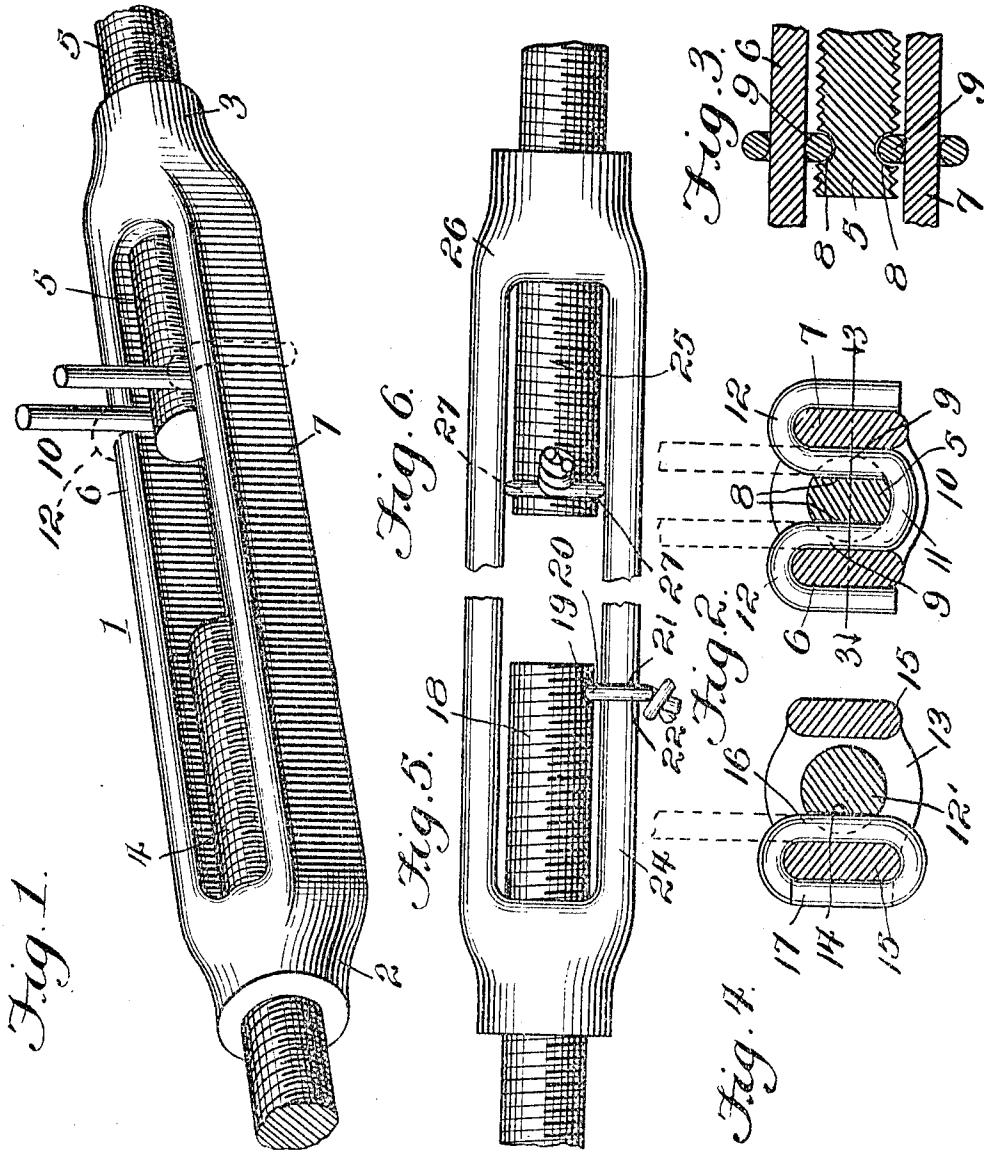


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 LOCKING TURNBUCKLE.
 APPLICATION FILED MAY 14, 1909.

950,424.

Patented Feb. 22, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

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LOCKING-TURNBUCKLE.

950,424.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Application filed May 14, 1909. Serial No. 495,917.

To all whom it may concern:

Be it known that I, WARREN H. ANDREWS, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented new and useful Improvements in Locking-Turnbuckles, of which the following is a specification.

This invention relates to rod locks for turnbuckles or similar machine elements wherein right and left hand threaded rods or screws are employed for holding two oppositely positioned parts in their correct or adjusted positions, and an object of my invention is to provide a turn buckle or the like with means whereby the rod or rods can be securely held against rotation with the yoke member or nut of the turn buckle.

A still further object of my invention is to provide a lock consisting chiefly of a single piece of malleable metal arranged for interlocking engagement with one of the rods of a turn buckle and with a portion of the yoke or nut of said turn buckle.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claims may be resorted to without departing from the spirit of the invention.

