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PATENTED MAR. 28, 1905.

S. COHN.

MACHINE FOR TYING UP THE HEADS OR TOPS OF MANTLES.

APPLICATION FILED MAY 21, 1903.

2 SHEETS—SHEET 1.

Fig. 1.

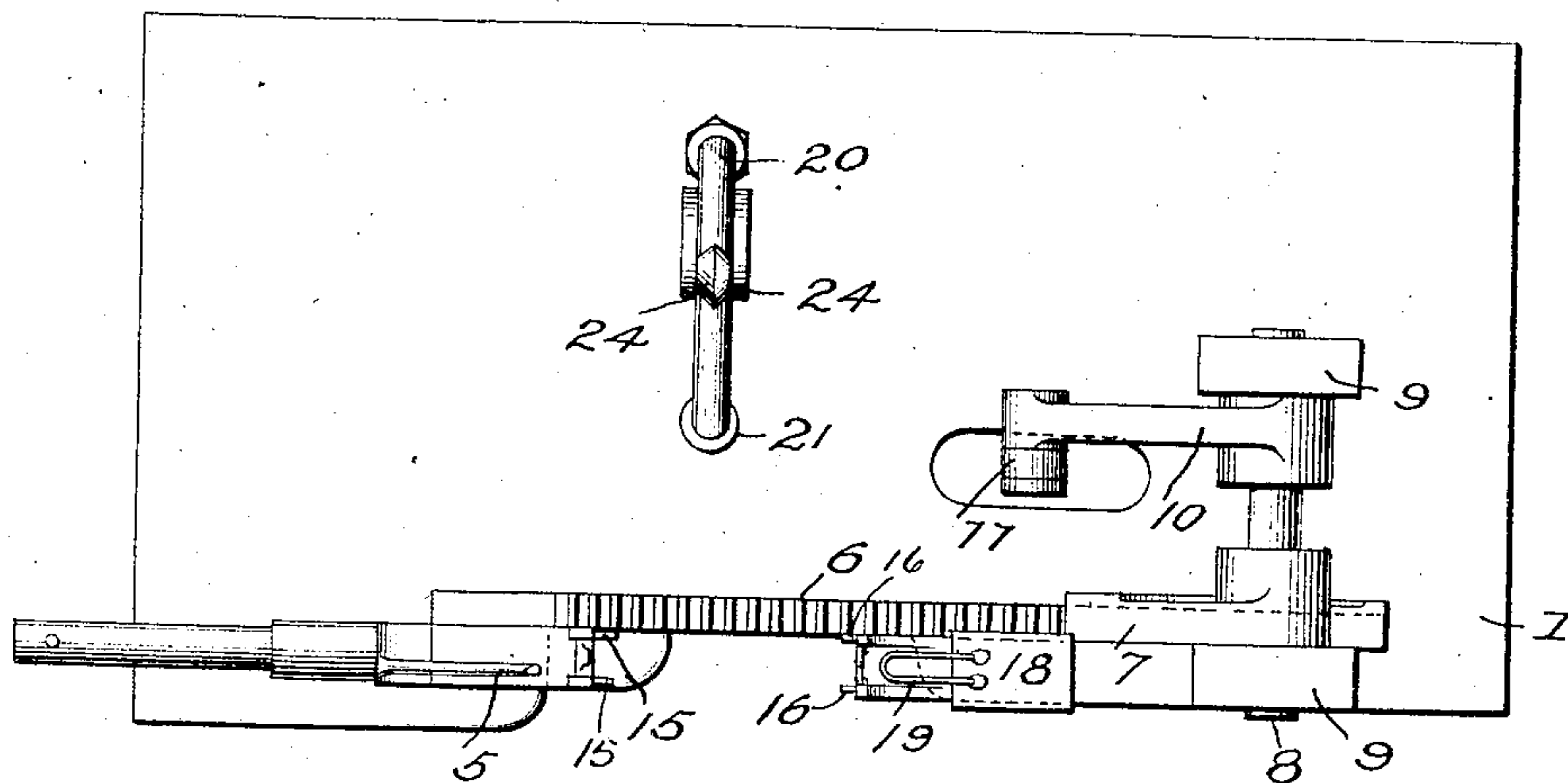
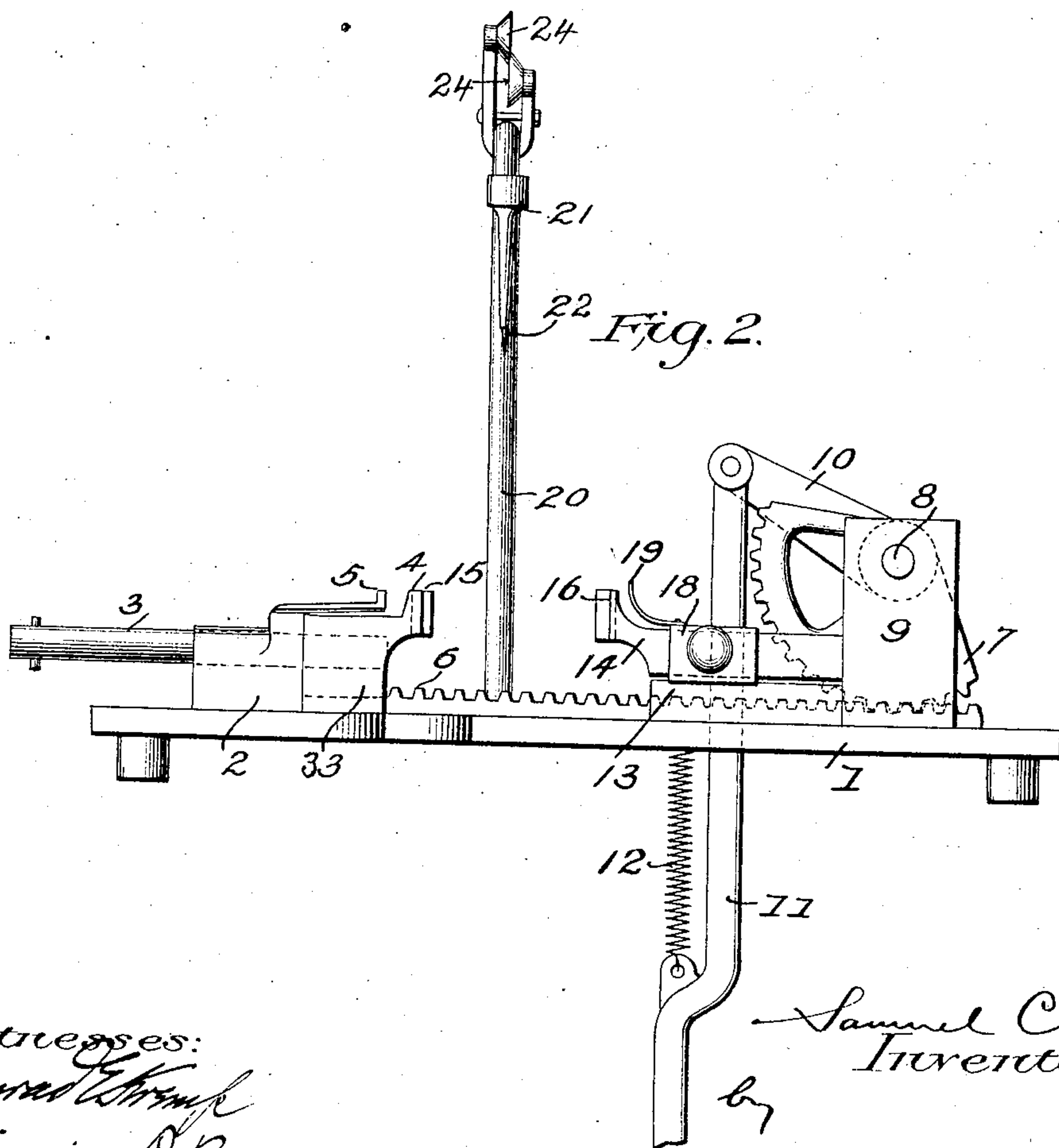


