

No. 656,405.

Patented Aug. 21, 1900.

W. R. HEWITT.
HARNESS SUPPORT.

(Application filed Nov. 15, 1899.)

(No Model.)

Fig. 1.

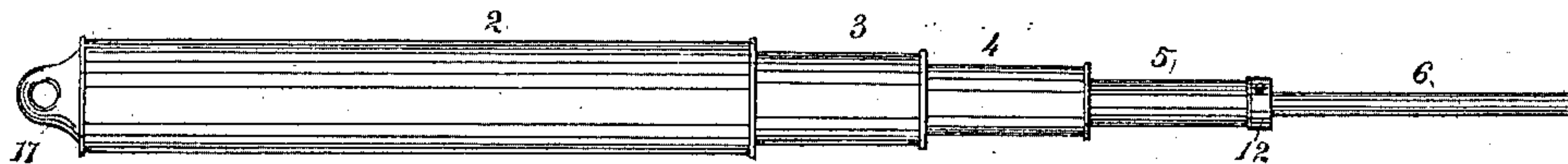


Fig. 2.

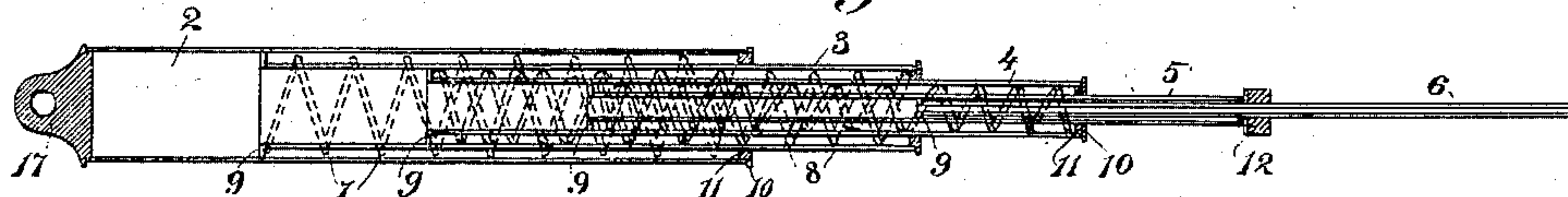


Fig. 3.

