J. B. DOWNEY AND A. C. EDGECOMB.

THREADLESS NUT.

APPLICATION FILED JAN. 23, 1920.

1,378,770. Patented May 17, 1921.

Fig. 1.

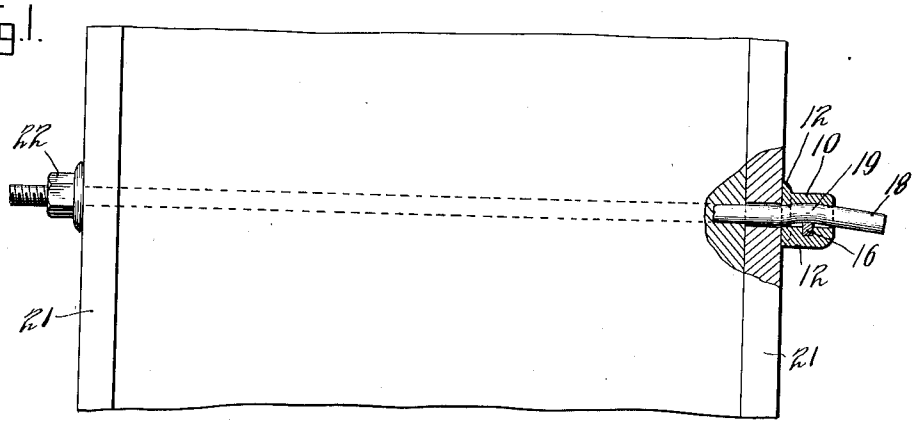


Fig. 3.

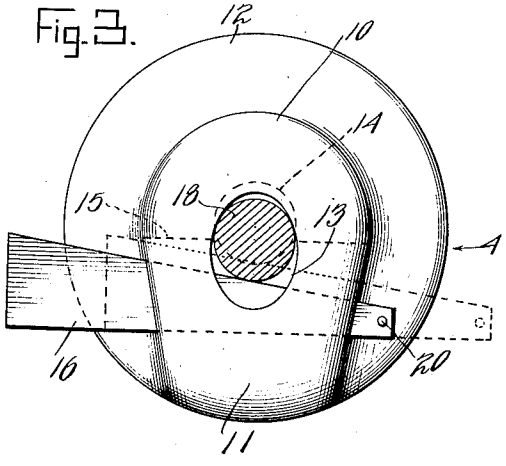


Fig. 2.

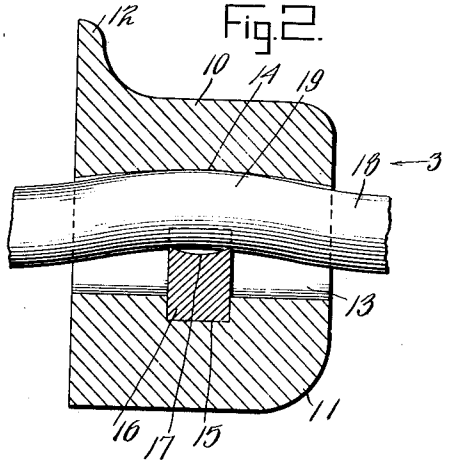
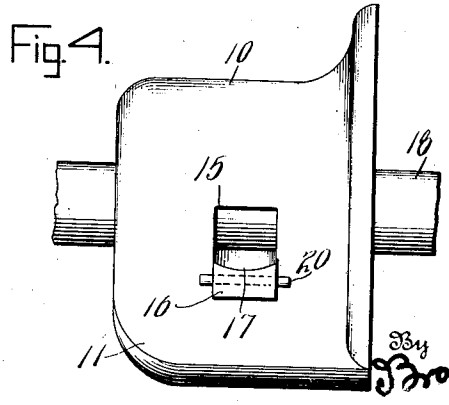


Fig. 4.



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UNITED STATES PATENT OFFICE.

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THREADLESS NUT.

1,378,770. Specification of Letters Patent. Patented May 17, 1921.

