

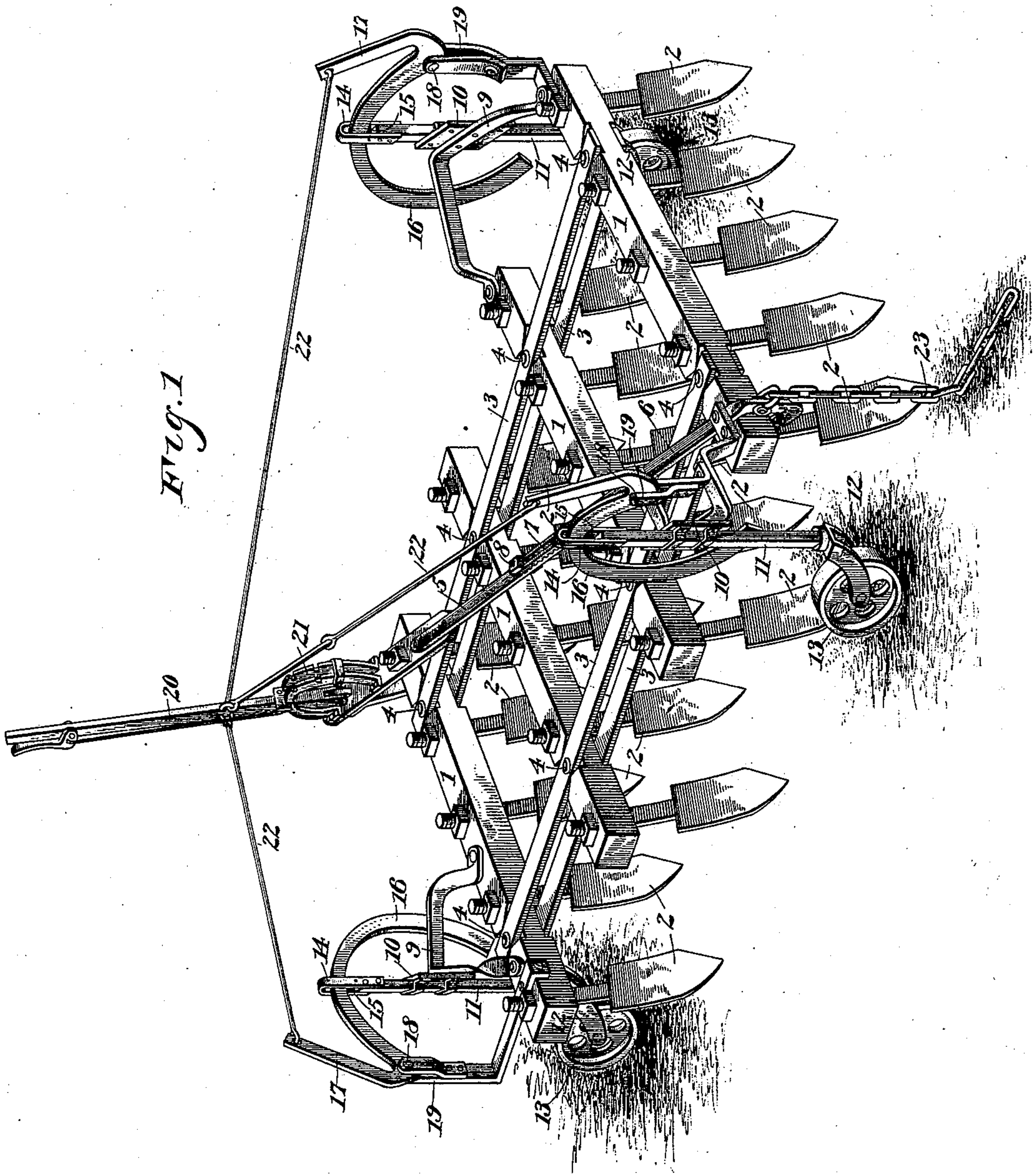
(No Model.)

2 Sheets—Sheet 1.

J. L. STALEY.
CULTIVATOR.

No. 512,669.

Patented Jan. 9 1894.



Witnesses;

M. H. Sherrow
E. C. Zuber

Inventor,

Joseph L. Staley,

By *Staple & Attorneys*

Attorney.

