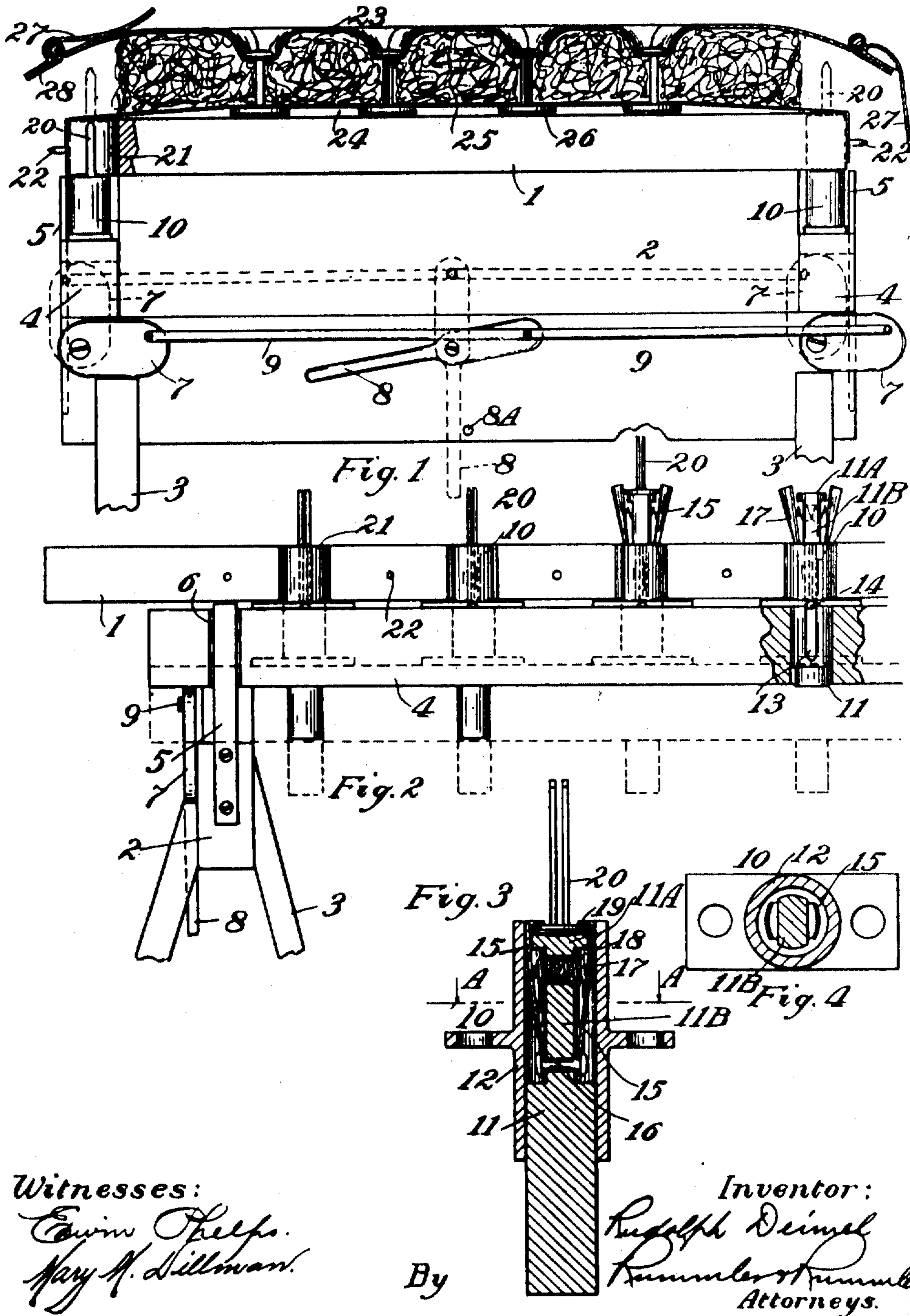


R. DEIMEL.  
UPHOLSTERY MACHINE.  
APPLICATION FILED SEPT. 13, 1909.

Patented May 30, 1911.

