

(No Model.)

W. H. DODD.

BUCKLE.

No. 273,476.

Patented Mar. 6, 1883.

Fig. 1.

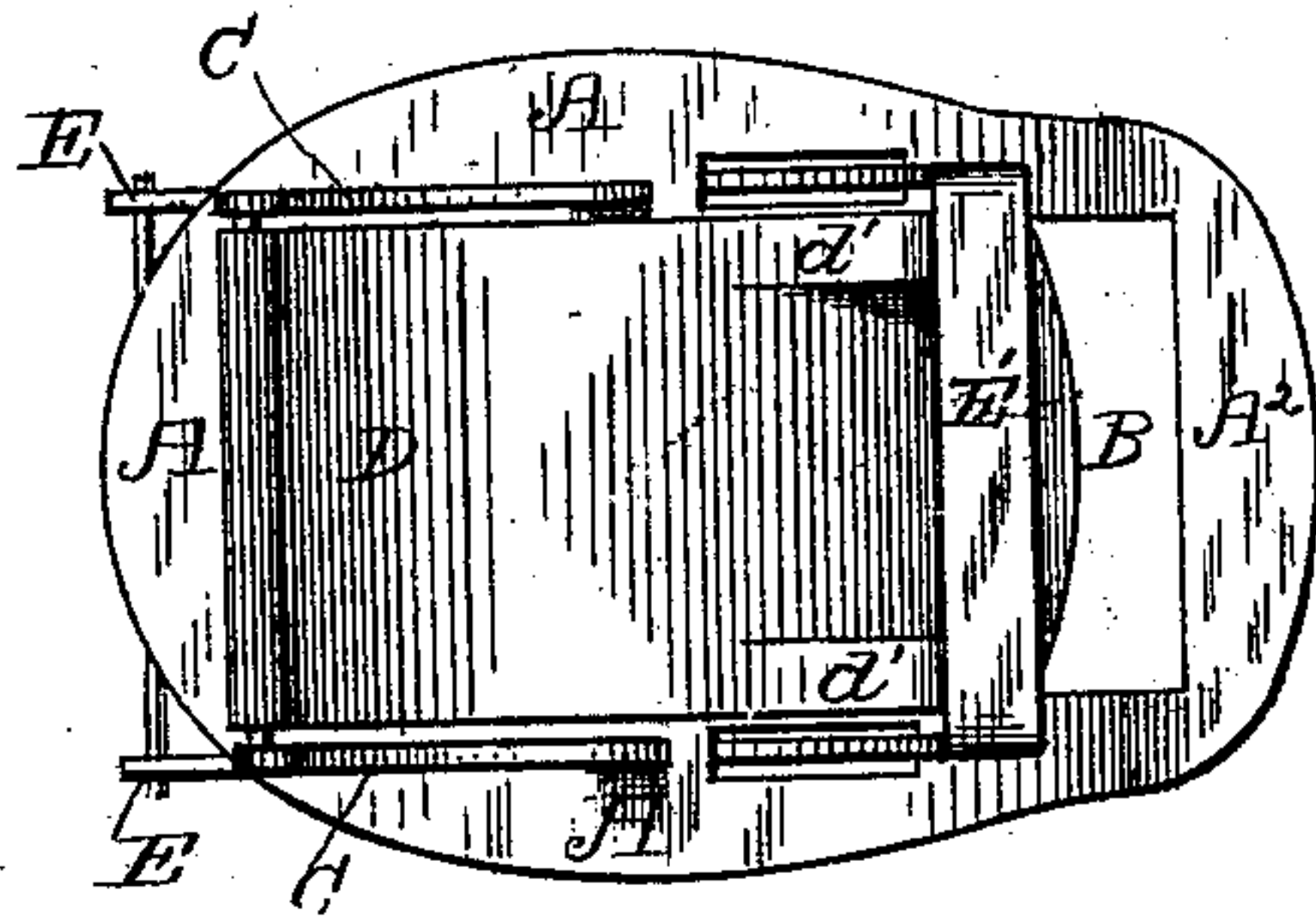


Fig. 2.

