

No. 712,042.

Patented Oct. 28, 1902.

C. F. G. BUROW.
BOTTLE BRUSHING MACHINE.

(Application filed July 6, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

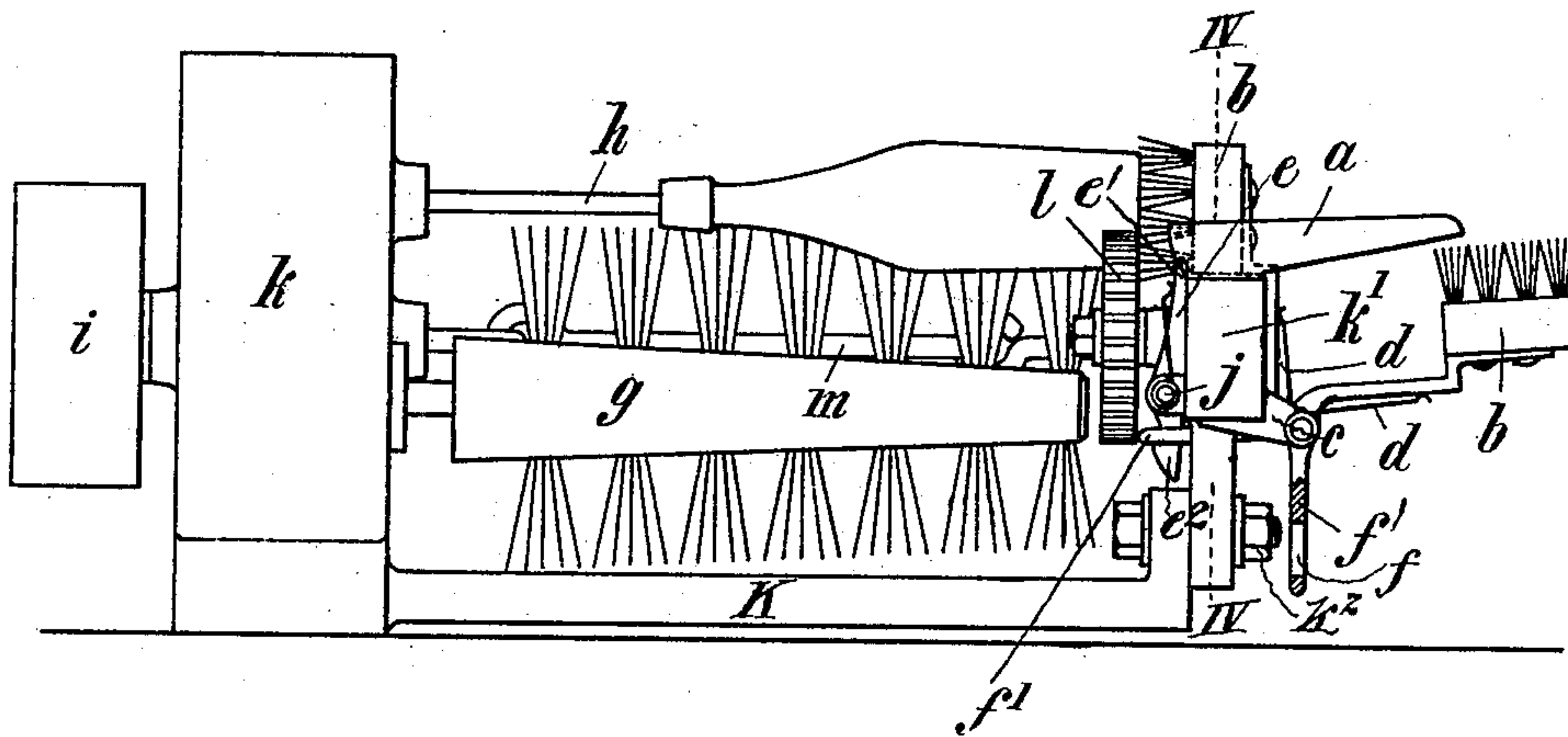
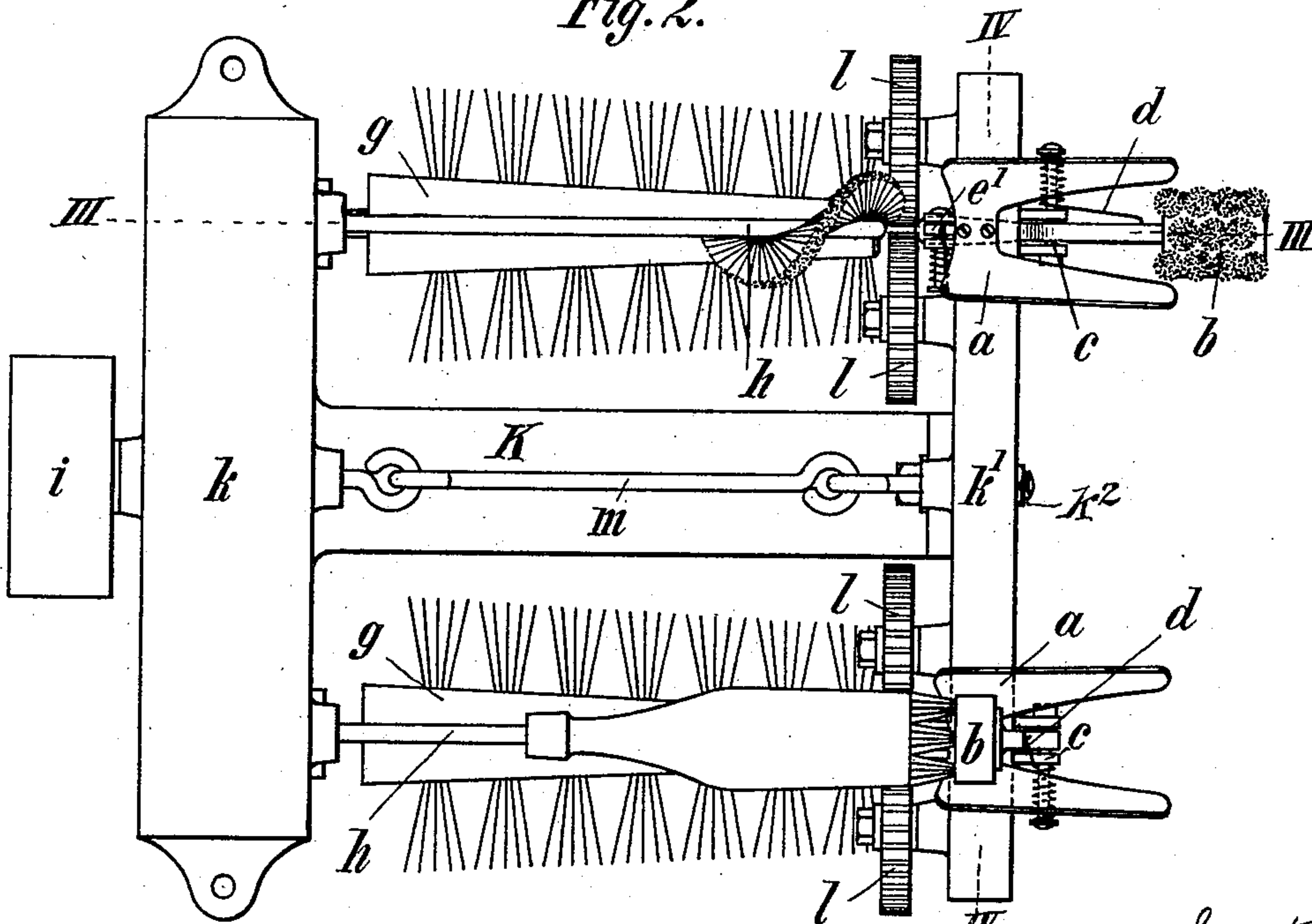


