2 Sheets—Sheet 1.

J. SLOCUM.

Potato Digger.

No. 34,787.

Patented Mar. 25, 1862.

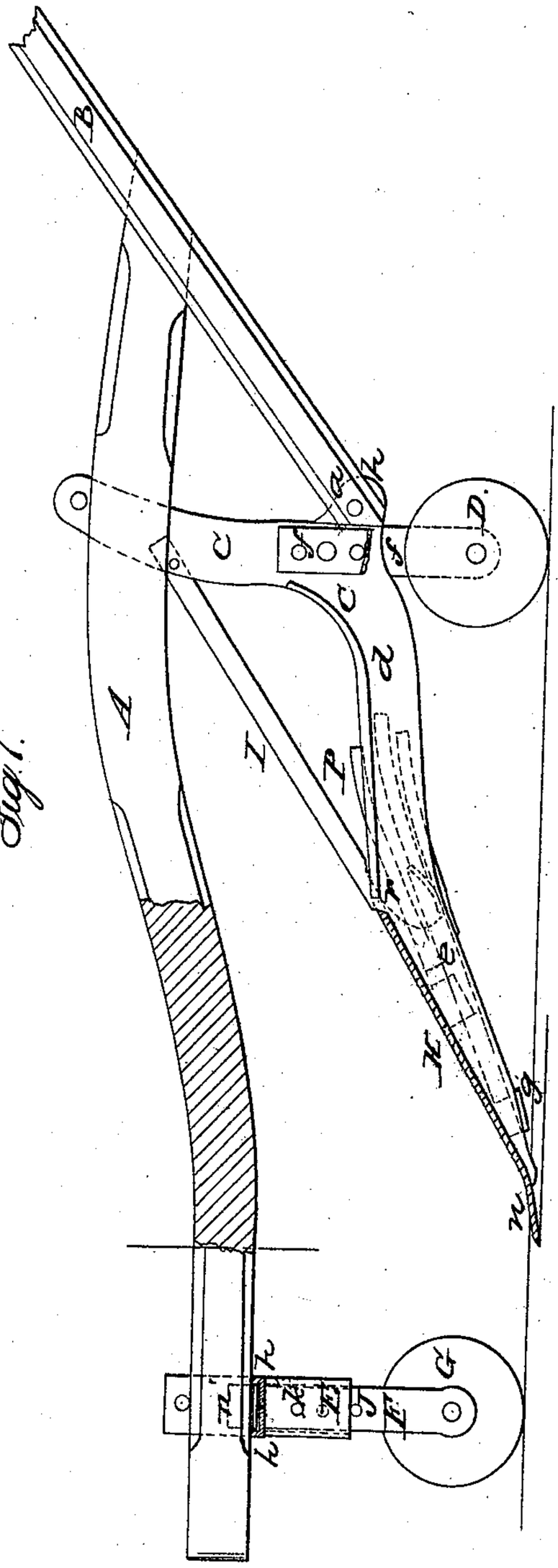

Fig. 1.

