

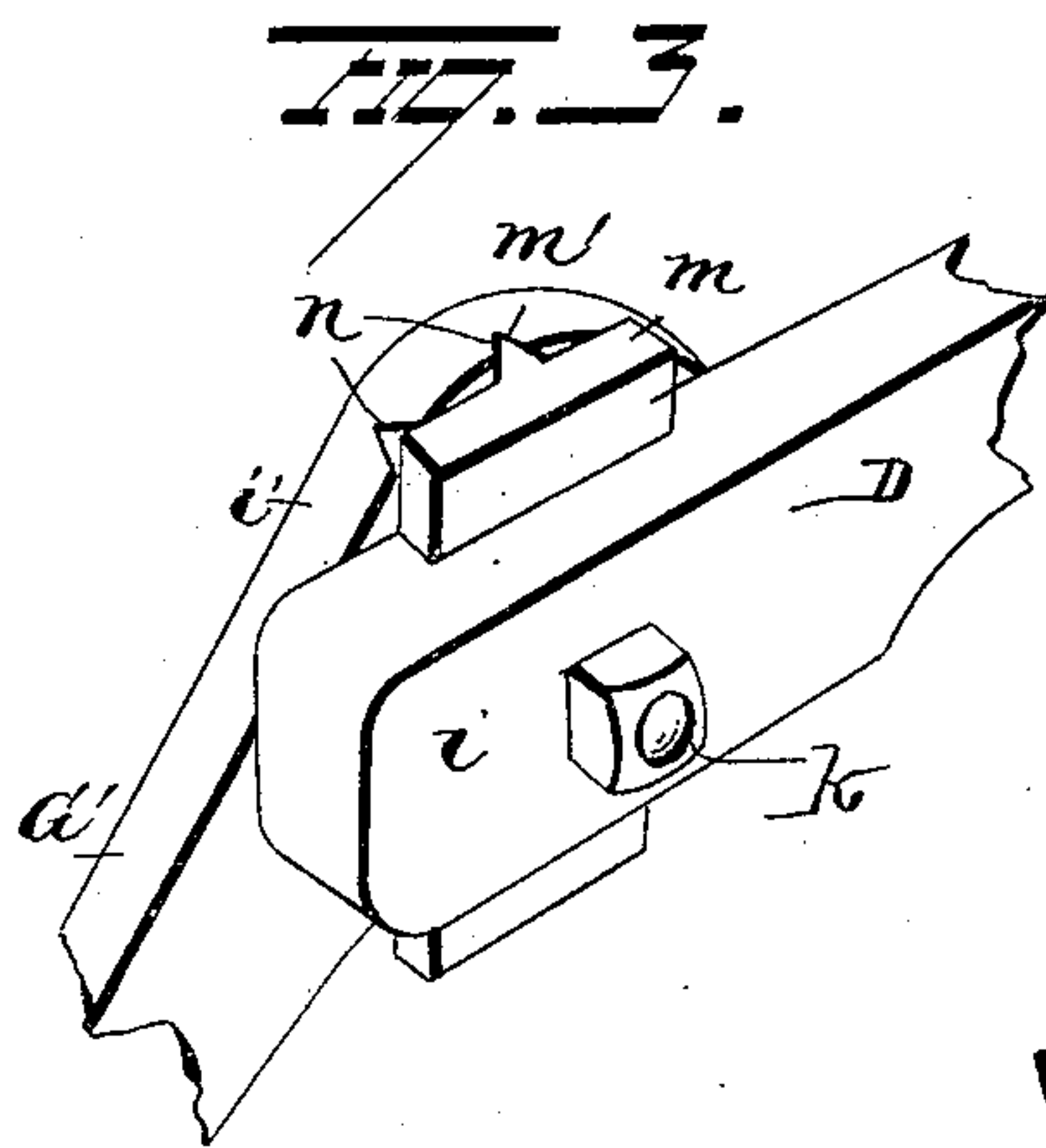
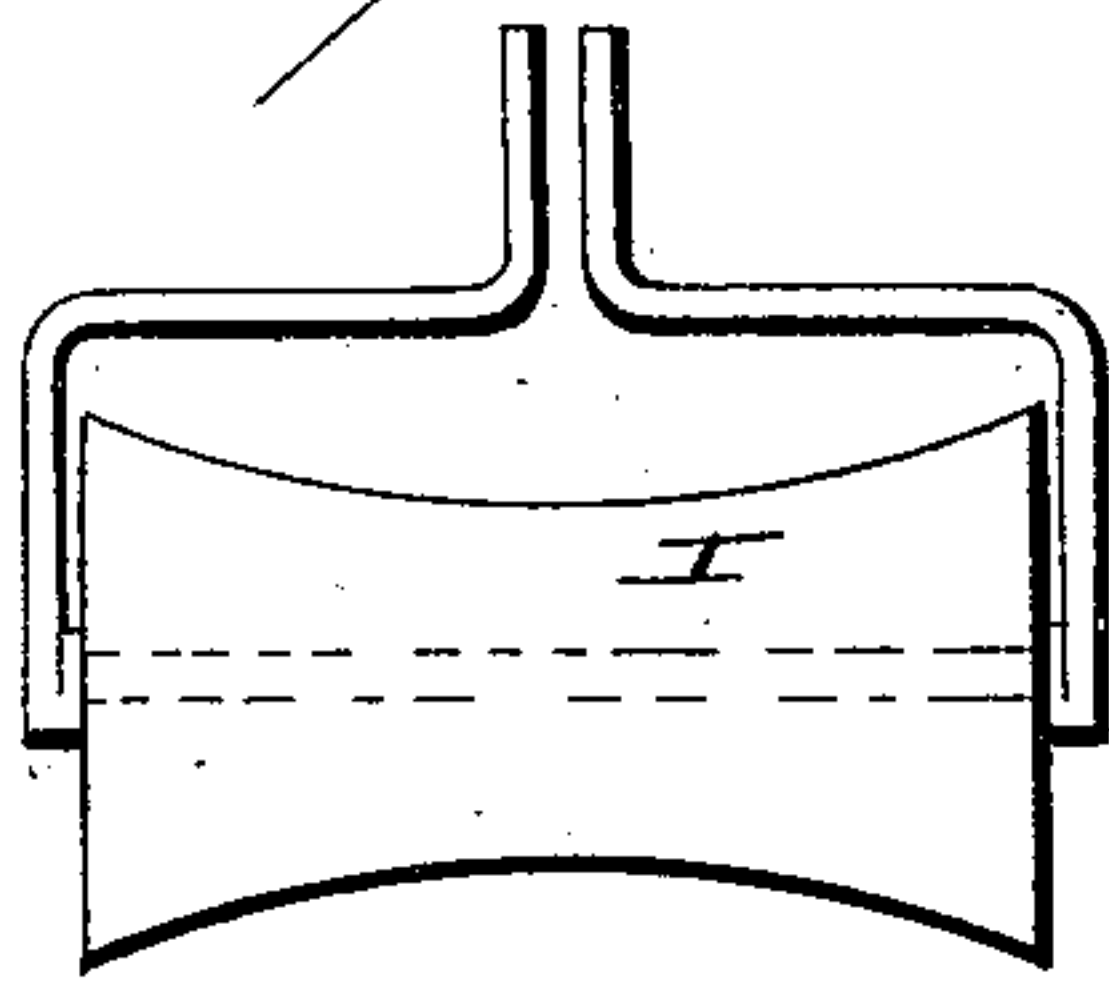
