(Model.)

J. LANE.

CORN CULTIVATOR BLADE OR SHOVEL.

No. 277,907. Patented May 22, 1883.

Fig. 1.

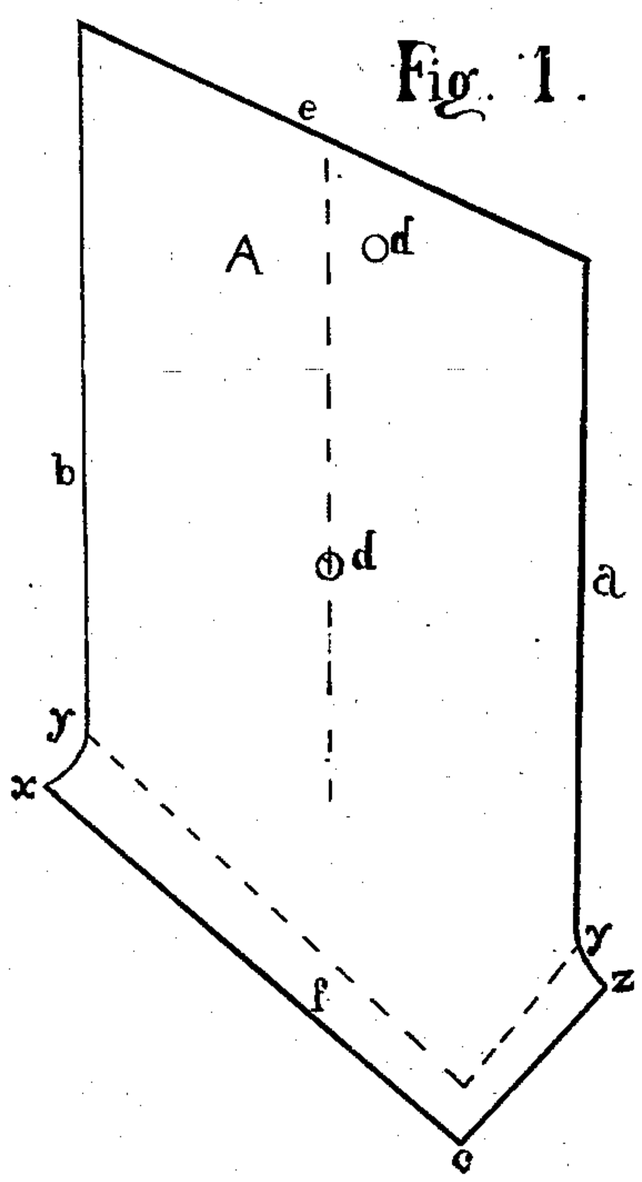


Fig. 2.

