

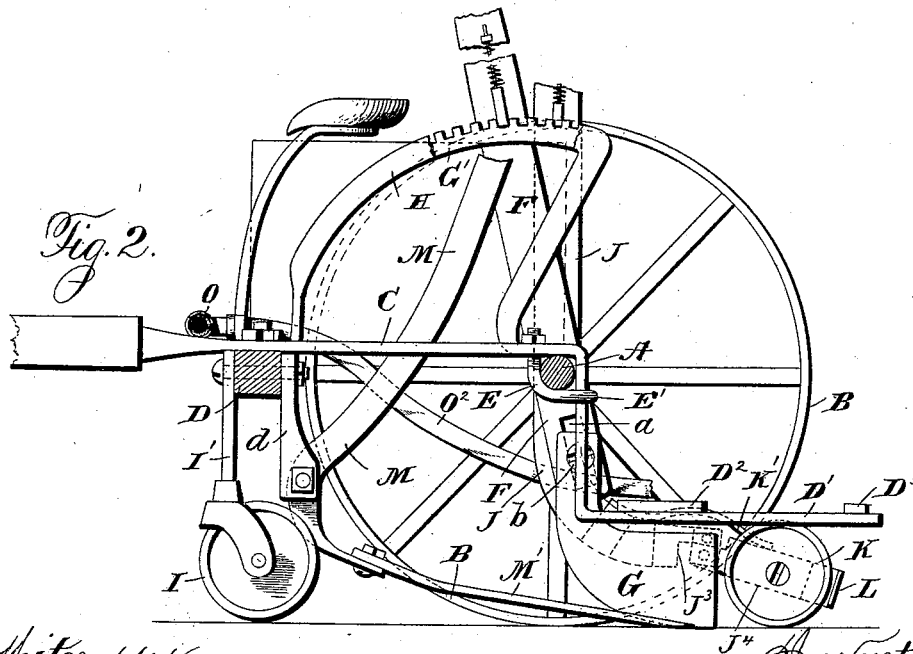
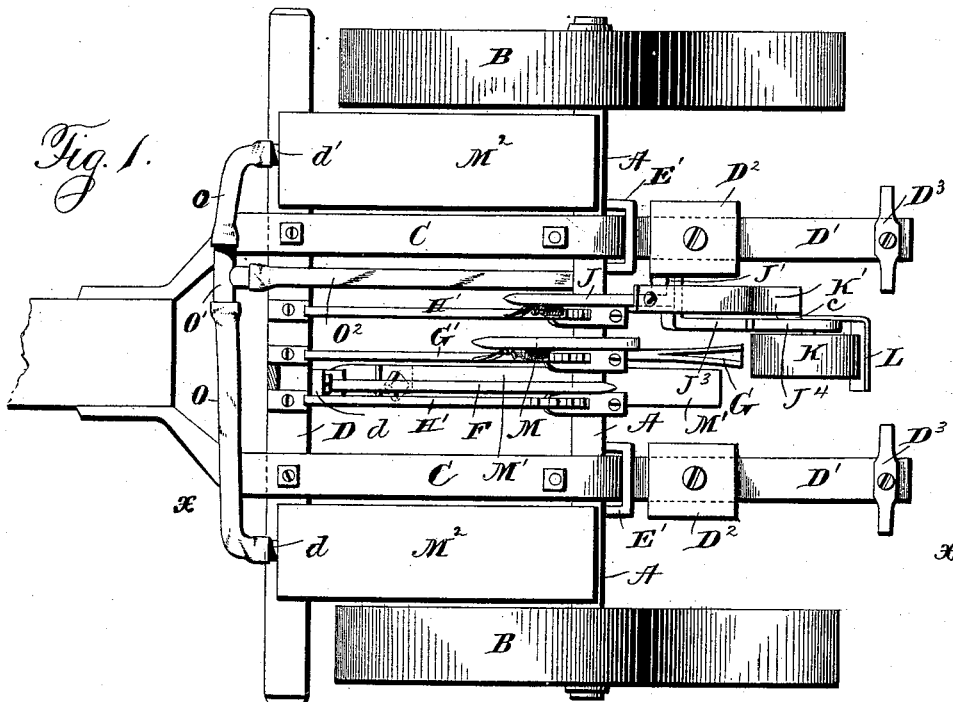
(No Model.)

