

No. 652,040.

Patented June 19, 1900.

A. P. PETTERSON.  
BOTTLE WASHER.

(Application filed Dec. 18, 1899.)

(No Model.)

Fig. 1.

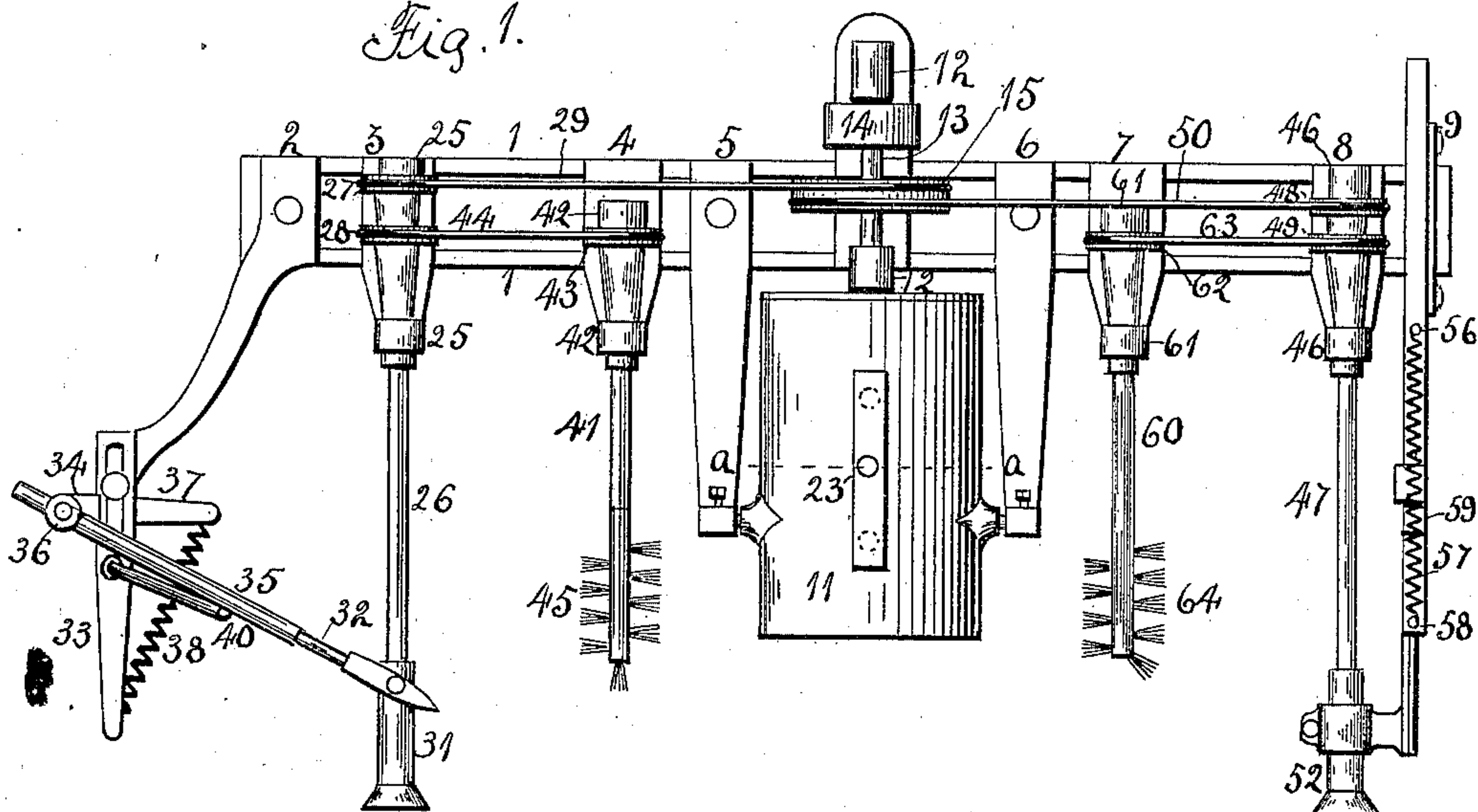


Fig. 2.

