

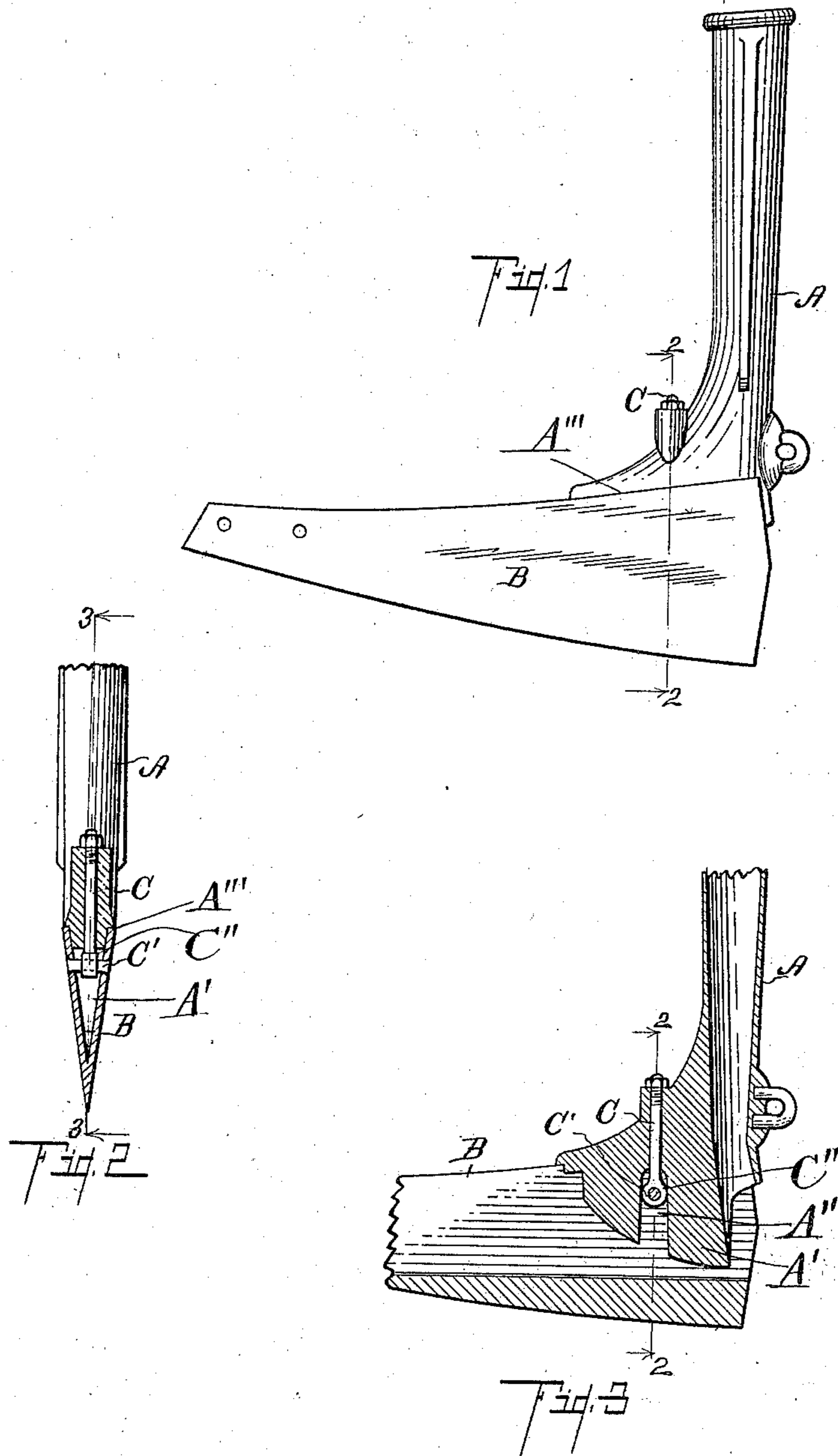
No. 705,030.

Patented July 22, 1902.