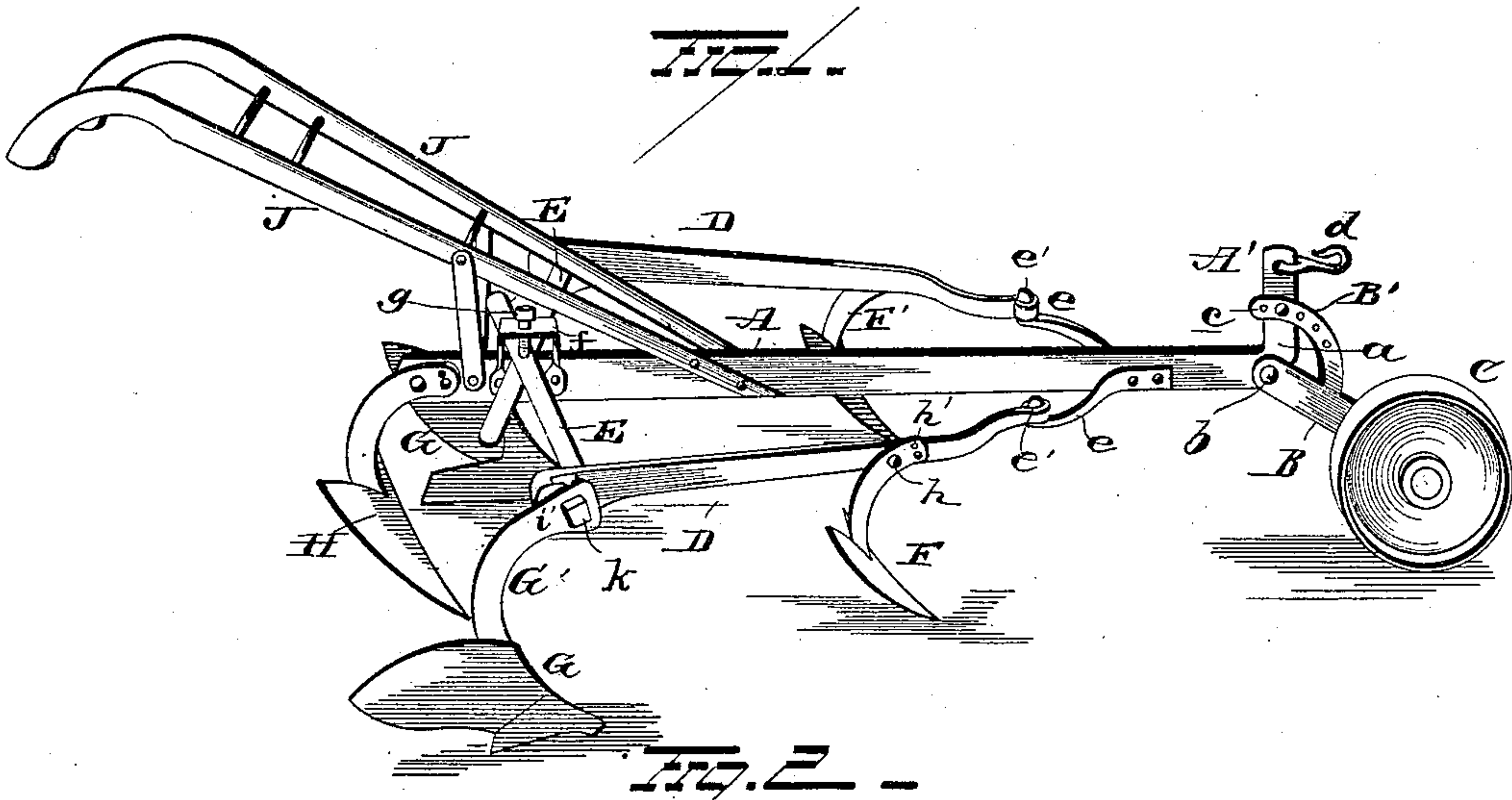
(No Model.)

