

W. P. BROWN.  
Improvement in Cultivators.

No. 128,701.

Patented July 9, 1872.

Fig. 1

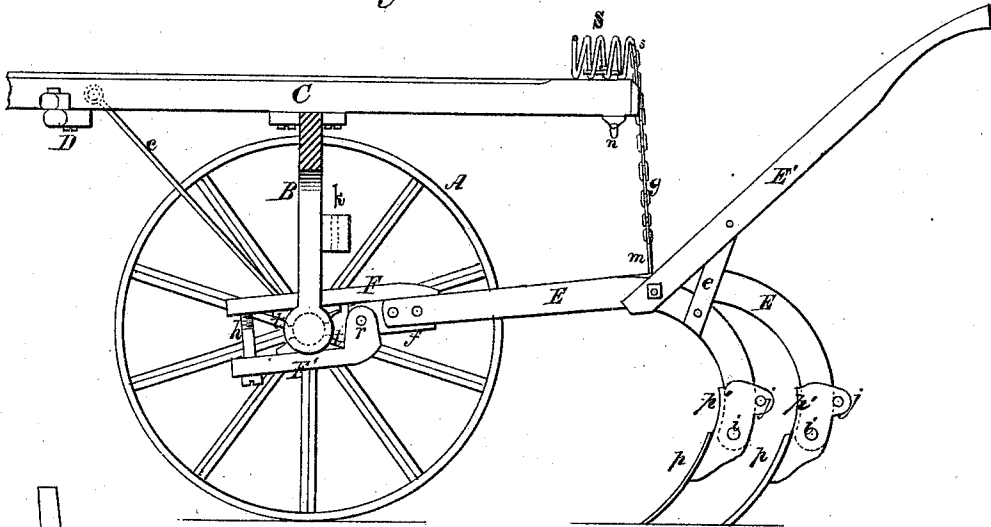
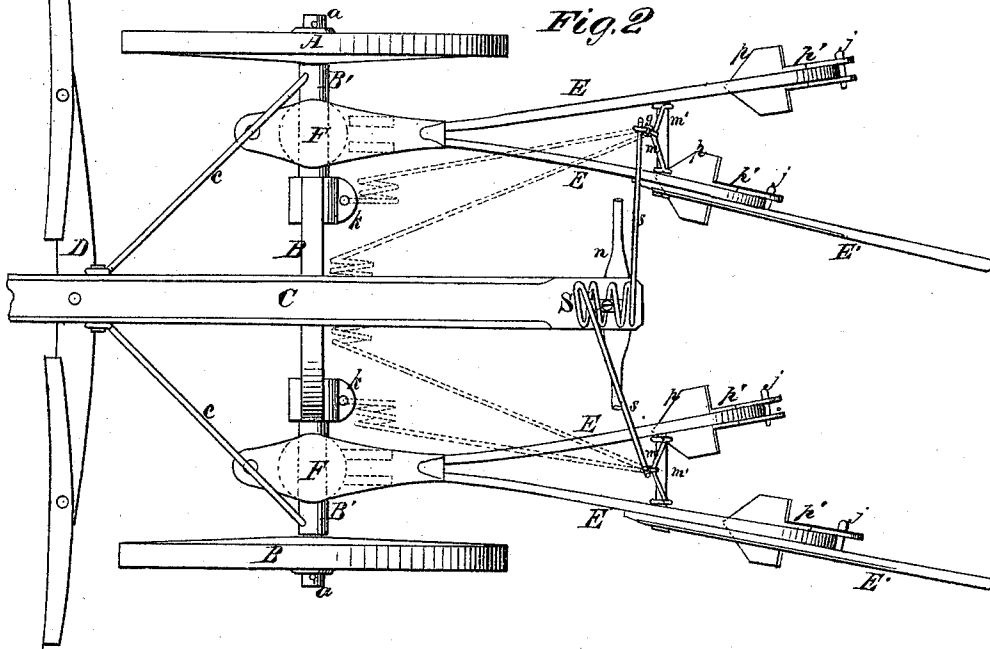


