2 Sheets—Sheet 1.

A. W. WASHBURN.

Shovel Plow.

No. 14,539. Patented Mar. 25, 1856.

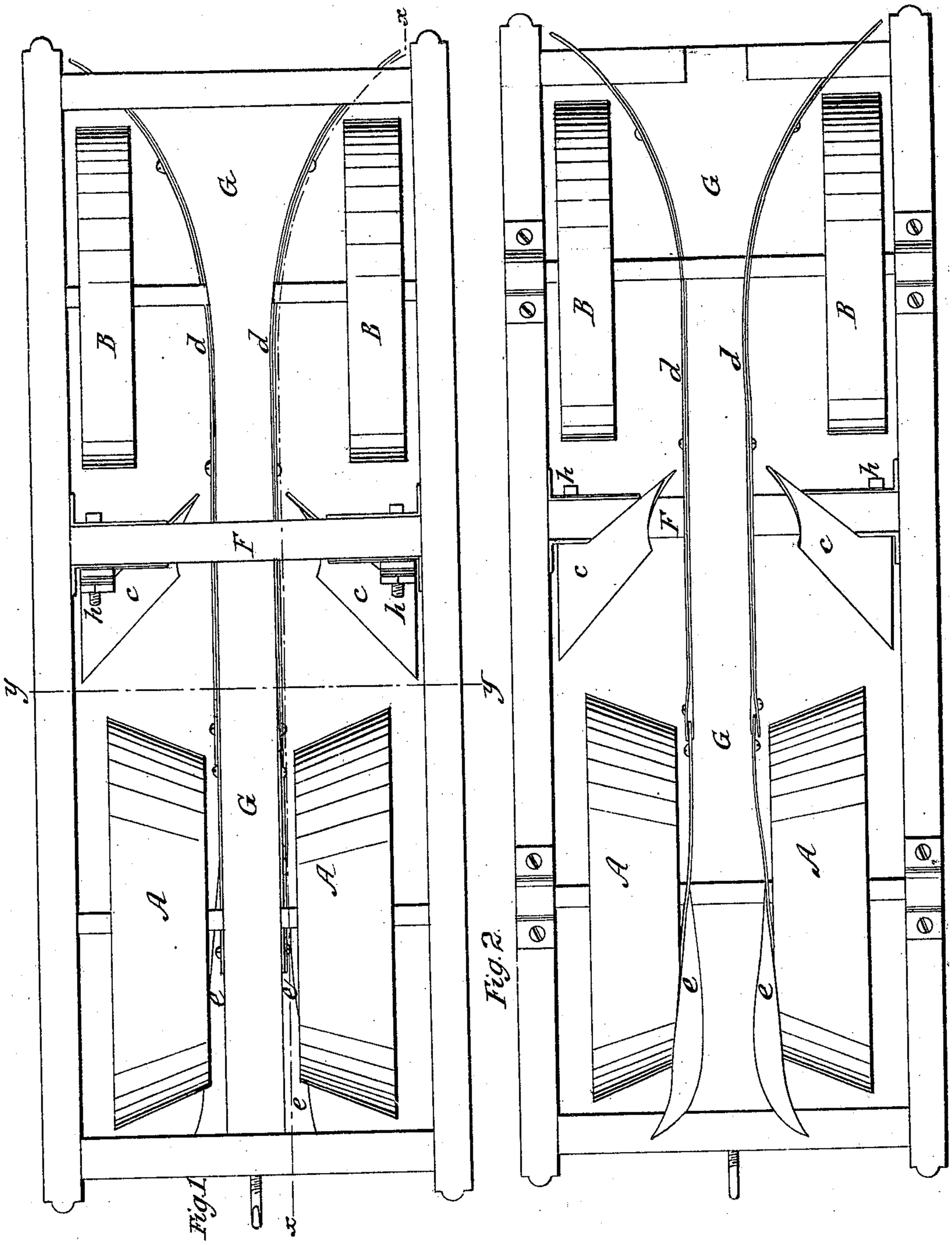

Fig. 1.

Fig. 2.

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2 Sheets—Sheet 2.

