

D. W. SHARES.

Ridge-Plow.

No. 12,075.

Patented Dec. 12, 1854.

Fig. 1.

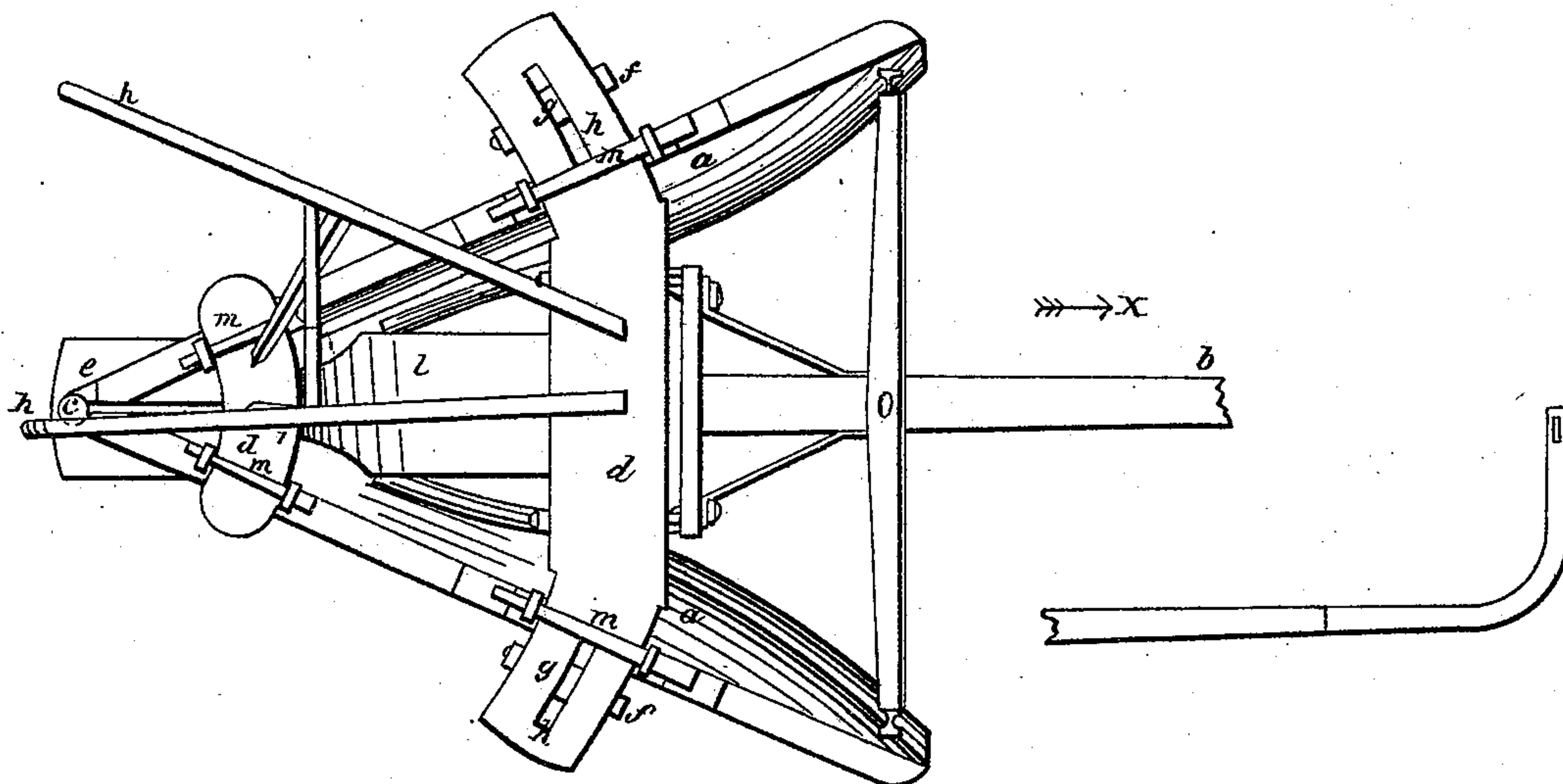
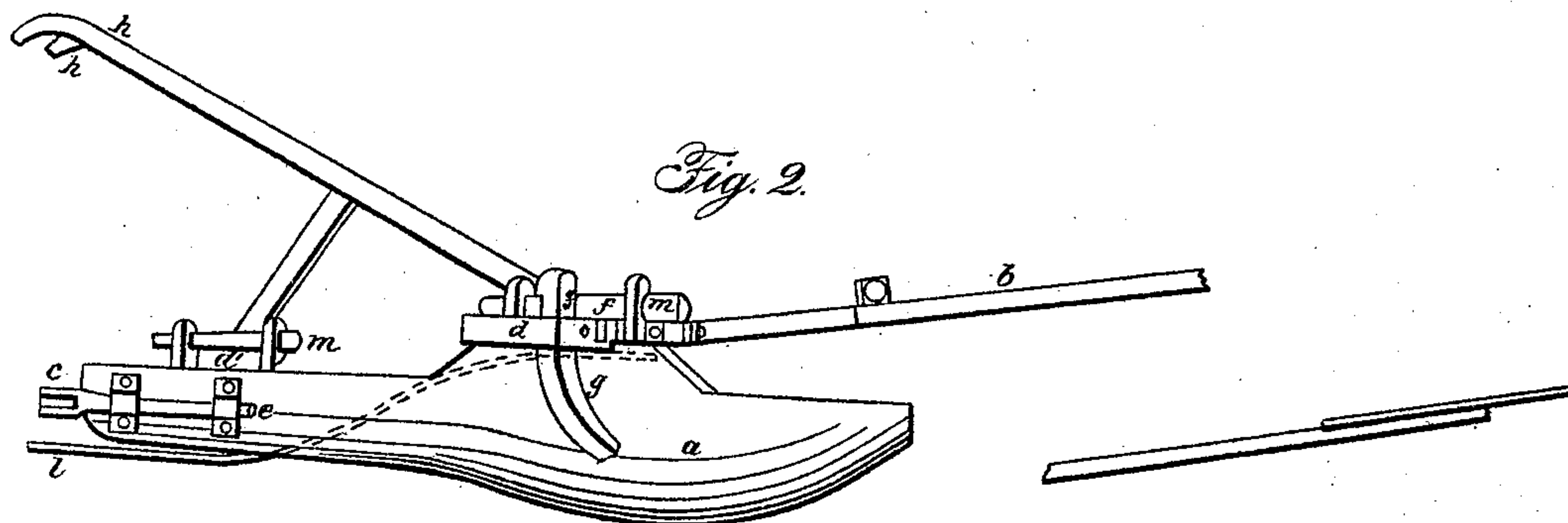


