(No Model.)

2 Sheets—Sheet 1.

J. H. NOLEN, Jr.

DISH CLEANER.

No. 575,368. Patented Jan. 19, 1897.

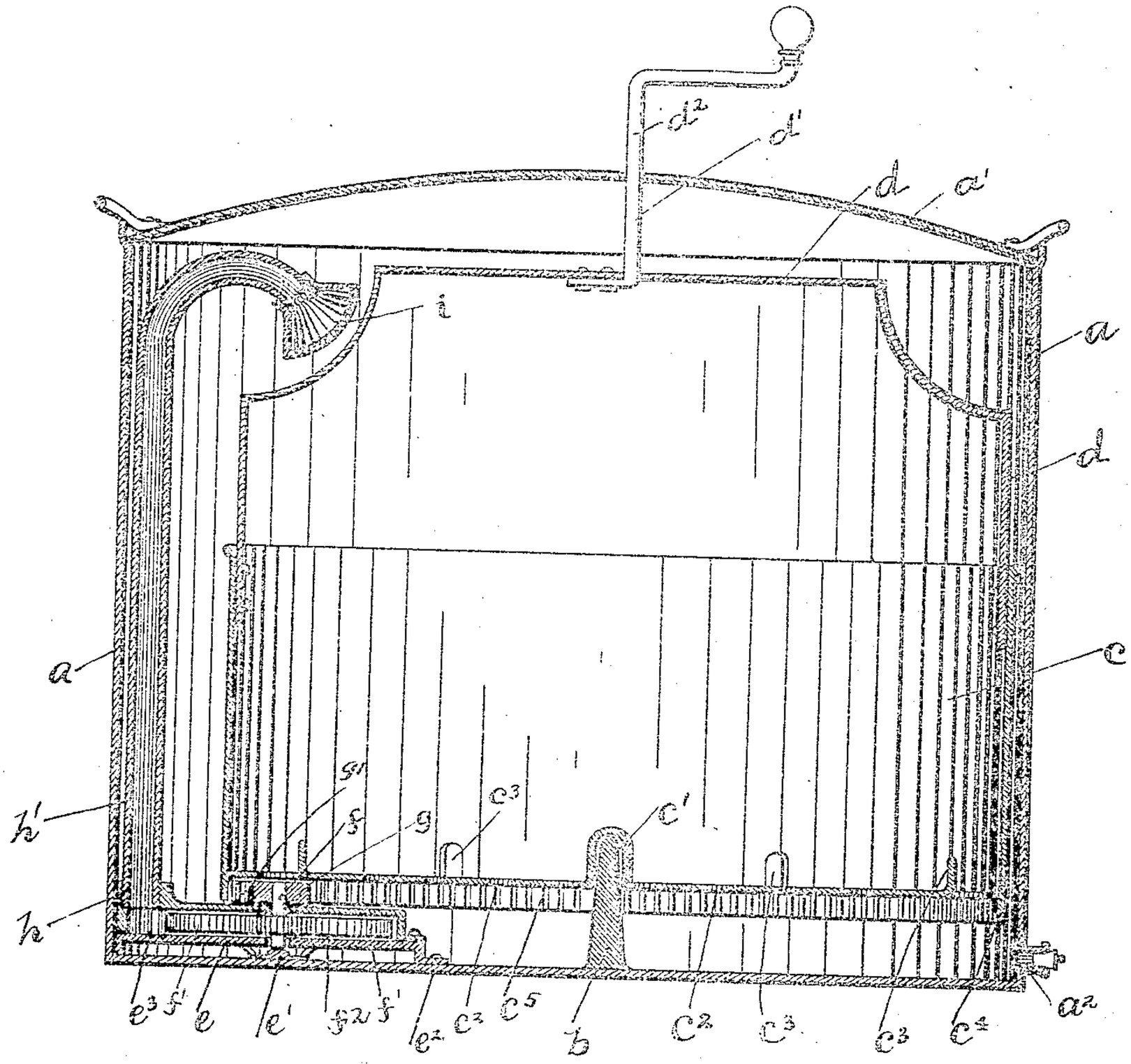

Fig. 1

Witnesses
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Inventor
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C. C. Shepherd