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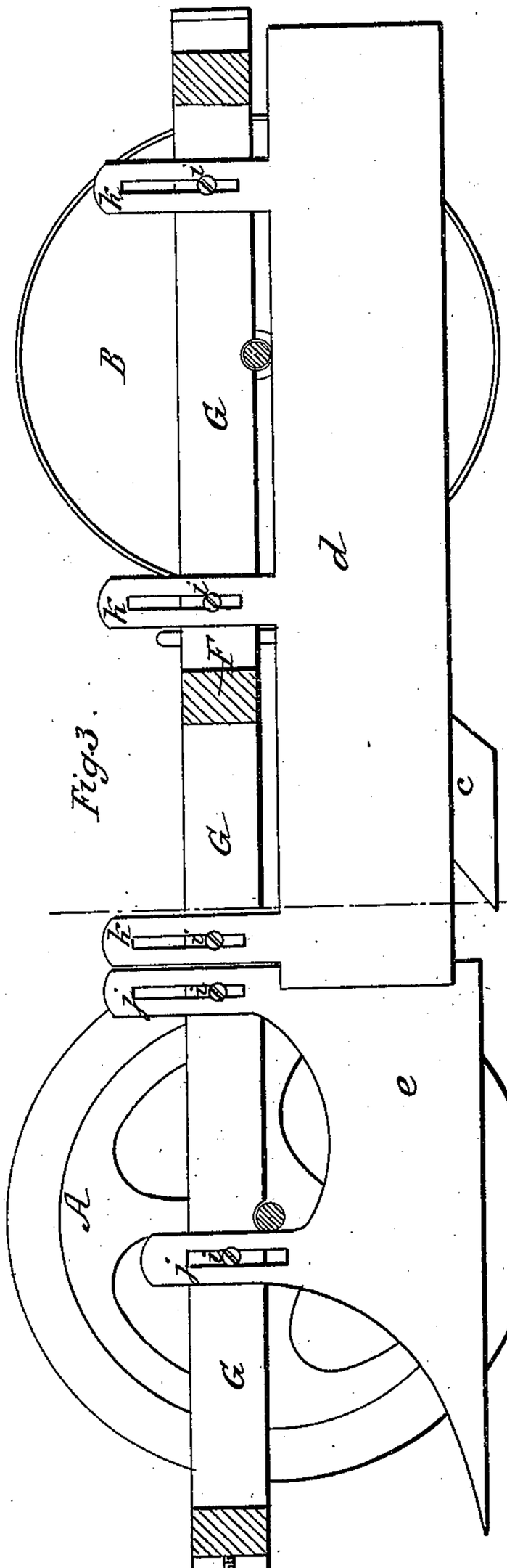

Fig. 3.

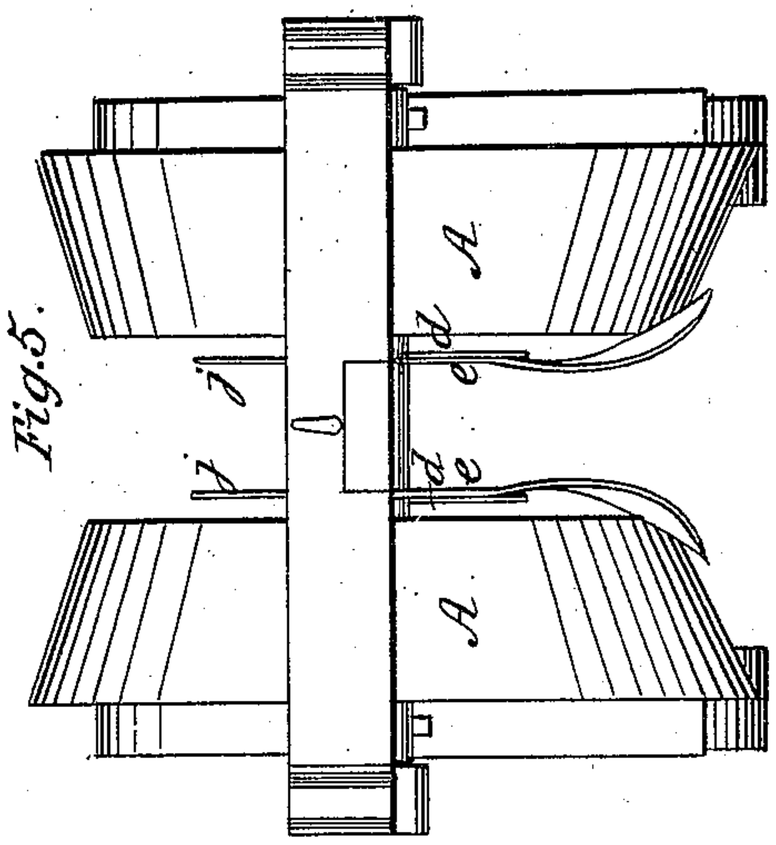

Fig. 5.

