

No. 764,058.

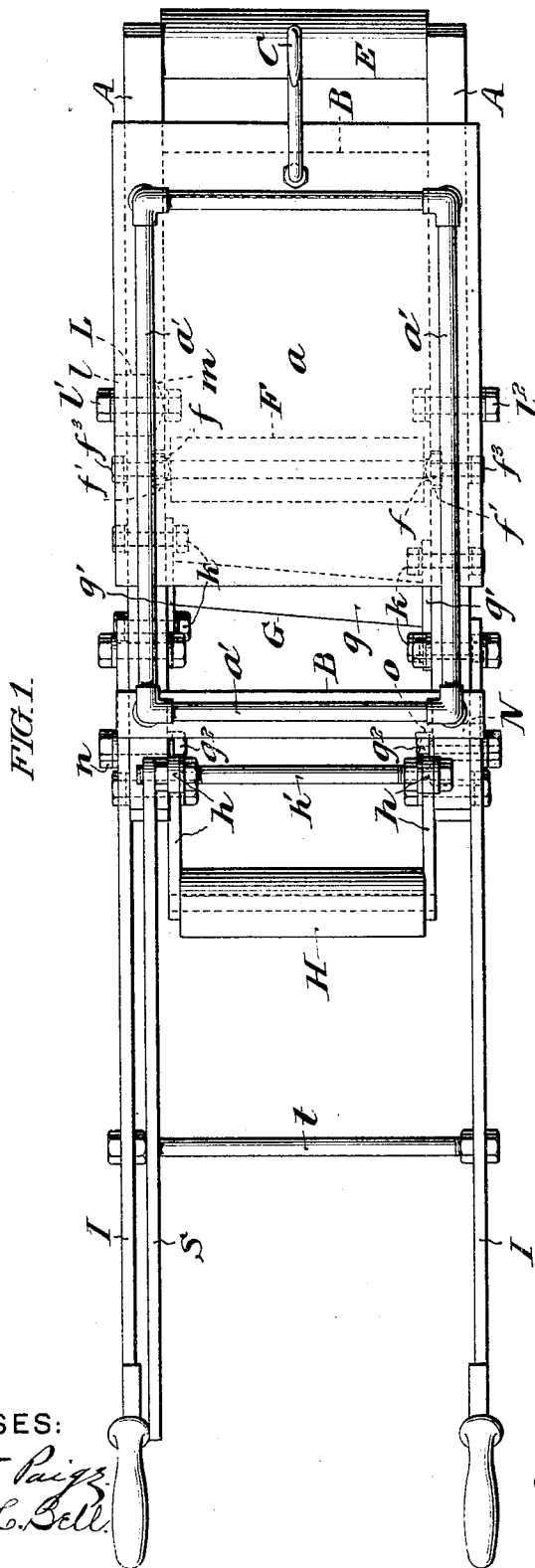
PATENTED JULY 5, 1904.

G. LANE.
SOD CUTTER.

APPLICATION FILED AUG. 22, 1903.

NO MODEL.

2 SHEETS--SHEET 1.



WITNESSES:

Arthur E. Paigg.
James H. Bell.

INVENTOR:

