

No. 773,462.

PATENTED OCT. 25, 1904.

G. H. BENTON.
UNION NIPPLE CLUTCH.
APPLICATION FILED MAY 6, 1904.

NO MODEL.

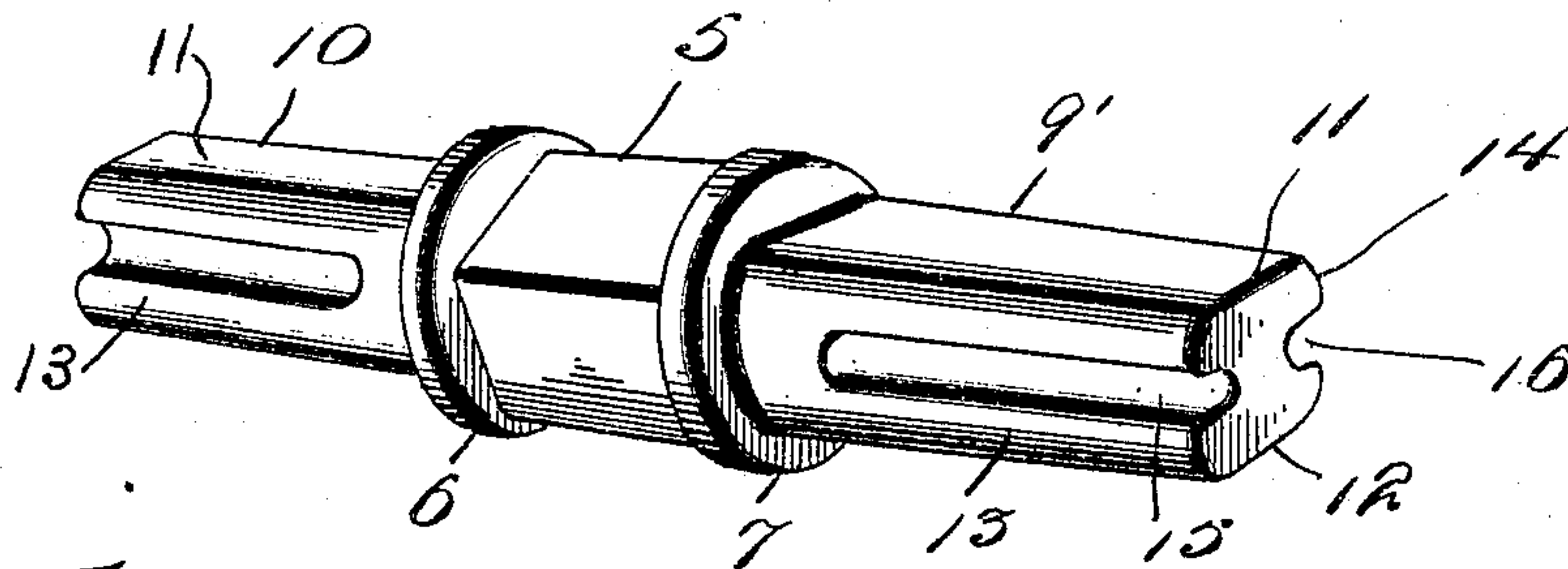


Fig. 1.