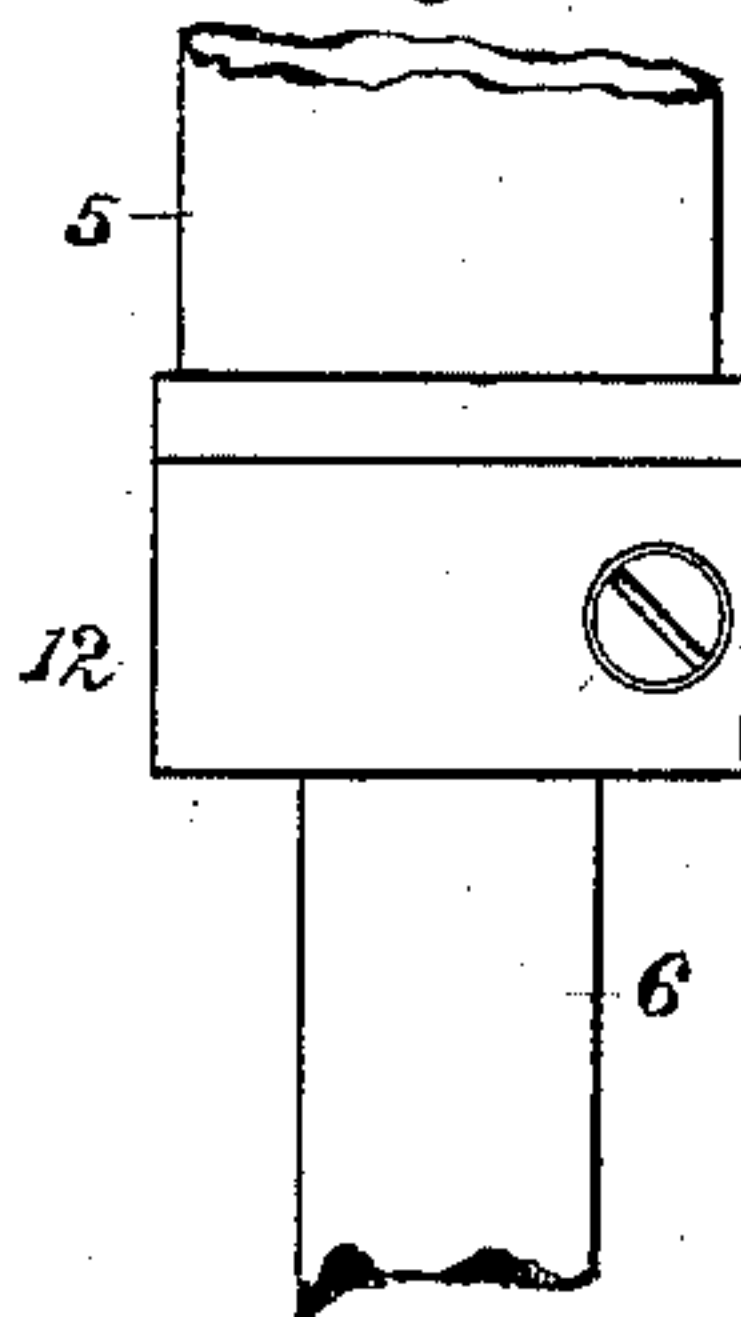


Fig. 4.

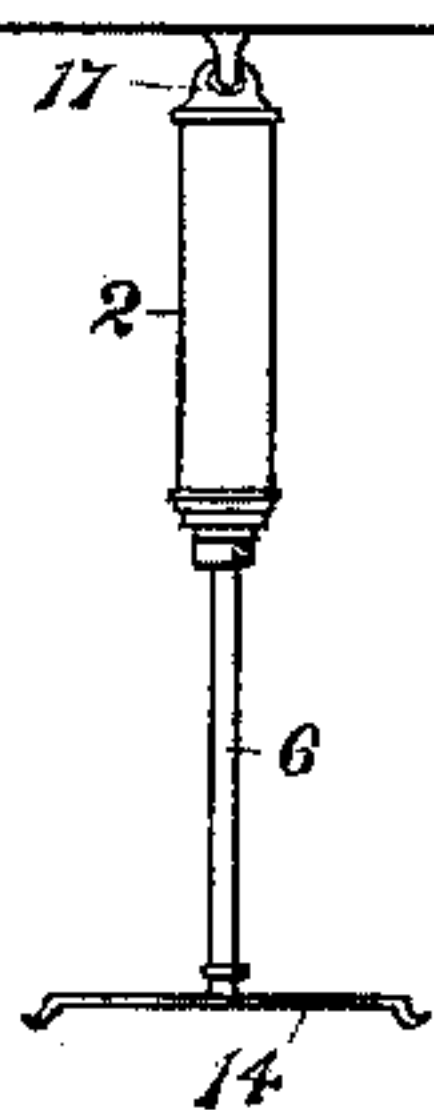


Fig. 5.