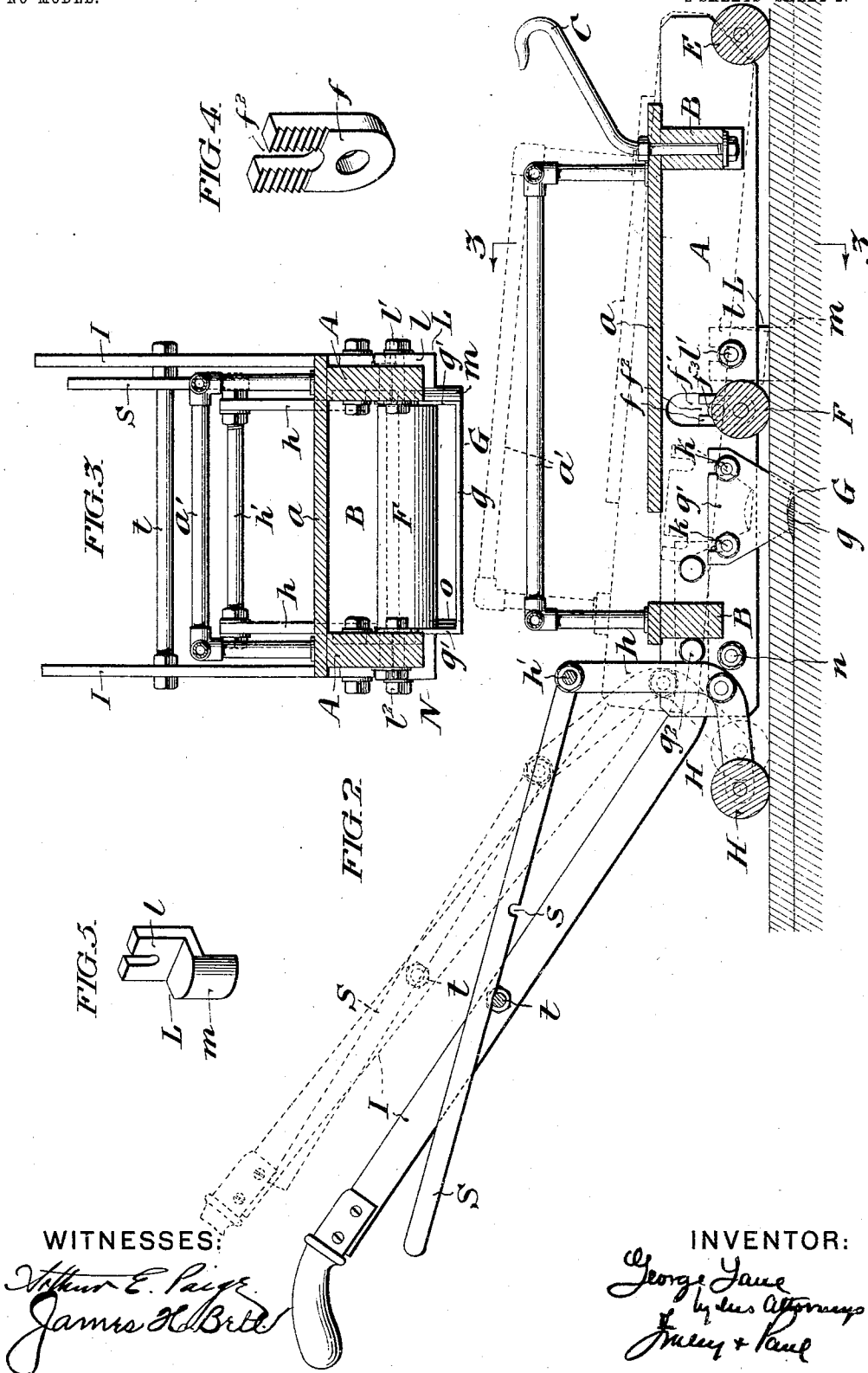
George Lane
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2 SHEETS—SHEET 2.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

GEORGE LANE, OF HAVERFORD, PENNSYLVANIA.

SOD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 764,058, dated July 5, 1904.

Application filed August 22, 1903. Serial No. 170,397. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LANE, a subject of the King of Great Britain, residing at Haverford, in the county of Montgomery and 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.

My invention relates to certain improvements in the construction of sod-cutters whereby an entire plot of sod may be cut into a ribbon of uniform width without the necessity of removing the sod as it is cut.

It also relates to certain other details of construction and arrangement whereby the manipulation of the sod-cutter as it is being operated is facilitated.

In certain respects my present invention is an improvement upon the sod-cutter invented by me and patented in United States Letters Patent No. 549,730, granted to me under date of November 12, 1895.

In the accompanying drawings, Figure 1 is a plan view of a sod-cutter constructed in accordance with my invention. Fig. 2 is a vertical longitudinal central section of the same. Fig. 3 is a vertical cross-section taken along the line 3 3, Fig. 2. Fig. 4 is a detail of the adjustable bearing for the central roller, and Fig. 5 is a detail of one of the guide-shoes.

