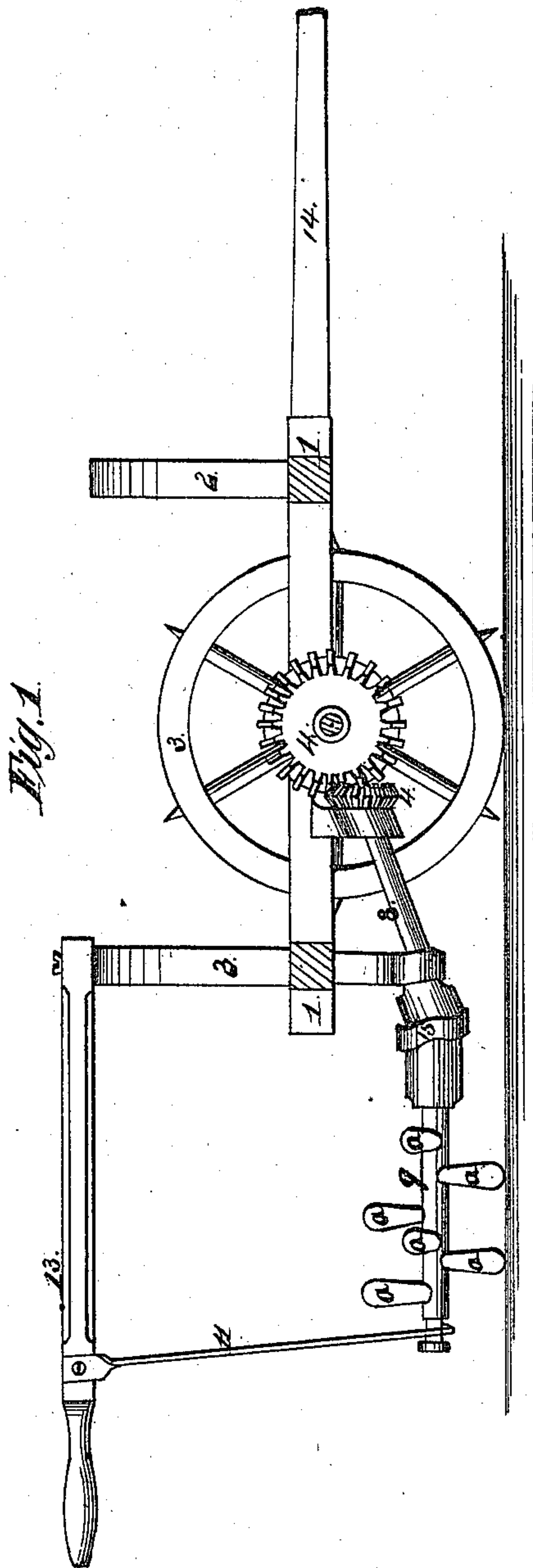


N. S. WOOD.
Revolving-Cultivators.

No. 158,663.

Patented Jan. 12, 1875.