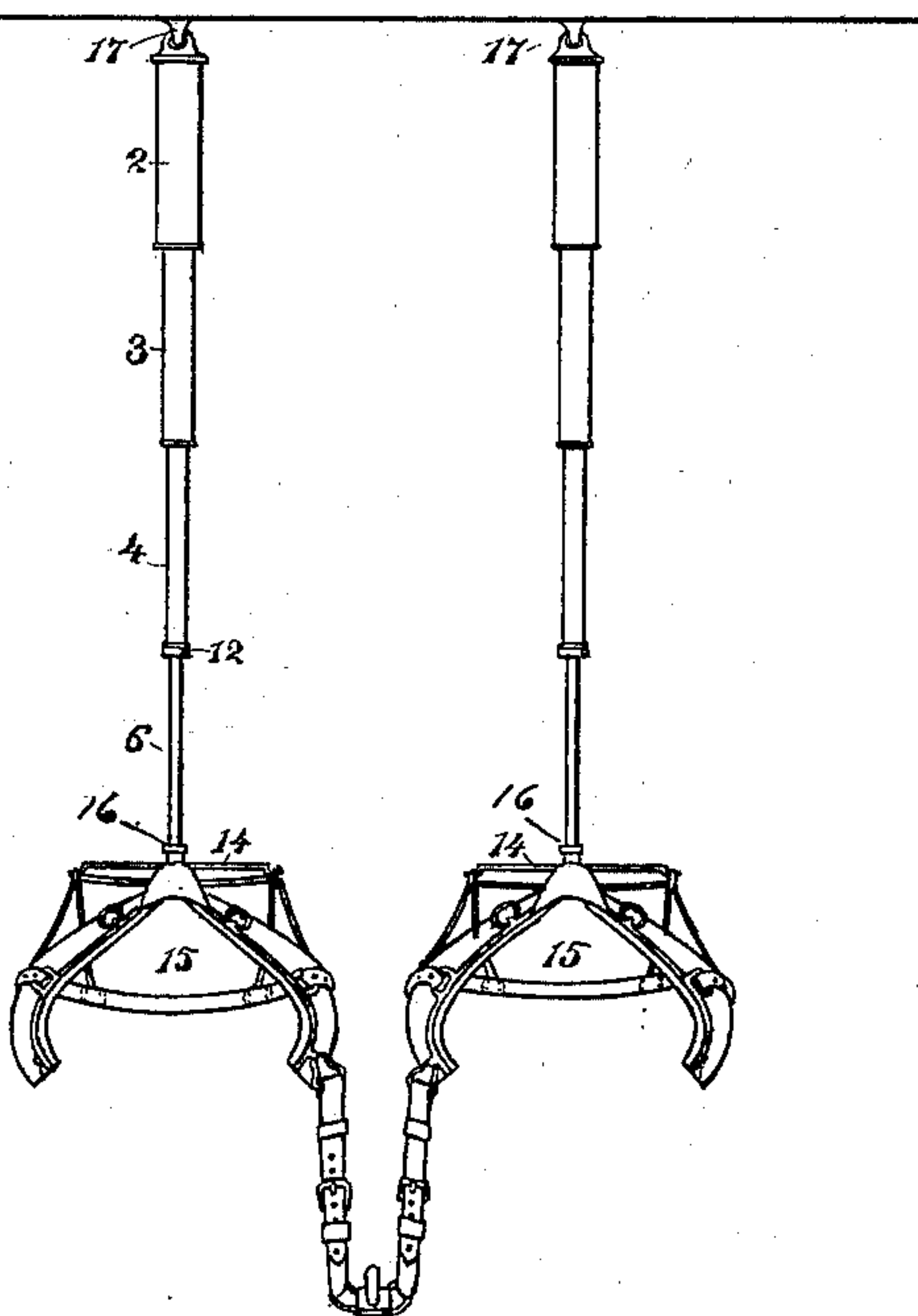


Fig. 3a.

