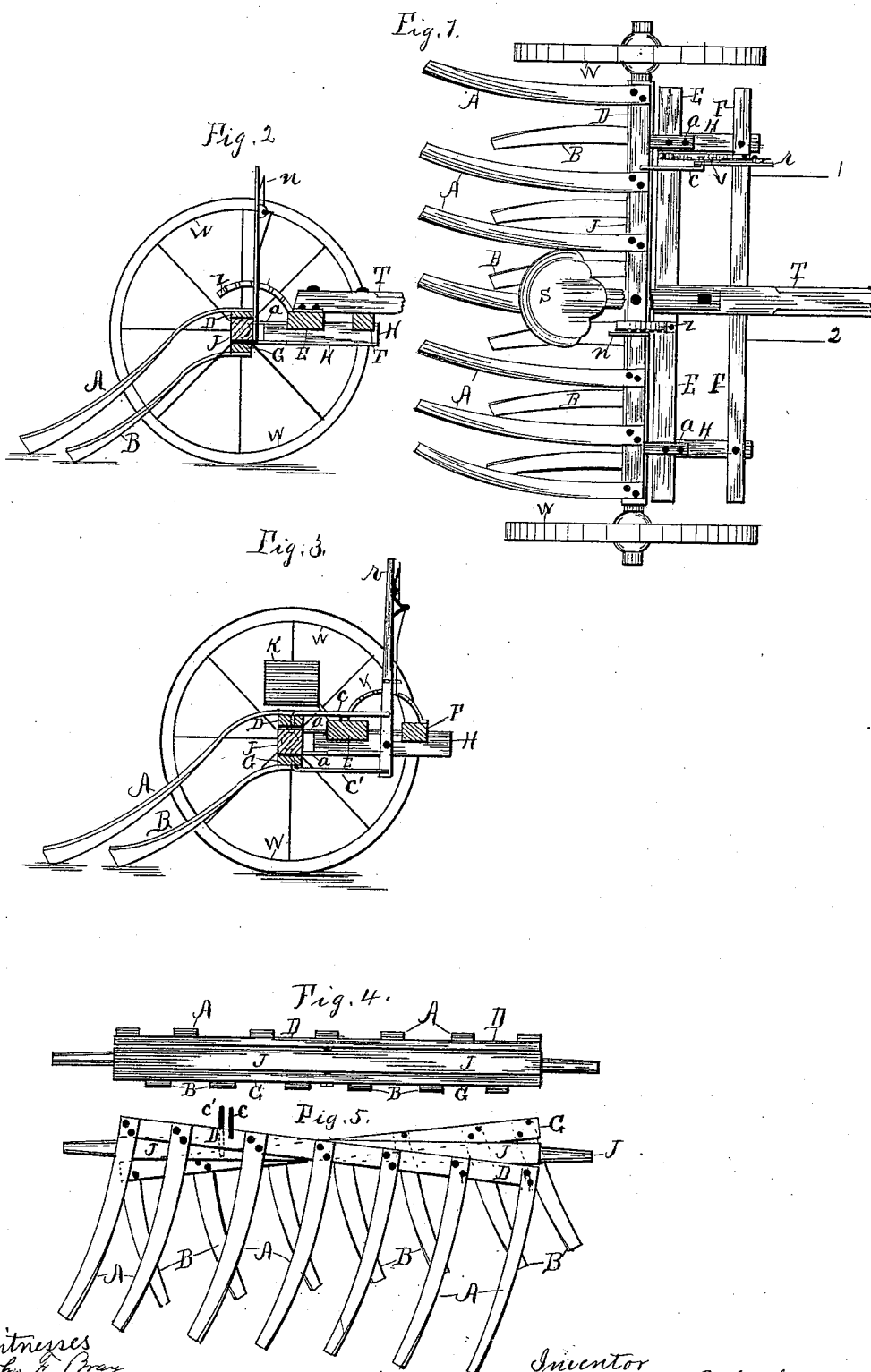


(No Model.)

A. E. JACKSON.
SOIL PULVERIZER.

No. 463,628.

Patented Nov. 24, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

AARON E. JACKSON, OF WESLEY, ILLINOIS.

SOIL-PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 463,628, dated November 24, 1891.

Application filed July 6, 1891. Serial No. 398,475. (No model.)

