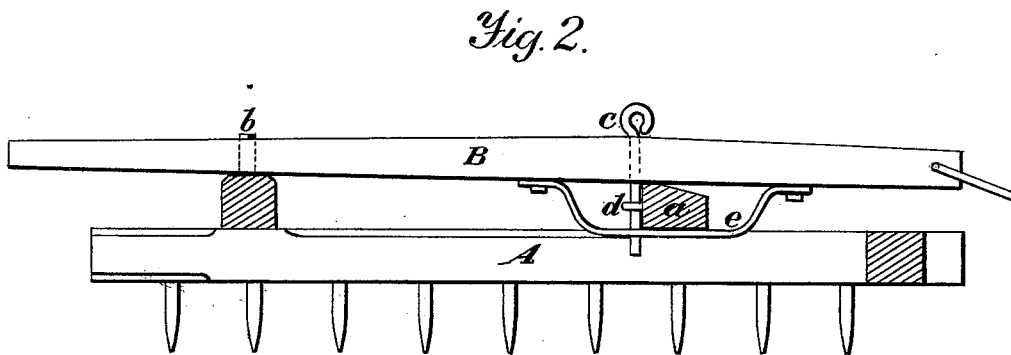
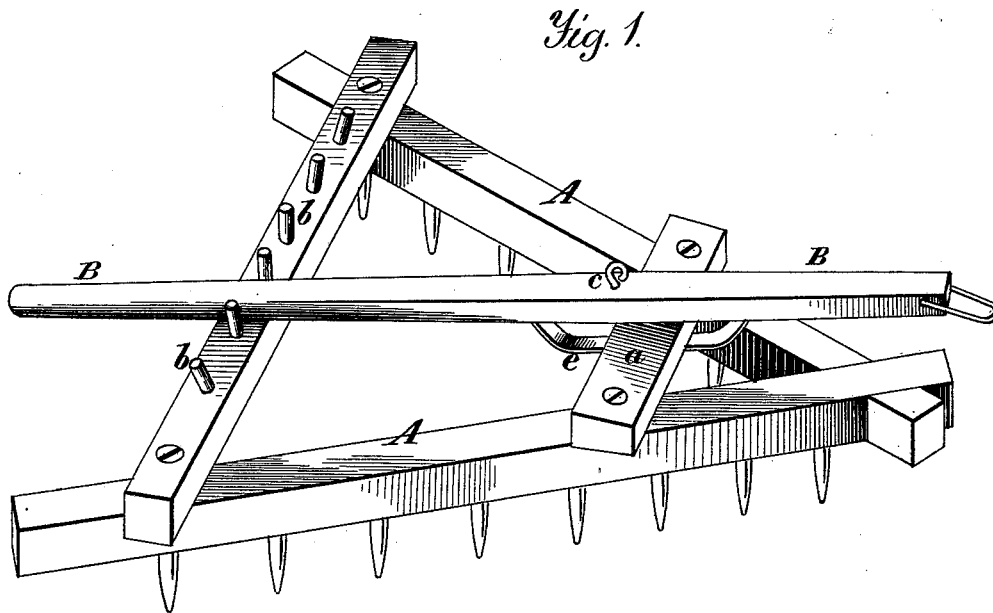


O. BAYLES.  
Harrow.

No. 213,541.

Patented Mar. 25, 1879.



*Witnesses.*  
*A. Ruppert,*  
*James H. Lange.*

*Inventor.*  
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*Attorneys.*

# UNITED STATES PATENT OFFICE.

OLIVER BAYLES, OF EASTON, WEST VIRGINIA.

## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **213,541**, dated March 25, 1879; application filed January 11, 1879.

### *To all whom it may concern:*

Be it known that I, OLIVER BAYLES, of Easton, in the county of Monongalia and State of West Virginia, have invented certain new and useful Improvements in Harrows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a plan view of my improved harrow, and Fig. 2 is a vertical longitudinal section of the same.

The same part in the two figures is denoted by the same letter.

This invention relates to certain improvements in harrows, particularly that class adapted for hill-side work; and it consists in the employment therewith of a lever, by which the angle of the line of draft may be changed with reference to the harrow, substantially as hereinafter more fully set forth.

In the accompanying drawings, A refers to the frame of the harrow, supplied with the usual teeth. This frame is preferably triangular in shape, with its forward or tapering end spanned by a beveled cross-piece, *a*, also fastened thereto. The rear cross-piece of the frame A is provided, upon its upper surface, with a number of teeth, *b*, or any equivalent means, for serving to hold the lever, to be hereinafter referred to, at the desired point. B is a lever, pivoted to the forward cross-piece, *a*, of the frame A, preferably by a pin or key, *c*, passing through itself, a staple or eye, *d*, of the said cross-piece, and a perforated bail or bowed plate, *e*, fastened to the nuder side of the lever B, and passing under neath the said cross-piece, as clearly seen in Fig. 2.

By beveling the part *a* the plate *e* can be placed nearer thereto without interfering with the vertical movement of the lever, and thus render the parts more compact and durable.

The pivoting of the part B enables the swinging or shifting of the same at different angles to the line of draft, the purpose of which will be presently seen. The forward end of the lever B is provided with means for hitching the team thereto.

In using the harrow for hill-side work, the lever B is adjusted, according to the inclination to the desired pin, tooth, or notch *b*, to bring the draft upon the harrow at such an angle as to prevent the slipping of the harrow, or its teeth from passing into each other's path, and thus effect the proper harrowing of the ground in such localities.

This harrow is adapted also for use in other than hilly ground.

I am aware that a clevis attached to a plow-beam having arms occupying the sides of the plow-beam, one of which extends back to within reach of the operator, and by means of which the plow can be made to take more or less ground; also, that a clevis bent to a U shape and bolted to a cross-bar, and having a lever extending back to a rack-bar, by which a plow is made to take more or less land, is not new.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

In a harrow, the combination of the frame A, front and rear cross-pieces, the former being beveled, lever B, plate *e*, and pin *c*, substantially as shown and described.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

OLIVER BAYLES.

Witnesses:

THOMAS HILL,  
JAS. C. SHAY.