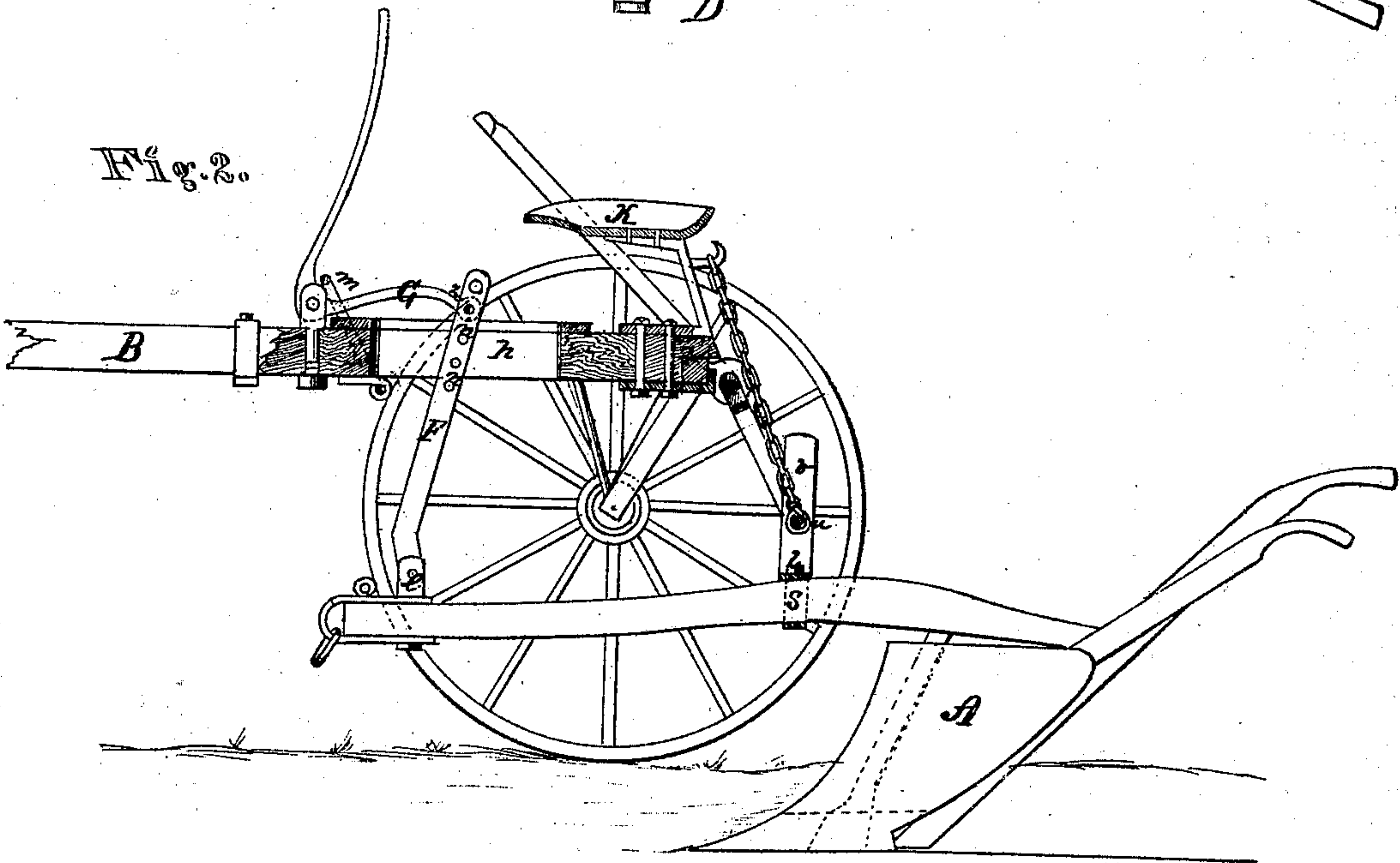
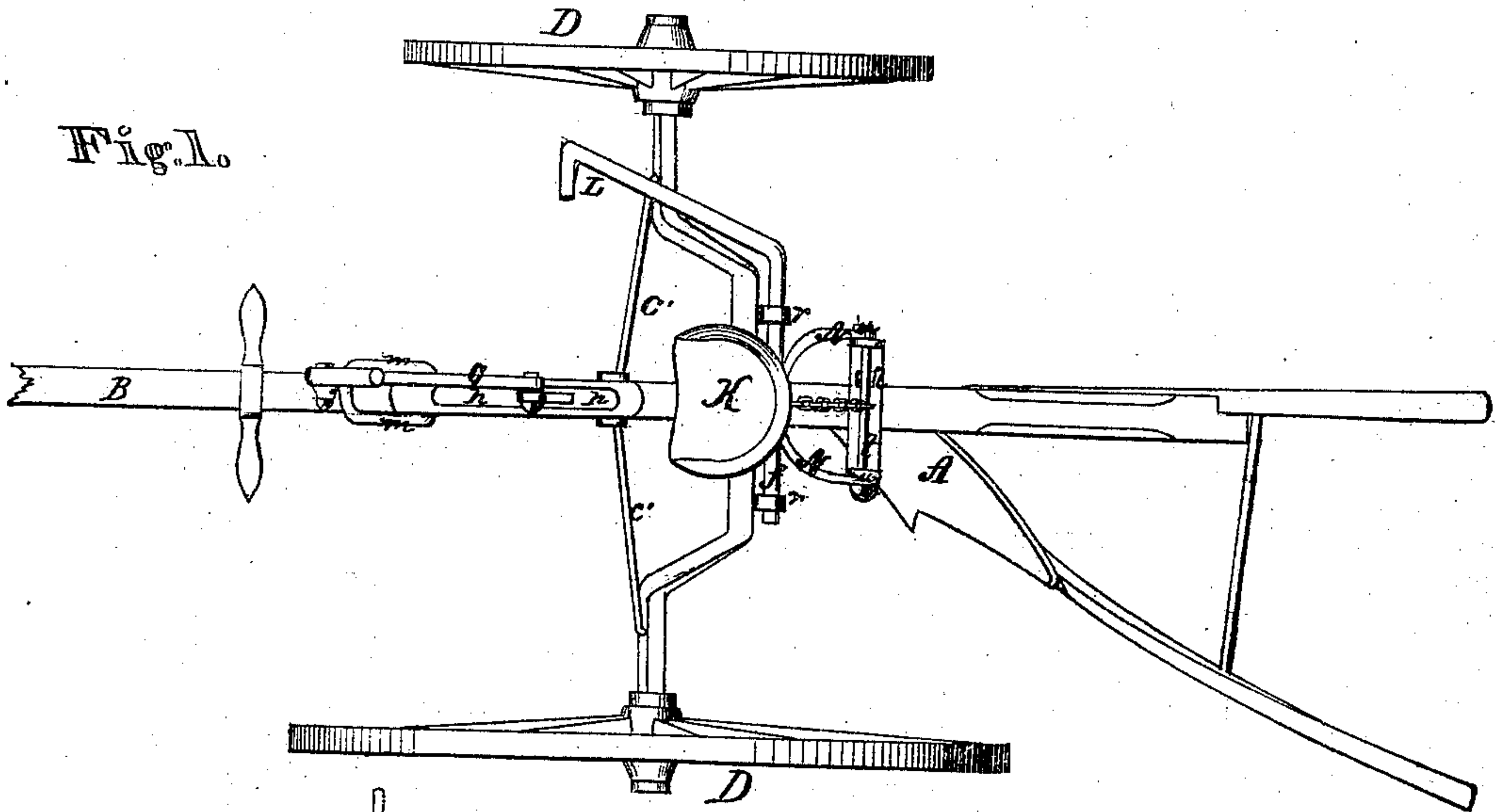


