
*Samuel Holt Sharp*  
*per O. E. Deffen*  
*Attorney.*

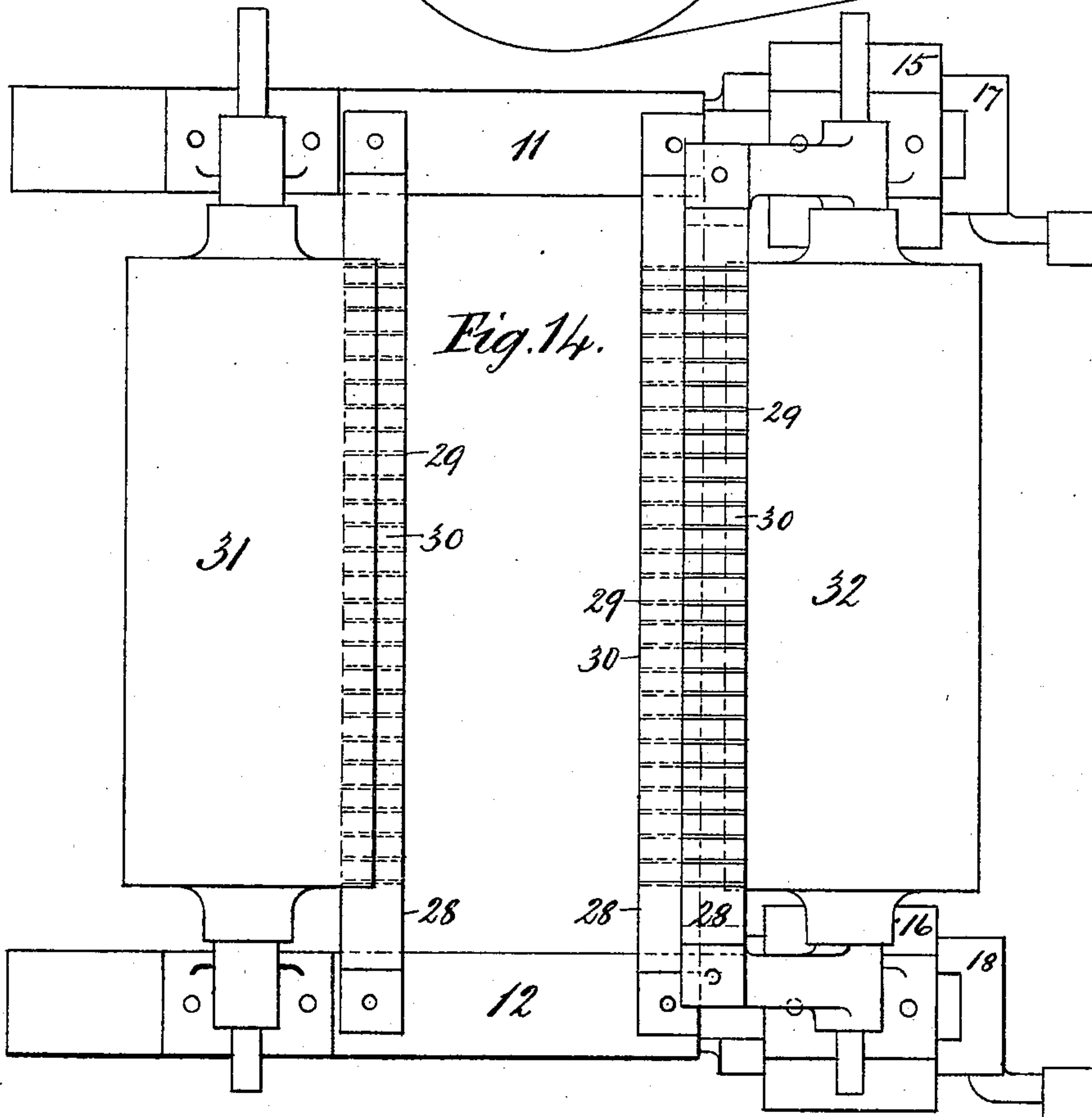
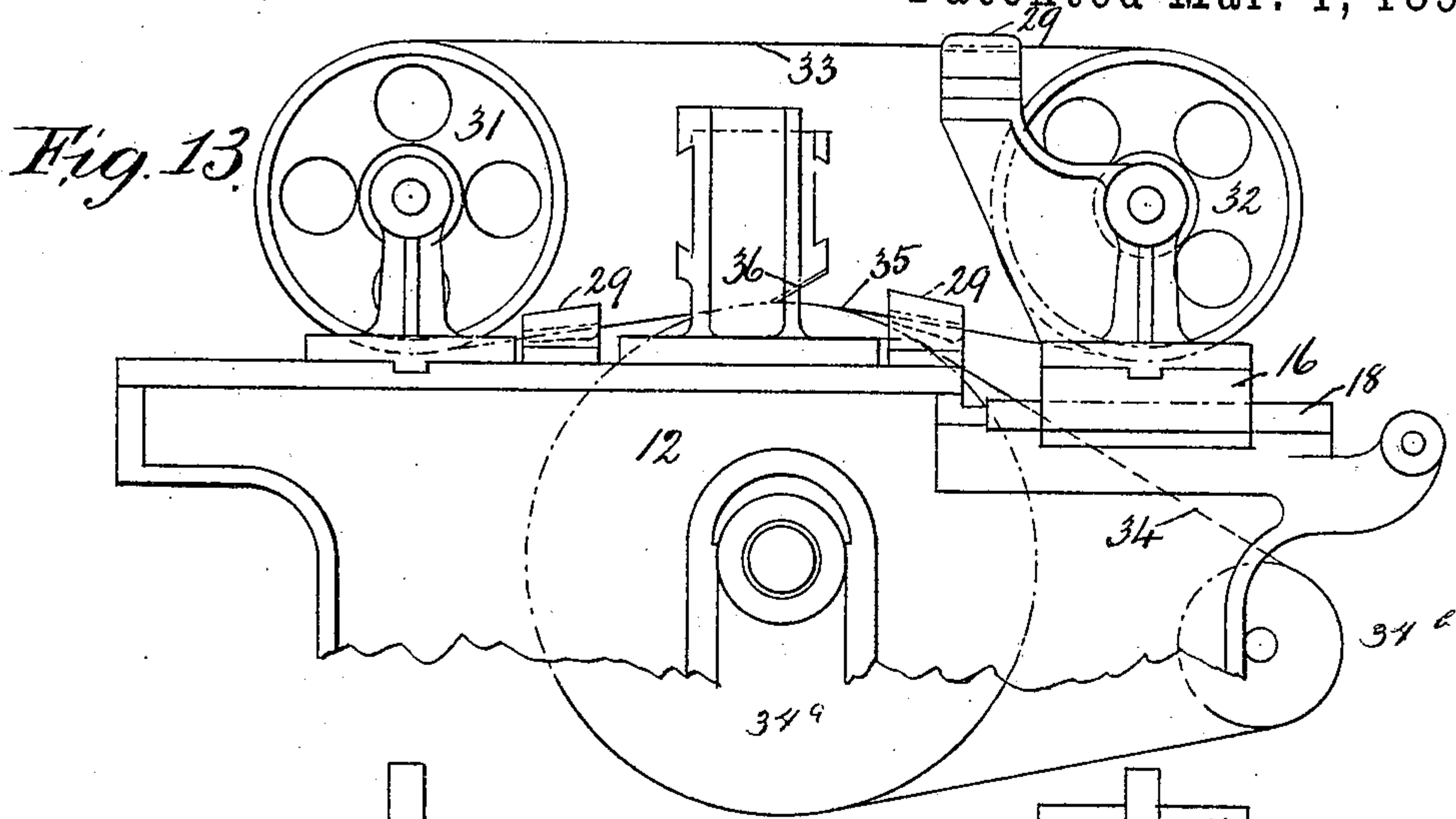
(No Model.)

