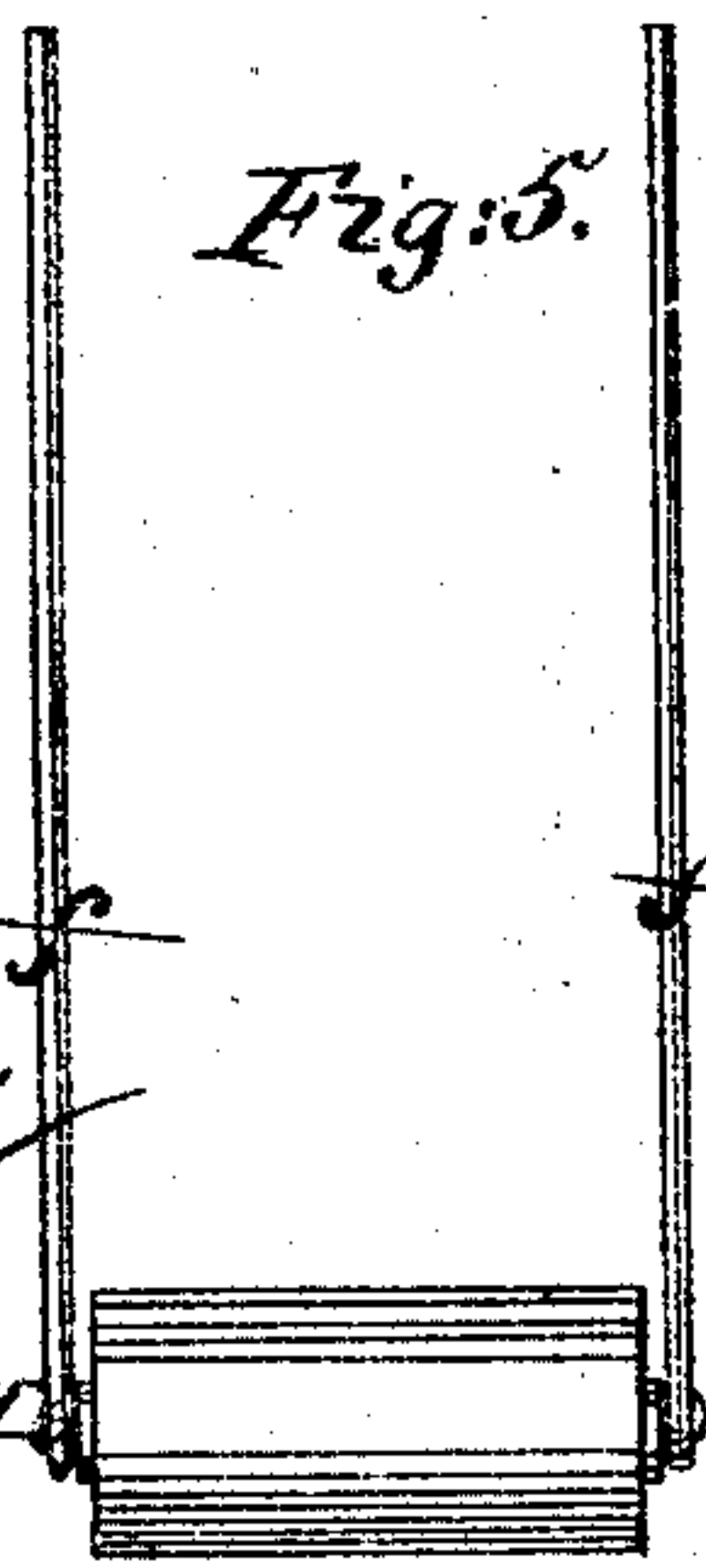
