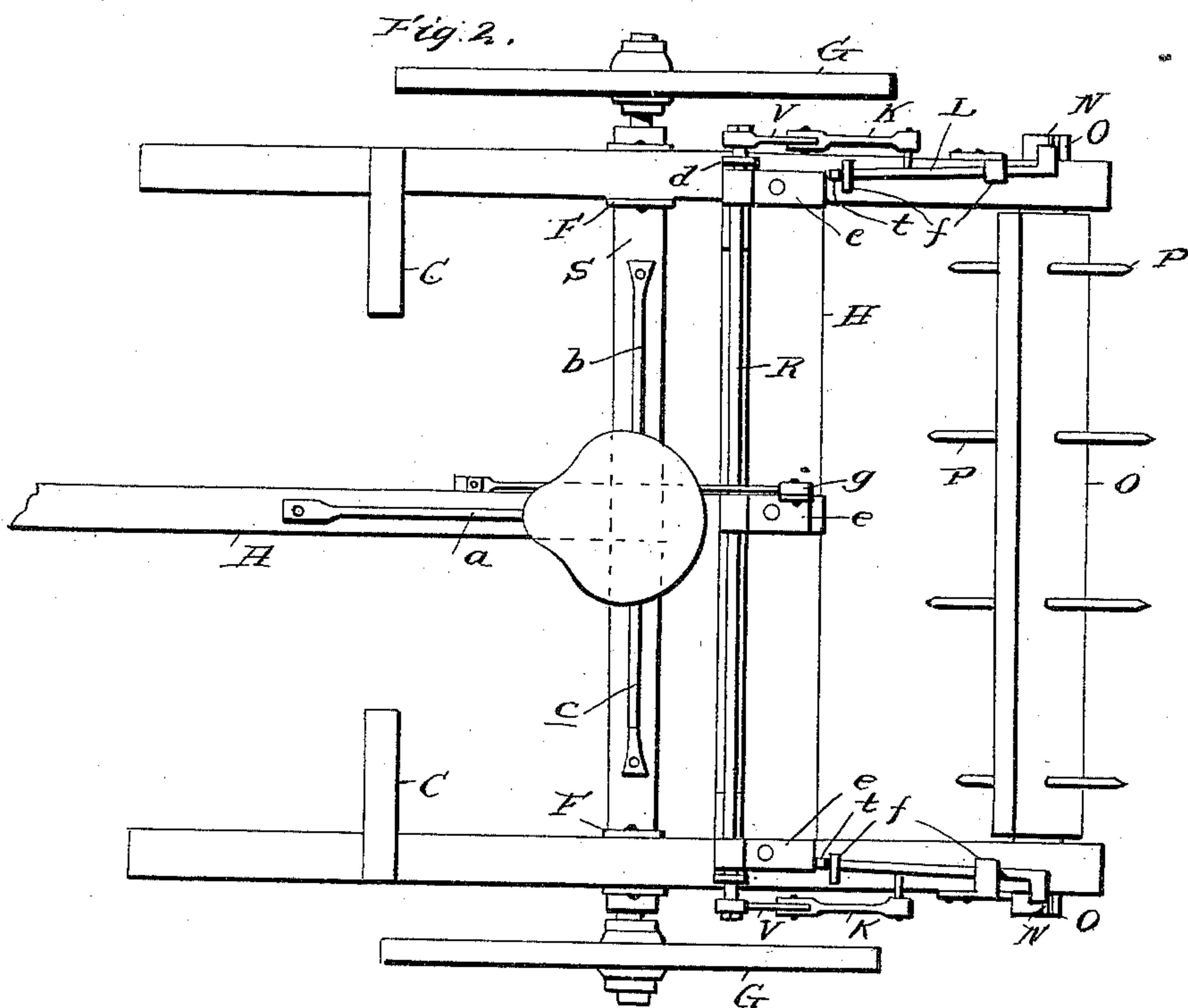
