No. 832,343. PATENTED OCT. 2, 1906.

W. D. SCOTT.

PULLING HEAD FOR WIRES, ROPES, AND CABLES.

APPLICATION FILED MAY 17, 1906.

Fig. 1.

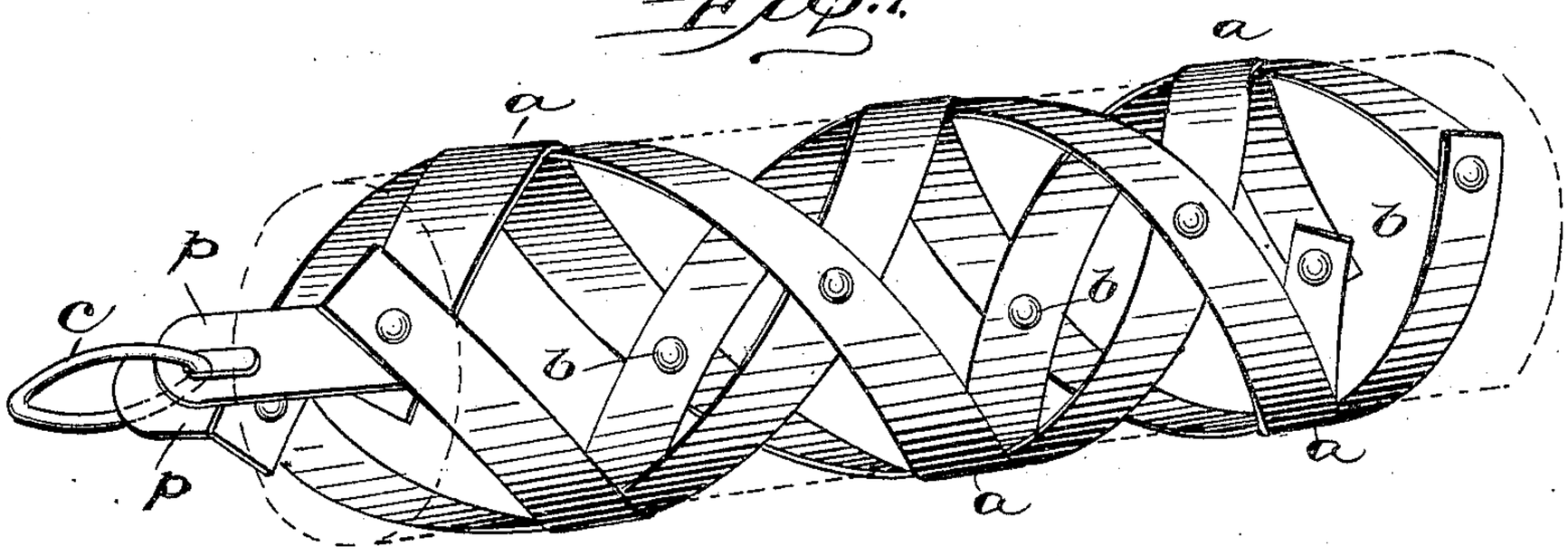
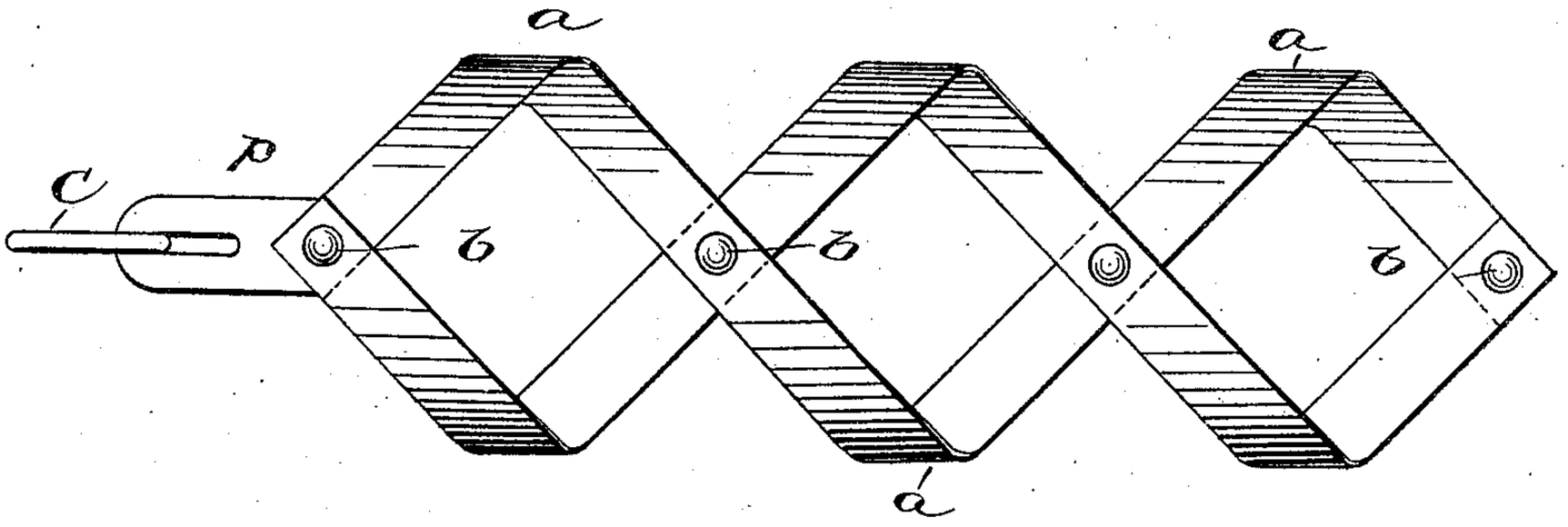


