E. D. BARTON.

ROPE OR STRAP FASTENER.

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1,426,535. Patented Aug. 22, 1922.

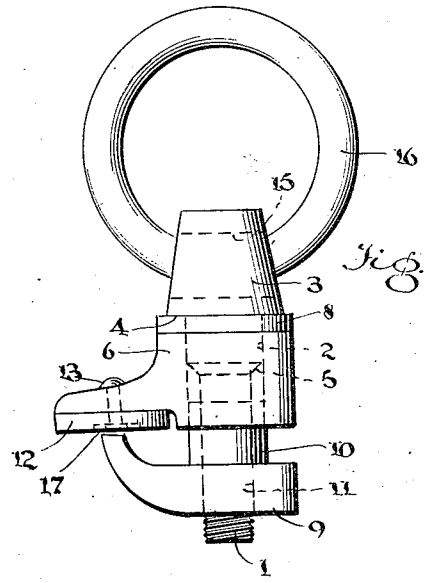


Fig. 1.

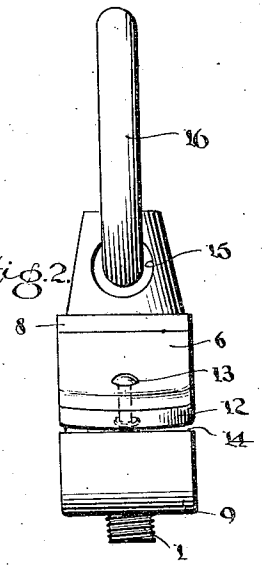


Fig. 2.

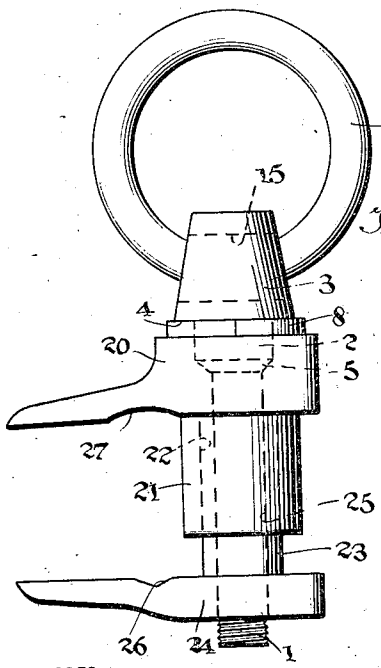


Fig. 3.

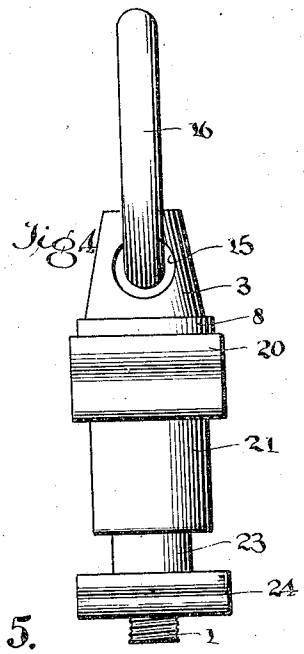


Fig. 4.

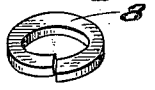


Fig. 5.

WITNESSES

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ROPE OR STRAP FASTENER.

1,426,535. Specification of Letters Patent. Patented Aug. 22, 1922.

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To all whom it may concern:

Be it known that I, EDWARD DEVERE BARTON, a citizen of the United States, and a resident of Canon City, in the county of Fremont and State of Colorado, have invented certain new and useful Improvements in Rope or Strap Fasteners, of which the following is a specification.

My invention relates to devices adapted to be detachably secured to a support to provide a means to which a flexible member, such as a rope or strap, may be secured, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a simple, positively acting, device which is adapted to be detachably attached to various objects, such as a part of an automobile and which has means to which a rope or strap may be readily secured.

A further object of my invention is to provide a device of the character described which has relatively adjustable means for engaging supporting objects of various sizes and shapes.

A further object of my invention is to provide a device of the character described which has means for locking the support engaging elements thereof in adjusted position.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be pointed out more particularly in the appended claims.

My invention is illustrated in the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a side elevation of one embodiment of my invention,

Fig. 2 is a front view of the same,

Fig. 3 is a side elevation of another embodiment of the same invention, and

Fig. 4 is a front view of the form of the device illustrated in Fig. 3.

Figure 5 is an enlarged perspective view of a lock washer comprised in the embodiment of the invention illustrated in the preceding views.

Referring now to the drawings, and particularly to Figs. 1 and 2 thereof, it will be noted that I provide a shank comprising a screw-threaded end portion 1 merged by a neck portion 2 into a head portion 3, thereby providing a shoulder 4 at the juncture of the neck and head portions. The neck portion 2 is larger diametrically than the threaded end portion 1 and is provided with a beveled end wall, such as indicated at 5.

