

No. 672,272.

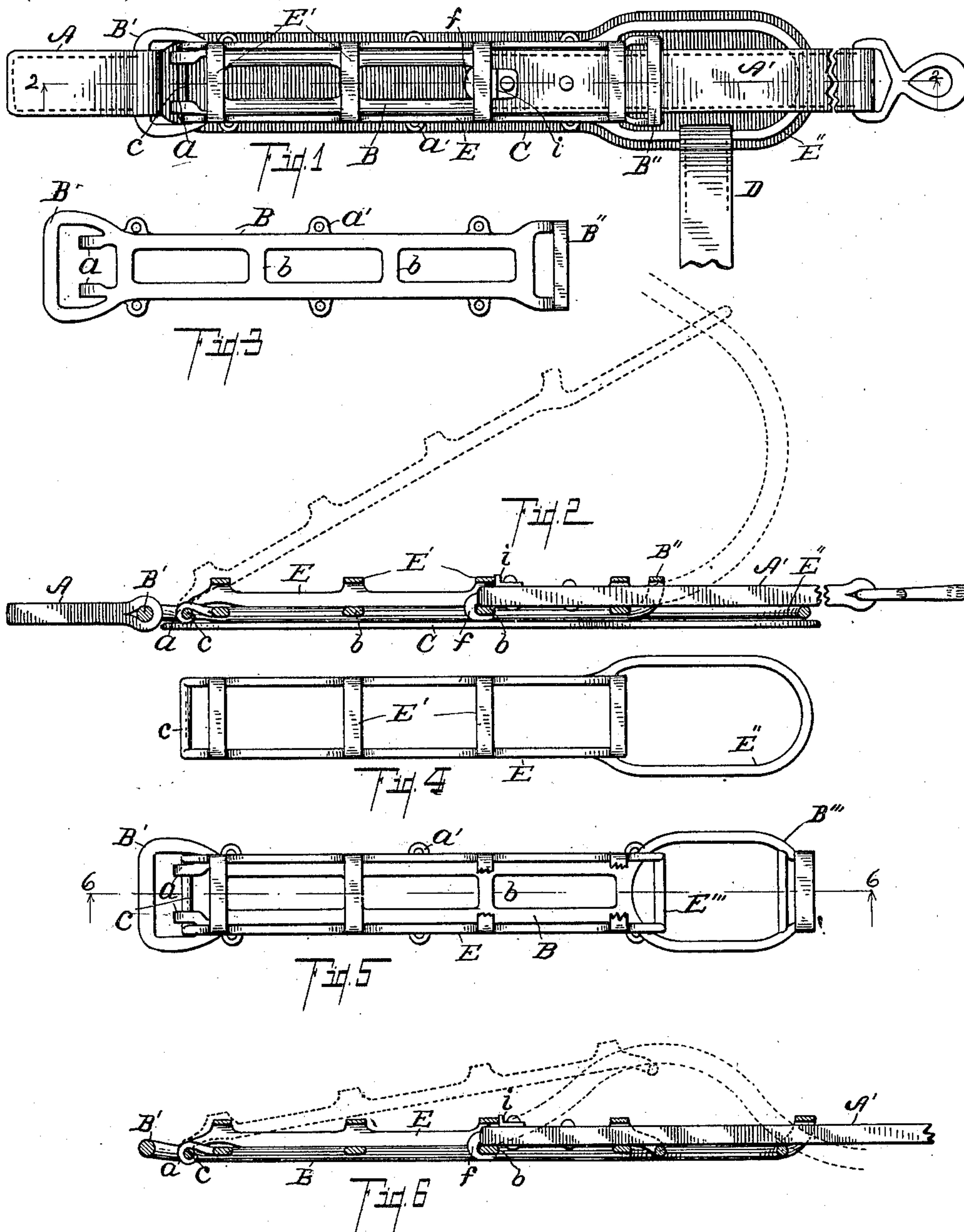
Patented Apr. 16, 1901.

F. W. HODGES.

HAME TUG.

(Application filed July 10, 1900.)

(No Model.)



