(No Model.)

D. SUMME.

TWYER.

No. 598,448. Patented Feb. 1, 1898.

Fig. 1.

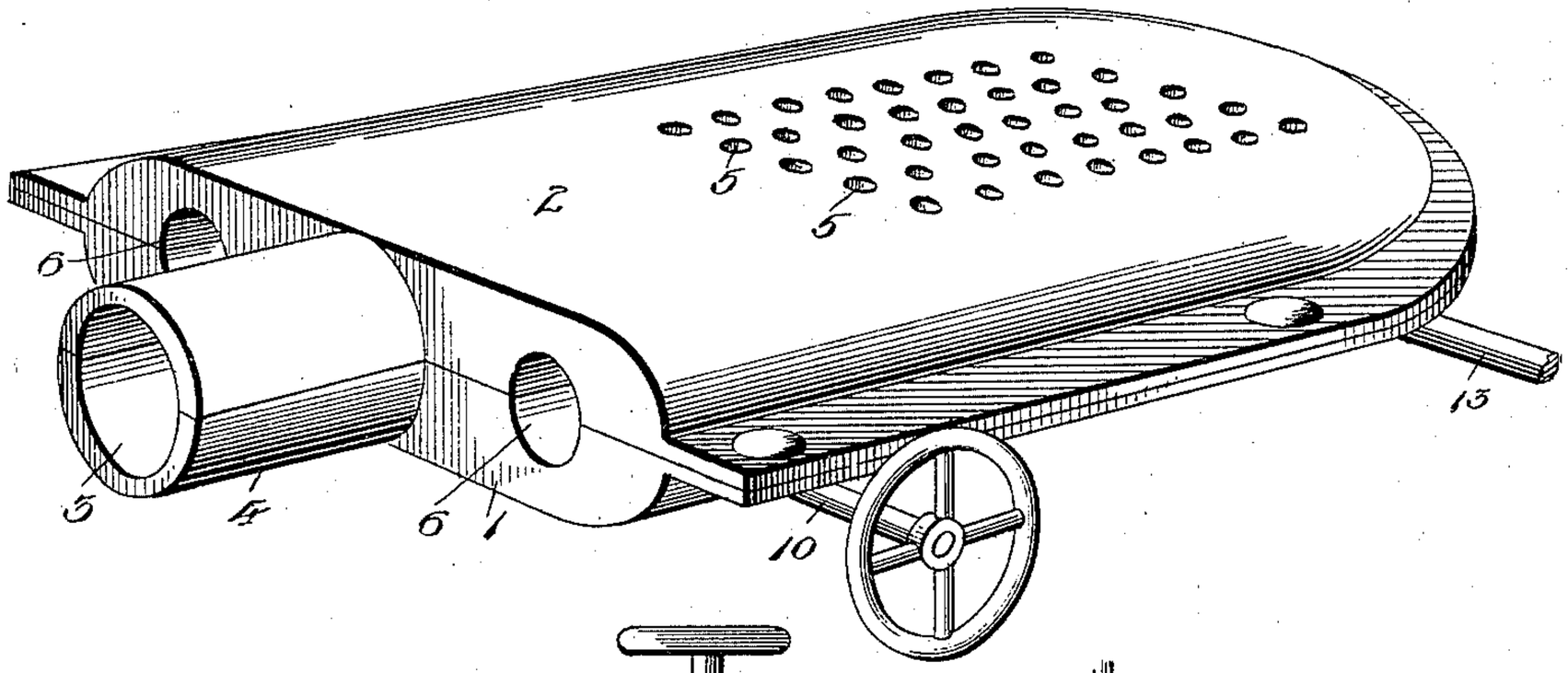


Fig. 2.

