E. P. LYNCH & E. A. WRIGHT.

CULTIVATOR.

No. 191,451. Patented May 29, 1877.

Fig. 2.

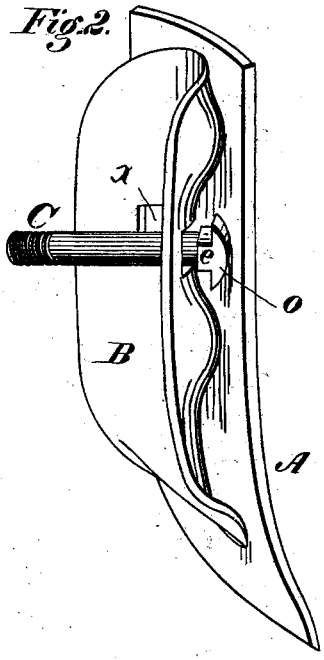


Fig. 1.

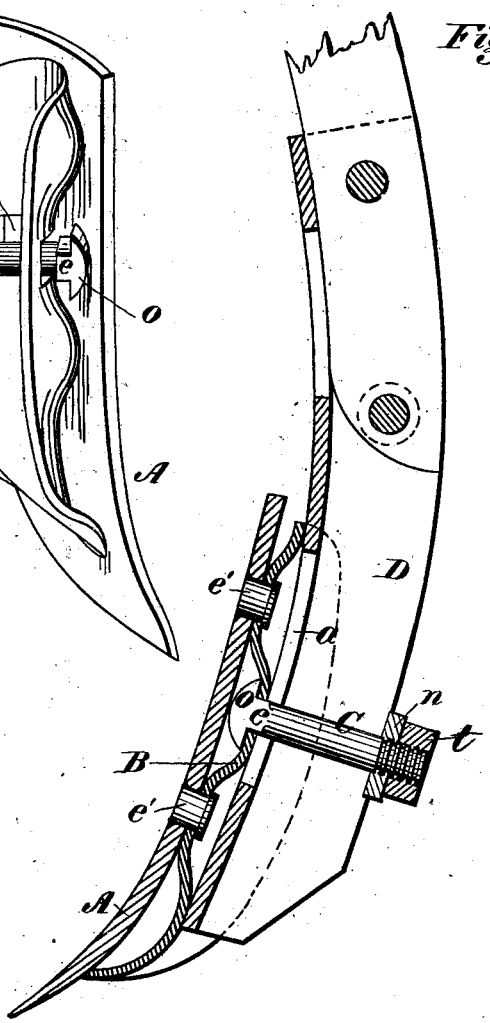
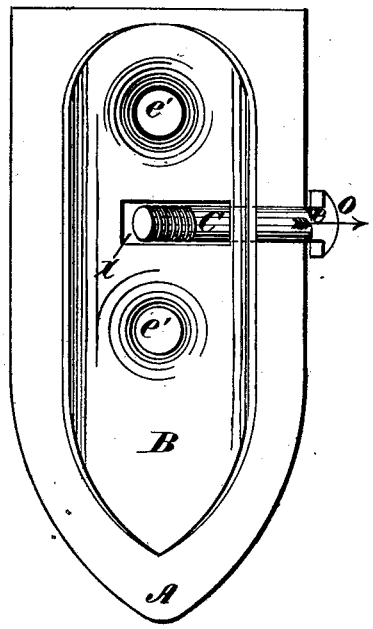


Fig. 3.



Witnesses:

Donn B. Twitchell

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UNITED STATES PATENT OFFICE.

EDWARD P. LYNCH AND EDGAR A. WRIGHT, OF DAVENPORT, IOWA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **191,451**, dated May 29, 1877; application filed November 8, 1876.

To all whom it may concern:

Be it known that we, EDWARD P. LYNCH and EDGAR A. WRIGHT, both of Davenport, in the county of Scott and State of Iowa, have invented a new and valuable Improvement in Cultivators; and we 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Our invention consists in a novel method of securing a cultivator-shovel to its shank, and is designed as an improvement on the device patented to us August 1, 1876, and numbered 7,250.