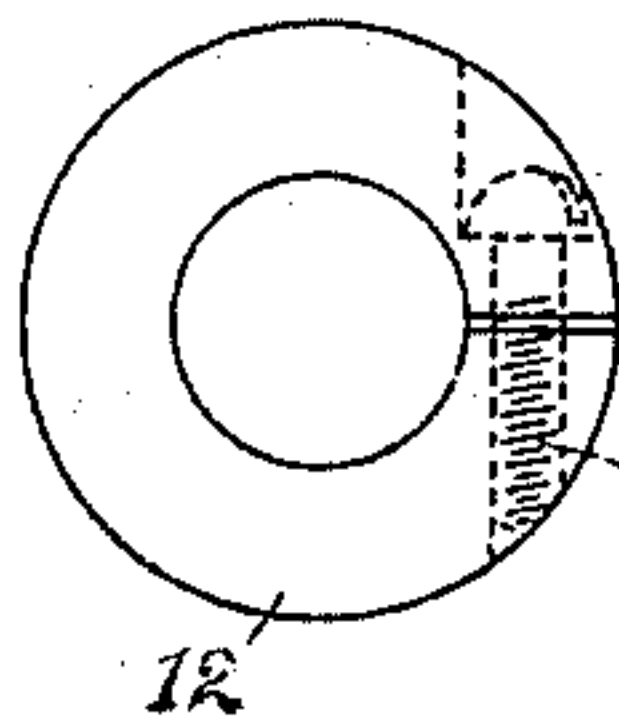


Fig. 6.

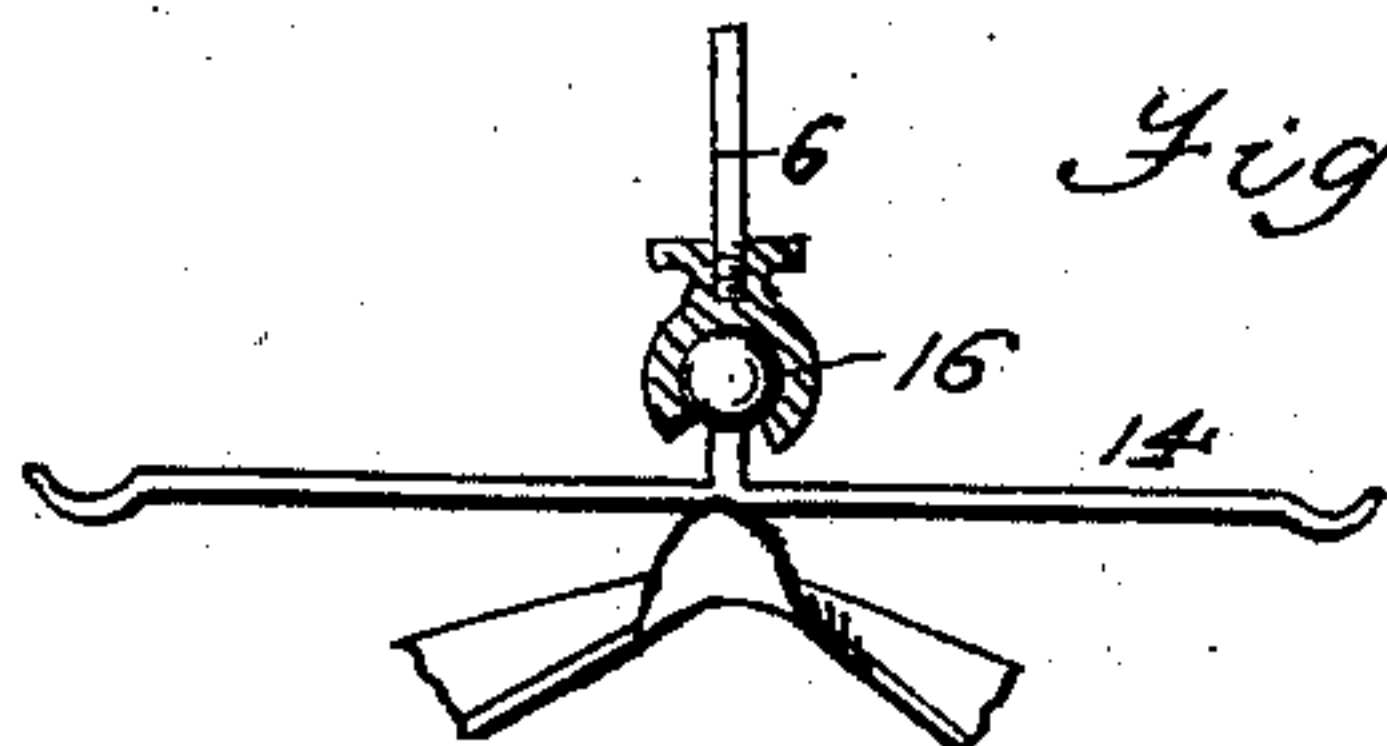
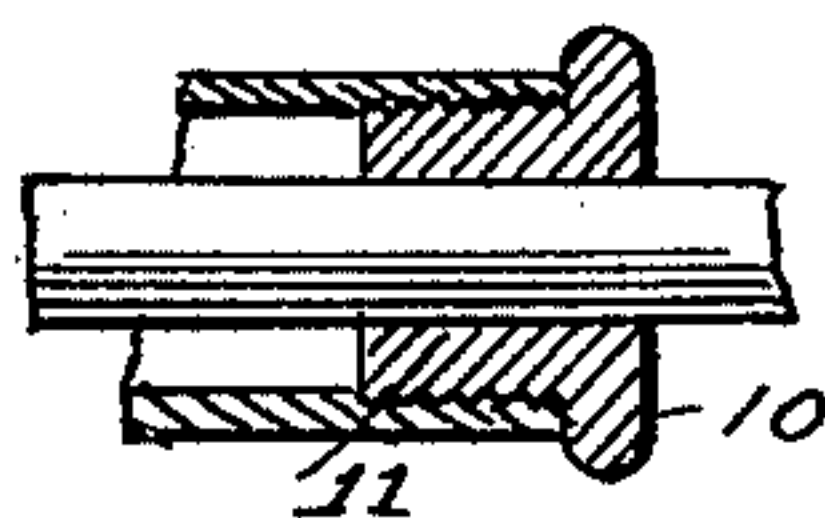


