

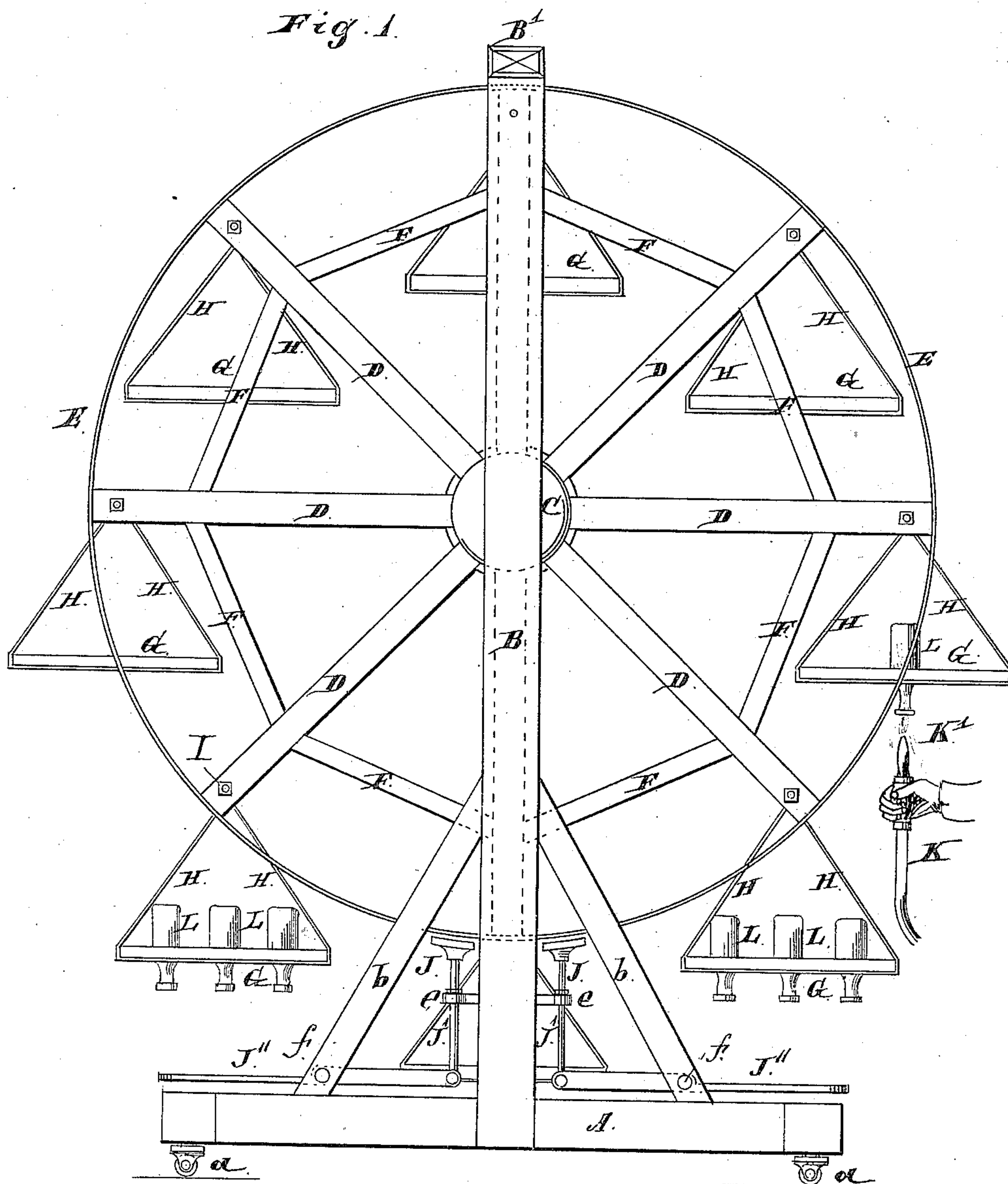
(No Model.)

2 Sheets—Sheet 1.

C. MÜSSEL.
BOTTLE WASHER.

No. 309,401.

Patented Dec. 16, 1884.



Witnesses:
Edgar J. Bond.
D. A. Price.

Inventor:
Christoph Müssel
By West & Bond.
His attys.