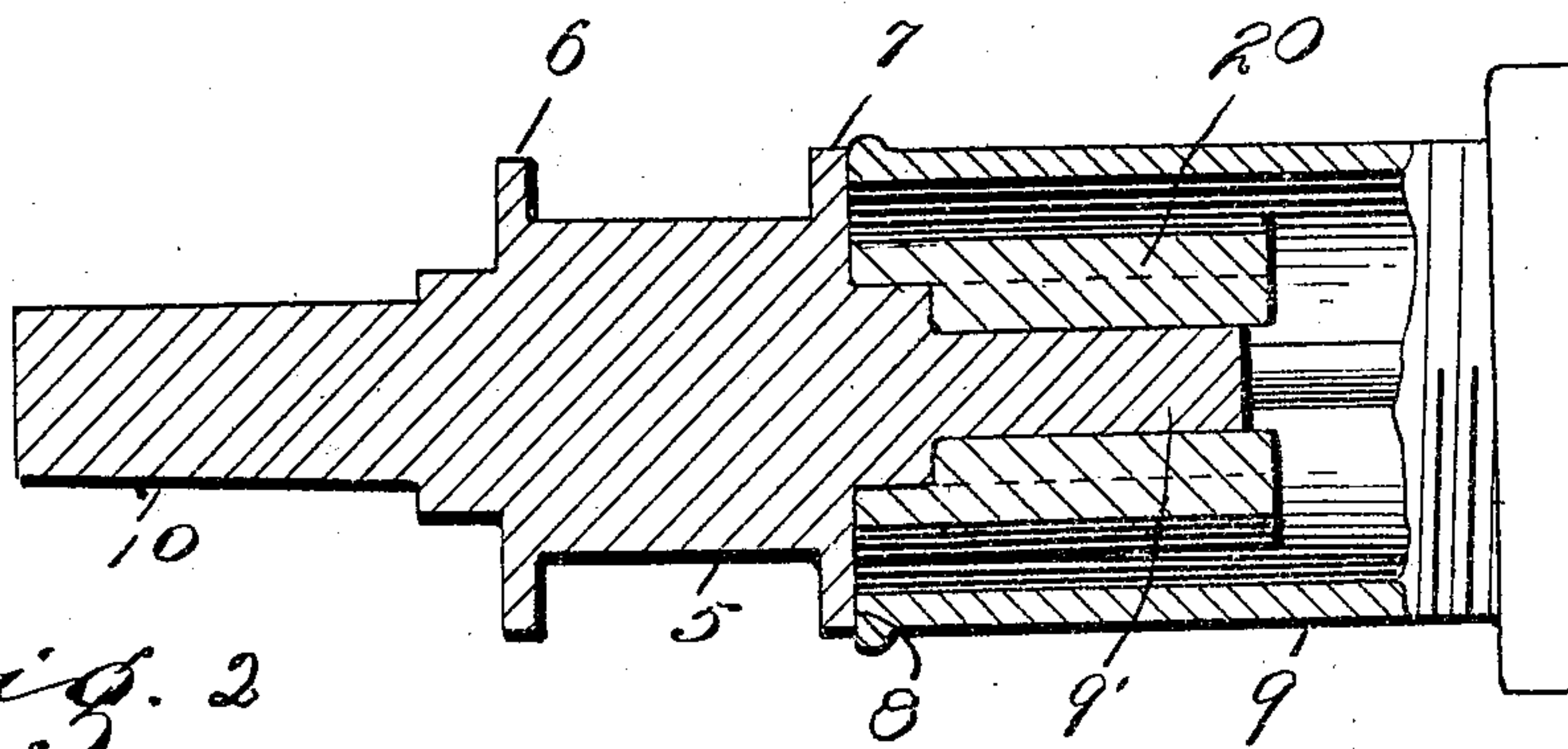


Fig. 2.

