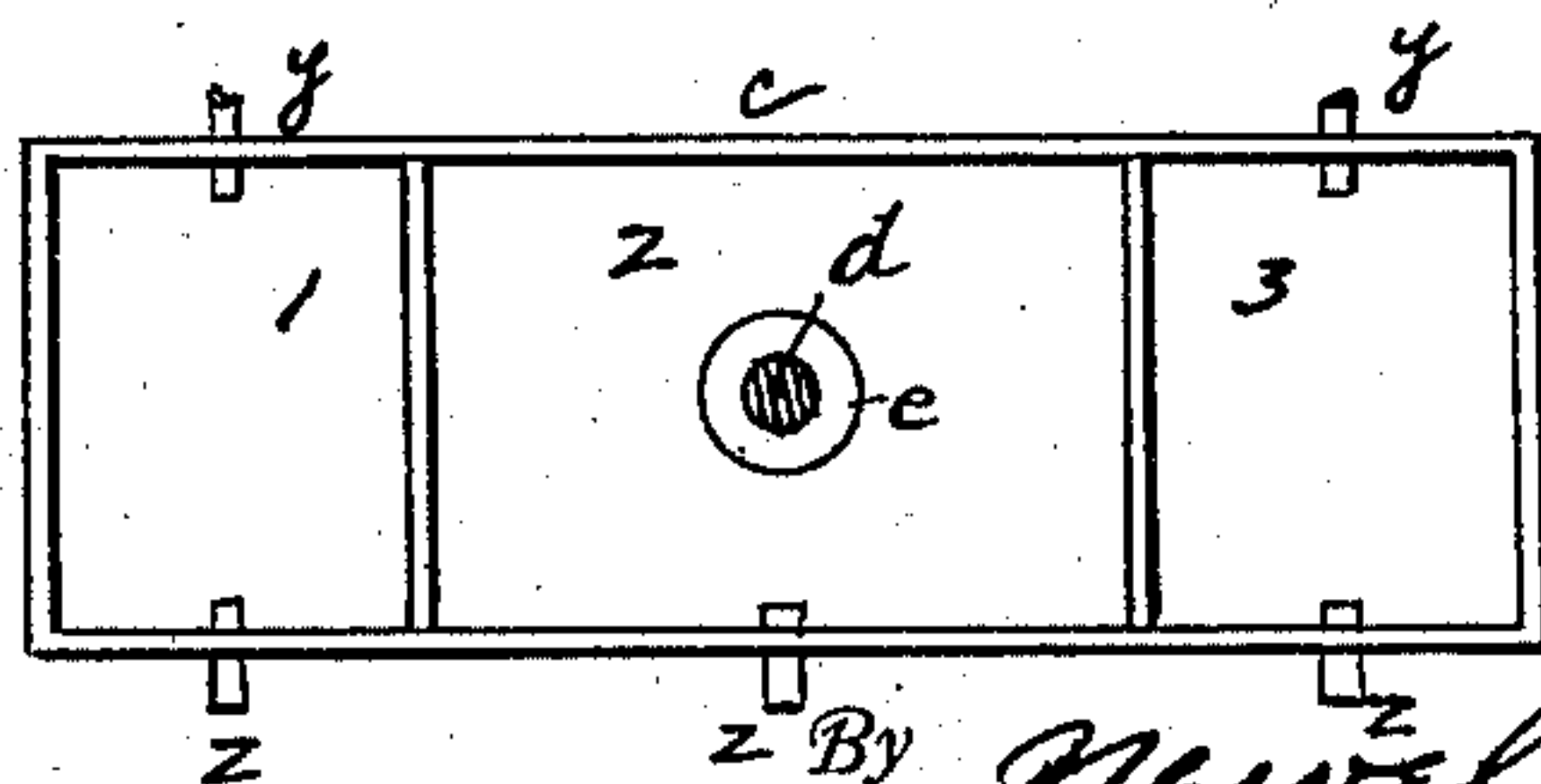