Fig. 2.



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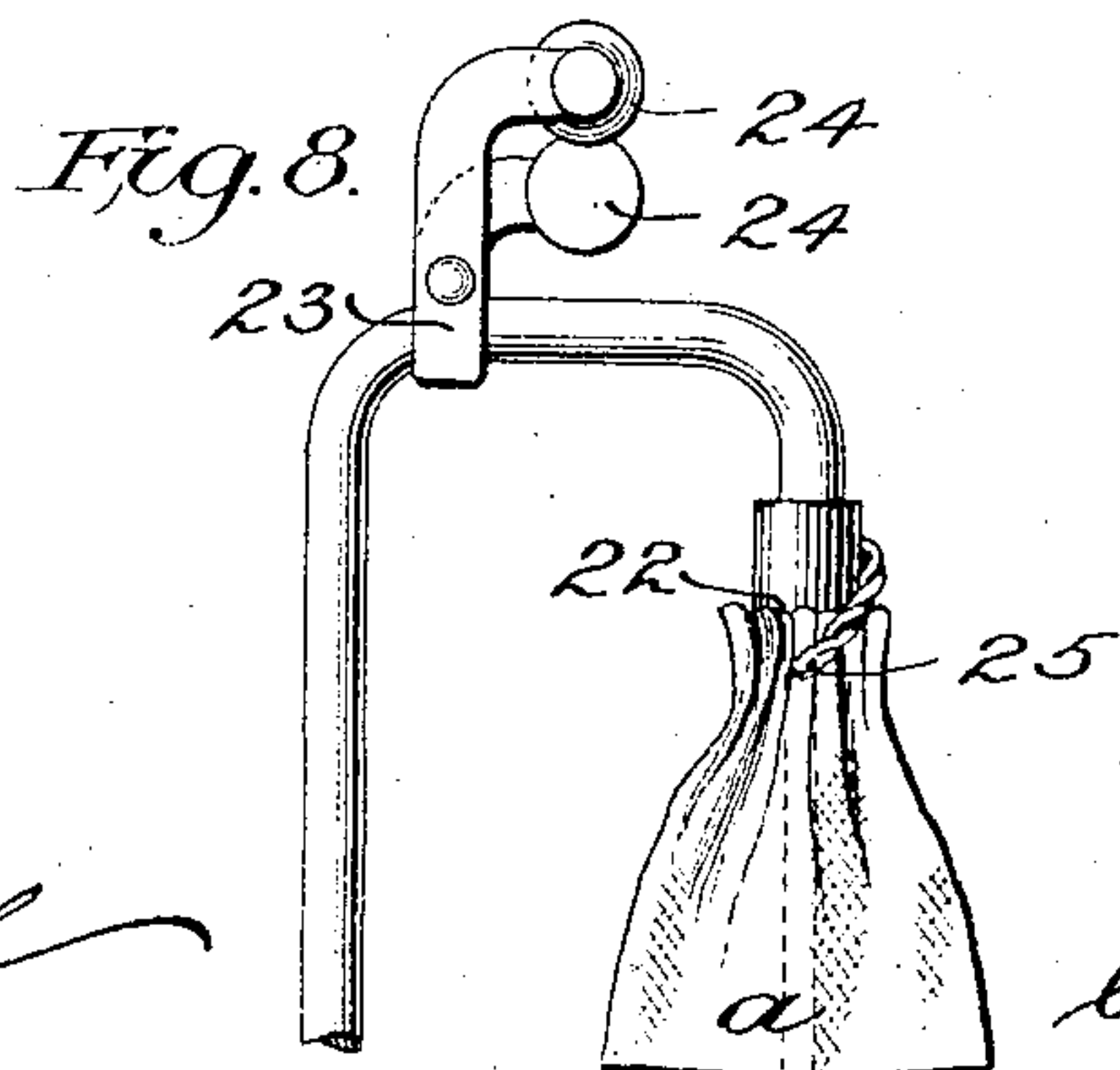
