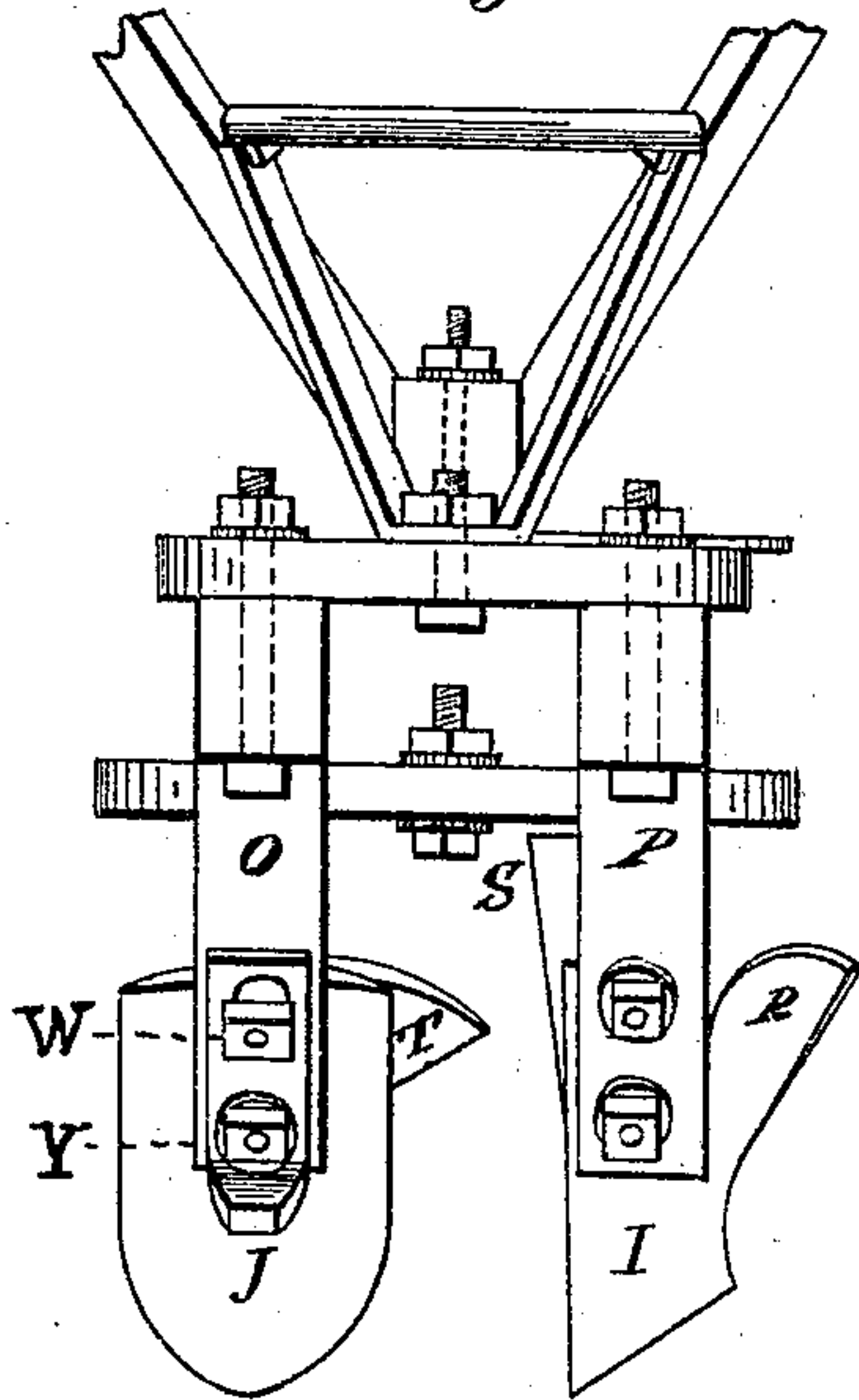
