N. S. SHIELDS.

Cultivator.

No. 106,733. Patented Aug. 23, 1870.

Fig. 1.

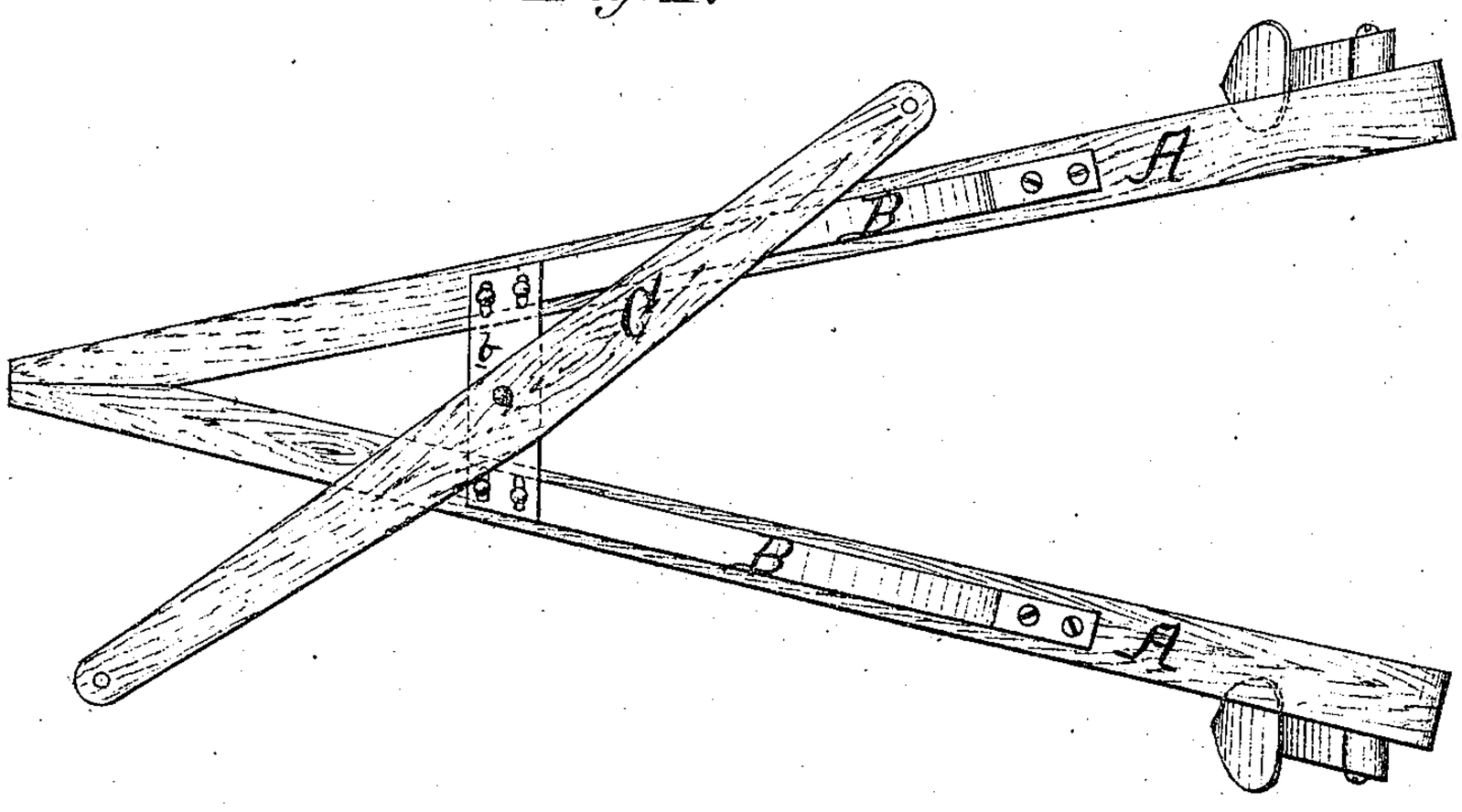
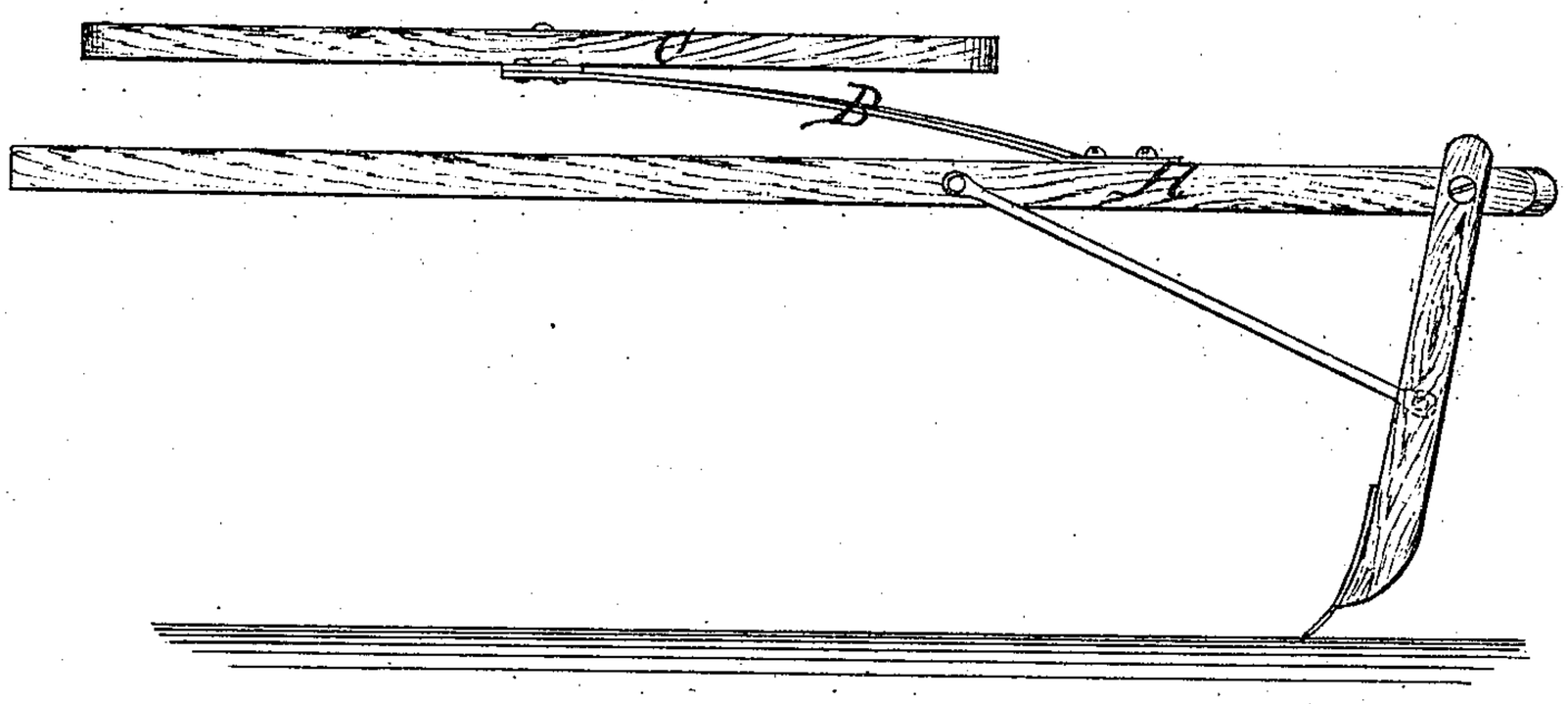