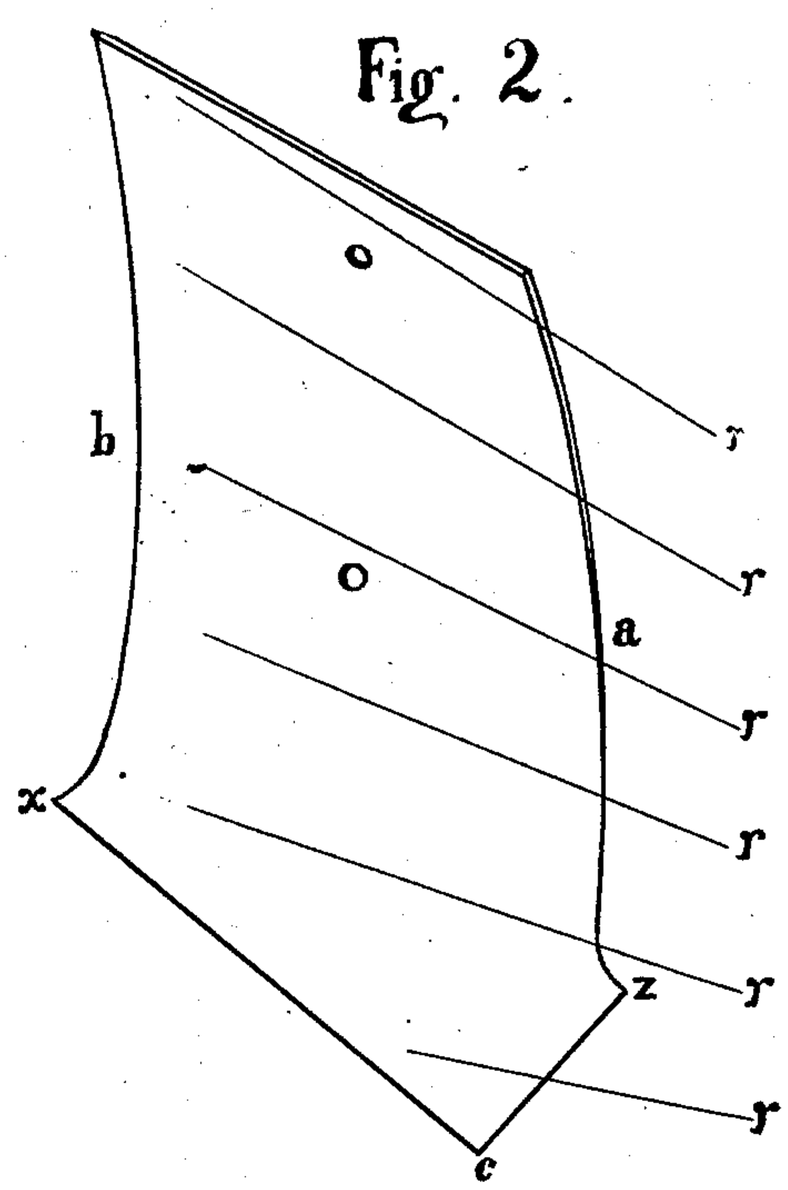


Fig. 3.

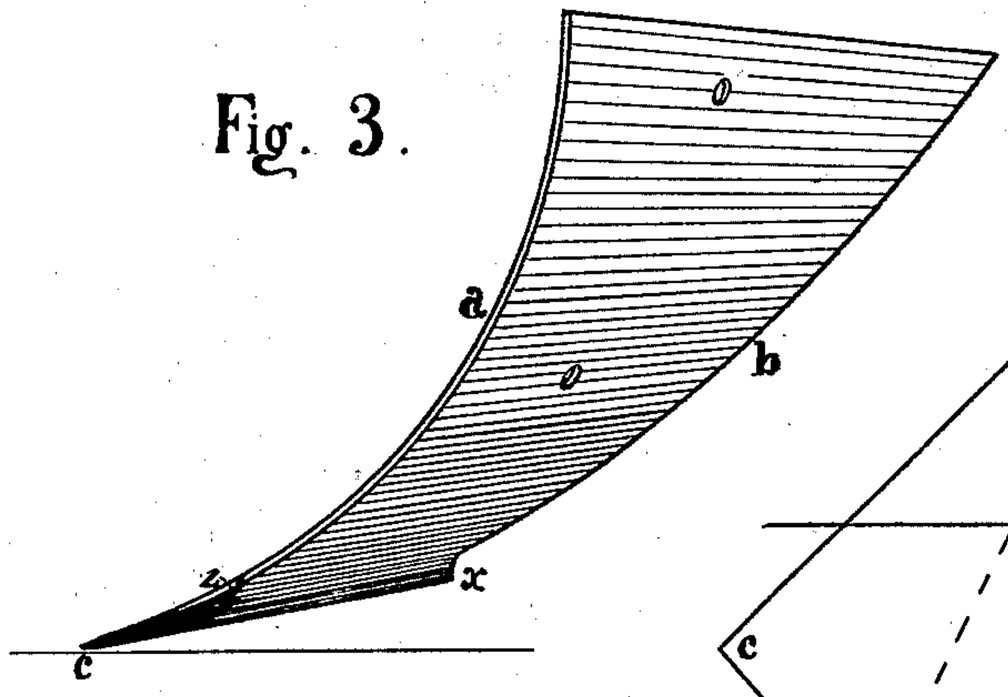


Fig. 4.

