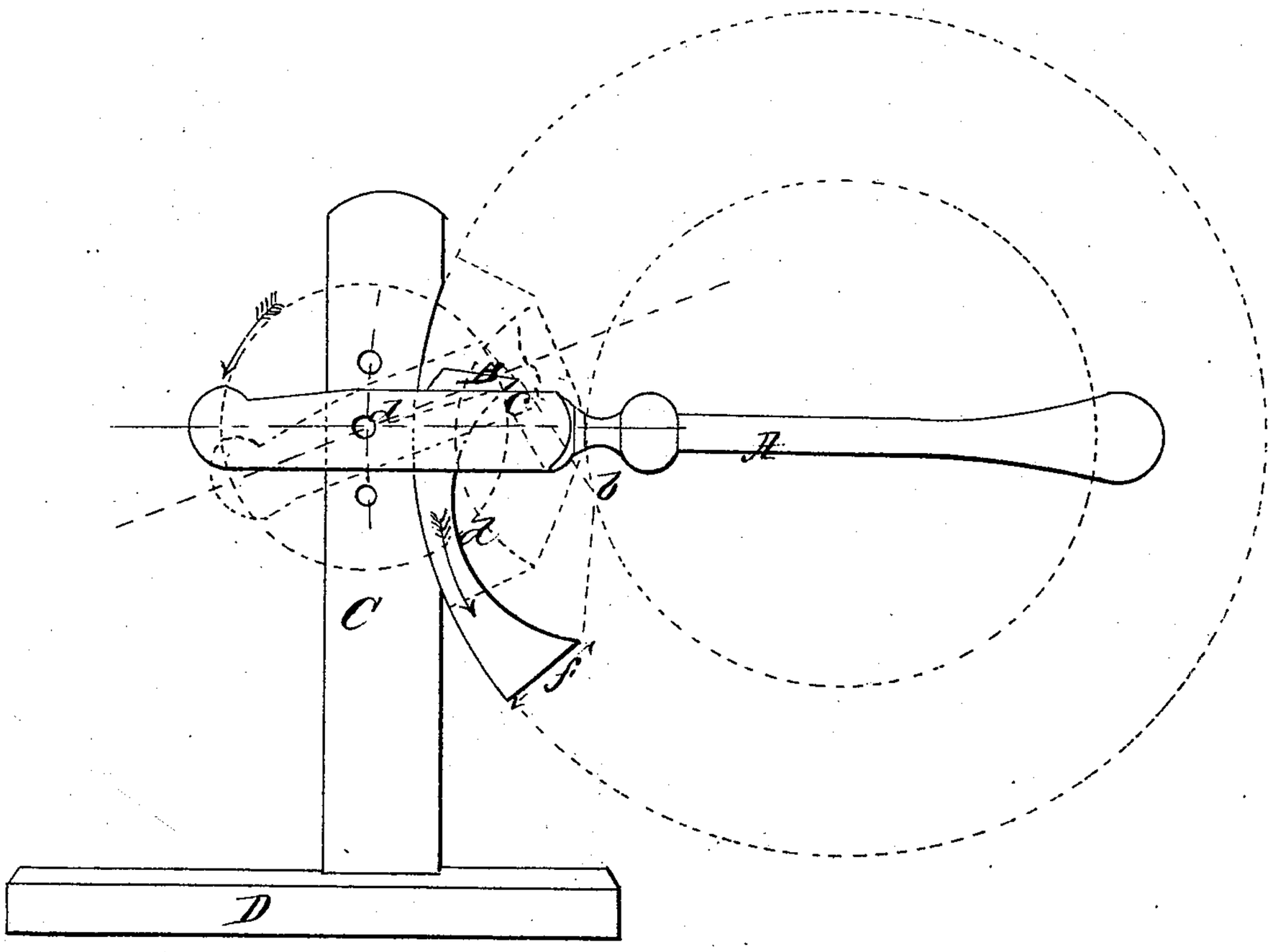
Seekins & Goss,

Lifting Jack.

No. 17,757. Patented July 7, 1857.



UNITED STATES PATENT OFFICE.

HEBER G. SEEKINS AND CHAS. H. GOSS, OF ELYRIA, OHIO.

LIFTING-JACK.

Specification of Letters Patent No. 17,757, dated July 7, 1857.

To all whom it may concern:

Be it known that we, HEBER G. SEEKINS and CHARLES H. Goss, of Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Wagon-Jack; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The drawing represents a side elevation showing the motion of the wedge, lever, etc.

The nature of our invention consists in so constructing the wedge which supports the lever that when in operation the bearing point in said lever will at all times bear upon the wedge at the same angle, which angle should be a right angle.

Jacks constructed with a wedge will sustain a weight at certain points but at all other points the usual formed wedge will slip from its place and thus let the body which is being lifted fall down, consequently all such are useless if they will not sustain a weight at any angle. Our jack, owing to the peculiar combination of its concave and convex surfaces will sustain a weight at any and every angle equally well, thus giving it a practical advantage over that of any other lifting jack now in use. It is much more easily adjusted to the work and more effective in its operations.

To enable others skilled in the arts to make and use our invention we will now proceed to describe its construction and operation.

A represents the lever, the fulcrum of which is at "*a*."

B represents the wedge.

C represents the upright.

D represents the base.

Wedge B is composed of two segments of circles, each having different radii, thus forming and being a wedge having one concave and one conxex surface. The concave surface of said wedge is struck from a point "*b*" having a radius equal to the radius of the circle described by the bearing point "*c*" of the lever described from the fulcrum "*a*". Thus if the distance between "*c*" and "*a*" be six inches then the radius of the concave of wedge B must be six inches.

The next point to be considered is the convex surface of the wedge, which must be drawn so as to give a sufficient taper, thickness, and length. Thus after determining the thickness of the wedge at "*d*" and at "*f*" the dividers must be set at a radius which will cut the wedge in those two points. Thus when the wedge at "*d*" equals one inch in thickness and at "*f*" equals two inches, then the radius of the circle must be set on a right line running at right angles to a line drawn through point "*f*" fourteen inches. This radius will describe the curve of the convex surface of the wedge and also the concave surface of the upright, against which the wedge bears at all points.

The circle described by the bearing point of the lever from the fulcrum "*a*" is shown by a red dotted line; the circle describing the convex surface of the wedge is found in blue dotted lines. The point from which the concave surface of the wedge is described traverses on a circle described from the same point as that describing the convex surface of the wedge, the same as the wedge traverses the circle describing the concave in the upright.

If necessary to change the fulcrum of the lever in adjusting it to the weight desired to be raised it can be done by removing the pin and putting it in either of the holes through the upright as will be readily seen by examination. These holes should be relatively positioned to the point from which the concave surface of the upright is described, that is, each hole should be found in a circle described from that point.

The advantages and uses of a jack made by our plans are too numerous and obvious to require any explanation or comment.

We do not claim the application of a wedge for the purpose of supporting the lever, but

What we do claim and ask Letters Patent to secure, is—

The concave and convex surfaces of the wedge in combination with the concave surface of the upright for the purpose of equalizing the direction of the pressure as described heretofore.

HEBER G. SEEKINS. [L. S.]
CHAS. H. GOSS. [L. S.]

Signed and sealed in presence of us—
H. S. ROCKWOOD,
C. E. BASSETT.