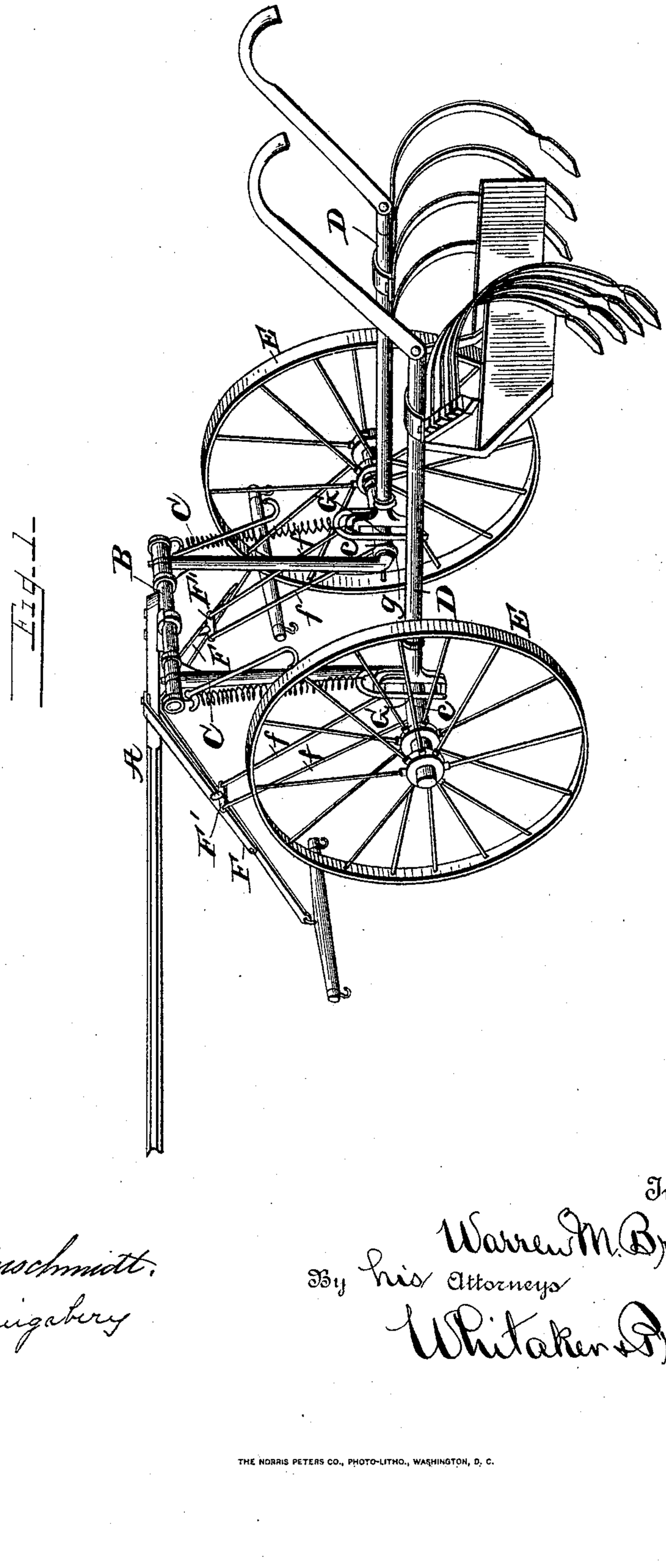
(No Model.) 2 Sheets—Sheet 1.

W. M. BRINKERHOFF.

CULTIVATOR.

No. 464,262. Patented Dec. 1, 1891.