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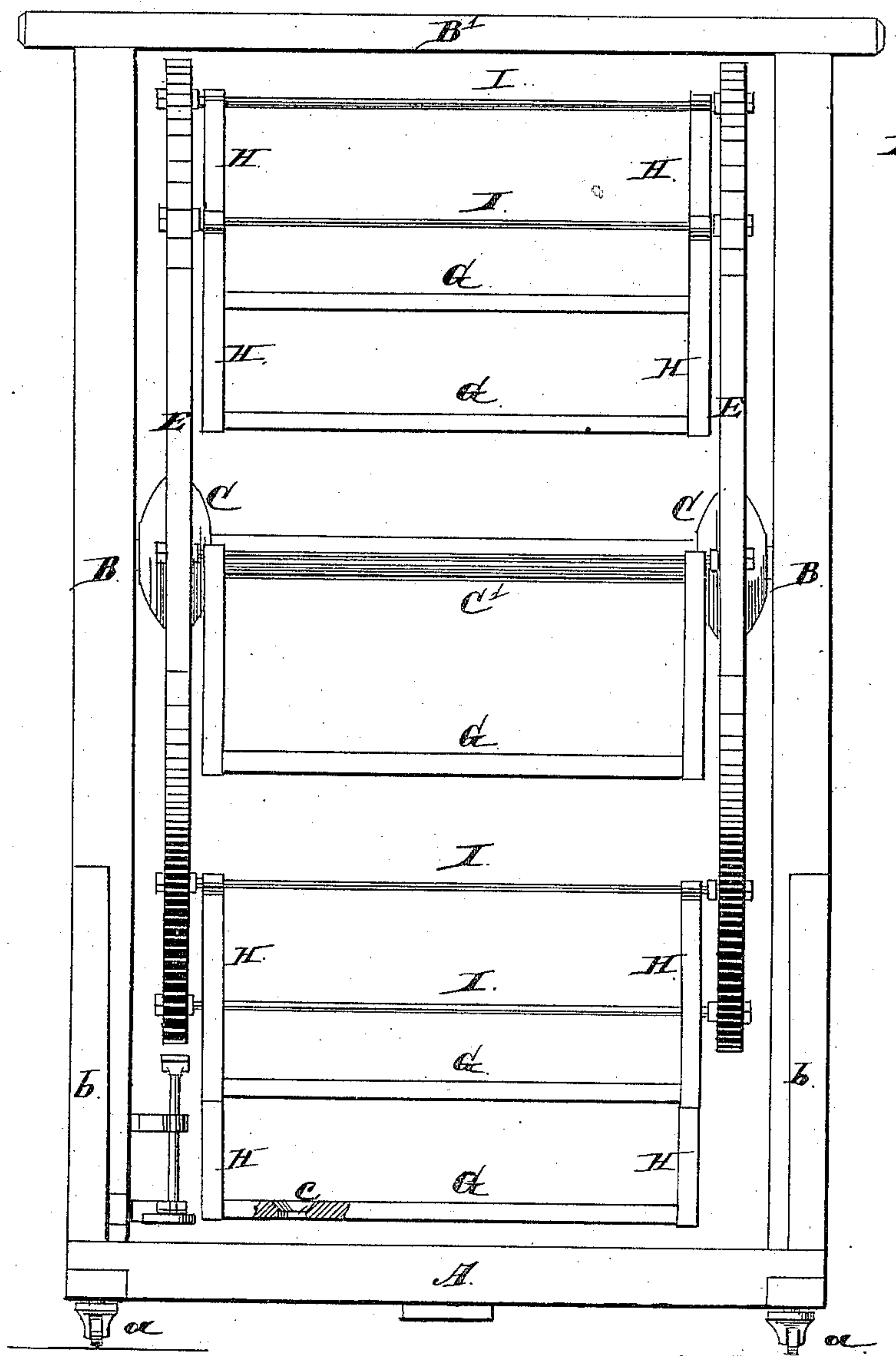


Fig. 2.

