

(No Model.)

J. H. MYERS.
TUG BUCKLE.

No. 402,181.

Patented Apr. 30, 1889.

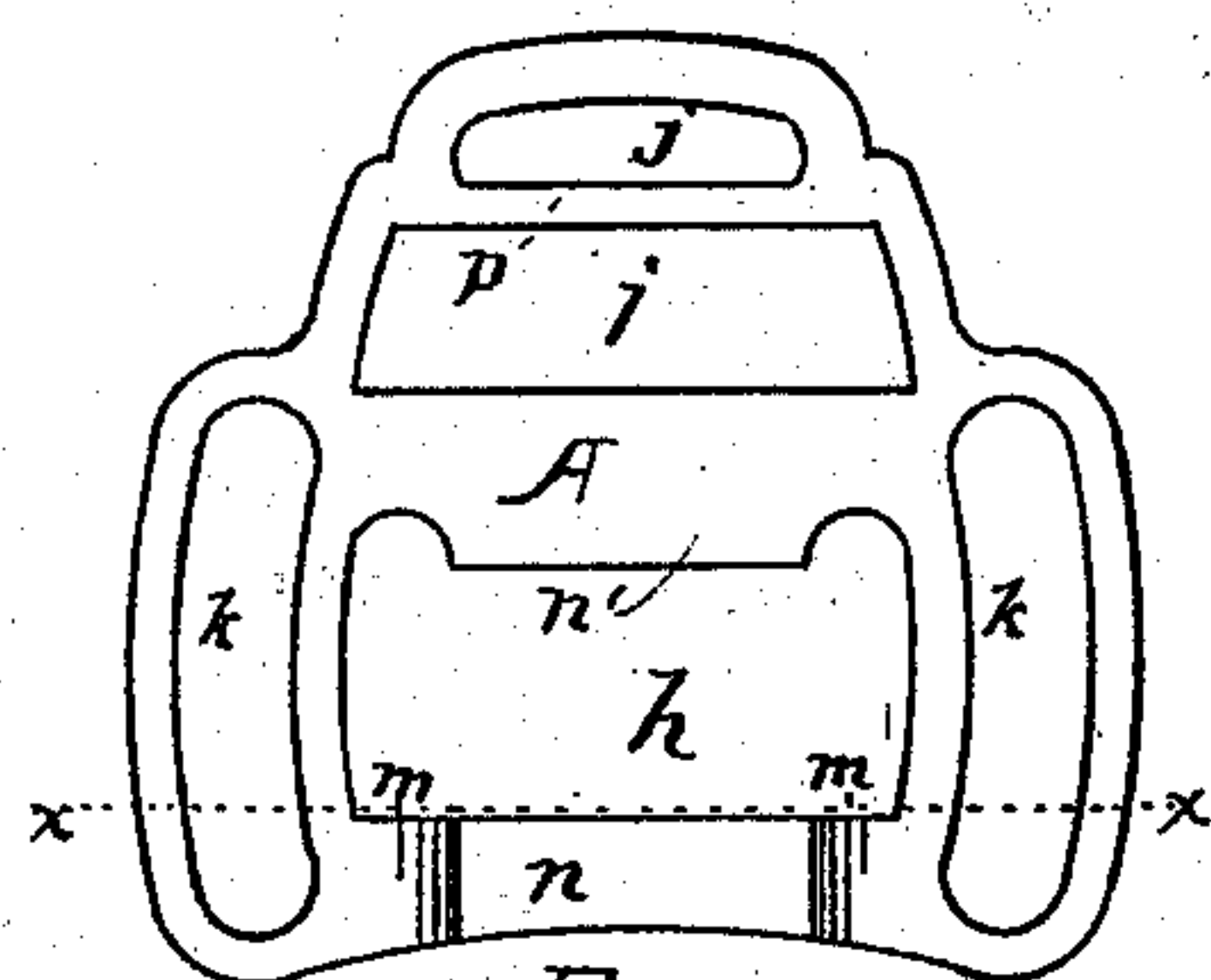


Fig. 1.