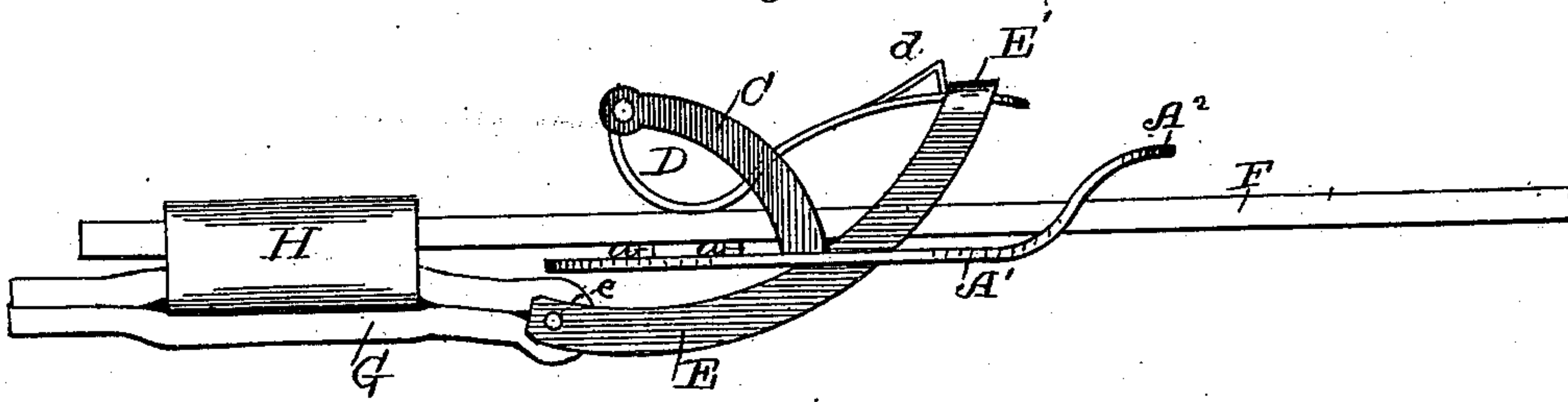
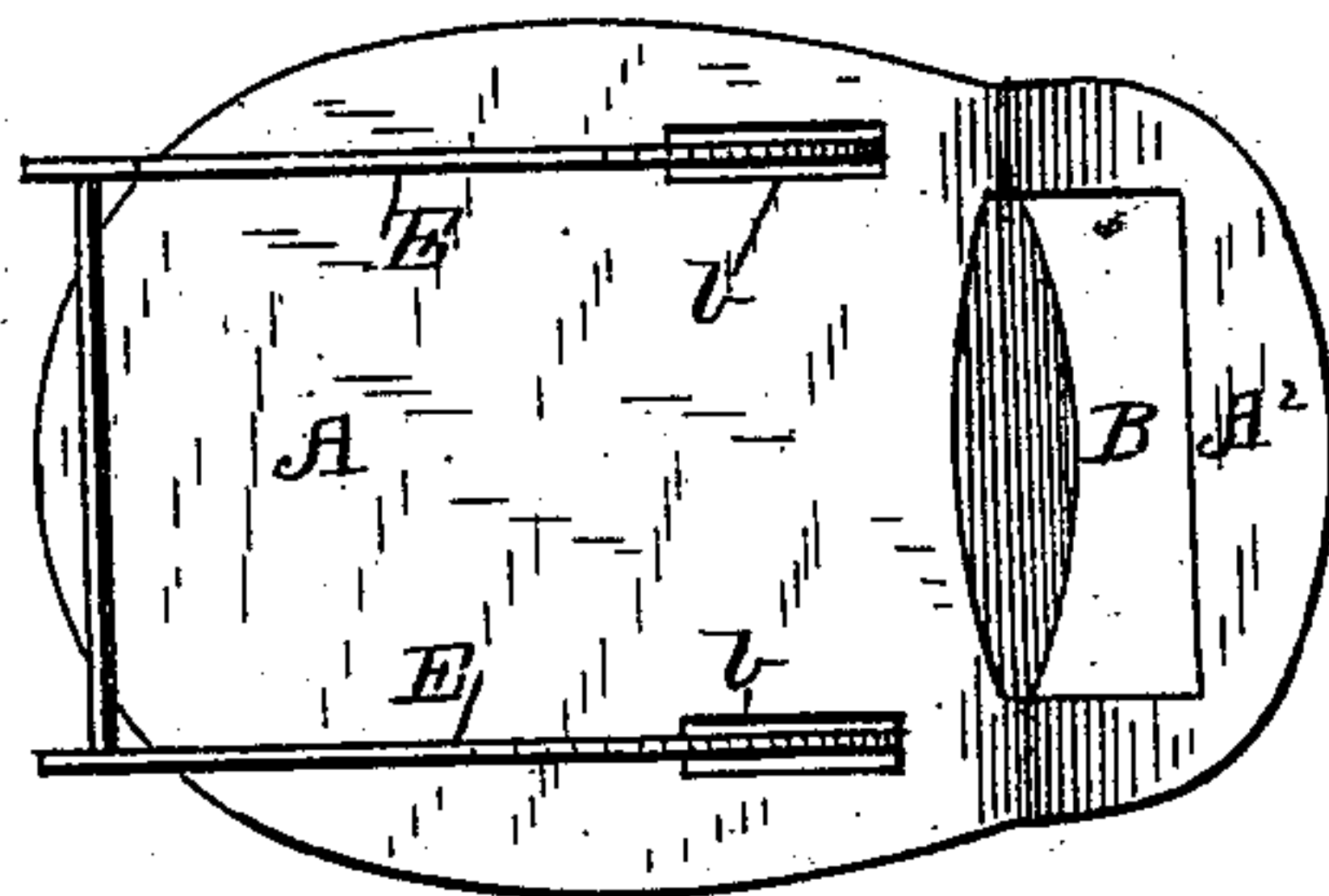


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. DODD, OF ELDRED, PENNSYLVANIA.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 273,476, dated March 6, 1883.