(No Model.) 2 Sheets—Sheet 2

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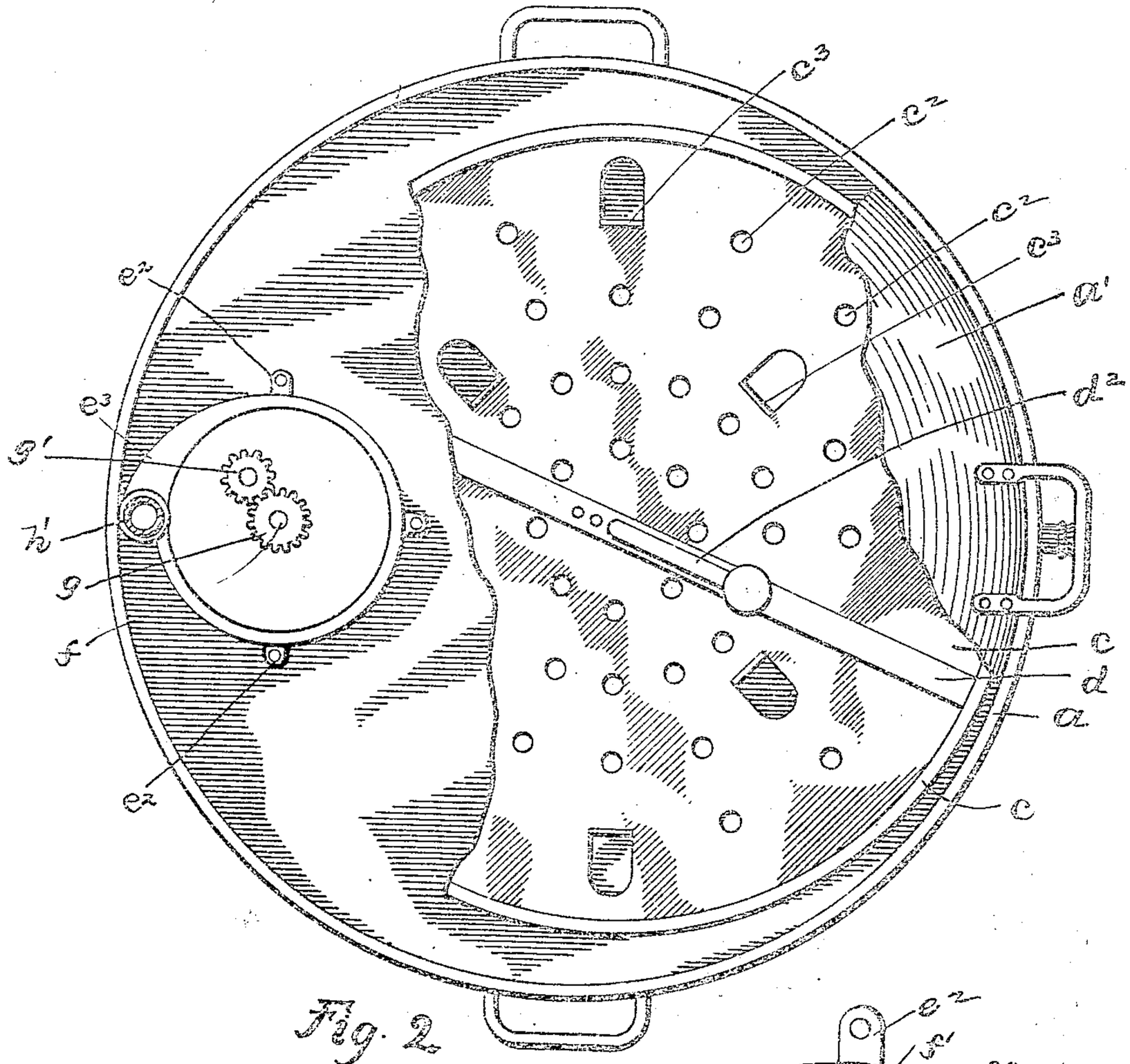

Fig. 2.