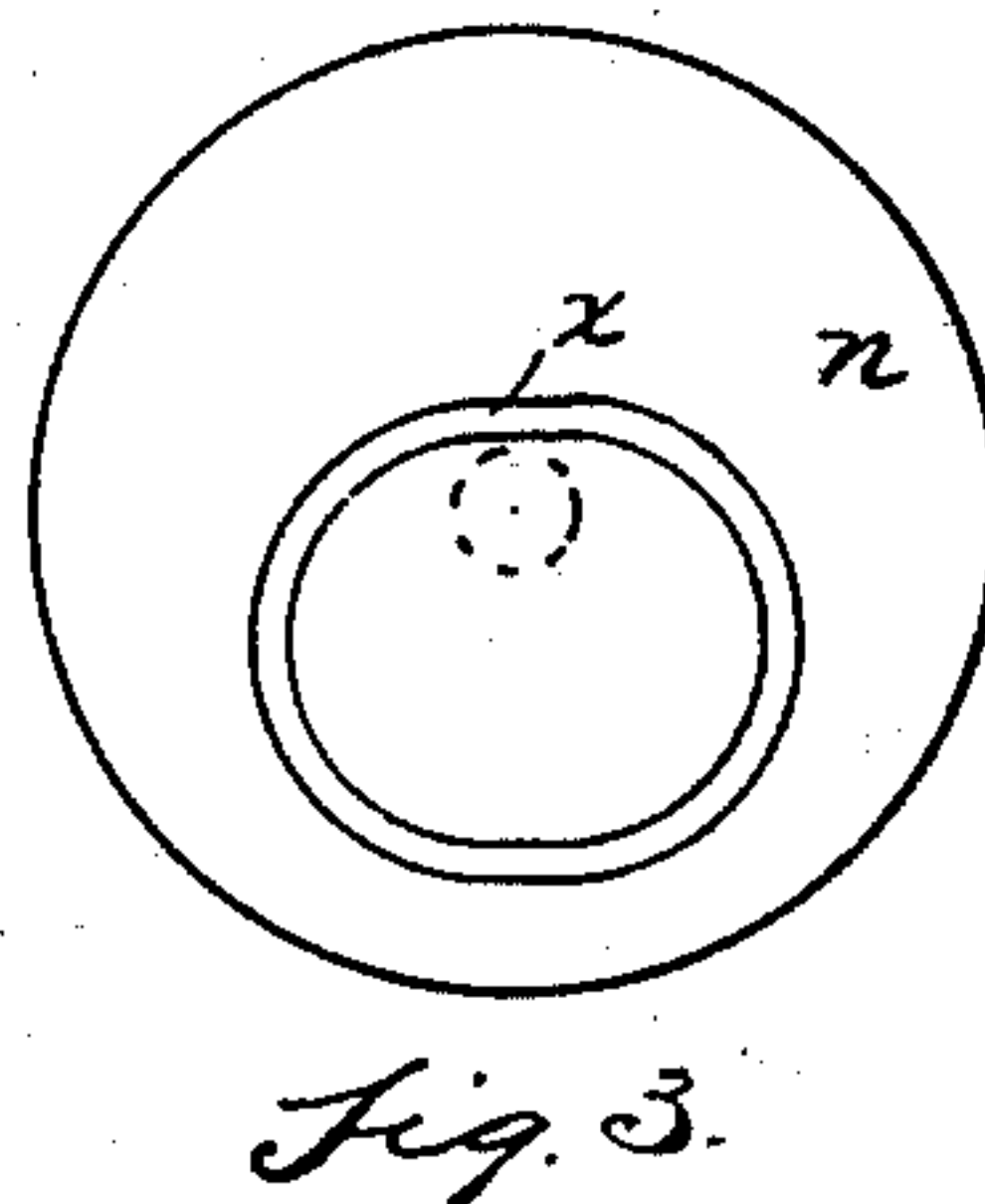
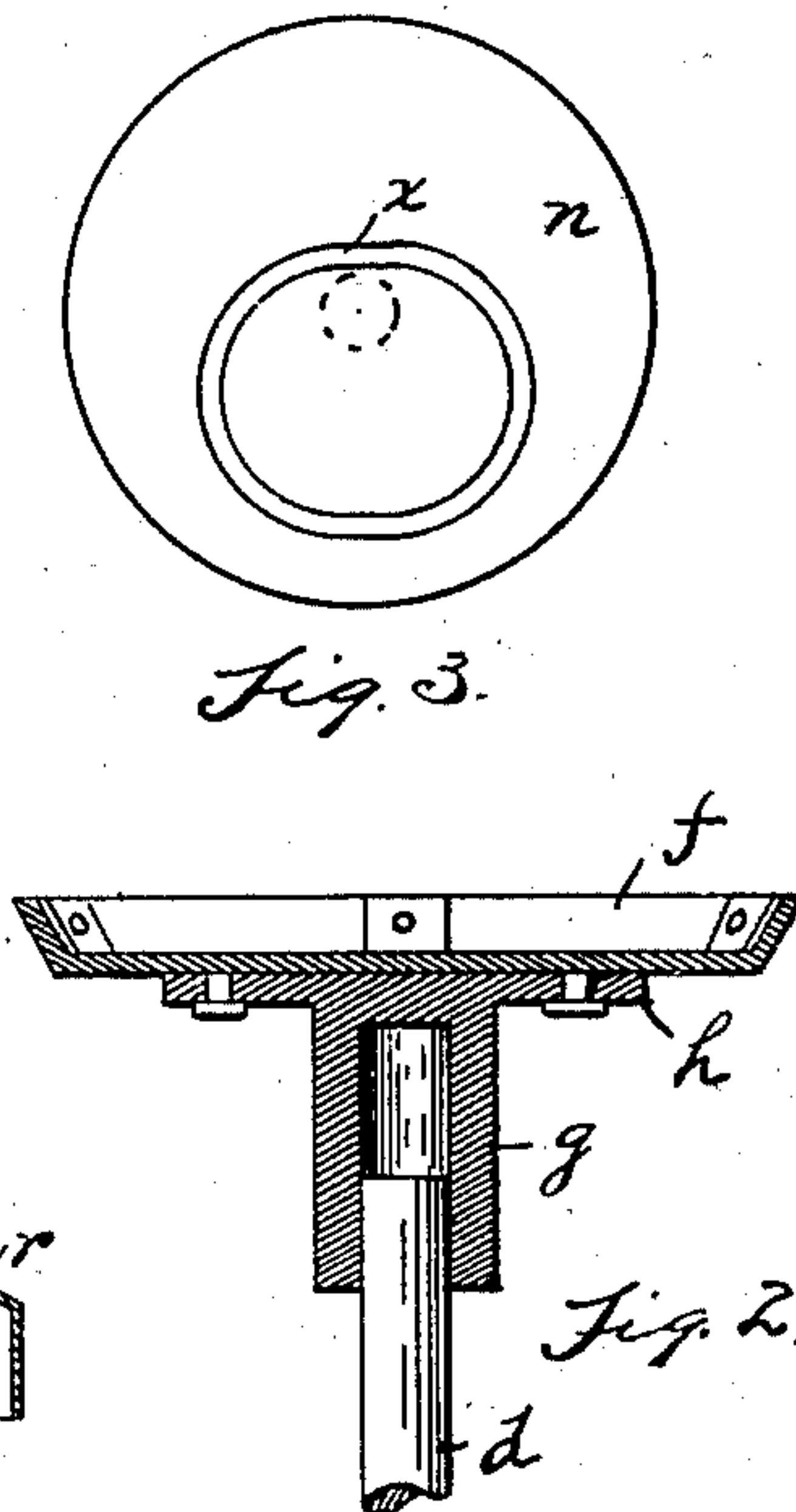
