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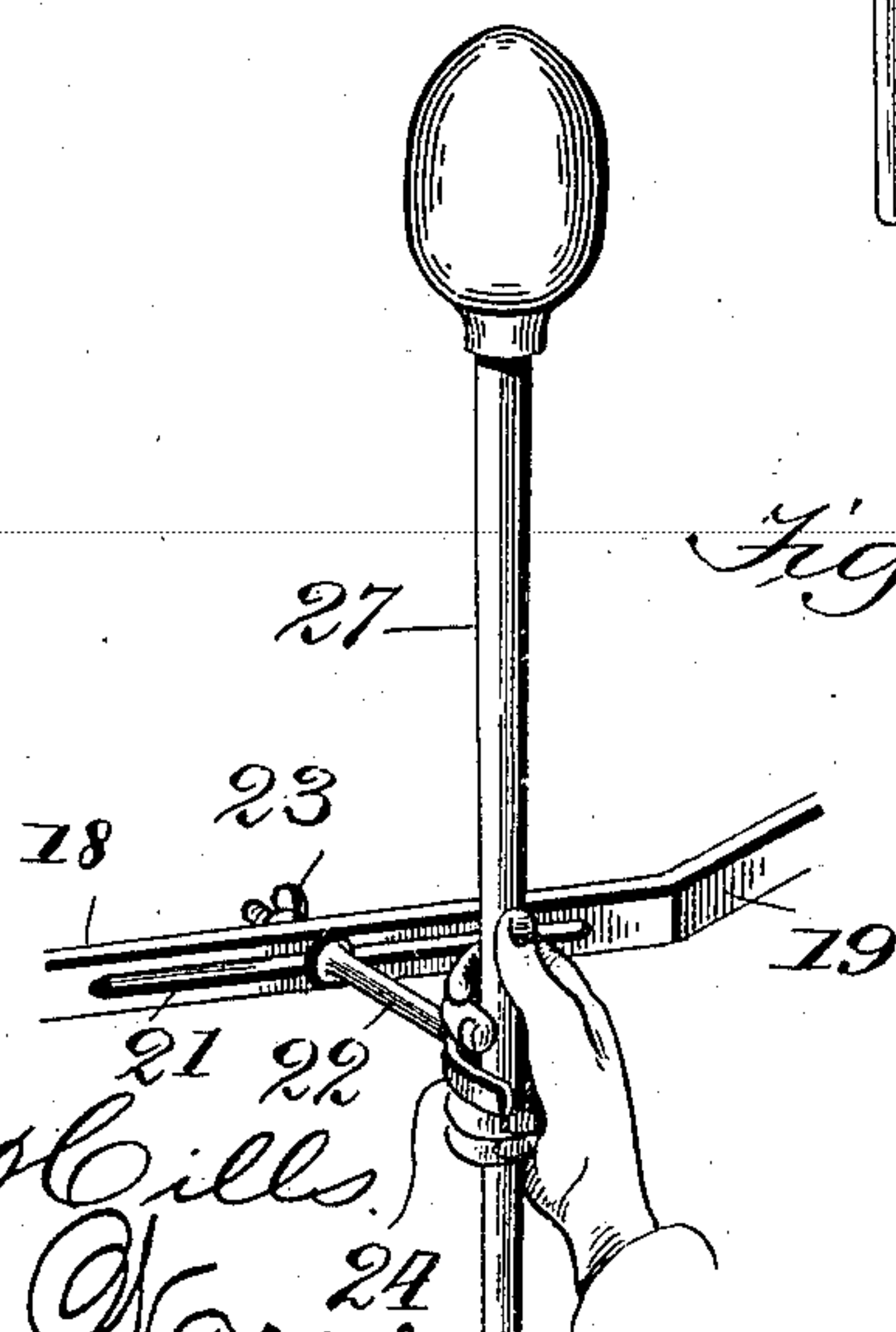
