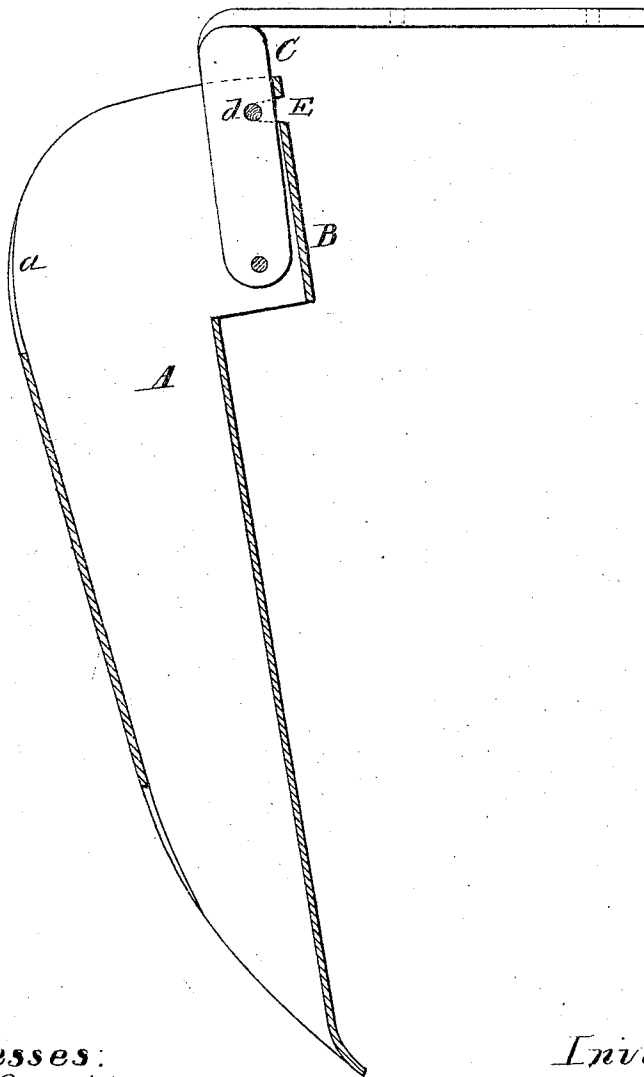


J. D. WELSH.
Grain Drill-Teeth.

No. 135,186.

Patented Jan. 21, 1873.



Witnesses:
E. A. Bates.
George E. Upham.

Inventor:
James D. Welsh.
Chapman Hosmer & Co.
Attys.

UNITED STATES PATENT OFFICE.

JAMES D. WELSH, OF FARMLAND, INDIANA.

IMPROVEMENT IN GRAIN-DRILL TEETH.

Specification forming part of Letters Patent No. **135,186**, dated January 21, 1873.

To all whom it may concern:

Be it known that I, JAMES D. WELSH, of Farmland, in the county of Randolph and State of Indiana, have invented a new and valuable Improvement in Grain-Drill Teeth; and I 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.

The figure of the drawing is a representation of a sectional view of my invention.

My invention has relation to teeth for grain-drills; and it consists in the novel construction of a tooth having a rectangular recess formed in its front wall to receive the pivoted shank, which is held rigid by a yielding wooden pin; and it also consists in constructing the tooth with a slot or opening in its back part to receive said shank when the tooth is raised, all substantially as hereinafter more fully described.

Referring to the drawing, A designates the drill-tooth constructed with a rectangular socket, B, on its front side, said socket extending from the mouth of the tube about three inches downward. The back part of this socket

opens into the interior of the tooth and holds within it the vertical arm of the shank C, pivoted near its lower end, and held firmly by means of a wooden peg, *d*, passing through an opening in the socket. When the tooth comes in contact with an immovable obstacle the peg *d* breaks and allows the tooth to turn upward and backward, the shank being received in the opening or slot *a* at the back of the tooth. E designates the opening in the socket through which the peg passes. This opening is in the form of a slot having a large mouth, and is formed as shown, so that when the peg is broken its ends will fall out.

What I claim as my invention, and desire to secure by Letters Patent, is—

The drill-tooth, constructed as described, having the slot E in the rectangular socket B, and adapted for connection with the shank C, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES D. WELSH.

Witnesses:

WILLIAM S. ROBBINS,
J. MACY.