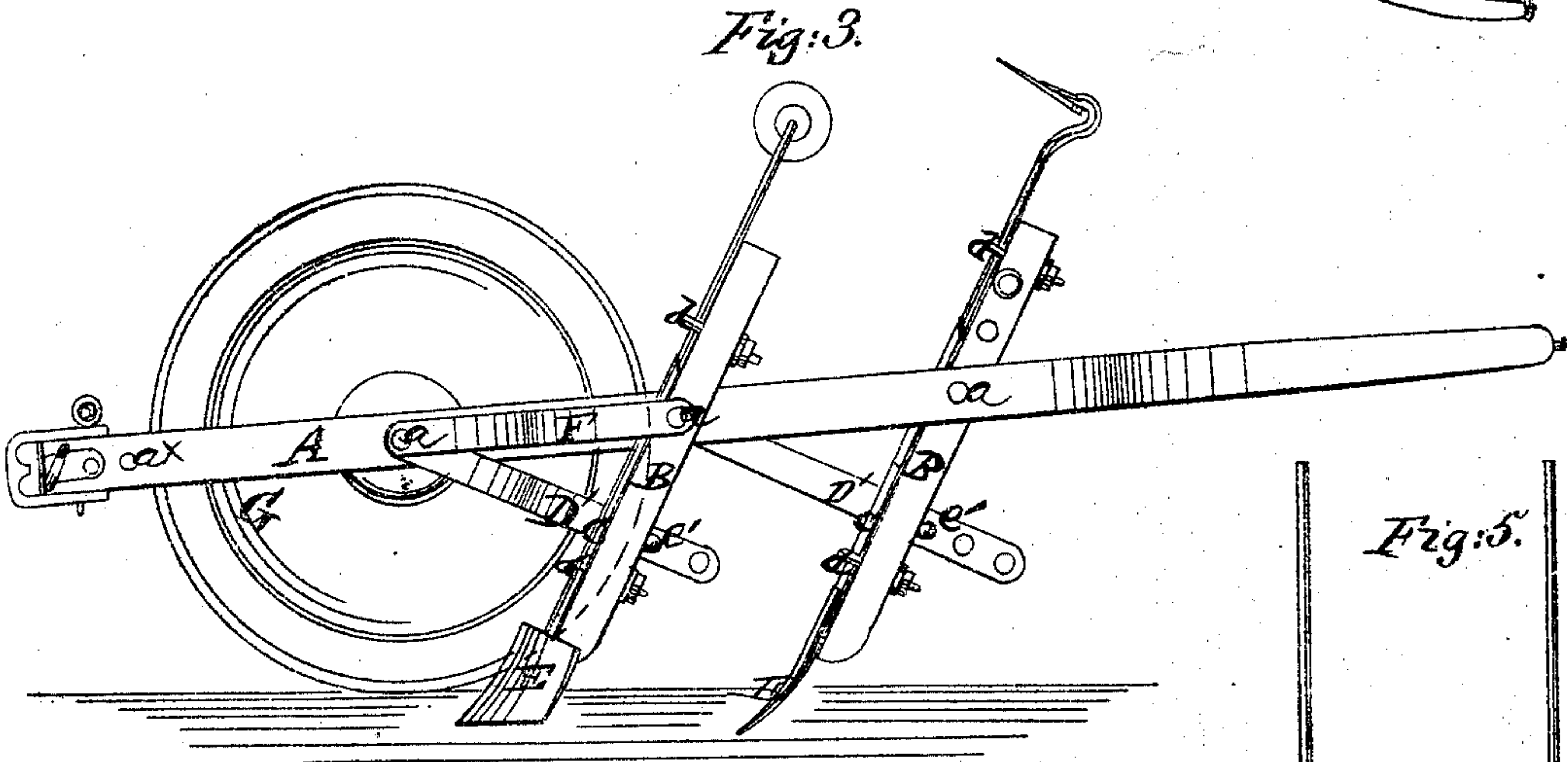
