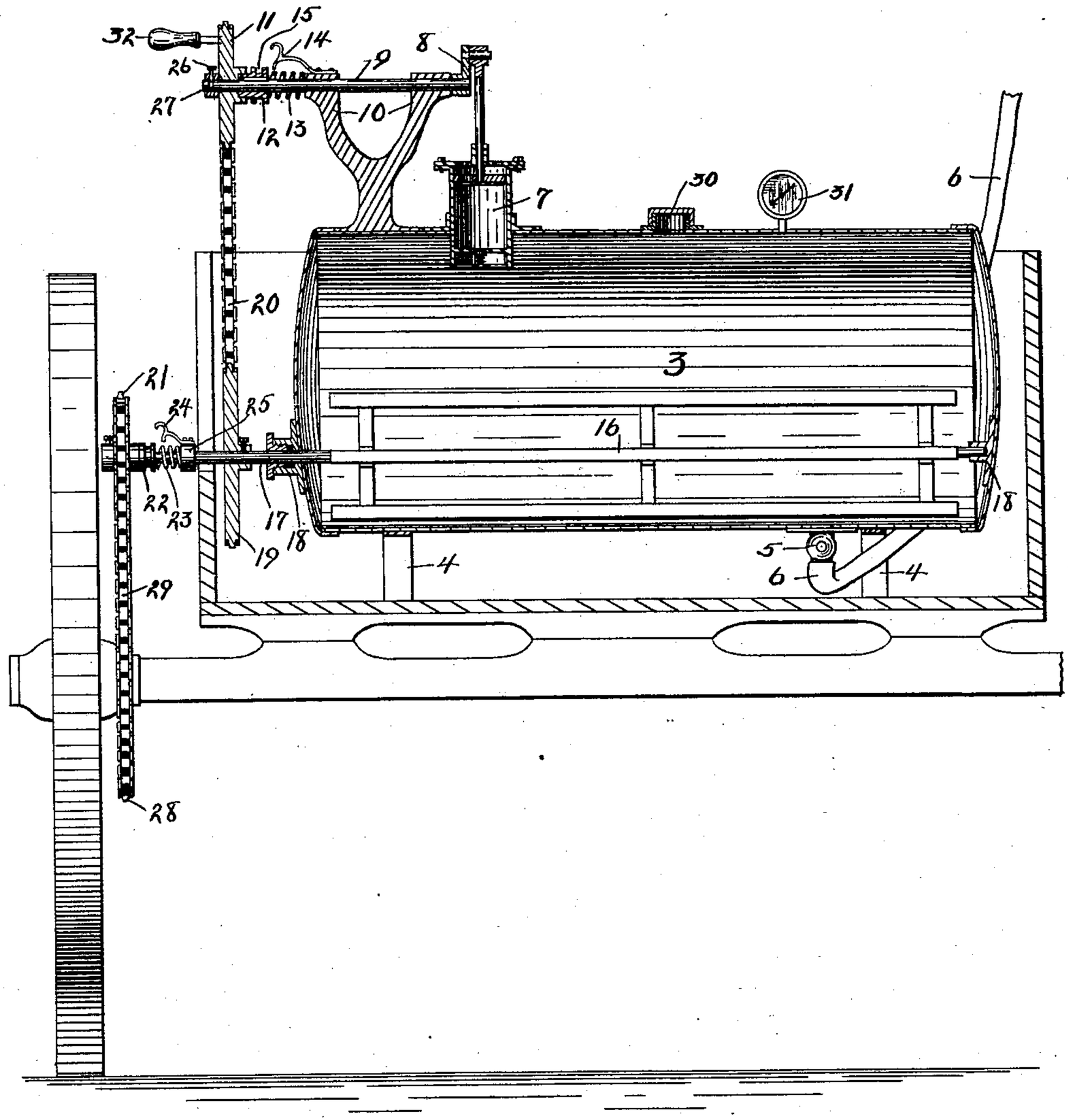
No. 606,811. Patented July 5, 1898.

J. H. POTTENGER.

SPRAYING DEVICE.

(Application filed Dec. 18, 1897.)

(No Model.)



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JAMES H. POTTENGER, OF FRANKLIN, INDIANA.

SPRAYING DEVICE.

SPECIFICATION forming part of Letters Patent No. 606,811, dated July 5, 1898.

Application filed December 18, 1897. Serial No. 662,424. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. POTTENGER, a citizen of the United States, residing at Franklin, in the county of Johnson and State of Indiana, have invented a new and useful Spraying Device, of which the following is a specification.

My invention relates to an improvement in spraying devices.

The object of my invention is to produce a device of the class described which may be operated by the movement of the wagon upon which it may be mounted, a device which may be easily mounted upon any of the well-known forms of wagons, and to provide means whereby the various portions of the device may be independently operated by hand.

