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PATENTED FEB. 2, 1904.

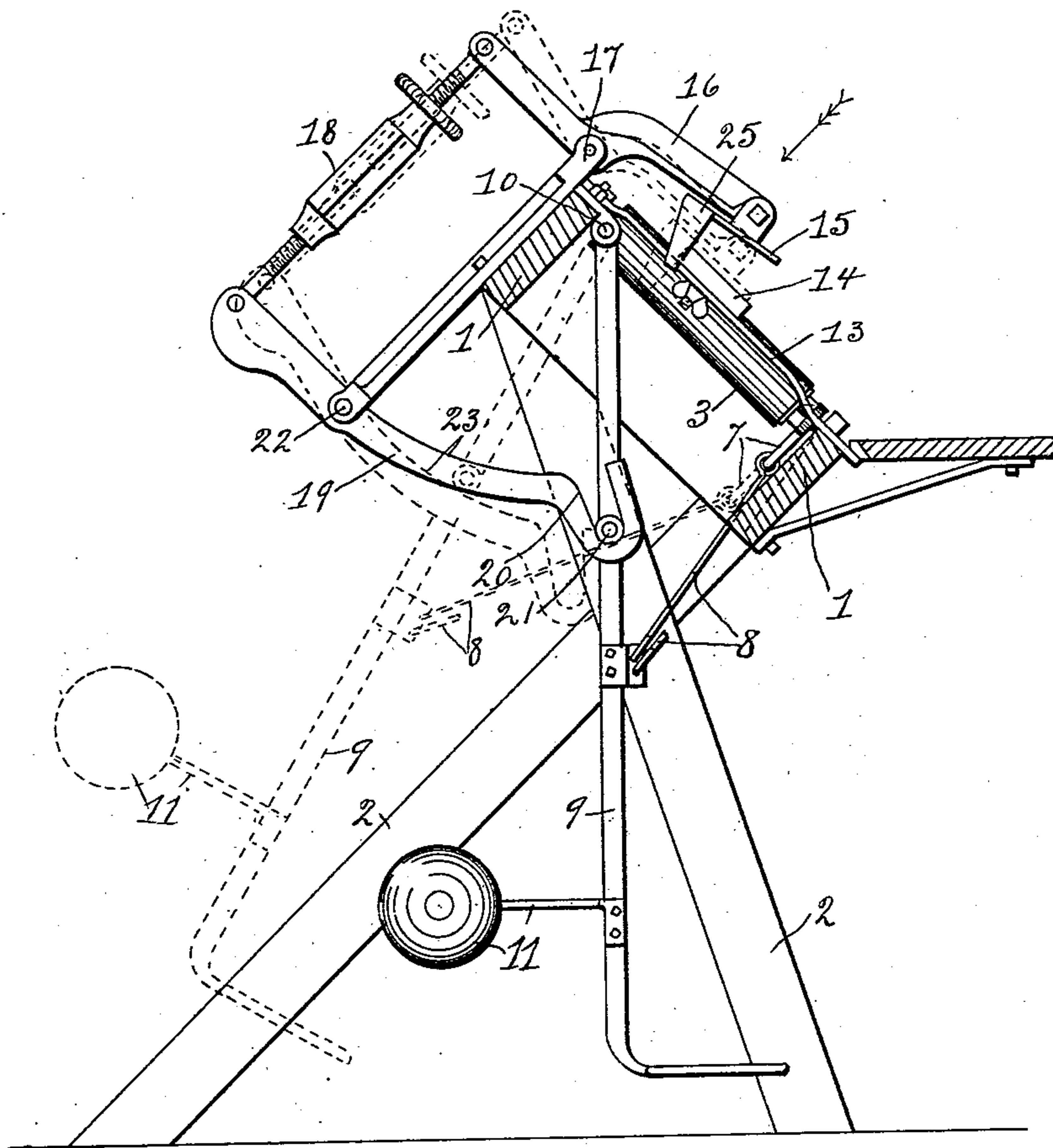
A. SHARP.
APPARATUS FOR STRETCHING COLLARS.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