Fig. 2.



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Fig. 3.

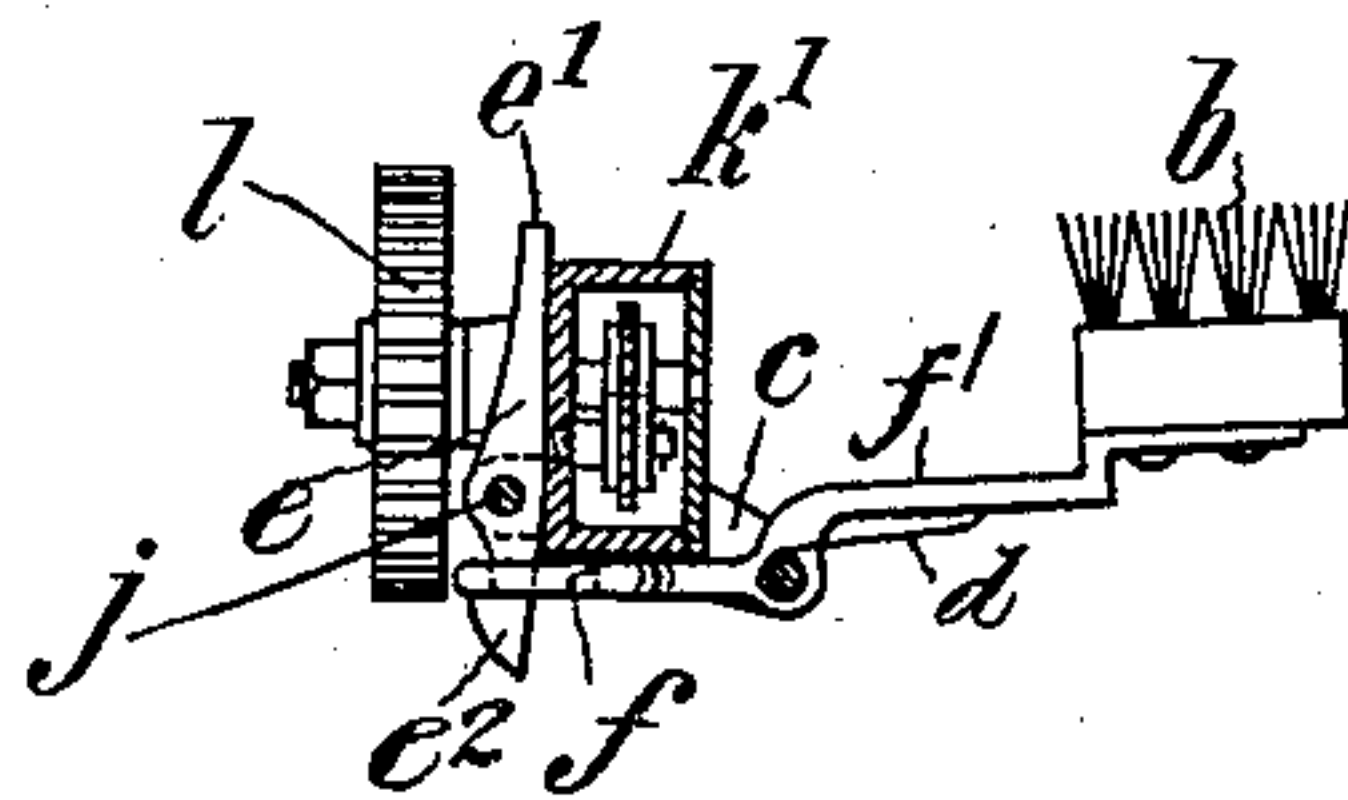
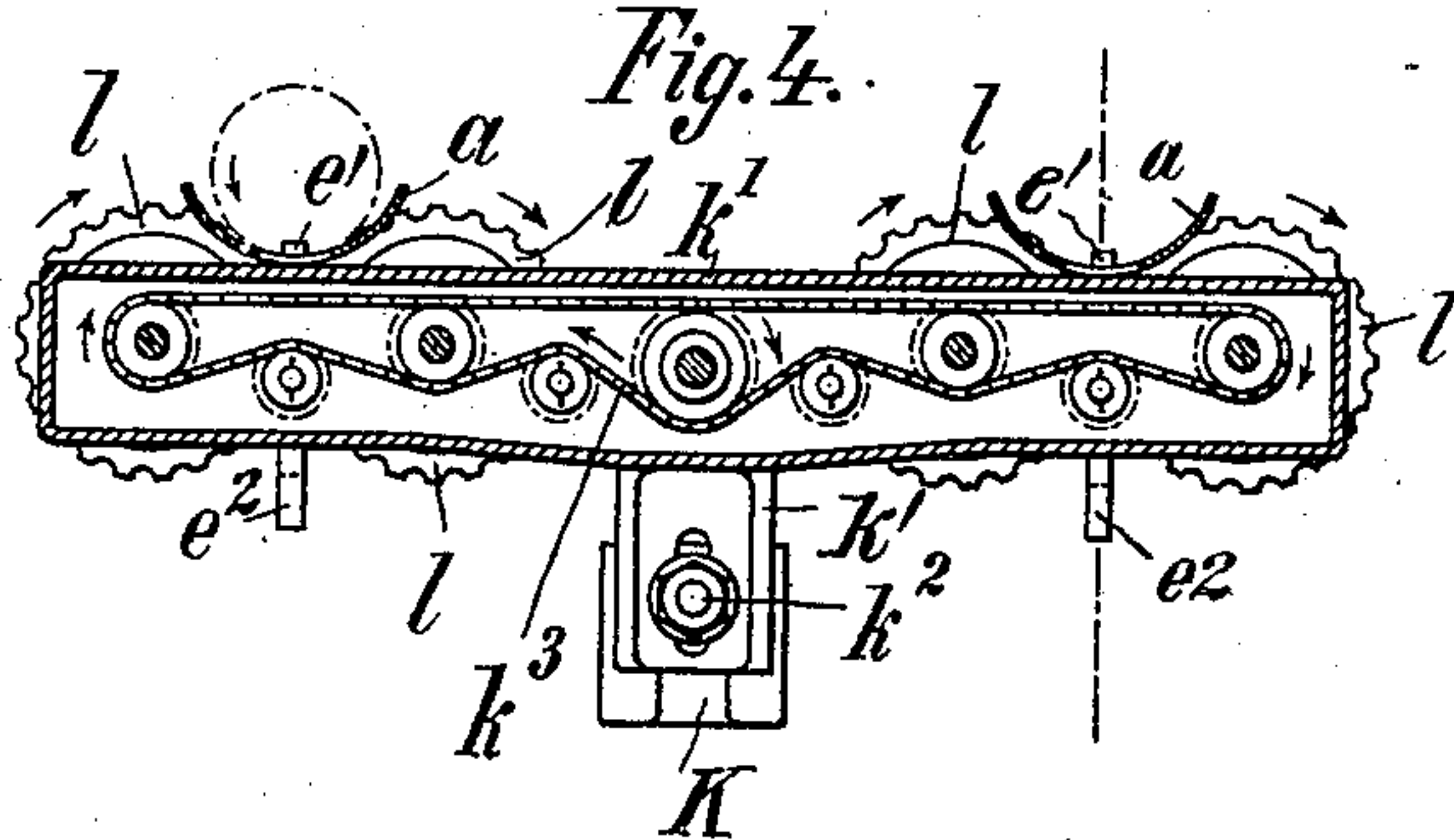