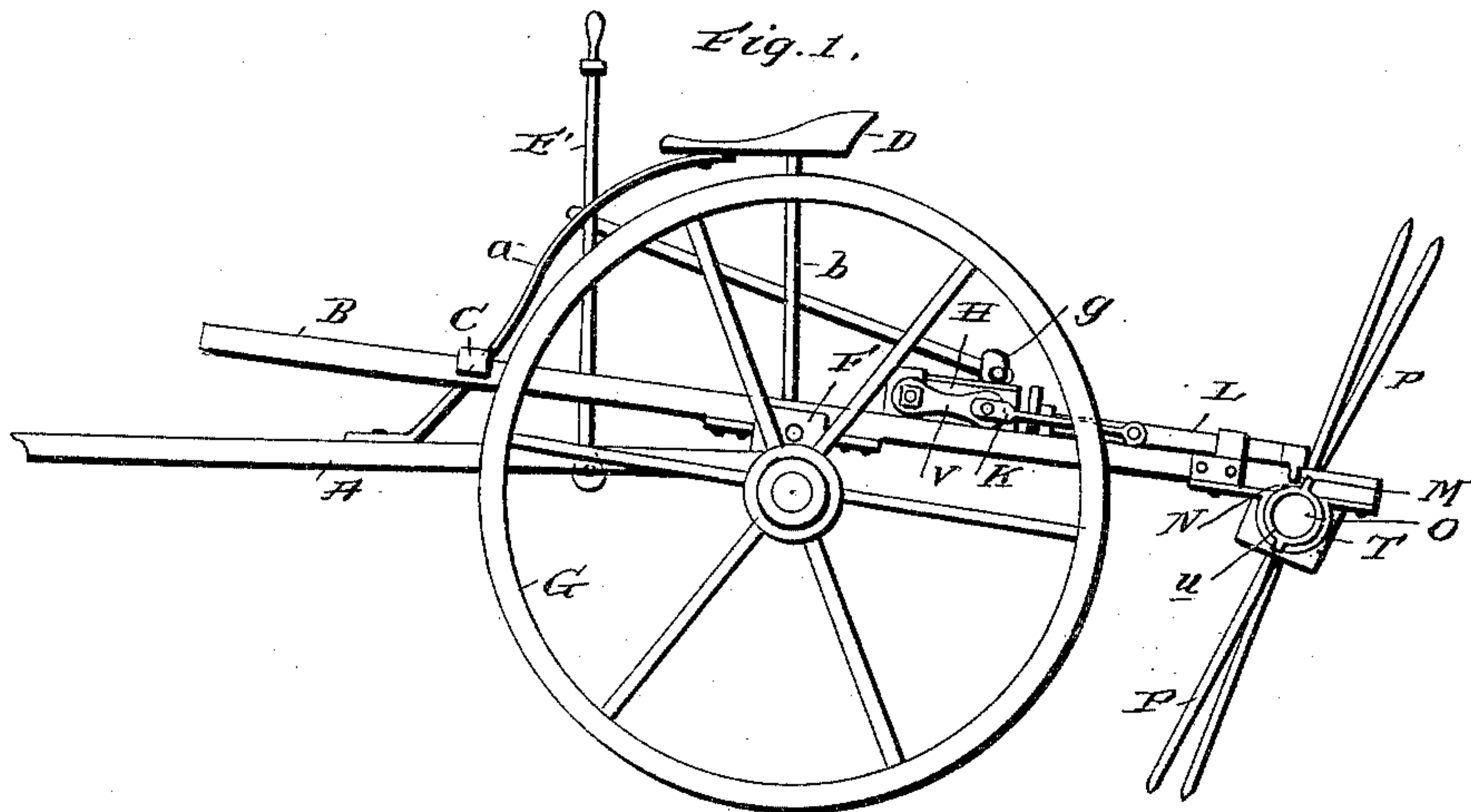