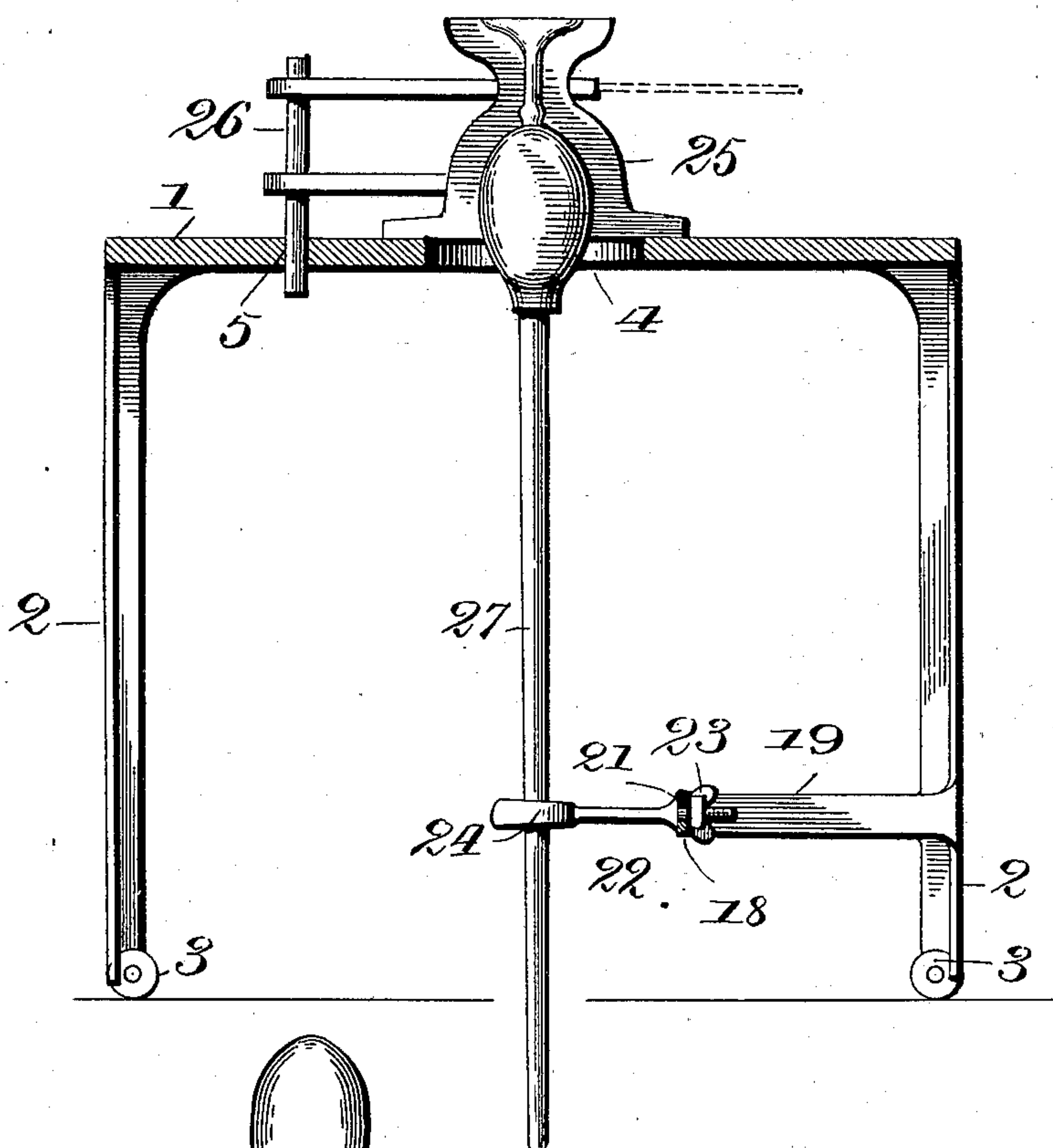
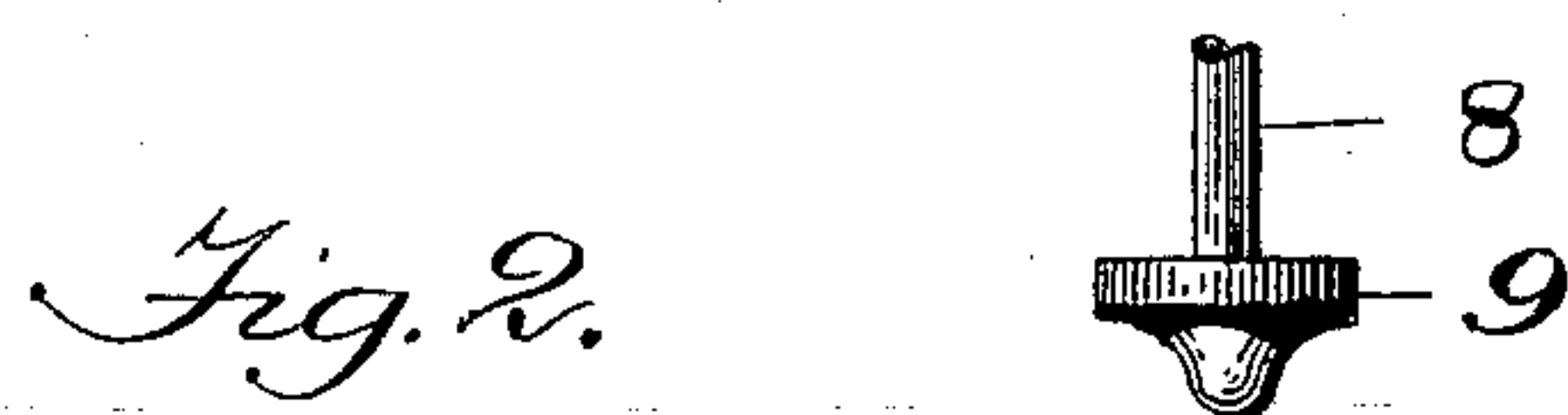
O. SIGWART.