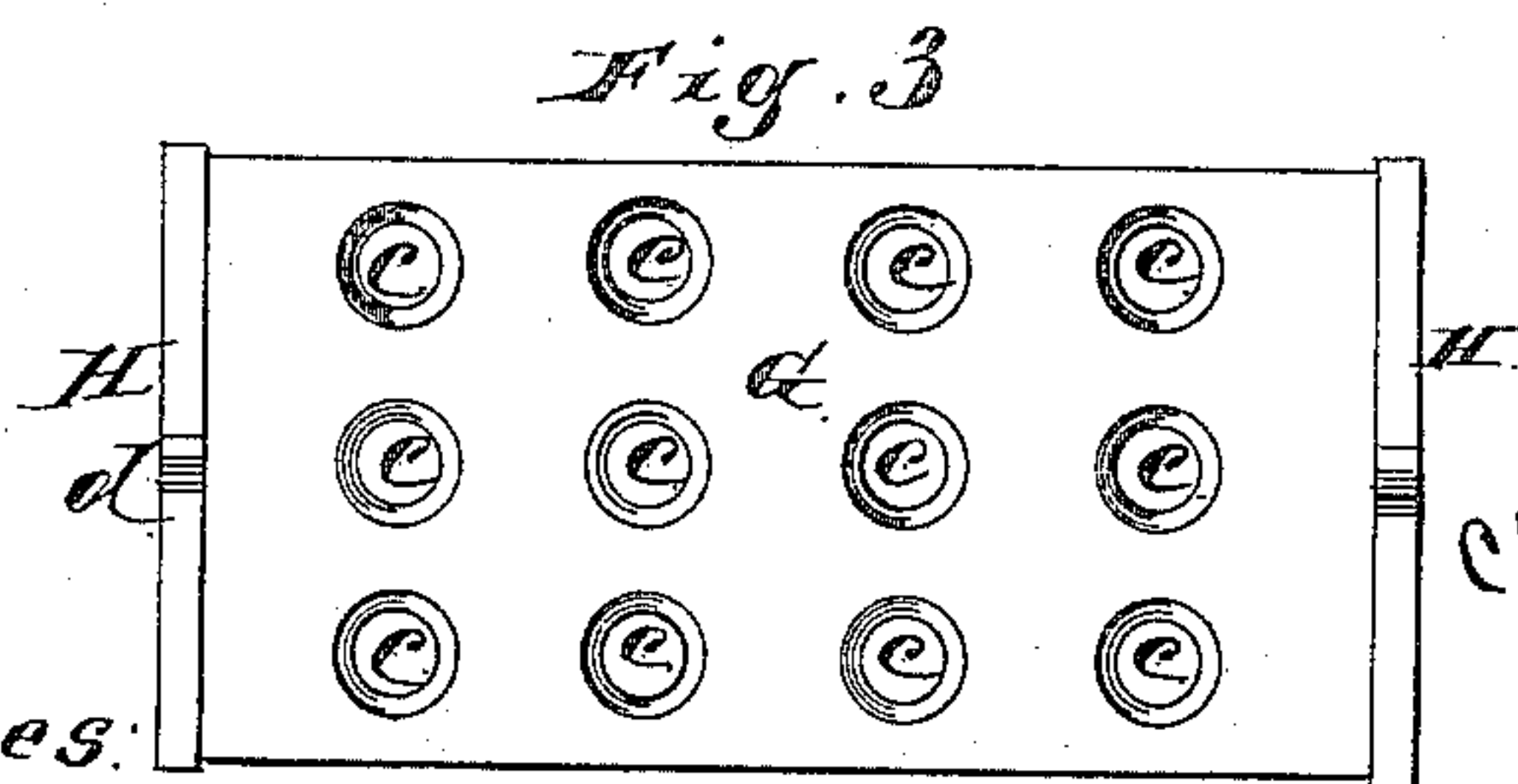


Fig. 3

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UNITED STATES PATENT OFFICE.

CHRISTOPH MÜSSEL, OF SOUTH BEND, INDIANA.

BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 309,401, dated December 16, 1884.

Application filed July 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPH MÜSSEL, residing at South Bend, in the county of St. Joseph and State of Indiana, and a citizen of the United States, have invented new and useful Improvements in Bottle-Washers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an end elevation; Fig. 2, a side elevation; Fig. 3, a detail showing the form of the suspended trays which carry the bottles.

The object of this invention is to construct an apparatus for washing bottles, allow them to drip, and permit of their easy removal on the opposite side from where washed, and which can also be used for the purpose of filling bottles, if so desired; and it consists in providing rotating wheels and cross-rods with trays suspended between the wheels and from the rods, the trays having openings to receive the necks of the bottles, all as hereinafter more specifically described, and pointed out in the claim.