(No Model.)

W. B. SHARP.  
HAY RAKE.

No. 448,145.

Patented Mar. 10, 1891.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM B. SHARP, OF NEAR DONALDSONVILLE, LOUISIANA.

## HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 448,145, dated March 10, 1891.

Application filed September 25, 1890. Serial No. 366,181. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BYRNE SHARP, a citizen of the United States, residing near Donaldsonville, in the parish of Assumption and State of Louisiana, have invented certain new and useful Improvements in a Hay-Rake; and I do 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.

This invention has relation to improvements in rakes for gathering hay, vines, trash, &c.; and it consists in the construction, novel combination, and adaptation of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved rake, and Fig. 2 is a top plan view of the same with parts in section.

In carrying out my invention the several parts of the improved harrow may be constructed of the most suitable material and of a proportional size and weight conducent to a thorough and practical operation.

The wheels G, which are of a form usually employed in this class of devices, support a transverse axle-bar S, upon which they are mounted.

Adjacent to the respective spindles of the axle-bar I attach thereto two upright castings or plates F, which are respectively arranged a suitable distance apart to receive between them the longitudinal bars B of the frame, which are mounted on fulcrum-pins journaled in apertures in the said castings. These bars B are respectively provided at a suitable point in their forward portion with inwardly-directed lateral bars C, which are attached to or formed integral therewith and are adapted to receive pedal-pressure to throw the rake out of operation, and it is obvious that, if desired, a single transverse bar may be employed in place of the two lateral branches.

The pole or tongue A, which is attached to the axle-bar midway of the length thereof and which extends forwardly therefrom, may be of any preferable construction suitable to the requirements placed upon it.

The driver's seat D is mounted upon and attached to three supporting-arms a, b, and c, which are attached to and rise, respectively,

from the pole and the axle-bar, forming a tripod support upon which the seat rests, thus leaving a space below the seat for the free play of a rearwardly-extending pitman branch of the operating-lever, presently to be described.

Adjacent to the rear end of the frame-bars B and upon the under side thereof I attach journal-castings T, which receive the ends of the transverse shaft O, in which are fixed the radially-extending raking-teeth P.

Fixed upon the ends of the shaft O are collars U, and formed integral with and extending radially from these collars at diametrically-opposite points are two lugs N, which are adapted to be engaged to fix the tooth-shaft, as will be described, and which, if desired, may be formed integral with the said shaft.

Upon the upper side of the frame-bars B and slightly in rear of their fulcrum-points I attach thereto two upwardly-extending castings d, which are provided with journal-apertures to receive a rock-shaft R, for a purpose to be described. This rock-shaft R has fixed upon it at points adjacent to its ends and midway of its length castings or plates e, which are secured by bolts or otherwise to a transverse strip H, of wood or other suitable material.

Keyed or otherwise fixed upon the outer ends of the rock-shaft R and secured thereon by suitable means are crank-arms V, which, if desired, may be formed integral with said shaft.

The links K, which have one end bifurcated and pivotally attached to the ends of the crank-arms V, are provided at their opposite ends with an eye, as illustrated, which is pivotally secured upon a lateral lug projecting outwardly from the sliding bars L, which are secured to the respective bars B by means of straps f. These bars L, which are movable in the straps and are provided at their inner ends with a lug-stop t, are provided at their opposite or rear ends with outwardly-extending lateral portions, from which depend lugs M, which engage the lugs N of the tooth-shaft and serve to fix the same in an operative position.

Formed integral with and rising from the middle casting e of the rock-shaft is a plate g,



to which is pivotally attached the rear end of a link E, the forward end of which is pivotally attached to the lever E' at an intermediate point in the length thereof. This lever E' 5 is fulcrumed upon a pin, which extends laterally from one side of the pole, as illustrated.

In operation, when the lever E' is pushed forward the bar H is raised and the rock-shaft R turned, which raises the crank-arms V and 10 pulls the lever K and rod L forward, which movement releases the lugs of the tooth-shaft and allows the said shaft to revolve in its bearings. When it is desired to resume raking, the pedal-pressure is removed and the lever 15 pulled back, when the tooth-shaft will again be fixed.

Having described my invention, what I claim is—

1. The combination, with the axle supported 20 by wheels, the frame fulcrumed thereon provided in its forward portion with a lateral pedal branch, and the transverse shaft carrying raking-teeth journaled on the rear end of the frame and provided at its ends with radial oppositely-directed lugs, of the transverse 25 rock-shaft also journaled on the frame, the crank-arms fixed on the ends of the rock-shaft, the lever-arms K, pivotally connected to the

crank-arms, the sliding rods L, pivotally connected to the lever-arms and provided at their 30 rear ends with depending lugs adapted to engage the lugs upon the tooth-shaft, and the lever connected with the rock-shaft and adapted to turn the same, all adapted to operate substantially as specified. 35

2. The combination, with the main frame mounted upon an axle supported by wheels and the transverse shaft carrying raking-teeth journaled on the rear end thereof and having 40 at its ends the radial oppositely-directed lugs, of the transverse rock-shaft journaled on the frame, the crank-arms fixed on the ends of the rock-shaft, the lever-arms K, pivotally connected to the crank-arms, the sliding rods L, pivotally connected to the lever-arms and 45 provided at their ends with depending lugs adapted to engage the lugs upon the tooth-shaft, and the lever connected with the rock-shaft and adapted to rock the same, all adapted to operate substantially as specified. 50

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM B. SHARP.

Witnesses:

PERCY D. PARKS,

JOHN H. McCORMICK.