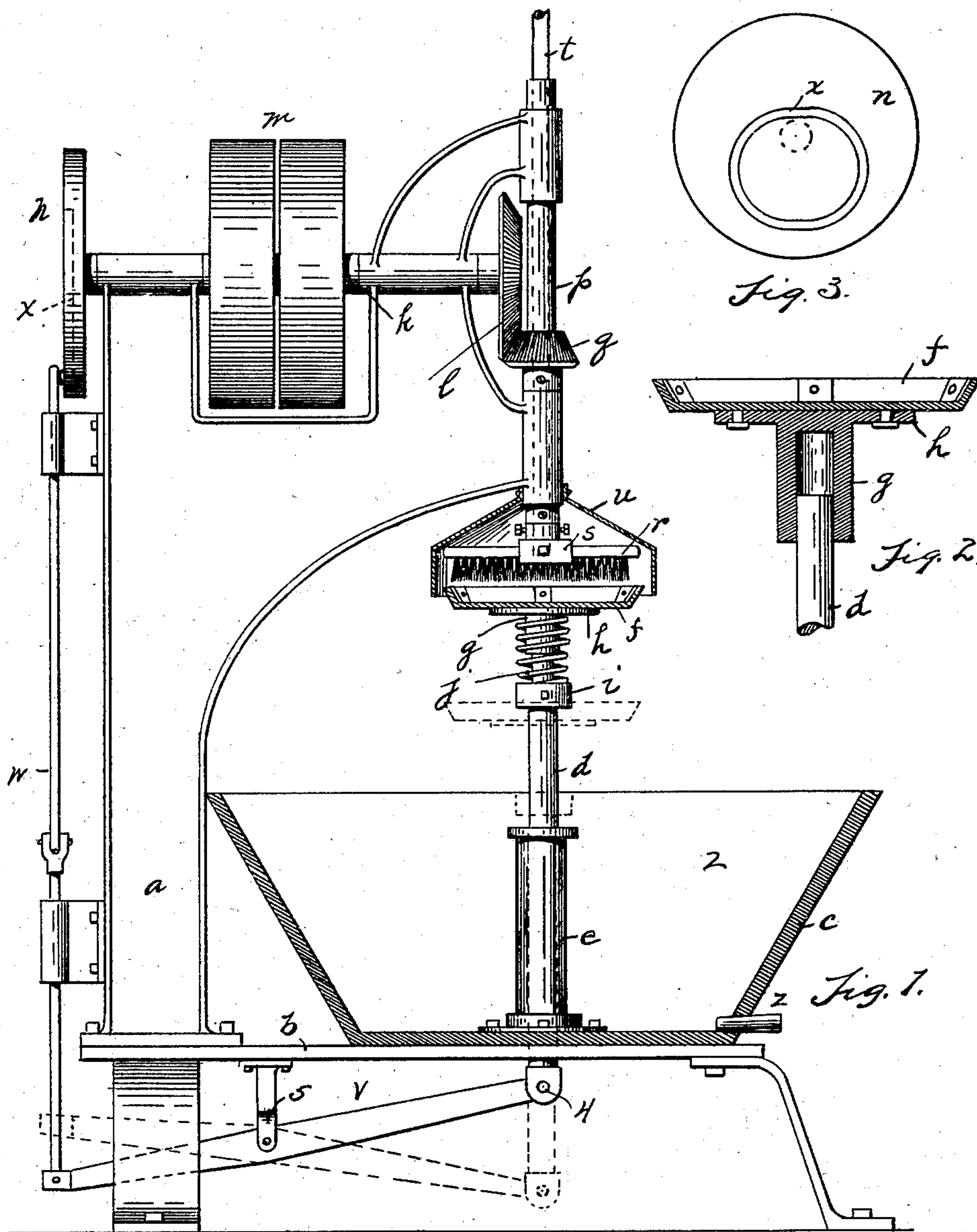