2 SHEETS—SHEET 1.

993,657.



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2 SHEETS-SHEET 2.

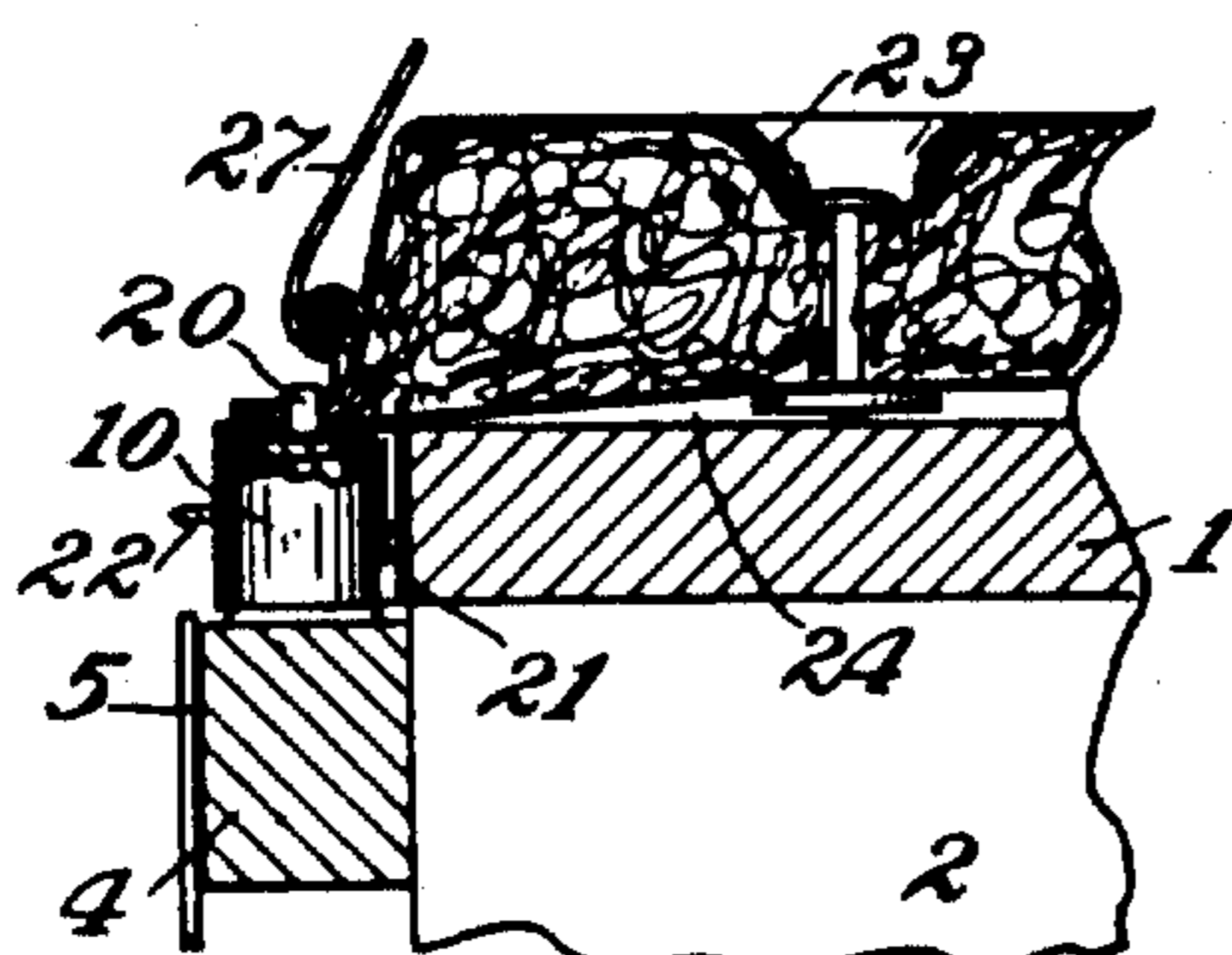
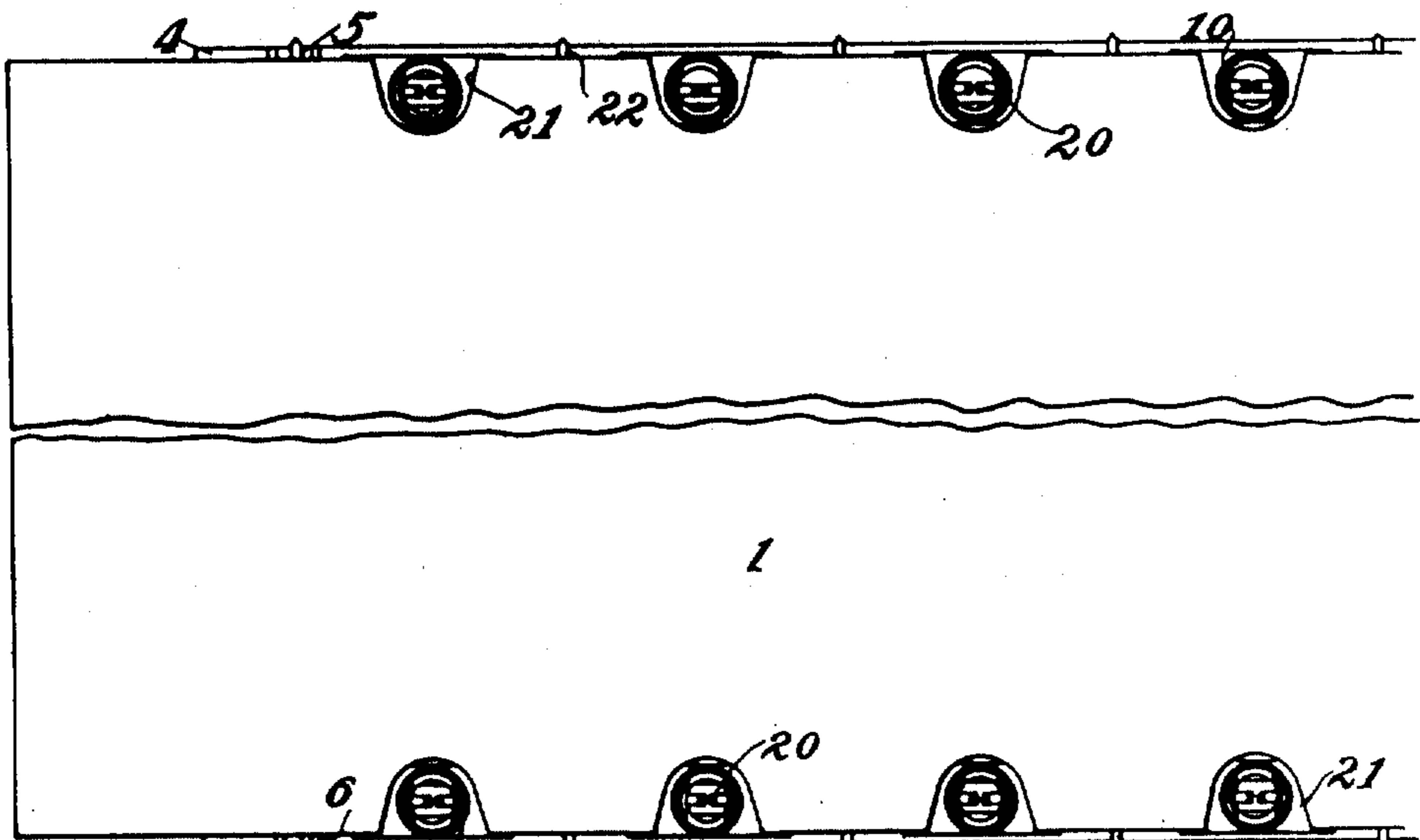