2 Sheets—Sheet 1.

T. SULLIVAN.  
TRANSPLANTER.

No. 494,178.

Patented Mar. 28, 1893.



*Witnesses:*  
*James Hutchinson.*  
*G. J. Downing.*

*Inventor.*  
*T. Sullivan*  
*By H. A. Simpson*  
*Attorney*

T. SULLIVAN  
TRANSPLANTER.

No. 494,178

Patented Mar. 28, 1893.

Fig. 3.

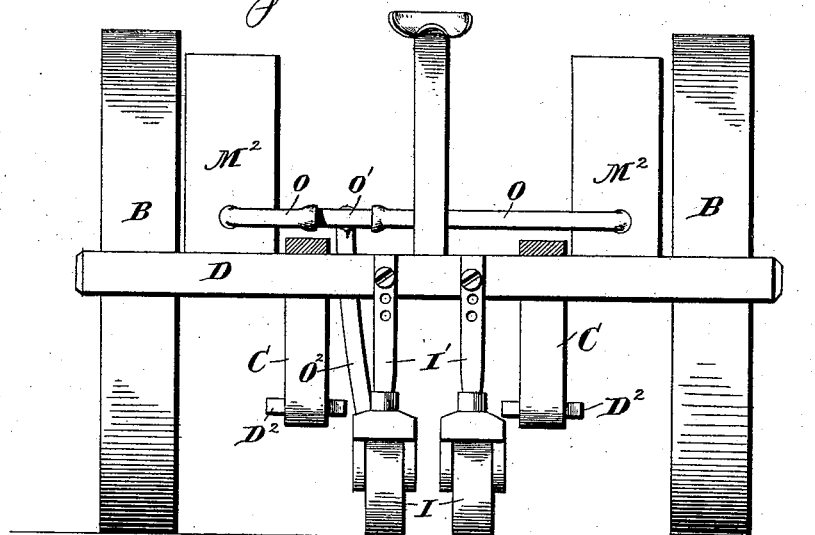
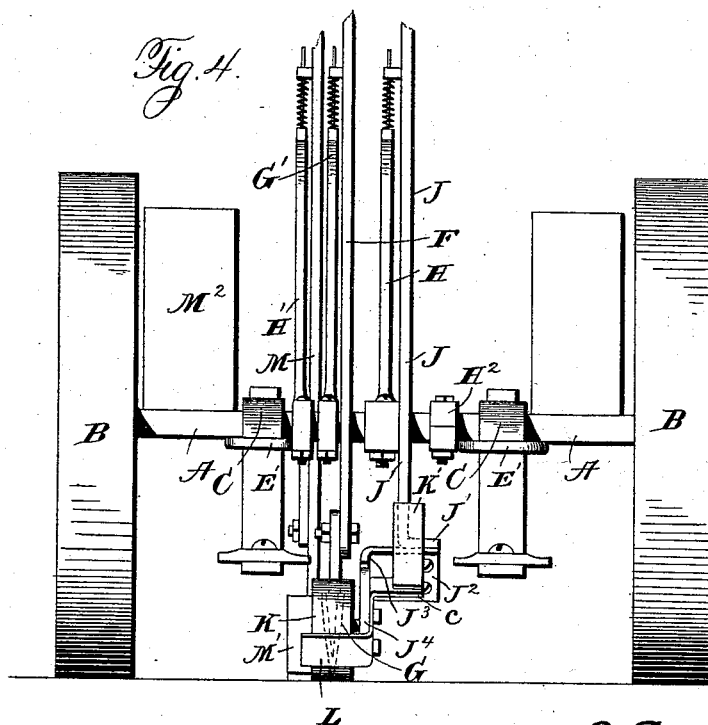


Fig. 4.



