

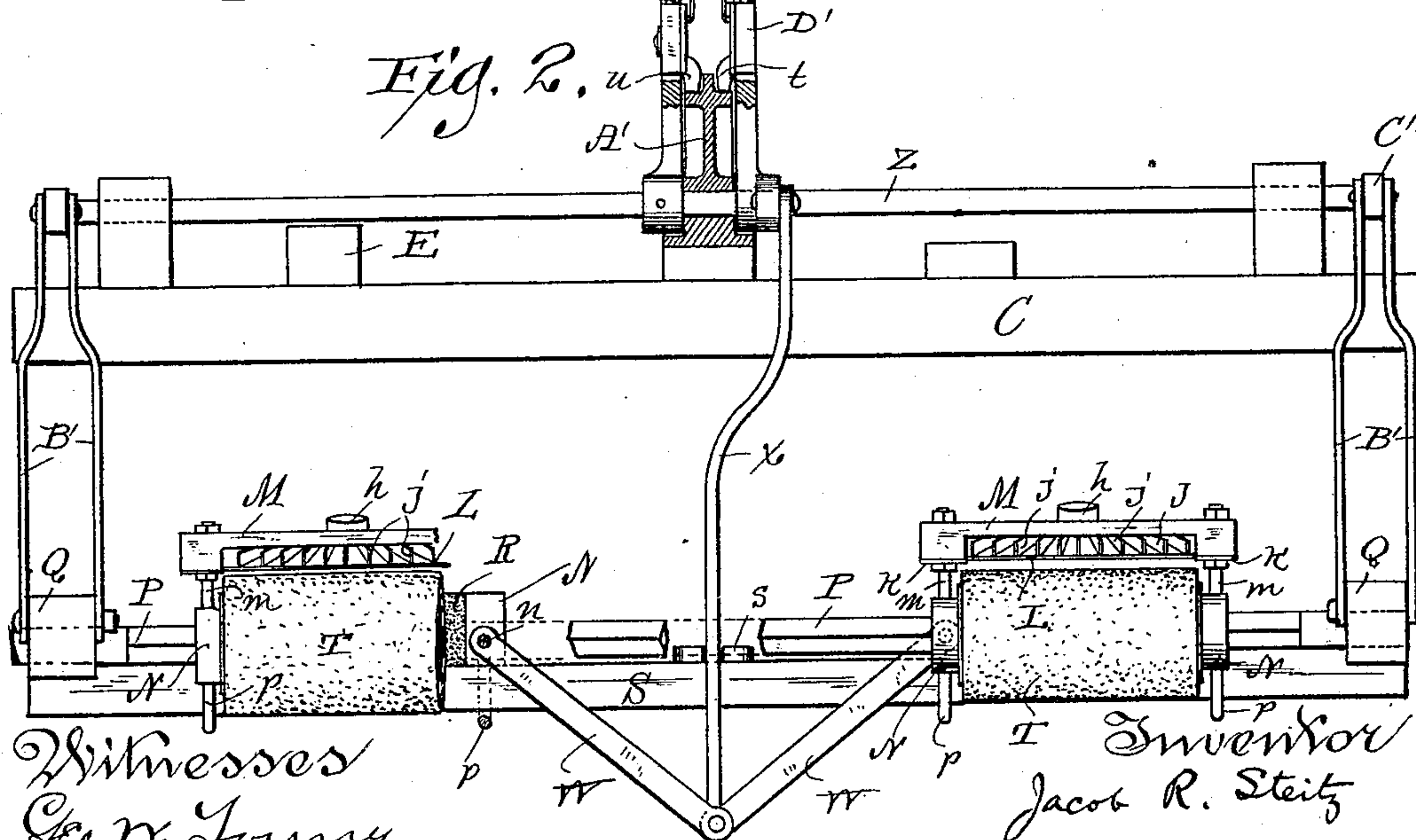