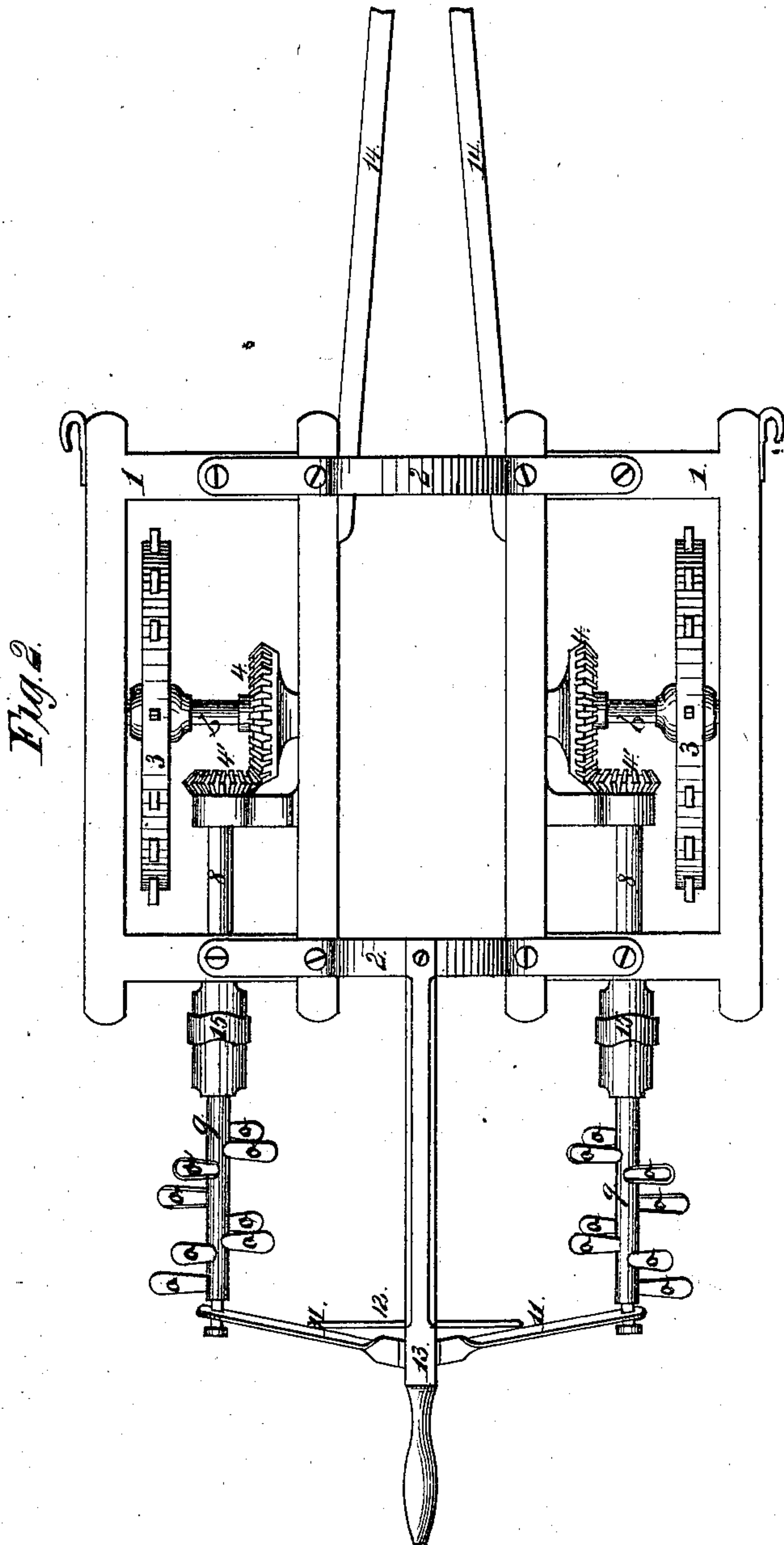
Witnesses:
James R. Birks
Joseph W. Johnston

Inventor:
Nathaniel S. Wood

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UNITED STATES PATENT OFFICE.

NATHANIEL S. WOOD, OF BOONE COUNTY, MISSOURI.

IMPROVEMENT IN REVOLVING CULTIVATORS.

Specification forming part of Letters Patent No. **158,663**, dated January 12, 1875; application filed July 16, 1874.

To all whom it may concern:

Be it known that I, NATHANIEL S. WOOD, in the county of Boone and State of Missouri, have invented a new and useful Improvement in Rotary Cultivators; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification.

The invention relates to corn and cotton cultivators, and will be first fully described, and then pointed out in the claims.

Figure 1 is a longitudinal sectional elevation, and Fig. 2 a plan view, of the improved machine.

Similar letters of reference indicate corresponding parts.

2 2 represent slightly-flexible arched iron bars, uniting two wooden rectangular frames, 1 1, supported by the traction-wheels 3 3, firmly fixed upon separate axles *b b*. 8 8 are shafts, revolving in journal-boxes secured to the rear, transverse, and inner longitudinal bars of frames 1 1, and provided with the beveled gear-wheels 4' 4', gearing with the beveled gear-wheels 4 4, firmly fixed on axles *b b*, thus giving a rotary motion to the shafts 9 9, universally jointed to shafts 8 8 at 15 15, and projecting rearward, carrying the plow-hoes *a* in their revolutions. The inner ends or shanks of the hoes *a* are square, and are inserted on a spiral line in shafts 9 9, and firmly fastened therein by means of a screw and tap on the

end of each, and may be changed at pleasure, so as to penetrate the earth at various angles. 13 is a pivoted lever or handle, projecting rearward from the top of the rear arched bar 2, to which are attached the pendent rods 11 11, holding and supporting in their looped ends the rear ends of shafts 9 9. 12 is a transverse bar, uniting and regulating the angular direction of the pendent rods 11 11. 14 14 are sections of the tongue.

It will be observed that, by means of the wheels 3 3 operating on separate axles *b b*, the difficulty otherwise experienced in turning the machine is avoided.

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

1. The combination of frames 1 1, connected by yoke 2, shafts 8 8, universally-jointed hoe-shafts 9 9, pivoted lever or handle 13, and adjustable rods 11 11, as and for the purpose described.

2. In combination with the driving-wheels, frames, and arched connecting-bar, the geared shafts 8 8, universally jointed to the rotary shafts 8 8, as and for the purpose described.

In testimony that I claim the foregoing as my invention I hereunto set my hand this 28th day of November, 1870.

NATHANIEL S. WOOD.

Witnesses:

JAMES CHRISTIAN,
JAMES ROBOTOS, Jr.