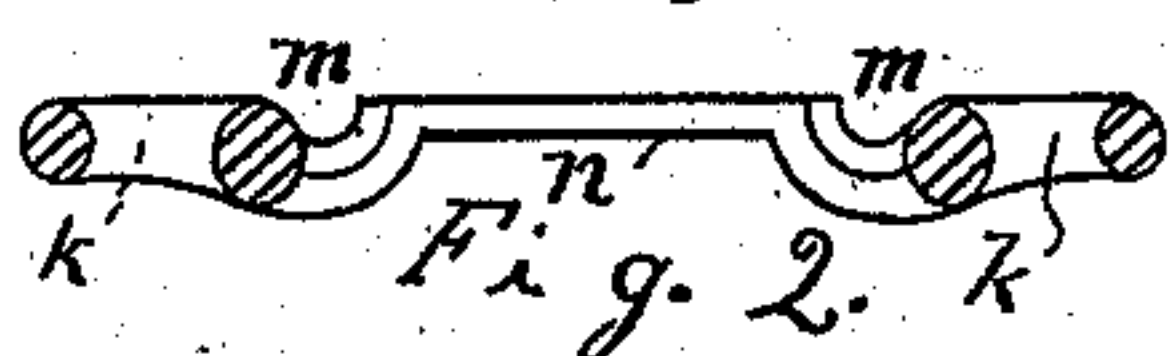


Fig. 2.

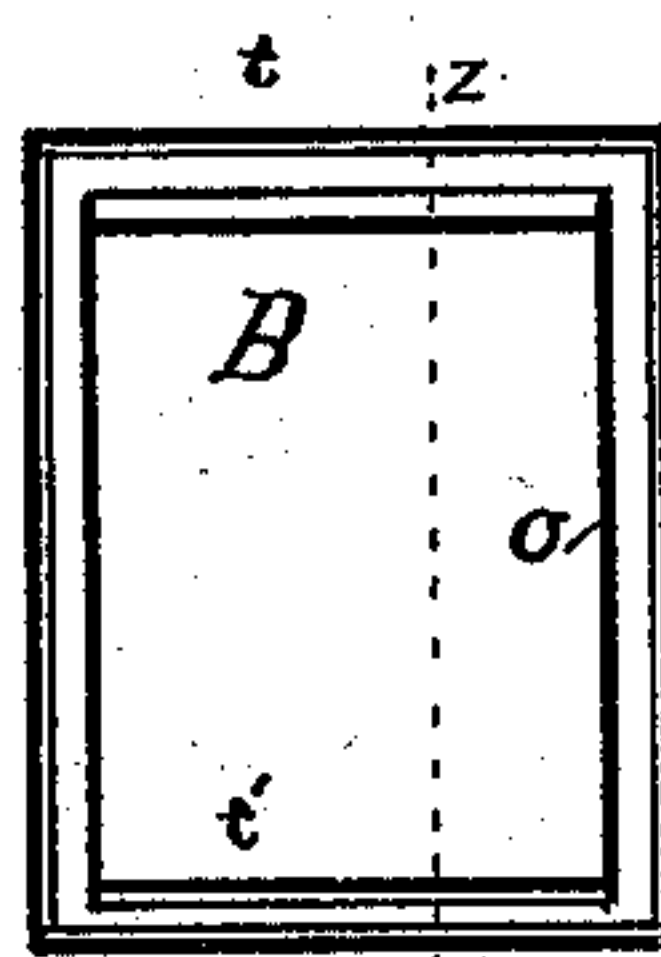


Fig. 3.