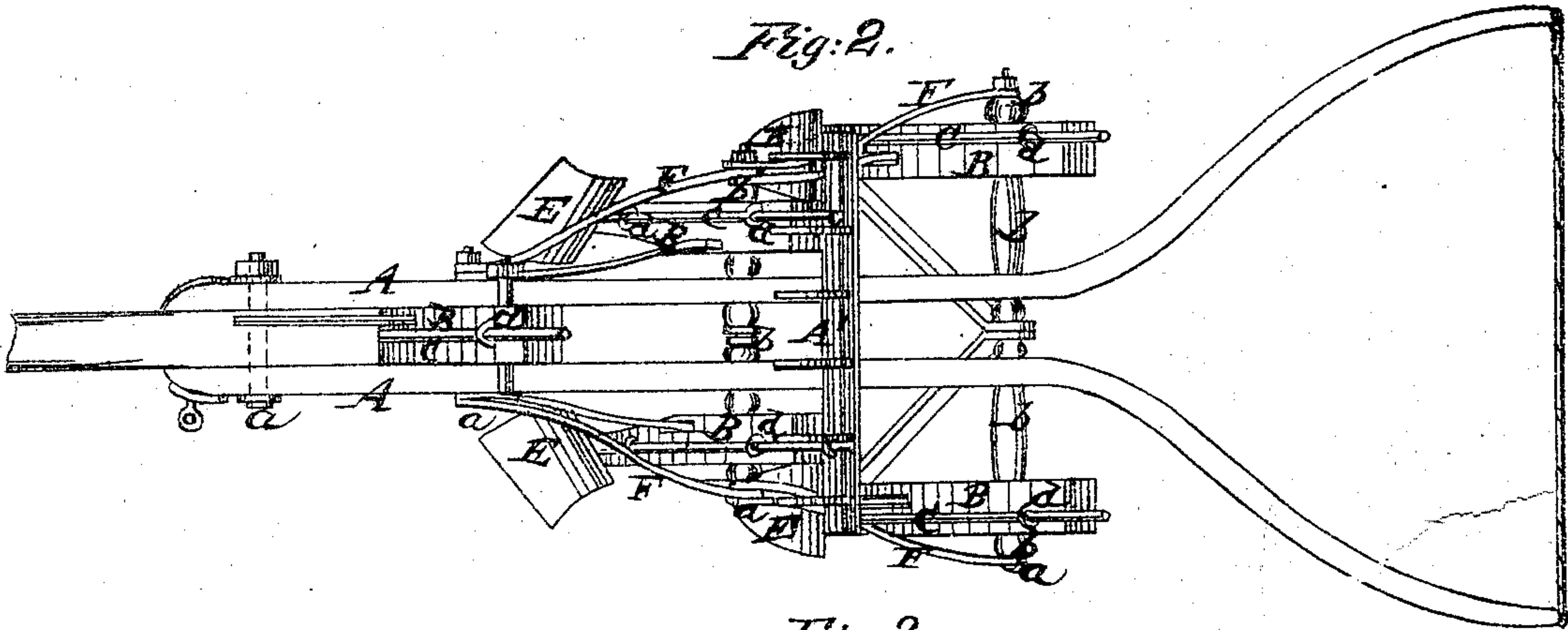