W. A. DUTTON & C. J. MEEK.

CULTIVATOR.

No. 397,842.

Patented Feb. 12, 1889.



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UNITED STATES PATENT OFFICE.

WILLIAM ADDISON DUTTON AND CHARLES J. MEEK, OF RURAL RETREAT,
VIRGINIA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 397,842, dated February 12, 1889.

Application filed October 3, 1888. Serial No. 287,077. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM ADDISON DUTTON and CHARLES J. MEEK, of Rural Retreat, in the county of Wythe and State of Virginia, have invented certain new and useful Improvements in Cultivators; and we 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.

Our invention relates to an improvement in cultivators, the object being to provide a light, strong, and convenient cultivator or shovel-plow that may be readily adjusted for width, and that will be of light draft, simple construction, and comparatively low cost.

To effect the objects stated, our invention consists in the construction of parts and their combination, as hereinafter set forth, and defined in the claims.

Referring to the drawings, Figure 1 is a view of the plow in perspective. Fig. 2 is a view of a roller attachment. Fig. 3 is an enlarged detached view of one of the details, showing plan of attachment of the rear side shovels to their supports.

A is the center beam of the cultivator. It is preferably made of a rectangular bar of steel or iron. The forward end at *a* is bent upwardly at right angles to the body of the beam, a proper length being afforded the upright limb A' for its use, which will be further explained.

At or near the angular center where the beam A is bent, as stated, a hole is formed laterally through the material for the reception of a bolt, *b*, which is also inserted through a mating hole in the arm B near its free end, the opposite end of this arm being adapted to afford support to the ground-wheel C and permit it to rotate.

On the upper edge of the arm B at a suitable point an arch-plate, B', is secured or formed integral with the arm, said arch-plate being curved upwardly and rearwardly, so that its body may lie in contact with the upright limb A', to which it is designed to be adjustably attached, a series of spaced perforations, *c*, being made through the arch-plate, any one of which holes may be caused to register with a similar-sized hole in the upright

limb A', so that by this means the arm B can be given any desired degree of inclination to the beam A, which will raise or lower the forward end of said beam by the position given the ground-wheel C with relation to it. Near the upper end of the limb A' a clevis, *d*, is loosely secured thereto for the connection of a draft-animal by any of the ordinary devices employed for the purpose.