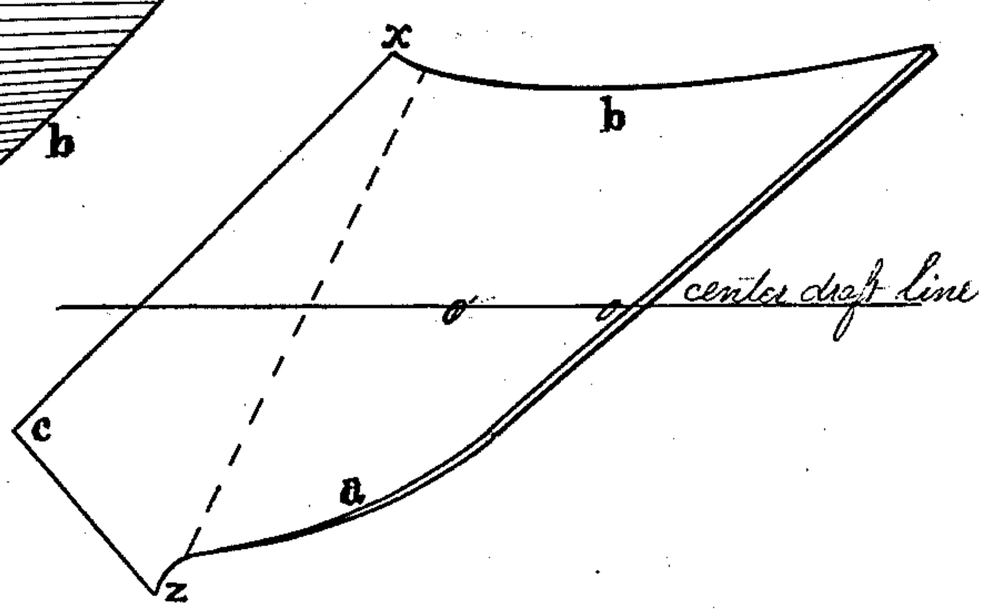
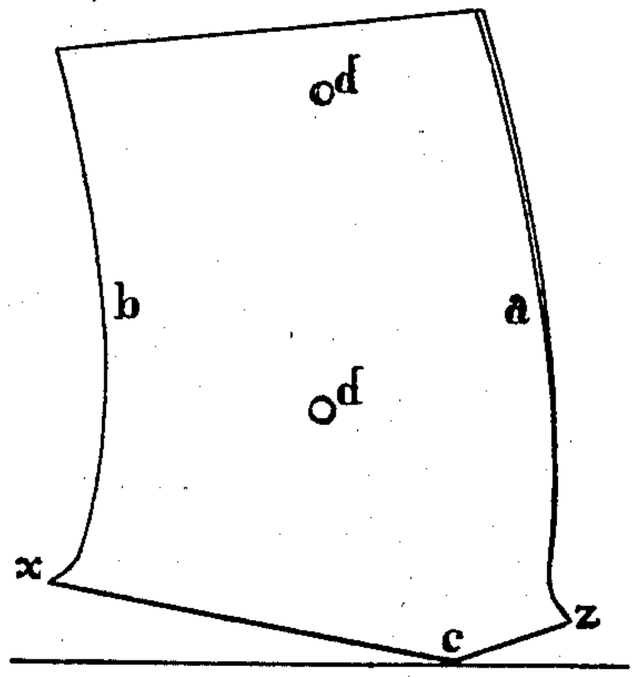


Fig. 5.



WITNESSES.

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JOHN LANE, OF HYDE PARK, ILLINOIS.

CORN-CULTIVATOR BLADE OR SHOVEL.

SPECIFICATION forming part of Letters Patent No. 277,907, dated May 22, 1883.

Application filed October 21, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN LANE, of Hyde Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Corn-Cultivator Blades or Shovels, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to corn-cultivating blades or shovels; and the object of my invention is so constructing the blade that it will run straight, following the center draft, and throw its furrow-slice lowly and horizontally to one side, scattering the loose soil in among the plants, and not break down or cover up the small plants. Heretofore blades called "twisted shovels" have been used intended for such purpose, which in operation run the soil high up the blade, from which high elevation the soil is thrown to one side, falling, breaking down, and covering up corn-plants, as well as weeds, for reason of which it has been the custom to turn the soil away from the planted row when first cultivating, and also such shovels or blades, being set twisted or oblique to the center of draft, tend to crowd to one side and do not run straight. It is to obviate such side pressure and make the blade run straight, and also to throw the soil lowly, that I have invented and made the herein-described blade.

My invention consists in a new and novel construction of the blade, which I will first describe, and afterward point out in the claim.