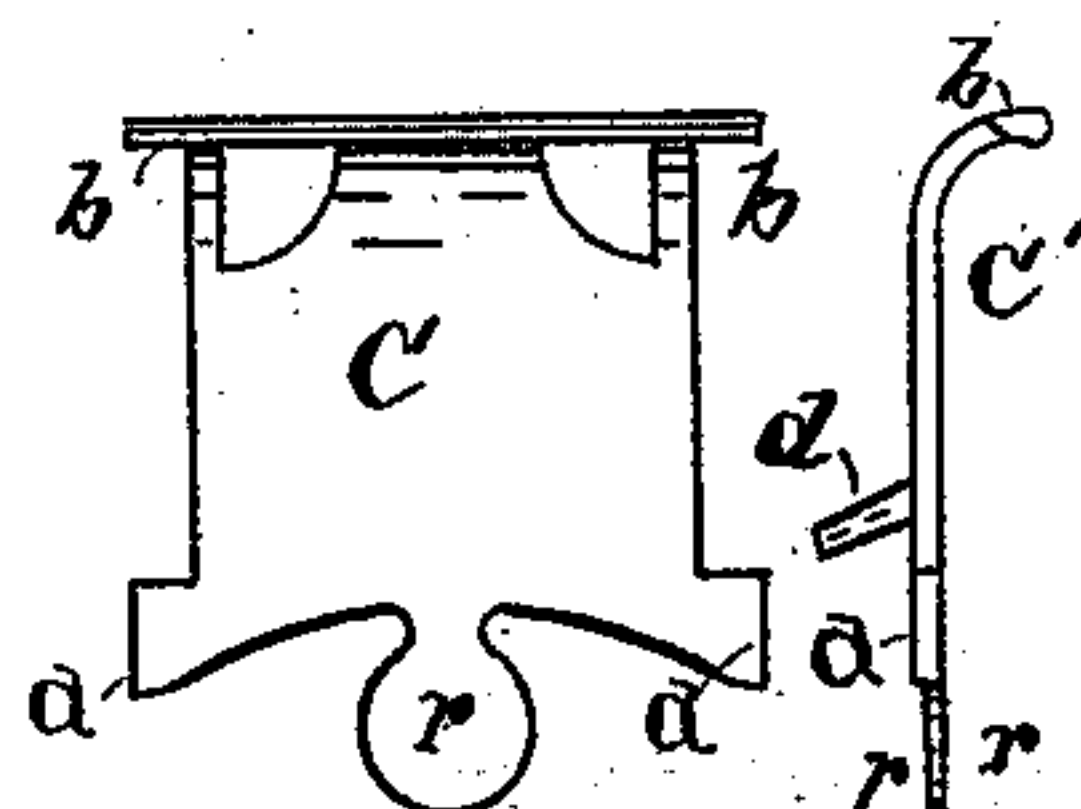


Fig. 4.

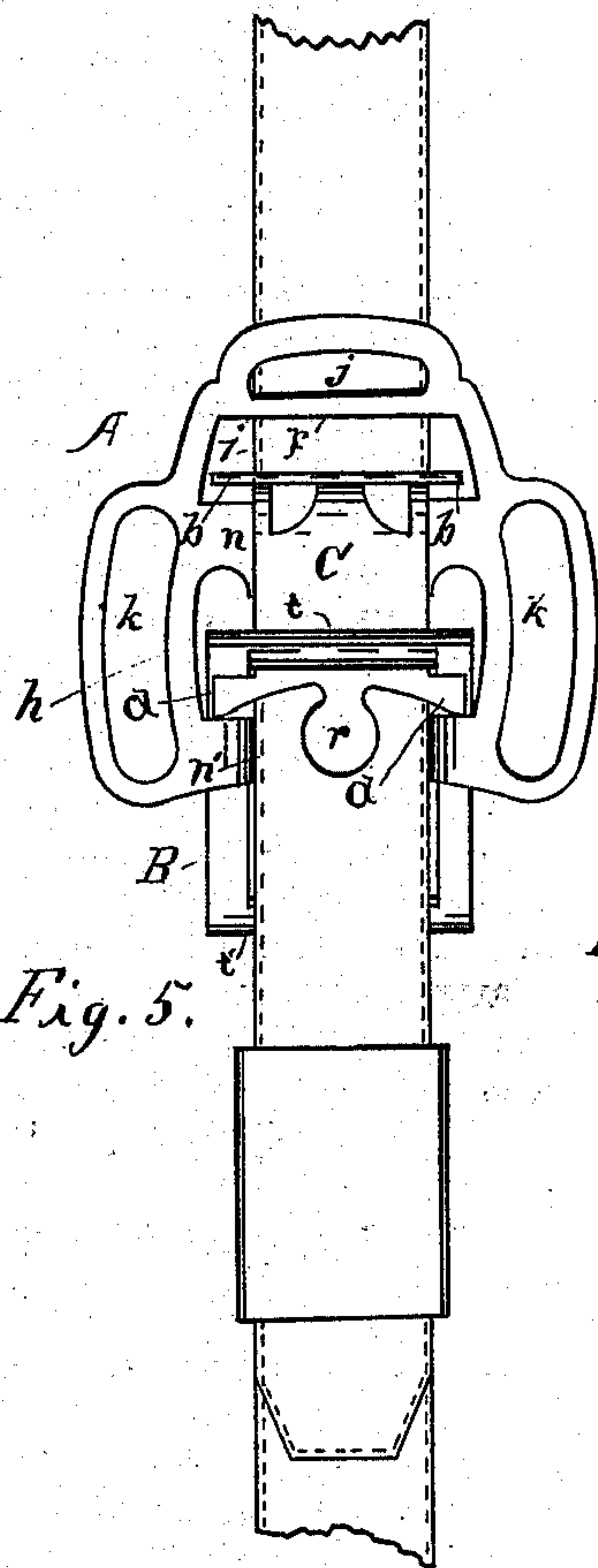


Fig. 5.