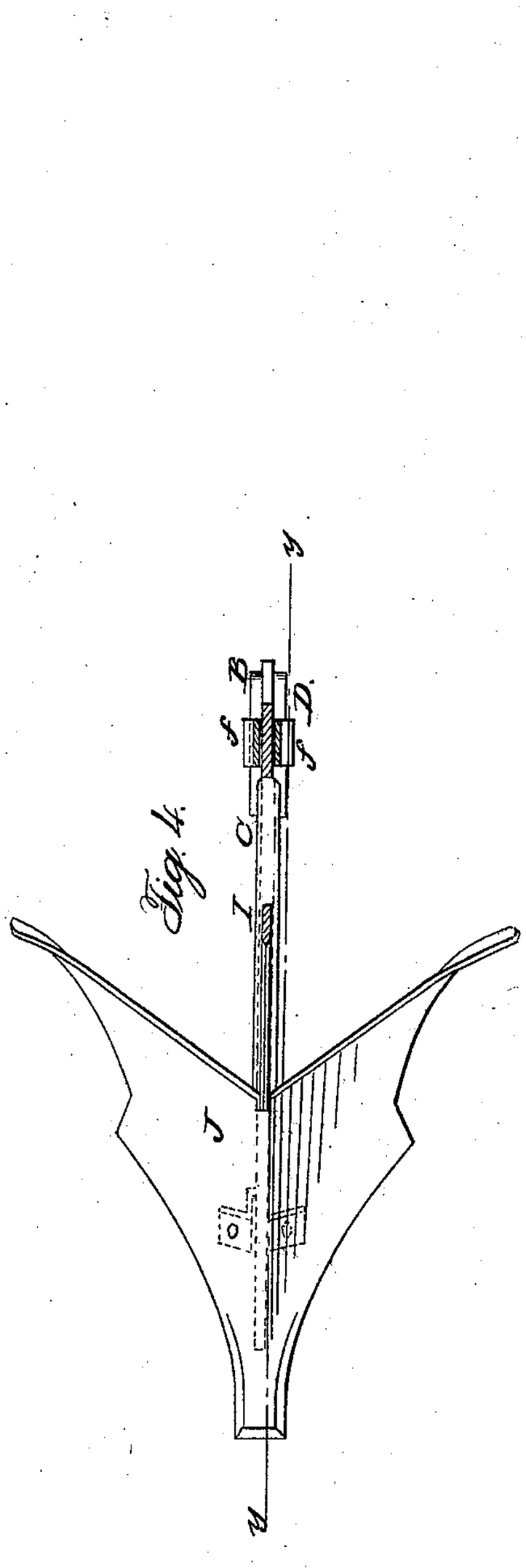

Fig. 4.

Witnesses.

James Laird

Richard M Bailey

Inventor.

Joseph Slocum

2 Sheets—Sheet 2.

J. SLOCUM.

Potato Digger.

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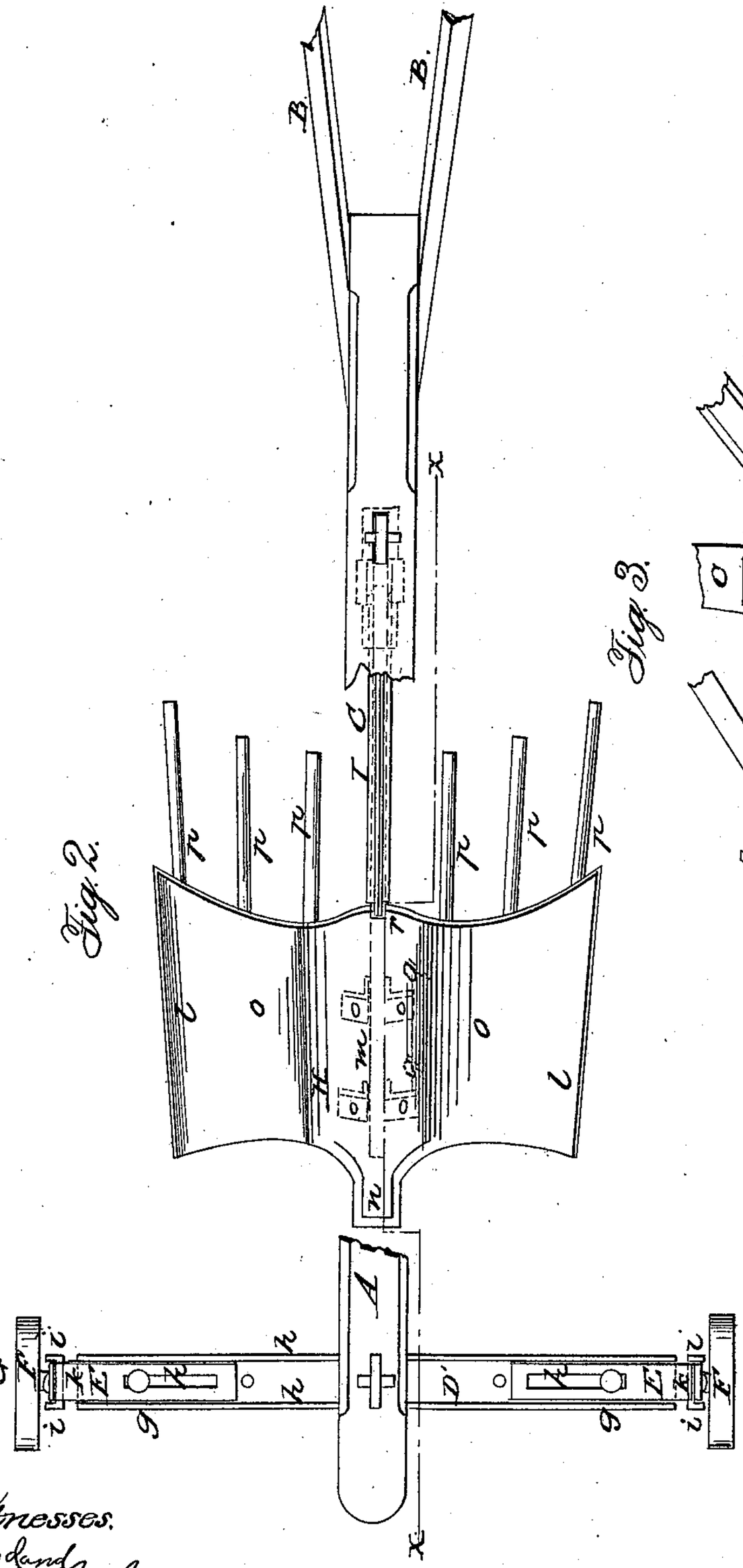

