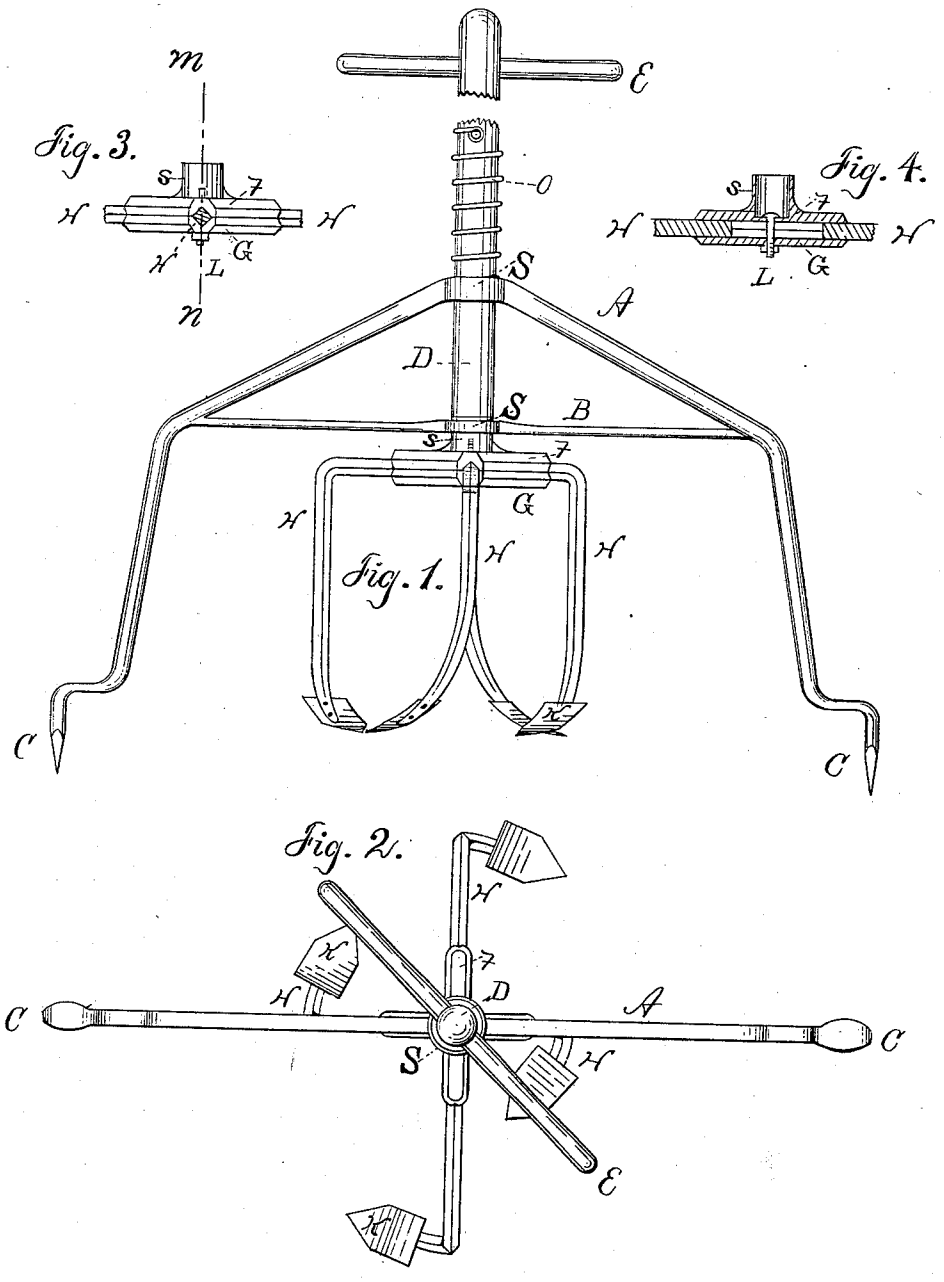
(No Model.)