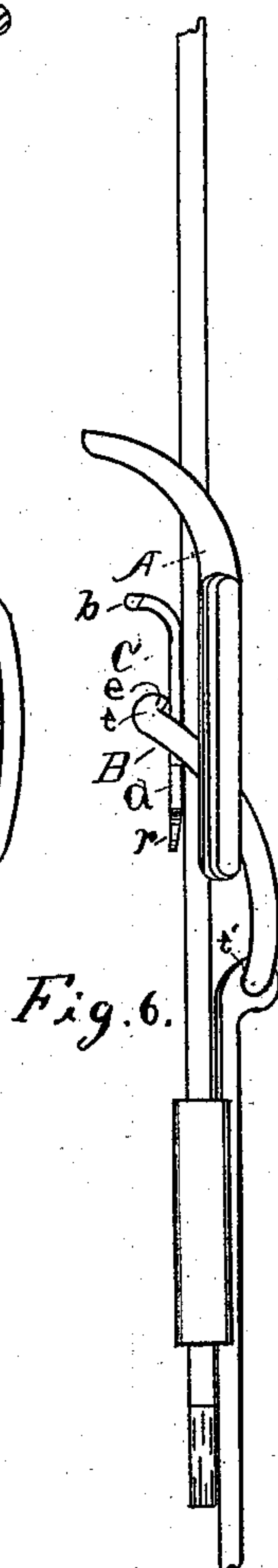


Fig. 6.

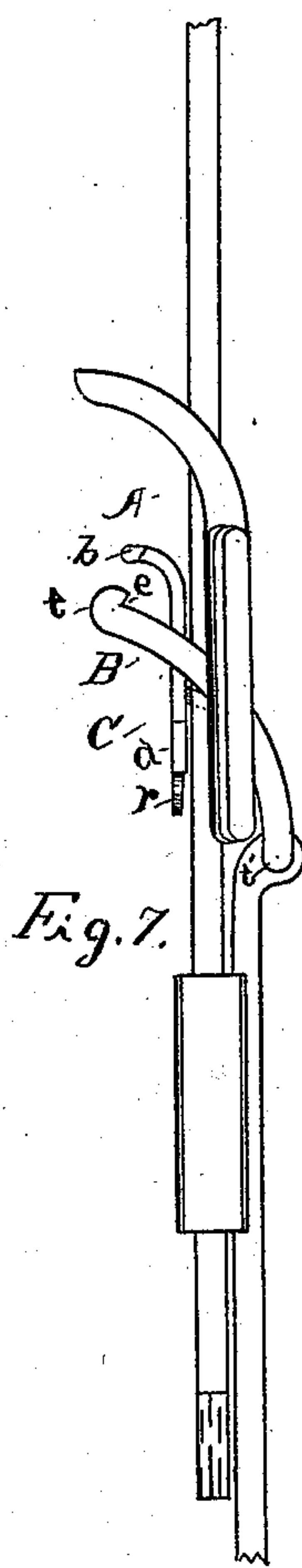


Fig. 7.