Fig. 7.



WITNESSES.

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HARNESS-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 656,405, dated August 21, 1900.

Application filed November 15, 1899. Serial No. 737,009. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RAINEY HEWITT, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Harness-Suspending Devices; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device which is designed for suspending harnesses in a spread condition, such as is employed in fire department, police, and like places where it is necessary for the horses to be attached to the apparatus and in readiness to start in the shortest space of time after an alarm. As ordinarily arranged in such places the harnesses are spread out and suspended by ropes or equivalent attachments at such a height and with such relation to the apparatus that the horses upon the signal can run to their places beneath the harnesses, which are then dropped upon their backs and secured in readiness for them to move out. These devices are not of permanent adjustment and are continually in need of repairs, and it is the object of my invention to provide an automatically-operating device for the purpose.

The invention consists of the parts and the constructions and combinations of parts, which I will hereinafter describe and claim.

Figure 1 is an exterior view of the telescopic tubes extended. Fig. 2 is a longitudinal section of the same. Figs. 3 and 3^a are side and end views, respectively, of an adjusting-clamp for the lowermost section. Fig. 4 shows the apparatus closed and out of use. Fig. 5 is a view showing the device extended and harnesses hung therefrom. Fig. 6 is a detail showing the ball-joint 16. Fig. 7 is an enlarged view of one of the caps and its bushing.

2, 3, 4, and 5 are tubes of successively smaller diameter, so that each following tube is slidable within the one above. The tube 2 is sufficiently large to inclose all the other tubes and there is a sufficient space between it and the next smaller one to admit of a spiral spring 7. This spring is made of wire or other material and of such strength as will support the remainder of the tubes and the whole load as represented by the hanger and suspended harness. The next tube 3 is in like manner acted upon by a spring 8, the strength

of which is sufficient to support the remainder of the tubes and the whole load as represented by the suspended harness, the remainder of the tubes in like manner each having a spring of as much less strength as the lessened load upon each requires. As many of these tubes may be employed having such a length as will allow an extension to support the harnesses in the proper position and allow them to be dropped upon the backs of the horses. The distance to which the harnesses are to be raised is practically covered by the springs 7 and 8, and all that remains after the harness has been dropped upon the back of the horse and the hanger released is for the remaining tubes, with their springs, to raise the hanger clear of the apparatus, horses, and men passing beneath.