Witnesses:

A. E. Houghton

Otis A. Earl

Inventor.

Frank W. Hodges

By Fred L. Chapin

Att'y.

UNITED STATES PATENT OFFICE.

FRANK W. HODGES, OF BATTLECREEK, MICHIGAN, ASSIGNOR TO CHARLES
C. GREEN, OF SAME PLACE.

HAME-TUG.

SPECIFICATION forming part of Letters Patent No. 672,272, dated April 16, 1901.

Application filed July 10, 1900. Serial No. 23,162. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. HODGES, a citizen of the United States, residing at the city of Battlecreek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Tug-Buckles, of which the following is a specification.

This invention relates to improvements in devices for attaching tugs to the hames of harnesses called by some a "hame-tug" and by others a "tug-buckle."

The objects of the invention are, first, to provide a simple, efficient, and strong attachment which is easy to adjust to different lengths, and, second, to provide an improved construction of tug-buckle in which there is a long leverage on the adjustable parts, making them easy of manipulation.

Further improvements will appear from the detailed description, such as the improved means of pivoting the parts together, the improved attaching-hook used in this connection, and the improvement resulting from the arrangement of the parts whereby the tug itself, acting through the arrangement of loops, automatically clamps the parts together, and other items of advantage resulting from the arrangement and form in the details of the structure.

I accomplish the objects of my invention by the devices and means described in this specification.

The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail elevation view of my improved tug-buckle in use. Fig. 2 is a detail sectional view of the same, taken on line 2 2 of Fig. 1, the operation of the parts in affecting an adjustment being indicated by dotted lines. Fig. 3 is a detail view of the inner member B of the buckle. Fig. 4 is a detail view of the outer member E of the buckle. Fig. 5 is a detail view of a modification of the buckle independent of the tug or

other portions of the harness. Fig. 6 is a sectional view on a line corresponding to line 6 6 of Fig. 5, the manner of operating when adjusting the tug being indicated by dotted lines.

In the drawings all of the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is the intermediate connection of the buckle to the hame secured to the loop B' and adapted to be secured to the hame by any suitable means, no means being here illustrated. Within the loop B' are a pair of hooks *a* to engage the outer member of the buckle. The inner member B is made up of side bars having cross-pieces *b b* intermediate the length, with which a hook *f*, permanently secured to the end of the tug, engages. Little eyes *a'* are provided along the sides of this inner member to receive rivets for securing a broad leather shield C to the inside of the same to protect the sides of the animal. A loop B'' is formed at its rear end to receive and retain the trace or tug A'. The outer member E of the buckle is also made up of side bars and intermediate cross-pieces E' and at its front end has a small round cross-bar *c*, which engages within the hooks *a*, which are then closed upon it to retain the same securely by a hinge-joint at this point. The cross-pieces E' are to engage a stop *i* on the outside of the tug to prevent the unhooking of the same when the buckle is closed. A loop E'' is formed at the rear end of this outer member E, through which the tug A' is extended to serve as a retaining means to hold the outer member E of the buckle in position. The tug or trace A' is provided with a metal hook *f* for engaging the cross-bars *b*, as I have already stated. This hook is made sufficiently large and heavy to withstand any strain upon it. On the outside of the tug or trace A' and near its forward end is secured a stop *i*, and this is engaged by the cross-pieces E' when the member E is

closed down to the position indicated in Fig. 2. The tug in this position extends through the loops E'' and B'', and the two members are thus held securely together. The hook engages the cross-pieces of the inner member, and it is prevented from disengagement by the cross-pieces E' on the outer member engaging the stop *i* on the outer side of the tug, and the two parts or members of the buckle are prevented from movement by the tug itself being threaded through loops in each, and thus a very secure tug-buckle is formed.

I prefer to provide a large loop E'' on the outer member E of the buckle, and a smaller loop B'' is provided on the inner member B to extend up through the said loop E'' to serve as the retaining means; but I am aware that this can be reversed and a large loop, as B'', be provided on the inner member and a smaller loop E''' be provided on the outer member to extend down into the large loop B'', this being merely a reversal of the arrangement of the retaining-loops. This modification is illustrated in Figs. 5 and 6. I prefer in this arrangement to modify the end of the large loop by an additional cross-piece to serve as a more perfect guide for the tug A'.