MACHINE FOR PUTTING STEMS AND FEET ON GOBLETS, &c.

(Application filed Aug. 4, 1898.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

OTTO SIGWART, OF MORGANTOWN, WEST VIRGINIA.

MACHINE FOR PUTTING STEMS AND FEET ON GOBLETS, &c.

SPECIFICATION forming part of Letters Patent No. 624,389, dated May 2, 1899.

Application filed August 4, 1898. Serial No. 687,733. (No model.)

To all whom it may concern:

Be it known that I, OTTO SIGWART, a citizen of the United States, residing at Morgantown, in the county of Monongalia and State of West Virginia, have invented certain new and useful Improvements in Machines for Putting the Stems and Feet on Goblets, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to machines for putting the stem and foot on goblets, &c.; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

The object of the invention is to provide a machine of the nature as described, said machine being of simple and cheap construction and adapted to be duly shifted to any part of the factory. During the process of producing the goblet the body of the goblet is supported at the end of a blowpipe, and the machine is provided with a table having an opening in its center, a mold being adapted to operate over said opening. The body of the goblet, at the end of the blowpipe, is inserted up through the opening into the mold, and a special means is provided whereby the lower end of the blowpipe is held in its proper position. The body of the goblet being thus held in the mold, the stem or foot is molded and a descending plunger presses the same in position. The mold is so attached to the table as to prevent the possibility of making crooked stems or feet.

In the accompanying drawings, Figure 1 is a perspective view of the machine. Fig. 2 is a transverse sectional view of the machine, cut on the line 2 2 of Fig. 1; and Fig. 3 is a detail perspective view of the machine for holding the lower end of the blowpipe in position.

The machine consists of the table 1, said table having the legs 2 2, the casters 3 3 being journaled at the lower ends of the legs 2 2. The top of the table 1 is provided with an opening 4, and immediately behind the said opening a perforation 5 is located. The upwardly-extending arm 6 is fixed in the edge of the table, said arm having the horizontal

extensions 7 7, the outer ends of the said extensions 7 7 being perforated, the said perforations being perpendicularly in alignment with each other. The plunger-rod 8 passes through the perforations of the horizontal extensions 7 7, and to the lower end of the said plunger-rod a suitable plunger 9 is fixed. The cross-piece 10 is secured to the plunger-rod 8 between the horizontal extensions 7 7. The cross-piece 11 is provided with a central perforation, through which the upper end of the plunger-rod 8 passes, the upper end of the said plunger-rod being screw-threaded and having a tap 12, said tap being adapted to come down against the upper surface of the cross-piece 11. The ends of the cross-piece 11 are provided with perforations, which receive the perpendicular rods 13. The lower ends of said rods 13 are fixed to the outer ends of the cross-piece 10. The upper ends of the said rods are threaded, and the jam-nuts 14 are located on the said rods and are adapted to impinge against the upper and lower surfaces of the cross-piece 11. It will thus be seen that by manipulating the jam-nuts 14 the perpendicular rods 13 may be adjusted vertically through the openings of the cross-piece 11 for the purpose of adjusting the limit of the downward movement of the plunger as said movement is terminated on the abutment of the cross-piece 10 with the lower extension 7. When the said rods 13 are properly secured, the tap 12 is screwed down tight against the upper face of the cross-piece 11. The lever 15 is fulcrumed to the upright 6, the outer end of said lever being provided with an adjustable weight 16. The forward end of said lever is pivotally connected to the cross-piece 10, the extreme forward end of the lever extending upwardly, as at 17 in Fig. 1. Two legs 2 2 of the table 1 are connected by the brace 18. Said brace extends inwardly at the sections 19 and is provided with the central section 20, said section being provided with the elongated perforation 21. The said central section is in the vicinity of a perpendicular line dropped from the middle of the top of the table 1. The shank of the arm 22 passes through the elongated perforation 21, the said arm being held in place by means of the nut 23. The outer end of the said arm 22 is provided with