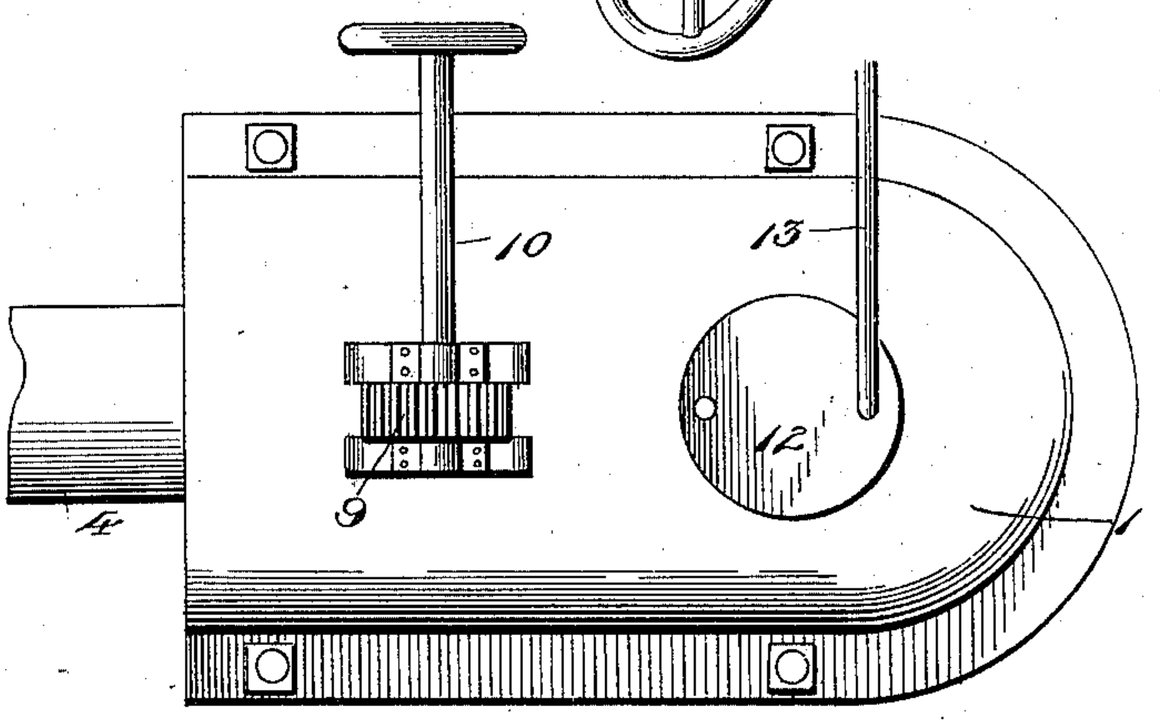


Fig. 3.