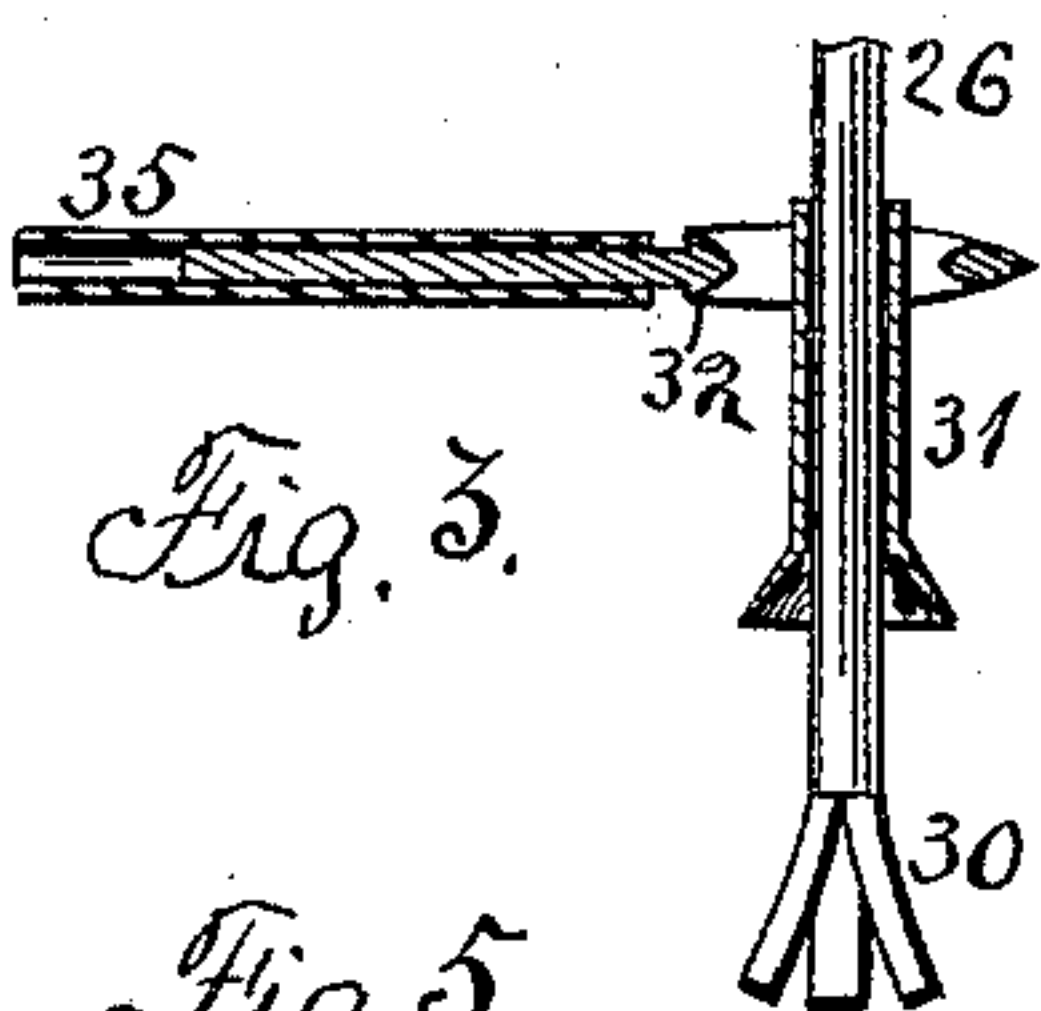
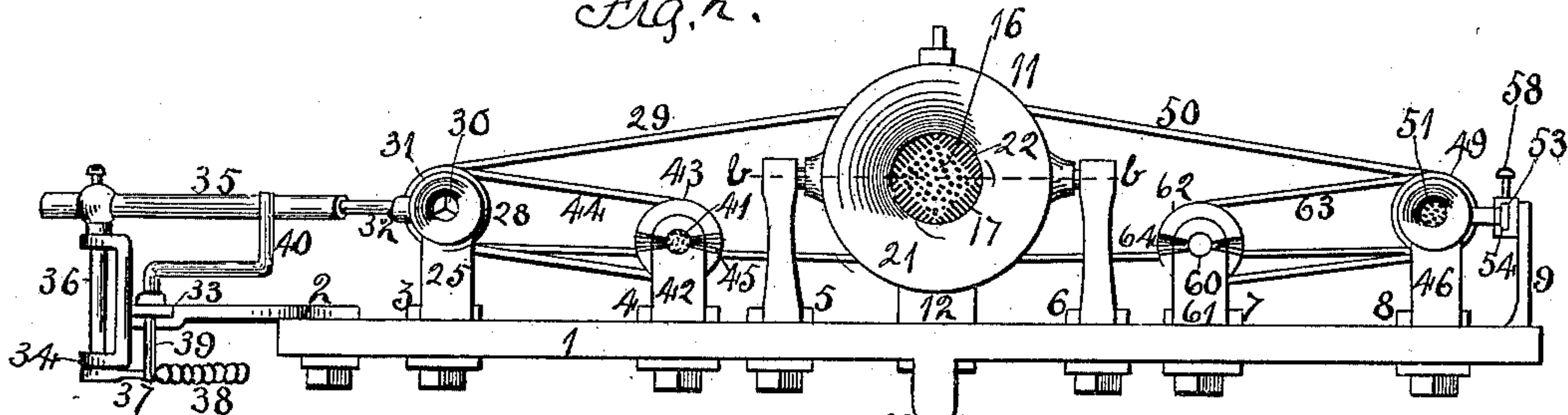