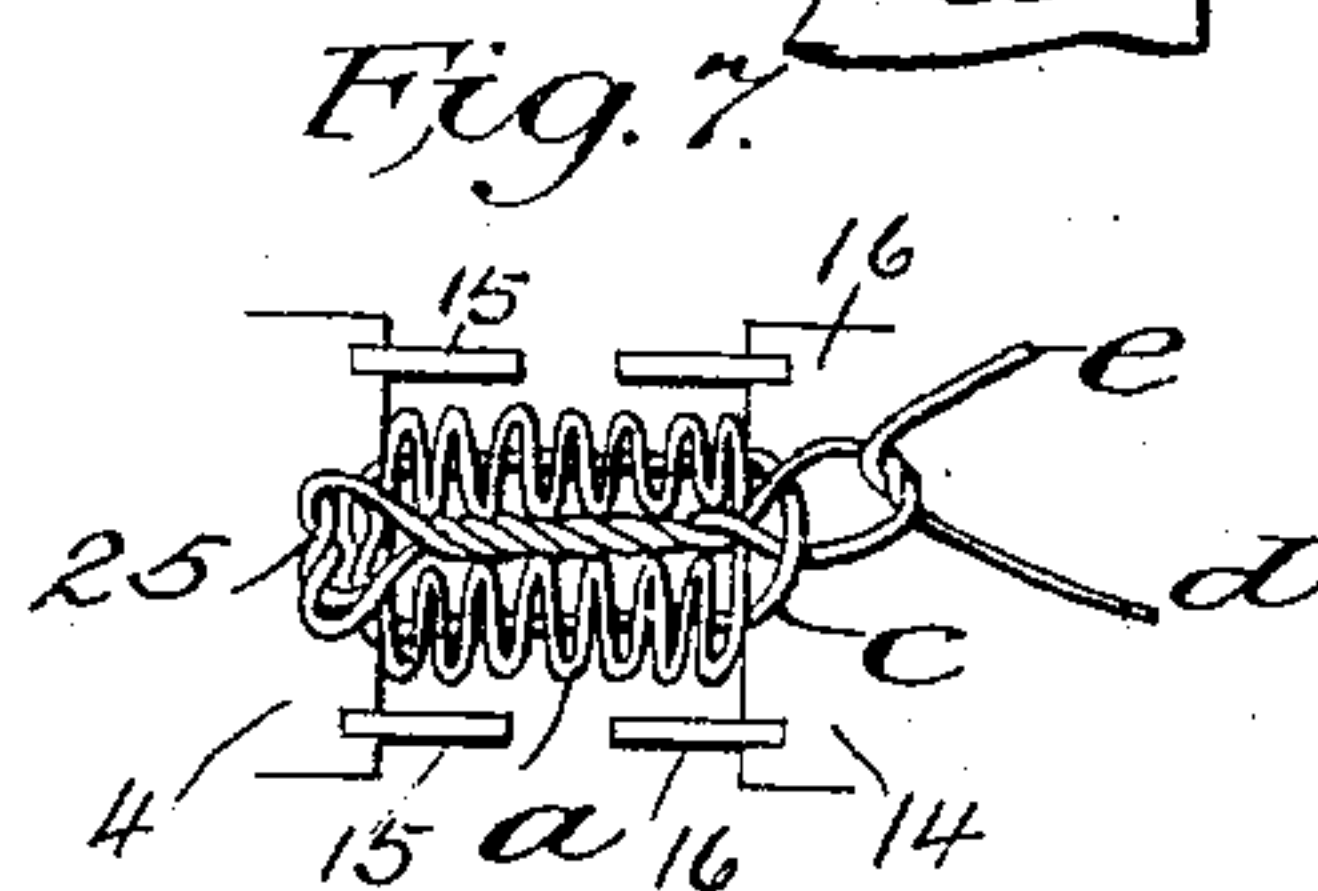
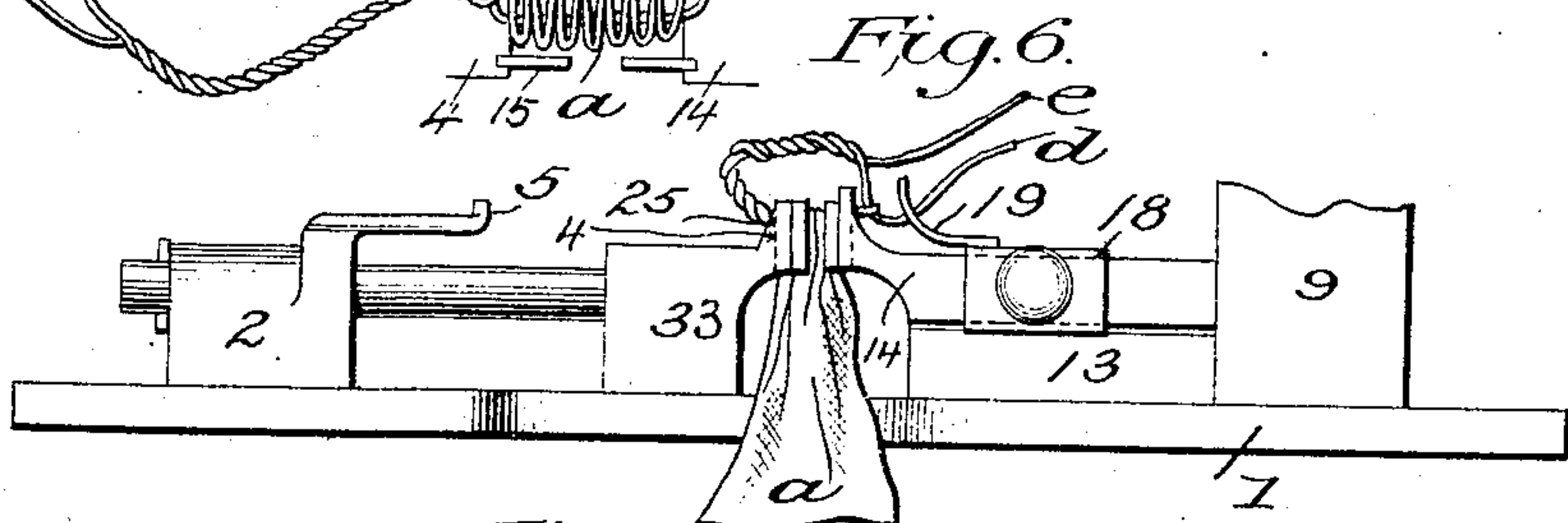