FIG 1



WITNESSES
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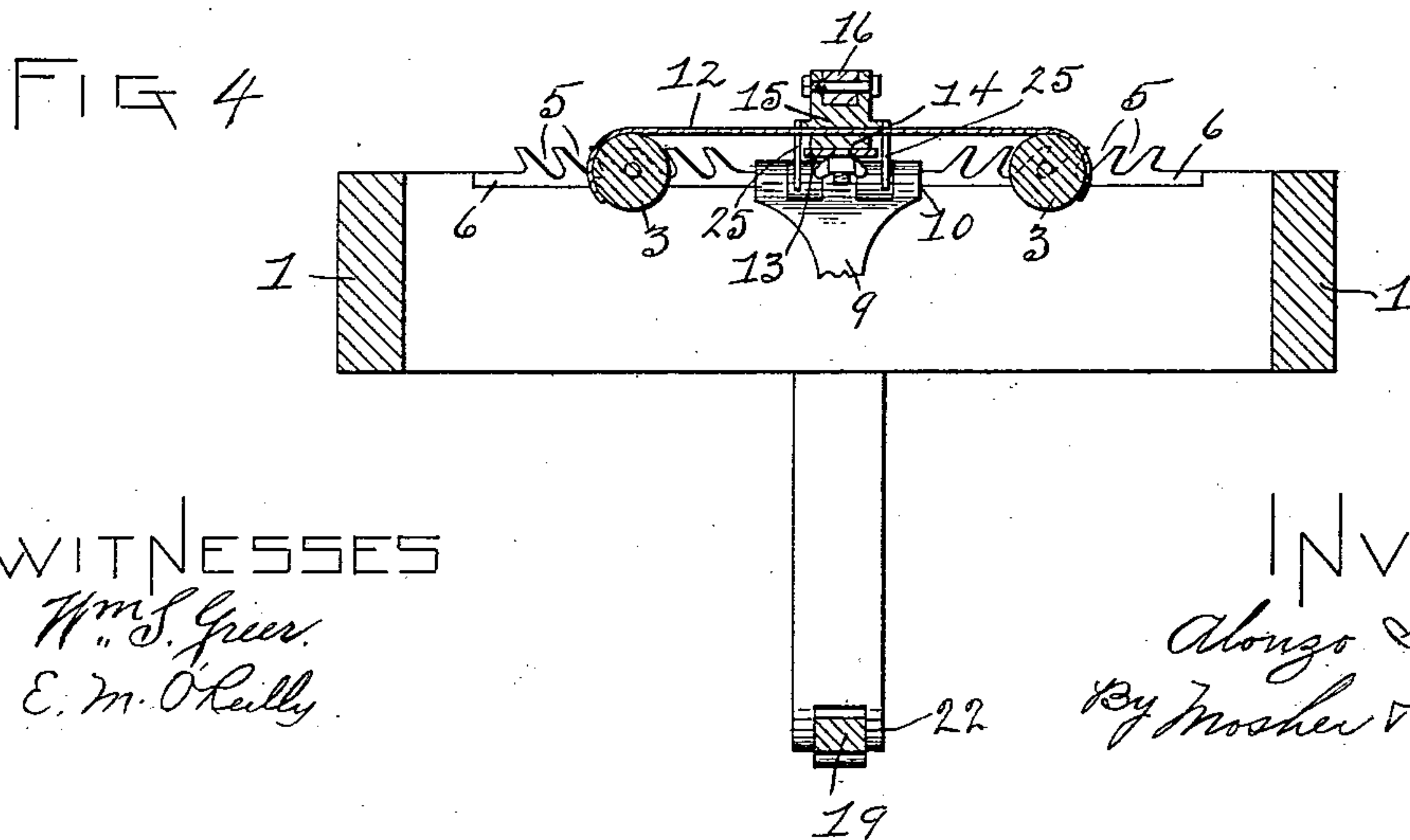
