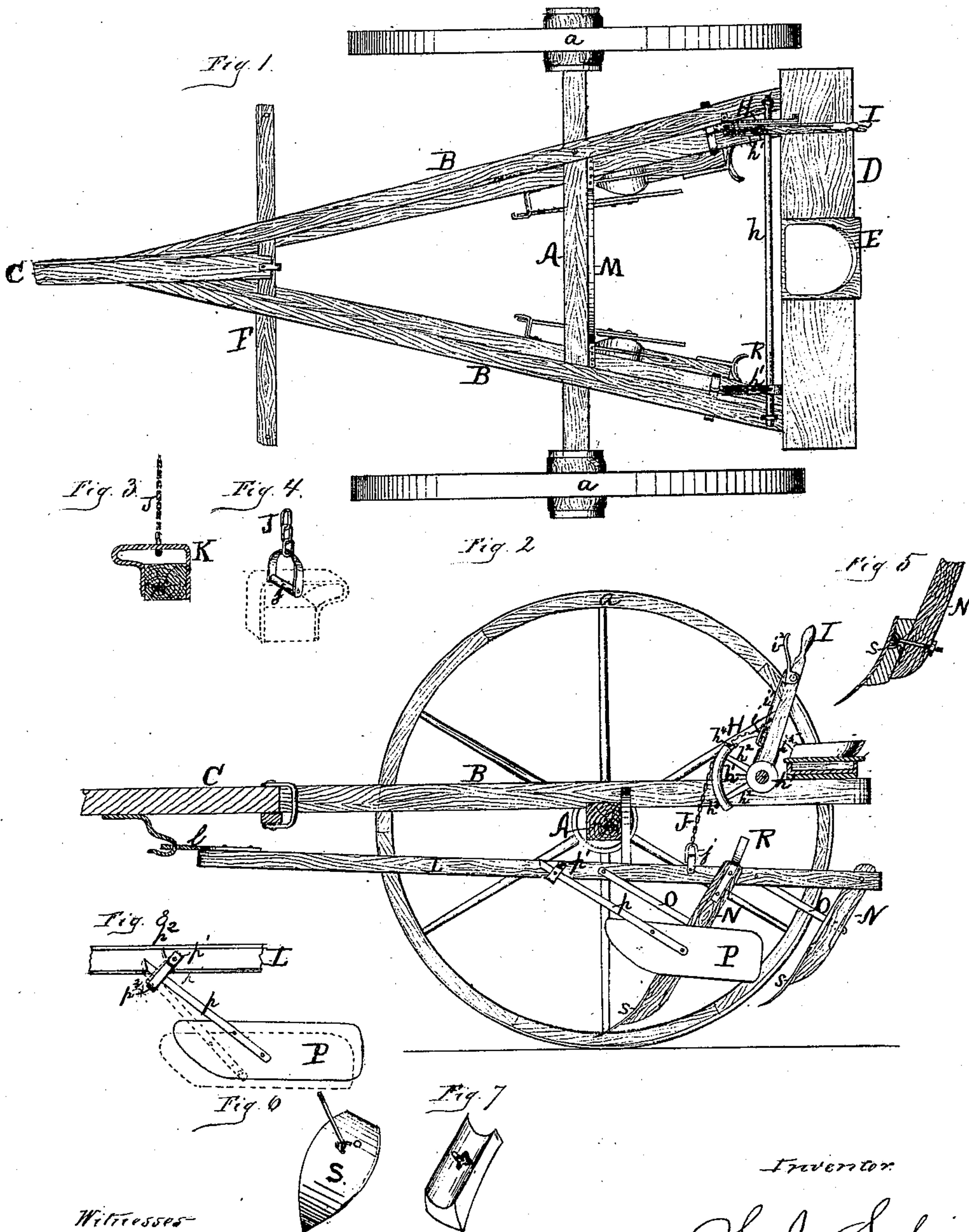


S. A. Sabin,

Cultivator.

No. 95,520.

Patented Oct. 5. 1869.



Witnesses
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SIDNEY A. SABIN, OF PECATONICA, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 95,520, dated October 5, 1869.

To all whom it may concern:

Be it known that I, SIDNEY A. SABIN, of Pecatonica, 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 relates to an improved cultivator; and it consists, first, in the method of attaching the lifting-chains to the shovel-beams, and, second, in the arrangement of the shields for protecting the plants.

It further consists, also, in the specific construction and arrangement of the various parts of the machine by means of which a simple and efficient cultivator is produced.

In the drawings, Figure 1 represents a plan view of my invention; Fig. 2, a sectional elevation; and Figs. 3, 4, 5, 6, 7, and 8 represent views of parts detached.