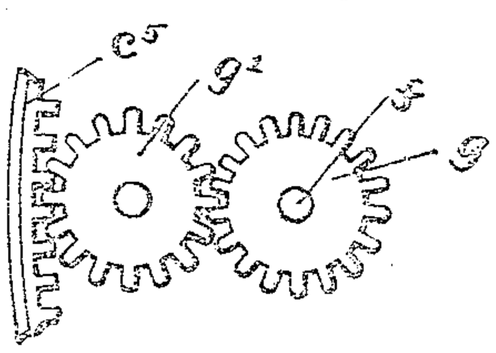

Fig. 3.

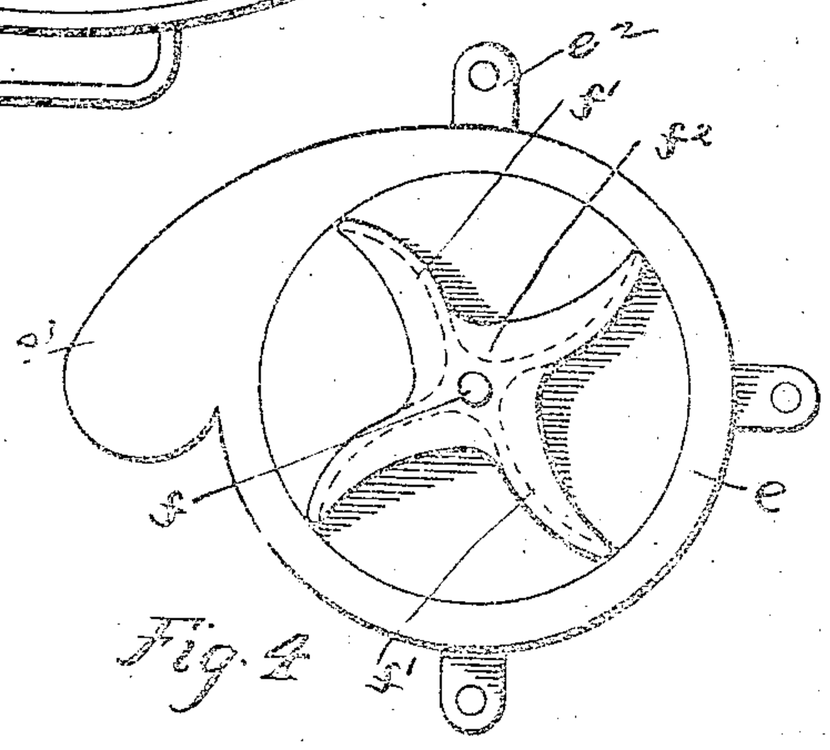

Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN H. NOLEN, JR., OF COLUMBUS, OHIO, ASSIGNOR TO CARRIE L. NOLEN, OF SAME PLACE.

DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 575,368, dated January 19, 1897.

Application filed April 15, 1896. Serial No. 587,578. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. NOLEN, Jr., a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Dish-Washing Devices, of which the following is a specification.

My invention relates to the improvement of dish-washers, and has particular relation to that class of dish-washers in which a dish holding or washing cylinder is adapted to rotate within a stationary cylinder.

The objects of my invention are to provide a washing device of this kind of simple and reliable construction, by means of which the operation of washing dishes may be carried on rapidly and effectively with a comparatively small quantity of water; to so construct and arrange my improved washing device as to provide a discharge of hot water onto the dishes contained in the washing basket or cylinder, and to accomplish the same through a rotary motion of said washing-basket, and to provide other improvements in details of construction and arrangement of parts, which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of my improved washer. Fig. 2 is a plan view of the same, showing, for the sake of clearness, portions of the lid and inner cylinder or washing-basket broken away. Fig. 3 is a detail view illustrating the gear connection of the pump gear-wheels and cylinder-rack, and Fig 4 is a plan view of the pump with the lid removed.

Similar letters refer to similar parts throughout the several views.

a represents an external case or cylindrical vessel which is adapted to be provided with a suitable close-fitting lid or cover *a'*, and which is provided in the lower portion of its body with an outlet a^2, the latter having a detachable stopper therefor.

b represents a vertical pivot-pin which projects from a point at or near the center of the bottom of the case *a*.

c represents a washing-basket or inner case which is of less diameter than the case *a*, and which is provided in its bottom portion with a central socket *c'*, the latter being adapted to receive the upper end portion of the pivot-pin *b*, on which said case or basket *c* is supported. The bottom of the basket *c* is, as indicated at c^2, preferably provided with perforations, while upturned lips c^3 are formed in said case-bottom at desirable intervals.