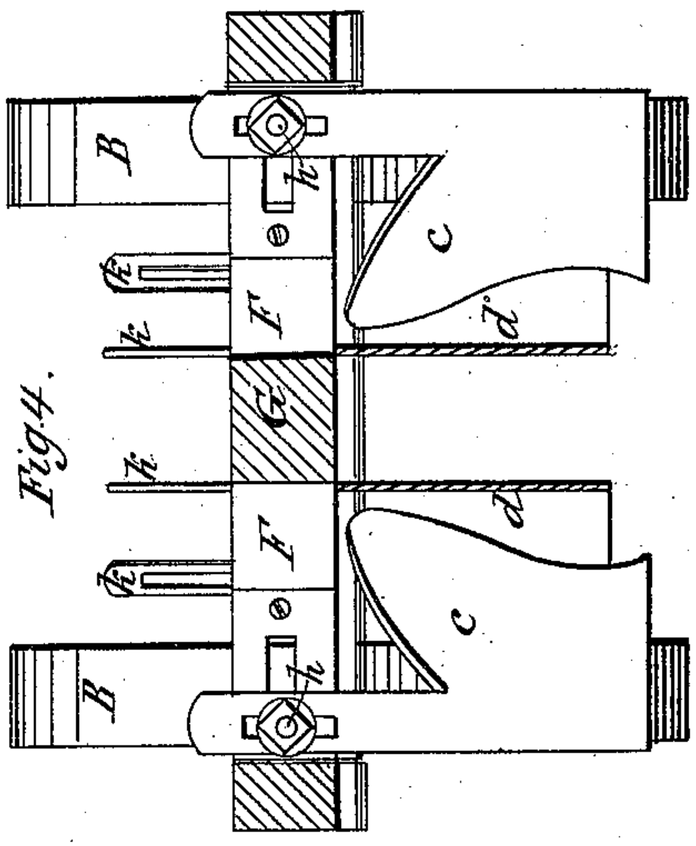

Fig. 4.

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UNITED STATES PATENT OFFICE.

A. W. WASHBURN, OF YAZOO CITY, MISSISSIPPI.

IMPROVEMENT IN COTTON-HILLERS.

Specification forming part of Letters Patent No. **14,539**, dated March 25, 1856.

To all whom it may concern:

Be it known that I, A. W. WASHBURN, of Yazoo City, in the county Yazoo and State of Mississippi, have invented a new and Improved Cotton-Hiller; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a top view; Fig. 2, a bottom view; Fig. 3, a longitudinal vertical section in the line *x x* of Fig. 1; Fig. 4, a transverse section in the line *y y* of Fig. 1, and Fig. 5 a front view of the machine.

Similar letters indicate like parts in all the figures.

The oblong frame of my improved cotton-hiller may be constructed of any suitable materials properly united together. The said frame is supported upon the forward pair of bevel-wheels A A and the after pair of plain broad-faced wheels B B.

A central longitudinal beam, G, of the rearwardly-flaring shape, represented in Figs. 1 and 2 of the drawings, is framed into the front and rear end pieces of the machine. A transverse beam, F, is halved into the said beam G, near the center of its length, and the ends of said transverse beam are framed into the sides of the machine.

Adjustable lifting-up plates *e e* descend from the forward portion of the beam G, whose pointed forward ends must be of such a shape, respectively, that when they are adjusted to the proper positions relatively to the bevel-faces of the wheels A A they will pick up and gather in that portion of the cotton-plants that may have fallen outward and retain them in a standing position until they are supported by the earth thrown up by the hilling-plows *c c* of the machine, which follow immediately after. The said lifting-up plates *e e* are secured to the sides of the beam G by means of the slotted shanks *j j* and the set screws *i i* or by any other suitable means which will admit of proper adjustment of the positions of said plates.

Immediately in the rear of the lifting-up plates *e e* the adjustable regulating-plates *d d* descend vertically from the sides of the beam G, the said plates *d d* being secured to the sides of the beam G by means of the slotted shanks *k k k* and the set-screws *l l l;* or the said plates may be secured to the beam G in any other suitable manner.

The hilling-plows *c c* are secured to the transverse beam F by means of the set-screws *h h*, which pass through vertical slots in the shanks of the plows and through horizontal slots in said beam; or said plows may be combined with the machine in any other manner that will admit of their being adjusted to any desired position.

The object of the regulating-plates *d d* is to gage the height of the hills formed about the cotton-plants. The earth thrown inward by the plows it will be perceived, has to pass under the said plates *d d;* consequently by elevating or depressing said plates the quantity of earth to be thrown up around the cotton-plants can be perfectly regulated and controlled. Any surplus earth that may be turned up by the plows against the sides of the plates *d d* will be thrown back into the space between the rows of plants by the outwardly-curving rear ends of said plates.

I shall generally combine the bevel-wheels A A with the forward axle in such a manner that they can be adjusted in their positions upon said axle and be secured in any desirable position. The said bevel-wheels A A run on each side of a cotton-plant ridge, and thereby accurately guide the machine, so that its respective parts will perform their proper functions.

It is not necessary to inform any cotton-planter that the young cotton-plants are exceedingly tender, and consequently great numbers of plants fall outward before they are hilled. The importance, therefore, of the lifting-up plates of my improved cotton-hiller is readily appreciated by all who are familiar with this subject.

In place of the lifting-up plates *e e*, it will readily be perceived that rods may be combined with my improved cotton-hiller, and be given such a shape at their forward ends that they will produce the same effect upon the outwardly-reclining cotton-plants as the said lifting-up plates.

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

The lifting-up plates *e e* of my improved cotton-hiller or their equivalents when arranged and operating in conjunction with the governing-plates *d d* and the hilling-plows *c c*, substantially in the manner, and for the purpose herein set forth.

A. W. WASHBURN.

Witnesses:

Z. C. ROBBINS,

THOMAS W. LAY.