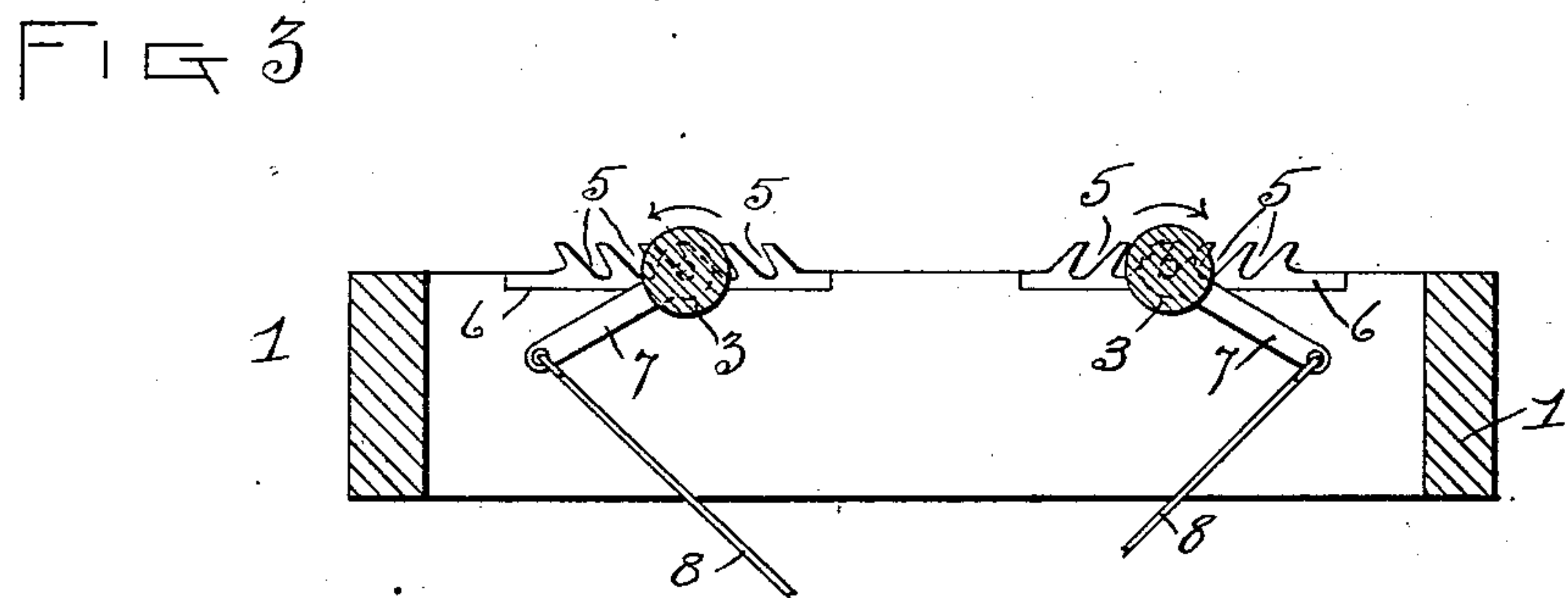
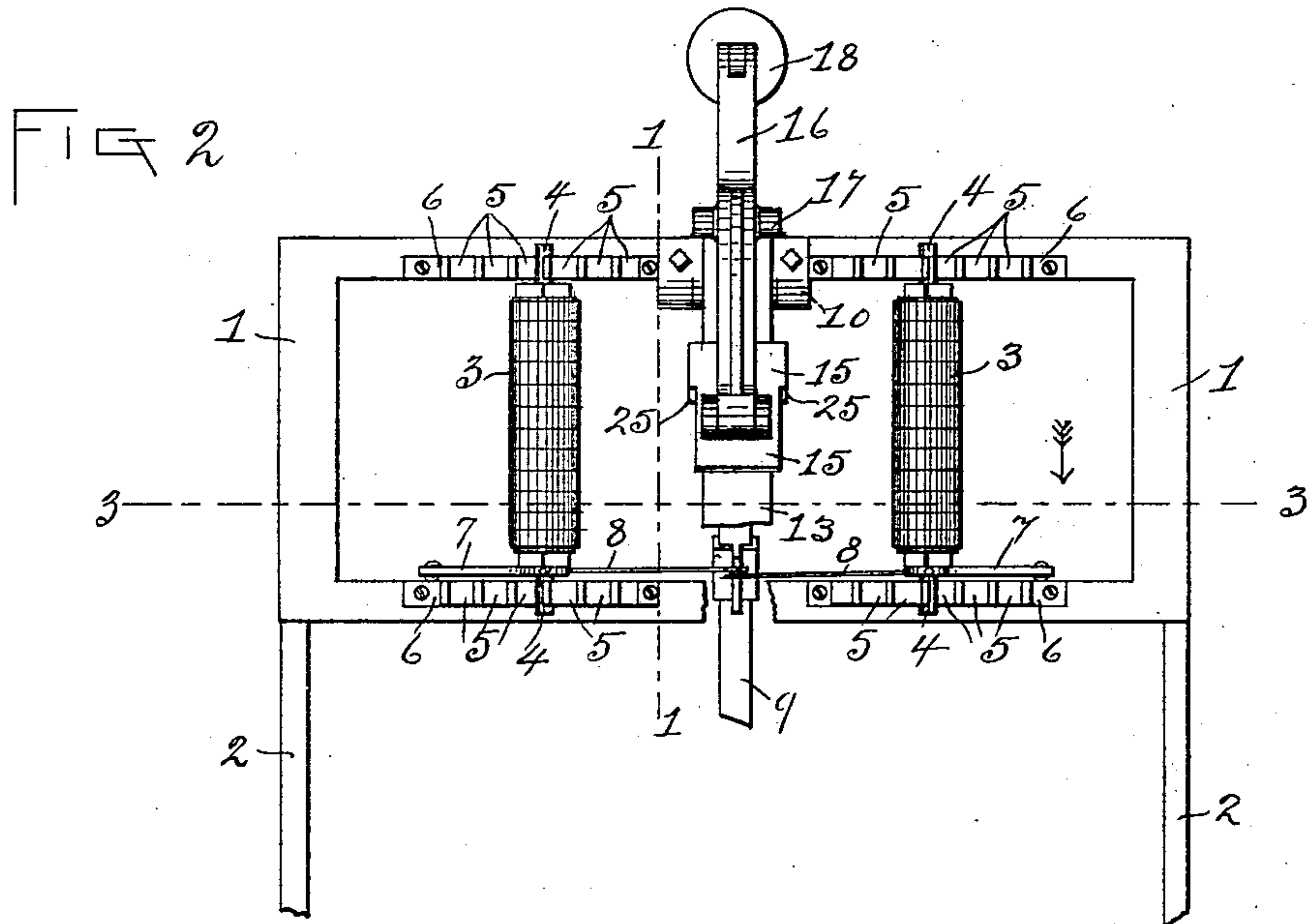
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INVENTOR
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UNITED STATES PATENT OFFICE.