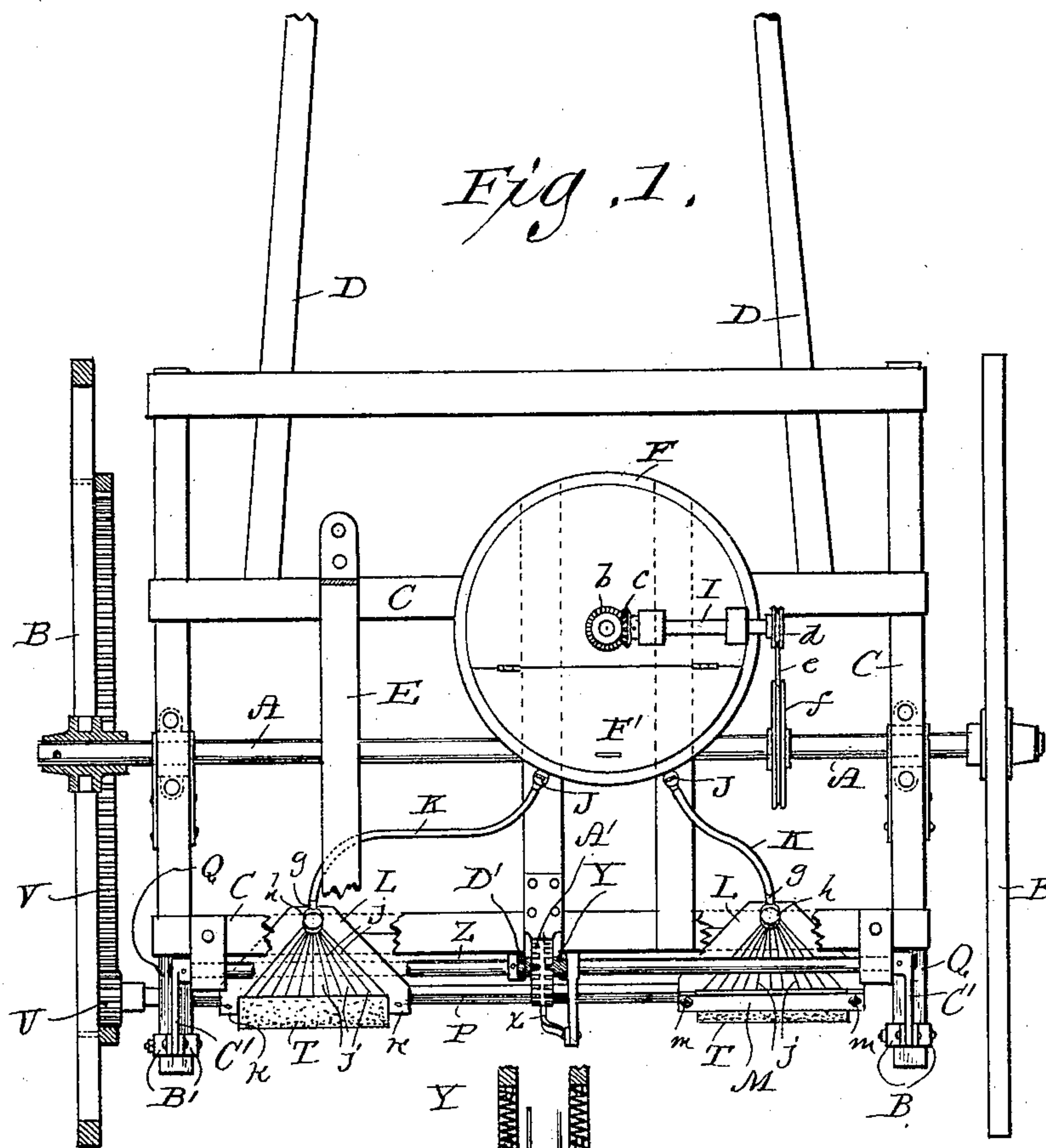
(No Model.)