B. COLVIN.

ROTARY HAND CULTIVATOR.

No. 264,138. Patented Sept. 12, 1882.



WITNESSES:

J. A. Hunt

A. W. Greene

INVENTOR

Benom Colvin

by Robt. H. Wiles

ATTORNEY

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

BENONI COLVIN, OF FREEPORT, ILLINOIS.

ROTARY HAND-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 264,138, dated September 12, 1882.

Application filed July 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, BENONI COLVIN, a resident of Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Rotary Hand-Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention is a rotary hand-cultivator adapted to the cultivation of tobacco, cotton, and other hilled crops. Its details are set forth in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of the cultivator; Fig. 2, a top view of the same; Fig. 3, a side view of the retaining-clamp F G, the shovel-carrying arms being cut just outside the clamp; and Fig. 4, a vertical section of the retaining-clamp through line *m n*, Fig. 3, and at right angles to the plane of the arms H H, shown in side view in Fig. 3.

The cultivator, as shown in the drawings, has for its base the arch A, provided with two vertical points, C C, and a horizontal brace, B. The brace B and arch A are each provided with an eye or ferrule, S, and in these ferrules rotates freely the vertical handle D, having a cross-handle, E, near its top. The handle D is inserted firmly in a socket, *s*, formed integrally with the upper plate, F, of the cross-shaped retaining-clamp F G. The upper plate, F, of the clamp has two V-shaped grooves at right angles to each other in its lower face, and the lower plate, G, has two corresponding grooves in its upper face. The two plates F G are held firmly together by a bolt, L, the grooves in their respective faces, when united, forming four horizontal sockets for the reception and retention of four arms, H H, bent at right angles in vertical planes outside the retaining-sockets, and provided at their lower ends with shovels K K. By loosening the nut on the bolt L the retaining-clamp is loosened, and the arms H H and shovels attached thereto may be set at any desired distance from the center. As shown, the four shovels are all set at different distances from the center, in order that they may describe different circles when rotated. About the handle D, above the ferrule S of the arch A, is coiled a spiral spring, O, fastened to the handle and tending to hold it up, and with it the shovels K K. By pressing down upon the handle the force of this spring is overcome, and the shovels may be pressed into the ground to any desired depth.

It is evident that the form of the handle and its supporting-spring, the number of points of the supporting-arch, the number of shovel-bearing arms, and the form of the adjusting-clamp may all be varied without changing the principle of the machine or its mode of operation. I do not intend, therefore, to limit my invention to the exact forms shown and described, but wish it to cover the equivalent devices which may evidently be substituted for it without the introduction of new principles.

The mode of working the cultivator is evident. The two points C C are placed in the ground on opposite sides of and practically equidistant from the hill of tobacco or other plant to be cultivated. The shovels will then be on four sides of the hill, and on rotating the handle they will move about the hill in circles. At the same time that the handle is rotated a downward pressure upon the handle forces the shovels into the ground to such depth as may be necessary, and one or two turns will be found to cultivate the soil thoroughly.

Having now described my invention and its mode of operation, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand-cultivator, the combination of a series of cultivating-shovels, means for rotating the same in circles, and means for varying the distance of the shovels from the center of rotation.

2. In a hand-cultivator, the combination of a vertical handle and a series of vertical arms provided with shovels at their lower ends, the handle and arms being connected rigidly by a clamp adapted to allow the variation of the distance of each of the shovel-carrying arms from the handle.

3. In a rotary hand-cultivator, the combination of the handle D, arch A, and spring O, substantially as and for the purpose described.

4. In a hand-cultivator, the combination of

a supporting-arch provided with two or more retaining-points, a handle pivoted in said arch, and a series of shovels attached to said handle at its lower end by means adapted to permit the lateral adjustment of said shovels, substantially as and for the purpose described.

5. The combination of the arch A with its brace B, handle D, spring O, clamp F G, arms H H, and shovels K K, all substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

BENONI COLVIN.

Witnesses:
R. H. WILES,
J. A. SHEETZ.