Fig. 3.

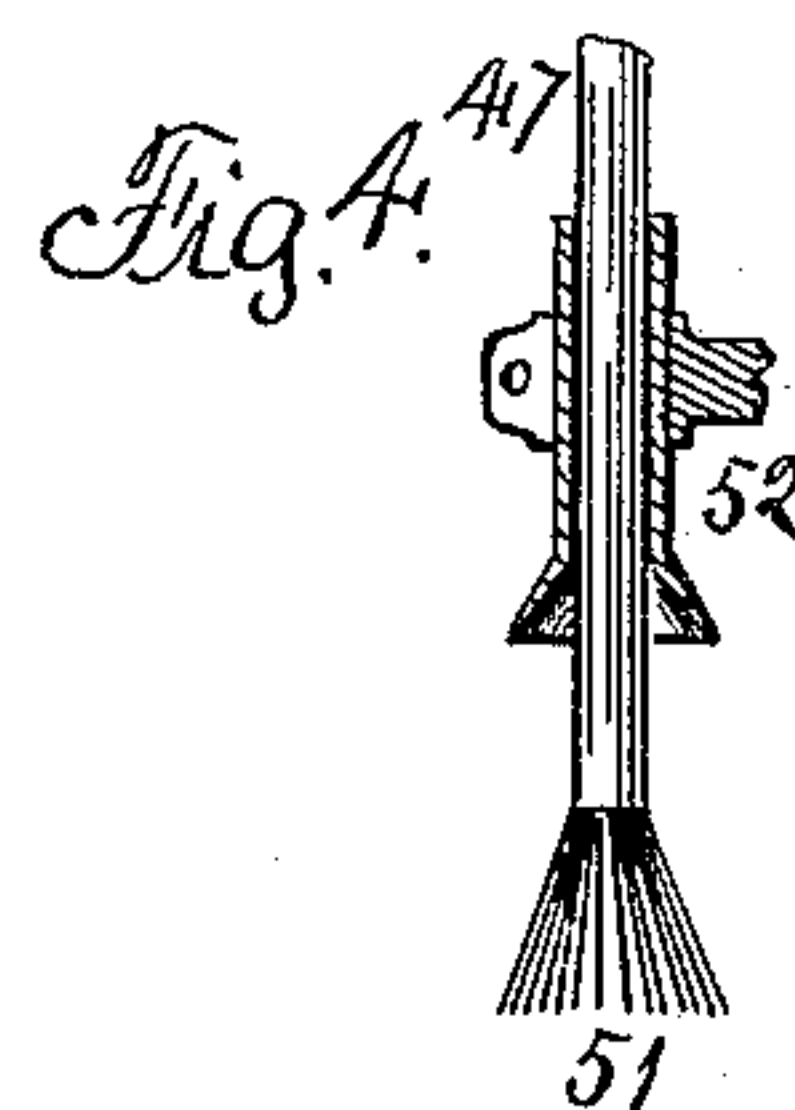
