(No Model.)

E. M. HICKMAN.

JOINTER ARM FOR PLOWS.

No. 415,866. Patented Nov. 26, 1889.

Fig. 1.

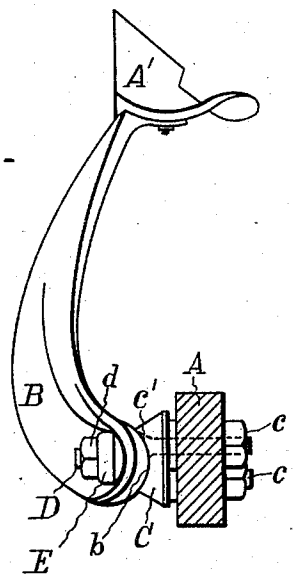


Fig. 3.

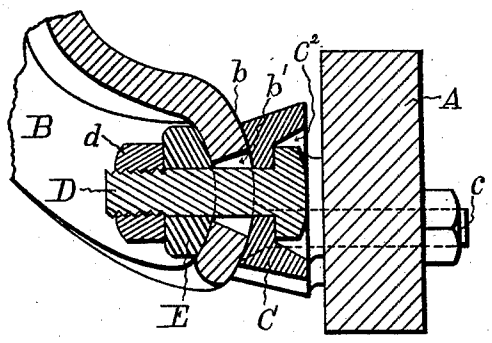
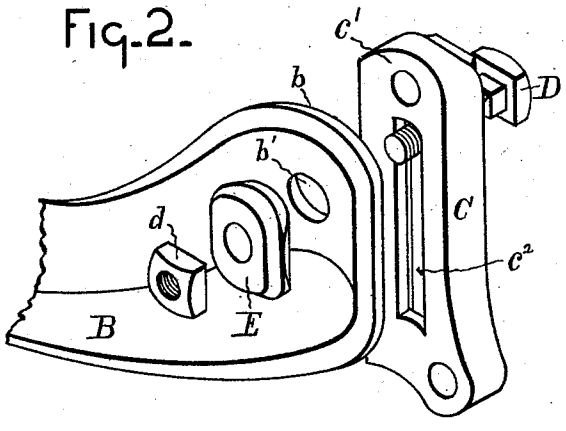


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDGAR M. HICKMAN, OF ALBION, MICHIGAN, ASSIGNOR TO THE GALE MANUFACTURING COMPANY, OF SAME PLACE.

JOINTER-ARM FOR PLOWS.

SPECIFICATION forming part of Letters Patent No. 415,866, dated November 26, 1889.

Application filed May 1, 1889. Serial No. 309,247. (No model.)

To all whom it may concern:

Be it known that I, EDGAR M. HICKMAN, a citizen of the United States, residing at Albion, county of Calhoun, State of Michigan, have invented a certain new and useful Improvement in Jointer-Arms for Plows; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention is designed as an improvement on reissued Letters Patent No. 6,824, dated December 28, 1875.

In the use of the device described and claimed in the above-named patent great difficulty has been experienced in properly adjusting the outer end of the jointer-arm, and consequently the jointer or small plow, in a horizontal direction, so that its cut will be exactly in a vertical plane with the main plow.

The object of this invention is to produce a device by which this horizontal adjustment may be accomplished.

In the drawings, Figure 1 is a plan view of my device. Fig. 2 is a perspective view showing the relative arrangement of the parts. Fig. 3 is a horizontal section.

In carrying out my invention, A represents the plow-standard, A′ the jointer or small plow, and B is the horizontal arm by which it is supported. The heel or butt *b* of this horizontal arm is made rounded or convex, and is provided with the orifice *b′*.

C is a block, which may be attached to any suitable part of the plow by the bolts *c*. This block forms the seat for the end *b* of the horizontal arm and has one surface *c′* concave to fit the convex surface of the arm. The block is provided with an elongated orifice c^2, through which the bolt D, used to secure the parts together, may be passed,

E is a washer, against which the nut *d* may bear. This washer is of course not essential, and may or may not be used.

By making the orifice *b′* larger at the inner surface of the arm than at the outer the bolt D will have a free horizontal movement therein.

The advantage of securing the arm to the plow beam or standard by this means will be apparent. The rounding of the seat of the standard is such that the jointer-arm has a motion about said rounded surface as a vertical pivot. This permits, therefore, of the jointer-arm being adjusted horizontally around the standard as a pivot, and by loosening the bolt it may be raised or lowered bodily on the standard, while the curved seat holds it rigidly against any tendency to tilt downward about the heel or butt of the jointer-arm or to rock laterally about the jointer-arm as an axis. Of course the block C might be dispensed with and a concaved seat be formed integral with the standard when the latter is cast; so, also, if desired, the end of the arm might be made concave and its seat made convex. As these would be obvious equivalents of the form herein shown, they would of course be contemplated by my invention.

What I claim is—

The combination, with a plow, of a jointer-arm projecting from its standard, the engaging faces of such standard and arm being vertical cylindrical surfaces, bolt-orifices through the standard and the arm on these curved engaging faces, the bolt-orifice in the jointer-arm flared toward the standard, thereby giving the jointer a lateral adjustment with respect to the standard, and means for adjusting said arm vertically along said curved engaging faces, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

EDGAR M. HICKMAN.

Witnesses:
MONFORT D. WEEKS,
EUGENE C. LISTER.