Fig. 4.



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CARL FRANZ GUSTAV BUROW, OF HAMBURG, GERMANY.

BOTTLE-BRUSHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 712,042, dated October 28, 1902.

Application filed July 6, 1901. Serial No. 67,304. (No model.)

To all whom it may concern:

Be it known that I, CARL FRANZ GUSTAV BUROW, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements in Bottle-Brushing Machines, of which the following is a specification.

This invention relates to an improved bottle brushing or cleansing machine, which is provided with a bottom-brush which when the bottle is placed upon the internal brush is erected in its operative position against the bottom of the bottle and returns into its inoperative or lowered position by removing the bottle from the machine and then in such lowered position serves, in conjunction with appropriately-shaped guides fixed to the frame of the machine, to guide and support the bottle when being removed or withdrawn. The raising and lowering of the bottom-brush are affected by the bottle itself by causing the latter when placed upon the bottom-brush and guide and then pushed forward upon the internal brush to strike against a spring-controlled locking-lever. By thus reversing the said locking-lever the bottom-brush is released or unlocked and a spring in connection with it forces it upward against the end of the bottle. By removing the bottle after the same has been cleaned it forces the bottom-brush back into its horizontal position, where it is retained by the automatic spring-controlled locking-lever. This improved arrangement effects a reliable guide, thus facilitating the introduction and the withdrawal of the bottle. It also obviates the labor of raising and lowering the bottom-brush. Furthermore, in the improved arrangement the operator is not obliged to try with the bottle-mouth until he succeeds in finding the end of the internal brush for the reason that by pushing the bottle forward on the bottom-brush and guide it moves straight and accurately onto the internal brush.