To all whom it may concern:

Be it known that I, AARON E. JACKSON, a citizen of the United States of America, residing at Wesley, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Soil-Pulverizers, of which the following is a specification, reference being had therein to the accompanying drawings and the letters and figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a top plan view. Fig. 2 is a vertical longitudinal section of Fig. 1, taken on line 2, looking toward the top of the figure. Fig. 3 is a vertical longitudinal section of Fig. 1, taken on line 1, looking toward the top of the figure. Fig. 4 is a side view of the axle and of its upper and lower bolster, looking at the axle from its forward side; and Fig. 5 is a top plan of the axle and of its two bolsters having their rearwardly-extending knives attached and showing the bolsters turned in opposite directions from each other for changing the position of the two sets of knives with each other.

This invention relates to certain improvements in soil-pulverizers, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, J represents the axle of the machine, having the two traveling wheels W W.

E F H is a rectangular frame attached to said axle J by means of the straps *a a*, which pass around the axle in such manner that the axle may be partially rotated.

T is a tongue secured to said rectangular frame.

D is a bolster pivotally attached at its center to the upper side of the said axle and has secured to it the series of rearwardly-extending curved knives A, and G is a bolster pivotally attached at its center to the lower side of the said axle, and has secured to it the series of rearwardly-extending curved knives B, which are shorter than knives A, so they may not be engaged by them. The two sets of knives may be set on their respective bolsters, so they will alternate with each other, as shown in Figs. 1 and 4, or so they will be

opposite to each other, as shown in Fig. 5, if for any reason that is preferable.

r is a lever pivotally attached near its lower end to the side of one of the beams H and is connected above its said point of pivot to the upper bolster D by means of the rod *c*, and is connected below its said point of pivot to the lower bolster G by means of the rod *c'*. A forward or backward movement of said lever will change the position of the two bolsters from that shown in Figs. 1, 2, and 3 to that shown in Fig. 5, for the purpose of changing the position of the knives A B as may be desired, so as to cause them to engage the soil at a greater or less angle for throwing the soil to one side a greater distance and for causing the two series of knives to engage the soil at different distances apart from each other, and cause them to travel nearer to or farther from each other's track, as the quality and character of soil may require and according to the work the machine is required to do. A notched segment V furnishes means for securing the spring hand-latch on said lever in any one of the notches in said segment, and thus hold the said bolsters and their knives adjusted in any required position.

N is a lever secured to the axle J and by means of which said axle may be partially rotated to elevate the knives A B from the ground, as when it is desired to transport the machine from field to field or along the road and it is not desired to have the knives engage the ground. The notched segment Z and a spring hand-latch on said lever furnish means for holding the axle rotated, as may be desired.

K is a box for holding stone or other heavy material for weighting the machine down to its work, so the knives will not pass over clods and not pulverize them. Only one box is shown; but it is intended to place one on the top of each end of the machine-frame, so each end may be weighted.

The knives A of the upper series are curved at their rear ends, so as to throw the soil in the opposite direction from that which it is thrown by the oppositely-curved rear ends of the lower series of knives B, so that the soil is not only cut by the sharp lower edges of the knives,

but thrown violently in contrary directions by the two oppositely-curved series of knives as the machine advances. The whole forms a very cheap, durable, and effective device for the purpose.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In the soil-pulverizer shown and described, the combination of the axle J, bolster D, pivotally attached to the upper side of said axle and having the rearwardly-extending curved knives A, bolster G, pivotally attached to the lower side of said axle and having the rearwardly-extending curved knives B, lever r, and rods c c' for connecting said bolsters and lever, substantially as and for the purpose set forth.

2. The combination, with the axle J, of the

frame E F H, straps a a for connecting said frame and axle and permitting partial rotation of said axle, lever n, secured to said axle, segment Z, bolsters D and G, pivotally attached, respectively, to the upper and lower sides of said axle, the two series of rearwardly-extending curved knives A B, secured, respectively, to said bolsters, one series of knives being different in length from the other and each series curved in an opposite direction from the other, lever r, and rods c c' for connecting said lever and bolsters, and the notched segment V, all arranged to operate substantially as and for the purpose set forth.

AARON E. JACKSON.

Witnesses:

THOS. H. HUTCHINS,
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