In the accompanying drawing, Figure 1 is a vertical section of our improved device; Fig. 2, a perspective view of the shovel, shovel-block, and bolt, showing one manner of inserting and removing the bolt; and Fig. 3, a rear-face view of the same parts, illustrating another method of accomplishing the same result.

The object of our invention is to provide a simple means of attaching a cultivator-shovel to its shank which shall admit of its ready attachment, adjustment, or removal.

In our device above referred to the shovel was riveted or otherwise securely attached to a shovel-block, said block being provided with an elongated slot having an enlargement at one end, said enlargement being of sufficient size to allow the square shank of the fastening-bolt to turn therein and allow the T-head of the bolt to be brought in proper position to be drawn through the slot, in order to remove the shovel. In the present case the shovel is mounted on a shovel-block; the block provided with an elongated slot, which extends around to one side far enough to permit the bolt to be shoved out forward or turned in the slot, and a bolt having a T-head and a square shank is used as in the former case, but the enlargement at the end of the slot is dispensed with and the bolt so arranged that it may be turned and taken out through the back of the shovel-block as before, or it may be withdrawn through the front of said block without turning.

In the drawing, A represents the shovel, secured to the block B by means of rivets e', said block resting against the shovel A at the points where the rivets e' are located, but being curved outward away from the shovel between these points. Through this outwardly-extending portion is formed a slot, x, extending in a horizontal position partially across the block B, and around to one side far enough to permit the bolt to be shoved forward, as shown in Fig. 3, so it can either be turned therein and drawn out backward or or shoved out forward, as indicated by the arrow marked thereon.

We next provide a bolt, C, which has its shank e made square, and which has a T-shaped head, o. The head of the bolt C being turned lengthwise of the slot x, is passed through the same at one end of the slot until the square portion of the bolt is carried through and the round portion thereof carried into said slot, when the bolt C may be readily turned, thus bringing the T-head o across the slot x at a right angle thereto, when, by drawing the bolt C backward, the square shank e will be drawn into the slot x, thus preventing any further turning of the bolt. In this position the bolt C may be moved along to its proper place midway of the slot, the T-head o locking against the front face of the block B, as shown in Fig. 1.

The shovel A is then placed upon the shank D, the stem of the bolt being inserted through the slot a of the U-shaped shank, as shown in Fig. 1, after which a small metal cross-piece, n, is slipped on the bolt, so as to bear against the rear edge of the shank, and the whole is secured by a nut, t.

Another manner of inserting and withdrawing the bolt C is accomplished without turning the bolt, it being in this case inserted and removed at the forward side of the block B. In order to accomplish this result it is only necessary to move the T-head o of the bolt along to one end of the slot x, the opposite end of said bolt being moved toward the other end of the slot, thus bringing the bolt

and slot nearly in the same line, as shown in Fig. 2, when the bolt may be withdrawn past the edge of the shovel, as shown in Fig. 3, the bolt being moved in the direction indicated by the arrow.

In using the former of these modes of inserting and removing the bolt C, the square shank *e* is necessarily made shorter than heretofore, in order that a short movement of the bolt may suffice to carry the square shank *e* out of the slot *x*, and thus allow the bolt to turn in said slot. In the latter case, however, it will be seen that the bolt may have a square shank of any length without interfering with the operation of the device.

This construction admits of all the adjustments accomplished by our device previously referred to, said adjustments being made in precisely the same manner in both cases.

The shovel in this case may be more readily attached to the shank or removed therefrom than with our former device.

Having thus described our invention, what we claim is—

The curved block B, having the transverse slot *x* extended around to one side to permit the bolt C to be shoved forward to bring its round portion in the slot and allow it to be turned therein or shoved out forward, substantially as shown and described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

EDWARD P. LYNCH.
EDGAR A. WRIGHT.

Witnesses:
JOHN M. PRICE,
A. JACKSON HIRSCH.