ALONZO SHARP, OF TROY, NEW YORK, ASSIGNOR TO ADAMS LAUNDRY MACHINERY COMPANY, A CORPORATION OF NEW YORK.

APPARATUS FOR STRETCHING COLLARS.

SPECIFICATION forming part of Letters Patent No. 751,019, dated February 2, 1904.

Application filed June 4, 1903. Serial No. 159,992. (No model.)

To all whom it may concern:

Be it known that I, ALONZO SHARP, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have
5 invented certain new and useful Improvements in Apparatus for Stretching Collars, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and
10 combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specifica-
15 tion.

Similar characters refer to similar parts in the several figures.

Figure 1 of the drawings is a vertical cross-section of the improved collar-stretching apparatus, taken on the broken line 1 1 in Fig. 2. Fig. 2 is a plan view of the same as seen in the direction of the arrow in Fig. 1. Fig. 3
20 is a section taken on the broken line 3 3 in Fig. 2 on a plane at right angles to the stretching-rollers, the collar-clamping mechanism being removed, the section being viewed in the direction of the arrow. Fig. 4 is a similar section viewed in the opposite direction, showing a collar applied to the stretching-rollers
25 and held by the clamping mechanism.

In laundering collars it is found that collars cut to the same size vary greatly in length after being laundered, the variation being due largely to differences in shrinkage which the
35 articles undergo in laundering.

In order to restore to proper size a collar which has shrunk to a smaller size, it is a common expedient to pull or stretch the collar more or less, as the case requires. This
40 stretching has been commonly done by hand, the operator pulling upon one end of the collar, while the other end is held in a stationary clamp.

The object of this invention is to facilitate
45 the stretching of collars and to accomplish the same in a more satisfactory manner.

Referring to the drawings, wherein the in-

vention is shown in its preferred form, 1 represents a rectangular frame supported in inclined position by the uprights or legs 2, across
50 which frame are supported a pair of parallel rollers 3, having end journals 4, rotatively mounted in certain of the bearing-notches 5 in the bearing-plates 6, fixed upon the upper side of said frame. These rollers are ar-
55 ranged at a distance apart to adapt them to receive the opposite ends of a collar laid flatly thereon, with said ends extending part way around the respective rollers, as shown in Fig. 4. Fixed to the respective rollers and ex-
60 tending divergently therefrom are a pair of arms 7, each connected by a link 8 with a swinging foot-lever or treadle 9, suspended from the frame by means of a hinge connection 10 and having offset therefrom a weighted
65 arm 11, which tends to maintain the lever in a vertical position. A rearward swinging movement imparted to this lever, as by the foot of the operator, serves to produce through the links 8 and divergent arms 7 rotative
70 movement of the rollers in opposite directions, as indicated by the arrows in Fig. 3.

In operating the apparatus the collar 12 is applied to the rollers as above described and as shown in Fig. 4, and its ends, which partly
75 encircle the respective rollers, are held tightly thereagainst by the hands of the operator, while the foot of the operator is operating the treadle to produce a rotative movement of the rollers adapted to further wind there-
80 upon the encircling ends of the collar, as a result of which the collar is stretched and drawn out. The ends of the collar being partly wound upon the rollers, no great pressure is neces-
85 sary to prevent slipping of the rollers, and the collar is thus stretched with little strain upon the hands of the operator. This method of stretching collars also relieves their buttonholed ends from injurious and distorting
90 strains.

The notches 5 in the bearing-plates permit the rollers to be arranged at different distances apart to accommodate them to collars of different sizes.

The frame may be provided with a cross-bar 13, adapted to support a bed-plate 14, against which the middle buttonholed portion of the collar is tightly clamped by the
 5 presser-plate 15 during the stretching operation, whereby the middle buttonhole is relieved from distorting strains and both ends of the collar are equally stretched.

The presser-plate is pivotally mounted upon
 10 the lever 16, fulcrumed at 17, and connected by the turnbuckle-link 18 with the cam-lever 19, having a cam 20, adapted to be engaged by a follower 21 on the foot-lever 9, whereby the presser-plate is operated to tightly force
 15 against the bed-plate an interposed collar.

Between the cam 20 and the fulcrum 22 of the cam-lever said lever is provided with a dwell 23, curved in the form of an arc of a circle corresponding with the path of move-
 20 ment of the follower 21, whereby the presser-plate is held in its clamping position during the latter part of the rearward movement of the foot-lever after having been operated by the initial rearward movement thereof.

