

(No Model.)

G. F. STILLMAN.
TURN BUCKLE.

No. 390,992.

Patented Oct. 9, 1888.

Fig. 1.

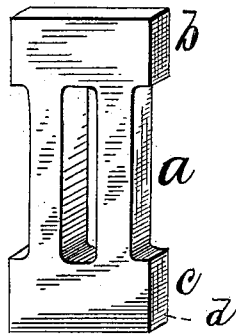


Fig. 2.

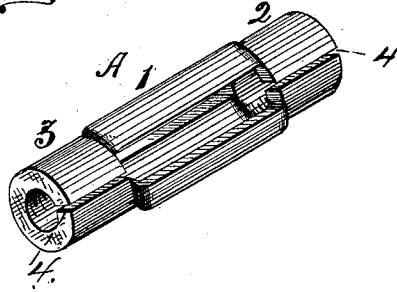


Fig. 3.

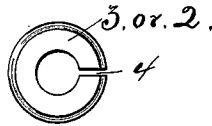


Fig. 4.

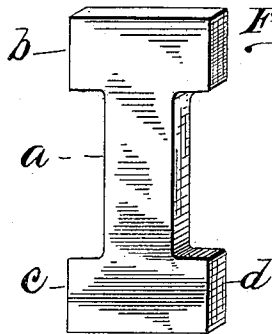


Fig. 5.

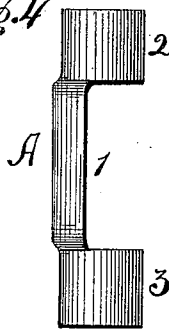


Fig. 6.

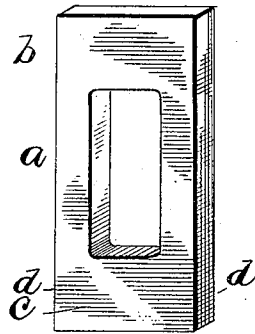


Fig. 7.

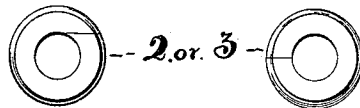


Fig. 8.

Witnesses.
W. H. Brown,
A. Smith.

Inventor.
George F. Stillman.
By his Attorneys
Smith & Denison.

UNITED STATES PATENT OFFICE

GEORGE F. STILLMAN, OF SYRACUSE, NEW YORK.

TURN-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 390,992, dated October 9, 1888.

Application filed March 2, 1888. Serial No. 265,947. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. STILLMAN, of Syracuse, county of Onondaga, in the State of New York, a citizen of the United States, have invented certain new and useful Improvements in Turn-Buckles, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an isometrical elevation of a blank from which the turn-buckle is formed. Fig. 2 is a like view of a turn-buckle made from that blank; Fig. 3, a like view of another blank; Fig. 4, a like view of a turn-buckle made from blank, Fig. 3. Fig. 5 is an end view of the turn-buckle. Fig. 6 is an elevation of another blank. Fig. 7 is an end view of a turn-buckle in which the slot is tangential to the bore; Fig. 8, a like view in which the slot is radial.

My invention relates to turn-buckles employed to adjustably connect the ends of two rods; and my object is to improve their construction and utility and simplify their manufacture by making them from sheet metal stamped or rolled up and tempered, if desirable, or direct from sheet spring metal, or in any other manner in which the head which receives the rod ends may possess a spring elasticity.

My invention consists in the several novel features of construction and operation which are hereinafter described, and which are specifically set forth in the annexed claims.

It is constructed as follows:

A is a turn-buckle, consisting of a body, 1, and heads 2 3, which are tubular and threaded internally, one with a right and the other with a left hand thread. I first stamp or cut out from spring sheet metal or sheet metal a blank of substantially the form shown in Figs. 1, 3, and 6, without spreading the ends, although I may scarf them off, so that the edges of the ends will meet with a lapped joint. In this blank *a* is the body, either slotted, notched in the edges, or solid, and B C are the ends, which are either square or scarfed upon their edges *d*. I then roll, compress, or swage the blank longitudinally into a tubular or substantially tubular form, the end B forming the head 2 and the end C forming the head 3, the edges meeting with a butt or scarf joint; but I do not weld them in their meeting joints in the heads. By not welding the joints of the meeting edges of the heads,

leaving either a slotway longitudinal to the heads in each head, as shown in Figs. 2 and 5, or by not welding the scarf-joint shown in Fig. 7 or the butt-joint in Fig. 8, I create what I call an "elastic head," capable of expansion and spring retraction whenever a rod or screw of larger diameter than the bore of the head is inserted into one or both of the heads. I thus utilize the spring elasticity of the metal, whether a natural or inherent spring elasticity or whether it is imparted to the heads by tempering. The heads are usually screw-threaded, and the bore thereof is smaller than the diameter of the rod to be screwed therein, and when the rod is screwed in, the spring expansion of the heads will cause each head to grip or pinch the screw or rod, such grip or pinch varying according to the stiffness of the spring of the heads and also to the amount of variation between the size of the screw or rod and of the bore of the heads of the buckle. This method of construction is especially valuable in making turn-buckles of small size; but it may be adapted to larger ones. The heads may be connected by a body consisting of a plane cylinder or one or two side bars, as may be desired.

What I claim as my invention is—

1. A turn-buckle consisting of a slotted sheet-metal body and longitudinally-slotted sheet-metal heads integral with the body, substantially as described.

2. A turn-buckle consisting of a bar or bars connecting and integral with elastic heads, and elastic heads slotted longitudinally and threaded to receive a screw of larger diameter than the bore of the heads, substantially as described.

3. A turn-buckle consisting of a bar or slotted body connecting and integral with elastic heads threaded to receive the rods, substantially as described.

4. A turn-buckle of substantially cylindrical slotted or unwelded body, provided with unwelded or slotted elastic cylindrical heads integral with the body, substantially as described.

In witness whereof I have hereunto set my hand this 17th day of February, 1888.

GEORGE F. STILLMAN.

In presence of—

H. P. DENISON,
CHAS. MORSE.