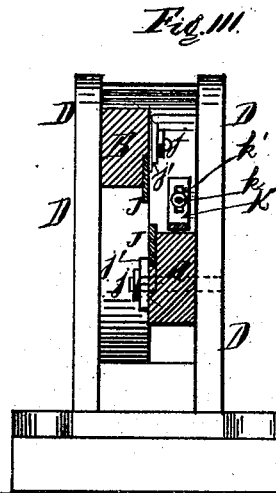
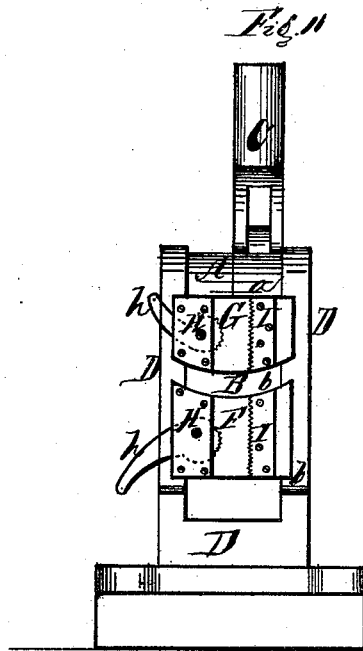
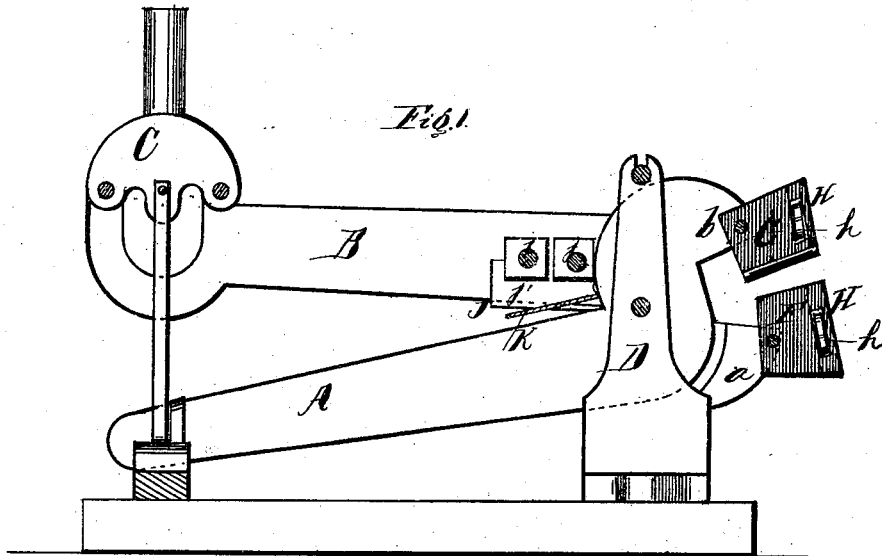


A. W. COMSTOCK.
 Tire-Bending and Upsetting Attachment for Punching
 and Shearing Machines.

No. 196,877.

Patented Nov. 6, 1877.



Witnesses:
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 Per: *Henry C. Carter*
 Atty.

UNITED STATES PATENT OFFICE.

AUSTIN W. COMSTOCK, OF MOUNT PLEASANT, IOWA.

IMPROVEMENT IN TIRE BENDING AND UPSETTING ATTACHMENTS FOR PUNCHING AND SHEARING MACHINES.

Specification forming part of Letters Patent No. **196,877**, dated November 6, 1877; application filed April 4, 1877.

To all whom it may concern:

Be it known that I, AUSTIN W. COMSTOCK, of Mount Pleasant, in the county of Henry and State of Iowa, have invented a new and useful Improvement in Attachments for Punching and Shearing Machines, of which the following is a specification:

This invention relates to certain improved devices, consisting of tire-benders, tire-upsetters, shearing-blades, and gage attachments, to be attached to a punching and shearing machine of my own manufacture, and now in common use.

The nature and use of these improved attachments will be readily understood by the subjoined description, and by reference to the accompanying drawings, of which—

Figure 1 is a side elevation of the machine with the improved attachments shown in place. Fig. 2 is a front elevation of the machine; and Fig. 3, a transverse sectional elevation of the same, taken through one of the bolts that holds the cutter-knives of the shearing-machine to the lever, and looking toward the front end of the machine, so as to exhibit the improved attachment for the gage.

The levers A B C, the fulcrum D, and the bed-plate E are similar to those parts in a machine already built by myself, and now in common use.

To the front end of the jaws *a b* of the levers A B, I bolt or otherwise securely attach, in a removable manner, forming-blocks F G. These blocks are placed so that one of them is directly over the other, and in such positions that their adjacent edges touch or nearly touch each other when the ends of the levers A B are brought together.

The adjacent edges of the blocks F G are formed, one of them concave and the other convex, and when they are pressed together they will readily bend a wagon-tire placed between them into the proper form to fit a wheel, and these blocks will be attached at pleasure to the machine A B C D E, and used for this and similar purposes.

The blocks F G, or similar blocks, similarly attached to the levers A B, will have grooves in their front faces, formed between the sides or lugs H I. These grooves will be wide enough to take in bars of iron suitable for wagon-tires, and the edges of the sides or lugs I toward the grooves will be corru-

gated, and in the sides or lugs H will be fitted small cams *h*, the peripheries of which will be corrugated, and these cams will have levers or handles, by which they may be turned or set up against a tire or other similar piece, which may be placed in the said grooves.

When the said cams *h* are thus set up against a tire or bar, the corrugations of I and *h* will cause the piece to be firmly held between the said lugs and cams, and the motion of the levers A B may then be used to upset the tire or other piece so held.

The knives or cutters J that form the shears of my machine are held fast to the lever A or B, as the case may be, by the bolts *j*, which will be cast in the substance of the said levers, and by the retaining-plates *j'*, which will overlap the said knives or cutters, and, if need be, have seats rabbeted in their sides for the knives. In this manner the said knives or cutters will be firmly held in place without the necessity of punching or drilling holes in the steel blades.

The gage K, that is used to regulate the length of the piece cut off by the shears, will be held fast to a seat prepared for it on the lever A by means of the bolt *k*, as shown in Fig. 1. This bolt will be cast into the substance of the lever A, and a nut, *k'*, on its outer end, will secure the gage-piece in place thereon.

Having described my invention, I claim—

1. The forming-blocks F G, removably attached to the levers A B, and having their adjacent faces formed so as to fit each other, one being convex and the other concave, and adapted to the bending of tires or other similar pieces, substantially as described and set forth.

2. The lugs or projections H I on the blocks F G, removably attached to the levers A B, the face of the lugs I being corrugated, and the lugs H being provided with retaining-cams *h*, to lock pieces in between the said lugs H and I, for the purpose of upsetting them by the pressure imparted from the levers A B, as and for the purpose set forth.

AUSTIN W. COMSTOCK.

Witnesses:

JOHN F. LEECH,

JOHN J. FITZGERALD.