An upper jaw 6 is provided with a bore 7 adapted to slide on the neck portion 2 and to loosely receive the screw threaded end portion 1. The length of the upper jaw 6 is greater than the length of the neck portion 2 and considerably less than the combined length of the neck portion 2 and the screw threaded portion 1. A spring lock washer 8 is disposed on the neck portion 2 between the shoulder 4 and the adjacent end of the upper jaw 6 for a purpose which will be hereinafter set forth.

A lower jaw member 9 is provided with an inner cylinder boss 10 on its face. A threaded bore 11 extends through the jaw member 9 and the boss 10 and is adapted to engage the threaded end portion 1 of the shank. The cylindrical boss 10 is adapted to enter the bore 7 of the upper jaw member 6 when the latter is slidably moved toward the lower jaw member 9.

The upper jaw 6 is provided with a bearing or friction piece 12 secured on its face by a rivet 13 or the like, the head of the rivet being countersunk in the bearing or friction piece 12, as shown. The bearing or friction piece 12 is preferably formed of rubber or a like material which is adapted to engage a plane surface without slipping and without marring or injuring the surface.

The jaw 9 is provided with an upwardly curved end portion such as indicated at 14, which end portion is adapted to cooperate with the bearing or friction of the jaw 6 and to contact the latter when the end of the boss 10 is positioned in contact with the proximate end of the neck portion 2.

From the foregoing description of the various parts of the device, the operation thereof will be readily understood. The upper jaw 6 is preferably formed so that the plane of the face of the friction or bearing piece 12 is slightly inclined downwardly at its outer end with respect to a plane intersecting the longitudinal axis of the shank at right angles. The head 3 is provided with a transversely extending bore 15 through which a fastening ring 16 extends. The bearing or friction piece 12 is preferably provided with a central recess, such as

indicated at 17 in its face which aids in causing the bearing or friction piece 12 to grip a smooth surface against which the jaw 6 is clamped without marring or injuring the finish of such surface.

The device is particularly well adapted for use in connection with an automobile or other vehicle and may be attached to the door, side or body, running board or like part of such vehicle. In applying the fastener, the jaws 6 and 9 are arranged at opposite sides of the parts or objects upon which the fastener is to be supported. The ring 16 provides a convenient means adapted to be grasped to turn the shank, which serves as an adjusting bolt, to cause the jaws to firmly grip the supporting part or object. The contact of the shoulder 4 with the spring washer 8 will force the latter against the jaw 6, thereby locking the jaw 6 in adjusted position with respect to the jaw 9. As stated, the jaw 6 is slightly downwardly inclined in order to insure a firm positive grip on a selected object, even though a slight play between the jaw 6 and the neck portion 2 should occur. When so applied, the fasteners provide a firm anchorage for a rope or other flexible member which may be tied to the ring 16. It is important to note that any stresses sustained by the jaws in service are communicated through the boss 10 and the jaw 6 to the neck and head portions of the adjusting bolt and are not placed upon the threads of the portion 1 of the bolt. The only stress upon the threads of the portion 1 of the bolt is that caused by the action of the lock washer 8 reacting against the jaw 6 and the head of the bolt.

Referring particularly to Figs. 3 and 4, I show another embodiment of the same invention. Like reference characters have been used to designate like parts of the two embodiments of the invention illustrated and I shall confine my description of the form of the invention illustrated in Figs. 3 and 4 to a description of the parts thereof which differ from corresponding parts of the form of the invention which has been described in detail. An upper jaw member 20 has an integral boss or sleeve portion 21 on its face adjacent to the rear part thereof. The bore 22 of the sleeve portion extends through the jaw member 20 and is adapted to slide on the neck portion 2 of the adjusting bolt and on a cylindrical boss 23 which projects from the face of a lower jaw member 24. A bore 25 extending through the cylindrical boss 23 and the lower jaw member 24 is threaded for engagement with the threaded portion 1 of the bolt. The face of the lower jaw member 24 has a transversely extending notch 26 formed therein and the face of the upper jaw member 20 is provided with a cooperating transversely extending shallow groove 27 of curved cross sectional contour. The plane of the face of the upper jaw member 20 is slightly inclined downwardly toward the outer end thereof with respect to a plane intersecting the axis of the bolt at right angles.

The operation of the form of the device illustrated in Figs. 3 and 4 is identical in essential respects with the operation of the form of the device illustrated in Figs. 1 and 2. The provision of the cooperating groove 27 and notch 26 in the faces of the jaw members adapts the fastener for engaging objects other than those with flat surfaces.