4 Sheets—Sheet 3.

S. H. SHARP.  
FABRIC PRINTING MACHINE.

No. 599,948.

Patented Mar. 1, 1898.



*Witnesses:*  
*Robert Edwin Pearce Craven*  
*David Edwin Craven.*

*Inventor.*  
*Samuel Holt Sharp*  
*per O. E. Deffen*  
*Attorney.*



(No Model.)

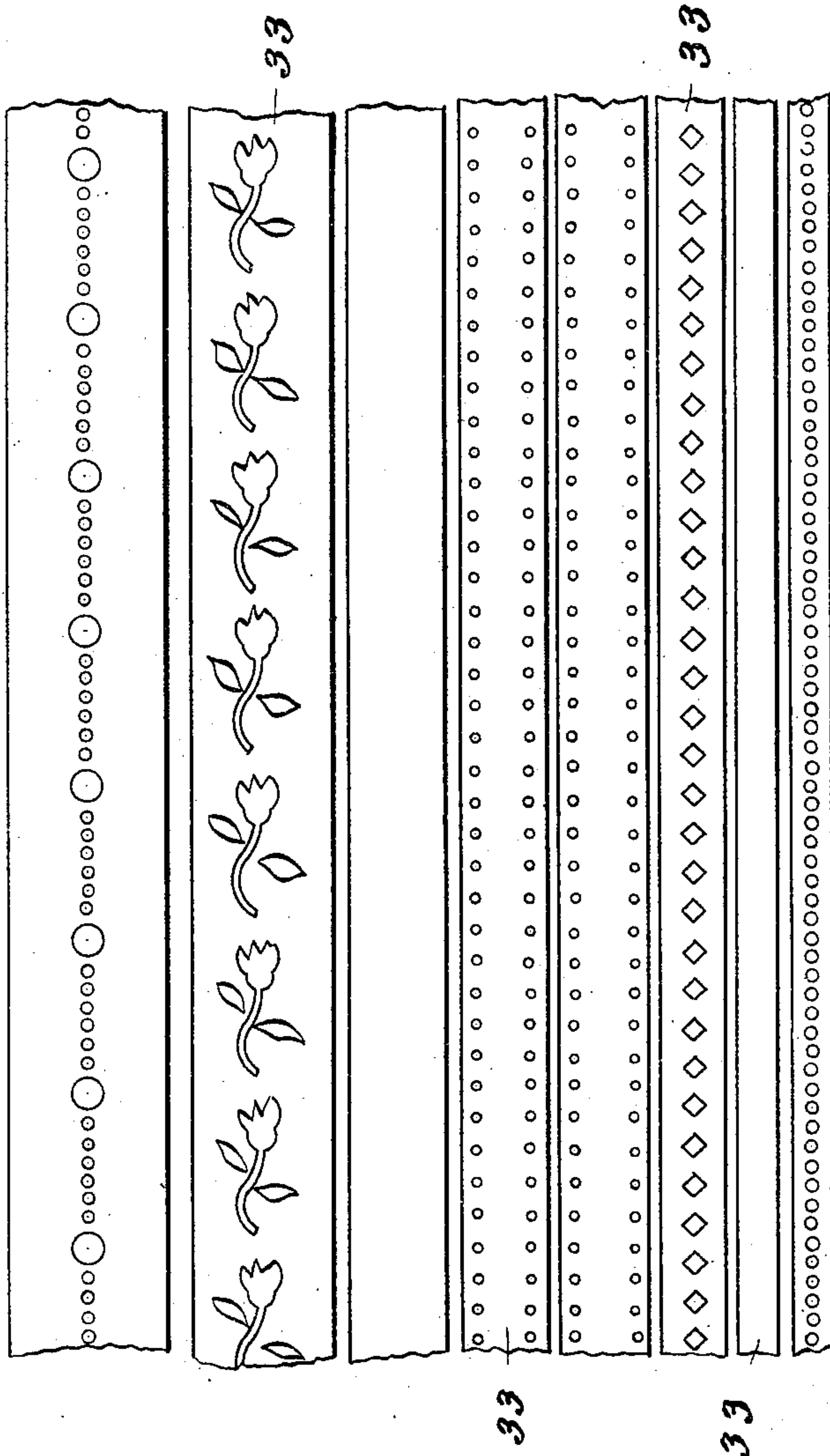
4 Sheets—Sheet 4.

S. H. SHARP.  
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*Fig. 15.*



Witnesses.

*F. C. Barry*

*W. B. Duffy*

Inventor.

*S. H. Sharp*

*per W. B. Duffy*

Attorney.



# UNITED STATES PATENT OFFICE.

SAMUEL HOLT SHARP, OF LEEDS, ENGLAND.