2 Sheets—Sheet 1.

J. R. STEITZ.
SPRINKLER.

No. 480,047.

Patented Aug. 2, 1892.



Witnesses
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(No Model.)

2 Sheets—Sheet 2.

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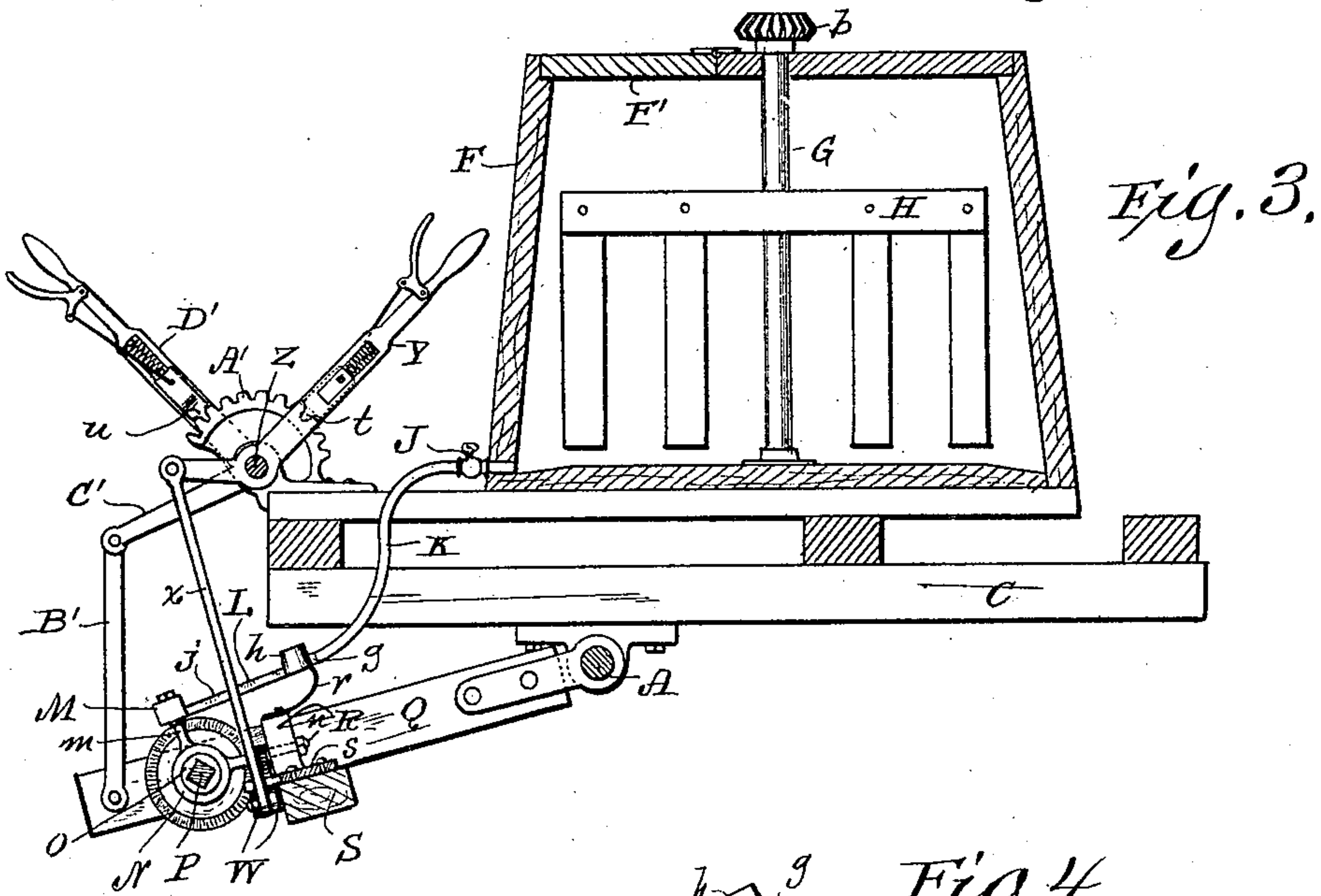


Fig. 3.

