

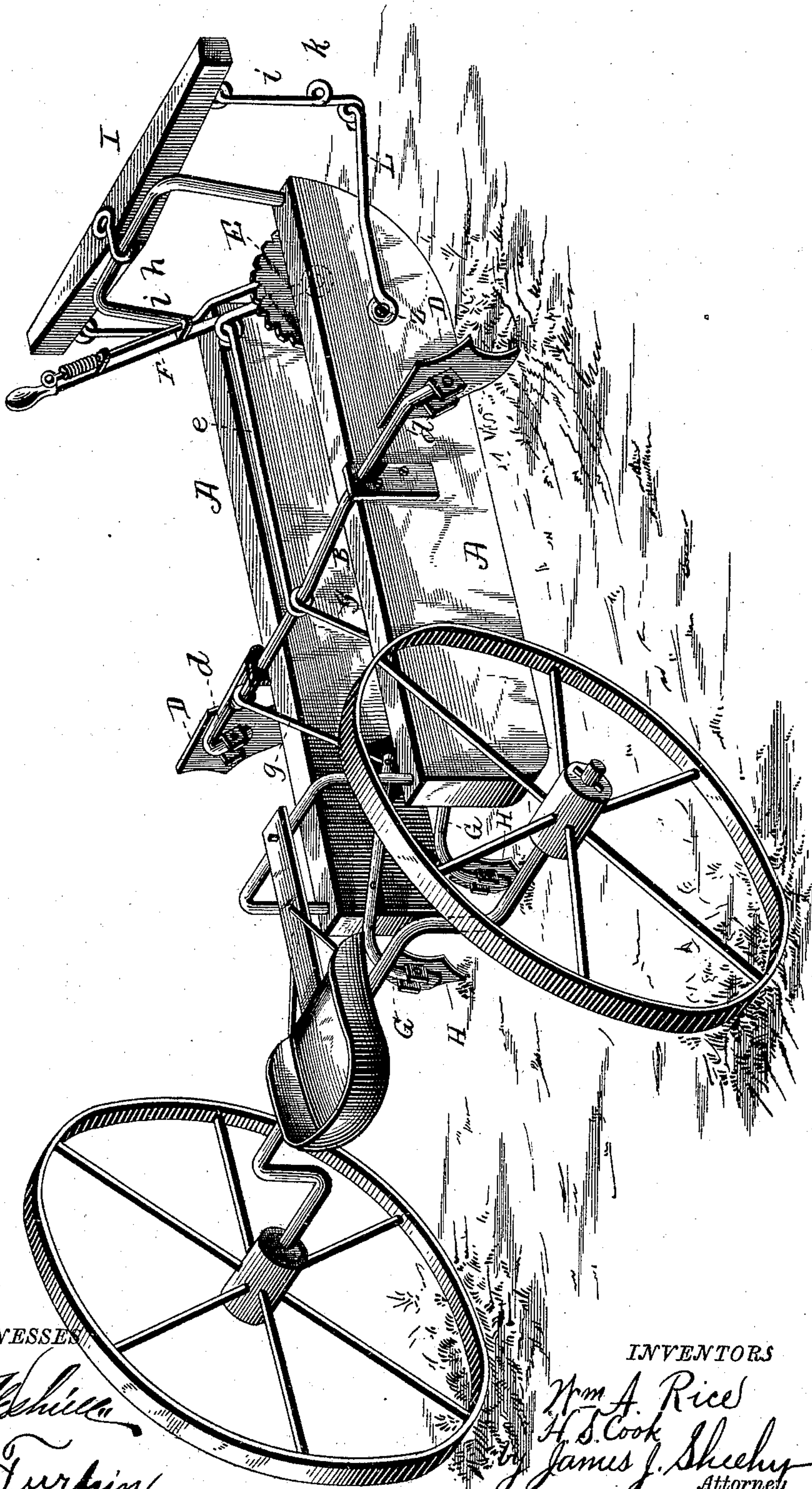
(No Model.)

W. A. RICE & H. S. COOK.

SULKY CULTIVATOR.

No. 371,709.

Patented Oct. 18, 1887.



WITNESSES

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WILLIAM A. RICE AND HENRY S. COOK, OF RANDOLPH, KANSAS.

SULKY-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 371,709, dated October 18, 1887.

Application filed July 30, 1887. Serial No. 245,706. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. RICE and HENRY S. COOK, citizens of the United States, residing at Randolph, in the county of Riley and State of Kansas, have invented certain new and useful Improvements in Sulky-Cultivators; and we do 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 appertains to make and use the same.