Fig. 6

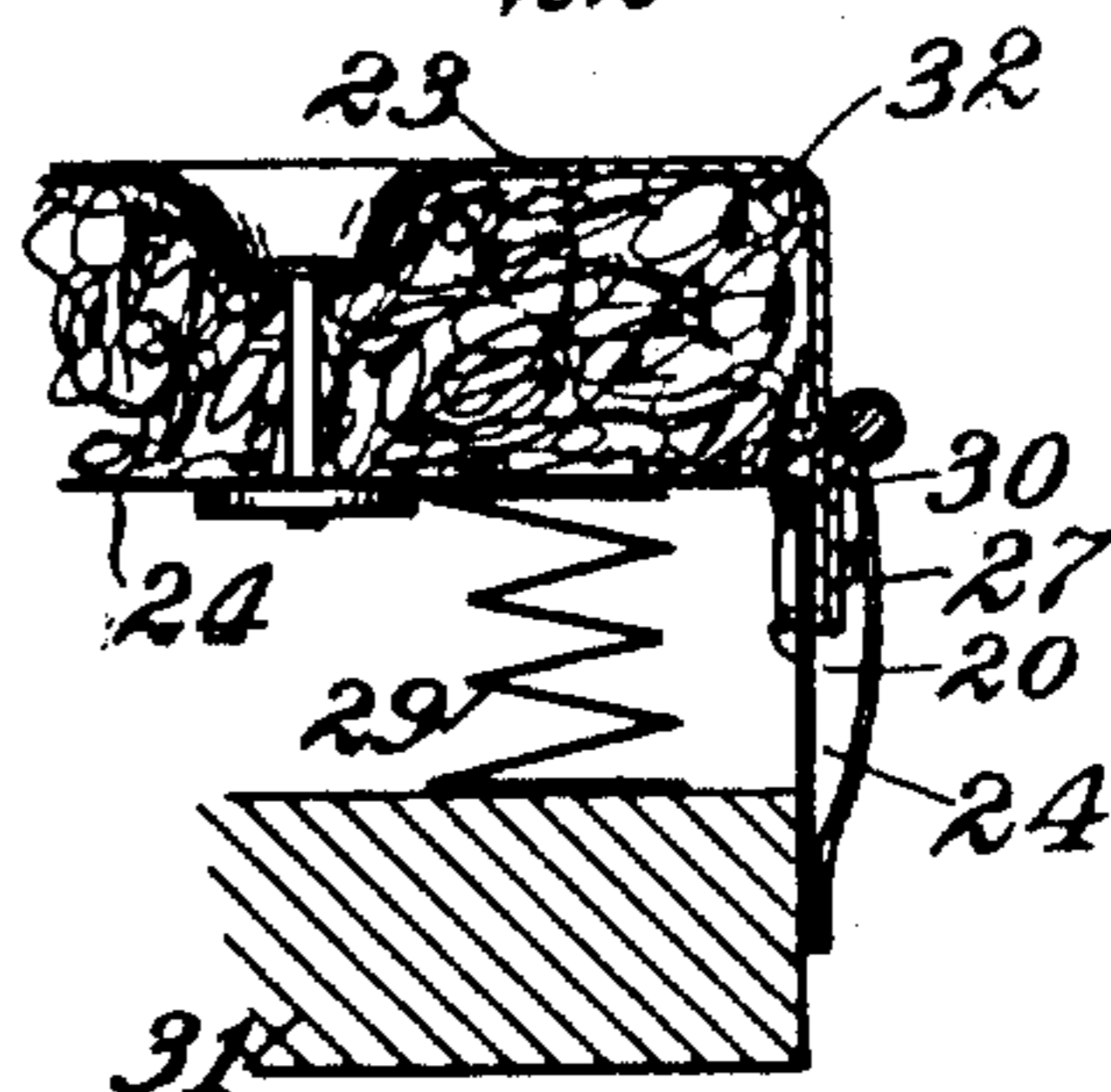