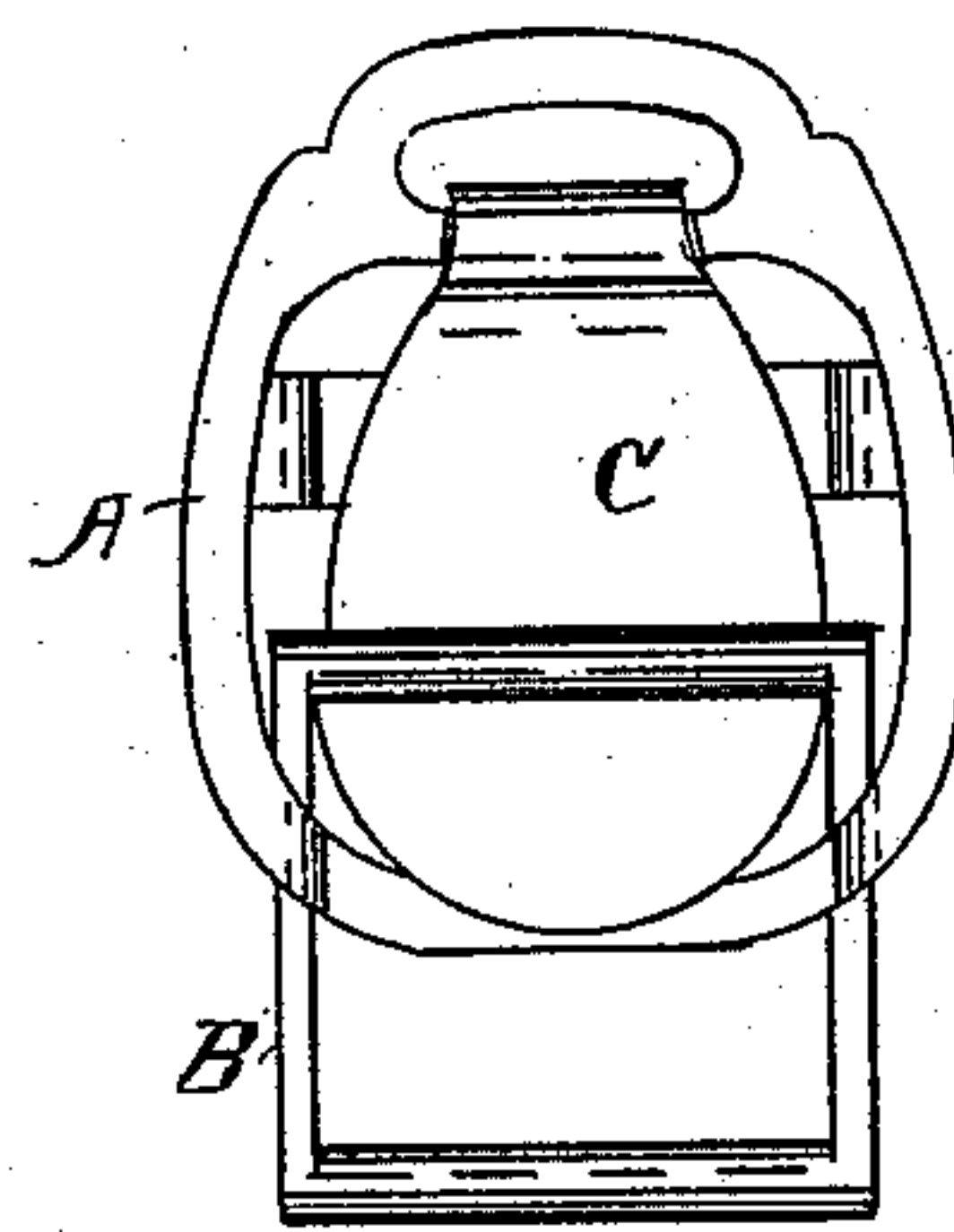


Fig. 8.