This invention has relation to sulky-cultivators for corn, and is particularly adapted for use in listed corn.

The improvements will be fully understood from the following description and claims, when taken in connection with the accompanying drawing, in which the figure is a representation of a cultivator, in perspective, according to our invention.

Referring by letter to the said drawing, A indicate runners, which are preferably formed of wood, and are of a sufficient length and height, as will be presently understood. These runners are arranged parallel and at a distance apart sufficient to pass on each side of a row of corn. To secure these runners in the desired position we employ bow-braces *a b*—one at the front and one at the rear upper ends of the respective runners—the said bows being carried sufficiently high for the purposes desired, and the transverse elements thereof are perfectly straight for the attachment of the sulky reach and evener, as will be presently set forth.

B indicates a rock-shaft, which has its cranked portion of about the same height as the arched connecting-braces and in a plane between the runners. This rock-shaft is journaled at its horizontal branches *d* in the upper longitudinal edges of the runners and about midway of their length, and the said shaft terminates at opposite ends in stems or branches for the attachment of the front set of shovels, D D, as shown. It will thus be observed that we have a shovel on the outer side, and these shovels are adapted to be set in the earth at any desired depth. On the inner forward side of one of the runners we secure a segmental rack, E,

and also journal thereto the lower end of a ratchet-lever, F. This lever F is connected with the cranked rock-shaft B by means of a link-rod, *e*.

G G indicate plow-beams, there being one on the rear inner side of each runner. These plow-beams are pivoted to the said runners at a less elevation than the crank-shaft B, and carry at their lower rear ends shovels H H, which are designed to enter the earth deeper than the forward shovels. It will be observed that these rear plow-beams being pivoted or fulcrumed about midway of their length and at a lower elevation than the forward lateral shovels, and that they being also connected by their forward ends by link-rods *g* to the horizontal portion, when the hand-lever has been manipulated to raise the front shovels the rear shovels will be simultaneously raised, although at a less elevation. It is not, however, desirable to have the front shovels raised as high as the rear ones, as the former are designed to travel on the ridges, while the latter are to travel in the furrows.

To the forward transverse arch-connection of the runners we connect, by means of a clevis, *h*, an evener, I, from the opposite ends of which depend vertical bars or rods *i*, having eyes *k*, or other suitable means for the attachment of whiffletrees. The lower ends of these rods *i* are pivotally connected with the outer sides of the runners by means of rods L and transverse bolts *z*. This form of equalizer and draft attachment is found to be very effective in operation, and may be manufactured at a small expense.

At the rear end of the runners we have shown a sulky, which may be of any ordinary or approved construction, having a seat for the driver. This sulky has a cranked axle of about the same height at the rear arched connection of the runners, and its reach is connected with the horizontal portion of the said arch by means of a pin, as shown. It is obvious that the forward shovels may be adjusted so as to set them high or low, as may also the rear shovels.

We do not wish to confine ourselves to the precise construction of the parts herein illus-

trated, as many of them may be varied in construction according to the dictation or fancy of the mechanic.

Having described this invention, what we
5 claim is—

1. In a listed-corn cultivator, the combination, with the runners having the front and rear arched connections, of the cranked shaft joined on the said runners and carrying plows
10 at opposite ends, the plows at the rear of the runners having their beams also journaled in the runners, the segmental rack and ratchet-lever, and the links connecting the ratchet-lever with the crank-shaft, and the links connecting the said shaft with the rear plows, sub-
15 stantially as specified.

2. The combination, with the runners, of the cranked rock-shaft journaled thereon and carrying shovels at its opposite ends, the rear
20 shovels having their beams fulcrumed on the runners at a lower elevation than the said cranked shaft, and the link connections,

whereby both sets of shovels may be raised and lowered simultaneously, substantially as specified.

3. The combination, in a corn-cultivator, of two runners connected by front and rear arched connections, a sulky having an arched axle, and its reach pivotally connected with the rear connecting-arch, the cranked rock-shaft B,
25 journaled on the runners and carrying plows at its ends, the rear plows having their beams pivoted and connected to the crank-shaft, the segmental rack, the ratchet-lever, and the links connecting the said lever with the rock-
30 shaft, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM A. RICE.
HENRY S. COOK.

Witnesses:

C. A. MOORE,
JOSEPH HOAG.