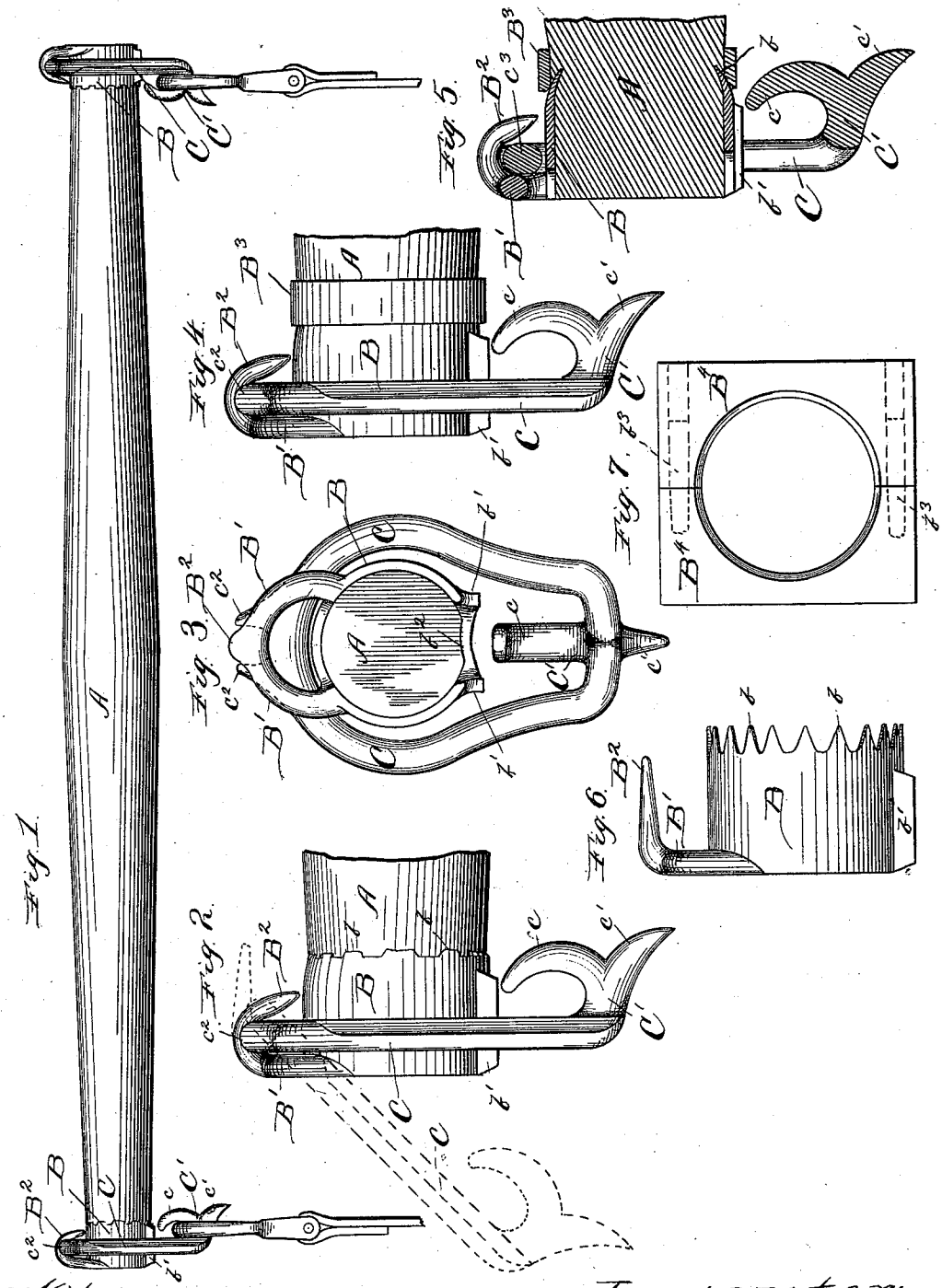
(No Model.)

W. W. BURSON.

WHIFFLETREE CLIP.

No. 408,689. Patented Aug. 13, 1889.



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UNITED STATES PATENT OFFICE.

WILLIAM WORTH BURSON, OF CHICAGO, ILLINOIS.

WHIFFLETREE-CLIP.

SPECIFICATION forming part of Letters Patent No. 408,689, dated August 13, 1889.

Application filed June 6, 1889. Serial No. 313,259. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WORTH BURSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clips and Hooks for Whiffletrees and other Purposes, of which the following is a specification.

My invention relates to clips and hooks for whiffletrees and other purposes; and the objects of my invention are, first, to provide a clip which can be securely fastened upon the end of the wooden part without sawing or boring before attaching, and without wedging, riveting, or nailing after the clip is put on the wood; second, to provide a hook which will not unhitch until so desired. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows whiffletree complete, except central draft-clip. Fig. 2 is a side view of the clip attached to the wood. The dotted lines show the hook in position to hitch or unhitch the tug. Fig. 3 is an end view of the whiffletree complete. Fig. 4 is a side view of the whiffletree end with clip-fastening band B^3 in position. Fig. 5 is a longitudinal section of Fig. 4. Fig. 6 is a side view of the clip before bending. Fig. 7 shows a removable clip-fastening band.

Similar letters refer to like parts throughout the several views.

The whiffletree A, or other wooden piece requiring a clip, may be of any shape desired, but preferably is made either round or oval and slightly tapered toward the end. The clip B is made to fit the wood and the inner end terminates in points *b b*, the function of which will be explained hereinafter.