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

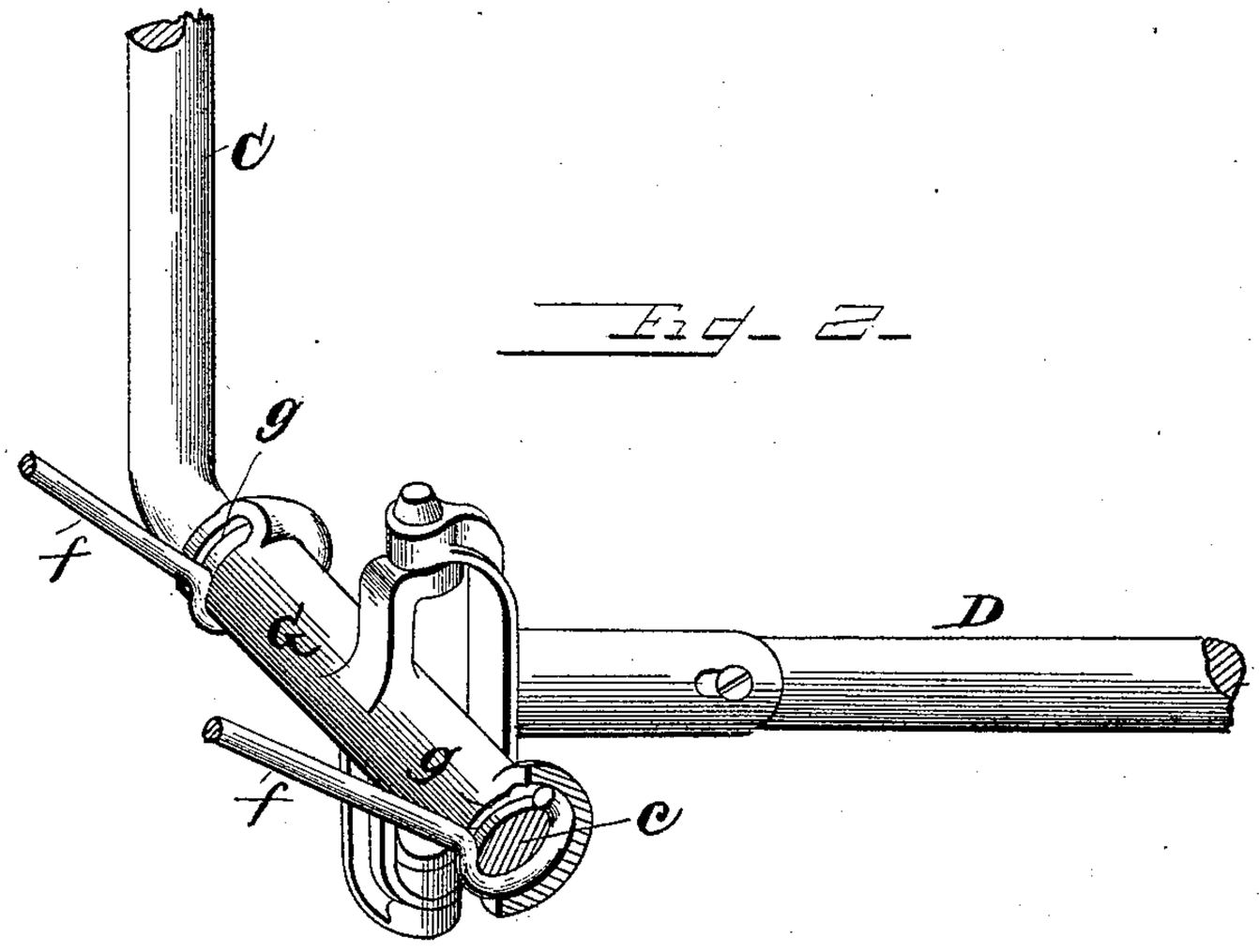
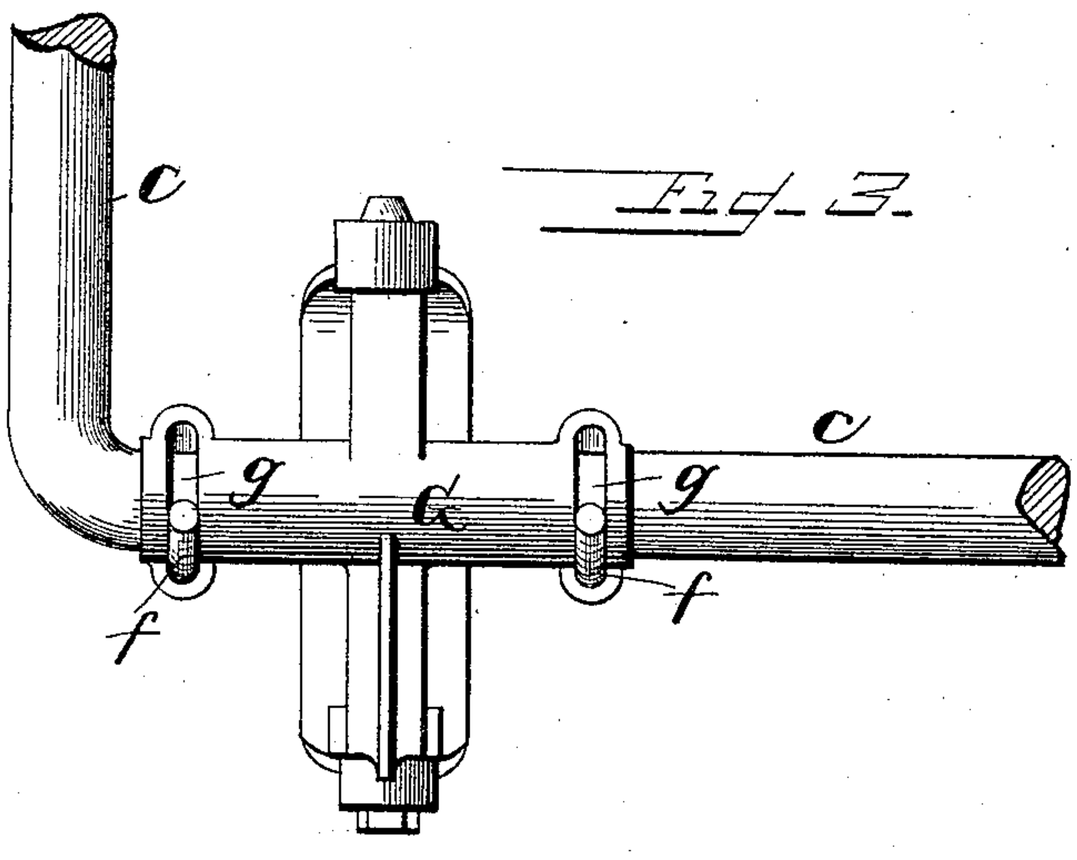


