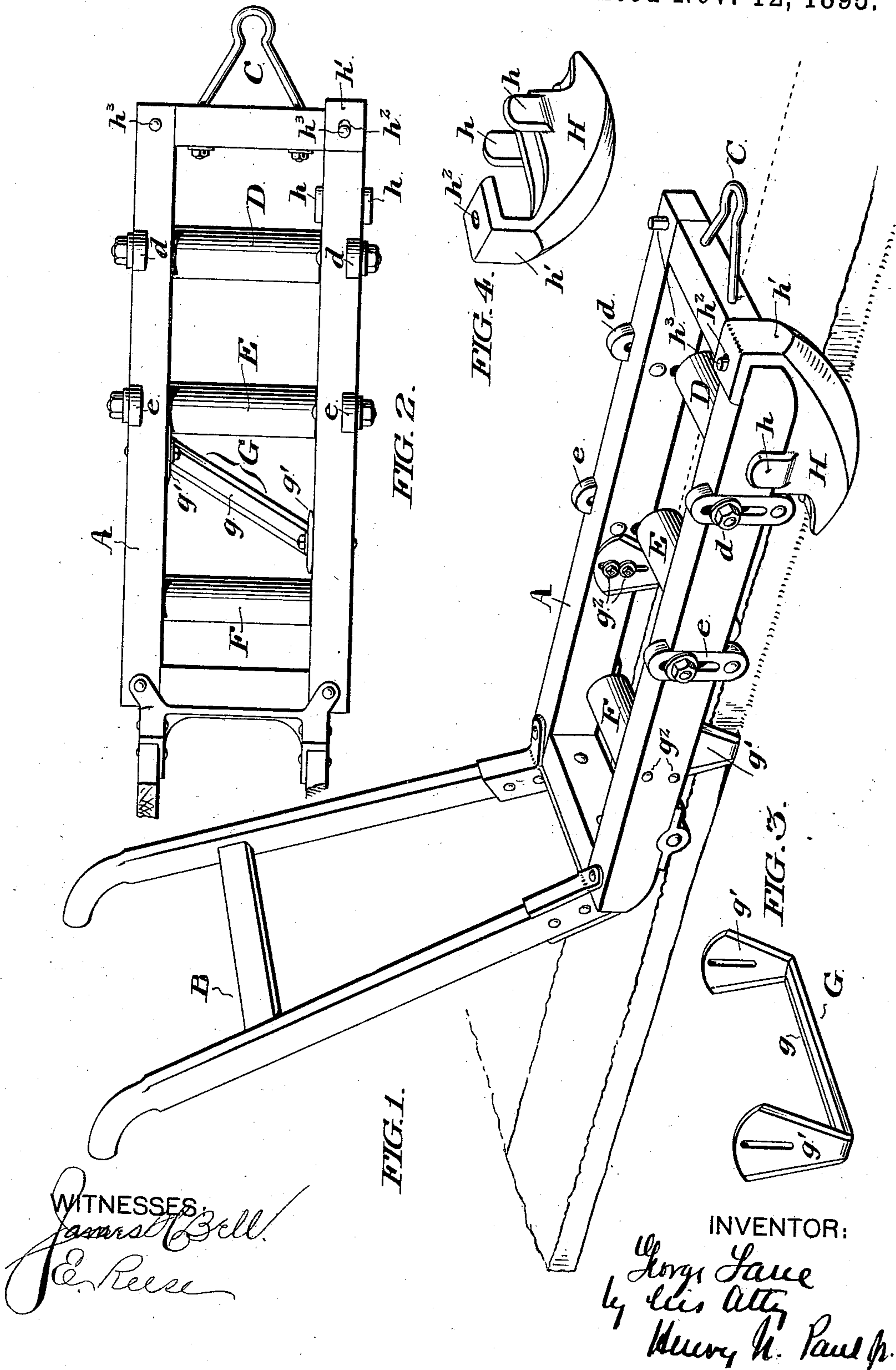


(No Model.)

G. LANE.
SOD CUTTER.

No. 549,730.

Patented Nov. 12, 1895.



UNITED STATES PATENT OFFICE.

GEORGE LANE, OF HAVERFORD, PENNSYLVANIA.

SOD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 549,730, dated November 12, 1895.

Application filed February 21, 1895. Serial No. 539,562. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LANE, a subject of the Queen of Great Britain, residing at Haverford, in the State of Pennsylvania, have invented certain new and useful Improvements in Sod-Cutters, whereof the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide a sod-cutter which, while simple in its construction, will be capable of cutting sod with more precision, and consequently with less waste, than the implements which have heretofore been used for this purpose.

In the accompanying drawings, Figure 1 is a view of my improved sod-cutter in perspective. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of the knife removed from the machine, and Fig. 4 is a similar view of the guide-shoe.