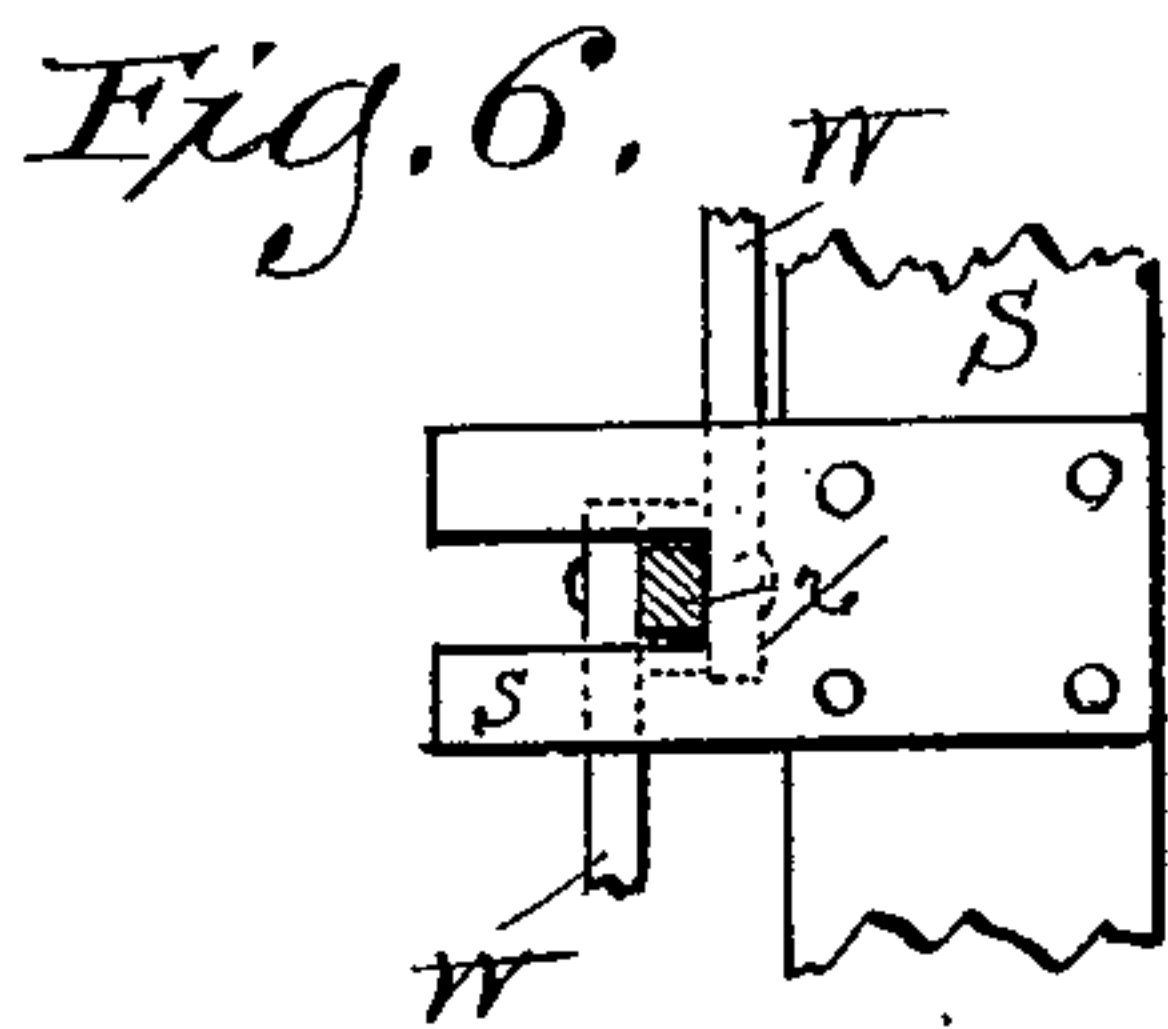


Fig. 6.