The case *c* is provided with a suitable bale *d*, with the upper portion of which is connected the vertical stem *d'* of a crank-handle d^2, the latter passing through and being journaled in an opening in the lid *a'*.

As indicated at c^4, the circular wall of the case *c* is provided with a downward extension below its bottom plate, and this extension has secured on its inner surface or formed therewith a circular rack c^5.

e represents a substantially disk-shaped pump-case, the central downwardly-projecting and slotted boss *e'* of which rests on or is adjacent to the bottom of the external casing *a* at a point on one side of the center of the latter. The bottom of the pump-casing *e* is provided with suitable feet e^2, which serve to elevate said pump-casing slightly above the bottom of the external case *a*. This pump-casing belongs to that class of pumps commonly known as "centrifugal" pumps, and is provided with the usual tangential outlet e^3, which extends to a point near the inner wall of the casing *a*, as shown. Journaled in the boss *e'* and extending upward loosely through the top plate of the casing *e* is a pin *f*, which carries thereon within said casing the radiating arms *f'* of a centrifugal pump-wheel f^2. On its upper end portion the pin *f* carries a gear-wheel *g*, the teeth of which mesh with those of a pinion-wheel *g'*, loosely mounted on the top plate of the pump-casing. The pinion-wheel *g'*, as indicated more clearly in the drawings, is so supported as to result in an engagement of its teeth with the teeth of the rack c^5 of the case *c*.

As shown at *h*, the outer extremity of the tangential outlet e^3 of the pump-casing connects with the lower end of a pump-tube *h'*, the latter extending upward along the inner side of the casing *a* and having its upper end portion bent or shaped to discharge onto the contents of the dish-holding bas-

ket or case *c*. This discharging upper end of said pipe or tube *h'* is provided, as indicated in Fig. 2 of the drawings, with a suitable form of detachable spraying device *i*.

In utilizing my device the dishes or other articles to be washed are deposited in the case *c*, the upturned lips c^3 thereof being adapted to facilitate the support of said dishes in desired positions. A desirable quantity of hot water is then poured into the case and the lid placed in position thereon, after which rotary motion may be imparted to the internal case *c* by revolving the crank-handle d^2. This rotary motion of said internal case thus imparted will result, as will readily be seen, through the gear connection of the pinion *g'* with the rack c^5, in a rotation of the curved arms *f'* of the water or pump wheel f^2, with the result that the water in the lower portion of the casing *a* will be drawn through the slotted openings of the pump-wheel boss *e'* into the pump-casing and thence forced by the action of said wheel-arms *f'* into and upward through the tube or pipe *h'*, thus resulting in a discharge of the hot water pumped through said tube onto the dishes of other articles contained in the basket *c*. In this manner it is obvious that a continuous flow of hot water may be directed onto the dishes while the latter are being rotated, thus subjecting them to a desirable washing action.

If desired, the casing *a* may be provided with sufficient water to cover or partially cover the dishes contained in the case *c*, but it is evident that this will not be found necessary, inasmuch as the dishes may be subjected to the desirable washing action by the use of a comparatively small amount of water.

It is evident that my device may be produced in a simple and reliable form at a low cost of manufacture and that the operation of cleansing dishes and other similar articles thereby is exceedingly simple.

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

1. In a dish-washing device the combination with an external case, an internal rotatable case therein and a rack carried thereby, of a rotary pump arranged in said external case, said pump being provided with an operating gear-wheel and means whereby said pump is rotated by motion contributed to said gear-wheel from said rack, substantially as and for the purpose specified.

2. In a dish-washing device the combination with an external cylinder, an internal rotatable cylinder or case and a circular rack carried thereby, of a centrifugal rotary pump arranged in the lower portion of said external case, a spout leading therefrom and discharging into said inner case, an operating gear-wheel on said pump and an idle-wheel gearing therewith, said idle-wheel having an engagement with the teeth of said rack, substantially as and for the purpose specified.

JOHN H. NOLEN, JR.

In presence of—
A. S. PHELPS,
C. C. SHEPHERD.