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM D. SCOTT, OF BUFFALO, NEW YORK.

PULLING-HEAD FOR WIRES, ROPES, AND CABLES.

No. 832,343. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed May 17, 1906. Serial No. 317,405.

To all whom it may concern:

Be it known that I, WILLIAM D. SCOTT, a citizen of the United States of America, and a resident of Buffalo, Erie county, New York, have invented certain new and useful Improvements in Pulling-Heads for Wires, Ropes, and Cables, of which the following is a specification.

My invention relates to a device adapted to be readily secured to the end of a wire, rope, or cable for attaching the same to any pulling part and which may be readily disconnected from the wire, rope, or cable.

It will be understood that the uses of my device are not limited to any particular purpose or in connection with any particular article to be pulled, it being applicable generally whenever it is desired to attach a pulling-rope to any cylindrical body for the purpose of dragging the same along.

The invention, speaking generally, consists in a plurality of metallic filaments, specifically in the form of ribbons, which are laid spirally in the form of a cylinder, the several intersections of the ribbons being pivoted together. Proper means for attaching the drag-rope are secured at one end of the articulated cylinder thus formed to the several filaments, so that a strain put upon the drag-ropes results in a stretching or straightening of the filament and a consequent reduction in the diametrical size of the cylinder, whereby the cylinder will be caused to grasp any cylinder-body which may be contained therein at such time.

My invention further consists in the construction, arrangement, and combination of the several parts of which it is composed, and will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding marks of reference, Figure 1 is a perspective view of a pulling-head constructed in accordance with my invention. Fig. 2 is a side view of the same.

In forming the pulling-head shown in the annexed drawings I take a plurality of metal ribbons *a*, preferably of steel and four in number, and twist the same into spirals, half with a right-hand and half with a left-hand twist. These spiral ribbons are then assembled in such manner that they constitute a reticulated cylinder in which a right-hand and a left-hand ribbon each have one of their ends located on one side of the cylinder, the other right-hand ribbon and the other left-hand ribbon having each one of their ends located on the other side of the cylinder. The several ribbons are then riveted in such way that they are free to move on the rivets *b* as pivots at each intersecting-point, including an intersecting-point located at or adjacent to the free ends of the ribbons terminating on each side of the cylinder, so that one end of each of a pair of ribbons is secured together at one end, and the same ribbons are also secured together at the intersecting-point of their opposite ends, which by preference lies on the opposite side of the cylinder from that on which their first-named ends lie. To each of the pivotal points of the last-named ends of each pair of ribbons is secured a link *p*, and through these two links passes a common end ring *c*, to which the pulling-rope is secured.

It is obvious that a pulling strain upon the end ring, with a slight resistance to movement on the part of the reticulated cylinder, will result in a straightening of the ribbons and a consequent reduction in the diametrical size of the cylinder formed thereby, whereby increased friction between the reticulated cylinder and the cylinder-body to be drawn and contained therein will be created, and that this last-named friction will vary directly with the pulling power, so that the cylindrical body will be the more firmly clamped the greater its resistance to movement.

It is obvious that while the metallic flat ribbons are herein specifically described other forms of metallic filaments may be used, which are appropriately connected at their ends and intersecting-points to permit the pivotal movement necessary for their proper action.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A pulling-head for cylindrical bodies comprising a reticulated network made up of interlaced metallic filaments, the opposite ends of which are connected in pairs, with an

attachment device secured to the corresponding ends of the pairs of filaments, substantially as described.

2. A pulling-head for cylindrical bodies comprising a reticulated cylinder consisting of a plurality of pairs of metallic ribbons, the ends of each pair of ribbons being united together, and the several ribbons being pivotally connected at their intersecting-points, with the operating means attached to the corresponding end of all of the pairs of ribbons, substantially as described.

Signed at Buffalo, New York, this 30th day of March, 1906.

WILLIAM D. SCOTT.

Witnesses:

JOHN R. JOSLYN,

GEORGE J. NOONAN.