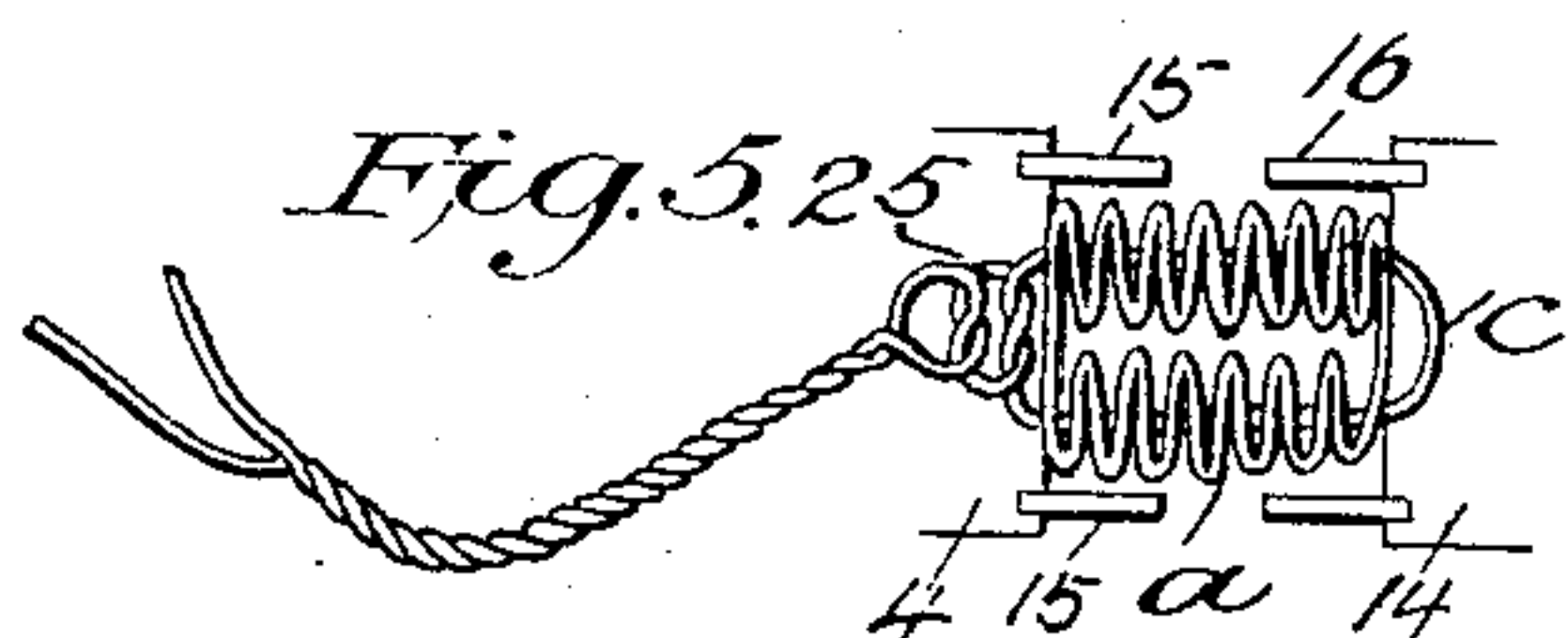
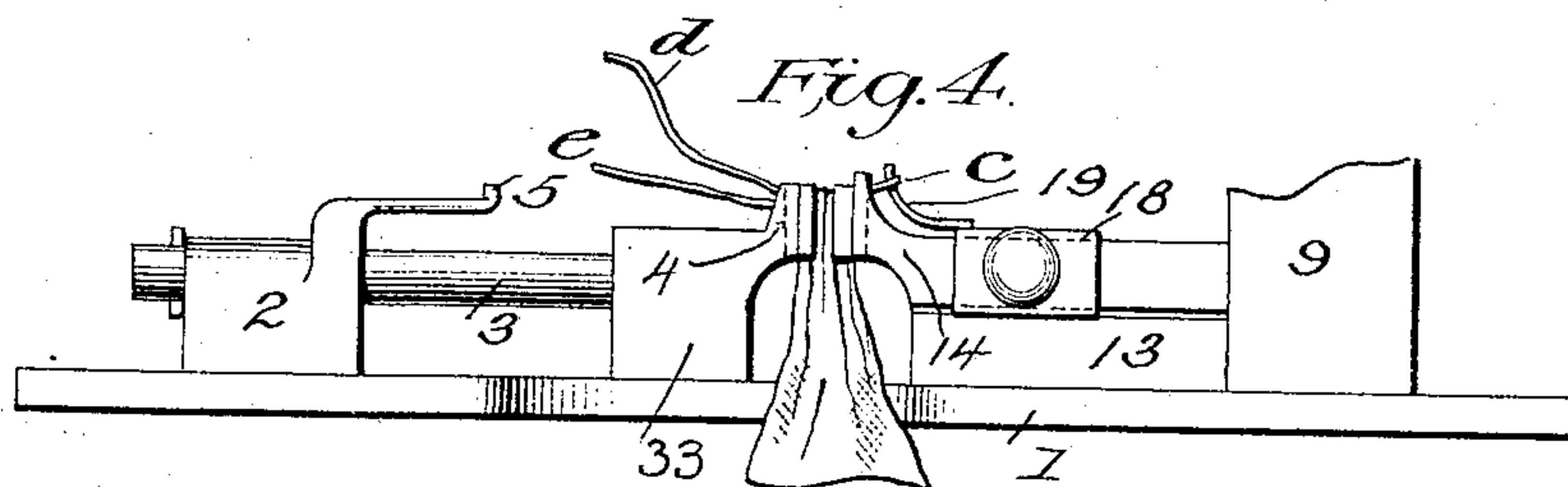