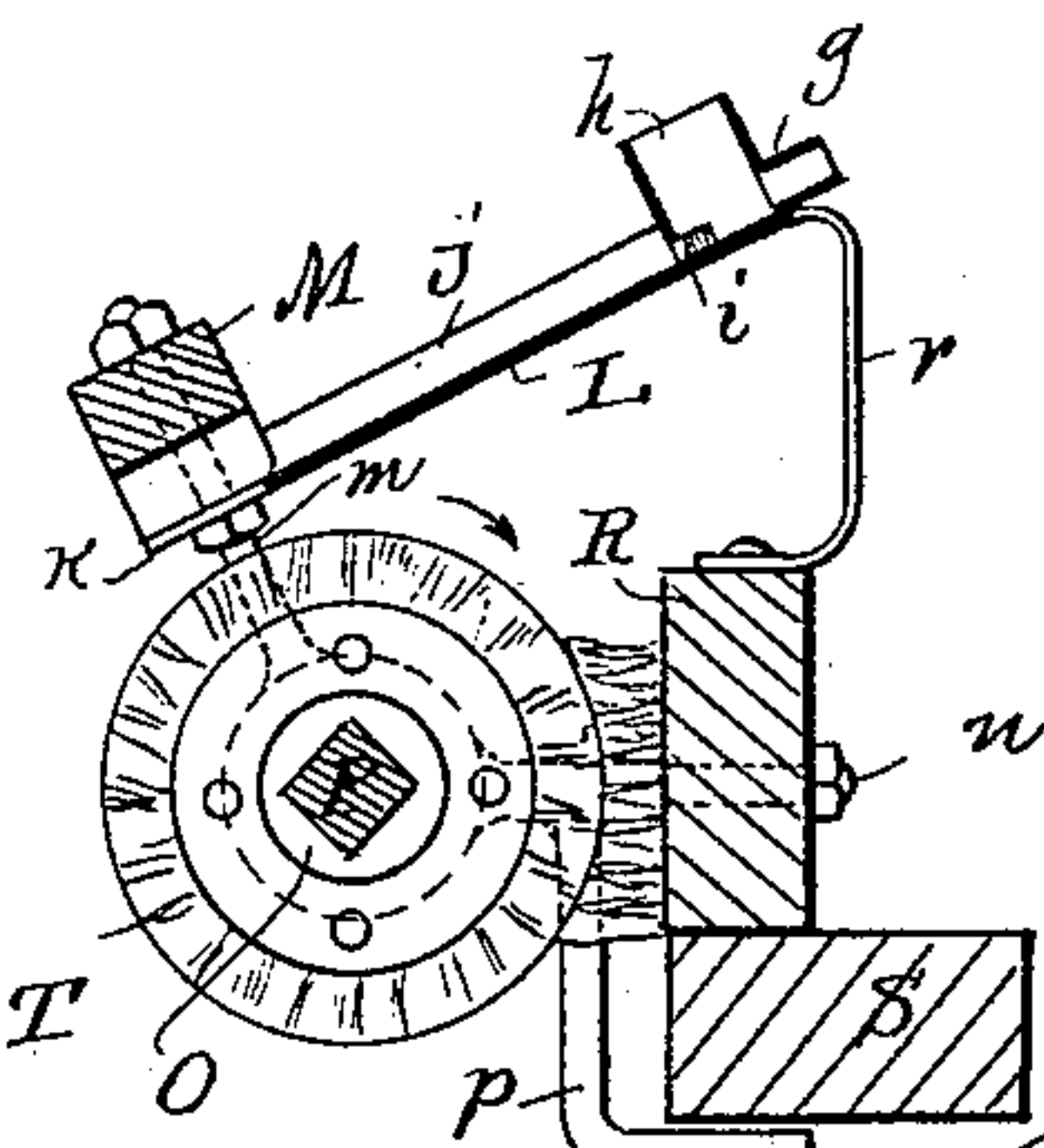


Fig. 4.

Fig. 7.

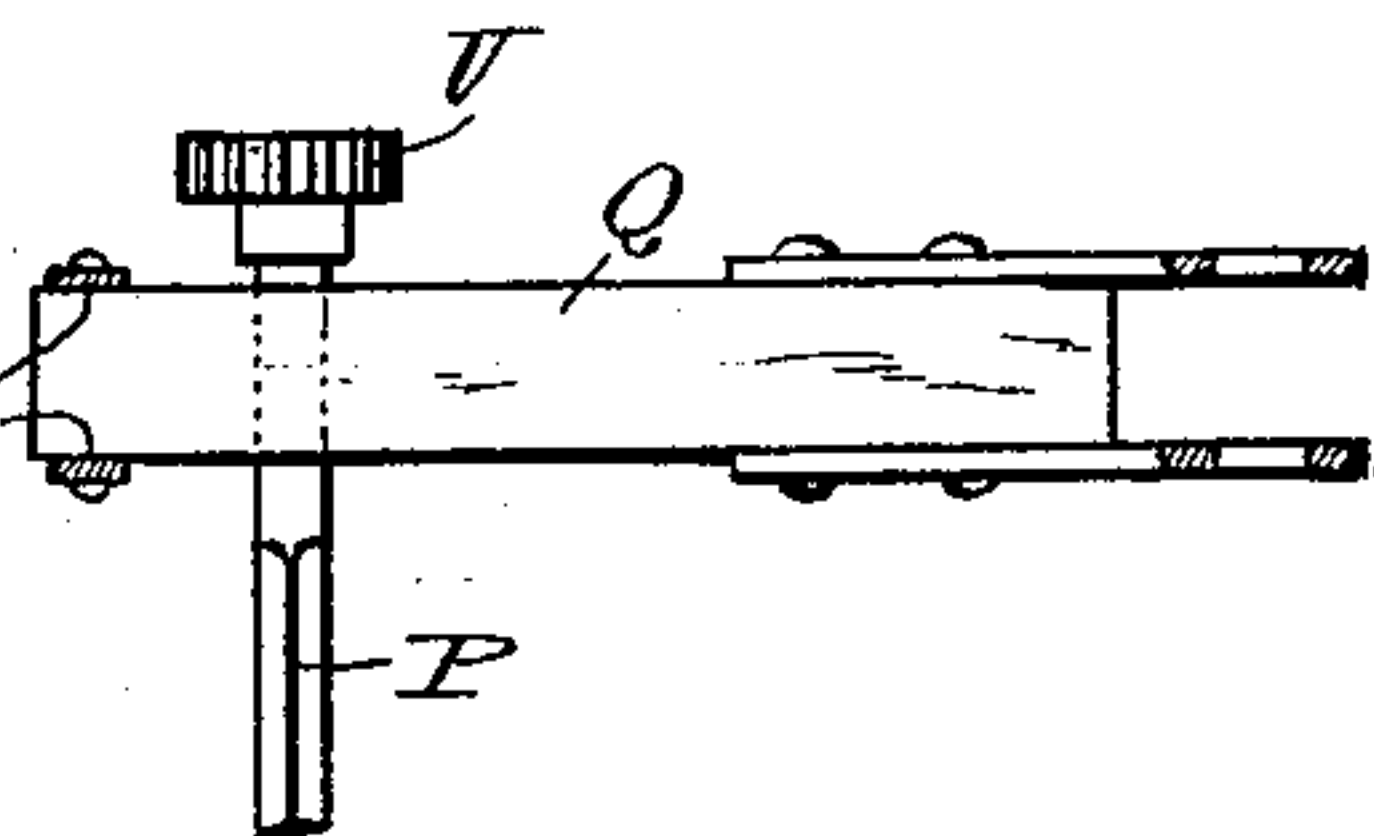


Fig. 8.