No. 748,077.

PATENTED DEC. 29, 1903.

H. H. JONES.
DISH WASHING MACHINE.
APPLICATION FILED JUNE 6, 1903.

NO MODEL.



WITNESSES
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UNITED STATES PATENT OFFICE.

HARRY H. JONES, OF DETROIT, MICHIGAN, ASSIGNOR TO AUTOMATIC
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MICHIGAN.

DISH-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 748,077, dated December 29, 1903.

Application filed June 6, 1903. Serial No. 160,330. (No model.)

To all whom it may concern:

Be it known that I, HARRY H. JONES, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Dish-Washing Machines, of which the following is a specification, reference being had to the accompanying drawings, which form a part of this specification.

My invention is designed to provide a dish-washing machine, the same being more particularly designed and adapted for washing pie-tins, although I do not limit myself to any precise use to which the invention may be applied.

My invention consists of the construction, combination, and arrangement of devices hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation showing parts in section. Fig. 2 is a detail view in section showing said parts of the invention. Fig. 3 is a view of the cam-plate *n*. Fig. 4 is a plan view of the tub on a reduced scale.

The purpose of my invention is to provide mechanism for washing pie-tins more particularly in a rapid and economical manner.

I carry out my invention as follows:

In the drawings, *a* represents any suitable support provided with a bed *b*, upon which is located any suitable tub *c*. Through said bed and tub projects a vertically-reciprocating shaft *d*, a bearing *e* being provided within the tub. Upon the upper end of the shaft *d* is engaged a plate *f*, said plate being preferably supported upon a head *g*, provided with a hollow stem to receive the upper end of the shaft *d*, the upper end of the head being provided with a flange *h*, as shown, to support the plate *f*. Upon the shaft *d* is engaged a collar *i*. A spring *j* is engaged about the stem of the head *g* between the flange *h* and the collar, which permits the plate *f* to yield if necessary. A driving-shaft *k* is journaled in the upper end of the support *a*, provided with a gear *l*, with driving-pulleys *m*, and with a cam-plate *n*. A vertical rotatable shaft *p* is also journaled in the bed *a*, said shaft provided with a pinion *q*, driven by the

gear *l*. The shaft *p* carries at its lower end a brush *r*, held thereupon in any suitable manner, as by a clamping device *s*. Through the shaft *p* extends a water-pipe *t*, through which water is supplied for washing the dishes or tins, the tins or dishes being located upon the plate *f*. A hood *u* is located over the brush and extends down around the periphery of the plate *f* to prevent the water from flying about.