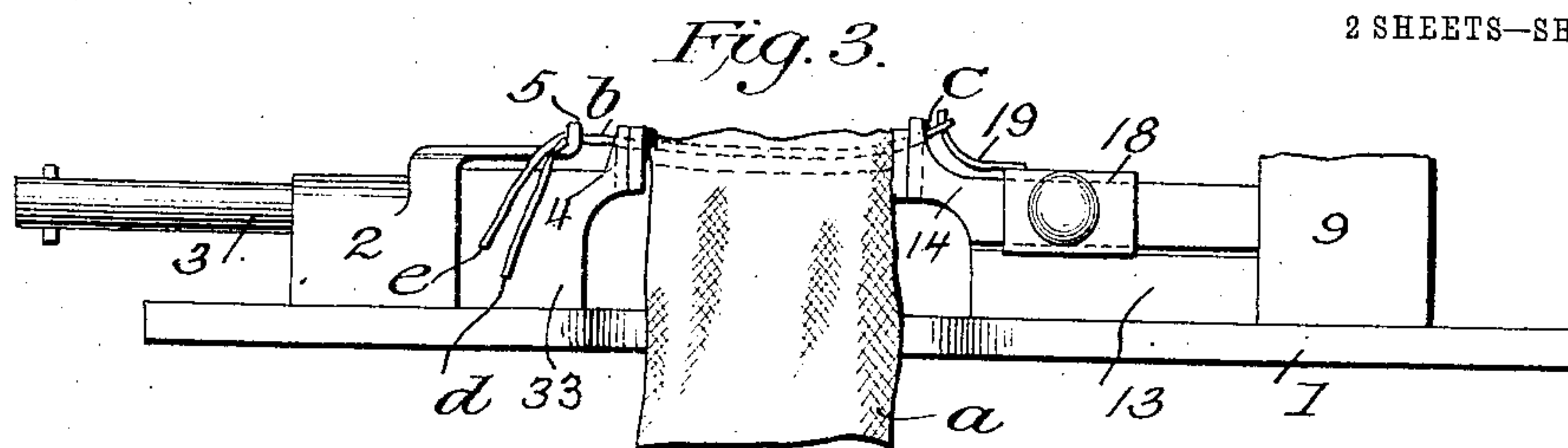
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