Application filed January 23, 1920. Serial No. 353,431.

To all whom it may concern:

Be it known that we, JOHN B. DOWNEY and ARTHUR C. EDGECOMB, citizens of the United States, residing at Topsham, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Threadless Nuts, of which the following is a specification.

This invention relates to threadless nuts, or adjustable abutments for rods and has for an object to provide a device of the kind which may be secured upon, or along, any portion of a rod, for any purpose whatsoever. In the general operation of the device it is intended that the rod to which this abutment is applied shall be employed for poring-molds for concrete to retain the opposite spaced walls together, the rod to be withdrawn from the concrete after crystallization. The utility of the device is, however, not limited to such association and any description based upon such use is only illustrative of some of the functions.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts.

Figure 1 is a view of the device in operation, employed upon and to hold together spaced walls,

Fig. 2 is a view of the device taken on the same plane as Fig. 1 but shown in enlarged detail,

Fig. 3 is a view of the device in end elevation as indicated by arrow 3 of Fig. 2, and

Fig. 4 is a view of the device in side elevation as indicated by arrow 4 at Fig. 3.

The improved abutment, which forms the subject matter of this application, comprises a hub 10 having an offset 11 and preferably, though not necessarily, a flange 12 completing a circle with the extreme of the offset 11 coinciding with the circumference.

Through the device, perpendicular to the plane of the flange 12, an opening 13 is provided elliptical in transverse form and with a bowed portion 14 so that centrally of the hub 10 the ellipse 13 is longer than at the extremities of the opening, as shown more particularly at Fig. 2.

Transversely of the opening 13 a keyway 15 is provided in which is inserted a key 16. The key 16 is tapered, as indicated more particularly at Fig. 3, and the edge of the key, which transects the opening 13, is concaved, as indicated at 17 in Figs. 2 and 4, producing comparatively sharp edges at the opposite sides of the key 16 which engage and bite into the rod 18 which is inserted through the opening 13. By driving the key 16 from the larger end, in the direction of the smaller end, the tapered wedging action is designed to cause the rod 18 to be bowed as at 19 to correspond to the bow 14 of the opening 13. This bowing, or bending, of the rod 18 in addition to the biting of the edges of the key 16 causes the structure to be engaged firmly and immovable upon the rod 18 until the key has been displaced by driving in the opposite direction. To prevent the accidental complete displacement of the key 16 a pin 20 is employed as indicated at Figs. 3 and 4, which pin is of course inserted after the key 16 has been entered in the keyway 15.

With the device thus rigidly secured upon the rod 18, said rod may be used for many purposes as, for instance, to be inserted through the side walls 21 of a pouring-mold with an adjusting nut 22 upon the end of the rod opposite the device. It is contemplated that the device, which forms the subject of this application, shall be fixed upon the rod and shall be moved only when the exigencies of use require its employment in conjunction with pouring-molds or the like of different thicknesses and it is not contemplated that it should be employed for ordinary adjustment, which is accomplished by the nut 22. The device, however, is not limited to such use and the employment with a nut, similar to or the equivalent of the nut 22, is wholly immaterial to the present invention.

Having thus fully described our said in-

vention, what we claim as new and desire to secure by Letters Patent, is:

A threadless nut comprising a body having an elliptical opening therethrough internally bilged, a key-way transecting the opening and registering with the bilge, a tapered key formed to fit the key-way and provide sliding restricted to the direction of the key-way and a removable pin adapted to be placed through the key and removably confine the key to the key-way.

In witness whereof, we have hereunto set our hands and seals at Waterville, Maine, this 10th day of January, A. D. nineteen hundred and twenty.

JOHN B. DOWNEY. [L. S.]
ARTHUR C. EDGECOMB. [L. S.]

Witnesses to signature of John B. Downey:
MARK J. BARTLETT,
CHARLES W. ATCHLEY.

Witnesses to signature of Arthur C. Edgecomb:
JESSIE M. EDGECOMB,
ROBERT W. DE WOLFE.