My invention is fully and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, Fig. 2 a top or plan view, of a double-brushing machine. Fig. 3 is a section on line III III, Fig. 2, showing the bottom-brush arrested in its horizontal position by its locking-lever; and Fig. 4

is a section on lines IV IV, Figs. 1 and 3, illustrating means for rotating the friction-disks.

Similar letters refer to like parts throughout the several views.

The machine comprises a base K, having an end frame *k*, in which are mounted brushes *g g* for the external brushing of the bottles and brushes *h h* for the internal brushing. These brushes receive motion from a train of gearing inclosed in the frame *k* and may be of any appropriate construction, said gearing receiving motion from the belt-pulley *i*. At the opposite end of the base from the gearing in a frame *k'* are mounted serrated or toothed friction-disks *l l*, which serve to support the bottle when in position upon the internal brush and at the same time by reason of their slow rotation retard the rotation of the bottle, so that the rotating internal brush will have the desired brushing effect. The slow rotary motion of the friction-disks *l l* is obtained from the belt-pulley *i* through the medium of a link *m*, which imparts motion to a suitable chain-gear *k³*, Fig. 4, inclosed in the frame *k'*.

A suitable guide *a* is mounted on the frame *k'* adjacent to each internal brush, and beneath each guide on said frame is a bracket *c*, in which is pivoted an appropriate bottom-brush *b*. This brush *b* is subjected to the action of a spring *d* and is retained in a horizontal position by means of a locking-lever *e*, pivoted at *j* to the frame *k'* in such manner that its upper end *e'* projects into the path of the bottle and its lower notched end *e²* takes into an eye *f*, formed in the arm of the brush-carrying lever *f'*. The arm *f'* strikes against the frame *k'*, so that the brush cannot be lowered beyond its horizontal position, Fig. 3.

The bottle to be cleaned is placed flat upon the horizontally-disposed and locked bottom-brush *b*. The frame portion *k'* may by reason of a set-screw *k²* be so adjusted in its position or height on the bed K that the mouth of the bottle when placed on the guide *a* will be on a line with and exactly in front of the free end of the internal brush *h*. If now the bottle is pushed forward upon the internal brush by moving it along the guide, the bottle engages the upper end of the locking-le-

ver and causes the lower end of said lever to disengage the eye *f* in the arm of the brush-carrying lever *f'*. The bottom-brush thus disengaged is moved upward by the action of
 5 its spring *d* and presses against the bottom of the bottle. By causing the bottle during its forward movement to be accurately guided upon the internal brush the front portion or point of the latter is not so liable to become
 10 deteriorated and worn out in a short space of time. After cleaning the withdrawal of the bottle from the internal brush causes the bottom-brush to be lowered without the use of a separate hand-lever into the horizon-
 15 tal position for guiding and supporting the bottle, in which position it is then retained and locked automatically by the spring-controlled locking-lever *e* until again released by the next bottle to be cleaned.

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

1. In a bottle-brushing machine, a brush for the interior and one for the exterior of
 25 the bottles, a brush for the bottom of the bottle, means actuated by the bottle during the positioning thereof to operatively position the brush for the bottom and means to rotate the bottle, substantially as and for the purpose
 30 set forth.

2. In a bottle-brushing machine, a brush for the interior and one for the exterior of

the bottle, a brush for the bottom of the bottle, a catch to hold the last-mentioned brush out of operative position and actuated to re- 35 lease said brush by positioning the bottle and means to rotate the bottle, substantially as and for the purpose set forth.

3. In a bottle-brushing machine, a brush for the interior and one for the exterior of 40 the bottle, a brush for the bottom of the bottle, a guide to position the bottle, a catch to hold the last-mentioned brush out of operative position, said catch projecting beyond said guide and actuated by positioning the 45 bottle to release said bottom-brush, substantially as and for the purpose set forth.

4. In a bottle-brushing machine, a brush for the interior and one for the exterior of 50 the bottle, a spring-actuated brush for the bottom of the bottle, a pivoted lever connected to the brush, a catch to engage the lever and hold the brush out of operative position, a bifurcated guide above said brush, said catch projecting above the guide and 55 actuated by positioning the bottle to release the bottom-brush and means to rotate the bottle, substantially as and for the purpose set forth.

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