Witnesses

Jas. Hutchinson  
Chas. F. Downing

Inventor

T. Sullivan  
By H. A. Seymour

Attorney

# UNITED STATES PATENT OFFICE.

TIMOTHY SULLIVAN, OF JANESVILLE, WISCONSIN.

## TRANSPLANTER.

SPECIFICATION forming part of Letters Patent No. 494,178, dated March 28, 1893.

Application filed September 21, 1891. Serial No. 406,371. (No model.)

*To all whom it may concern:*

Be it known that I, TIMOTHY SULLIVAN, residing at Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Transplanters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in transplanters,—its object being to provide an improved planter which shall be of comparatively simple construction, and effectual in the performance of its functions.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a plan view. Fig. 2 is a sectional view on the line  $x-x$  of Fig. 1. Fig. 3 is a front end view. Fig. 4 is a rear end view.

A represents the axle of the machine, said axle supported in the usual manner in wheels B, B. Mounted on the axle at each side of the center thereof, are two parallel irons C, C, which extend forwardly and are bent inwardly at their forward ends and are adapted to have a pole or tongue secured to them. A transverse beam D is securely bolted to the irons C, C, near their forward ends. The rear ends of the irons C, C, are bent downwardly from the axle, and then rearwardly to produce supports D', on which platforms or seats D<sup>2</sup> are secured for the accommodation of an operator, and on the ends of said supports, foot rests D<sup>3</sup> are secured. The irons C, C, are secured to the axle A by means of straps E,—which straps are provided at one end with a screw-threaded shank adapted to project through openings in the irons C, and receive nuts on their ends. The straps E are made to extend under the axle and at their rear ends are made with loops E' through which the downwardly projecting portions of the irons C are made to pass. Mounted loosely on the axle A is a lever F,—the short arm F' of which is provided with an elongated slot  $a$  for the reception of a headed

screw or pin  $b$ , which pivotally connects a shoe or furrow opener G to said lever F. By means of this construction the depth of the shoe in the ground, may be readily adjusted or regulated, and said lever is maintained at the desired adjustment by the engagement of a lock bar carried by the lever, with a toothed segment G',—said toothed segment being secured at one end to the cross bar or beam D and the other end being loosely mounted on the axle A. Two other toothed segments H, H', are mounted or supported on the machine in a similar manner to the segment G',—the purpose of which will be hereinafter explained.

The front end of the machine will be supported by means of castor wheels I, the shanks I' of which are adjustably connected with the cross bar or beam D.

Loosely mounted at a point between its ends, on the axle A and in proximity to the segment H, is a lever J, which is prevented from lateral movement in one direction by the segment H and in the other direction by a block H<sup>2</sup> mounted on the axle A. The lower end of the lever J is bent to form an arm J', to which an angle iron J<sup>2</sup> is secured, and to the forwardly extending arm J<sup>3</sup> of said angle iron, a bracket J<sup>4</sup> is pivotally connected. A presser wheel K is mounted in the bracket J<sup>4</sup> and is adapted to run alongside the shoe or furrow opener G and slightly in rear of the same and adapted to close the furrow after the plant shall have been deposited therein. A spring K', is secured at one end to the lever J and at the other end bears on an arm  $c$  projecting from the bracket J<sup>4</sup>, whereby the presser wheel is made to bear on the ground with a yielding pressure which may be regulated by means of the lever J and maintained at any desired adjustment by the engagement of a latch bar carried by said lever, with the toothed segment H. A guard L is secured to the rear end of the bracket J<sup>4</sup> and projects in rear of the presser wheel K.

Secured to and projecting downwardly from the cross bar or beam D at a point in proximity to its center, is a bracket  $d$ , in which a lever M is mounted. One arm of said lever, or a separate blade secured to the lever, is flattened and extended rearwardly to produce

a sliding presser M', which terminates at its rear end in proximity to the shoe or furrow opener G and by the side of the same its purpose being to pulverize and flatten the soil in advance of the furrow opener. The other arm of the lever (or more properly speaking, the lever itself) is extended upwardly and provided with a lock bar adapted to engage the toothed segment H', and thus secure the sliding presser blade at any desired adjustment relatively to the ground.