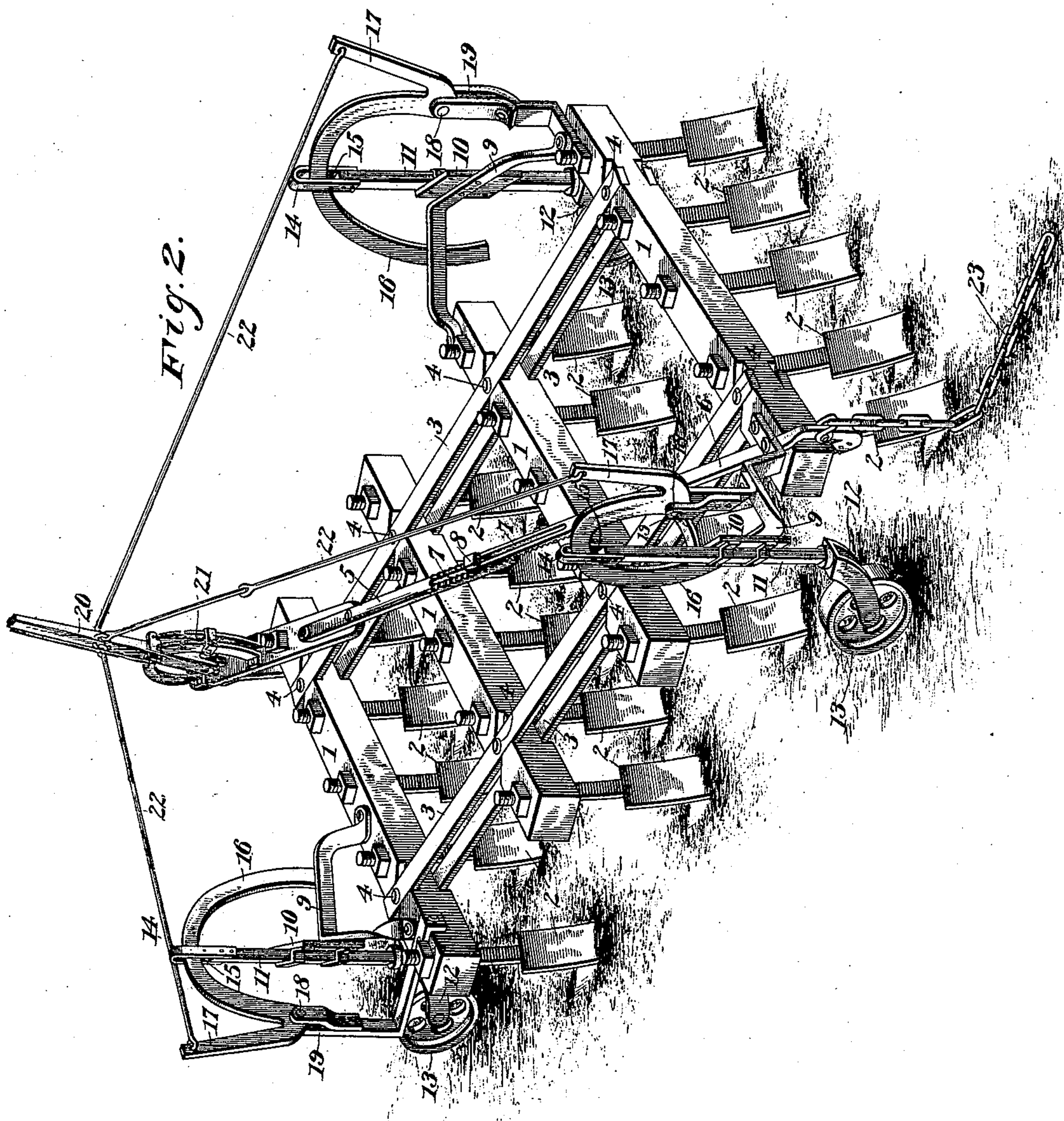
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2 Sheets—Sheet 2.

J. L. STALEY.
CULTIVATOR.

No. 512,669.

Patented Jan. 9, 1894.



Witnesses:

M. Withrow.
B. G. Julian.

Inventor,
Joseph L. Staley,

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UNITED STATES PATENT OFFICE.