Application filed December 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DODD, a citizen of the United States, residing at the borough of Eldred, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Buckles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention belongs to that class of buckles in which there is employed a clamping mechanism so constructed as to grip one end of the strap, which is to be adjusted between a movable lever and a fixed portion of the buckle; and the invention consists in a novel construction of parts by which an increase in the tension or pull upon the united ends of the strap produce an increase in the pressure which is applied by the gripper.

Figure 1 is a plan view of the model. Fig. 2 is a side view, and Fig. 3 a bottom view.

Similar letters of reference indicate like parts in all the figures.

For convenience in so describing the invention that it may be readily understood, I will refer to the parts in the position indicated in Fig. 2, making use of the terms "upper" and "lower" when referring to the plate against which the gripper presses the free end of the strap which used to be lengthened or shortened.

A A' A² represent the base-plate, the part A² being connected with the part A by means of a shoulder or offset, A', at which point there is formed a slot, B, through which the strap F may be inserted.

b b are slots formed in the base-plate about midway its length and near its edges.

a a are ribs upon the upper face of the end A of the base-plate, for a purpose which will soon be explained. These ribs may be either stuck into the metal by suitable dies or made separately and attached thereto; or there may be simply a roughened or milled surface upon the upper face of that portion of the base-plate.

C C are standards rising from opposite sides of the base-plate.

D d is a gripping cam-lever, pivoted at its rear end to the upper ends of standards C C at c. d' d' are projections or lugs rising from the upper side of this cam-lever near its front end, and form stops to receive a link, to be de-

scribed, and which is used for the purpose of forming the cam portion of this gripping-lever toward the base-plate, whereby when the parts are under tension a strap may be firmly gripped between this cam-shaped end of the lever and the base-plate with great power, it being readily understood that the force with which a cam-lever operates is greatly increased whenever power is applied to its outer end, the force being increased in proportion to the leverage.

E E E' is a curved link, vibrating in slots b b of the base-plate. The closed end E' of this link engages with the free end d of the cam-lever, and is prevented from slipping backward thereon by the stops d' d'. One end of the strap G is attached to a pivot, e, at the rear or open end of the curved link.

H represents an ordinary tug-loop on strap G, to receive the free end of strap F.

The operation of this buckle will be readily understood by an examination of the figures, where it will be seen that the end F of the strap, after passing through the slot B of the base-plate, passes between the bars E E of the link, thence under the heel or pivoted end of the cam-lever, where it is firmly gripped between said lever and the part A of the base-plate, the relation of parts being such as to effect that result and hold the end F of the strap firmly in the desired position. It will also be understood that an increase in the strain or pull upon the end G of the strap will produce an increase in the compression of the end F of the strap between the cam-lever and the base-plate until the end d of the lever is caused to engage with strap F.

In practice I prefer to make the cam-lever sufficiently elastic to permit such contact between the end d and strap F without producing an undue strain upon any of the parts.

I am aware that tongueless buckles have heretofore been used, and hence do not claim such construction, broadly.

I am aware that tongued buckles have been constructed with a slotted base-plate, a link vibrating through such slotted base-plate, one end of the link engaging with the upper face of the buckle-tongue, the other end of the link being attached to one of the straps in such manner that when the parts are under tension the link operates to press the buckle-tongue

more firmly into contact with the trace and operating to insure that the buckle-tongue shall not escape from the hole in the strap with which it engages; but in such prior constructions the link engages with the buckle-tongue at a point between the vibrating end of the tongue and its pivot, the buckle-tongue not operating in any manner as a gripping-cam.

I believe my invention possesses many advantages over those heretofore known, and is due to the combination of parts employed by me; hence I do not wish to be limited to the precise form herein shown, which, I believe, illustrates the best construction now known to me for the carrying out of my invention.

What I claim is—

1. In a buckle, the base-plate provided at one end with a slot for the reception of strap F and at its opposite end with a support for a cam-lever, in combination with a pivoted cam-lever and a link attached at one end to the cam-lever and adapted at its opposite end to receive a strap, G, substantially as set forth.

2. In a tongueless buckle, the combination of a base-plate adapted to receive upon one surface the strap F, and provided with slots near its edges, a pivoted cam-lever mounted upon the base-plate, a link arranged to vibrate in the slots of the base-plate, one end of the link engaging with the free end of the cam-lever, its opposite end being adapted to receive the strap G, substantially as set forth.

3. In a tongueless buckle, the combination of the base-plate, the supports for the lever, the cam-lever provided with stops d' d' , and the link engaging with the free end of the lever and vibrating in the slots of the base-plate, substantially as set forth.

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

WILLIAM H. DODD.

Witnesses:

JAMES HERBERT WILLIAMS,
ERNEST ABRAM BARDEN.