Fig. 2



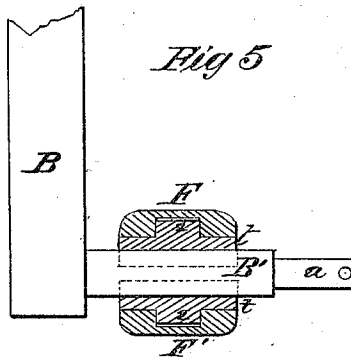
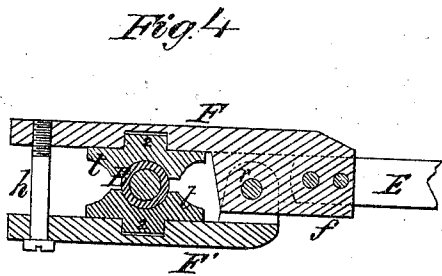
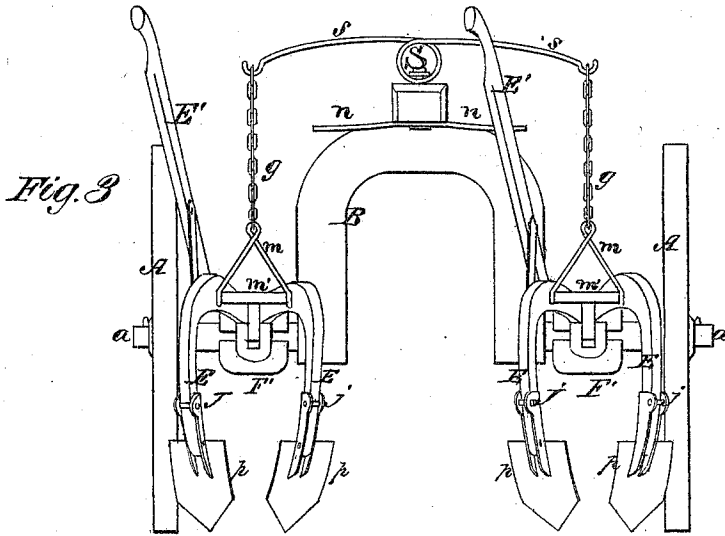
Witnesses:  
 R. G. Campbell,  
 J. H. Campbell.

Inventor  
 William P. Brown  
 by  
 Mason, Knicker & Lamson

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# UNITED STATES PATENT OFFICE.

WILLIAM P. BROWN, OF MALTA, OHIO.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 128,701, dated July 9, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM P. BROWN, of Malta, in the county of Morgan and State of Ohio, have invented an Improvement in Wheel-Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is an elevation of one side of my cultivator. Fig. 2, Plate 1, is a top view of the cultivator. Fig. 3, Plate 2, is an elevation of the rear end of the same. Figs. 4 and 5 show the adjustable swivel-connection for the cultivator-beams.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to improve wheel-cultivators by suspending the rear ends of the shovel-carrying beams from the carriage by means of springs and chains in such manner that, while the plowman is relieved from the weight of said beams and their shovels, the horses are also relieved of the weight of the tongue and double-tree during the operation of the machine, as will be hereinafter explained.

The following description will enable others skilled in the art to understand my invention.

In the accompanying drawing I have represented a machine for cultivating on both sides of a row at one time. The wheels A A are applied on short reduced portions *a a* of axles B' B', which latter extend out laterally from an arch, B, on which is secured a tongue, C. The tongue C extends in rear of the arch B; and it is rigidly secured thereto, and also braced to the axles, by means of rods *c c*. The curved shovel-beams E E, on each side of the center of the machine, are secured to a feather, *f*, that is formed on the upper one, F, of two adjustable clamping-jaws, F F'. The lower jaw F' is connected to the feather *f* by means of a pivot, *r*; and between the jaws are two journal-blocks, *t t*, the concave surfaces of which receive between them the axle B', and are confined to this axle by means of a screw, *h*. The blocks *t t* will oscillate vertically on their respective axles to allow the shovels to be raised or depressed; and by means of joints at 2 2 the shovel-carrying beams are allowed lateral vibration.

By loosening the screws *h h* the shovel-car-

rying beams can be adjusted further apart or nearer together on their axles.

The beams E E are provided with handles E' E', by which a person walking behind the machine controls the movements of the shovels. The shovels *p* are connected to their respective beams by means of pivots *i* and wooden pins *j*, which pass laterally through sheaths *p'* and through the beams, as shown in Fig. 1.

Should a shovel strike an obstruction in its path which would be liable to break it, the wooden pin will break and allow such shovel to fall back and pass safely over the obstruction.

The tongue C has secured upon its rear end a coiled spring, S, the ends of which extend out laterally, and form suspending-arms for the shovel-carrying beams. The end of each spring-arm is hooked, and has attached to it a chain, *g*, the lower end of which is attached to a bail, *m*, that is connected loosely to a cross-bar, *m'*, of the beams E E.

Instead of applying the spring-arms *s s* to the tongue C, they may be applied to the arch B, as indicated by dotted lines, Fig. 1. I do not, therefore, confine myself to any particular location of the spring-arms. These spring-arms *s s* suspend the shovel-beams, and at the same time, owing to their elasticity, allow the attendant to depress the beams, or to move them laterally with perfect freedom; at the same time the springs will sustain the weight of the rear ends of the beams and their shovels, thereby relieving the attendant of considerable manual labor.

When the machine is not plowing, the beams E are hung upon the rigid arms *n n* in the usual manner.

I do not claim the attachment of a shovel to its standard by a pivot and a wooden pin, as such device has been used long before my application.

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

Spring-arms and chains for sustaining the weight of shovel-beams, substantially as described.

WILLIAM P. BROWN.

Witnesses:

JOHN TIMMS,  
W. A. BROWN.