Fig. 2.



Witnesses:
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atty

UNITED STATES PATENT OFFICE.

NELSON S. SHIELDS, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **106,733,** dated August 23, 1870.

To all whom it may concern:

Be it known that I, NELSON S. SHIELDS, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Cultivators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention consists in the employment of springs in connection with the evener and shovel-beams of a cultivator, as will be fully described hereinafter.

In the drawings, Figure 1 represents a top view of my improved cultivator, and Fig. 2 a side elevation.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and method of operation.

A A represent the shovel-beams of a cultivator, to which are attached the shovel-standards in any proper manner.

B B represent springs, preferably of steel, which are secured at their rear ends to the beams A A, and united at their front ends by means of a cross bar, *b*, as shown. The attachment at the front, however, is not a rigid one, the parts being united by means of bolts passing through slotted openings, by which means either spring is permitted to vibrate to a certain extent without affecting the other.

C represents the evener, which is pivoted to the cross-bar *b*, as shown.

The operation is as follows: When the cultivator is not at work the springs are not depressed and the draft remains unchanged. When, however, the shovels are inserted into the ground and the strain becomes great the springs necessarily yield and adjust themselves in the direct line of draft, and thus relieve the team.

It will be obvious that a rigid connection between the evener and cultivator-beams can never be adjusted to suit all the varying circumstances of the case. By the interposition of springs, however, it is believed that the evener will always adjust itself, when the strain is at all great, to the direct line of draft.

I do not claim broadly the employment of springs for easing the draft of the cultivator; but,

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

The springs B B, with bar *b*, when constructed specifically as described and employed to connect the evener C directly to the beams A A of the cultivator, as described.

This specification signed and witnessed this 6th day of April, 1870.

NELSON S. SHIELDS.

Witnesses:
G. W. FORD,
CHARLIE S. FORD.