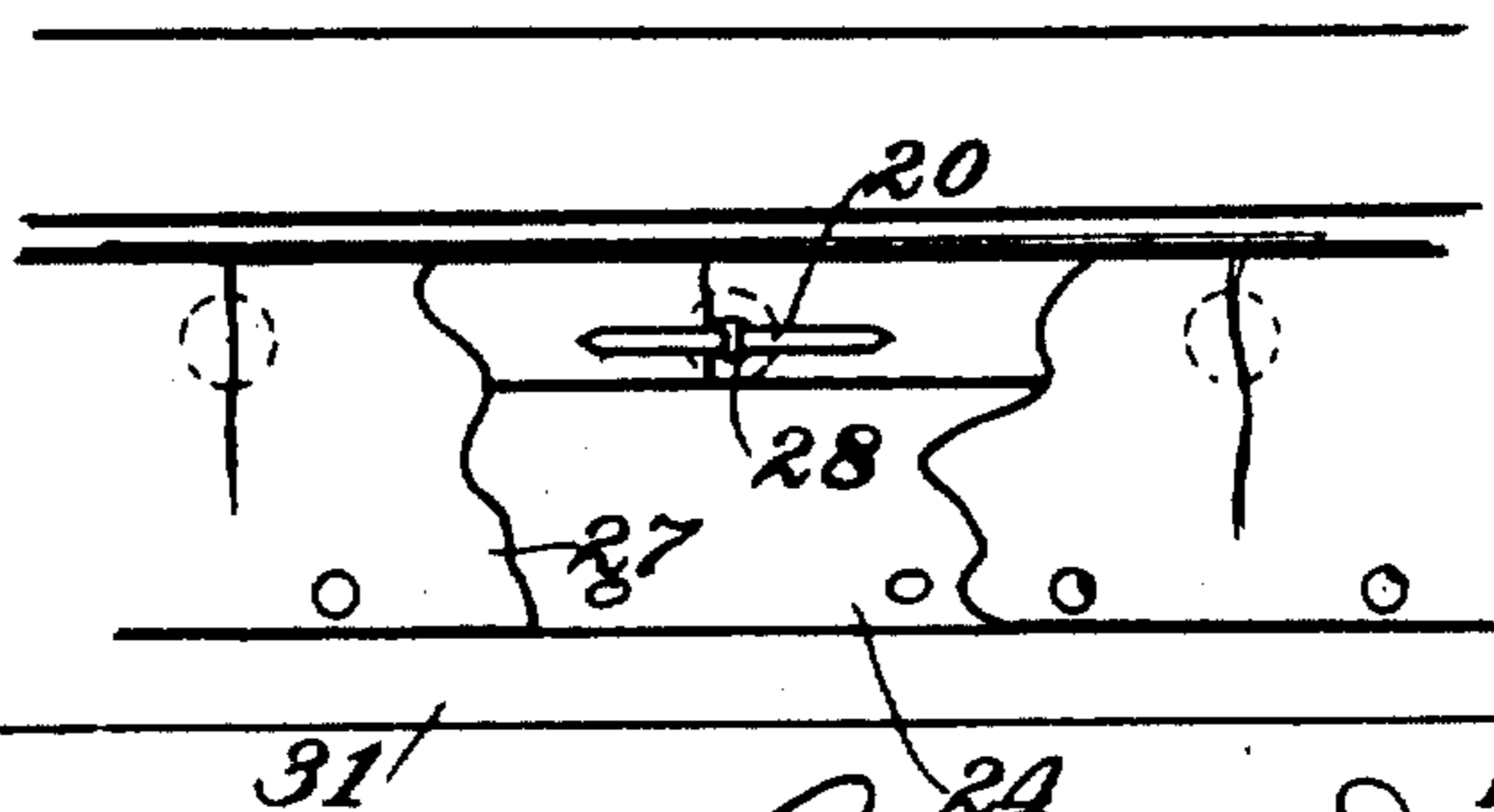