a socket 24. It will thus be seen that the said arm 22 can be shifted laterally in the perforation 21 and secured at any desired point. The mold 25 is located on the upper surface of the table 1, said mold being made in two pieces in the ordinary manner; each half of the mold being pivoted to the pin 26. The lower end of said pin 26 passes down through the perforation 5 and the halves of the mold come together just above the opening 4, the edges of the mold projecting beyond the edges of the opening, the top of the table thus supporting the mold. The upper end of the mold is perpendicularly under the plunger 9.

The machine is operated as follows: The blower forms the body of the goblet or glass on the blowpipe 27 and then inserts the body thus formed up through the opening 4 and the mold 25 is closed over the body of the goblet. The lower end of the blowpipe 27 is inserted in the socket 24 and held therein by the operator, as indicated in Fig. 3. The molten glass is then poured in the mold 25, and by depressing the outer end of the lever 15 the plunger 9 is brought forcibly in contact with the molten glass, and thus the end of the foot or stem is spread and at the same time the same is pressed in position upon the body of the glass. The halves of the mold 25 are then swung apart, leaving the stem in position on the goblet, and the blowpipe is removed, after which the goblet is cut from the end of the blowpipe and finished up.

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

1. A machine of the nature as described, consisting of a table having an opening in its top, a sectional mold adapted to be located over said opening, a reciprocating plunger located above the opening, a brace located under the top of the table and connecting two of the legs of the table, said brace having an elongated perforation, a guide-arm having at its end a socket and adapted to be adjustably secured in the perforation of the brace.

2. A machine of the nature as described, consisting of a table having an opening in its top, a suitable guide-arm located beneath the said opening, a perpendicular arm located on the top of the table, said arm having horizontal extensions, a reciprocating plunger-rod passing through perforations at the ends of the horizontal sections, a plunger located at the lower end of said rod, a cross-piece fixed to said plunger-rod between the horizontal extensions, a cross-piece located on the plunger-rod above the horizontal sections, perpendicular rods connecting the two cross-pieces, a lever adapted to operate the plunger-rod.

3. A machine such as described, consisting of a table having an opening in its top, a

suitable guide-arm located below the said opening, an upwardly-extending arm fixed to the top of the table, said arm having horizontal extensions, a reciprocating plunger-rod passing through suitable perforations in the horizontal sections, a plunger located at the end of said plunger-rod, a cross-piece secured to the plunger-rod between the horizontal extensions, a cross-piece located at the upper end of said plunger-rod, perpendicular rods fixed at their lower ends to the lower cross-piece and at their upper ends being adjustably secured to the upper cross-piece, a lever fulcrumed to the upwardly-extending arm, an adjustable weight located on one end of the lever, said lever being pivotally attached to the reciprocating plunger-arm.

4. A machine such as described, consisting of a table having an opening in its top, an adjustable guide-arm located below said opening, a reciprocating plunger located above said opening, the top of the table having a perforation to one side of the opening, a sectional mold adapted to be located over said opening, the edges of the mold extending beyond the edges of the opening, a pin connecting the sections of the mold together, the lower end of the said pin adapted to enter the perforation in the top of the table.

5. In a device of the character described, a plunger-rod slidable in a suitable bearing, a cross-piece sliding on the plunger-rod, a second cross-piece rigidly secured to the plunger-rod, rods rigidly secured to the first-named cross-piece and adjustably secured to the other cross-piece, a weighted lever suitably fulcrumed and having its arm pivoted to the first-named cross-piece, said cross-piece being adapted to limit the movement of the plunger-rod by coming in contact with the bearing thereof, substantially as described.

6. In a device of the character described, a vertical arm, parallel, horizontal extensions projecting therefrom, a plunger-rod vertically slidable through perforations in the ends of the extensions, a cross-piece slidable on the plunger-rod between the horizontal extensions, a second cross-piece rigidly secured to the upper end of the plunger-rod, vertical rods rigidly secured at their lower ends to the ends of the slidable cross-piece and adjustably secured at their upper parts to the ends of the other cross-piece, a lever fulcrumed to the vertical arm having one end pivoted to the slidable cross-piece and bent to extend upwardly, and a weight on the other end of the lever, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

OTTO SIGWART.

Witnesses:

MAUDE EMERINE,
FRANK. CAPLES.