The accompanying drawing, which is a central vertical section, illustrates my invention.

In the drawing, 3 indicates a tank adapted to hold the liquid material to be sprayed, the said tank being provided, if desired, with suitable supports 4, and being also provided with a suitable outlet 5, to which a hose 6 may be attached. Mounted upon tank 3 and leading into the interior thereof is an air-pump 7, the piston of which is reciprocated by means of a crank 8, carried upon one end of a shaft 9, supported in suitable bearings 10, supported on the tank. Upon the outer end of shaft 9 and revoluble thereon is a sprocket-wheel 11, and keyed to said shaft and longitudinally movable thereon is a clutch 12, which is normally held in engagement with sprocket 11 by means of a spring 13. Clutch 12 may be held out of engagement with sprocket 11 by means of a catch 14, the free end of which may lie within a peripheral groove 15, formed in said clutch.

Most spraying solutions consist of a powder held in mechanical solution in a suitable quantity of water, and it is therefore necessary to agitate such solutions during the spraying process. For this purpose I mount within the lower part of tank 3 a stirrer 16, carried by a shaft 17, supported in suitable bearings 18. One end of shaft 17 extends through one head of tank 3, and secured to said shaft, outside the tank and in line with sprocket 11, is a sprocket 19, and passed over said two sprockets is a suitable chain 20. Rotatably mounted upon the outer end of shaft 17 is a sprocket 21, which is engaged by a clutch 22, keyed to the shaft and normally held in engagement with said sprocket by means of a spring 23. Clutch 22 may be held out of engagement with sprocket 21 by any suitable means, such as a catch 24, carried by a collar 25, secured to shaft 17. Sprockets 11 and 21 are held in longitudinal position upon their respective shafts by any suitable means, such as a bolt 26, the inner end of which lies within a peripheral groove 27, formed in the shaft.

Secured to one of the wheels of the wagon upon which the apparatus is to be carried is a sprocket-wheel 28, over which and sprocket 21 is passed a chain 29.

In operation the tank 3 is partially filled through opening 30 with the desired solution and the operator drives to the orchard. During the drive the pump and stirrer are operated by the rotation of the wagon-wheel through the various chains, sprockets, clutches, and shafts, the pump compressing air into the tank, the pressure being indicated by a suitable pressure-gage 31. When the desired pressure is obtained, the material may be forced out through outlet 5 and hose 6. It being desirable that during the process of spraying the solution be occasionally stirred, clutches 12 and 22 are withdrawn from engagement with their respective sprockets, thus allowing sprocket 11 to rotate upon shaft 9 and shaft 17 to rotate within sprocket 22, thus allowing the stirrer to be independently rotated by means of sprockets 11 and 19 and chain 20, a suitable handle 32 being secured to sprocket 11. If, for any reason, it is desired to increase the air-pressure within the tank without moving the wagon, the pump may be operated by means of sprocket 11 and handle 32 by releasing clutch 12 and allowing it to be thrown into engagement with said sprocket. Sprocket 28 is preferably made so that it may be easily attached to any wagon-wheel, so that the device may be mounted upon any of the wagons which the owner may possess, thus doing away with the necessity of a specially-constructed truck, as is the case with most power-operated devices of this class.

I claim as my invention—

1. In a spraying device, the combination

with a tank adapted to be detachably mounted upon any suitable truck, of an air-pump arranged to force air into said tank, intermediate connecting mechanism between said truck and pump whereby the movement of the truck operates the pump, means for disengaging said pump from the truck, and means for operating the pump by hand, substantially as described.

2. In a spraying device, the combination with a tank adapted to be detachably mounted upon any suitable truck, of an air-pump arranged to force air into said tank, a mechanical stirrer mounted within said tank, intermediate connecting mechanism between the stirrer and the pump whereby they may be operated simultaneously, means for allowing the stirrer and pump to be operated independently, and intermediate connecting means between the said parts and the truck whereby they may be operated thereby, substantially as described.

3. In a spraying device, the combination with a tank, of an air-pump arranged to force air into said tank, a shaft provided with means for operating said pump, a pulley mounted on said shaft, a clutch carried by the shaft and arranged to normally engage said pulley, means for holding said clutch out of engagement with the pulley, a stirrer rotatably mounted within the tank, a pulley mounted on the stirrer-shaft and connected by a suitable belt with the first-mentioned pulley, a second pulley rotatably mounted upon the stirrer-shaft, a clutch carried by said shaft and arranged to normally engage said second pulley, and means for holding said clutch out of engagement with said pulley, all combined and arranged substantially as and for the purpose set forth.

JAMES H. POTTENGER.

Witnesses:
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