In the drawings, A represents a base, which may be made of four timbers, suitably joined at the ends, as shown, or may be made of a solid piece, and, as shown, each corner of the base is provided with a caster-wheel to facilitate the moving of the apparatus from place to place.

B are posts or uprights extending up, one on each end of the frame, secured at their lower ends to the end pieces of the frame, and suitably braced, as shown, by diagonal bars *b*, and having at their upper ends the cross-piece B', constructed as shown.

C are hubs, secured one at each end of the shaft C', which shaft is mounted in suitable bearings in the uprights B, so as to turn or revolve freely.

D are arms or spokes extending out radially from the hubs C.

E is a rim or band, one for each hub and its arms, and secured in any suitable manner to the outer ends of the arms.

F are braces between each of the series of arms, for the purpose of strengthening the arms and making them more firm.

G are trays, each formed of a piece of board

or other suitable material, and provided with a series of holes, *c*, of sufficient diameter for the passage of the neck of a bottle.

H are hangers, one at each end of each tray, which may be formed, as shown, of a piece of metal bent into a triangular shape, with a loop or eye, *d*, at the apex, and of sufficient width to receive the tray; or they may be formed of straps running down and attached to the sides and bottom of the tray, or in some other suitable manner.

I are cross-rods extending from arm to arm D of the wheels, and located near the outer ends of the arms. These cross-rods pass through the eyes or loops *d* of the hangers H, and suspend their trays from the rods so that they can turn and self-maintain themselves in a horizontal position as the shaft C' rotates.

J are brake-shoes on the upper end of vertical rods J', which rods slide in bearings or collars *e*, extending out from one of the uprights B. The lower end of each rod J' is attached to a foot-treadle, J'', pivotally attached by a suitable pin or pivot, *f*, to each of the braces *b*. This braking device is arranged on one end of the machine only, and at the proper point for the shoe to engage with the ring E on that end of the machine.

K is a hose, and K' a nozzle, for washing the bottles.

L are the bottles.

The operation is as follows: The machine is brought to the place where the washing is to be done, and the operator places a number of bottles in one of the trays, inserting their necks in the openings, so that the bottles will be suspended with the mouth downward. The bottles are subjected to a thorough washing by means of the hose and nozzle, or in some other manner, during which operation and while filling the tray the operator places his foot on the treadle J'' and bears down thereon, forcing the shoe J on that side in contact with the rim E, holding the tray stationary by preventing the wheel from revolving. When the washing of the bottles of this tray is completed, the operator releases the brake sufficiently to allow the wheel to rotate and bring the next suspending tray into position to be filled with bottles and washed, which tray in turn, after

the washing is completed, is allowed to drop
down, carrying the first tray farther around,
and the trays are in succession brought into
position filled with bottles and the bottles
5 washed. As the first tray is carried around
and brought into position on the opposite side
of the wheel, a party on that side removes the
bottles therefrom, and the tray will be carried
around empty into position to be again filled,
10 each succeeding tray being emptied in a like
manner as it comes into position on the oppo-
site side of the machine from where it started.
It will be noticed that no matter what arc of
the circle the tray may be in, it swings free
15 and clear, and is always in a horizontal plane,
so that it cannot tip and spill the bottles which
it supports; and it will also be seen that after
being washed the bottles remain in the tray,
until removed therefrom, neck downward,
20 which allows them to drip thoroughly, so that
when removed they will not have to be placed
neck downward so as to drip. The size of the
wheel is to be sufficient to carry the trays and
allow them to swing without interfering with
25 each other, and the trays are to be provided

with a greater or less number of holes for car-
rying the bottles, according to the size of the
machine. The trays, when the brake is re-
leased, will each in turn carry the wheel around,
thereby requiring no assistance from the op- 30
erator to bring the trays into position on the
opposite side to be emptied.

The apparatus can also be used in connec-
tion with the filling-machine to take the filled
bottles and carry them around to the oppo- 35
site side of the machine, where they can be re-
moved.

What I claim as new, and desire to secure
by Letters Patent, is as follows:

The rotating wheels composed of the parts 40
C, D, and E, and connected together by rods
I, in combination with the trays G, provided
each with a series of openings to receive the
necks of bottles, and suspended from rods I,
substantially as described.

CHRISTOPH MÜSSEL.

Witnesses:

GODFREY L. POEHLMAN,
E. L. ABBOTT.