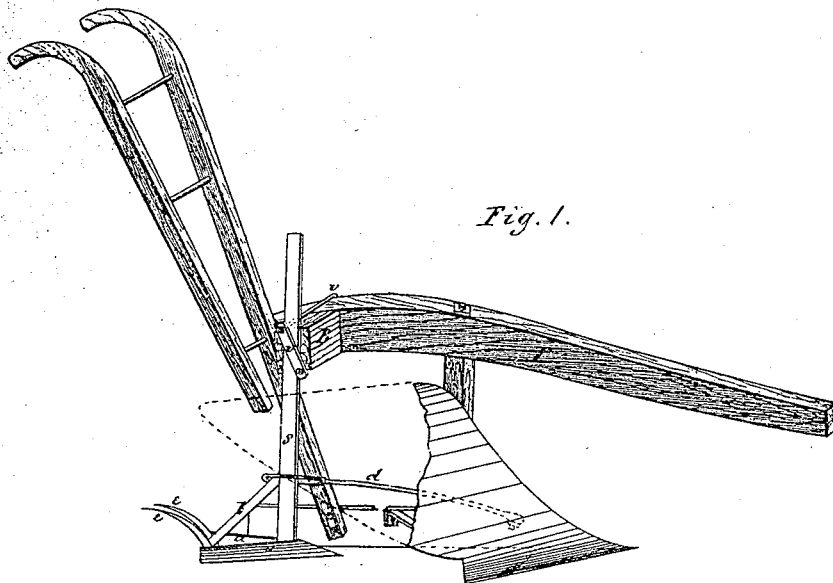


L. E. Burdin,
Subsoiler.

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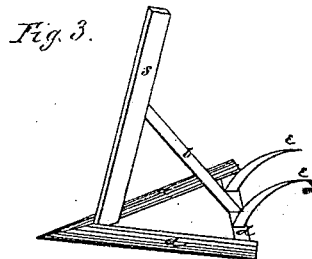
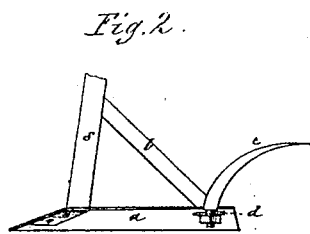
No. 108,002.

Patented. Oct. 4. 1870.



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Witnesses:

H. J. Arch
C. A. O'Neil

Inventor:

L. E. Burdin.

PER

Attorneys.

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UNITED STATES PATENT OFFICE

LUTHER E. BURDIN, OF PARIS, KENTUCKY.

IMPROVEMENT IN SUBSOIL-PULVERIZING ATTACHMENTS FOR PLOWS.

Specification forming part of Letters Patent No. 108,002, dated October 4, 1870.

To all whom it may concern:

Be it known that I, LUTHER E. BURDIN, of Paris, in the county of Bourbon and State of Kentucky, have invented a new and Improved Subsoil-Pulverizing Attachment for Plows; and I 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, in which—

Figure 1 is a perspective view, a portion of the mold-board of the plow being removed to reveal the form and application of the subsoil attachment. Fig. 2 is a sectional view of the attachment; and Fig. 3, a perspective view of the same.

The object of this invention is to provide for public use a simple, cheap, and effective instrument which can be readily attached to a plow, and conveniently operated therewith, and which will, at the same time, effectually pulverize the subsoil. This object is accomplished by the use of a simple apparatus, consisting of a triangular blade, *a a'*, provided with sharp pulverizing-teeth *e e*, and connected to the rear end of the plow-beam *P* or a block, *B*, attached thereto by means of a standard, *s*, and adjusting-strap *u*.

A brace, *b*, may be employed to strengthen the connection between the standard and blade, and a draft-rod, *r*, may extend from the standard to a bolt or staple on the rear side of the mold-board, or wherever may be most convenient, according to the form of plow employed.

The draft-rod may be fastened to the standard or brace in any suitable manner; or a loop may be made at its rear end, through which the standard may extend, as shown in the drawing.

The two side pieces, *a a'*, of the triangular blade incline downward from the rear to the front edge, the latter edge being made sharp and cutting. These pieces are connected by a cross-piece, *a'*, near their rear end, which is, likewise, a cutting-blade, having its front edge inclined downward.

The cutters or pulverizing-teeth *e e* are attached to the rear piece, *a'*, in any suitable manner, and curve upward and backward, as shown in the drawing. There may be as many of these teeth as may be thought desirable to use in any particular soil, and they may be so attached that they, or any of them, can be removed or changed in position or inclination. They may, if preferred, be attached to the side pieces or to other cross-pieces in front of the one shown in the drawing.

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

The subsoil-pulverizing attachment herein described, consisting, essentially, of the parts *a a'*, *e e*, *s*, and *d*, when constructed to operate substantially in the manner and for the purpose described.

LUTHER E. BURDIN.

Witnesses:

SOLON C. KEMON,
CHAS. A. PETTIT.