W. F. BROWN.  
SHOE FOR GRAIN DRILLS.

(Application filed May 10, 1901.)

(No Model.)



Witnesses:

S. Alice Earl.  
O. to A. Earl

Inventor,

William F. Brown  
By Fred L. Chappell  
Att'y.

# UNITED STATES PATENT OFFICE.

WILLIAM F. BROWN, OF DOWAGIAC, MICHIGAN, ASSIGNOR TO THE DOWAGIAC MANUFACTURING COMPANY, OF DOWAGIAC, MICHIGAN.

## SHOE FOR GRAIN-DRILLS.

SPECIFICATION forming part of Letters Patent No. 705,030, dated July 22, 1902.

Application filed May 10, 1901. Serial No. 59,588. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. BROWN, a citizen of the United States, residing at the city of Dowagiac, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Shoes for Grain-Drills, of which the following is a specification.

This invention relates to improvements in shoes for grain-drills.

The object of the invention is to provide a shoe for a grain-drill which is easily detachable, the same being so constructed that it is very simple, with scarcely any additional parts, and at the same time the shoe is retained as securely in position as by the usual rivets.

Minor objects will appear in the detailed description to follow.

I accomplish these objects by the devices and means described in this specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a grain-drill shoe with its boot attached. Fig. 2 is a vertical detail sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a vertical detail sectional view taken on line 3 3 of Fig. 2.

In the drawings all of the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is the boot, and B is the shoe. The shoe is constructed in the usual form from two plates of metal, the lower edges of which are welded together and an upper rear portion of which is left open like a V. The lower end of the boot A extends forwardly into a kind of bracket, and this extends downwardly in a piece somewhat wedge-shaped at A'. A vertical slot A'' is in this wedge-shaped part, and a bolt C, having an eye C'' at its lower end, which is pivoted on a rivet or pivot C', through the sides of the shoe B.

A shoulder A''' is on both sides above the wedge-shaped portions A', against which the side plates of the shoe B rest. The slot A'' engages the eye C'' of the bolt C quite closely to prevent a forward-and-backward movement of the shoe. A screw-threaded nut is on the upper end of the bolt C and fits against a suitable seat to draw the shoe up against the boot, so that when this bolt C is tightened the shoe is drawn into position and the wedge-shaped portion A' crowded into the V-shaped opening in the top of the shoe, and the shoe is retained securely in position and at the same time is easily removed by loosening a single bolt.

The shoes of grain-drills wear out, and it is consequently very desirable to renew the same or to remove them for the purpose of sharpening.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the boot A with a wedge-shaped portion A' at the lower end thereof having suitable shoulders A''' above and a vertical slot A'' therein; and a shoe B with a V-shaped opening between its side plates; and a bolt C with an eye C'' embracing a pivot C' through the shoe, the said eye C'' fitting the said slot closely said bolt extending upwardly through the part A' of the boot A.

2. The combination of a boot having a wedge-shaped portion at the bottom with a slot therein; a shoe with side plates forming a V-shaped opening above to embrace the wedge-shaped part of said boot; a bolt secured to a suitable pivot between the sides of the shoe and extending upwardly through the wedge-shaped part of the boot, for the purpose specified.

3. The combination of a boot with a suitable wedge-shaped portion at the bottom containing the vertical slot; and a shoe, the side plates of which form a V-shaped opening above to embrace the wedge-shaped portion of said boot, and a bolt connected with the shoe and extending upwardly for attaching the same to the boot, as specified.

4. The combination of a boot with a suit-

able wedge-shaped portion at the bottom;  
and a shoe, the side plates of which form a  
V-shaped opening above to embrace the  
wedge-shaped portion of said boot; and a bolt  
5 connected with the shoe and extending up-  
wardly for attaching the same to the boot, as  
specified.

In witness whereof I have hereunto set my  
hand and seal in the presence of two witnesses.

WILLIAM F. BROWN. [L. S.]

Witnesses:

C. L. FOWLE,  
F. W. JONES.