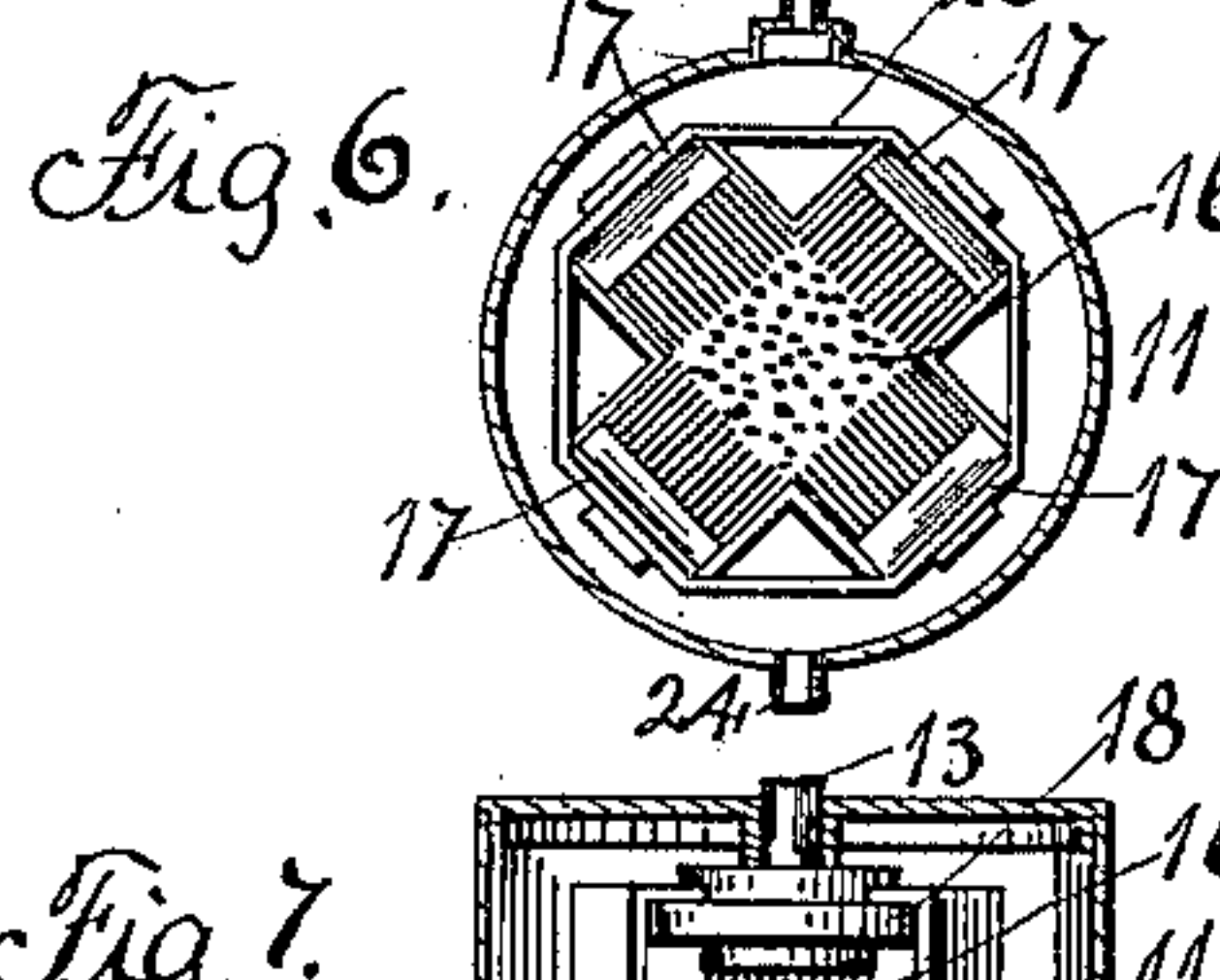


Fig. 4.