Obviously, modifications and adaptations of the forms of the device illustrated in the accompanying drawings may be provided without departing from the spirit and scope of the invention, as disclosed in the foregoing specification and as outlined in the appended claims.

I claim:—

1. A device of the character described comprising an adjusting member having a shank provided with a head portion, a jaw member having a bore adapted to receive the shank and being disposed thereon adjacent to the head portion, a second jaw member threadedly engaging said shank adjacent to the end of the latter and being adapted to cooperate with said first named jaw member, and a locking device arranged between said head portion and said first named jaw member for holding the latter against movement away from said second named jaw member.

2. A device of the character described comprising a member having integral shank, neck, and head portions, the diameter of said neck portion being greater than that of said shank portion, a jaw member having a bore adapted to receive said neck portion, a second jaw member threadedly engaging said shank portion and adapted to cooperate with said first named jaw member, a ring attached to said head portion, and a locking device arranged between said head portion and said first named jaw member for holding the latter against movement away from said second named jaw member.

3. A device of the character described comprising a member having integral shank, neck, and head portions, the diameter of said neck portion being greater than that of said shank portion, a jaw member having a bore adapted to receive said neck portion, a second jaw member threadedly engaging said shank portion and adapted to cooperate with said first named jaw member, a ring attached to said head portion, and a spring lock washer disposed between said head portion and said first named jaw member for holding said first named jaw member in adjusted position with respect to the second named jaw member.

4. A device of the character described

comprising a member having a threaded shank and a head portion merged one into the other by a neck portion, the diameter of said neck portion being greater than that of said shank portion, a jaw member having a length greater than that of said neck portion and having a bore adapted to slidingly engage said neck portion, a second jaw member having an integral boss projecting laterally of the face thereof and adapted to enter the bore of said first named jaw member, said second named jaw member being adapted to cooperate with said first named jaw member and having a threaded bore extending axially of said boss for engaging the threaded shank portion of said member, and means associated with said member for turning the latter to adjust the position of said jaw members with respect to each other.

5. A device of the character described comprising a member having a threaded shank and a head portion merged one into the other by a neck portion, the diameter of said neck portion being greater than that of said shank portion, a jaw member having a length greater than that of said neck portion and having a bore adapted to slidingly engage said neck portion, a second jaw member having an integral boss projecting laterally of the face thereof and adapted to enter the bore of said first named jaw member, said second named jaw member being formed with the end portion thereof curved toward the corresponding portion of said first named jaw member and being formed with a threaded bore extending axially of said boss for engaging the threaded shank portion of said member, a lock washer disposed on said neck portion between said head portion and said first named jaw member, and a ring attached to said head portion.

6. A device of the character described comprising a member having a threaded shank and a head portion merged one into the other by a neck portion, the diameter of said neck portion being greater than that of said shank portion, a jaw member having a length greater than that of said neck portion and having a bore adapted to slidingly engage said neck portion, a second jaw member having an integral boss projecting laterally of the face thereof and adapted to enter the bore of said first named jaw member, said second named jaw member being formed with the end portion thereof curved toward the corresponding portion of said first named jaw member and being formed with a threaded bore extending axially of said boss for engaging the threaded shank portion of said member, a lock washer disposed on said neck portion between said head portion and said first named jaw member, a ring attached to said head portion, and a compressible friction piece secured on the face of said first named jaw member in position to cooperate with said second named jaw member.

7. A device of the character described comprising a member having a threaded shank portion and a head portion merged one into the other by a neck portion of greater diameter than the shank, a jaw member having an integral portion projecting in advance of the rear part of the face thereof, said jaw member and said extension being provided with a continuous bore extending axially of said extension and adapted to receive said neck portion, a second jaw member having an integral boss projecting in advance of the face thereof and adapted to enter the bore of said confronting portion of said first named jaw member, said second named jaw member and said boss thereon being provided with a threaded bore extending axially of said boss for engaging said threaded shank portion, whereby said jaw members are adapted to be clamped to an object disposed therebetween, and a ring carried by said head portion.

8. A device of the character described comprising a member having a threaded shank portion and a head portion merged one into the other by a neck portion of greater diameter than the shank, a jaw member having an integral portion projecting in advance of the rear part of the face thereof, said jaw member and said extension being provided with a continuous bore extending axially of said extension and adapted to receive said neck portion, a second jaw member having an integral boss projecting in advance of the face thereof and adapted to enter the bore of said confronting portion of said first named jaw member, said second named jaw member and said boss thereon being provided with a threaded bore extending axially of said boss for engaging said threaded shank portion, whereby said jaw members are adapted to be clamped to an object disposed therebetween, said jaw members having their faces grooved to engage objects of various shapes, and a ring carried by said head portion.

EDWARD DEVERE BARTON.