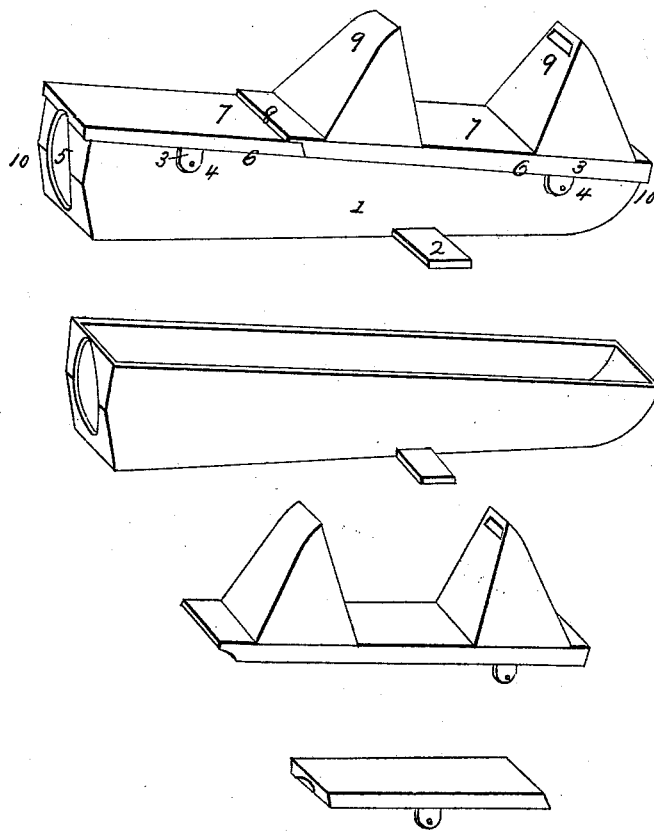


STILES & GRAVES.

Tuyere.

No. 2,386.

Patented Dec. 14, 1841.



UNITED STATES PATENT OFFICE.

R. C. STILES AND J. S. GRAVES, OF EAST BLOOMFIELD, NEW YORK.

TWYER.

Specification of Letters Patent No. 2,386, dated December 14, 1841.

To all whom it may concern:

Be it known that we, RIVERIUS C. STILES and JOSEPH S. GRAVES, of East Bloomfield, in the county of Ontario and State of New York, have invented a new and Improved Mode of Constructing Twyers; and we do hereby declare that the following is a full and exact description.

The nature of our invention consists in providing the top of a wind chest, with two or more tubes, or two or more apertures, inclined toward each other, so that the several blasts issuing therefrom tend to one point, and thereby produce a concentration of heat. To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation. We construct our twyer by casting an iron chest about one foot long, and, two and a half inches wide, two and a half inches deep at one end, from thence diminishing in depth to the other end, to one and a half inch. The bottom, sides, and ends are cast together, with a hole in the largest end, of one and three fourths inch diameter, through which the bellows pipe is introduced into the chest. The bottom has a bar cast across it of six inches in length, to keep it firm in the forge. The lid is cast in two separate parts, one of which is five and a half inches long, and the other seven inches long. The shortest part of the lid, wedges under the other about half an inch. Attached to the edges of the lid, are cleats, shutting over the sides and ends of the chest. Connected to the cleats on each side of the chest, are

two ears extending down the sides of the chest, about one inch. Through each ear is a pin introduced into the sides of the chest, to fasten down the lid; and in such a manner that either part of the lid may be removed without removing the other part. In that part of the lid opposite where the wind enters the chest from the bellows, are two or more tubes, or two or more apertures inclined toward each other, so that the several columns of wind issuing therefrom meet; after passing about three inches, and form a concentration of blasts. In order that it may be better understood we refer to figures 50 in the drawings viz:—

Figure 1 refers to sides of the chest, 2 the bar across the bottom, 3, 3 the ears, 4, 4 the pins, 5 the hole in the end of the chest to admit the bellows pipe, 6, 6 the cleats on the lid setting over sides of the chest, 7, 7 the top of the lid, 8 the connection of the two parts of the lid, 9, 9 the tubes or apertures, 10, 10 the ends of the chest.

What we claim as our invention and desire to secure by Letters Patent, is—

Combining with a wind chest arranged substantially in the manner set forth two or more tubes, or two or more apertures inclined toward each other, so as to produce a concentrated blast; all as herein described.

RIVERIUS C. STILES.
JOSEPH S. GRAVES.

Witnesses:

JOSIAH PORTER,
SAM'L. HOUGH.