

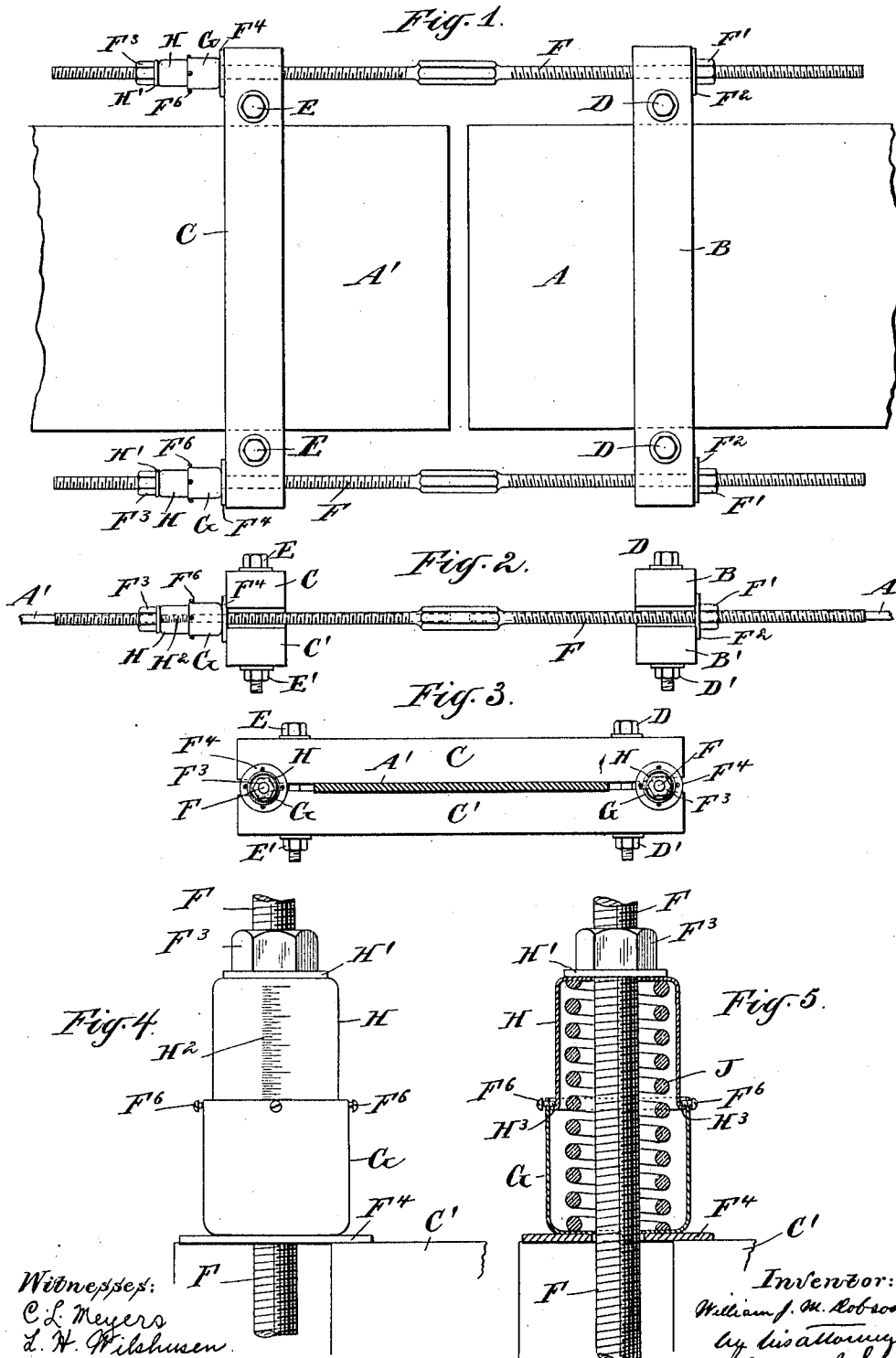
W. J. M. DOBSON.

BELT CLAMP.

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1,020,748.

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Witnesses:
C. L. Meyers
L. H. Wilshusen.

Inventor:
William J. M. Dobson,
by his attorney
Charles R. Seale.

UNITED STATES PATENT OFFICE.

WILLIAM J. M. DOBSON, OF NEW YORK, N. Y.

BELT-CLAMP.

1,020,748.

Specification of Letters Patent. Patented Mar. 19, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM J. M. DOBSON, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Belt-Clamps, of which the following is a specification.