Fig. 2.



UNITED STATES PATENT OFFICE.

DANIEL W. SHARES, OF HAMDEN, CONNECTICUT.

IMPROVEMENT IN SEED-PLANTERS AND CULTIVATORS.

Specification forming part of Letters Patent No. 12,075, dated December 12, 1854.

To all whom it may concern:

Be it known that I, DANIEL W. SHARES, of Hamden, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Covering and Hoeing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents a top view or plan of the machine, and Fig. 2 a side view or elevation of the same.

The machine represented in the accompanying drawings is designed to be used at time of planting and for after-hoeing potatoes, corn, and other vegetables, seed, or grain sown in drills.

It consists, in part, of two wings or shoes, *a*, diverging from a point in the rear on either side of the center line of draft, the machine traveling as indicated by the arrow *x* in Fig. 1, the draft pole or perch *b* being in the center and one shoe *a* being drawn by horse or cattle on each side of the row. These shoes *a*, which present an open or flaring space between them in front, are hinged together by a joint, *c*, at their back, to admit of shoes being more or less contracted or expanded horizontally, to vary their width apart or angle of divergence from each other; and, further, the shoes *a* are so hung to or connected with the back hinge, *c*, and are otherwise so connected to the frame or braces *d d'* of the machine as to admit of the shoes *a* having a universal adjustment to suit their action to various conditions of the soil, accordingly as it is loose or heavy and according to the amount of earth the shoes or wings are required to gather and throw up, &c.—as, for instance, the shoes *a*, as before specified, are by the back joint, *c*, made capable of expansion or contraction horizontally, to give the required shape to the hill or row and vary their action to any width of hill or row apart; and by hanging the shoes *a* loosely, so that they may turn on rods *e*, projecting horizontally or at right angles from the back joint, *c*, of which they form the extension-bars that connect the shoes with the back hinge, the shoes *a* may have their angular set from the horizontal position varied, so as to cut into the soil more or less obliquely, and their depth of entrance into the soil varied to suit various