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

A represents the axle of my machine, which is supported in the ordinary manner by the wheels *a a*.

B B represent beams resting upon the axle, which, extending front and rear, as shown, unite in front with the pole C, and are joined in rear by the cross-timber D. These beams thus arranged and united form the frame-work of the machine, upon which and from which the other parts depend.

Upon the timber D is placed the seat E, the base of which consists of a tool-box having a hinged cover. The draft-bar or evener F is attached to the rear end of the pole, upon its under side, as shown in the drawings.

The lifting devices are as follows: H represents a semicircular rack-bar, which is arranged in the usual manner. *h* represents a shaft turning in suitable bearings, which is provided near each end with the disk *h'*, having the radial arms *h²* and grooved section *h³*. At the upper end of each of these sections is the hook *h⁴*, over which the upper link of the lifting-chain is caught. One of these disks is also provided with arms *h⁵*, between which is screwed the lever I. Upon this lever is placed the spring-catch, consisting of the pivoted bolt *i*, connecting-rod *i'*, and handle *i²*. This ar-

range of parts permits the lifting-chains J to be easily attached and detached when desired.

The lower ends of the lifting-chains are attached to the shovel-beams in a peculiar manner. They are provided at their lower ends with a roller-clevis, *j*, by means of which connection is made with the irons K upon the beams L, Figs. 3 and 4. The beams L are connected at their front ends by means of the U-shaped iron *l*, and near their centers by the bow-shaped bar M. The bearing-points of this bar are provided with holes in order that it may be adjusted to bring the shovel-beams nearer together or farther apart, as may be desired.

N N represent the shovel-standards, which are bolted to the beams L by a single bolt.

O O represent braces, the rear ends of which pass through the standards N, as shown, and are retained in place by a wooden pin.

P P, Fig. 8, represent shields for protecting the plants. These shields are attached to arms *p p*, the upper ends of which are pivoted to the bars *p' p'*, attached to the inner sides of the beams L. These bars extending first at right angles to the beams L are then bent downward at *p²*, and again at *p³* in toward the beam. The projecting ends formed at *p³* serve as stops to limit the downward motion of the shields.

R R represent stirrups upon which rest the feet of the driver, and by means of which the beams are moved to either side at will.

S S represent the shovels, which are not attached directly to the standard, but are separated from it by means of a block. This construction is similar to that shown in the patent of Stover, 1868, excepting that the staple is attached to the shovel in the direction of its length instead of its width. (See Fig. 7.)

It has been found in practice that when the staples are attached in line across the shovels, that the latter are extremely liable to fracture in hardening, and it is to remedy this evil that the change is made.

From the foregoing description the operation of my cultivator will be easily understood.

The shovels are raised and lowered by means of the lifting devices described. The beams are swung to either side at will, the attachment between the chains and beams being such that the shovels remain in precisely the same horizontal line in all lateral movements. This re-

sult, which is an important one, as it is essential that the ground shall be cultivated uniformly in depth, is obtained by the employment of the irons K, in connection with the roller-clevis *j*. If the lifting-chains be rigidly attached to the shovel-beams, it necessarily follows that any movement which causes them to deviate from the perpendicular must force the shovels to describe the arc of a circle, and consequently to stir the ground less deeply. By my peculiar method of attachment this difficulty is entirely obviated. If desired, the friction-roller may be dispensed with, and a ring may be used instead of the clevis. The shovels may be adjusted in regard to their distance from each other, as may be desired, by means of the bar M. The shovel-standards are so held by the braces that when a serious obstruction is met with the pin gives away, and no serious damage results to the machine. The shields for protecting the plants adapt themselves to the inequalities of the ground, being forced upward by the elevations, and falling by their own weight into the depressions. Their downward movement is limited at a certain point by the projecting end *p*³.

The construction of the frame is very simple,

and by its peculiar arrangement the operator is enabled to see the plants and to perform all the necessary operations incidental to the work without leaving his seat.

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

1. The sliding attachment described, by means of which the lifting-chains and the shovel-beams are united, consisting, essentially, of the clevises *j* and irons K, or their equivalents, as and for the purpose described.

2. The shield P, having the arms *p p*, in combination with the bar *p'*, as and for the purpose described.

3. The machine described, consisting, essentially, of the frame B B C D, lifting devices *h h' h² h³* I, clevis *j*, irons K, beams L, bar M, standards N, and shields P, the whole being combined and arranged as described.

This specification signed and witnessed this 17th day of July, 1869.

SIDNEY A. SABIN.

Witnesses:

G. W. FORD,
E. A. NICHOLS.