25 The presser-plate may be provided with depending wings 25, as shown, to serve as guides for the inserted collar.

The apparatus may be employed for stretching fabrics and various articles.

30 The rollers are preferably built up from disks of soft wood cut crosswise of the grain, so that the rough edges of the wood fibers are exposed on the periphery of the disks, which produce a surface to which the fabric
 35 will cling without slipping under slight pressure.

What I term "rollers" 3 are shown as cylindrical structures; but their form is to a great extent immaterial and may be varied
 40 without departing from the spirit of the invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus of the class described,
 45 the combination with a pair of rollers rotatively mounted adapted to receive and be partly encircled by the opposite ends of a collar or the like; of means for imparting to said rollers rotative movements in opposite di-
 50 rections, whereby a collar having its ends held thereon will be wound thereupon and stretched.

2. In an apparatus of the class described, the combination with a pair of rollers rota-
 55 tively mounted adapted to receive and be partly encircled by the opposite ends of a collar or the like; of a foot-lever; and connections between said foot-lever and said rollers, whereby a relative movement can be imparted
 60 to both said rollers simultaneously in opposite directions.

3. In an apparatus of the class described, the combination with a frame having a series

of open journal-bearings mounted thereon; of a pair of rollers having their journals remov- 65
 ably located in certain of said open bearings, said rollers being adapted to be partly encircled by the opposite ends of a collar or the like; and means for imparting to said rollers
 70 rotative movements in opposite directions.

4. In an apparatus of the class described, the combination with a frame; of a pair of rollers rotatively mounted thereupon adapted to be partly encircled by the opposite ends of a collar or the like; means for rotatively mov- 75
 ing said rollers in opposite directions to stretch an article held thereon; a bed-plate fixed upon said frame intermediately of said rollers; and means for clamping the middle part of the arti-
 80 cle upon said bed-plate during the stretching operation.

5. In an apparatus of the class described, the combination with a frame; of a pair of rollers rotatively mounted thereon adapted to be partly encircled by the opposite ends of a 85
 collar or like article; clamping mechanism adapted to engage the middle portion of the article; a foot-lever; and connections between said foot-lever and said rollers and clamping
 90 mechanism, whereby rotative movement is imparted to the rollers in opposite directions to stretch an article held thereon at the same time the clamping mechanism is operated to engage the middle portion of said article.

6. In an apparatus of the class described, 95
 the combination with a pair of rollers rotatively mounted adapted to stretch a collar or the like held thereon, each of said rollers being built up from a plurality of disks of soft wood having the cut ends of its fibers exposed 100
 on the periphery thereof; and means for imparting to said rollers rotative movements in opposite directions.

7. In an apparatus of the class described, the combination with a frame; a pair of roll- 105
 ers rotatively mounted thereon adapted to be partly encircled by the opposite ends of a collar or the like; of clamping mechanism mounted upon said frame intermediately of said rollers adapted to engage the middle portion 110
 of an article applied to the rollers; a foot-lever; connections between the foot-lever and respective rollers whereby the rollers are rotatively operated in opposite directions; a cam-follower on the foot-lever; and a lever for oper- 115
 ating the clamping mechanism having thereon a cam adapted to be engaged by said follower to force the clamp members into en-
 120 gagement with the interposed article during the first part of the movement of the foot-lever, and a dwell adjacent to said cam adapted to be engaged by said follower during the remainder of the movement of said foot-lever to retain the clamp closed.

8. In an apparatus of the class described, 125
 the combination with a roller rotatively

mounted, adapted to receive and be partly
encircled by one end of a collar or like arti-
cle; and means for imparting to said roller a
rotative movement adapted to wind thereupon
5 said end of the article; of means for support-
ing the other end of said article held thereon
to resist the pull exerted by said roller.

In testimony whereof I have hereunto set
my hand this 21st day of May, 1903.

ALONZO SHARP.

Witnesses:

JOHN T. BIRGE,
E. M. O'REILLY.