The invention relates to devices for drawing together the ends of machine belts in making the joint, and the object of the invention is to provide simple, easily operated means in connection with the clamps whereby the tension or force of the pull may be indicated, thus enabling the operator to join the belt-ends at a point at which the completed belt will apply upon the pulleys under the desired tension, and also to insure equal tension on both sides or edges of the belt and thus avoid the disadvantages due to unequal marginal strains.

The invention consists in certain novel features of construction and arrangement by which the above objects are attained, to be hereinafter described and pointed out in the claim.

The accompanying drawings form a part of this specification and show an approved form of the invention.

Figure 1 is a plan view of a clamp in position on the ends of a belt and equipped with the improved belt-tension indicator. Fig. 2 is a corresponding side elevation. Fig. 3 is an end view of the same, one of the belt-ends being shown in transverse section. Fig. 4 is an end elevation of one of the tension-indicating devices, on a larger scale. Fig. 5 is a corresponding axial section, partly in elevation.

Similar letters of reference indicate the same parts in all the figures.

A A¹ are the ends of a belt to be joined.

B B¹ are strips, preferably of hard wood, applied transversely of the belt-end A on its opposite faces and securely clamped thereon by bolts and nuts D D¹ extending through the overhanging ends of the strips. C C¹ are similar strips clamped upon the belt-end A¹ by bolts and nuts E E¹ similarly arranged.

F F are long right-and-left screws, one at each edge of the belt-ends, extending between the overhung ends of the strips, which are rabbeted to receive them, and serving to draw the belt-ends together through their

engagement with nuts F¹ F¹ applied against washers F² F² on the outer faces of the strips B B¹ and similar nuts F³ F³ for the strips C C¹ but differently arranged relatively to these strips, as will be described. A square or hexagonal portion of the screws at the midlength of each permits them to be turned by a wrench.

G is one of a pair of cylindrical cups, one for each screw, each having an axial opening in its bottom and open at the top, and each receives a similar but inverted cup or shell H of smaller diameter arranged to slide telescopically within the other and thus inclose a portion of the screw F extending axially therethrough.

Encircling the screw and inclosed within the cup and shell is a strong helical spring J abutting at one end against the interior of the bottom of the shell and at the other against the interior of the bottom of the cup, and exerting its force expansively when compressed, in the direction to separate the cup and shell. Each cup is applied against a washer F⁴ F⁴ similar to the washers F² F², lying against the outer faces of the ends of the strips C C¹ and bridging the open space between them, and the protruding ends of the screws each receive a nut F⁵ and a washer H¹ lying against the shell. Thus arranged the tensile strains due to turning the screws in the direction to draw the belt-ends toward each other, are transmitted to and resisted by the springs J J which are thus compressed and the shells H correspondingly forced into the cups G to an extent determined by the force exerted and the resistance offered by the springs, which may be read in pounds or other measurements, upon a suitable scale H² marked on the outer face of the shell, the upper edge of the cup serving as an index therewith.

In order to maintain the relative positions of the cups and shells when the pressure is relaxed or the device not in service, the shells are each provided with a flange or lip H³ arranged to strike the ends of pins or screws F⁶ inserted through the margin of each cup near its open mouth.

The apparatus permits the belt to be joined at a point at which it will be subjected to a predetermined tension when placed on the pulleys, and also allows the operator to equalize the strains on both edges of the belt. The apparatus may also

be used in measuring the strain on a belt already in position, in determining the service it is performing.

5 The device is self-contained and is easily and quickly applied to the belt. The forms of the clamps are not essential except in so far as they are adapted to receive the screws and the cups and shells.

10 Other modifications may be made. The means for holding the cups and shells against detachment, illustrated by the lip H^c and pins F^c, may be varied, or such attaching means may be omitted.

I claim:—

15 In a device of the character set forth, a pair of clamps for engaging a belt, screws connecting said clamps, a cylindrical cup on each screw bearing against the adjacent

clamp, a shell of smaller diameter cooperating with each cup to slide telescopically 20 therein, nuts on said screws bearing against said shell, each shell having a scale readable relatively to the cup, means limiting the outward movement of the shell relatively to the cups, springs within said cups 25 and shells tending normally to distend the same, and nuts on the screws bearing against the outer face of the other clamp.

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses. 30

WILLIAM J. M. DOBSON.

Witnesses:

CHARLES R. SEARLE,
C. M. FREDERICKS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."