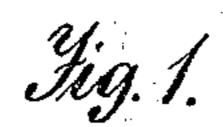
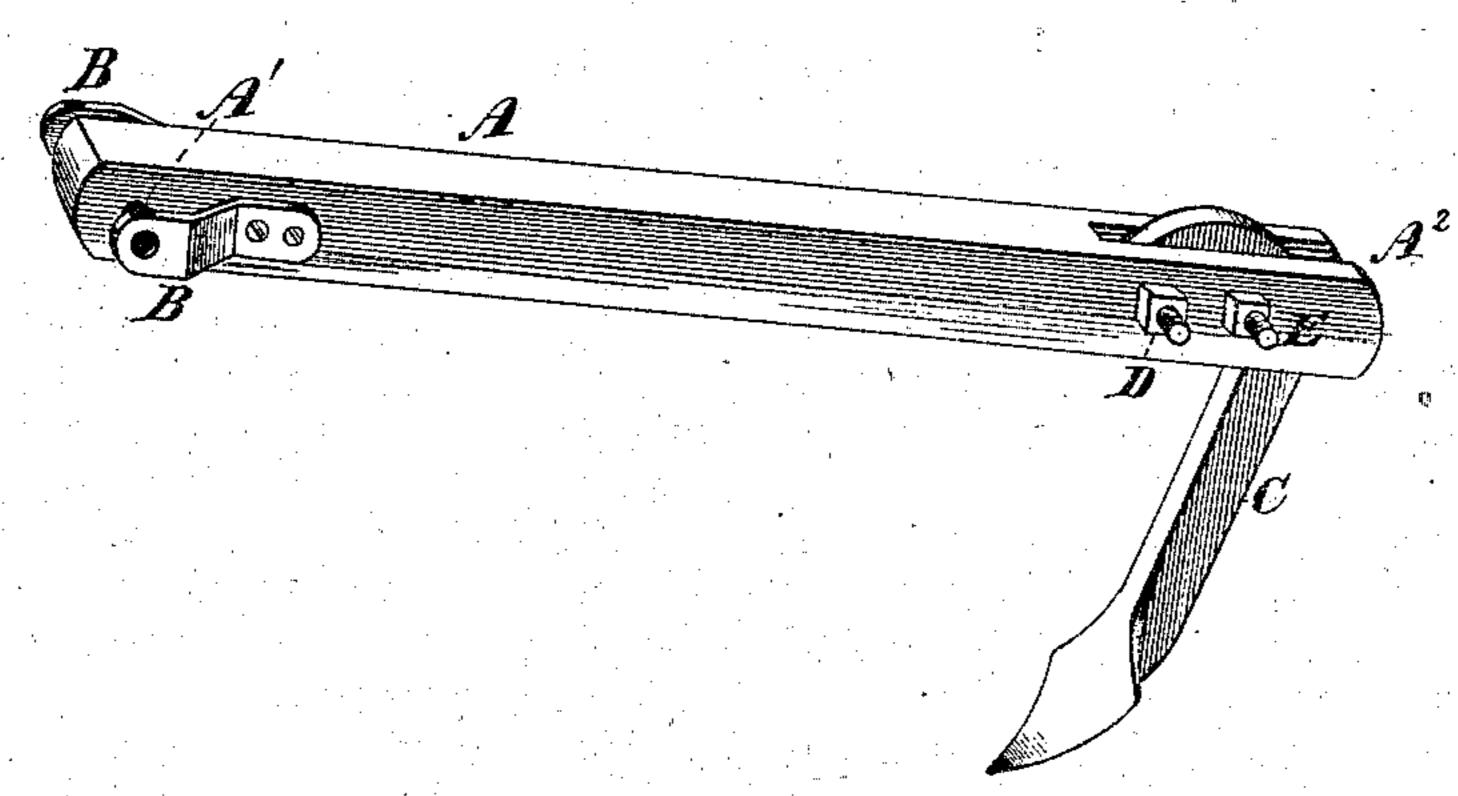
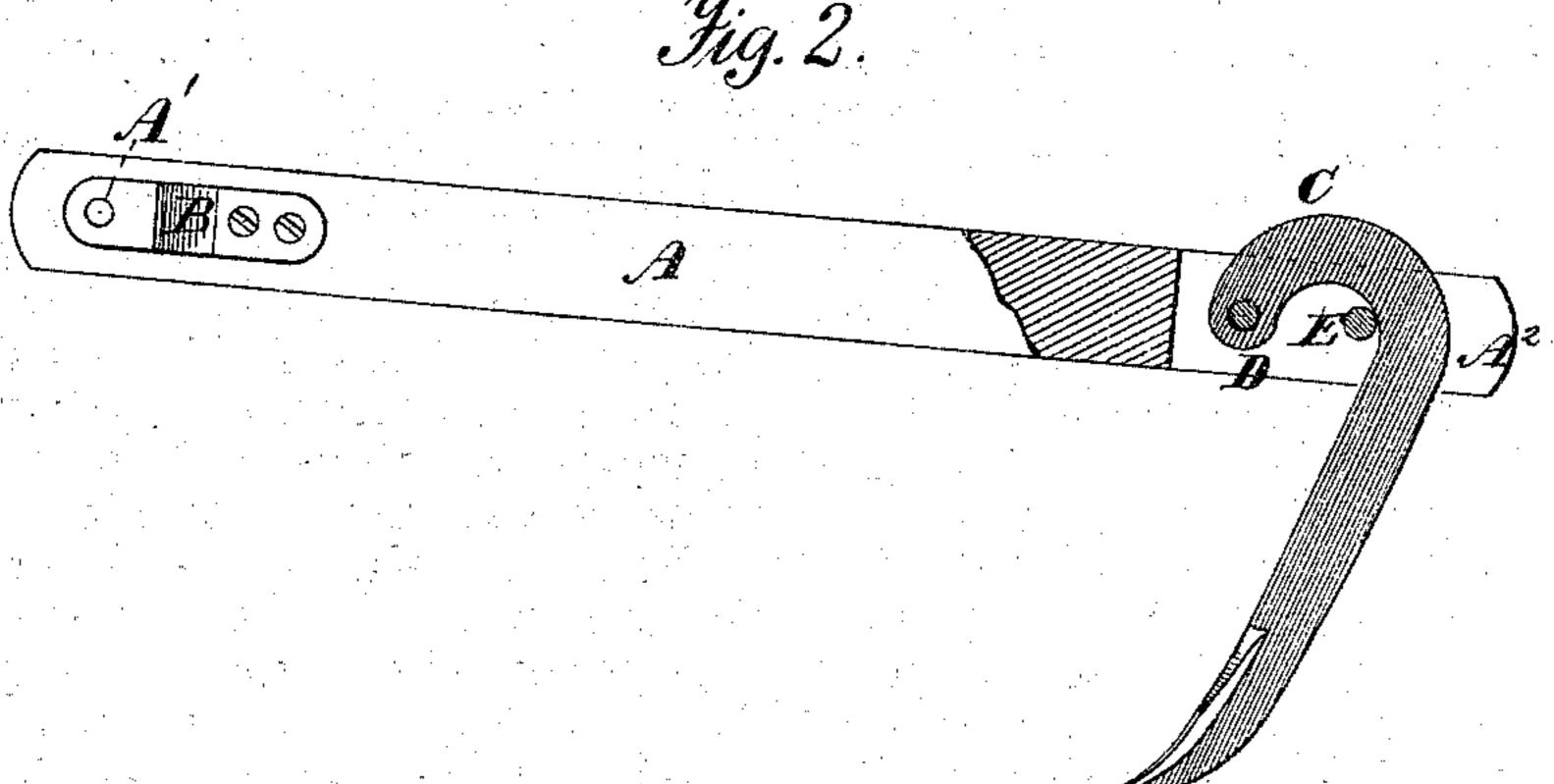
## J. H. & J. W. THOMAS. Seeding-Machines.

