No. 697,446. Patented Apr. 15, 1902.

W. E. CHANDLER.

SPRAYER.

(Application filed Nov. 16, 1900.)

(No Model.)

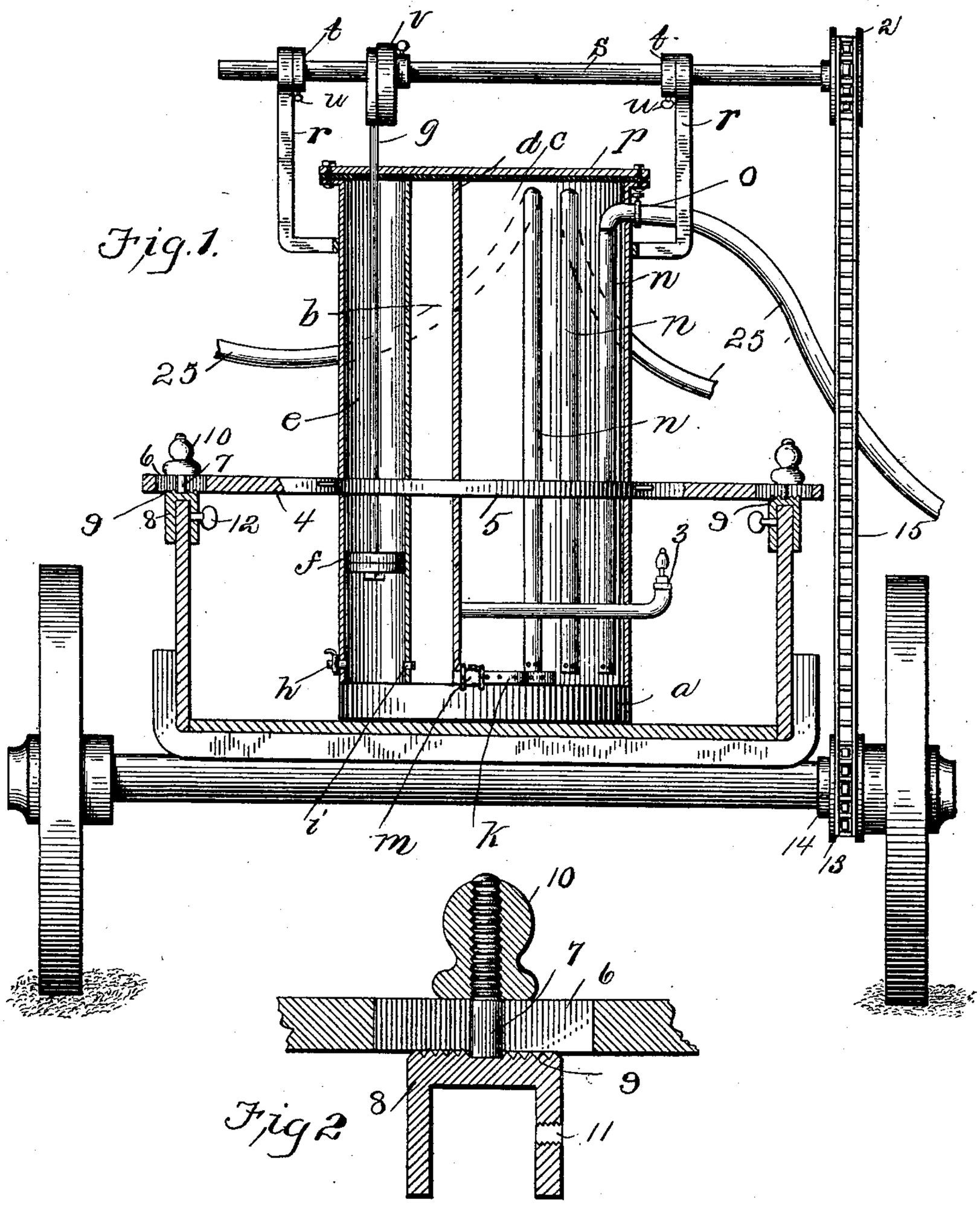

Fig. 1.

Fig 2

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM E. CHANDLER, OF ELCAMPO, TEXAS.

SPRAYER.

SPECIFICATION forming part of Letters Patent No. 697,446, dated April 15, 1902.

Application filed November 16, 1900. Serial No. 36,775. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. CHANDLER, a citizen of the United States, residing at Elcampo, in the county of Wharton and State of Texas, have invented certain new and useful Improvements in Sprayers; 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 sprinklers in general, and more particularly to that style which is used for spraying poisonous liquid upon vegetation for the purpose of exterminating insects.

The object of my invention is to provide an article of this nature which may be so constructed as to throw up a continuous stream and that it may be placed in a vehicle and operated by means of the running-gear or carried by hand.

With these objects in view I have constructed a device of this nature such as is described in this specification and shown in the accompanying drawings, in which—

Figure 1 is a view of my invention placed upon a vehicle-body and showing part in section and part in elevation. Fig. 2 is a detail view showing the yokes and the manner in which they are supported.