SAMUEL COHN, OF NEW YORK, N. Y.

MACHINE FOR TYING UP THE HEADS OR TOPS OF MANTLES.

SPECIFICATION forming part of Letters Patent No. 786,191, dated March 28, 1905.

Application filed May 21, 1903. Serial No. 158,092.

To all whom it may concern:

Be it known that I, SAMUEL COHN, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Machines for Tying Up the Heads or Tops of Mantles, of which the following is a specification.

This invention has for its object to produce a machine or implement upon which the heads of mantles may be readily tied up ready for use or for further manipulation.

Broadly stated, my invention consists in a machine for shirring or gathering the open mouth of a mantle after the same has been sewed; but I would have it understood that I do not mean to limit my invention to the construction shown, and desire to include within the terms of my claims such equivalents as may be justified by the prior state of the art.

In the accompanying drawings I have in the several views shown a machine in which one form of my invention is embodied.

In the drawings, Figure 1 is a plan view of the machine. Fig. 2 is a side elevation of the machine. Fig. 3 is a side elevation, on an enlarged scale, showing the parts in the position in which they are placed when the mantle is first put into the machine. Fig. 4 is a similar view showing the head of the mantle gathered or condensed and the ends of the string ready to be twisted, so that one end may be passed through the loop 19. Fig. 5 is a detail plan view, on an enlarged scale, showing the head of the mantle condensed or gathered and the string ends twisted. It will be understood, however, that this view is more or less diagrammatic and that the gathers are exaggerated. Fig. 6 is a view of the machine similar to Fig. 4, showing the end of the string twisted, one end passed through the loop *c*, and the final tying operation about to take place. Fig. 7 is a plan view similar in character to Fig. 5, showing the head of the mantle gathered and the ends *d e* of the string partly tied. It will be understood that Fig. 7 is also more or less diagrammatic and that the gathers are exaggerated for the purpose of clearer illustration,

and Fig. 8 is a detail view of the head-opening mandrel and the cutting-disks.

Referring more particularly to Figs. 1 and 2, 1 represents the base or bed plate of the machine. This base or bed plate carries a suitable bracket 2, within which slides or reciprocates a rod or slide 3, having a head 33, which carries a jaw 4. The bracket 2 carries an arm or snubbing-post 5. In the present instance this is shown in the form of a pin. The slide 3 and head 33 are connected to a rack-bar 6, which slides freely on the base or bed plate 1 and meshes with a toothed arc 7, carried upon a pivot 8, mounted in brackets 9 on the bed-plate. An arm 10 is also mounted upon the pivot 8 and is pivotally connected to a link 11, which is connected to a suitable treadle. (Not shown.) A spring 12 serves to hold the treadle in an elevated position and to return the same to such elevated position when the foot-pressure is released. A stationary bracket 13 is also mounted upon the bed-plate 1 and carries a jaw 14. The jaw 4 is provided with small pins or projections 15, and the jaw 14 is provided with two pins or projections 16. Mounted upon the bracket 13 is a slide 18, which carries a suitable loop or hook 19 for a purpose presently to be described. Rising from the bed-plate 1 is a suitable standard 20, provided with a tapering mandrel 21, which tapers abruptly at 22, so that the size of the head-opening may be determined. Mounted upon the standard 20 is a bracket 23, provided with cutting-disks 24 for cutting the free ends of the string.