A is a heavy rectangular horizontal frame, preferably of wood. Suitable handles B are affixed to the rear end of the frame, and an eye C is affixed to the forward end, to which a whiffletree may be attached in case the cutter is to be operated by horse-power. Between the side pieces of the frame are mounted three rollers D E F and a knife G, having transverse and vertical portions. The roller D is situated near the forward end of the frame in vertically-adjustable bearings *d d*. The roller E is similarly mounted near the center of the frame in vertically-adjustable bearings *ee*. The roller F is mounted near the rear of the machine. Its bearings may be fixed and it should be mounted in a plane an inch or two above that in which the rollers D E are normally adjusted. All the rollers D, E, and F are of constant diameter across their entire length. The knife G consists of a horizontal portion *g* and two vertical portions *g' g'*, all preferably formed of a single piece of steel. The horizontal portion is set in a horizontal position, as seen in Fig. 2. It is of equal width throughout and has both its forward and rear edges sharpened, the beveled edge being preferably the upper one. The vertical portions *g' g'* are V-shaped and are also sharpened both at their forward and rear edges. They have cut through them vertical slots, through which pass the bolts *g²*, by which they are fastened to the frame and

whereby the height of the knife may be adjusted.

H is a guide-shoe, which is preferably cast of a single piece of iron, but which may vary considerably in shape or material. It contains two side clamps *h* and an overhanging lug *h'*, containing a hole *h²*. In the upper side of the forward corners of the frame are set pegs *h³*, which pass through and hold in place the lug *h'*, the further securing of the shoe being accomplished by the clamps *h*, which embrace a portion of the side of the frame.

The operation of my machine is as follows: The rollers D and E are adjusted in as near as may be the same horizontal plane. The knife is then adjusted at a depth to correspond to the thickness of the sod which it is desired to cut. The solid roller E being situated so nearly over the cutting-edges of the knife prevents the sod from rising in advance of the cutter and thereby increasing the thickness of the cut. It is desirable to hold the rollers D and E firmly on the surface of the sod by placing a heavy weight (not shown in the drawings) in addition to the weight of the machine upon the framework near its center. The horizontal portion of the knife being inclined from side to side cuts with much greater precision and less resistance than knives which run straight across. Attempts have been made to accomplish this result by making the knife pointed in the middle; but in this case the point is liable to get bent up or down, rendering the machine useless. The vertical portions of the knife slope backward along both edges from the top to the bottom, so that they cut from the top downward rather than from the bottom upward, insuring a clean even cut. The knife is sharpened along both its forward and rear edges, and is therefore reversible, so that if the edge which is being used becomes too dull for precise work it is only necessary to reverse the cutter without stopping to sharpen it. When it is desired to remove the knife from the sod, the operator by bearing down upon the handles brings the roller F in contact with the surface of the sod, correspondingly raising the forward roller D, the result of which is to incline the forward edge of the knife upward, so that it immediately cuts its way to the surface.

The guide-shoe *h* enables the operator to guide the vertical portion of the knife accurately along the edge of a line of sod which has already been cut, in order that, on the one
 5 hand, no sod may be wasted by remaining uncut, and, on the other hand, that the ribbon of sod cut may not narrow, and thus vary in width. If the plot of sod to be cut is in the
 10 form of a square, the cutter may pass continuously around it in one direction, in which case the same edge is always outward, so that no change in the position of the shoe *h* is necessitated; but when the cutting is done alternately backward and forward along a single
 15 line it is necessary at the end of each cut to transfer the guide-shoe from one side of the machine to the other. I have therefore provided a shoe which, although firmly held upon the frame, may be removed and placed
 20 upon the other side with the utmost readiness.

Having thus described my invention, I claim—

1. In a sod-cutter, the combination of the frame, A; the knife, G, having both transverse and vertical cutting edges, and vertically
 25 adjustable upon said frame; and the transverse roller, E, mounted nearly over said knife and of equal diameter across its entire length, substantially as described.

30 2. In a sod-cutter, the combination of the frame, A; the knife, G, having both transverse and vertical cutting edges, and vertically adjustable upon said frame; and the transverse roller, E, mounted nearly over said
 35 knife, of equal diameter across its entire length, and vertically adjustable upon the frame, substantially as described.

3. In a sod-cutter, the combination of the

frame, A; three transverse rollers, D, E, F, the latter of which is mounted in a higher
 40 plane than the two former; and the vertically adjustable knife, G, having transverse and vertical cutting edges, substantially as described.

4. In a sod cutter, the vertically adjustable
 45 knife, G, consisting of the transverse portion, *g*, having a straight cutting edge diagonally disposed with reference to the sides of the machine; and the vertical portions, *g'*, *g'*, also
 50 provided with cutting edges, substantially as described.

5. In a sod cutter, the vertically adjustable knife, G, consisting of the transverse portion, *g*, disposed in a horizontal plane and furnished with a sharpened cutting edge; and
 55 the vertical portions, *g'*, *g'*, said vertical portions being furnished with sharpened cutting edges inclined rearwardly from top to bottom, substantially as described.

6. In a sod-cutter, the reversible knife, G, 60 having the transverse portion, *g*, with cutting edges upon both its forward and rear side; vertical portions, *g'*, *g'*, similarly furnished with cutting edges upon their forward and
 65 rear sides, substantially as described.

7. In a sod-cutter, the combination of the frame, A; rollers for guiding it in a horizontal path; a knife having horizontal and vertical cutting edges; and an adjustable guide-shoe, H, provided with means for readily af-
 70 fixing it to or removing it from either side of the frame, substantially as described.

GEORGE LANE.

Witnesses:

E. REESE,

G. HERBERT JENKINS.