widths or sets of the shoes apart, different kinds of earth, or vary the amount of soil they should throw up over the hill or row, and to suit different shapes or sizes of hills or rows, &c., the shoes *a* always being set so as to diverge more or less upward from each other on their plowing or covering surfaces, and in this respect and in their angle or direction of horizontal divergence they are set in an opposite manner to those corn-plows that are provided with expanding and contracting wings or scrapers diverging backward and that scatter the earth on either side of each adjoining row, while the shoes *a* in this machine gather the earth between them as the machine travels forward and cover the earth over each hill or row on both sides of it simultaneously, thereby insuring the loose earth being heaped over the center and equally on either side of the row, which is not the case in the plows I refer to, as the wings in them, according to the nature or condition of the soil and velocity of the plow's travel, are apt to throw the earth unequally and improperly over the rows, and in such the expansion and contraction of the wings insure no certainty of the proper distribution of the soil, and is only designed to suit the general action of the wings to various widths of the rows apart; but the specified adjustability of the shoes *a* in my machine insures a certain altered shape to the hill or row and gives it without fail the required width and form.

The lower edges of the shoes *a* are of suitable configuration at their back to give the proper shape to the hill or row, while at their front they are shaped to insure an easy and gradual entrance into the soil, and of such intermediate configuration as to take the proper hold and lift upon the soil to heap it up against or over the rows. When adjusted to their required set, as provided by their universal connection, as specified, the shoes *a* are securely held by bolts *f*, passing through any one of a series of holes in the front brace, *d*, on either side or end, and through one of a series of apertures, *s*, in an arm, *g*, projecting from either shoe on the outside, and fitting through a slot, *h*, near either end of the front brace. Wedges *m* are passed through loops on the shoes to tighten the braces *d d'* down on the shoes. The draft pole or perch *b* is suitably connected to the front brace, and plow-handles *k*, to guide

the machine, unite by their supports the fore and aft braces, d d' , together.

Projecting from the front brace, d , underneath it, and extended and dipped backward, is a flattening-plate, l , that follows in the wake of the covering portions of the shoes, and that serves slightly to smoothen or level the top of the hill or row, to give the hill or row a neat and substantial finish. This plate is removed in the after-hoeing of the potatoes or other vegetables by the machine, as they, in growing, are coming out of the ground, in order that the shoes a may throw a covering of loose or light earth over the potatoes, which will serve to strengthen their growth and to kill the weeds, &c. Thus the most perfect covering and hoeing may be accomplished by my machine, and that in the most expeditious manner.

I do not claim in themselves as new expanding and contracting hoeing wings or scrapers, as these have before been used; but

What I do claim as new and useful, and desire to secure by Letters Patent, is—

1. Connecting the wings or shoes a to each other and to the frame of the machine in such

manner that they are made capable of universal adjustment, by hanging them so that they may be turned on extension bars or rods, e , projecting horizontally from the rear hinge, c , and uniting them together, or otherwise equivalently hanging and connecting them, so that the wings or shoes may not only be expanded or contracted to vary their width apart, but may also have their depth of entry into the ground and angular set in direction of their depth varied to suit various widths of the wings apart and various conditions of the soil or other controlling circumstances, substantially as specified.

2. The arrangement of the leveling or finishing plate l , operating in rear of the covering portions of the wings to slightly flatten the tops of the rows and give a neat and substantial finish to them, as set forth.

In testimony whereof I have hereunto subscribed my name.

DANIEL W. SHARES.

Witnesses:

DAVID B. COOK,

HORACE P. SHARES.