In the manufacture of my invention I provide a tank *a*, which is divided into two compartments *b* and *c* by a vertical partition *d*, the compartment *b* being adapted to contain air under pressure and the compartment *c* being adapted to contain liquid. Extending longitudinally of the compartment *b* is a hollow cylinder *e*, containing a piston *f* and a piston-rod *g*, forming an air-pump, having an inwardly-opening valve *h* and an outwardly-opening valve *i* at its base, the former communicating with the exterior of the tank *a* and the latter communicating with the interior of the compartment *b*. Leading from the compartment *b* to the exterior of the tank *a* is a pipe 3, upon the outer end of which is a suitable safety-valve, which may be adjusted to open when the air in the compartment *b* has reached a certain pressure. Passing from the base of the partition *d* is a tube *k*, bent into circular form and having perforations. A valve *m* is placed at the base of the compartment *b*, opening into the tube *k*. Extending upwardly from the lower part of the tank *a* and distributed throughout the compartment *c* are open-ended pipes *n*, which project through the walls of the tank at its top. To the outer end of each pipe is connected a flexible tube 25, provided with a suitable cut-off valve *o*. An air-tight cover *p* is provided for the tank *a*, and it is held in place by means of screws or suitable clamps. Extending upwardly and outwardly from the tank *a* are arms *r*, to the upper ends of which is journaled a shaft *s*. Upon the shaft and between the arms are disks *t*, having set-screws *u*, through the medium of which they may be clamped to the shaft, and between the disks is a cam *v*, also having a set-screw to hold it in a fixed position. This cam is connected to the upper end of the piston-rod *g*, through the medium of which the piston may be reciprocated.

Upon the end of the shaft *s* is a sprocket-wheel 2, through the medium of which the shaft may be revolved.

A tank as above constructed may be placed in a vehicle and transported from place to place; but to insure its stability I have devised a brace comprising a bar 4, having a bulge at its center to partly encircle the tank, and in connection with this bar I employ a clamp 5, also having a bulge at its center to encircle the tank and having perforations at its ends to receive set-screws for clamping it to the bar 4 to hold the two in a fixed position upon the tank. The bar 4 is slotted at its outer ends, as shown at 6, to receive the shafts 7 of yokes 8, the upper face of the yokes being roughened, as shown at 9, to prevent slipping of the parts. Upon the upper ends of the shafts 7 are thumb-nuts 10 to hold the yokes in a fixed position upon the bar or to allow longitudinal adjustment of the former with relation to the latter.

The yokes 8 are perforated at one side, as shown at 11 in Fig. 2, and through the perforations are set-screws 12. When the tank is placed in a vehicle, the bar 4 is adjusted vertically upon the tank, according to the height of the sides of the vehicle-body, and when it is secured in this position the yokes 8 are adjusted upon the bar 9 to receive the sides of the body, as shown in Fig. 1.

To revolve the sprocket-wheel 2, I provide a second sprocket-wheel 13, which may be clamped upon the hub 14 of a vehicle by means of suitable set-screws, and upon this sprocket-wheel and the first-named sprocket-wheel I place a chain 15.

The operation of my invention is as follows: Assuming that the tank has been placed in a vehicle as above described and assuming that the poisonous liquid has been placed in the compartment *c*, the vehicle is drawn forwardly, and this will revolve the sprocket-wheel 13, the sprocket-wheel 2, the shaft *s*, and the cam *v*. As the cam *v* is revolved the piston *f* will reciprocate, and this will pump a current of air into the compartment *b*. The air from the compartment *b* will flow through the valve *m*, the tube *k*, and the perforations therein into the tank *a*, causing a stream of liquid to be forced upwardly and outwardly through the pipes *n* and tubes 25. Suitable sprinklers may be placed upon the ends of these tubes, and as the vehicle is drawn along the tubes may be grasped and a spray of liquid may be thrown upon the shrubbery.

It will be readily understood that I may manufacture my invention of any suitable material and that I may make various changes in the specific construction thereof. For instance, if it is not desired to place the sprocket-wheel 13 upon the hub of the vehicle, it may be secured to the spokes by suitable clamps. Again, if it is desired to operate the pumps by hand when the vehicle is not in motion, I may connect the sprocket-wheel 2 with a sprocket-wheel mounted within the body of the vehicle, and this sprocket may be provided with a handle or crank, through the medium of which it may be rotated.

If desired, the tank *a* may be carried by hand instead of being mounted in a vehicle, as hereinbefore described, and when manipulated in this manner the piston *f* may be reciprocated by means of a suitable lever pivoted to the tank and having a nut attached to the rod *g*.

Having now fully shown and described my invention, what I claim is—

A sprinkler comprising a tank adapted to be carried within a vehicle, a vertical partition within the tank dividing it into a major and a minor compartment, an air-pump mounted in the minor compartment an air-tight cover upon the tank, a pipe passing from the base of the minor compartment and opening into the major compartment, a number of perforations in the pipe, a valve between the perforations and the minor compartment, pipes extending vertically within the tank and passing outwardly therefrom at its upper end, arms projecting upwardly from the tank, a shaft journaled in the arms, disks mounted upon the shaft adjacent the arms, a cam mounted between the disks and having connection with the piston-rod of the air-pump, said rod being passed through a perforation in the air-tight cover, a sprocket-wheel upon the shaft, a sprocket-wheel carried by the running-gear of the vehicle, a chain connecting the two sprockets, a bar connected to the tank and extending laterally therefrom at two opposite sides, slots in the ends of the bar, yokes adjustably mounted upon the bar and adapted to receive the sides of the vehicle-body and set-screws mounted in the yokes to hold them firmly in position.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, on this 2d day of July, 1900.

WILLIAM E. CHANDLER.

Witnesses:
C. E. ERICSON,
G. A. ADLING.