Located on the machine at the inner sides of the wheels B, are water tanks M<sup>2</sup>, having outlets d' in their bottoms. With the outlets d' elastic tubes O are connected, the other ends of said tubes being connected with a common coupler O'. Another tube O<sup>2</sup> connects with said coupler and is adapted to convey water from the tanks to the furrow opener and consequently into the furrow made by the same. A driver's seat is located on the cross bar D.

The operators of the machine ride on the supports D', and place the plants in the furrow made by the shoe or furrow opener G, and the roots of the plants will be supplied with water and automatically covered as above set forth.

After the machine is once properly adjusted to suit the ground in which it is intended to plant the young plants, it is simply necessary to propel the machine and place the plants in the furrow, and the making of the furrow, and the covering and watering of the base or roots of the plants will be performed automatically by the machine.

A machine thus constructed is very simple, cheap to manufacture and effectual in the performance of its functions.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a transplanter, the combination with an axle, of irons mounted thereon, a cross bar secured to said irons, casters connected with said cross bar, supports for an operator formed by the rearward extensions of said irons, and a furrow opener between said supports, substantially as set forth.

2. In a transplanter, the combination with an axle, of a pivotally mounted lever extending above and below the plane of the axle, and adapted to swing laterally upon its support, and a furrow opener loosely connected to the lower end of the lever, substantially as set forth.

3. In a transplanter, the combination with an axle, of a lever mounted at a point between its ends on said axle and having an elongated slot in its lower end, a furrow opener, and a pin or screw passing from said furrow opener into the elongated slot of the lever, substantially as set forth.

4. In a transplanter, the combination with an axle, of a furrow opener, pivotally supported on the axle a lever mounted on the axle, and a yielding presser wheel carried by

said lever, in proximity to the furrow opener, substantially as set forth.

5. In a transplanter, the combination with an axle, of a furrow opener, a lever mounted on the axle, a bracket pivotally connected with said lever, a spring secured at one end to the lever and at the other end to the bracket, and a presser wheel carried by said bracket, substantially as set forth.

6. In a transplanter, the combination with an axle, of a furrow opener, a lever mounted on the axle, a bracket pivotally connected with said lever, a spring secured at one end to the lever and at the other end to the bracket, a presser wheel carried by said bracket, and a guard secured to the bracket and extending in rear of the presser wheel, substantially as set forth.

7. In a transplanter, the combination with an axle, and a furrow opener pivotally supported on the axle, of a lever mounted at a point between its ends on said axle, a yielding presser wheel carried by said lever, a toothed segment and a lock bar carried by said lever and adapted to engage said toothed segment, substantially as set forth.

8. In a transplanter, the combination with an axle, a furrow opener pivoted thereto and a cross bar, of a lever pivotally supported by said cross bar, and a sliding presser blade projecting from said lever and terminating in proximity to the furrow opener, substantially as set forth.

9. In a transplanter, the combination with an axle, a furrow opener pivoted thereto and a cross bar, of a lever pivotally supported by said cross bar, a sliding presser blade projecting from said lever and terminating at a point in proximity to the furrow opener, a toothed segment and a lock bar carried by said lever and adapted to engage said toothed segment, substantially as set forth.

10. In a transplanter, the combination with an axle and a cross bar, of irons mounted on said axle and connecting said axle and cross bar, said irons being adapted at their forward ends to receive a pole or tongue, and at their rear ends bent downwardly and rearwardly to form supports for operators, platforms on said supports, foot rests on said supports, and a furrow opener between said supports, substantially as set forth.

11. In a transplanter, the combination with a suitable frame, a lever pivotally connected therewith, and a furrow opener loosely connected with the lower end of the lever, of water supply pipes for conducting the water to the furrow-opener, and means for locking the lever in any desired position, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

TIMOTHY SULLIVAN.

Witnesses:

GEO. G. SUTHERLAND,  
N. B. ROBINSON.