(No Model.)

W. J. S. SHEIBLEY.

ROOF FOR NAIL OR OTHER FURNACES.

No. 422,893. Patented Mar. 4, 1890.

FIG. 1.

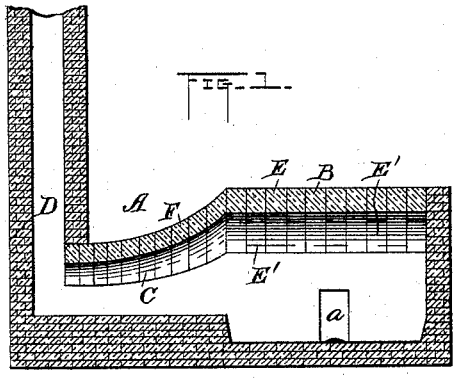


FIG. 2.

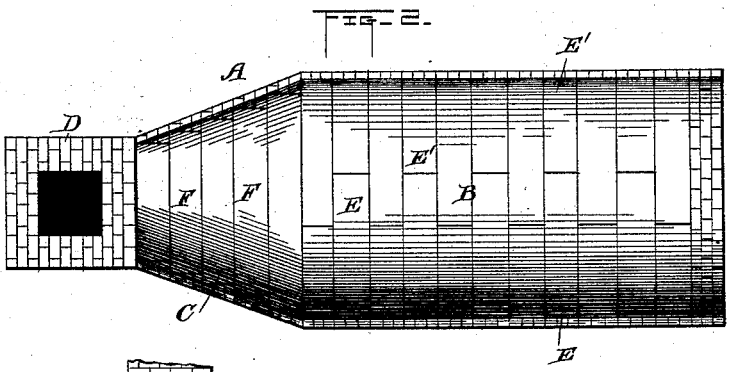


FIG. 3.

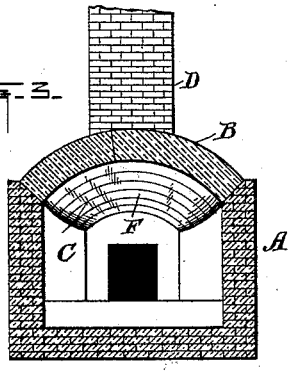
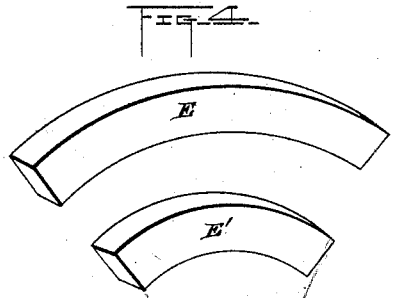


FIG. 4.



WITNESSES

Severance
Fish Deane

INVENTOR

Wm. J. S. Sheibley.

By L. Deane

his Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM J. S. SHEIBLEY, OF LOCK HAVEN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO FREDERICKS, MUNRO & CO., OF SAME PLACE.

ROOF FOR NAIL OR OTHER FURNACES.

SPECIFICATION forming part of Letters Patent No. 422,893, dated March 4, 1890.

Application filed December 23, 1889. Serial No. 334,735. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. S. SHEIBLEY, a citizen of the United States, residing at Lock Haven, in the county of Clinton and State of Pennsylvania, have invented certain new and useful Improvements in Roofs or Necks for Nail or other Furnaces; 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.

Figure 1 is a longitudinal vertical section. Fig. 2 is a plan view of the under side of the roof and neck. Fig. 3 is a cross-section showing the arched roof and neck; Fig. 4, details in perspective of one of the long and one of the short bricks used in the construction of the roof.

This invention is particularly designed for use in iron-furnaces, nail-mills, and rolling-mills, where an intense heat is necessary to melt the iron and other metals; but the invention can be used in all kinds of furnaces in which the heat is so intense that the roof and necks must be specially protected, so as to keep them from burning out.

In the construction of furnaces now in use small bricks made of fire-clay are used for forming the roofs and neck of said furnaces in arches. This method is objectionable for the reason that now and then one of the small bricks melts and drops down into the heated metal, and as soon as one drops out the whole arch is liable to fall.

I construct my roofs by using long curved bricks made of fire-clay, so that it only takes two to reach across the roof. I, however, make each course of one longer and one shorter brick and alternate them over the roof, so as to make the joints between the brick alternate, as more fully appears in my drawings.

There is a great saving of time in the construction of my roof over the old way, because in the old construction it is necessary to have a wooden arch made and placed in the furnace, and the roof of small brick is built over this. This wooden arch is not necessary in my construction, as I place the end of each curved brick on the side support of the furnace, and by placing the opposite one in its place I bring the two together by slowly dropping them until they meet in the center, and thus by merely placing the brick in position the arch is formed.

In a roof made according to my invention, if one of the bricks should burn out, it is not necessary to reconstruct the whole roof, as another brick can easily be put in the place of the burned one without interfering with the others. Thus in a very short, easy, and cheap way the roof can at any time be repaired.

In the formation of the neck in the furnace, which is part of the roof or extension of it, I use long bricks, each one running across the top, instead of the small ones now used, and gain the same advantages as in the furnace-roof. The several bricks are laid side by side and gradually decrease in length from the roof to the chimney, so as to form the usual neck.

Referring to the drawings, A designates the furnace; B, the roof; C, the neck; D, the chimney, and *a* the door into the furnace.

The arched or curved brick of which the roof is composed are designated E E′, the former being the longer bricks and the latter the shorter ones.

The arched or curved brick for the neck are designated F.

All the bricks are very much longer than the ordinary ones, and the designation of "longer" and "shorter" is simply used for convenience in description.

Having described by invention, I claim—

1. In a furnace for nail or rolling mills or kindred purposes, a roof made of longer and shorter arched or curved brick E E′, each two extending across the roof and laid alternately in courses, so as the break joints, substantially in the manner and for the purposes set forth.

2. In a furnace, as described, the neck made of long and arched or curved brick laid

side by side and decreasing in length, substantially as and for the purposes set forth.

3. In a furnace, as described, a roof made of longer and shorter brick, one of each extending across, combined with a neck made of arched brick, one extending across, substantially as and for the purposes set forth.

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

W. J. S. SHEIBLEY.

Witnesses:
J. M. PEOPLES,
HENRY HILLE.