Otherwise the structure is the same as in the first instance, except that the form of the sides and ends of the loop is modified to accommodate the position of the tug, owing to the change in the general arrangement. The large loop referred to affords a convenient attachment for supporting-straps, as D, on either the upper or under side of the same, wherever they may be used. I am aware, however, that these straps which reach to the back pad or the belly-band are often omitted, particularly on slip-tug harnesses.

I desire to state that the parts of my improved tug-buckle are preferably made of malleable-iron castings; that they may be made of any suitable material—as bronze, brass, or a forging—and I am aware that while I have shown the structure made up of but two principal members these members might be made up of pieces joined together by screws or rivets or other suitable means without departing from my invention. The form of the members of the buckle, however, is especially designed for use in a casting and is of very great advantage on that account.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tug-buckle, the combination of the inner member B having a loop B' at its front end and having hooks *a*, *a* located within the loop; said member being formed of side pieces with intermediate cross-pieces *b*, *b*, and a loop B'' at its rear end; a tug arranged in the loop B'' and provided with a hook *f* at its forward end to engage the cross-pieces *b* of the inner member B; an outer member E having a cross-pin *c* at its front end to be en-

gaged by the hooks *a* to form a hinge-joint and provided with side pieces which have cross-pieces E' connecting the same at intervals, said cross-pieces being arranged to engage the stop *i* on the tug when closed, and provided with a broad loop E'' at its rear end through which the tug A' is passed to retain the members together, as specified. 70

2. In a tug-buckle, the combination of the inner member B having a loop B' at its front end, said member being formed of side pieces with intermediate cross-pieces *b*, *b*, and a loop B'' at its rear end; a tug arranged in the loop B'' and provided with a hook *f* at its forward end to engage the cross-pieces *b*, of the inner member B and having a stop *i* on its outer surface; an outer member E connected by a hinge-joint to the forward end of member B and provided with side pieces which have cross-pieces E' connecting the same at intervals, said cross-pieces being arranged to engage the stop *i* on the tug when closed, and provided with a broad loop E'' at its rear end through which the tug A' is passed to retain the members together, as specified. 80 90

3. In a tug-buckle, the combination of the inner member B having a loop B' at its front end, said member being formed of side pieces with intermediate cross-pieces *b*, *b*, and a loop B'' at its rear end; a tug arranged in the loop B'' and provided with a hook *f* at its forward end to engage the cross-pieces *b* of the inner member B; an outer member E connected by a hinge-joint to the forward end of member B and provided with side pieces which have cross-pieces E' connecting the same at intervals, and provided with a broad loop E'' at its rear end through which the tug A' is passed to retain the members together, as specified. 95 100

4. In a tug-buckle, the combination of an inner member having cross-bars and a loop for the tug at its rear end; a tug with a hook for engaging said cross-bars and provided with a stop on its outside; an outer member connected at its forward end to said inner member by a hinge-joint and provided with cross-bars to engage the stop on the tug, said tug being passed through said loop whereby the said members are retained closed upon each other, as specified. 105 110 115

5. In a tug-buckle, the combination of an inner member, having cross-bars and a loop for the tug at its rear end; a tug with a hook for engaging said cross-bars; an outer member connected at its forward end to said inner member by a hinge-joint and provided with a loop for the engagement of the tug whereby when the said tug is passed through said loops the said members are retained closed upon each other, as specified. 120 125

6. In a tug-buckle, the combination of an inner member; a tug with suitable engaging devices to engage said inner member; an outer member hinged to said inner member and adapted to close upon the same to retain the 130

5 tug in position, the said outer and inner members being provided with loops one of which is narrower than the other and adapted to insert through the same, the said loops engaging the tug whereby the members are retained folded together by such engagement to positively retain the tug as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

FRANK W. HODGES. [L. s.]

Witnesses:

A. E. HOUGHTON,
OTIS A. EARL.