

B. C. BRADLEY.

Cultivators.

No. 135,401.

Patented Feb. 4, 1873.

Fig 3

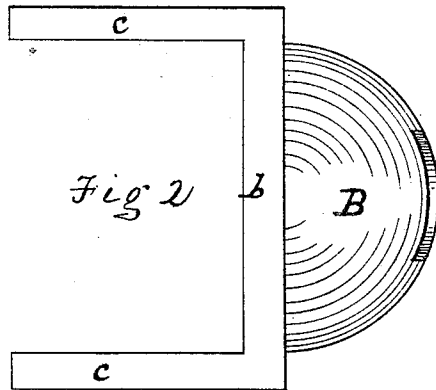
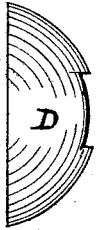


Fig 1

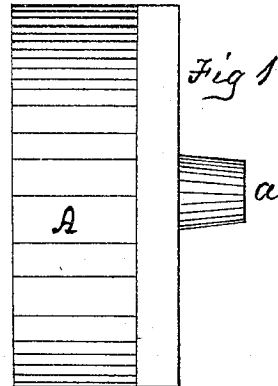


Fig 5

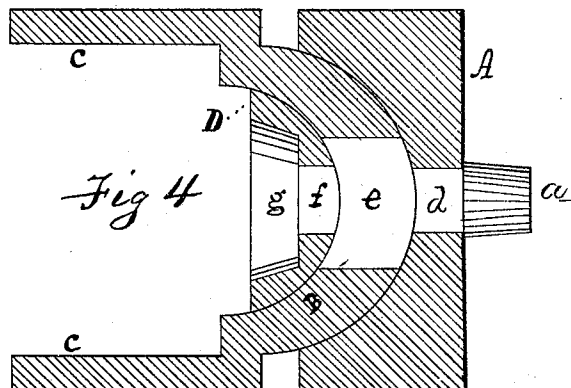
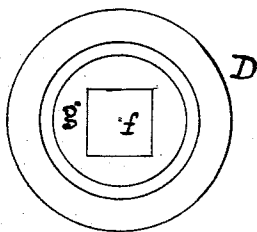
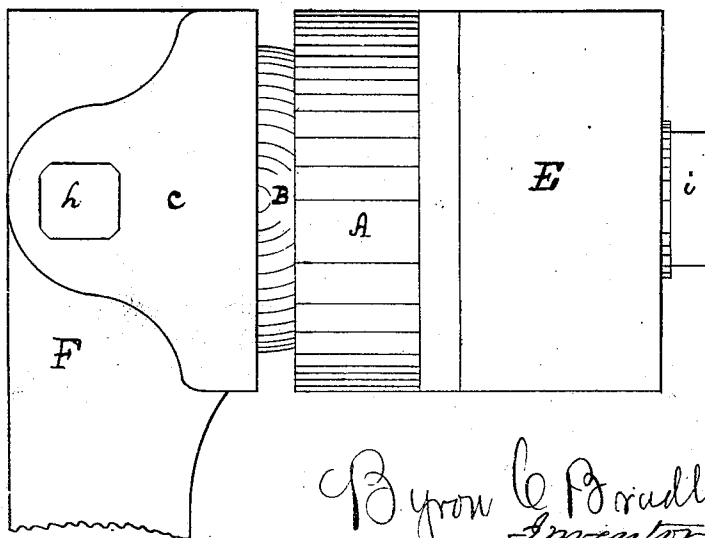


Fig 6.



Witnesses.
C. A. West
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UNITED STATES PATENT OFFICE.

BYRON C. BRADLEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 135,401, dated February 4, 1873.

To all whom it may concern:

Be it known that I, BYRON C. BRADLEY, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Corn-Cultivators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making a part of this specification, in which--

Figures 1, 2, and 3 represent the three parts of my device detached in side elevation. Fig. 4 represents these parts as connected in use in section; Fig. 5, a plan view of Fig. 3. Fig. 6 represents the device attached to the beam and standard of a cultivator.

The drawing is full size.

It is customary to use bent standards for the purpose of carrying the shovels away from the beam; also, to so construct cultivators that the shovels can be turned so as to throw the dirt toward or from the plants.

The object of my invention is to so construct a device that, by its use, the standard can be securely attached to the beam, and yet be so far removed therefrom that a straight standard can be used, while the standard can be adjusted so that the shovel will throw the earth to or from the plants. It is also desirable that the standard be so connected with the beam that when the plow comes in contact with an obstruction, the standard will be thrown out of line to prevent breaking of any of the parts. This result is also accomplished by the use of my device. I use a ball-and-socket joint.

In the drawing, A represents the cup portion of such joint, having on the back side two or more pins, *a*, which enter the plow-beam to prevent A from turning thereon. B is the ball part of the joint, fitting the socket in A. B also has a socket on the back side, and is cast with the parts *b c c*, the two latter being ears, by means of which and a bolt this piece is secured to the standard. D is a half sphere, fitting the socket in the back side of B. Through the center of A is a hole, *d*. In B is a slot, *e*. D has a square hole, *f*, and a recess, *g*, on the back side to receive the head of the bolt.

The device is attached to the cultivator as follows: The parts A B D are placed in the

position shown in Fig. 4, and a bolt is passed through the openings *f e d*, the head of the bolt passing into the recess *g*. The bolt is passed through the plow-beam, Fig. 6, and secured by means of a nut, *i*. The standard F is then attached by passing a bolt, *h*, through it, and the ears *c c* secured by a nut.

In Fig. 6, for convenience, the plow-beam E and the plow-standard F are shown standing at right angles to each other; but in use the standard F can be placed at any desired angle with the beam E, and the slot *e* in B permits the standard to be so adjusted that the shovel will throw the dirt to or from the plants, as may be desired; and when the standard has been placed in the desired position, it can be secured and held firmly in place by tightening the nut *i*, the friction between the ball B and its socket being sufficient to prevent the movement of the parts by ordinary use.

The parts may be so adjusted that in case the shovel comes in contact with any obstruction the ball B will rotate in its socket, permitting the shovel to pass over the obstruction, dispensing with the use of a safety-pin, though a safety-brace and safety-pin might be used in connection with my device.

The best result follows the use of the piece D in connection with the other parts; but this piece D might be omitted, and the remaining parts of the device be used with considerable success, the head of the bolt being formed to fit the socket, into which D fits.

This device may be used with shovel-plows.

What I claim as new is as follows:

1. The parts A and B, constructed substantially as shown and described, and used in connection with a cultivator or plow beam and standard, substantially as and for the purpose herein specified.

2. The parts A B, beam E, and standard F, in combination with the piece or washer D and bolt, the several parts being constructed and arranged substantially as and for the purpose described.

BYRON C. BRADLEY.

Witnesses:

E. A. WEST,
O. W. BOND.