The shaft *d* may be vertically reciprocated in any suitable manner, as by means of a lever *v*, actuated in any suitable manner, as by a rod or bar *w*, connected with the outer end of the lever, said rod or bar *w* being actuated by a cam-groove in the cam-plate *n*, (indicated at *x*.) This cam-groove is preferably so constructed that when the plate *f* is elevated it will remain in elevated position a suitable length of time and when the plate *f* is in depressed position it will also remain in such position a suitable length of time for the removal and insertion of a pie plate or dish upon the plate *f*. I prefer to automatically reciprocate the shaft *d*, so that an attendant will only have to remove the tin or dish from the plate *f* and to place thereupon another dish or tin to be washed.

The operation of the device as above described will be obvious. A dish or tin having been placed upon the plate *f* when in depressed position, (shown in dotted lines in Fig. 1,) the same is elevated by the upward movement of the shaft *d* into normal position underneath the brush, and a pressure may be exerted upon the plate *f* to carry the dish or tin thereupon firmly against the brush by the spring *j*. The brush rotates with the shaft *p*, the wash-water being fed through the pipe *t*. By the rotation of the brush, the water being thus supplied, the tin or dish is quickly cleansed, after which the plate *f* is depressed, when the attendant removes the dish or tin from the plate *f*. I prefer that the tub *c* shall have plural compartments, three being shown in the accompanying drawings at the numerals 1, 2, and 3. It will be evident that the wash-water fed through the pipe *p* overflowing the plate *f* will descend into the central compartment 2 of the tub.

The cleansed dishes or tins when removed from the plate *f* may be placed in one of the compartments 1 or 2. Rinsing-water may be supplied to the compartments 1 and 3 in any suitable manner, as by feed-pipes *y*, and the water may be drawn off from any of the compartments 1, 2, and 3 through suitable discharge-pipes, (indicated at *z*.) The bed *b* is preferably elevated sufficient to allow the lever *v* to extend thereunder, said lever having a jointed engagement with the lower end of the shaft *d*, as indicated at the numeral 4, said lever being fulcrumed in any suitable manner, as to a bracket 5.

I do not limit myself solely to the actuation of the lever *v* by a cam device, as it might be otherwise automatically actuated within the scope of my invention; but a cam-plate *n* may conveniently be constructed, as above described, to permit the plate *f* to be stationary for a suitable period of time both in its normal and in its depressed position.

What I claim as my invention is—

1. The combination with a vertically-reciprocatory shaft, a dish-support thereupon, a non-reciprocatory rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, and a water-feed pipe to feed water to the work.

2. The combination with a vertically-reciprocatory shaft, a dish-support thereupon, a non-reciprocatory rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, and a water-feed pipe leading through the rotatable shaft to feed the water to the work.

3. The combination with a vertically-reciprocatory shaft, of a dish-support carried thereupon, a rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, a water-feed pipe to feed water to the work, and mechanism to automatically reciprocate the reciprocatory shaft.

4. The combination with a vertically-reciprocatory shaft, of a dish-support carried thereupon, a rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, a water-feed pipe to feed water to the work, and cam-actuated mechanism to reciprocate the reciprocatory shaft.

5. The combination with a vertically non-rotatable reciprocatory shaft, a dish-support

thereupon, a non-reciprocatory rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, and a water-feed pipe to carry water to the work, said support having a yielding engagement upon the reciprocatory shaft.

6. The combination with a vertically non-rotatable reciprocatory shaft, a dish-support thereupon, a non-reciprocatory rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, and a water-feed pipe to feed water to the work, said support having an upward tension against the cleansing device.

7. The combination with a vertically-reciprocatory shaft, of a dish-support carried thereupon, a rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, a water-feed pipe to feed water to the work, and a hood over the support and cleansing device.

8. The combination with a vertically-reciprocatory shaft, a dish-support thereupon, a non-reciprocatory rotatable shaft thereabove, a cleansing device carried by the rotatable shaft, a water-feed pipe to feed water to the work, and a tub about the base of the reciprocatory shaft.

9. The combination with a support, of a driving-shaft, a rotatable non-reciprocatory shaft driven thereby, a cleansing device carried by the rotatable shaft, a reciprocatory shaft, a water-feed pipe leading through the rotatable shaft to carry water to the work, a dish-support carried by the reciprocatory shaft, and a tub at the base of the reciprocatory shaft.

10. The combination of a support, a driving-shaft, a rotatable shaft, a cleansing device carried by the rotatable shaft, a reciprocatory shaft, a dish-support carried thereupon, a water-feed pipe to feed water to the work, a lever to actuate the reciprocatory shaft, a cam-plate upon the driving-shaft, and means to connect the lever with the cam-plate.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HARRY H. JONES.

Witnesses:

N. S. WRIGHT,
M. M. STRUBLE.