## FABRIC-PRINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 599,948, dated March 1, 1898.

Application filed May 9, 1896. Serial No. 590,832. (No model.) Patented in France May 28, 1896, No. 256,733; in Germany June 17, 1896, No. 94,517; in Hungary July 16, 1896, No. 7,307; in Belgium July 17, 1896, No. 122,544; in Austria August 12, 1896, No. 46/3,168; in Italy September 30, 1896, LXXXIII, 114; in Spain November 21, 1896, No. 19,434; in India April 20, 1897, No. 331, and in Canada September 9, 1897, No. 57,362.

*To all whom it may concern:*

Be it known that I, SAMUEL HOLT SHARP, a subject of the Queen of Great Britain and Ireland, residing at Leeds, in the county of York, England, have invented Improvements in Fabric-Printing Machines, (patented in Austria, No. 46/3,168, dated August 12, 1896; in Belgium, No. 122,544, dated July 17, 1896; in Canada, No. 57,362, dated September 9, 1897; in France, No. 256,733, dated May 28, 1896; in Germany, No. 94,517, dated June 17, 1896; in Hungary, No. 7,307, dated July 16, 1896; in Italy, Vol. LXXXIII, 114, dated September 30, 1896; in India, No. 331, dated April 20, 1897, and in Spain, No. 19,434, dated November 21, 1896,) of which the following is a specification.

This invention relates to improvements in machinery or apparatus for producing patterns or designs on textile and felted fabrics and the like according to the method described and claimed in the specification of my Patent No. 538,655, my present object being the production of stripes of any desired width or widths, or both stripes and dotted lines, or stripes and patterns or designs, on the fabrics. For this purpose, according to this invention, I employ, in conjunction with the cylinder and presser or pressing device, two or more traveling endless metallic tapes or bands, which are kept taut and at the required distance apart and between which the parts of the material on which stripes are to be produced are caused to enter, the semi-liquid composition being then applied and caused to enter the material and produce the required stripe or stripes. The said metallic tape or bands, or some of them, are suitably perforated when it is desired also to produce dotted lines or patterns or designs other than and additional to the stripe or stripes.

Figure 1 of the accompanying drawings is an elevation, partly in section, of one of the main rollers; and Figs. 2 and 3 are respectively end views of a flange-disk and a distance-piece thereof. Fig. 4 is an elevation of a guide-roller. Figs. 5 and 6 are respectively an end view and side elevation of a guide-bar. Figs. 7 and 8 are respectively a plan and transverse section of a collar, and Figs. 9 and 10 are respectively a plan and a transverse section of one of the metallic

flange-disks of the guide-roller shown in Fig. 4. Fig. 11 is a partial side elevation of a fabric-stenciling machine provided with guide-rollers of the kind shown in Fig. 4 according to this invention. Fig. 12 is a plan thereof, some of the parts being removed for the sake of clearness. Figs. 13 and 14 are similar views to Figs. 11 and 12 of a stenciling-machine according to this invention provided with guide-bars of the kind shown in Figs. 5 and 6. Fig. 15 is a view of the tapes 33, carrying patterns of different designs.

The main rollers, Fig. 1, are each constructed by placing on a shaft 1, having a fixed collar 2 near one end 3, first a metallic distance-piece 4, then a metallic flange-disk 5, then another distance-piece 4, followed by another flange-disk 5, and so on until the shaft 1 has been filled to the desired extent. Then the whole of the flange-disks and distance-pieces are firmly secured together by means of a nut 6, screwed on a thread 7, formed on the end 8 of the shaft, and tightened up against the collar 2. Two main rollers constructed in this way are provided in the machine represented in Figs. 11 and 12, one being mounted in bearings 9 and 10, fixed on the main frames 11 and 12 of the machine, and the other in bearings 13 and 14, secured to movable saddles 15 and 16, capable of being moved toward or from the bearings 9 and 10 on slides 17 and 18 on the main frames 11 and 12.

The guide-rollers (see Fig. 4) are each constructed, similarly to the main rollers just described, of a shaft 19, metal distance-pieces 20, and metal flange-disks 21, (which are shown to a larger scale in Figs. 7 to 10, inclusive,) the whole being held firmly together and tightened against a fixed collar 22 by a nut 23, screwed on a thread 24, provided on the shaft 19. Two of such guide-rollers are mounted in bearings 25 25<sup>a</sup> and 26 26<sup>a</sup>, secured to the main frames 11 and 12 of the machine, Figs. 11 and 12, while a third and a similar guide-roller is mounted in bearings 27 27<sup>a</sup>, carried by the bearings 13 and 14, respectively.

