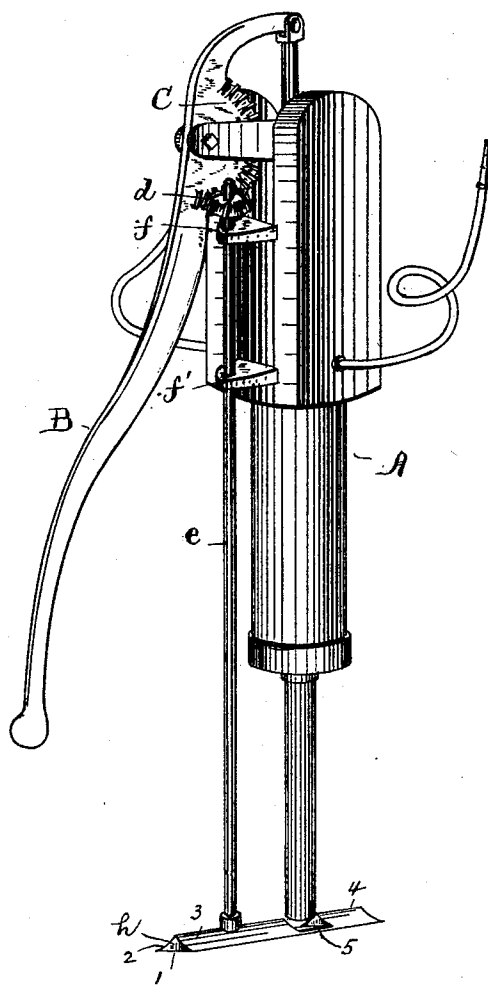


(No Model.)

A. M. PHILLIPS.
COMBINED PUMP AND MIXER.

No. 479,378.

Patented July 19, 1892.



WITNESSES
H. N. Jenkins.
Charles F. Mallard.

INVENTOR
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Attorneys.

UNITED STATES PATENT OFFICE.

ADELBERT M. PHILLIPS, OF LOCKPORT, NEW YORK, ASSIGNOR TO HARRISON S. CHAPMAN AND CHARLES A. BARNES, OF SAME PLACE.

COMBINED PUMP AND MIXER.

SPECIFICATION forming part of Letters Patent No. 479,378, dated July 19, 1892.

Application filed October 24, 1891. Serial No. 409,703. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT M. PHILLIPS, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented new and useful Improvements in a Combined Pump and Mixer, of which the following is a specification.

This invention relates to an improved pump and mixer combined, and it is especially intended for use in spraying plants, &c., with liquid containing such chemicals as may be deemed best for destroying insects and fungous growth on trees and vines.

The invention provides for a thorough mixing of the insect-destroying material with the liquid before and during its withdrawal from the reservoir.

The nature of my improvements are clearly shown in the accompanying drawing, whereon same is illustrated by a single perspective view.

The letter A designates a pump of any desired pattern, and B the plunger-operating lever thereof. My invention consists in providing the pivotal portion of the lever with a segmental rack *c*, the teeth of which are adapted to engage those of a pinion *d*, that is fitted on the top of a vertical shaft *e*, having journal-bearings *f f'* near the upper part thereof and a mixer or dasher *h*, secured to the lower extremity of same. The aforesaid dasher *h* is provided with a flat under surface 1 and rearwardly-inclined sides 2 3, the latter ter-

minating in a ridge 4, a portion of which is recessed, as at 5, to permit of its operating under the end of the suction-pipe. The inclined sides 2 and 3 serve to lift the sediment from the bottom of the vessel and discharge same upwardly into the liquid, while at same time they offer but little frictional resistance to the operation of the apparatus.

For pumps designed to be operated from a rotating shaft instead of hand-lever, as above described, a toothed wheel should be substituted in lieu of the handle and segmental rack, which would give to the mixer a circular movement instead of an oscillating one, as in the above arrangement.

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

The combination, in a pump, of an operating-lever having a segmental rack at its pivotal point, a vertical shaft journaled at the side of the pump, a pinion at the upper end of said shaft to engage the rack, and a dasher, as described, at the lower end of the shaft to operate below the suction-pipe of the pump, as and for the purpose set forth.

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

ADELBERT M. PHILLIPS.

Witnesses:

WM. GRITMAN,
WM. G. AYER.