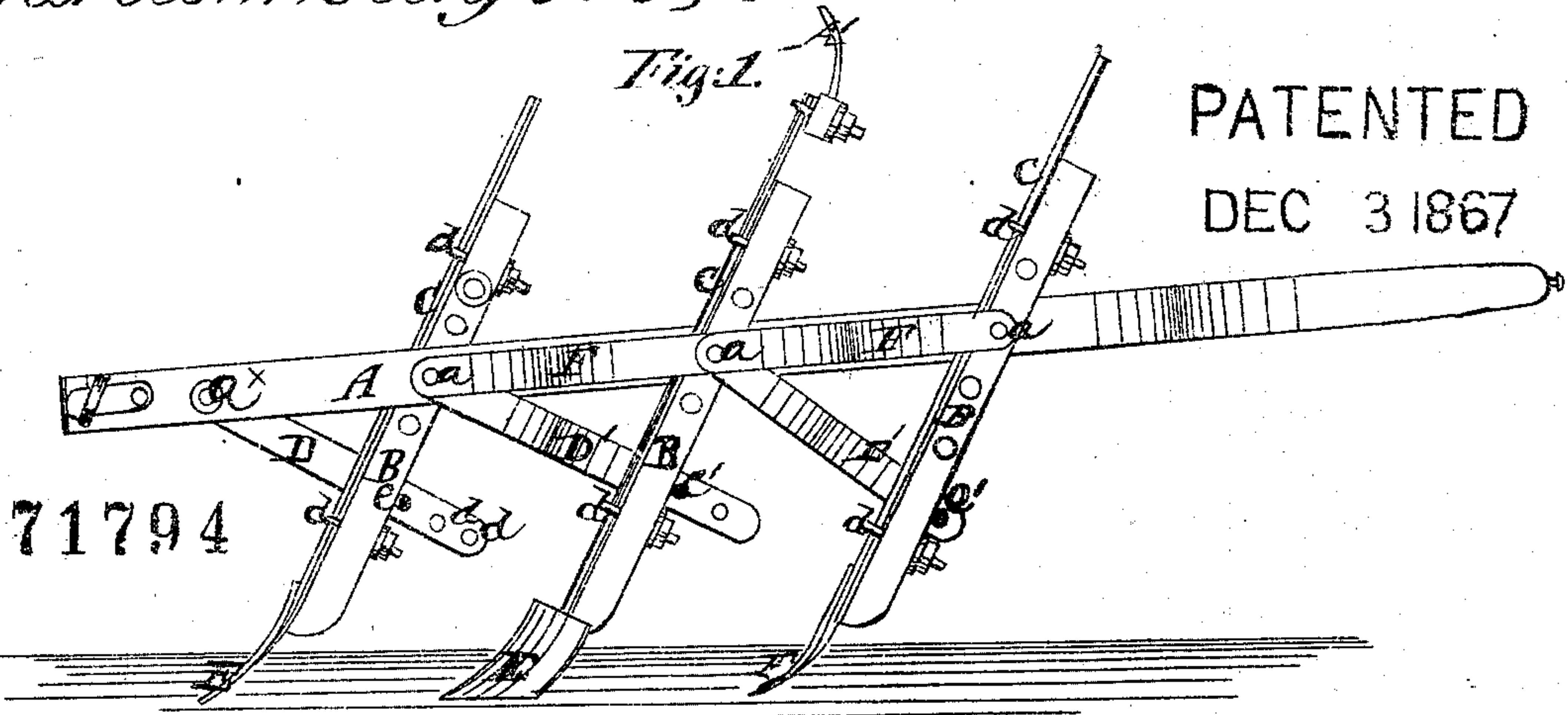