Each of the tubes has an outwardly-turned flange or a collar screwed upon it, as shown at 9, which serves as an abutment against which the springs contact at the end, so that the springs may be compressed by extending the tubes and when released will by their elasticity extend themselves and correspondingly telescope and shorten the tubes one within another.

Each tube has a cap 10 screwed into the lower end, and against each cap the lower end of the spring surrounding and acting upon the next interior section rests, so that the lower end of the spring is supported by the cap in the outer tube and the upper end of the spring presses against the outwardly-turned flange of the next interior tube, so as to force it upward. These caps also limit the descent of the tubes when they are pulled out.

11 are bushings, which are shown as extensions of the caps 10 and are fixed in each successive tube and so fitted into the tubes that they practically form dash-pots by acting against the column of air contained within the tubes, so that they regulate the rate of ascent of the tubes when the harnesses are released. These bushings may be adjusted by loosening or tightening them to regulate the speed of movement of the parts.

The lower section may be either tubular or solid, as desired, and it is adjusted to suit the hanger to the height of the ceiling by means of a clamp 12, which is fitted to the section above and has a screw 13, by which

it may be closed and caused to grip the lower section, as shown at Fig. 3^a, or it may be loosened to allow this section to slide in or out for purposes of adjustment, after which it is again locked in place.

From the lower end of the lowermost section 6 the hangers 14 are suspended. These hangers are here shown as transverse bars having hooks at the outer end from which the harnesses 15, both breechings, and collar or hame portions are suspended in the usual manner and opened out so as to be in readiness to fall upon the backs of the horses at the proper time. In order to flexibly connect these hangers and allow them proper freedom of movement, I have shown the lower end of the lowermost section 6 as formed with a ball-joint, as at 16, and this allows of sufficient flexibility and freedom of movement for the purpose desired.

By means of this apparatus, the tension of the spring being regulated by the more or less rapid ingress of air through the openings closed by the caps 10 and bushing 11, the harnesses will be normally suspended and spread at such a height that the horses can pass beneath them when occasion requires, the harnesses being disengaged from the hangers and lowered upon the horses' backs. When the harnesses are released, the springs will immediately draw the tubes upward, telescoping one within the other, and the air-cushions will cause them to move up with a sufficiently-easy motion until they are entirely out of the way of the apparatus and men who may afterward pass beneath. When they are again required, it is only necessary to pull them down and attach the harnesses to the hangers.

The upper end of the uppermost tube has a suspension eye or ring 17, by which it may be attached to the ceiling or other suitable point.

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

1. In a hanger for suspending harness and the like, a series of telescoping tubes and a

spring in each tube whereby said tubes are independently spring-supported.

2. A harness-hanger consisting of a series of successively-smaller telescoping slidable tubes having flanges upon their upper ends and caps at the lower ends, springs surrounding each interior tube with the ends abutting against said flanges and caps whereby the springs are compressed and shortened when a weight is hung from the device, and are extended and act to shorten and telescope the tubes when relieved of weight.

3. A harness-hanging device consisting of a series of successively-smaller slidable telescopic tubes with interposed spiral springs, bushings connected with tubes and slidable in unison therewith so as to cushion upon the contained air.

4. An apparatus for suspending harness and the like comprising tubes adapted to slide one within the other, a spring within each tube and yieldingly supporting the same, and hangers attached to and movable with the lowermost tube.

5. An apparatus for suspending harness comprising tubes adapted to slide one within the other, an independent spring in each tube and suspending the same, hangers carried by the lowermost tube and adapted for connection with the harness, and a flexible joint between the hanger and the lowermost tube.

6. An apparatus for suspending harness and the like consisting of a series of successively-smaller telescoping tubes slidable one within the other, spiral springs acting between each contiguous section to telescope and shorten the device, bushings carried by the sections and movable to act as cushions against the column of contained air, said bushings being adjustable to regulate the speed of movement.

In witness whereof I have hereunto set my hand.

WILLIAM RAINEY HEWITT.

Witnesses:

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