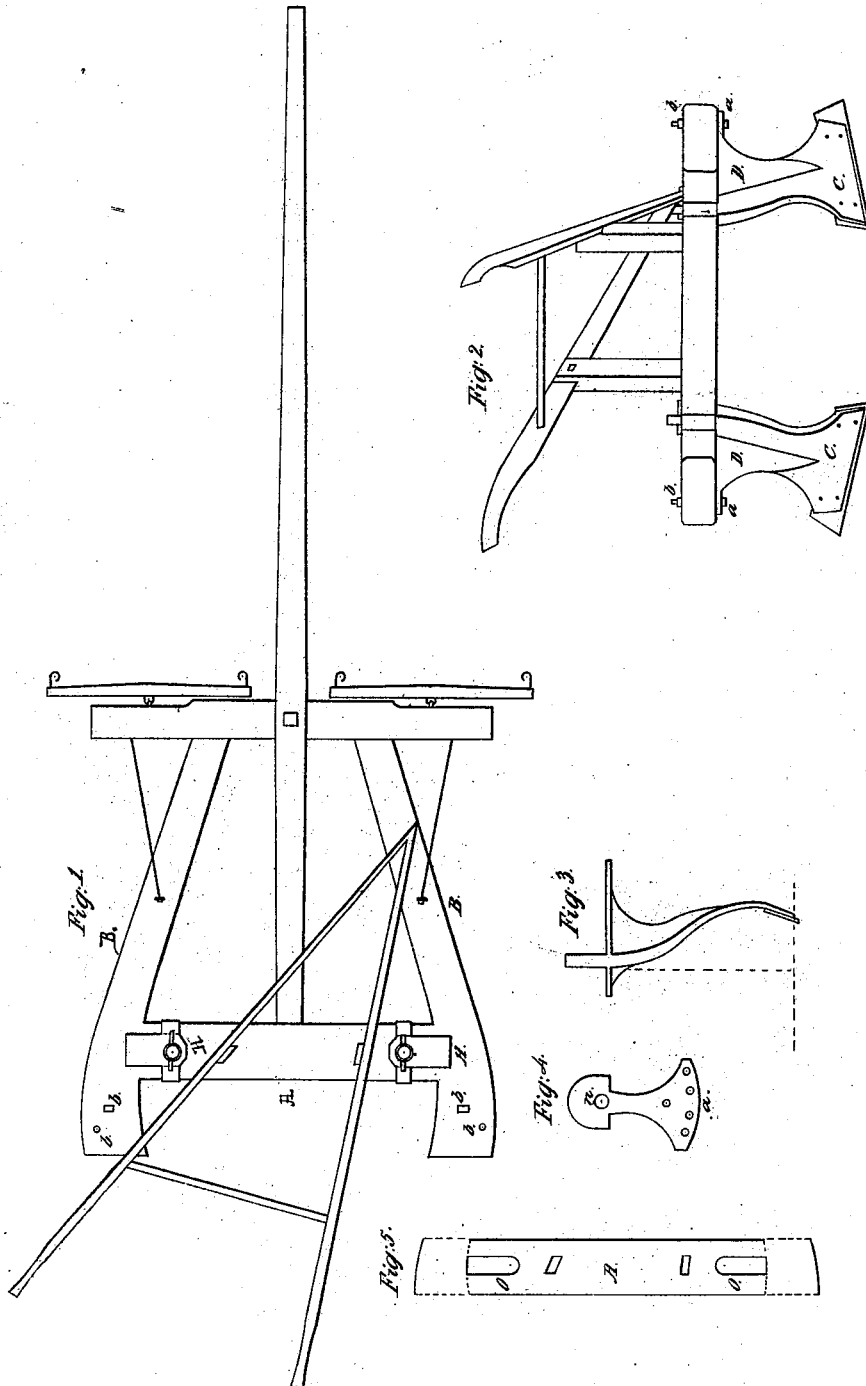


*J. & C. Hrauser.*

*Cultivator.*

*N<sup>o</sup> 4,746.*

*Patented Sept. 5, 1846.*



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN COMBINED PLOWS.

Specification forming part of Letters Patent No. 4,745, dated September 5, 1846.

*To all whom it may concern:*

Be it known that we, JOHN KRAUSER and CYRUS KRAUSER, of the borough of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Plows, used in plowing corn, potatoes, &c.; and we do hereby declare the following to be full and exact description of the same, reference being had to the accompanying drawings, making a part of this specification; and to enable others skilled in the art to make and use our invention, we will proceed to describe its construction.

Figure 1 represents the frame of the plow, which is somewhat in the form of a square, the front part, however, being less in width than the hind part. The hind cross-beam, A, is tenoned into the side pieces, B B, so that the latter project beyond said cross-piece any desirable length. The tongue passes the front cross-piece at right angles and terminates in a mortise cut in the hind cross-piece. The tongue is fastened to the front cross-piece by means of a bolt. In each end of the beam A there is a longitudinal opening about four inches in length placed on the inside of the side pieces, B B. Said openings are large enough in width to receive the shaft of the stand, and over each of these longitudinal openings is slipped a metallic box, H, of the exact size of the beam A, having a round hole in the bottom, and also one in the top. The shaft of the stand is represented in said hole with a pin sticking through it. Said boxes being moved to and fro on the beam A, the holes move in a line with the longitudinal openings, both of which are shown at *o o* in Fig. 5. The bottom of the box is the same as the top, (seen in the figure,) and its sides of the same width as those parts of the top which touch the edges of the beam A.

Fig. 2 represents a hind view of the plow. C C are two upright stands or shares of a given breadth from the bottom upward to about one-third their height. The remainder is of an optional breadth. D D are two knees or braces cast to the outside of the stands. They may also be cast on the inside, or one may be cast upon each edge of each stand, the top of which

brace rests flat against the bottom of the side pieces, B B, when the shaft of the stand is introduced into the holes in the metallic boxes H H. These braces serve to give additional strength to the stands, and also of keeping them in any given position. For this purpose, as represented in Fig. 4, (which figure represents a top view of the brace, *n* being the shaft of the stand,) at *a* the end of the brace at the top may be made of any breadth, having a number of holes cast in it, one of which, whenever the stands are turned inward or outward so as to form a greater or less angle with each other, is made to correspond to a similar hole, *b*, in the frame of the plow, through which a bolt is passed to keep the stand securely and firmly in its place.

It should be observed that the above-mentioned holes in the top of the brace are cast in the circumference of a circle, the center of which is *n*, Fig. 4. On the inside of the stand, and at the bottom, is an iron plate, in length something more than the breadth of the stand, having two small longitudinal openings at convenient points in their length, and also in their breadth, so that said plate projects beyond the bottom of the stand about an inch. A bolt is passed through each opening into a hole in the stand, by means of which they are fastened together. The plate can be moved backward and forward in a line with the bolts, and in order to elevate or depress said plate the bolts are taken out and passed through a hole higher or lower on the stand, as the case may require.

Fig. 3 represents a side view of the form of the stand, D being the brace, and *a* that part of it already referred to.

What we claim as of our invention, and wish to secure by Letters Patent, is—

1. The knee or brace cast on the stand, as herein explained.
2. The longitudinal openings *o o*, together with the metallic boxes H H.

JOHN KRAUSER.  
CYRUS KRAUSER.

Witnesses:

DAVID MEDARY,  
JOSEPH S. GORGAR.