Jared W. Sanford, Cultivator.

PATENTED
DEC 3 1867



Witnesses
Thos. Ince
Wm. Brown

Fig: 4.

Inventor -
J. H. Sanford
Per *Munroe & Co.*
Attorneys -

Inventor /s/

J. H. Sanford

Век Миллениум

Attorneys—

United States Patent Office.

JARED W. SANFORD, OF BYRON, ILLINOIS.

Letters Patent No. 71,794, dated December 3, 1867.

IMPROVEMENT IN CULTIVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JARED W. SANFORD, of Byron, in the county of Ogle, and State of Illinois, have invented a new and improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a new and improved cultivator, designed for general purposes, so as to be capable of performing all the various kinds of work now done by cultivators.

The invention consists in a peculiar construction and arrangement of parts, as hereinafter fully shown and described, whereby the end above specified, with a strong, economical, and durable implement, is obtained. In the accompanying sheet of drawings—

Figure 1 is a side view of my invention adjusted or arranged as a double cultivator.

Figure 2, a plan or top view of the same.

Figure 3, a side view of the same adjusted or arranged as a single-horse cultivator.

Figures 4 and 5, detached views of parts pertaining to the same.

Similar letters of reference indicate like parts.

The frame of my improved implement is composed of two beams, A A, the front parts of which are parallel with each other, and secured a short distance apart by bolts *a* and washers *b*, which secure the plough-standards B to them. The rear parts of the beams A A are bent or curved outward from each other, to form handles, as shown in fig. 2.

The plough-standards B are arranged as follows for a double or two-horse cultivator: The front standard is placed between the beams A A, at the rear of a block, which is secured between the beams, said standard being secured by a bolt, *a*, on which it is allowed to turn freely. This standard may be adjusted at a greater or less angle of inclination by means of a perforated bar, D, the front end of which is fitted on a bolt, *a*^x, which passes through the front ends of the beams, said bar being perforated with holes, *d*, and passing through a slot in the standard, the latter resting against a wooden pin, *e*, inserted in any one of the perforations in D. This will be fully understood by referring to fig. 1. Directly behind the front standard there are secured on a bolt, *a*, two similar standards, which are in line with each other, and are at the outer sides of the beams A A, the bolt *a* of said standards passing entirely through the two beams, and having washers *b* upon it, to secure the beams and the standards in position, as will be fully understood by referring to fig. 2. At the rear of these two standards there are secured, in a similar manner, two other standards, their bolt *a* being rather longer than that of the standards in front of them, so that the rear standards will be rather farther out from the beams than the ones in front of them, and the several ploughs E, which are applied to the standards, have a position in the shape of a V, as shown in fig. 2. These standards, like the front one, are braced and secured in a more or less inclined position, by means of perforated bars D' and wooden pins *e*'. The bolts *a* are braced by bars F. The shares or ploughs E are at the lower ends of cylindrical rods *c*, which are secured to the front surfaces of the standards by means of staples, *d*, which admit of the ploughs being turned so as to throw the earth either to the right or left, as may be required. The depth of the penetration of the ploughs is regulated by varying the inclination of the standards, and adjusting the same higher or lower, and in case the implement is designed to straddle the row of plants, as in ploughing corn, the front standard B is pulled down at its upper end, which elevates its lower end and plough above the surface of the ground.

In order to convert the implement into a one-horse cultivator, the two rear standards are removed, and the front standard detached and placed on the bolt *a* of the rear standards, between the two beams A A, and on the bolt *a* of the front standard a wheel, G, is placed, and allowed to rotate freely. (See fig. 3.) The implement, thus adjusted or arranged, may be shoved along by hand, a body-strap, if necessary or desired, being attached to the ends of the handles for the body of the operator to bear against.

In cases where raking is necessary, a rake, A, may be fitted on the upper ends of the rear standards, as shown in figs. 1 and 2, and the implement inverted when the rake is to be used; and when the ground requires to be rolled, the rods *ff* of a roller-frame H may be inserted in the place of the rods *c* of the two standards at the rear of wheel G. A hoe, I, may also be applied to the rear standard whenever it may be necessary to

use a hoe. The application of the hoe and roller to the implement is shown in red in fig. 3, the implement being inverted, of course, when it is required to use the hoe or roller.

These tools may all be used without making any changes of parts when the implement is in operation or use, all that is required being simply the turning over or inverting of the implement, which may be accomplished in a moment of time.

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

1. The adjustable standards B, attached to the plough-beams A, and braced by bars D D', in the manner substantially as and for the purpose herein set forth.

2. The attaching of the ploughs or shares E to the standards B, by having the former at the lower ends of cylindrical rods c, fitted in staples d, at the front sides of the standards, substantially as and for the purpose specified.

3. The combination of the hoe, rake, and roller, with a cultivator, when all are constructed, arranged, and applied to admit of either the ploughs or the hoe, rake, or roller, being used by simply inverting the implement, as set forth.

JARED W. SANFORD.

Witnesses:

ALFRED B. SMITH,
JOHN H. SANFORD.