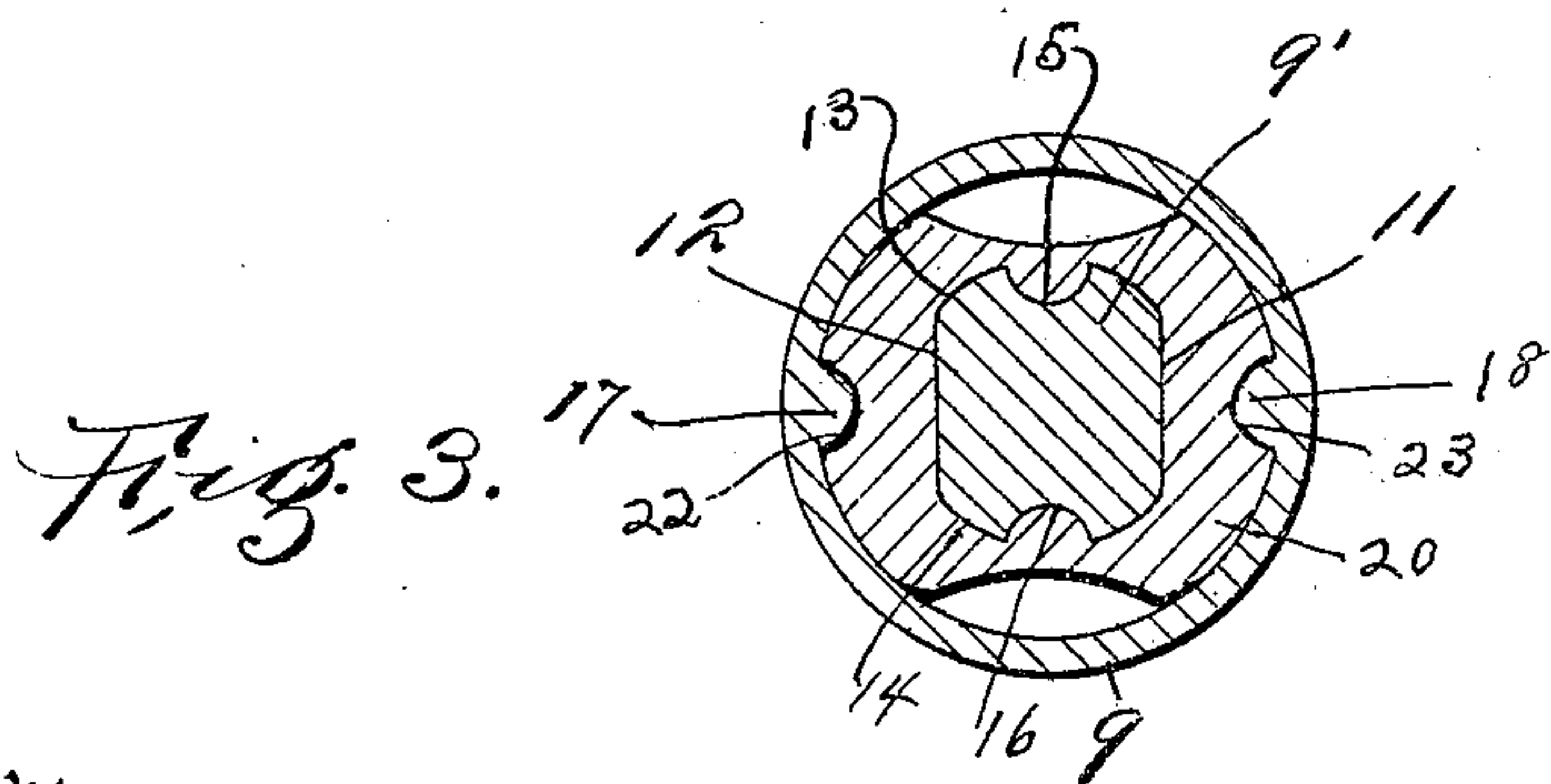


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE H. BENTON, OF METUCHEN, NEW JERSEY.

UNION-NIPPLE CLUTCH.

SPECIFICATION forming part of Letters Patent No. 773,462, dated October 25, 1904.

Application filed May 6, 1904. Serial No. 206,773. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BENTON, a citizen of the United States, residing at Metuchen, in the county of Middlesex, State of New Jersey, have invented certain new and useful Improvements in Union-Nipple Clutches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to clutches for applying and removing the union-nipples of radiators, the object of the invention being to provide a tool which may be quickly applied and removed and which will be efficient in its operation and insure against injury to the ground joint of the nipple. As these nipples are ordinarily constructed they are provided with internal longitudinal lugs, which permit of insertion of an angular body and prevent its rotation, so that a wrench may be engaged with the projecting portion of said body to rotate it and therewith the nipple. In the present invention there is provided a clutch, which will readily engage these lugs and will insure rotation of the nipple with the clutch.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view of the clutch. Fig. 2 is a section taken longitudinally through the clutch in engagement with a nipple, the clutch having a bushing thereon to fit it to the nipple. Fig. 3 is a section taken transversely through the nipple, the clutch, and its bushing.

Referring now to the drawings, the present clutch comprises a central body portion 5, which is angular in cross-section to receive an ordinary wrench for rotating the clutch, and at the ends of this body portion are the circular flanges 6 and 7, which serve to prevent slipping of the wrench against the ground face 8 of a nipple 9 in the operation of the clutch.

From each end of the body portion 5 there projects a stem, (shown at 9' and 10,) which

stems are of different cross-sectional dimensions to loosely fit nipples of different sizes. Each of the stems 9' and 10 has two of its opposite side faces 11 and 12 flat and parallel, while the opposite side faces 13 and 14 are convex, so that when the stem is inserted in a nipple these convex faces will lie in close relation to the inner wall of the nipple. Formed longitudinally of the faces 13 and 14 and opening through the free end of each stem are grooves or channels 15 and 16 of such dimensions that when the stem is inserted in a nipple these grooves or channels will receive the ribs 17 and 18, extending longitudinally of the inner face of the nipple. The engagement of the ribs in the grooves or channels insures rotation of the nipple with the clutch when the latter is rotated by engagement of a wrench with the body portion 5 thereof, as above described. The two stems 9' and 10, of different diameters, provide for manipulating two sizes of nipples, and when a nipple of a larger size is to be manipulated a bushing is provided for the nipple, consisting of a sleeve 20 of substantially cylindrical shape having a central longitudinal passage 21 corresponding in cross-sectional shape to the stem 9', so that the sleeve may be slipped onto the stem and will be held against rotation thereon. In the outer face of the sleeve 20 are formed longitudinal slots or grooves 22 and 23, corresponding to the grooves 15 and 16 and for a like purpose.

It will be understood that in practice modifications of the specific construction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

It will be noted that the opposite side faces of the sleeve 20 are concaved, these faces corresponding to the flat faces 11 and 12 of each stem. The object of so forming these faces is in order that the tool may be employed even when the lugs of the union-nipple are so badly cast that they would not go into the grooves, at which times, when the stem alone is used, it is only necessary to adjust the tool

so that its opposite flat sides will engage opposite sides of the lugs. When the sleeve is used in a larger nipple under the same conditions, the concaved sides are engaged with opposite sides of the lugs.

What is claimed is—

1. A union-nipple clutch consisting of a central cross-sectionally angular body portion adapted to receive a wrench for rotating it, a nipple-engaging stem at each end of the body portion, and guard-flanges between the body portion and the stems, said flanges being spaced apart a distance sufficient to receive a wrench between them.

2. A tool of the class described comprising a central angular body portion, a stem at each end of the body portion having longitudinal channels opening through its free end and a sleeve removably fitted upon one of the stems

and having longitudinal channels in its outer face opening through one end.

3. A union-nipple clutch consisting of a central cross-sectionally angular body portion adapted to receive a wrench for rotating it, stems at opposite ends of the body portion, said stems being of different diameters and adapted to engage within nipples, and continuous guard-flanges between the central body portion and the stems, said flanges being spaced apart a distance sufficient to receive a wrench between them.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. BENTON.

Witnesses:

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