The guide-bars 28 (shown in Figs. 5, 6, 13, and 14) are placed across the machine and are secured to the main frames 11 and 12 in lieu of the guide-rollers hereinbefore described. They consist of metal bars having projections 29 formed on their upper or un-



der surfaces, these projections being equal in width to the required stripes and the distance 30 between the projections being equal to the distance between the stripes—that is to say, the width of the endless metallic tapes or bands. These guide-bars are used with ribbed main rollers of the kind hereinbefore described or with main rollers 31 and 32, as shown in Figs. 13 and 14.

10 The endless metallic tapes or bands 33, constituting the stencil-sheet, are made from strips of metal of the required width and thickness, and in order to insure their being of the same length I bend each strip round

15 a former until one end overlaps the other. These ends are then brazed or soldered together, and the tape or band formed is then reduced at the joint, so as to be of the same thickness throughout.

20 When dotted lines, patterns, or designs are to be produced between the stripes, perforations corresponding thereto are cut or engraved in the metallic tapes or bands.

34 is an endless traveling blanket; 34<sup>a</sup>, a rotary pressing-cylinder arranged between the main guide-rollers 31 and 32, with its uppermost part above the lowermost parts of the said guide-rollers, and round which and a guide-roller 34<sup>b</sup> the blanket 34 passes, and 36

30 is an inclined spring or yielding presser arranged transversely above the pressing-cylinder 34<sup>a</sup> and so as to bear upon the upper surfaces of the under lengths of the endless tapes, so as to force printing composition supplied to such surface through the longitudinal spaces maintained between the tapes and into the fabric, which is fed between the endless tapes and the blanket and is forced thereby into said spaces.

35 The endless metallic tapes or bands 33 are placed on the main rollers between the flange-disks 5 (when ribbed or flanged rollers are employed) and between the flange-disks 21 on the guide-rollers, and tension is then applied

40 to them by moving the saddles 15 and 16, with their roller and bearings 13 and 14, from the roller in the stationary bearings 9 and 10, so as to force them and the blanket 34 tightly against the upper surface of the pressing-cylinder. Then fabric to be stenciled is passed

50 through the machine between the endless traveling blanket 34 and under the endless tapes 33, applying liquid-bronze composition on the upper surface 35 of the endless tapes, which is pressed through the spaces between

the tapes, through the perforations therein, when there are any, onto the material by the stationary presser 36.

What I claim is—

1. In a fabric-printing machine the combination of a series of endless, parallel traveling tapes of different designs or patterns, guide-rollers carrying said tapes, means for maintaining them at the requisite distance apart, a pressure-roller carrying an endless traveling blanket contacting with the tapes, a presser arranged to bear upon the tapes at said contacting-point and guides for the tapes located in front and rear of the presser, substantially as described.

2. In a fabric-printing machine, the combination of guide-rollers carrying a series of parallel endless traveling tapes, a pressure-roller carrying an endless traveling blanket, a presser located above the pressure-roller and arranged to bear upon the tapes at their point of contact with the blanket and spaced guide-bars located just in front and rear of the pressure-roller, substantially as described.

3. In a fabric-printing machine, the combination of ribbed guide-rollers carrying a series of parallel endless, traveling tapes, a pressure-roller carrying an endless traveling blanket contacting at the highest part of the pressure-roller, spaced guide-bars for the tapes located in the front and rear of the point of contact of the tapes and blanket and a presser located above said point, substantially as described.

4. In a fabric-printing machine, the combination of main rollers formed with guide-flanges, and one of which is movable toward and from the other, auxiliary guiding devices arranged in proximity to said rollers, endless tapes or bands passing around said rollers and guiding devices and held apart thereby, an endless traveling blanket, a pressing-cylinder arranged to force said blanket against the lower surface of the under lengths of said tapes, and a presser arranged above the said pressing-cylinder and bearing upon the under lengths of said endless tapes, substantially as described and shown for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL HOLT SHARP.

Witnesses:

ROBERT EDWIN PEACOCK CRAVEN,  
DAVID EDWIN CRAVEN.