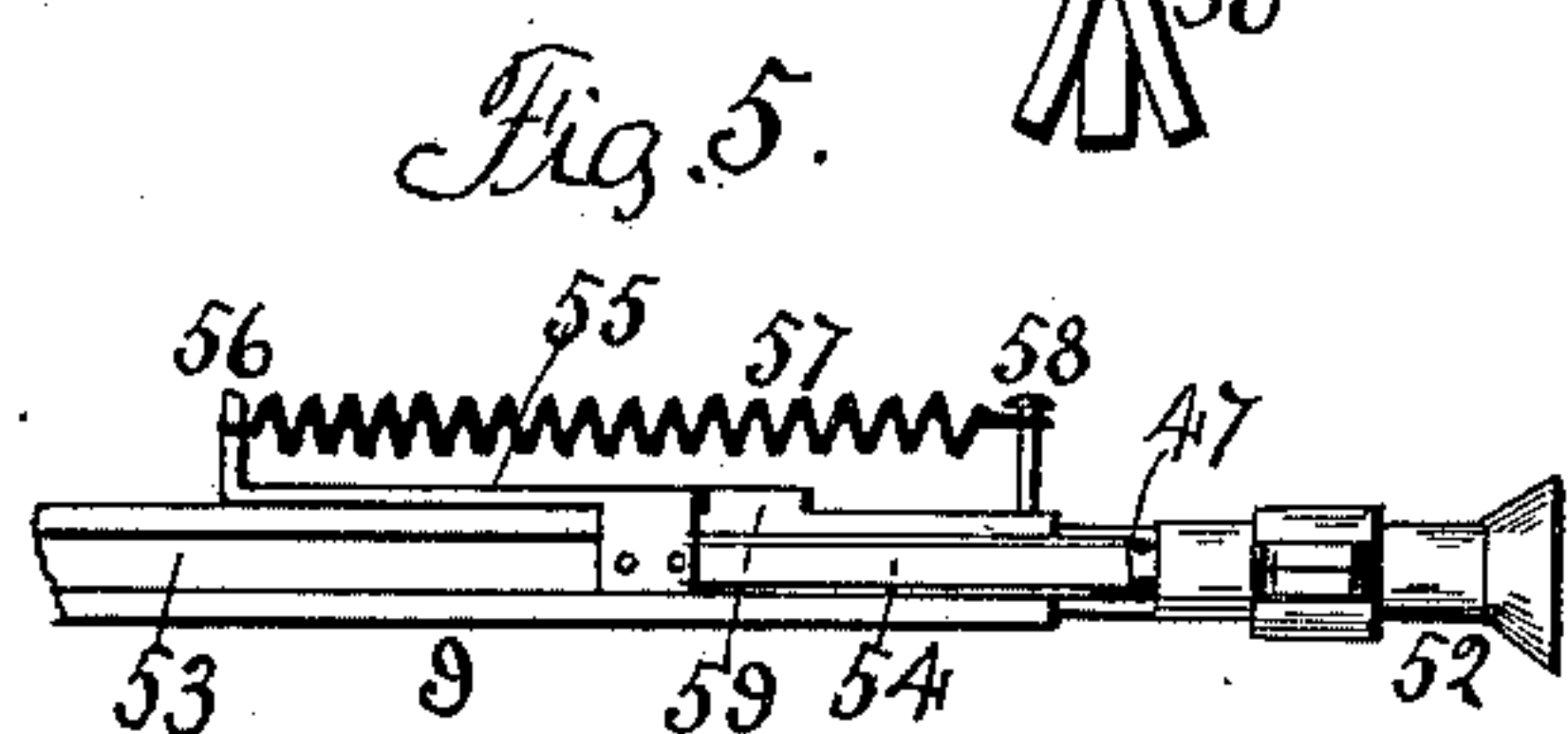


Fig. 5.