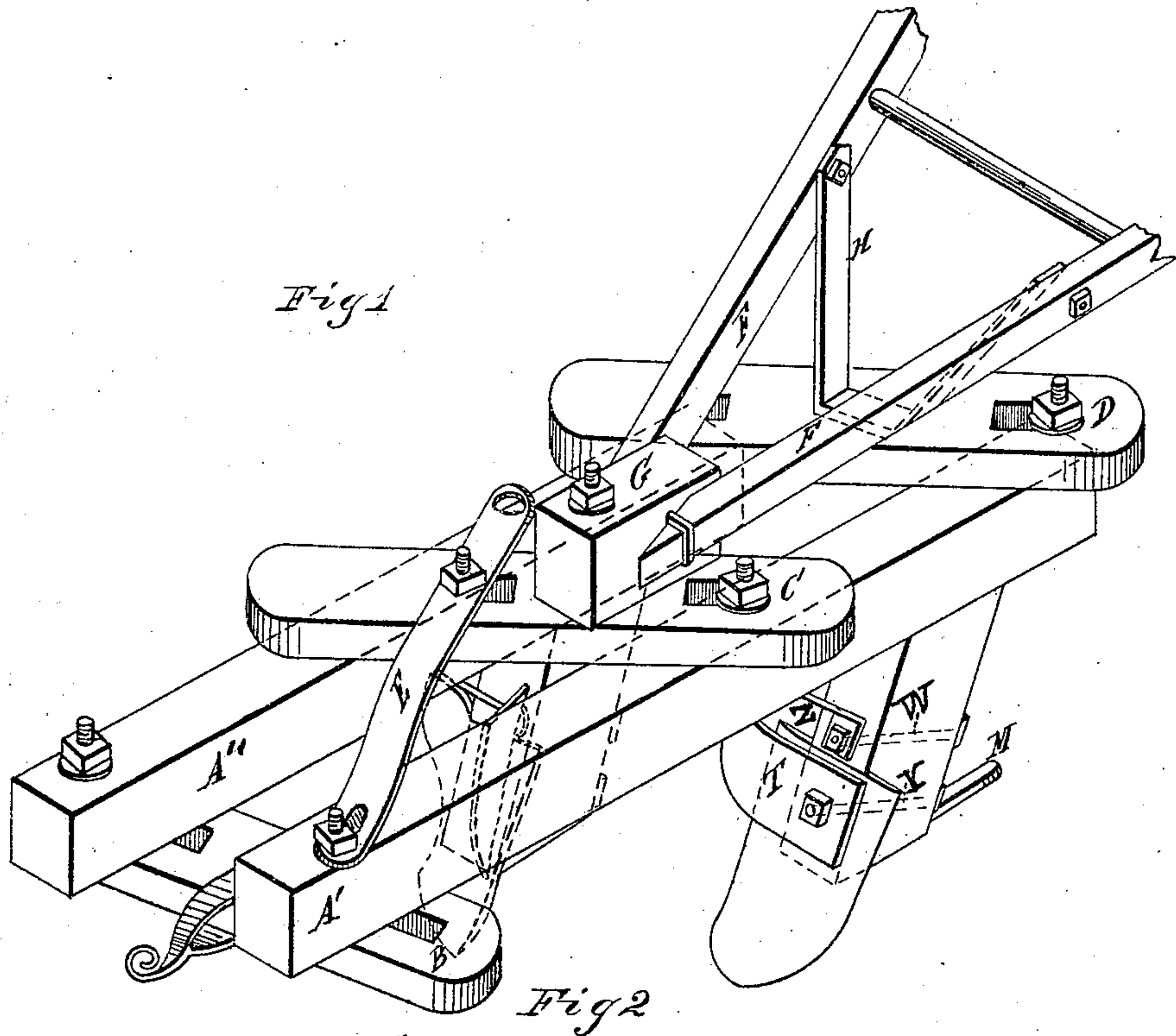