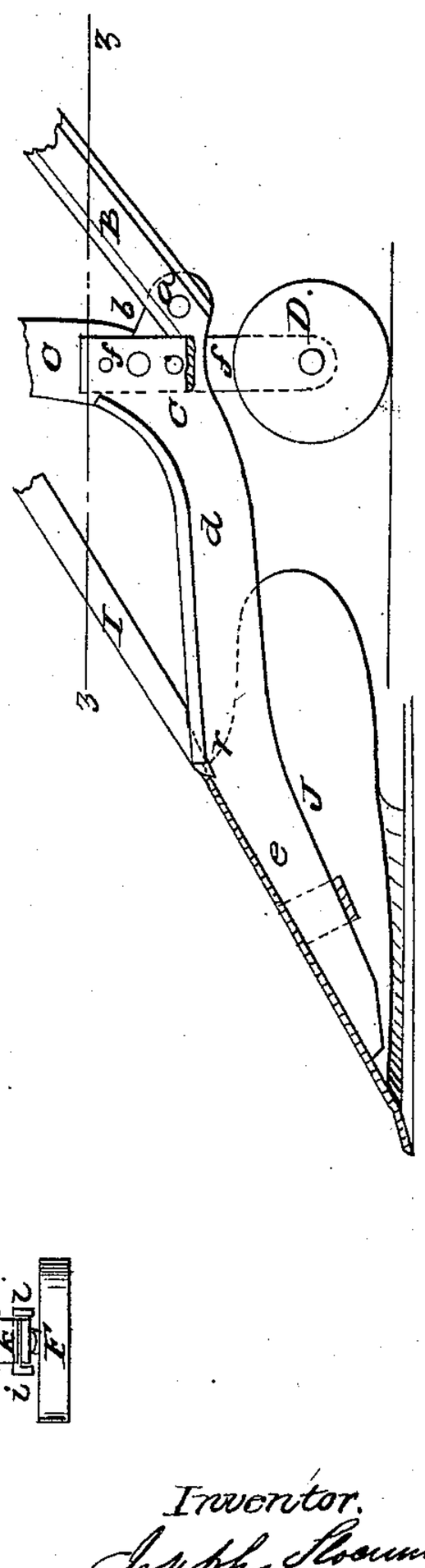

Witnesses.
James Land
Richardson Gawley

Inventor.
Joseph Slocum

UNITED STATES PATENT OFFICE.

JOSEPH SLOCUM, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **34,787**, dated March 25, 1862.

To all whom it may concern:

Be it known that I, JOSEPH SLOCUM, of Syracuse, in the county of Onondaga and State of New York, have invented a new and Improved Combined Potato-Digger and Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side sectional view of my invention when used as a potato-digger, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same with a portion of the beam broken away; Fig. 3, a side sectional view of the same when used as a cultivator, taken in the line *y y*, Fig. 4; Fig. 4, a horizontal section of the same, taken in the line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain an implement or device which may by a very simple adjustment be used either as a potato-digger or as a cultivator, and perform its work in either capacity equally as well as if it were constructed especially for each.

A represents the beam of the implement, which is constructed similarly to an ordinary plow-beam; and B B are two handles which are attached to the back end of the beam, said handles being inclined, projecting considerably below the beam, and secured at their lower ends by a bolt, *a*, to an ear or lug, *b*, at the back part of the standard C, as shown clearly in Figs. 1 and 3.

The beam A and handles B B may be of wood—that, at least, would be the preferable material; but the standard C is of metal. Cast metal would be the preferable material on account of economy. This standard C is of curved form, as shown clearly in Figs. 1 and 3, the standard projecting down a certain distance nearly in a vertical direction from its point of attachment with the beam, as shown at *c*, and then curving forward and extending nearly in a horizontal direction, as shown at *d*, to a point which is in a vertical line that bisects the beam about at its center, the standard then inclining downward at an angle of about forty-five degrees, as shown at *e*, its point being in a line which bisects the beam about one-quarter of its length from its front end. (See Fig. 1.)