My sod-cutter consists of a rectangular horizontal frame, preferably of wood, formed by joining together two side pieces A A and two end pieces B B. It is convenient to mount upon this frame a platform *a*, surrounded by a railing formed by a tubing *a'*, upon which may be placed and held a mass of stones or other material to weight the sod-cutter in order that it may more accurately perform its functions. Near the forward end of the frame there is fitted a strong clevis C. At the rear end two handle-bars I I are fixed to the frame, by means of which it may be guided.

G is the knife, which is formed very much as that shown in my previous application, above referred to. It consists of a horizontal portion *g* and two vertical side pieces *g'* *g'*, united to the horizontal portion and preferably integral with it. This horizontal por-

tion occupies a diagonal or angular position with reference to the side frames of the sod-cutter and consequently with reference to its own side pieces. It is sharpened at both edges, as are also the side pieces, both edges of which are inclined downwardly. The knife is set between the side pieces of the frame by means of bolts *k k k k*, passing through the frame and engaging in vertical slots cut in the side pieces of the knife, by means of which its requisite vertical adjustment may be secured.

The frame carries three transverse rollers. The front roller E is fixedly mounted between the side pieces A and near the front thereof. The middle roller F is carried between adjustable bearing-plates *f*, which rest in countersunk ways *f'*, formed upon the inner faces of the side pieces A. The bearing-plates *f* have their sides which rest in countersunk ways transversely corrugated, as shown in Fig. 4. They have also a vertical slot *f''*, through which passes the bolt *f'''*, by which they are both secured and adjusted.

The rear roller H is mounted between the lower horizontal arms of two bell-crank levers *h*, both of which are pivoted near the rear ends of the side pieces A A. The other arms of these bell-crank levers extend upwardly and are united at their upper ends by a cross-rod *h'*. They are maintained normally in the position shown in Fig. 2 of the drawings by stops *g''*, (the projecting heads of the bolts by which the handle-bars I I are fixed to the side pieces A A,) which restrain the vertical arms of the levers from further forward motion.

It is important that a sod-cutter of this sort be provided with means whereby when it is desired to move the cutter without its doing work this may be done without disturbing the position of the cutting-blade. For this purpose I have provided my sod-cutter with means whereby the rear roller may be so far depressed as to raise the whole cutting portion out of range of the turf or road on which it travels. The cross-rod *h'* projects a short distance beyond one of the levers *h* and has here pivoted to it an arm S, containing a notch *s*. When it is desired to raise the sod-cutter to its non-operative position, this arm

S is drawn rearwardly until its notch engages a cross-rod *t*, which unites the two handle-bars. By this motion the rear roller H is depressed and so held notwithstanding the travel of the machine until the notch *s* is again disengaged from the cross-piece *t* by lifting the lever-arm S.

Difficulty was experienced by me in the use of the sod-cutter shown and described in my previous patent by reason of the fact that it was not capable of proper employment unless the outer ribbon or strip of sod cut from a given plot was removed before proceeding to cut another strip. To avoid the difficulty, I employ two guide-shoes, novel in their construction and position, which I will now describe. L is the forward guide-shoe, situated to the left of and in front of the middle roller of the machine. It consists of a plate *l*, bolted upon the outer side of the left-hand side piece of the frame by a bolt *l'*, which passes through the side piece and through a vertical slot in the plate. Below the side piece the plate *l* turns horizontally toward the center of the sod-cutter, as seen in Fig. 3, until it reaches a vertical plane just outside of the corresponding vertical edge of the knife. Here it turns downwardly again, forming a guide *m*, and terminates at the level of the bottom of the horizontal part of the knife. The front and rear edges of the guide are rounded or beveled on the inner sides, as seen in Figs. 1 and 5. The rear guiding-shoe N is formed similarly to the one just described. It is bolted upon the outer side of the right-hand side piece of the frame near its rear extremity, and its guide *o* is similarly beveled or rounded, so as to present a flat surface on the right-hand side and a wedge-shaped edge immediately behind and in line with the right-hand vertical side piece of the knife.