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WARREN M. BRINKERHOFF, OF AUBURN, NEW YORK.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 464,262, dated December 1, 1891.

Application filed January 12, 1891. Serial No. 377,428. (No model.)

To all whom it may concern:

Be it known that I, WARREN M. BRINKERHOFF, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in 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 appertains to make and use the same.

My invention relates to the class of cultivators; and it consists in certain improvements in a cultivator of the class known as "straddle-row" cultivators or those which are constructed to cultivate the spaces between three rows of rowed crops or on each side of a single row of the same, and more particularly those cultivators of that class in which the separate gangs of plows or cultivator-teeth have a longitudinal movement independently of each other.

In the drawings I have illustrated the best form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following specification and claims.

In the said drawings, Figure 1 is a perspective view of my improved cultivator. Fig. 2 is a perspective view of the lower end of the pivoted standard, parts being broken away. Fig. 3 is a front view of the parts shown in Fig. 2.

In the figures, A is a pole or tongue, and B is a cross bar or rod rigidly secured to the same at right angles thereto. To each end of this cross-bar is pivotally secured the upper end of a standard C. The lower ends of the standards C are each provided with an outwardly-extending horizontal arm *c*, which may be termed the "axle-arm," as each of said arms forms an axle for one of the supporting-wheels E. Each wheel and standard is permitted a considerable measure of movement in the line of draft independently of the other at the opposite side of the implement through the following instrumentalities: Each standard is at its upper end provided with a sleeve rigidly connected therewith. This sleeve, when placed upon the cross-bar B, is capable of turning thereon as a pivot or axis, but is held from movement longitudinally of said bar.

Upon each axle-arm *c*, between the wheel E and the lower end of the standard C, is fitted a sleeve G, movable on the axle-arm and forming a hollow rock-shaft. Near each end this sleeve is provided with transverse slots *g g*, the opposite ends of which slots are connected by a channel extending around on the inside of the sleeve. Two draft-rods *f f* have their rear ends formed with hooks or loops, which lie in the said channel and directly engage the axle-arm, the said rods passing forward out through the said slots. The forward ends of these rods *f f* are pivotally connected with a short evening-bar F′, which has a central pivotal connection with the draft-evener F. The slots *g g* permit the hollow rock-shaft G to turn or rotate a limited distance upon the axle-arm *c*, and the rods *f f* also turn upon the axle-arm as far as necessary to permit the longitudinal movement of the pivoted standard and the cultivator or gang connected therewith.

The gang-cultivator beams D D are pivoted to the hollow rock-shafts, so that in conjunction therewith each gang may have any desired movement in a horizontal and vertical direction independently of the other, and springs are provided to assist the operator in raising the beams and plows or cultivators; but this forms no part of my present invention and may be omitted.

I have shown a gang or set of spring-cultivator teeth connected with each beam; but plows or any other form of cultivating devices may be employed in lieu thereof.

What I claim, and desire to secure by Letters Patent, is—

1. In a cultivator having gangs or cultivators free to move longitudinally independently of each other, the combination, with a pivoted standard and draft-evener, of two draft-rods having their rear ends engaging with the axle-arm of the standard and their forward ends connected with an evening-bar having a pivotal connection with the draft-evener, substantially as described.

2. In a cultivator having gangs or cultivators free to move longitudinally independently of each other, the combination, with a pivoted standard and draft-evener, of two draft-rods having their rear ends connected with the axle-

arm of the standard and held separated by a hollow rock-shaft or sleeve mounted on said axle-arm and having their forward ends connected with an evening-bar having a pivotal connection with the draft-evener, substantially as described.

3. In a cultivator having gangs or cultivators free to move longitudinally independently of each other, the combination, with a pivoted standard, draft-evener, and two draft-bars connected at their rear ends with the axle-arm of the standard and their forward ends to an evening-bar having a pivotal connection with the draft-evener, of a lifting-spring connected with parts partaking of the vertical movement of the cultivator-beam, the devices forming the connection of the lower end of the spring being located in rear of the axle-arm and extending below the longitudinal center of the said beam, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN M. BRINKERHOFF.

Witnesses:
L. P. WHITAKER,
J. D. KINGSBERY.