Upon each side of the center beam, A, there are duplicate bracket-plates *e*, attached by a bolt that passes through holes in the plates and the beam. The brackets *e* are bent out at an angle from the sides of the beam A, and their outer ends terminate in upturned pintles *e'*.

Two side beams, D, are provided and preferably shaped as shown, and made of the same material as the center beam, A, said side beams having eyes formed on their forward ends to engage the pintles *e'* of the bracket-plates *e*, thus affording a hinged connection of parts to permit the side beams, D, to be laterally adjusted by spreading their rear ends more or less with regard to the center beam, A.

To hold the side beams, D, equally removed at their rear ends from the center beam, A, the stay-bars E are provided and each pivoted by one of their ends to the side beams near their rear ends, the braces projecting toward the center beam, A, as shown.

It will be seen that one of the stay-bars E overlaps the other where these bars cross the center beam, A, and at this point on the beam A a bracket-loop, *f*, is secured to the top surface of the beam, so that the set-screw bolt *g*, which is inserted in a tapped hole in the loop-bracket, will have bearing-contact with the top brace when tightly set down upon it, and thus hold both braces from lateral displacement.

It is apparent that the side beams, D, may be readily adjusted to any necessary width within their range by the means just described.

Upon each side beam, D, near the forward ends of the same, the shovel-blades F are secured, the curved standards F', which support the shovel-blades F, having their upper ends bolted to the beams by the bolts *h*, which penetrate the standards a short distance from their terminal ends, in which the two spaced

holes h' are formed. Either of the holes h' may be made to register with another hole in the beam, so that by a change of adjustment the shovel-blades will be given a greater or less inclination to the ground operated upon, as may be required to suit the nature of the soil.

At the rear ends, i , of the beams D an enlargement is made on each and preferably rounded to produce a proper bearing for the upper ends, i' , of the standards G' , to which latter are secured the shovel-blades G. The enlarged rounded rear ends, i , of the beams D are flattened to afford vertical parallel sides to each and are centrally perforated to receive the screw-bolts k .

On the outer faces of the ends i of the beams D open slots are formed, in which are seated the key-plates m , said plates being thus retained by contact of their parallel edges with the side walls of the recesses or slots, as just stated. The key-plates m have projecting tongues m' formed on their outer faces, which tongues are located about at the center of width of the plates and extend throughout their length.

The upper enlarged ends, i' , of the standards G' are flattened and given a form that corresponds in contour with that of the enlarged ends of the beams D and are centrally perforated, as are also the key-plates m , so that the retaining-bolts k will clamp the parts together when properly adjusted.

In order to render the shovel-blades G adjustable in degree of inclination of their cutting-edges to the soil, the heads i' of the standards G' are slotted radially at spaced intervals across their faces placed adjacent to the key-plates m , these radial slots n permitting the tongues of the key-plates to seat within any desired slot, and thus afford a greater or less degree of inclination of the standards G' to the beams D and set the edges of the shovel-blades G with more or less rake to engage the soil they are in moving contact with.

The shovel-blades G may be changed from one side to the other of the cultivator, and thus be caused to throw the soil away from or toward a row of corn or other growing crop

that is undergoing cultivation, as may be necessary.

There is a removable shovel, H, attached to the rear end of the center beam, A, to work the soil between the forward shovels F, or this shovel may be dispensed with and a roller, I, substituted if the nature of the work should require it.

The usual handles, J, are mounted on the center beam, A, and properly braced thereto, so as to afford means for the proper management of the plow by the operator.

Slight change might be given to the form of the side beams and shape of the shovel-blades without departing from the spirit of our invention; hence we do not desire to be held to the exact forms of the parts as shown; but,

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a cultivator, the combination, with the center beam and outwardly and rearwardly extending arms projecting from the center beam near its forward end, of side beams pivotally connected with said arms, a shovel-standard adjustably secured to each side beam near its rear end, a shovel adjustably attached to the side beams near the front ends thereof, and adjustable stay-bars for uniting the rear ends of the side beams, substantially as set forth.

2. The combination, with the side beam, D, provided with a transverse slot at its rear end and a rectangular key or plate, m , secured within the slot, said key having a rib, m' , formed on its outer face, of a shovel-standard having its upper end constructed with a series of radial grooves, and a bolt, k , for securing the parts together, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

WILLIAM ADDISON DUTTON.
CHARLES J. MEEK.

Witnesses:

L. D. HANCOCK,
GEO. A. BOWDEN.