Fig. 7

Fig. 8



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# UNITED STATES PATENT OFFICE.

RUDOLPH DEIMEL, OF CHICAGO, ILLINOIS.

## UPHOLSTERY-MACHINE.

993,657.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed September 13, 1909. Serial No. 517,356.

To all whom it may concern:

Be it known that I, RUDOLPH DEIMEL, a citizen of the United States of America, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Upholstery-Machines, of which the following is a specification.

The main objects of this invention are to provide an improved machine for binding or securing the edges of upholstery coverings; to provide a machine of this kind which is of simple construction, which may be easily operated, and which, besides facilitating the operation of securing the covers, will permit the edges of the upholstery to be separately padded so that an unskilled workman may form a substantially square top edge along the sides of the cushion, the resulting edge being more perfect than that which can be made by even a skilled workman employing the usual methods.

A specific embodiment of this invention is shown in the accompanying drawings, in which:

Figure 1 is an end elevation, partly broken away, of a machine constructed according to this invention, the upholstery being shown in section on the machine with all of the padding material in place. Fig. 2 is a partial side elevation of the machine, showing the fastener holders in their different relative positions. Fig. 3 is an enlarged sectional elevation of one of the fastener-holders with fastener in position. Fig. 4 is a section taken on the line A—A of Fig. 3. Fig. 5 is a partial plan view of the machine with the fasteners in the holders. Fig. 6 is a fragmentary sectional detail showing the covers secured together, prior to the release of the fasteners from the holders. Fig. 7 is a fragmentary sectional detail showing the manner in which the upholstery is afterward secured to the frame of an article of furniture. Fig. 8 is a side elevation, partly broken away, of the same.

The device shown is particularly designed to be used on upholstery which has a ruffle extending along the edges, but it could also

be used on upholstery which had no ruffle, as other means might be provided for hiding the fastening devices.

In the construction shown in the drawings, a table or platform 1 is rigidly mounted on a supporting frame 2 provided with legs 3. Figs. 1 and 2 show but one end of the table, the other end being similar. Bars 4 are mounted below and extend along the edges of the table 1. The bars 4 are slidable vertically between the frame 2 and the table 1, fixed guides 5 preventing longitudinal movement of the bars 4. Cams 7 pivoted on the frame 2 bear against the under side of the bars 4. The cams 7 serve to elevate the bars 4 and retain them in their elevated position, but as soon as the cams 7 are retracted, the bars drop of their own weight. Levers 8 are pivoted at the ends of the frame 2, and links 9 connect the levers 8 with the cams 7. Stops 8<sup>a</sup> limit the movement of the levers 8. Each of the bars 4 carries a plurality of fastener-holders 10, each of which comprises a plunger 11 slidably mounted in a casing 12. The casing 12 has a slot 13 into which a pin 14 on the plunger extends to limit the movement of the plunger. (See Fig. 2). The plunger 11 has a head 11<sup>a</sup> at the top supported by a contracted flat-sided neck 11<sup>b</sup>. Jaws 15 are fastened to opposite sides of the neck 11<sup>b</sup> near its lower end by means of the rivet 16. The jaws 15 are normally urged apart by the spring 17 located in the aperture 18 near the upper end of the plunger 11. The jaws 15 extend above the head 11<sup>a</sup> of the plunger 11 and have inwardly projecting shoulders 19 which grip the head of the fastener 20 when the plunger 11 is pushed downward into the casing. The table is provided with recesses 21 located to receive the holders 10 when the bars 4 are raised. The length of the holders is such as to bring the heads of the clips 20 substantially flush with the upper surface of the table 1 when the bars 4 are raised. Prongs 22 are provided on the edges of the table to engage the lower cover of the upholstery and hold the same securely in place on the table.

The operation of the device shown is as follows: Assume that all of the plungers 11 are at the upper limit of their movement within the casings 12. The lever 8 is first  
 5 turned to the position shown by dotted lines in Fig. 1 so as to raise the bars 4 to their elevated position. This causes the jaws 15 to project above the table 1, and stand apart as illustrated at the extreme right of Fig. 2.  
 10 A fastener 20 is now placed head downward upon the head 11<sup>a</sup> of each plunger 11, as illustrated in the second position from the right of Fig. 2. A downward pressure upon the fastener 20 causes the plunger to be re-  
 15 tracted within the casing 10 and closes the jaws 15 over the head of the fastener, as in the third position from the right of Fig. 2. After fasteners 20 have been secured in each of the holders in this manner, the lever 8  
 20 is turned to the position of the full lines in Fig. 1 so as to lower the bars 4 and withdraw all of the fasteners 20 to a position below the upper surface of the table 1. A partly finished piece of upholstery which is  
 25 to have the edges of its covering fastened is now placed upon the table.