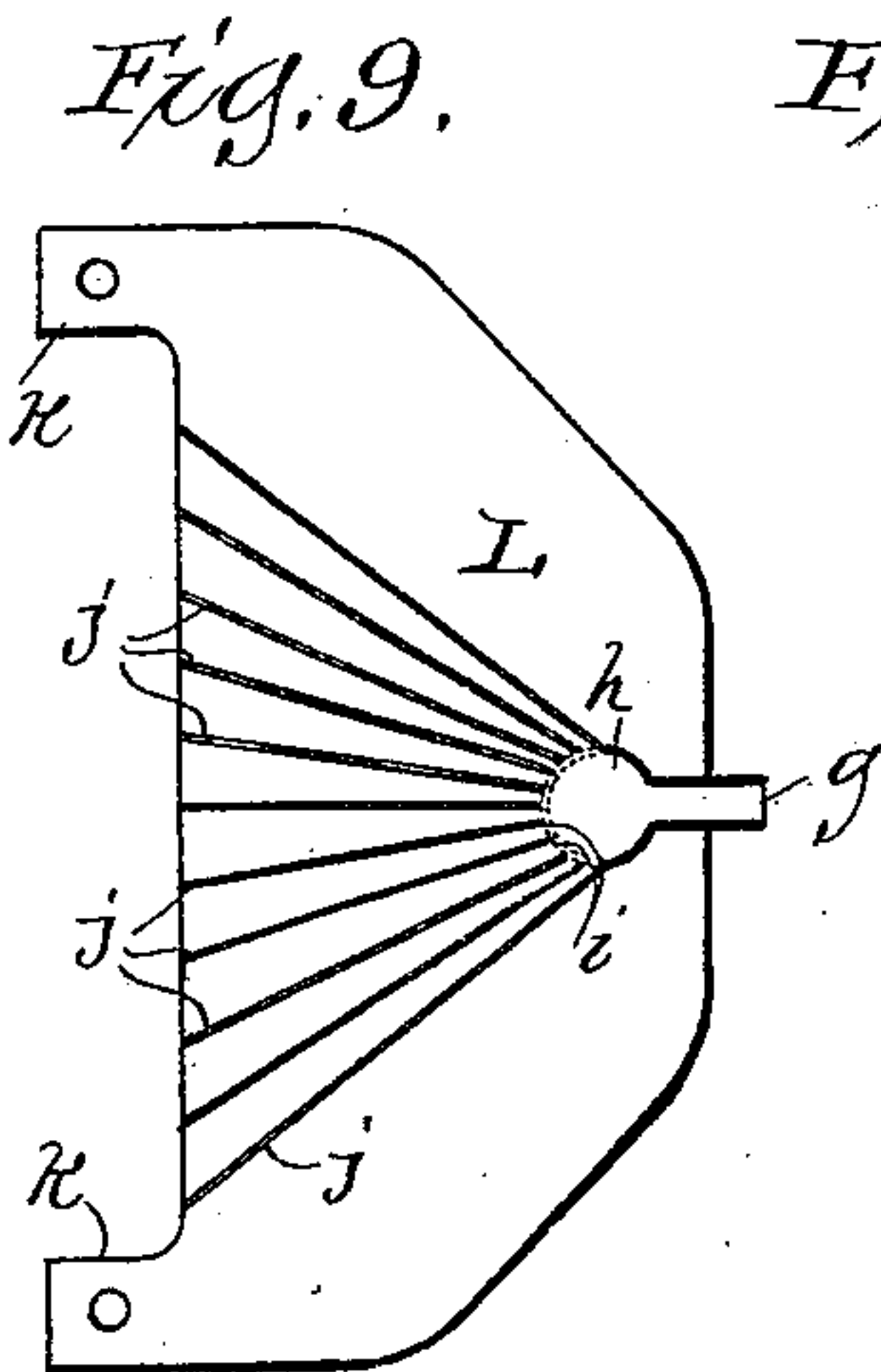


Fig. 9.

