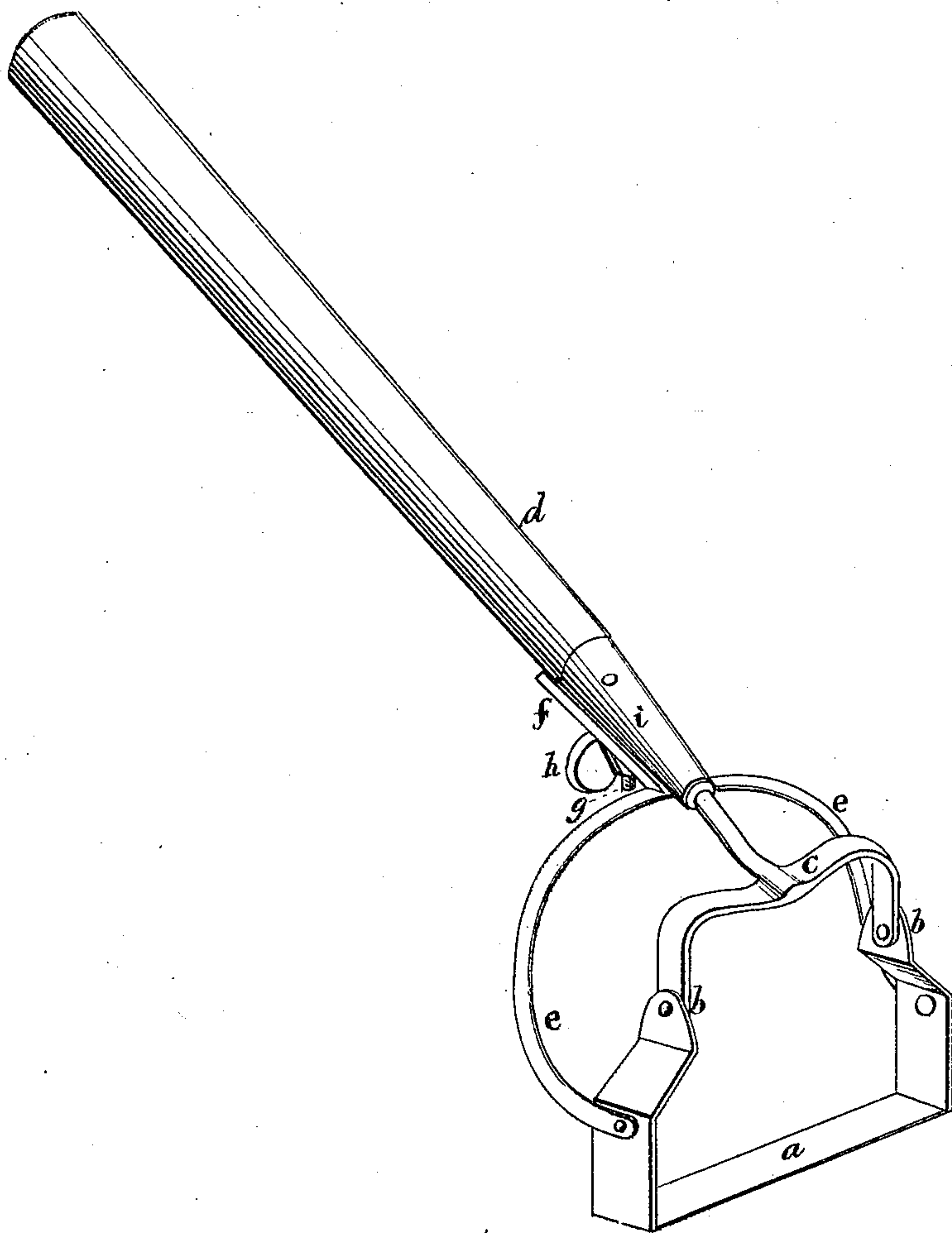


J. G. HARRIMAN.

Improvement in Weeding Hoes.

No. 133,151.

Patented Nov. 19, 1872.



Witnesses.

L. F. Bergman.
W. T. Hutchinson

Inventor.

Josiel G. Harriman,
By Row. Rothwell,
att'y.

UNITED STATES PATENT OFFICE.

JOSIEL G. HARRIMAN, OF GARDINER, MAINE.

IMPROVEMENT IN WEEDING-HOES.

Specification forming part of Letters Patent No. 133,151, dated November 19, 1872.

To all whom it may concern:

Be it known that I, JOSIEL G. HARRIMAN, of Gardiner, in the county of Kennebec and State of Maine, have invented an Improved Weeding-Hoe, of which the following is a specification:

This invention is an improvement in that class of hoes in which the blade is adjustable to different angles, whereby it is accommodated to various positions of the operator and various kinds of work. The object of the invention is to furnish a light skeleton form of hoe, of simple and durable construction, adapted to different kinds of work, and admitting of the employment of either a long or short handle, whereby the hoe can be used with one or both hands, and by the operator while standing or in a sitting posture. To this end the cutter is made of a flat piece of steel bent up at the ends and hinged to the arms of a goose-neck fixed to the handle, the cutter being provided with braces having adjustable connection with the handle; and in the construction and combination of these several parts, as hereinafter more fully described and claimed, the present invention consists.

The drawing is a perspective view of a weeding-hoe embodying my improvements. The cutter *a* is made of flat steel bent up at the ends in the form shown, or in any other suitable way to make connection with the goose-neck and secure sufficient inflexibility in the sides. The cutter or blade is ground or beveled on the upper side before the parts are united together; and if sharpening is required it may be done by grinding on the bottom. The blade is jointed, at *b b*, to the arms of a goose-neck, *c*, the shank of which is inserted in the end of handle, *d*, or otherwise secured thereto. As means of varying the angle of the blade and holding it when adjusted, two braces, *e e*; branching from a central shank, *f*,

are employed, said braces being jointed at their outer ends to the sides of the cutter about half-way between the joint *b b* and the cutting-edge, while the shank *f* is adjustably connected with the handle of the hoe. In the drawing is shown one method of making this connection, consisting of a screw, *g*, fixed in the handle and projecting through a slot formed longitudinally in the shank *f*, said screw being provided with a thumb-nut, *h*, which holds the braces, and, consequently, the cutter, at the required angle of adjustment. Instead of this construction the shank *f* may be provided with a series of holes for the passage of a set-screw into a suitable recess in the ferrule *i* attached to the handle; or the series of holes might be made in the ferrule with a single hole for the screw through the shank; or other means may be used, but the construction shown and described is preferred and will probably answer every purpose.

In the drawing the hoe is shown as provided with a short handle, so that it can be used with one hand, or while the person using it is sitting; but handles of various lengths can be employed and the dimensions of the hoe changed according to the uses for which it is intended.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The adjustable cutter *a*, made of flat metal, substantially as described, in combination with a goose-neck, and adjustable braces secured to a handle, for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name before two witnesses.

JOSIEL G. HARRIMAN.

Witnesses:

GEORGE SAFFORD,
R. M. MANSUR.