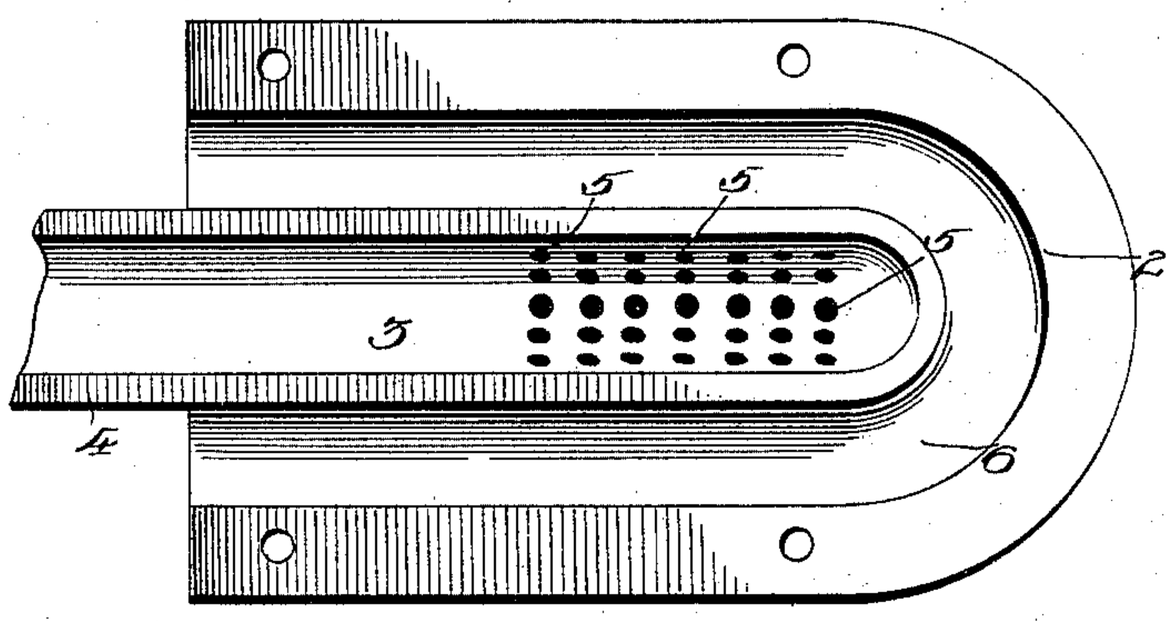
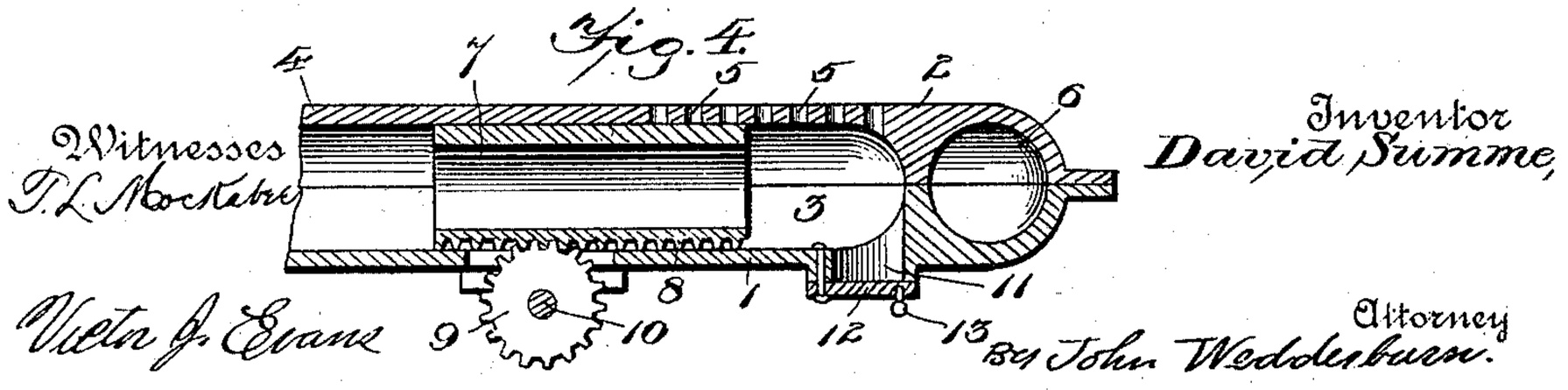


Fig. 4.



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UNITED STATES PATENT OFFICE.

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TWYER.

SPECIFICATION forming part of Letters Patent No. 598,448, dated February 1, 1898.

Application filed May 15, 1897. Serial No. 636,720. (No model.)

To all whom it may concern:

Be it known that I, DAVID SUMME, of Darwin, in the county of Carroll and State of Indiana, have invented certain new and useful Improvements in Twyers; 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.

The object of this invention is to provide an improved twyer for blacksmiths' forges in which the draft can be regulated to increase or diminish the amount of fire, the particular construction also contemplating an arrangement for keeping the projecting part of the twyer cool and provision made for an auxiliary draft-opening to keep a smoldering fire when the forge is not in use.