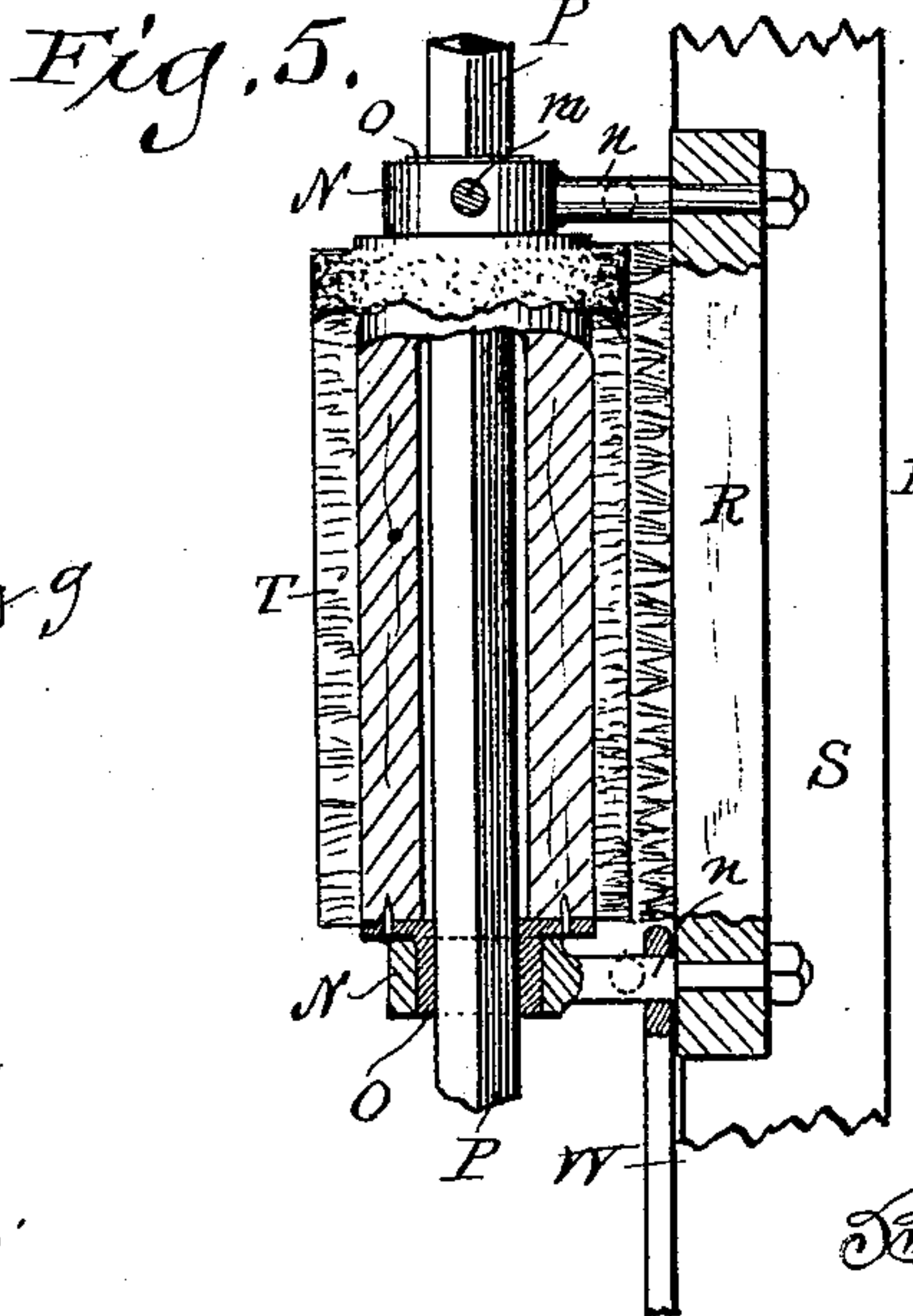


Fig. 5.

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UNITED STATES PATENT OFFICE.

JACOB R. STEITZ, OF ST. FRANCIS, WISCONSIN.

SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 480,047, dated August 2, 1892.

Application filed August 21, 1891. Serial No. 403,339. (No model.)

To all whom it may concern:

Be it known that I, JACOB R. STEITZ, a citizen of the United States, and a resident of St. Francis, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Sprinklers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a sprinkler capable of distributing a certain amount of poisonous fluid over a greater area than is possible with those in ordinary use; and the said invention consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a plan view of my sprinkler, partly in horizontal section and partly broken away; Fig. 2, a detail rear elevation, partly in section and partly broken away; Fig. 3, a detail sectional view with certain of the parts in side elevation; Figs. 4 and 5, like views on an enlarged scale, illustrating the distributor mechanism; Fig. 6, a detail plan view, partly in horizontal section; Figs. 7 and 8, detail views illustrating a driving-gear and hangers for a rotary brush-shaft, and Fig. 9 a detail plan view of a spreader-shield forming part of the sprinkler.

Referring by letter to the drawings, A represents an axle for wheels B, this axle being loose in bearings on the under side of a skeleton platform C, the latter having thills D and a seat-bar E connected thereto.

Mounted on the platform C is a tank F, the top of which has a hinged section F', and arranged in bearings in the top and bottom of said tank is a shaft G, carrying a dasher H, as shown in Fig. 3. Fast on the outer end of the shaft G is a beveled gear-wheel *b* in mesh with a like wheel *c*, fast on a horizontal shaft I, mounted in bearings on the top of the tank and having a pulley *d* rigid thereon. A belt *e* connects the pulley *d* with another pulley *f* that is fast on the axle A, and thus rotary motion is communicated to the dasher H to agitate the contents of the tank, it being understood that the sprinkler herein described is principally designed for the purpose of distributing paris-green mixed with water, and that to obtain the best results the mixture

must be kept well stirred. Fitted in the lower portion of the tank are faucets J, connected by flexible tube K with nipples *g*, that extend from cups *h* on shields L, and these cups have segmental slots *i* in their lower rear portions.