No.152,706.

Patented June 30, 1874.







## UNITED STATES PATENT OFFICE.

JOHN H. THOMAS AND JOSEPH W. THOMAS, OF SPRINGFIELD, OHIO.

## IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 152,706, dated June 20, 1374; application filed April 8, 1874.

To all whom it may concern:

Be it known that we, John H. Thomas and JOSEPH W. THOMAS, of Springfield, in the county of Clarke and State of Ohio, have invented a new and useful Improvement in Seeding-Machines; and we do hereby declare that the following is a specification of the same.

This invention relates to the drag-bars and shovel-standards of broadcast seeders; and consists mainly in the manner of attaching the standards to the drag-bars.

In the annexed drawings, Figure I is a perspective view of a drag-bar. Fig. II is an elevation of the same, partly in section.

The same letters in both figures indicate

identical parts.

A is a wooden bar, having a hole bored through it at A1, to receive a round rod attached to the frame of the machine. In order to maintain drag-bars of this construction at their proper spaces apart, we attach the braces B B on each side, extending so far as may be necessary, and attached in like manner to the round rod. The bar A is also cut so as to leave a slit in the rear end, as at A2, to receive the shank of the shovels C. These are forged to the form clearly shown in the drawings, and secured in the slit by the bolt D. Another threaded bolt, E, is passed through the bar A, as shown, in such place as to sustain the shovel when in proper position. The ends of the bifurcated bar are then drawn down by the bolt E, or by the united action of the bolts E and D, until clamped against the standard of the shovel with such force that the friction shall maintain the shovel in position while passing through mellow earth, but not so tight but that it will yield to an excessive resistance before force enough is applied to break the shovel.

We are aware that bifurcated wooden dragbars have heretofore been clamped on the head

of the standard for this purpose; but a much greater force must be applied to prevent it from turning on a center than is required with equal surface to prevent the standard from sliding endwise through the gripe.

By the form given to the standard we obtain not only the gripe on the pivoted end, but also a gripe against the sides of the standard, so that from its form it must be moved in the direction of its length; a much less restraining force will then hold the standard with

requisite tenacity.

We are aware, however, that the principle of so applying the gripe on cultivator-teeth as that the friction shall act on a part drawn lengthwise has been heretofore utilized in the case of cultivator-teeth having a curved arm attached to the standard, which extended between surfaces, by which it could be griped. Our device has its distinguishing feature in that construction, as shown, by which the shank is itself so bent as to give effect to the double action of the joint at the eye and the compressing bolt E. By making it in one piece, its construction is greatly cheapened, as compared with that class when an arm has to be welded onto the shank.

What we claim as our invention, and de-

sire to secure by Letters Patent, is—

In combination with the drag-bar A, bifurcated at A<sup>2</sup>, the curved shovel-standard C, bent as shown, and pivoted by a bolt at D, and clamped by bolt E, substantially as shown and described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

> JOHN H. THOMAS. JOSEPH W. THOMAS.

Witnesses:

A. P. LINN COCHRAN,