The operation of the machine may be traced by observing Figs. 3 to 7, inclusive, which show various stages of the operation. In Fig. 3 the mantle *a* is shown as having an open top or mouth and provided with a shirring-string *b*, having its two ends *d e* on one side of the mantle and its loop or bight *c* on the other side of the mantle. The loop *c* is thrown over the loop or hook 19 and the ends *d e* are thrown over the post or arm 5. The treadle is now operated, and as the ends of the string are held in the fingers of the operator slide 3 moves forward and the jaws 4 and 14 condense or gather the top of the mantle,

as shown in Fig. 4. The ends *d e* of the string are now tied into a knot by hand, as shown at 25 in Fig. 5, and the ends twisted together. Thereupon one of the ends, *d*, of the string is
 5 passed through the loop 19 above the loop *c*. Thereupon the slide 18 is moved backward by hand, as shown in Fig. 6, drawing the end *d* of the string through the loop *c*, removing the loop 19 from around the end *d* of the
 10 string, and the free ends *d e* tied together by hand, as shown in Fig. 7. The treadle is then released and the slide 3 is retracted to its initial position, (shown in Figs. 2 and 3,) and the mantle-top is then opened by push-
 15 ing the mantle up on the mandrel until the desired size of opening is made. The mantle is then lowered and the operator holding the free ends of the string and the head of the mantle passes the said free ends between the
 20 cutting-disks 4 and cuts the ends of the string off, leaving the mantle in a finished condition.

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

25 1. In a machine adapted for use in tying up the heads of mantles, the combination of means for engaging the shirring-string of the mantle, and movable means for shirring or
 30 folding the head of the mantle, substantially as described.

2. The combination in a machine adapted for use in tying up the heads of mantles, of a means for supporting and gathering a mantle-head and means for opening up the head
 35 after it has been gathered.

3. In a machine adapted for use in tying up the heads of mantles, the combination of means for engaging the shirring-string, means for shirring the mantle-head and
 40 means for opening out the shirred mantle-head as and for the purposes set forth.

4. In a machine adapted for use in tying up heads of mantles, the combination of means for engaging a loop of the mantle-
 45 string, means for engaging the free ends of

the string and means for shirring the mantle-head.

5. In a machine adapted for use in tying up heads of mantles, the combination of means for engaging a loop of the mantle-
 50 string, means for engaging the free ends of the string and means for shirring the mantle-head, and means for opening up the shirred mantle-head.

6. In a machine adapted for use in tying up the heads of mantles, the combination of means for supporting the mantle-head by en-
 55 gaging the strings, and mantle-head-shirring means substantially as described.

7. In a machine adapted for use in tying up the heads or tops of mantles, the combination of means for supporting one end of the
 60 loop of the shirring-string, means for engaging the free ends of the loop and for supporting the mantle.

8. In a machine adapted for use in sewing the heads of mantles comprising in its structure means for supporting the mantle and the
 65 plurality of means for engaging the shirring-string, whereby tying up may be effected.

9. In a machine adapted for use in tying up the heads of mantles, the combination of a mantle-head, string-engaging means and mantle-head-shirring means comprising in its
 70 structure a plurality of mantle-engaging jaws, one of which is movable.

10. In a machine adapted for use in shirring or condensing the heads of mantles, the combination of a plurality of jaws, one of which
 75 is movable, said jaws being spaced apart at a sufficient distance to receive between them, when opened, a mantle-head in an open condition and containing a shirring-string and means for moving a jaw to cause the
 80 head of the mantle to be condensed or shirred while supported from the shirring-string.

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Witnesses:

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