As shown, a series of plates *j* are set on edge upon each shield to radiate from the slot in the cup *h* thereon and thus form a series of channels; but said shield may be otherwise channeled without departure from the spirit of my invention. As best illustrated in Fig. 9, each shield L is cut away at its rear end to leave ears *k*, and these ears coincide with the ends of braces M, the latter being cut out to clear the radiating plates *j* on said shield, as clearly illustrated in Fig. 2. Passed through the shield-ears *k* and the adjacent ends of the braces M are arms *m*, extended up from circular sleeves N, loose on bosses O, the latter having polygonal bores fitting a polygonal shaft P, that has round bearings in bars Q, shackled to the axle A, the shields and braces being held on the sleeve-arms by means of nuts. Other arms *n* extend forward from the sleeves N and are bolted to flat tufted brushes R, supported on a guide-beam S, that is connected at its ends to the bars Q, above described. The latter sleeve-arms are provided with right-angular branches *p*, that come under the guide-beam S to prevent lifting of the brushes R, and supports *r* connect these brushes with the shields L, said supports being of such length as to give said shields an inclination. The bosses O are at the ends of circular brushes T, that have their tufts in frictional contact with those of the flat brushes R, and the polygonal shaft P carries a pinion U in engagement with a gear-wheel V, fast on one of the wheels B above described. The inner boss on each of the brushes T is connected by a link W with another link X, that works in a guide *s* on the beam S and is connected to a lever Y, the latter being loose on a rod Z, arranged in bearings at the rear of the platform C, and this lever is provided with a spring-latch *t* for engagement with a rack-standard A', also arranged on the rear of said platform. By means of the lever-controlled toggle formed by the links W X the shields and brushes above described may be laterally adjusted by the driver of the sprinkler to accommodate

the latter to varying distances between rows of plants to be treated with the poisonous solution. The rear ends of the bars Q are connected by links B' with cranks C' on the ends of the rod Z, and a lever D', fast on said rod, is provided with a spring-latch u for engagement with the rack-standard A' above described. By actuating the lever D' the bars Q may be raised or lowered by the driver of the sprinkler, and thus the shields and brushes are readily adjusted to various elevations, according to the height of the plants to be sprinkled.

In practice the poisonous solution let out of the tank onto the shields runs down the channels formed thereon, and is thus evenly distributed to the circular brushes. These circular brushes being in revolution against the stationary but adjustable brushes the poisonous solution is distributed in the form of spray and the heavy particles or poison proper is more certainly deposited on the plants to be treated, while at the same time I am enabled to accomplish the desired result with a less quantity of said poisonous solution per acre than is possible with such sprinklers as are in common use.

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

1. The combination of a carriage, a receptacle mounted thereon, a rotary brush, a stationary brush in opposition to the rotary one, a distributing-shield extended beyond the stationary brush and having its discharge end over the rotary brush, and tubes connecting the receptacle and the shield, substantially as set forth.

2. The combination of a carriage, a receptacle mounted thereon, a laterally-adjustable rotary brush, a stationary brush in opposition to the rotary one and laterally adjustable therewith, and suitable means for conveying the contents of the receptacle to said brushes, substantially as set forth.

3. The combination of a carriage, a receptacle mounted thereon, a vertically-adjustable rotary brush, a stationary brush in opposition to the rotary one and vertically adjustable therewith, and suitable means for conveying the contents of the receptacle to said brushes, substantially as set forth.

4. The combination of a carriage, a receptacle mounted thereon, a vertically and laterally adjustable rotary brush, a stationary brush always in opposition to the rotary one, and suitable means for conveying the contents of the receptacle to the brushes, substantially as set forth.

5. The combination of a carriage, a receptacle mounted thereon, a rotary brush, a stationary brush in opposition to the rotary one, a radially-channeled shield having its discharge end over the rotary brush, and tubes leading from the receptacle to the shield, substantially as set forth.

6. The combination of a suitable receptacle, a pair of spraying-brushes in frictional contact, a shield positioned to have its rear end over one of the brushes, a series of radiating plates set on edge upon the shield, and a tubular connection between said shield and receptacle, substantially as set forth.

7. The combination of a suitable receptacle, a pair of spraying-brushes in frictional contact, a shield positioned to have its rear end over one of the brushes, a slotted cup on the shield, having a tubular connection with the receptacle, and a series of plates set on edge upon the shield to radiate from the cup, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JACOB R. STEITZ.

Witnesses:

N. E. OLIPHANT,
WM. KLUG.