At the rear side of the clip is the finger B^2, which is preferably cast straight, as shown in Fig. 6, and after annealing bent upon the hook C at c^3, as shown in Figs. 1, 2, and 4. The body of hook C incloses the clip and is held in position by finger B^2 clasping the part c^3 of the hook. The projections c^2 c^2 at each end of the part c^3 engaging finger B^2 hold the hook in its hinged position.

The draft-hook C′ is conveniently made by an offset where the sides of C come together and a return end *c* extends backward between the branching sides of hook C. The safety-spur *c*′ extends forward from the draft-hook, and when the tug is slack is crosswise of the opening of the "cockeye" of the tug and hence cannot come unhitched. The return end *c* reaches backward nearly to the whiffletree and the tug cannot be hitched or unhitched without swinging outward beyond the end of the whiffletree, Fig. 2.

At the base of finger B^2 is a projection B′ B′, which limits the outward swing of hook C to what will enable the tug to be hooked and adds to its safety from unhooking. The clip B is cast, as shown in Fig. 6, and after annealing, when made of malleable iron, the finger B^2 is bent so as to hold hook C, and the points *b b* are bent into the wood of the whiffletree as it is driven to its place. These points are conveniently driven into the wood of the whiffletree by placing the fastening-band B^3 upon the end of the whiffletree where the points are intended to enter the wood. The outer end of band B^3 is cup shape, as shown in Fig. 5, and when in driving forward the clip the points *b b* strike this iron band they are turned into the wood, Fig. 5. This fastening-band serves the double purpose of deflecting the points into the wood and keeping the wood from splitting by the action of the wedge-shaped points.

Instead of having a solid band B^3, which remains upon the wood with the clip, the band may be made in halves doweled together and held firmly upon the wood while the clip is being driven on, and the points *b b* thus made to enter the wood and then removed, Fig. 7.

The flanges *b*′ *b*′ of clip B coact with the point *c* of hook C to keep the tug from unhitching while in front of the whiffletree. Between the flanges *b*′ *b*′ the clip is given a reentrant curve. (Shown at b^2, Fig. 3.) This reentrant curve is fully explained and claimed in my patent on whiffletree-clips, dated March 19, 1889, No. 399,831, and is referred to here only in the combination with this form of hook. This clip is adapted to be used upon whiffletrees, neck-yokes, and other wooden pieces requiring a clip which will not come off when properly attached.

It is readily understood that the draft-hook might be cast integral with the clip and preserve most of the novel features shown in the present arrangement and construction.

Various changes can be made in the construction here shown without departing from the scope of my invention.

I do not claim, broadly, holding a clip upon the wood of the whiffletree by points bent to press upon the wood after the clip is in place, for this is a well-known manner of holding the clip in place; but

What I do claim is—

1. A whiffletree-clip provided with deflecting points at its inner end, which are adapted to pass over the wood of the whiffletree until nearly "home," and then to be inclined inward and to pierce the wood, whereby it is held securely in position, substantially as set forth.

2. A whiffletree-clip provided with a clasping-finger extending outward from one end of said clip, said finger having a longitudinal extension substantially parallel with the side of said clip when cast, adapted to be bent about and to hold a draft hook or ring, in combination with a draft hook or ring, operating substantially as and for the purpose set forth.

3. The combination of a whiffletree-clip provided with the deflecting points b at its inner end, adapted to pierce the wood of the whiffletree, and having the hook-clasping finger B^2, with a draft hook or ring held by said finger, substantially as specified.

4. The combination of a whiffletree-clip provided with the deflecting points b at its inner end, and having the hook-clasping finger B^2 and the stop-flanges B^3 B^3, with a draft hook or ring, operating substantially as and for the purpose set forth.

5. The combination of a whiffletree-clip provided at its inner end with the points b, and a fastening-ring held in close contact with the wood and operating to deflect the points and cause them to enter into the wood, substantially as set forth.

6. The combination of a whiffletree-clip provided at its inner end with the points b, and the fastening-ring B^3, operating to deflect points b and cause them to enter the wood as the clip is driven into place, substantially as specified.

7. The combination of a whiffletree-clip provided with the clasping-finger B^2 to hold the draft hook or ring, and provided with the flanges b' b', and interposed re-entrant curve b^2, with a draft-hook having a return-point c operating to securely hold the tug in working position, substantially as specified.

8. The combination of a whiffletree-clip provided with the clasping-finger B^2 to hold the draft hook or ring, and a hook provided with a point c, extending backward toward the whiffletree, and a safety-spur c' extending forward, operating to hold the tug in working position, substantially as described.

9. The combination of a whiffletree-clip provided with the clasping-finger B^2, and a draft-hook C' held therein, provided with the lugs c^2 c^2, operating to prevent the said hook from turning axially in said clasping-finger, substantially as specified.

10. The combination of a whiffletree-clip provided with the deflecting points b, the clasping-finger B^2, and the stop-flanges B' B', with a draft-hook held by said clasping-finger and provided with the lugs c^2 c^2, the hook C', having the return-point c, and safety-spur c', operating substantially as and for the purpose set forth.

WILLIAM WORTH BURSON.

Witnesses:
LEW. E. CURTIS,
MACK A. CLAFLIN.

Corrections in Letters Patent No. 408,689.

It is hereby certified that in Letters Patent No. 408,689, granted August 13, 1 upon the application of William Worth Burson, of Chicago, Illinois, for an impr ment in "Whiffletree Clips," errors appear in the printed specification requiring rection, as follows: In line 35, page 2, the reference letters B^3 B^3 should read B' and the said Letters Patent should be read with these corrections therein that same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 3d day of September, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Inte

Countersigned:

ROBERT J. FISHER,
Acting Commissioner of Patents.