In operation the cutter, if adjusted as shown in drawings, is used with its right-hand side toward the center of the plot which is to be cut. The forward shoe L always runs against the outer edge of the uncut portion of the plot, preventing the cutter from so entering the uncut plot as to leave any uncut sod outside it. The rear shoe N similarly runs against the outer edge of the uncut portion and prevents the turning of the cutter in the opposite direction. It has the further function of throwing the ribbon of sod which has been cut a short distance (equal to its own width) out from the uncut plot. Into the space thus left the forward shoe L can enter when the cutter comes around again, thus permitting the continuous cutting of the whole plot without stopping to remove the cut sod.

In case it is desired to reverse the operation of the cutter it may be done by reversing the position of the guide-shoes. It will be noted that a bolt *l''* is provided upon the right-hand side piece of the frame immediately opposite the bolt *l'*, by means of which the forward

guide-shoe L may be removed from the left-hand side and be affixed in a corresponding position to the right-hand side. Likewise on the left-hand side a bolt *n* is provided, by means of which the rear guide-shoe N may be similarly reversed in position. By making these two changes the cutter may be used with its left-hand side toward the center of the plot which is to be cut.

Having thus described my invention, I claim—

1. In a sod-cutter, the combination of the frame mounted on front and rear rollers; a sod-cutting knife depending therefrom; a central roller mounted in proximity to the knife in vertically-sliding journal-boxes; said journal-boxes having their sides contiguous to the frame transversely corrugated; open vertical slots in said journal-boxes; and bolts in the frame passing through said vertical slots, substantially as described.

2. In a sod-cutter, the combination of a frame; rollers mounted thereon; a sod-cutting knife depending therefrom; handle-bars attached thereto; levers pivoted to the frame carrying one of the rollers between their lower extremities; an arm having one extremity in proximity to the handles of the handle-bars and its other extremity pivoted to the aforesaid pivoted arms; and a catch whereby motion of the arm is restrained when it is drawn to that position in which the roller is depressed, substantially as described.

3. In a sod-cutter, the combination of a frame; the rollers attached thereto; a sod-cutting knife depending therefrom; and a guide-shoe vertically adjustable in relation to the frame, having its depending lower portion provided with a flat surface on one side and an inclined surface on the other side, substantially as described.

4. In a sod-cutter, the combination of a frame carrying a sod-cutting knife; rollers mounted upon said frame both in front of and in the rear of the knife; bell-crank levers pivoted medially to the frame, and carrying the rear roller between their lower arms; a notched arm pivoted to the upper arms of the bell-crank levers; and a fixed cross-piece for engagement with said notch of the arm when the bell-crank levers are turned to the position in which the rear roller is depressed, and the knife raised above the surface upon which the sod-cutter rests, substantially as described.

5. In a sod-cutter, the combination of the frame; the knife having horizontal and vertical edges; the rollers; and a guide-shoe adjustably fixed to the side of the frame in front of the knife, the guiding portion of which is provided with a rounded inner side projecting inwardly to, but no farther than, the plane of the corresponding vertical edge of the knife, substantially as described.

6. In a sod-cutter, the combination of the frame; the knife having horizontal and ver-

tical edges; the rollers; and a guide-shoe adjustably fixed to the side of the frame in the rear of the knife, having a wedge-shaped edge in line with the corresponding vertical edge
5 of the knife, and projecting inwardly a substantial distance farther than said vertical edge of the knife, substantially as described.

10 7. In a sod-cutter, the combination of the frame; the knife having horizontal and vertical edges; the rollers; and two guiding-shoes one set in front of one of the vertical portions of the knife, and the other set behind the other vertical portion of the knife, substantially as described.

15 8. In a sod-cutter, in combination with the frame carrying both rollers and knife of a

guiding-shoe attached to the side of the frame; said guiding-shoe projecting down to the level of the horizontal blade of the knife and having in its effective portion a horizontal cross-
20 section which is flat on the outside and beveled on the inner side, substantially as described.

In witness whereof I have signed my name to this specification, this 14th day of August,
25 A. D. 1903, in the presence of two subscribing witnesses.

GEORGE LANE.

Witnesses:

G. HERBERT JENKINS,
JAMES H. BELL.