

M. MÉHU.
PORTABLE FORGE.

Patented Mar. 12, 1895.
Fig. 6.

Fig 1

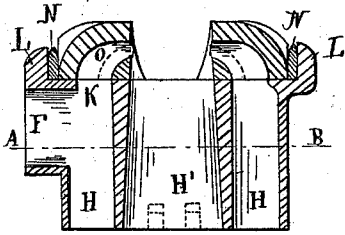


Fig. 2

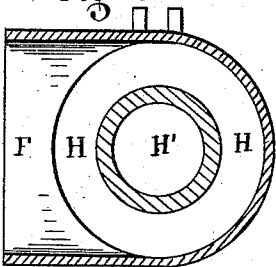


Fig 4



Fig. 7.

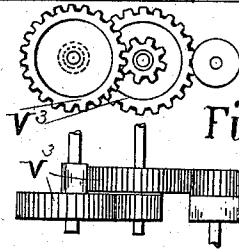
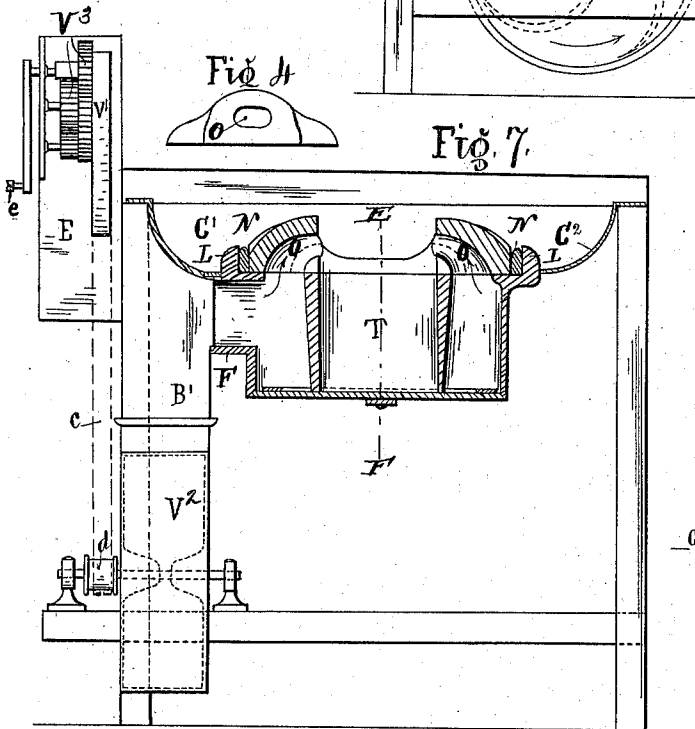
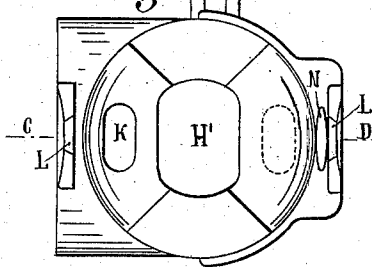


Fig 5

Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

MARIE MÉHU, OF ST. MALO, FRANCE.

PORTABLE FORGE.

SPECIFICATION forming part of Letters Patent No. 535,712, dated March 12, 1895.

Application filed April 6, 1894. Serial No. 506,632. (No model.) Patented in France September 7, 1893, No. 232,617.

To all whom it may concern:

Be it known that I, MARIE MÉHU, a citizen of the French Republic, residing at St. Malo, France, have invented certain new and useful Improvements in Portable Forges, (for which I have obtained Letters Patent in France, No. 232,617, dated September 7, 1893,) of which the following is a description.

My invention has relation to portable forges, and it has for its object to provide such a forge with an improved tuyere having air discharge nozzles or sections adapted to be interchangeably secured in position whereby the quantity of air delivered to the fire may be varied, and my invention has for a further object to provide a portable forge with means whereby air may be forced under pressure and in great volumes into and through the tuyere, said means being simple and readily operated.

Other objects and advantages of my invention will be presently apparent from the following description when taken in connection with the accompanying drawings.

In the drawings:—Figure 1 is a vertical sectional view of the tuyere on the line C—D of Fig. 3. Fig. 2 is a horizontal section on line A—B Fig. 1. Fig. 3 is a plan view of the tuyere. Fig. 4 is a detail view of one of the air discharge nozzles or sections of the tuyere. Fig. 5 is a view of the multiplying gearing. Fig. 6 is an elevation of the complete forge, partly in section, the section being taken on the line E—F of Fig. 7. Fig. 7 is an elevation at right angles to Fig. 6 and also partly in section, the latter being taken on the line G—H of Fig. 6.

In carrying out my invention I provide a suitable supporting frame A which may be constructed of any desired material, and it is provided at its upper part with a fire guard or wall G, and at one side with a casing E containing the multiplying gearing presently described. The frame also supports a plate C' C² which in turn carries the tuyere T. The latter is composed of two concentric cylinders H H' closed at bottom by a plate T².

O indicates air discharge nozzles or sections adapted to be interchangeably secured to the tuyere over the discharge opening K. Said

nozzles are constructed in the shape shown and have the interior passages or ducts for the passage therethrough of the air forced into them by the blower. The nozzles O are adapted to be detachably secured in position by means of small wedges or the like N, which are forced between the said nozzles and upwardly-extending flanges or shoulders L integral with the cylinder H of the tuyere. By this arrangement of the tuyere nozzles the same may be readily removed for any desired purpose and may be interchanged with other nozzles having passages of varying sizes whereby the quantity of air delivered to the fire may be varied.

For forcing air under pressure and in considerable volume to the tuyere I provide the cylinder H at one side with a short neck F which communicates with a passage or conduit B' which leads into a casing V² which contains a suitable blower V, having curved wings said blower being driven by means of a belt pulley d, on its shaft, over which passes a belt c, which latter runs over another larger pulley V' mounted within the casing E, and upon the shaft of which pulley is mounted one of a series of multiplying gears V³ which are operated by a hand crank e, to cause the blower to force air into and through the nozzles O.

The many advantages inherent to my invention will be readily apparent from the foregoing description, when taken in connection with the drawings.

What I claim, and desire to secure by Letters Patent, is—

In a portable forge, the combination with a suitable frame, a casing carried thereby, a blower arranged in said casing and an air discharge pipe communicating with said casing, of a tuyere composed of an outer cylinder H having the horizontal laterally-arranged neck F communicating with the said air discharge pipe, an inner cylinder H' concentric with cylinder H and forming between them discharge openings K, the upper edges of said cylinders terminating flush with each other, diametrically-arranged upwardly projecting lugs or ears L integral with the cylinder H, discharge nozzles O adapted to seat upon the

upper edges of the cylinders H H', and having openings adapted to align with the openings K said nozzles forming spaces between them and the lugs L, and wedges N adapted
5 to be driven into said spaces, for the purpose specified, and means as described for driving the blower.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1894.

MARIE MÉHU.

Witnesses:

H. ED. HUNT,
F. MATRAY.