Worrell & Rymerson,

Wheel Flour.

No. 113,234.

Patented Mar. 28. 1871.



Witnesses.

Chas. Kenyon
Willie Anderson

Inventor.

J. Worrell
J. H. Rymerson,
Chipman & Co.
Atty

UNITED STATES PATENT OFFICE.

JOHN WORRELL AND JAMES H. RYNERSON, OF CLAYTON, INDIANA.

IMPROVEMENT IN SULKY ATTACHMENTS FOR PLOWS.

Specification forming part of Letters Patent No. **113,234**, dated March 28, 1871.

To all whom it may concern:

Be it known that we, JOHN WORRELL and JAMES H. RYNERSON, of Clayton, in the county of Hendricks and State of Indiana, have invented a new and valuable Improvement in Sulky Attachment for Breaking-Plows; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is our invention in plan view. Fig. 2 is a central vertical section thereof.

Our invention has relation to an improvement in means for operating breaking-plows; and it consists in the construction and novel arrangement of the sulky attachment hereinafter described.

The letter A of the drawing designates an ordinary breaking-plow. B represents the pole of the sulky attachment, to the rear end of which the bent axle C is secured, and braced in position by the rods *c' c'*.

D D are the wheels, of different diameters, one being designed to run in the furrow, while the other runs on the hard ground.

Attached to the end of the plow-beam is a bolt, *e*, to which is pivoted the connecting-bar F. The upper end of this bar passes through a slot, *h*, in the pole of the sulky, and is perforated with the holes *n n*, for the adjustment of the pin in the end of the elbow-lever G. This elbow-lever is pivoted to the pole of the sulky, and under the pole is also attached a binding-ring, *m*, which is designed to engage in a notch, *z*, in the upper edge of the elbow-lever, and to hold the same securely when adjusted in the proper position.

K designates the seat of the sulky. L represents a foot-lever, which forms an elbow near the right-hand bend of the axle, and thence extends in rear of and parallel with it, being hinged thereto by means of bearings *r r*, and forming a partially-rotating shaft, *f*. Extending to the rear from the central portion of this shaft is a forked projecting arm, N.

s represents a clamp, which extends under the plow-beam at about its middle portion, and upward on each side thereof through the transverse bar *t*, to which it is secured by means of the nuts *l l*.

From the ends of the transverse bar *t* extend upward two ears or standards, *v v*, which are perforated for the adjustment of the transverse bolt *u*, by means of which these standards are pivoted to the forked projecting arm N.

The combined action of the levers N and G enables the operator to control the angular position of the plowshare with ease and celerity.

Claim.

In a sulky attachment for plows, the combination of the bent lever G and adjustable bar F with the foot-lever L, shaft *f*, forked arm N, and clamp *s t*, substantially as specified, as an improvement upon our patent of July 26, 1870.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN WORRELL.
JAMES H. RYNERSON.

Witnesses:

WILLIAM CLINE, Jr.,
CHARLES T. LAWRENCE.