

J. NIXON.
Forges.

No. 150,881.

Patented May 12, 1874.

Fig. 1.

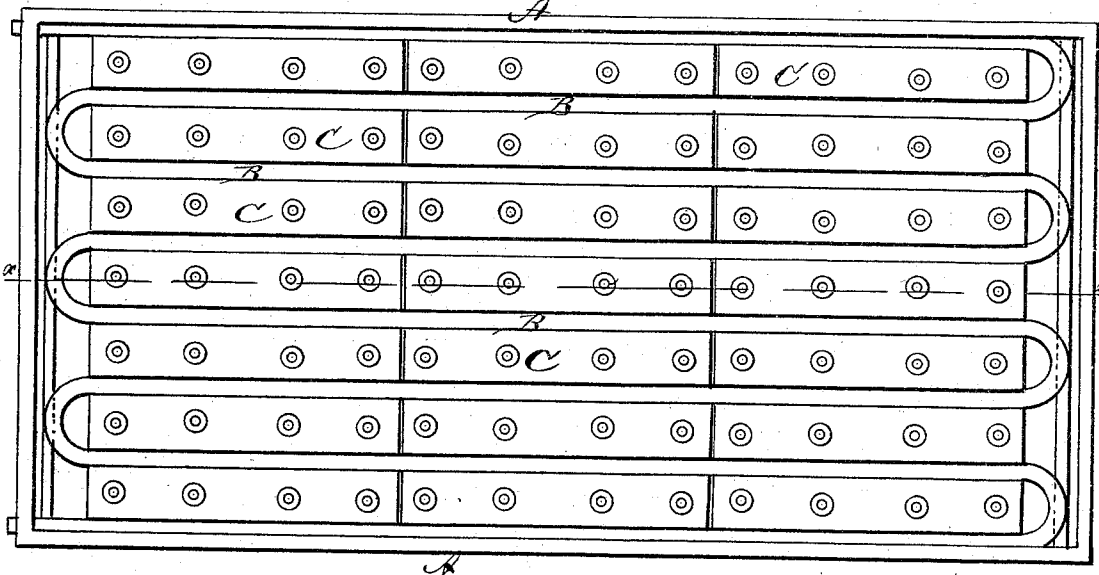


Fig. 2.

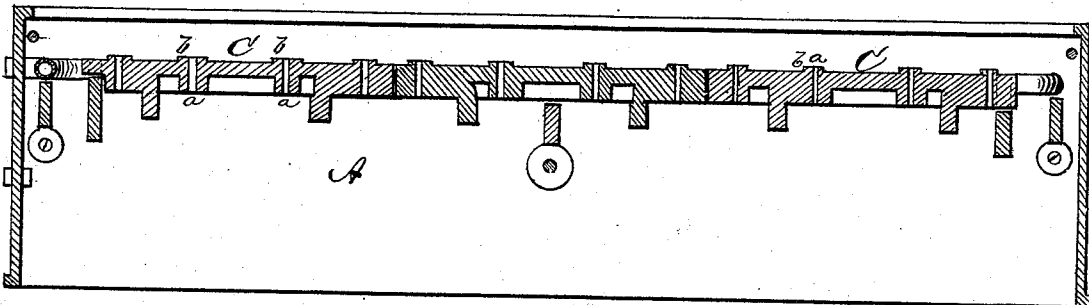


Fig. 3.

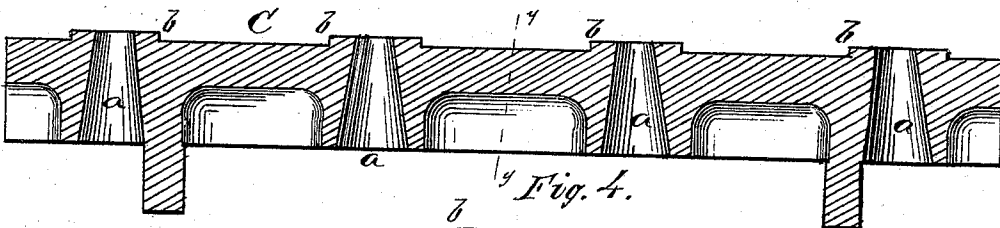
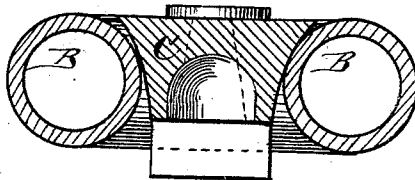


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH NIXON, OF ALTOONA, PENNSYLVANIA.

IMPROVEMENT IN FORGES.

Specification forming part of Letters Patent No. **150,881**, dated May 12, 1874; application filed April 15, 1874.

To all whom it may concern:

Be it known that I, JOSEPH NIXON, of Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Forges; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My present invention is intended as an improvement upon the flanging-forge for which Letters Patent No. 79,382 were granted to me June 30, 1868; and the nature of my invention consists in the construction of the hearth of the forge of a continuous-coil pipe with a series of perforated cast-metal bars placed between the pipes, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a plan view of my improved forge-hearth. Fig. 2 is a longitudinal vertical section of the same through the line *x x*, Fig. 1. Fig. 3 is an enlarged longitudinal section of one of the cast-iron bars, and Fig. 4 is a transverse vertical section of the same through the line *y y*, Fig. 3.

A represents the shell of the forge, within which is a water-pipe, B, of about one and one-half inch in diameter, with extra-heavy return-bends forming a coil through which the water is to circulate. Between the pipes B are placed perforated cast-iron pieces or bars *c c*, to fill up the spaces between them and form the hearth. Each of the pieces *c* is provided with holes *a a*, around the top of which are formed nipples *b b*. The nipples prevent cinders from

flowing into the holes and stopping the blast. The top of the nipples are level with the top of the coil of pipe B, so that in shoveling off the hearth, as the shovel runs on the pipes it skims off the top of the nipples, leaving ashes between them to protect the pieces from burning. There is no need of putting stoppers in the holes not in use, as the bed of wet coal keeps the blast down. The holes *a a* are tapering, as shown in Fig. 3, to admit a sharp blast. The shell A of the forge is set in hydraulic cement, and there is no bottom required. Around the top edge of the hearth I place fire-clay, to protect the edges from burning when fire is used all over the entire surface in heating sheets to straighten them.

This hearth is more durable, as the tubes are not easily obstructed, and the fire may be made to suit any circle of bed or shape required, either to anneal or form plates of boiler iron or steel.

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

The cast-iron pieces *c c*, provided with tapering holes *a* with nippers *b* around their upper end, in combination with the coil of pipe B, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in the presence of two witnesses.

JOSEPH NIXON.

Witnesses:

A. MOCK,
JOSEPH LUTHER.