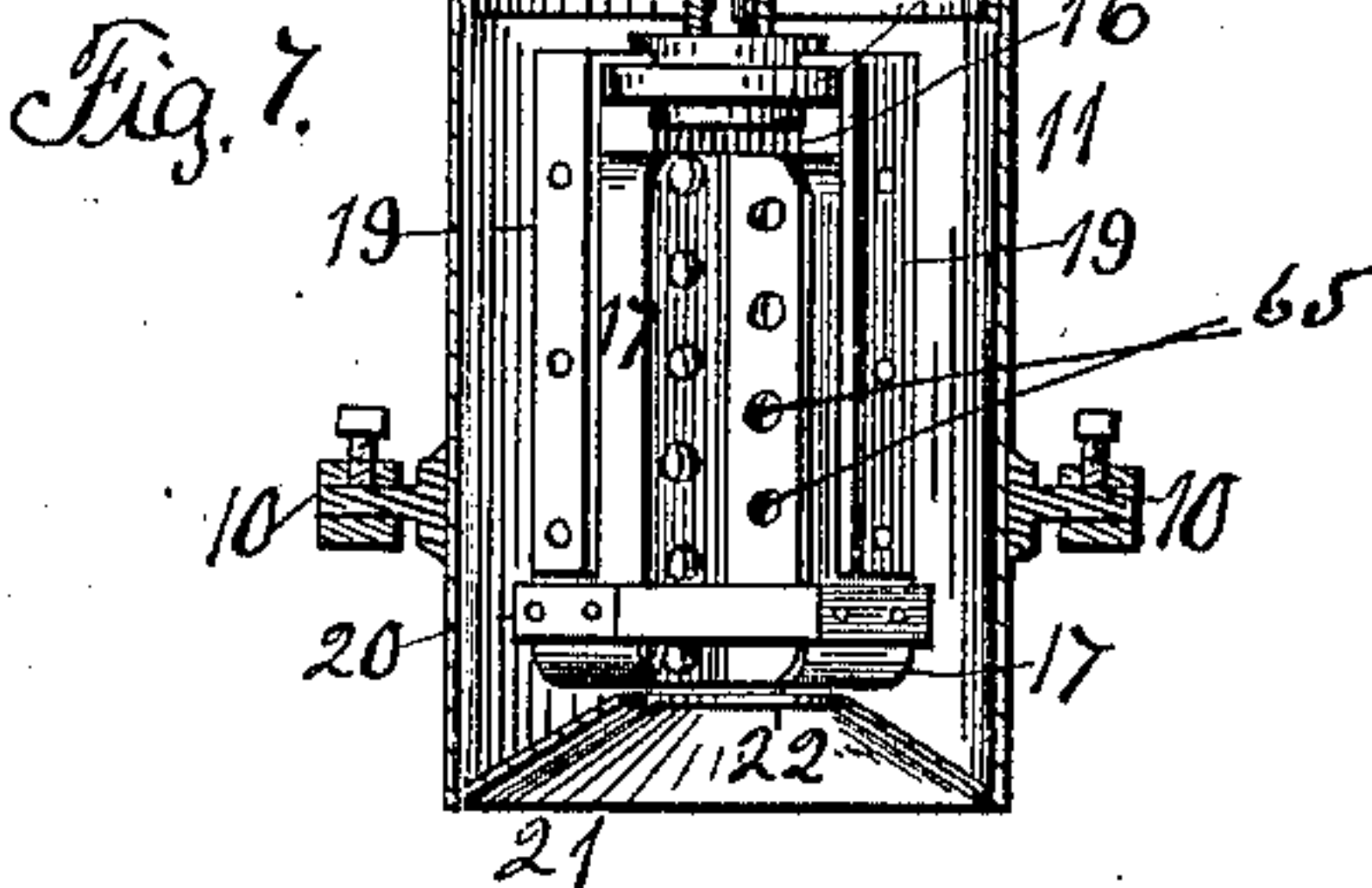


Fig. 6.

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# UNITED STATES PATENT OFFICE.

ANDERS P. PETTERSON, OF ROCKFORD, ILLINOIS.

## BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 652,040, dated June 19, 1900.

Application filed December 18, 1899. Serial No. 740,839. (No model.)

*To all whom it may concern:*

Be it known that I, ANDERS P. PETTERSON, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Bottle-Washers, of which the following is a specification.

The object of this invention is to construct a bottle-washer by which the inside and outside of the bottle can be cleansed.

In the accompanying drawings, Figure 1 is a plan view of my improved bottle-washer. Fig. 2 is a front elevation. Fig. 3 is a horizontal section of the left-hand sliding head. Fig. 4 is a horizontal section of the right-hand sliding head. Fig. 5 is an inner face elevation of the right-hand sliding head and its support. Fig. 6 is a transverse section on dotted line *a*, Fig. 1. Fig. 7 is a horizontal section on dotted line *b*, Fig. 2.

To the base, composed of the bars 1, are secured supports 2, 3, 4, 5, 6, 7, 8, and 9, each extending forwardly therefrom and held in place by nuts on the under side of the base. The supports 5 and 6 have their free ends fitted to receive journals 10, extending from opposite sides of the drum 11. From the base extend two bearings 12, which support a shaft 13, and the shaft supports a belt-pulley 14 and a pulley 15, provided with two grooves. The end of the shaft 13 extends within the drum and supports an end brush 16 and four side brushes 17, so located as to form a hollow square, with their bristles pointing toward the center. A head 18 is secured to the shaft 13 and supports arms 19, which are connected to the backs of the brushes, and a band 20 connects the outer ends of the brushes. As the shaft is rotated the end and side brushes will be rotated within it. Openings 65 are formed through the side supports of the brushes 17 and permit water to come in contact with the bristles of the brushes.