The main part of this piece of upholstery is made in the usual manner either by hand or by machine, as may be desired. In the  
 30 form shown the piece of upholstery is of the type which is used for the seats and backs of sofa beds, and comprises an upper covering 23, a bottom covering 24, and a layer of padding material 25 which is held in po-  
 35 sition by the usual tufting cords or devices 26. After the cushion is in position upon the table 1 the lower cover 24 is stretched tightly across the table and its edges are fastened by pressing them down upon the  
 40 prongs 22. This lower covering is usually of canvas.

After the cushion or piece of upholstery is fastened in this manner, additional padding material is placed between the covers  
 45 23 and 24 around the edges of the cushion so as to build up a firm and approximately square upper cornered edge for the cushion. After the operation of building up the edge of the padding is completed, the lever 8 is  
 50 turned down against the stop 8<sup>a</sup>. This raises the bars 4 and the holders 10 so that the prongs of the fasteners 20 project upward above the top of the table. The upper cover, which is usually of leather, is pro-  
 55 vided with perforations 28 along its edges for receiving the prongs of the fasteners 20. These perforations are usually made on the covering before it is placed in position upon the table. In the form shown, the upper  
 60 cover 23 is provided with a ruffle 27, and the apparatus which is herein shown is particularly designed for fastening upholstery provided with such a ruffle or other means for hiding the fasteners after the upholstery is

in position upon the article of furniture which it forms a part. The edges of the upper cover 23 are forced down so as to cause the prongs of the fasteners to extend through the perforations 28, and the prongs are then bent down for securing the two  
 70 covers together as shown in Figs. 6 and 8. After the prongs of all of the fasteners are bent down, the lever 8 is swung upward to the position shown by full lines of Fig. 1, thereby retracting the cams 7 and permit-  
 75 ting the bars 4 to drop. The descent of the bars 4 causes the plungers 11 to be pulled upwardly and thereby causes the jaws of the holders to open and release the fasteners 20 from the holders. This leaves the jaws  
 80 open, ready for receiving another set of fasteners.

The edge flaps of the lower cover 24 are now removed from the prongs 22, and the cushion is ready to be applied to the article  
 85 of furniture for which it was made. In attaching the cushion to the article of furniture, the cushion is first placed over the spring frame 29, the cushion being of such size and shape that its edges fit  
 90 around the border wire 30 of the spring structure. The edge flaps of the bottom cover 24 are now pulled downward and stretched taut and then tacked to the frame  
 95 34 as in Fig. 7. This operation causes the edge of the cushion to assume approximately the shape shown in Fig. 7, with an approximately square upper corner edge 32. The ruffle 27 is now tacked to the frame 31  
 100 so as to hide the fasteners 20 and the edge flaps of the lower cover 24.

The use of this machine insures perfectly straight edges to the cushion, and the operation of fastening the edges is now reduced  
 105 by this apparatus to such simplicity that it may be performed by a comparatively unskilled workman when the covers are sewed together by hand in the usual manner.

Although but one specific embodiment of this invention is herein shown and described,  
 110 it will be understood that numerous details of the construction shown may be altered or omitted, within the scope of the following claim, without departing from the spirit of this invention.

I claim:—

A device of the class described comprising a stationary table, means arranged along the edge of the table below the top thereof for  
 120 securing the edge of a sheet of fabric stretched over said table, said table having a series of openings arranged along the edge thereof, bars disposed for vertical movement beneath the table, holders carried by said  
 125 bars and arranged in spaced relation on the outer faces thereof, each of said holders adapted to support a headed fastening pin with the point upward, and means for forc-

ing said bars upwardly to position the holders in the openings in said table and simultaneously push said pins through a sheet of material stretched across the adjacent part of the table, each of said holders being adapted to release its fastener when retracted downward away from such fastener.

Signed at Chicago this 11th day of September, 1909.

RUDOLPH DEIMEL.

Witnesses:

WM. R. RUMMLER,  
MARY M. DILLMAN.

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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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