Referring to the drawings, like letters refer to like parts, in which Figure 1 is a plan view, showing the cut form of the blade before being bent to shape, showing how the top end is cut obliquely, showing how the point is set to one side of the center, showing how the bolt-holes are out of line with the center line, and showing how the point end is sharpened beveled to an edge from the dotted line *y*, and how the corners *x* and *z* project. Fig. 2 is a face view of the blade bent to shape, showing how the straight-edge lines *r* converge by reason that the side *a* is bent on a smaller circle than the side *b*. Fig. 3 is a side elevation view, showing the blade in position for work, showing how the side *a* is bent on a smaller circle than the side *b*, and showing how the corners *z* and *x* and the point *c* are arranged relative to each other, and how the point *c* enters the ground deeper than the corners *z* and *x*, and showing how the top part of the side *a* is curved to nearly a perpendicular, while the top part of the side *b* is sloping rearwardly. Fig. 4 is a top view, the blade being in position for work, showing how the blade is set obliquely to the line of draft, with the point set outside of the center draft-line. Fig. 5 is a front view of the blade in position for work, showing the position of the cutting-edge, point *c*, and corners *z* and *x*, how the point *c* is one side from the center of the blade, that the point *c* enters the ground below the level of the corners *z* and *x*, also showing the bolt-holes *d d*. While out of line with a center line of the blade they are perpendicular, one above the other, for attachment to the drag-bars.

In constructing my improved corn-cultivating blade I take a plate of steel of proper thickness and cut therefrom a truncated rhomboidal blank, A, (shown in Fig. 1,) having parallel sides *a b* and oblique-cut top end, *e*, with the point end cut oblique from *x* to *c* and truncated or cropped from *c* to *z*, by which the point *c* will be made at one side from the center of the blade and about equidistant between the center line, *f*, and the forward side, *a*, with a short cutting-edge on one side from *c* to *z* and a longer cutting-edge on the other side from *c* to *x*, as shown in the drawings, and the oblique cut from *c* to *x* may or may not be parallel with the top oblique end, *e*, without departing from my invention. The body of the blade is that portion above the dotted line from *x* to *z* in Fig. 4, and in bending the blade to shape I preferably twist the body by bending the side *a* upon a small curve and bending the side *b* upon a larger curve, as will be understood by inspecting the drawings, the side *a* being bent upon such a small curve that its top end is nearly perpendicular, while the side *b* is bent on a slower or larger curve and its top end sloping rearwardly, as clearly shown in Figs. 3 and 4. In thus bending the body of the blade I preferably make the face of the blade flat or straight across from side *a* to side *b*, as shown by the straight-edge converging lines *r* in Fig. 2, and it will be noticed that in a blade thus bent all the body of the blade is set oblique to the line of draft, as is shown in Fig. 4. The straight-edge lines *r*, crossing the

face of the blade, converge to a common center forward of and beyond the forward side, *a*, of the blade, as will be understood by inspecting Fig. 2 of the drawings. When the blade is set in position for work the point *c* enters the ground deepest, and the corner *z* enters the ground deeper than the corner *x*, as is clearly shown in Figs. 3 and 5.

In operation, with the blade set in position for work, the point *c* will enter the ground deepest, and the point, being to one side of the center of draft, will tend to crowd toward the center of draft, counteracting the crowding of the side pressure of the soil upon the twisted or oblique upper part of the blade, and by which the blade will run straight with a heavy side pressure upon its body, and by reason that the forward side, *a*, of the blade is bent on a small curve and its upper end nearly perpendicular the soil will not run high over the the top of the blade, but will be checked in its upward going by the short curved forward side, *a*, and crowded toward the long curved rear side, *b*, which will throw the loose soil lowly in among the plants, and not be liable to cover up the plants.

Having thus set forth my invention, I claim—

The cultivator blade or shovel A, when constructed, substantially as described, of a truncated rhomboidal form, with its advancing point *c* one side of the center of the blade, as shown, a short cutting-edge from the point *c*, on the forward side of the blade, and a longer cutting-edge on the other side, the body curved and twisted, the forward side bent upon a small curve, and the rear side bent upon a larger curve, and the corner *z* arranged to enter the ground deeper than the corner *x*, all substantially as and for the purpose set forth.

JOHN LANE.

Witnesses:
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A. A. STARR.