The standard C may be attached to the beam A in the usual or in any proper way, and to the back part, *a*, of the standard there are attached two vertical bars, *f f*, one at each side, between the lower parts of which a wheel, D, is fitted or placed, said wheel supporting the back part of the standard and plow, as will be fully understood by referring to Figs. 1 and 3.

To the beam A, near its front end, there is attached at right angles a bar, D′. This bar may be of metal, and to each end of it there is secured a right-angular bar, E. These bars E E are attached to the bar D by means of bolts or set-screws *g*, which pass through oblong slots *h* in the bars E, and through the bar D. This means of attachment admits of the longitudinal adjustment of the bars E E, as will be fully understood by referring to Fig. 2. The bar D has its front and back edges turned upward, forming flanges *h h*, which serve as guides for the upper horizontal parts of the bars E E, and the lower vertical parts of the bars E E have their edges bent outward to form flanges *i*, which serve as guides for vertical plates F F, to the lower ends of which wheels G are attached, one to each, as shown in Fig. 2. The vertical plates F F are perforated with holes *j*, through any one of which and the vertical parts of the bars E E bolts *k* pass. By this arrangement it will be seen that the wheels G G are rendered capable of being adjusted both laterally and vertically.

H represents a share which is of double-concave form, the sides of the share being curved upward, as shown at *l l*, and the center *m* being curved upward, forming a longitudinal ridge. The front edge of the ridge *m* projects forward to form the point *n* of the share, as shown in Figs. 1 and 2. The front edges of the concave parts *o o* of the share are slightly concave, as shown in Fig. 2.

To the back end of the share H there are attached a series of parallel rods, *p*. These rods form what may be termed a "screen." (See Fig. 2.) The share H is attached to the front inclined part, *e*, of the standard C in any proper way. Sockets *q q* may be secured centrally to the under side of the share for the front part, *e*, of the standard to be fitted into; or the part *e* may have lugs or ears cast on it, through which and the share bolts may pass. The inclination of the part *e* of the standard

gives, of course, an inclined position to the share H when the latter is attached to it. (See Fig. 1.)

By referring to Figs. 1 and 2, it will be seen that the length of the standard C causes the share H to have a position quite near the front end of the beam A, and hence the use of the wheel D is essential, as without it the back part of the implement would not have a sufficient support, and it would be difficult to keep the share H in a proper working position.

I represents a cutter or knife, which may be constructed of steel. This cutter may be straight or slightly curved, and it is attached at its back end to the upper part of the standard C, near the beam A, the front end of the cutter fitting in a notch or recess, *r*, at the upper end of the inclined part *e* of the standard.

The operation of the implement is as follows: When potatoes are to be dug the wheels G G are adjusted laterally, so as to run in the furrows at the side of the drill or row of hills to be dug, the wheels being adjusted vertically, so as to gage the depth of the penetration of the share H as may be desired. As the implement is drawn along the share H penetrates the hills or drills, the ridge *m* dividing the earth and the potatoes and casting them in equal quantities to either side, so that they will pass up the concaves *o o* and upon the screen formed of the rods *p*. The potatoes and the earth are partially separated by the rods *p*, the separation being perfected or completed by the falling of the earth and potatoes from the rear end of the share, the earth falling the quickest on account of its superior gravity, leaving the potatoes on the surface of the earth.

The cutter or knife I performs an important function—to wit, it cuts or divides weeds, potato-vines, &c., which may chance to pass up the share H, and causes said substances to be discharged freely or cast from either side of the machine without in the least disturbing or impeding the discharge of the earth and potatoes from the back end of the share.

In consequence of having the standard C of the length described, the share H has such a forward position that the weeds, vines, &c., are kept clear from the back part of the standard, so that they cannot catch and become bound between the beam and standard. The cutter or knife I has a sufficiently inclined position to cut freely the weeds and vines which may come in contact with it. In cases where a field is quite weedy, or where the vines are green, the implement cannot work perfectly without the cutter or knife I.

The implement is used for plowing or cultivating between the hills or drills by running the share H between them, the wheels G G being properly adjusted for such purpose. The share H, it will be understood, leaves no furrow behind it, as the earth in falling from the back end of the share fills up the furrow. Hence the level system can be perfectly carried out by my invention. If it is desired at any time, however, to "earth" up or "hill" the potato plants or vines, it may be done by detaching the share H and applying to it an ordinary double-moldboard share, J, as shown in Figs. 3 and 4.

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

The combination of the standard C with the undulating or double-concave removable share H and rods, arranged and operating in connection with the adjustable plates F, bars E, and bar D′, as and for the purposes herein shown and described.

JOSEPH SLOCUM.

Witnesses:

JAMES LAIRD,

RICHARDSON GAWLEY.