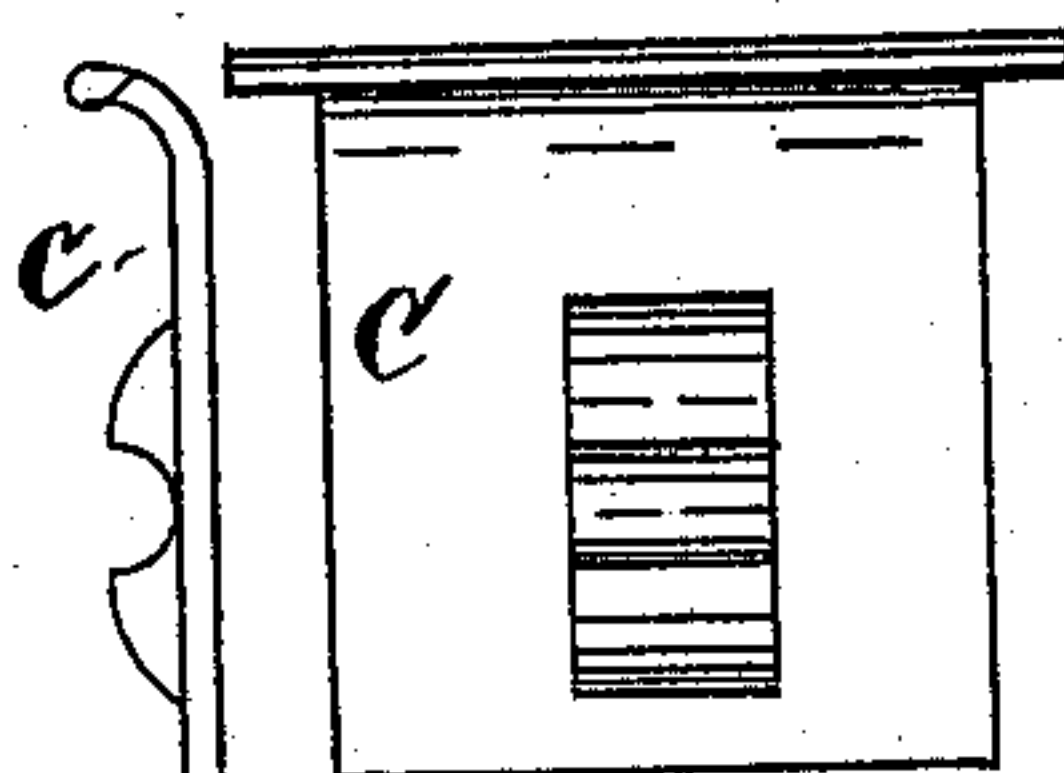


Fig. 9.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES H. MYERS, OF GRAND RAPIDS, MICHIGAN.

TUG-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 402,181, dated April 30, 1889.

Application filed October 11, 1888. Serial No. 287,873. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. MYERS, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Tug-Buckles, of which the following is a specification.

My invention relates to improvements in that class of tug-buckles in which the tongue is supported upon a plate detached from the body of the buckle, and is held to place by means of a bail or stirrup attached to the hame and passing through the body of the buckle and around the tug and over the tongue-plate or clasp; and the objects of my invention are, first, to provide a tug-buckle upon which the clasp or tongue of the buckle and the bail or stirrup that holds the clasp in place are both entirely detached from the body of the buckle; second, to provide a tug-buckle that cannot unclasp and free the tug from the hame when the tug and buckle are thrown ahead, as in backing a vehicle or driving down hill; third, to provide a tug-buckle with which the clasp may be removed when the bail or stirrup is thrown back, as shown in Figure 7 of the accompanying drawings, and free the tug without binding in the least degree in the hole *r* in the tug; fourth, to provide a tug-buckle from which the clasp cannot be removed without first removing the tug; and, fifth, to provide a tug-buckle with the bail or stirrup so formed at the upper or outer end that the bearing upon the clasp will be at a point as near midway between the ends as possible, so as to bring the entire surface of the clasp to bear uniformly upon the surface of the tug. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Fig. 1 is a plan view of the body of my buckle detached from the tug. Fig. 2 is a cross-section of the same, cut off on the line *xx*. In Fig. 3, B is a plan view of the bail or stirrup, and B' is a section of the same, cut off on the line *zz* for the purpose of showing the form of the outer or bearing end, *t e*, of the stirrup. In Fig. 4, C is a plan view of the clasp, and C' is a side view of the same. Fig. 5 shows the surface of a tug and hame with a buckle in position. Fig. 6 is a side view of the same. Fig. 7 is a side view of the same, with the tug

thrown ahead and the stirrup or bail thrown out for the purpose of removing the clasp for adjusting or removing the tug, and to show the position that the buckle may assume when the strain is withdrawn and the tug allowed to slide ahead upon the hame; and Figs. 8 and 9 represent forms of tug-buckles now in common use containing objectionable features, which I aim to overcome by the use of my invention.

Similar letters refer to similar parts throughout the several views.

The body A of the buckle is constructed with two bearings, *n* and *n'*, between which is an opening, *h*, of a proper size to allow of the free action of the bail or stirrup B, the bearing *n* being provided with two grooves on the under or inner surface, which act as a fulcrum upon which the sides of the stirrup bear when drawn taut, and are projected in toward the surface of the bearing for the purpose of giving the stirrup a position that will exert the greatest possible amount of draft with the least possible strain upon the several parts of the buckle, without making too great a curvature in the sides of the stirrup. Back of the bearing *n'* the body of the buckle bends at an obtuse angle, which carries the cross-bar P far enough beyond the bearing *n* to allow a tug to pass between the two, and in this projection I form an opening, *i*, for the reception of the tug. I also form upon the body of the buckle a loop, *j*, for the reception of a breeching-strap, and loops *k k* for the reception of the back and belly bands; but these features are not essential to my invention.