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 a turn buckle showing my improved rod lock applied thereto. Fig. 2 is a detail section taken through a portion of the turn buckle and illustrating my improved rod lock in its applied position. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2. Fig. 4 is a view similar to Fig. 2 showing a slightly modified form of my invention. Fig. 5 is a detail front plan view of a portion of a turn buckle showing a still further modified form of my invention. Fig. 6 is a view similar to Fig. 5 showing another form of my invention.

Upon reference to Fig. 1 particularly, it will be seen that the turn buckle itself is of the usual and well known form but the said buckle will be described as comprising a yoke 1 provided at its ends with interiorly threaded nut portions 2 and 3 arranged to receive correspondingly threaded portions of rods 4 and 5. The nut portions 2 and 3 are connected to each other by spaced parallel arms 6 and 7. As illustrated the rod 5 is

provided adjacent to its inner extremity with a pair of vertically disposed grooves 8 which in this instance are of semi-circular form cross sectionally. These grooves are thus arranged to receive the parallel arms 9 of a locking member or element 10 which are disposed between the arms 6 and 7 of the yoke of the turn buckle. The locking element or member is preferably formed from malleable metal or rod of tubular form which is originally bent upon itself in U-form as clearly illustrated in Fig. 1 of the drawing. This construction is such that the rods 4 and 5 of the turn buckle can be properly adjusted as will be readily understood, after which, the locking member or element 10 can be operatively placed in position with respect to the rod 5 and the arms 6 and 7 of the yoke 1.

Upon reference particularly to Fig. 2 it will be seen that the arms 9 of the locking member or element are connected to each other by means of a curved or bite portion 11 which is disposed immediately beneath the rod 5 and conforms to the transverse curvature thereof. The arms 9 when it is desired to lock the element 10 to the turn buckle are bent outwardly as indicated at 12 to lie upon the upper edges of the arms 6 and 7, and from said outwardly bent portions, the arms are bent downwardly to lie upon the outer faces of the arms 6 and 7 and are disposed in spaced relation to the portions between said arms.

It will be seen and appreciated upon reference to the foregoing description that I provide a simple and novel form of lock adapted to be engaged with portions of a turn buckle and with one of the rods thereof so as to hold the rods of the turn buckle against casual rotation after they have been adjusted. The construction is such that the arms 9 can be readily bent into U-form should it be desired to remove the device entirely from the turn buckle to permit further adjustment of the latter.

In the form of my invention shown in Fig. 4 the rod 12' of the turn buckle 13 is provided with a single groove 14 adapted upon one-half turn or revolution of the rod to be brought into parallel relation with one of the arms 15 of said turn buckle. The locking device consists of an element or member formed from a single length of wire or rod and may be inserted so that a portion 16 is confined between one of the

walls of the groove 14 and the inner face of one of the arms 15 of the turn buckle. After this operation the terminal ends of the said wire are bent over the upper and lower edge portions of one of the arms 15 and the extremities or portions 17 lie outwardly of one of the arms 15 and are disposed in spaced relation to the intermediate portion 16.

10 In the form shown in Fig. 5 the rod 18 of the turn buckle is provided with a groove 19 which receives a portion 20 of a locking member or element 21. The locking member or element in this form of my invention is preferably formed from malleable wire of less gage than the wire or rod described in the previously referred to forms of my invention and this element or member is particularly adapted for use in connection with smaller turn buckles for lighter work than the one shown in Fig. 1. The locking element 21 is provided with portions 22 which are bent around one of the arms of the yoke 24 and the terminal ends of the said portions are twisted together or otherwise brought into interlocking engagement with each other.

30 The form shown in Fig. 6 is substantially the same as that shown in Fig. 5, the difference being in providing the rod 25 of the turn buckle 26 with a pair of grooves 27 similar to those described in the preferred form of my invention. The locking element or member in this form of my invention is

identical with that described in Fig. 5 and it is thought that a description for one will suffice for both.

I claim:—

1. The combination with a turn buckle, of an adjustable grooved rod threaded to the nut members of the said turn buckle, and a locking member adapted for locking engagement with a portion of the yoke of the turn buckle and adapted to be seated in the grooved portion of said rod.

2. A turn buckle or the like comprising a yoke having a series of spaced arms, a rod adjustably connected with the yoke, said rod having a grooved portion, a locking member comprising a single piece of malleable metal adapted for locking engagement in the said grooved portion of the rod and adapted to be bent into engagement with the arms of said yoke.

3. A turn buckle or the like comprising a yoke having a revoluble rod connected therewith, said rod being provided with a plurality of grooves, and a rod locking element formed from a single piece of malleable metal bent to provide groove and yoke engaging portions.

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

WARREN H. ANDREWS.

Witnesses:

JOHN L. FLETCHER,
JAMES A. KOEHL.