JOSEPH L. STALEY, OF BLOOMINGTON, ILLINOIS, ASSIGNOR OF ONE-HALF TO
H. W. FUNK, OF SAME PLACE.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 512,669, dated January 9, 1894.

Application filed January 19, 1893. Serial No. 459,029. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH L. STALEY, of Bloomington, county of McLean, and State of Illinois, have invented certain new and useful Improvements in Cultivators, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a cultivator harrow provided with vertically adjustable wheels which may be thrown into or out of use at will, so that the machine may be made to do the work of an ordinary drag cultivator, or may be conveniently wheeled from place to place.

Another object is to provide means for conveniently adjusting the distances between the cultivator plows.

In the accompanying drawings, Figure 1 is a perspective view of my machine, showing the wheels depressed and the shovels set at a certain distance. Fig. 2 is a similar view, showing the wheels raised and the shovels in a different position.

Referring to the figures on the drawings, 1 indicates the shovel bars, which are preferably four in number, and to which are fastened by any suitable means cultivator shovels 2. The four shovel bars are united to form the frame of my machine, and are preferably fastened together by metallic strips 3 arranged in pairs upon opposite sides of the bars and near their opposite ends. The bars are united to these strips by bolts 4 which pass through them and through the strips, so as to readily afford some pivotal play of the bars upon the strips. Consequently the distance between the bars, and therefore the distance between the shovels may be increased or diminished by elongating the frame diagonally. For this purpose I employ two transverse strips 5 and 6 fastened at their opposite ends to the opposite corners of the frame, and having their adjacent ends overlapping. These transverse strips may be slotted, as at 7, in their overlapping ends, and be provided with a nut and bolt 8, by which, when the proper adjustment is attained, they may be secured together, and the frame rendered rigidly immovable.

Three of the four corners of the frame are

provided respectively with a bracket 9 which carries in a bearing piece 10 a vertically adjustable wheel shaft 11, carrying upon its lower end a swivel wheel frame 12, in which is borne a wheel 13. The upper part of the wheel shaft is provided with a yoke 14, and with a transverse anti-friction roller 15.

16 indicates a sickle-shaped elevator arm which passes through the yoke, and is provided with a bell-crank lever arm 17. At the bend between the elevator arm and the bell-crank lever arm it is pivoted, as indicated at 18, to a support 19.

20 indicates an ordinary adjustable lever, and 21 its sector carried upon the fourth or rear corner of the frame.

22 indicates rods uniting this lever respectively with the bell-crank lever arms of the respective elevator arms. By operating the adjustable lever the elevator arms may be swung upon their pivots, and exerting their force through the respective yokes upon the wheel shaft raise or depress the wheels at the will of an operator. By this means the cultivator shovels may be let down into the earth, or may be raised above it and afford ready means for hauling it from place to place.

23 indicates a tug chain, to which horse power may be applied.

What I claim is—

1. In a cultivator, the combination with shovel bars and transverse strips pivotally connected thereto, and an extensible diagonal adjusting part, of a lever located at the rear end of the extensible part operatively connected with mechanism adapted to raise or lower the frame to facilitate such diagonal adjustment, substantially as and for the purpose specified.

2. In a cultivator, the combination with a frame composed of shovel bars and transverse strips, of vertically adjustable wheel shafts and independent bell crank levers operatively connected to each of the shafts, respectively, and to an adjustable lever adapted to actuate them simultaneously, substantially as and for the purpose specified.

3. In a cultivator the combination of the frame and vertically adjustable wheel shafts,

of yokes upon the wheel shafts, elevator arms
passing through the yokes, bell-crank lever
arms connected therewith, a pivotal support
for the same, and adjustable lever and rods
5 connecting the adjustable lever with each of
the bell-crank lever arms, substantially as
and for the purpose specified.

4. In a cultivator the combination with
shovel bars provided with angular recesses,
10 and transverse strips pivoted therein, of an
extensible diagonal adjusting part, vertically
adjustable wheel shafts, and an adjustable le-

ver operatively connected with each of the
wheel shafts, respectively, and adapted to
actuate them simultaneously to raise or lower 15
the frame to admit of the desired adjustment,
substantially as and for the purpose specified.

In testimony of all which I have hereunto
subscribed my name.

JOSEPH L. STALEY.

Witnesses:

B. L. LUCAS,
R. D. CALKINS.