The clasp is constructed with a body, C, the front end of which turns up slightly and is provided with short projections *b b*, which set out beyond the sides of the stirrup in the usual manner. Back of the center of this body is formed a tongue, *d*, which should be fully as long as the thickness of the thickest tug to be used with a buckle, which should stand at a slight incline in an opposite direction from the draft of the tug. Upon the edges of the back end of this body I form two lugs, *a a*, which project outward as far as the full length of the opening *h* in the body of the buckle, or the entire thickness of the sides of the stirrup or bail. By the use of these

lugs or projections I dispense with the necessity of attaching the clasp to the body of the buckle, as shown in Fig. 8, and with the necessity of forming projections upon the surface of the clasp, as shown in Fig. 9, (both of which forms are now in use,) and render it impossible for the clasp to become freed from the tug and drop out from behind the stirrup when the tug is in place, though it should be thrown ahead to the position shown in Fig. 7. These lugs act the double purpose of bearings to sustain the draft of the tugs upon the buckle, and of preventing the clasp from dropping through the stirrup and becoming disconnected from the balance of the buckle, and constitutes one of the main features of my invention. The body of this clasp should be made as wide as the opening in the bail to work freely therein, or a trifle wider than the tug to be used. On the back end of the clasp I form a thumb-piece, *r*, the lower side of which inclines slightly upward, so that the sides of the fingers may be readily pushed under it for the purpose of raising the clasp up from the tug.

The bail or stirrup B is formed with sides *o o* and ends *t t'*, the end *t'* being made round and fitted to act as a pivot in the end of the hame-tug, where it is securely attached, as shown in Figs. 6 and 7, for the purpose of admitting of the turning of the stirrup to any desired position. The opposite end, *t*, is provided with a projecting point, *e*, which projects downward toward the convex side of the stirrup for the purpose of bringing the bearing upon the clasp as near the center of the plate as possible, and forms a second important feature of my invention. The sides of the stirrup are curved to a proper shape to bring the draft of the buckle as nearly in a direct line as possible, and are made of sufficient length so that when the stirrup is thrown over to the position indicated in Fig. 7 the clasp can be readily drawn out of the tug and the tug adjusted to the desired position or removed.

My device is applied to a harness in the usual manner of applying this class of buckles,

and I do not claim either the body, the stirrup, or the clasp, broadly, as my invention, each of which is in use in various forms and combinations; but,

Having thus fully described my invention, what I do claim as new, and desire to secure by Letters Patent of the United States, is—

1. A tug-buckle having a body, A, in combination with a bail or stirrup, B, provided with a projecting point, *e*, and entirely detached from the balance of the buckle, and a clasp, C, the forward end of which turns outward and is provided with short projections *b*, to prevent the bail from dropping over the end of the clasp, and with a tongue, *d*, and has formed at its back end two outwardly-projecting lugs, *a*, intended to sustain the draft of the tug and to prevent the bail from drawing or dropping from over the clasp, the clasp being entirely detached from the balance of the buckle, substantially as and for the purpose set forth.

2. The combination, in a tug-buckle, of a body, A, provided with bearings *n n'*, opening *h*, for the reception of the bail, opening *i*, for the reception of the tug, bearings *m m*, projecting end P, and loops *j k* and *k*, with a bail, B, of sufficient length, so that when thrown back the clasp may be raised entirely clear of the tug, and provided with a projecting point, *e*, and a clasp, C, having its forward end projected outward from the tug, with small projections *b* formed upon the outer edges, and a tongue, *d*, and provided with lugs *a*, projecting outward from the edges of the back end of the clasp, and a thumb-piece, *r*, at the back end, the bail being entirely separate from the body and attached to the hame-tug, and the clasp being detached from both the body and the bail, substantially as specified, and for the purpose set forth.

Signed at Grand Rapids, Michigan, this 6th day of October, 1888.

JAMES H. MYERS.

In presence of—

GEORGE H. WHITE,
ITHIEL J. CILLEY.