The rear end of the drum is supported by the shaft 13, and the front end 21 is recessed, having a central opening 22. The upper surface of the drum has a water-inlet 23 and a water-outlet 24 at its under face.

To the left hand of the machine the support 3 is secured to the base, and from its upper face extend bearings 25, supporting a shaft 26, and the shaft supports two grooved

wheels 27 and 28. A belt 29 connects the groove-faced wheel 27 with the groove-faced wheel 15. The free end of the shaft 26 supports a rubber cleaner 30, in three sections, and a guide 31 surrounds the shaft, having its outer end flaring and concave. To this guide is pivoted a rod 32. The support 2 has an extension 33 and an upright bracket 34. A tubular arm 35 has an adjustable connection with a support 36, pivoted in the bracket 34, and from the lower end of the pivoted support extends an arm 37, and to its free end is connected a spring 38, having its other end connected to a stud 39, extending from the free end of the extension 33.

The tubular arm 35 receives the rod 32, pivoted to the guide 31, thereby forming a connection between the spring and guide in a manner to permit the guide to move in the lengthwise direction of the shaft 26. A stop 40 has a connection with the extension 33 and limits the outward movement of the tubular arm 35.

Between the central shaft 13 and the shaft 26 is supported a shaft 41 in bearings 42, extending from the support 4. A groove-faced wheel 43 is secured to the shaft 41, and a belt 44 connects it with the groove-faced wheel 15. The free end of this shaft 41 supports brushes 45, and as the main shaft 13 is revolved the brush will be rotated.

To the right hand of the machine the support 8 is secured to the base, and from its upper face extend bearings 46, supporting a shaft 47, and the shaft supporting two groove-faced wheels 48 and 49. A belt 50 connects the groove-faced wheel 48 with the groove-faced wheel 15. The free end of the shaft supports a brush 51, and a guide 52 surrounds the shaft, having its outer end flaring and concave.

The support 9 has one face provided with a lengthwise groove 53, forming a guideway, within which is fitted a guide 54. The outer end of this guide has a connection with the guide surrounding the shaft 47, so that the two guides move together. To the inner end of the guide 54 is secured an arm 55, having an upturned end 56, to which is secured one end of a spring 57, the other end of the spring connected to a stationary pin 58. A stop 59 limits the outward movement of the guide 54.



Between the central shaft 13 and the shaft 47 is supported a shaft 60 in bearings 61, extending from the support 7. A groove-faced wheel 62 is secured to the shaft 60, and a belt 5 63 connects it with the groove-faced wheel 49. The free end of this shaft 60 supports brushes 64, and as the main shaft 13 is revolved the brush will be rotated.

The different cleaning devices are set to rotating by connecting the pulley 14 with a prime mover.

The bottles to be washed are soaked in water, and the open neck of the bottle is placed within the concave end of the guide 31 and 15 the guide pressed inward, which will insert the rubber strips within the bottle, and the rotation of the shaft 26 will throw the rubber strips about, so that they remove the greater portion of the dirt. The bottle is then transferred to the guide 52, which is pressed in, 20 exposing the brush 51 within the bottle, the end of the brush expanding and entering the junction of the bottle and body of the bottle. The dirt also clings to the side of the bottle 25 near the neck, and the brushes 45 and 64 will thoroughly cleanse the bottle. The bottle is then inserted within the drum, and the out-

side and fastening end are cleaned by the rotating brushes 16 and 17.

By employing the means for guiding the 30 guide 31 in its movement on the shaft 26 the shaft has a bodily-swinging movement in a circle, which is necessary to allow the rubber strips to do the best work.

I claim as my invention—

1. In a bottle-washer, the combination of a 35 main frame, two arms extending therefrom, a drum supported by the arms, and held against rotation, water inlet and outlet to the drum, a shaft rotating within the drum supporting a series of brushes pointing toward 40 the center of the drum, and an end brush.

2. In a bottle-washer, the combination of a main frame, a shaft supported thereby, a sliding end supported by the shaft, a bracket ex- 45 tending from the main frame, a tube pivotally supported by the bracket, a rod pivotally connected with the sliding end and movable within the tube, and a spring acting upon the tube.

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Witnesses:

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