In the following specification I have entered into a detail description of my invention, reference being had to the accompanying drawings, and to numerals thereon which designate the different parts, and what I consider to be the novel features of construction are specifically set forth in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a twyer for blacksmiths' forges constructed in accordance with my invention. Fig. 2 is an inverted plan view of the twyer. Fig. 3 is a plan view of the upper plate removed, and Fig. 4 is a longitudinal vertical section.

Referring to the drawings by numerals, 1 designates the lower plate of the twyer, and 2 the upper plate thereof, said plates being of the same configuration and recessed centrally to provide for the several passages, hereinafter described.

The plates 1 and 2 are each enlarged centrally, presenting the laterally-projecting flanges by which the two parts of the twyer are bolted to each other. The plates 1 and 2 are provided centrally with concaved recesses, which when the plates are placed together form the draft-passage 3, the plates being extended to form the projection 4, by which the pipe from the air-blast is connected to the twyer. The upper plate has a series of perforations or openings 5, which provide the draft for the fire and communicate with the draft-passage 3, the wall forming the fire-pot being built around the series of openings. The plates 1 and 2 are also recessed to form the passage or channel 6, which surrounds the draft-passage, being connected to a water keg or reservoir and to a receiving-tank, a valve being located within the pipe extending from the keg or reservoir to cut off the supply of water to the twyer when desired.

Within the draft-passage 3 fits a tube 7, having rack-teeth 8 on one side, which are engaged by a pinion 9, carried by a shaft 10, journaled in bearings secured to the under side of the twyer, said pinion passing through an opening in the bottom plate to engage the rack-teeth of the tube. The shaft extends beyond the side of the twyer, where it is provided with a hand-wheel for turning the same, and the tube is positioned within the draft-passage, so that it can be moved to cover as many of the perforations 5 as desired, thereby reducing the supply of air to the forge. The bottom plate of the twyer is also provided with an opening 11, to one side of which is pivoted a cover or lid 12, adapted to close the opening and operated by the connecting-rod 13, which extends beyond the twyer and is held in an adjusted position to regulate the draft through the opening.

The blacksmith's iron or twyer herein shown and described is adapted to rest upon a brick wall, and the draft-passage is connected to any style of bellows for supplying air thereto.

By the improved construction herein shown and described the amount of fire can be regulated by turning the shaft 10, which moves the tube located within the draft-passage, so as to cover as many of the perforations at one end of the series as desired, and when the forge is not in use the draft-opening 11 may be uncovered to permit the required draft to the fire, keeping it alive until the forge is again used. By providing the water-channel beyond the fire-pot of the forge the projecting portion of the twyer is kept cool, and it also serves to save coal, for when the fire-pan gets hot it tends to burn more coal. By keeping the projecting portion of the twyer cool it also prevents throwing out heat, thereby keeping the shop cooler in summer time. The shaft and pinion provide for readily and conveniently operating the tube in

regulating the draft to the fire, and the rod also provides for manipulating the lid which covers the auxiliary draft-opening.

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

1. In a twyer for blacksmiths' forges, the combination of the plates presenting the central draft-passage and a surrounding water-channel, the upper part of the twyer having perforations leading to the draft-passage, a tube located within the draft-passage and adapted to cover the perforations, the said tube having teeth on one side; together with a pinion meshing with the teeth of the tube, and a shaft for operating the pinion, substantially as shown and for the purpose set forth.

2. In a twyer for blacksmiths' forges, the combination of the plates recessed to present a central draft-passage and a surrounding water-channel, the upper plate having perforations communicating with the draft-passage, a tube located within the draft-passage and adapted to cover the perforations, teeth formed on the lower side of the tube, a pinion mounted upon a shaft journaled in suitable bearings, said pinion passing through the bottom plate and engaging the teeth on the tube, the lower plate having an opening entering into the draft-passage, a lid covering said passage, and a rod for opening and closing the lid, substantially as shown and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DAVID SUMME.

Witnesses:
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