A. RODEN.
Cultivators.

No. 145,901.

Patented Dec. 23, 1873.



Witnesses:
Francis L. Durand
Harry Hamilton Smith

Inventor,
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attys

UNITED STATES PATENT OFFICE.

ALFRED RODEN, OF MUMFORD, ALABAMA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **145,901**, dated December 23, 1873; application filed November 19, 1873.

To all whom it may concern:

Be it known that I, ALFRED RODEN, of Mumford, in the county of Talladega and in the State of Alabama, have invented certain new and useful Improvements in Plows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention relates to the construction and arrangement of a plow, as will be more fully hereinafter set forth.

In order to enable others skilled in the art to which my invention refers to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view, and Fig. 2 a rear elevation, of my invention.

A¹ A² represent two beams yoked together by three slotted cross-bars, B C D. At the forward end of beam A¹ is attached, by means of a bolt provided with nut and washer, a perforated brace, E, extending diagonally to the central cross-bar C secured to beam A² by the same means as at beam A¹. The cross-bar B is secured in its position underneath the beams A¹ A² by means of bolts passing through its slotted ends and through the beams. It will thus be seen that when the bolts are not tightened the beams move freely to and fro the length of the slots in the cross-bar B. The operator is thus enabled to tighten them at any point he desires. The slotted cross-bars C D are fastened on the beams A¹ A² by the same device. In the center of the rearmost cross-bar D are attached, by means of bolts, two upright arms, H, which, being bolted in their upper parts to the handles F, serve as a brace for supporting them, the extreme foremost points of said handles being secured to a block, G, attached to the central cross-bar C, and secured firmly by a bolt passing through the center of the cross-bar C. In the center of the cross-bar B is attached a clevis, N, which is also secured in its position by means of device mentioned above. P represents the foremost standard securely tenoned to the beam A², and to which is attached the mold-board R, guard S, and plowshare I. O, the

the rear standard, similarly secured to beam A¹, to which is attached a shovel-shaped plow, J, provided on its left side with a pointed plate, T. At the back of this standard is secured a slotted gage, M, bolted through the standard by two bolts, W Y, one of which, Y, passes through the slot in the gage, standard O, shovel-shaped plow J, and pointed plate T, thus securing them all firmly in position. The other bolt, W, passes through the slot in the gage, standard O, and brace Z, (which has its upper bearing in beam A¹.)

The slotted gage M enables the operator, by lowering or raising it as he desires, to regulate the depth of plowing. It is also calculated to steady the plow and keep the furrows of uniform depth. The foremost standard P being provided with bolts, as in the case of the standard O, it may also be attached hereto if desired. The pointed plate T serves for the purpose of enlarging the furrows and to throw the fine pulverized earth over the weeds, &c.

In the position shown in Fig. 2, the plows are adjusted to plow between the rows, the foremost plow, I, throwing to the rows, and the rear plow, J, filling up the furrows, making a bed around the plants cultivated. By using two half-shovels and guards, as shown in the foremost standard P, and changing the brace E, by unbolting its foremost end and bolting it to the forward end of opposite beam A², and unbolting the rear end and bolting it to the end of cross-bar C resting on beam A¹, the plows will be thrown square across the rows, enabling the operator to plow both sides of a row at the same time.

With the mold-board R turned outward, as shown in Fig. 1, the soil being plowed will be thrown up in clear rows, making wide furrows, which is very essential to the growth of young cotton when it first shows itself above earth. When the plants increase in size, and a quick process is necessary, the plows may then be reversed, with the mold-boards turned inward, by simply unbolting plow I, now secured to standard P, and securing it to standard O, and vice versa, thus throwing the earth back.

The draft can be changed from the center to either side by moving the slotted cross-bar B, to which the clevis N is attached, right or left as the operator may desire.

The guard S, secured to standard P, is for the purpose of keeping heavy clods of earth from falling on and covering up young cotton, corn, or other crops in course of cultivation.

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

The combination of the beams A¹ A², slotted cross-bars B C D, slotted and perforated brace

E, and their bolts, all as and for the purpose set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 14th day of October, 1873.

ALFRED RODEN.

Witnesses:

J. G. WEATHERLY,
A. J. STREET.