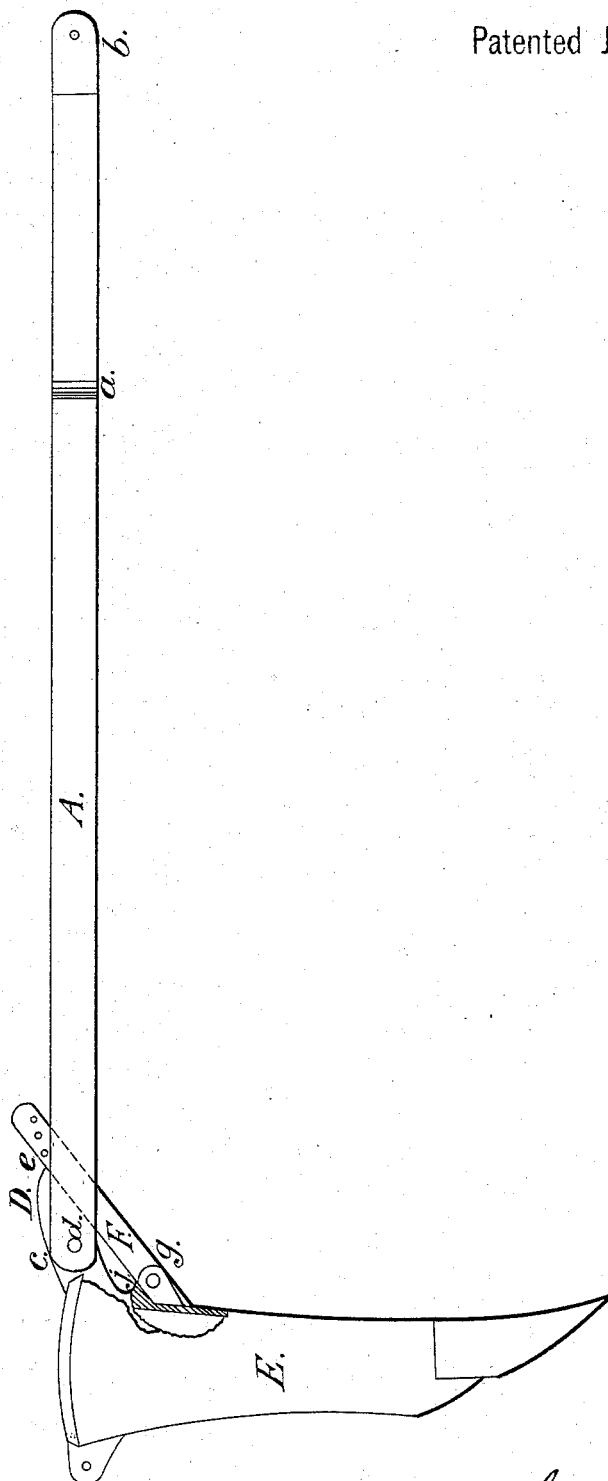


THOMAS & MAST.

Seed-Drill Teeth.

No. 48,112.

Patented June 6, 1865.



Witnesses:

*E. M. Kean.*  
*P. T. Dodge*

Inventor:

*J. H. Thomas*  
*By their P. P. Mast*  
*Tattnall Smith & Dodge*

# UNITED STATES PATENT OFFICE.

J. H. THOMAS AND P. P. MAST, OF SPRINGFIELD, OHIO.

## IMPROVEMENT IN DRAG-BARS FOR GRAIN-DRILLS.

Specification forming part of Letters Patent No. 48,112, dated June 6, 1865.

*To all whom it may concern:*

Be it known that we, J. H. THOMAS and P. P. MAST, of Springfield, in the county of Clarke and State of Ohio, have invented a new and Improved Drag-Bar and Tooth for Seed-Drills; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, the same letter referring to the same part wherever it occurs.

The nature of our invention consists in such an arrangement and construction of parts as shall permit the use of an arm or brace to support the drill-tooth when being drawn forward without permitting the said brace or arm to drop down if the wooden pin is broken.

That others may understand the construction and operation of our invention, we will particularly describe it.

A is the drag-bar, constructed of two flat strips of iron laid side by side and secured in that position, but only touching at one point, *a*, the ends *b* being spread some distance apart, in order to obtain a wide bearing upon the rod to which the drag-bars are attached, and the ends *c* being separated sufficiently far to inclose arm D, through which and the drag-bar the pivot-bolt *d* is inserted.

The drill-tooth E is constructed in any ordinary manner, those used by us being of the form represented. Upon the forward side is the arm D, having the straight face *e*, against which the upper edge of the brace-arm F rests.

The arm F has in its upper end suitable holes, through which a wooden pin is inserted to support the tooth E in the desired position. The arm F is attached to the tooth by being fastened at its lower end between two lugs, one of which is shown removed by the drawings. The space between the lugs is of the form represented—*i. e.*, the metal is left between them on the upper side sufficient to fill out to a line which would coincide, if prolonged, with the face *e*. A shoulder is thereby formed at *i*, against which the upper edge of the arm F rests at the same time that it rests against the face *e*. With this arrangement a single pin through the lower end of the arm F and the lugs, as at *g*, is sufficient to secure said arm F in the required position, or so that it will not drop down when the wooden pin is broken. The lower end of the arm F is slightly elongated and beveled downward, as shown, in such a manner that the above-named security from turning on the pin *g* will be increased.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

So constructing the arm F and lugs *i* that when the pin *g* is in place the said arm will be maintained in position in contact with the face *e*, substantially as set forth.

J. H. THOMAS.  
P. P. MAST.

Witnesses:

H. S. SHOWERS,  
GEO. ARTHUR.