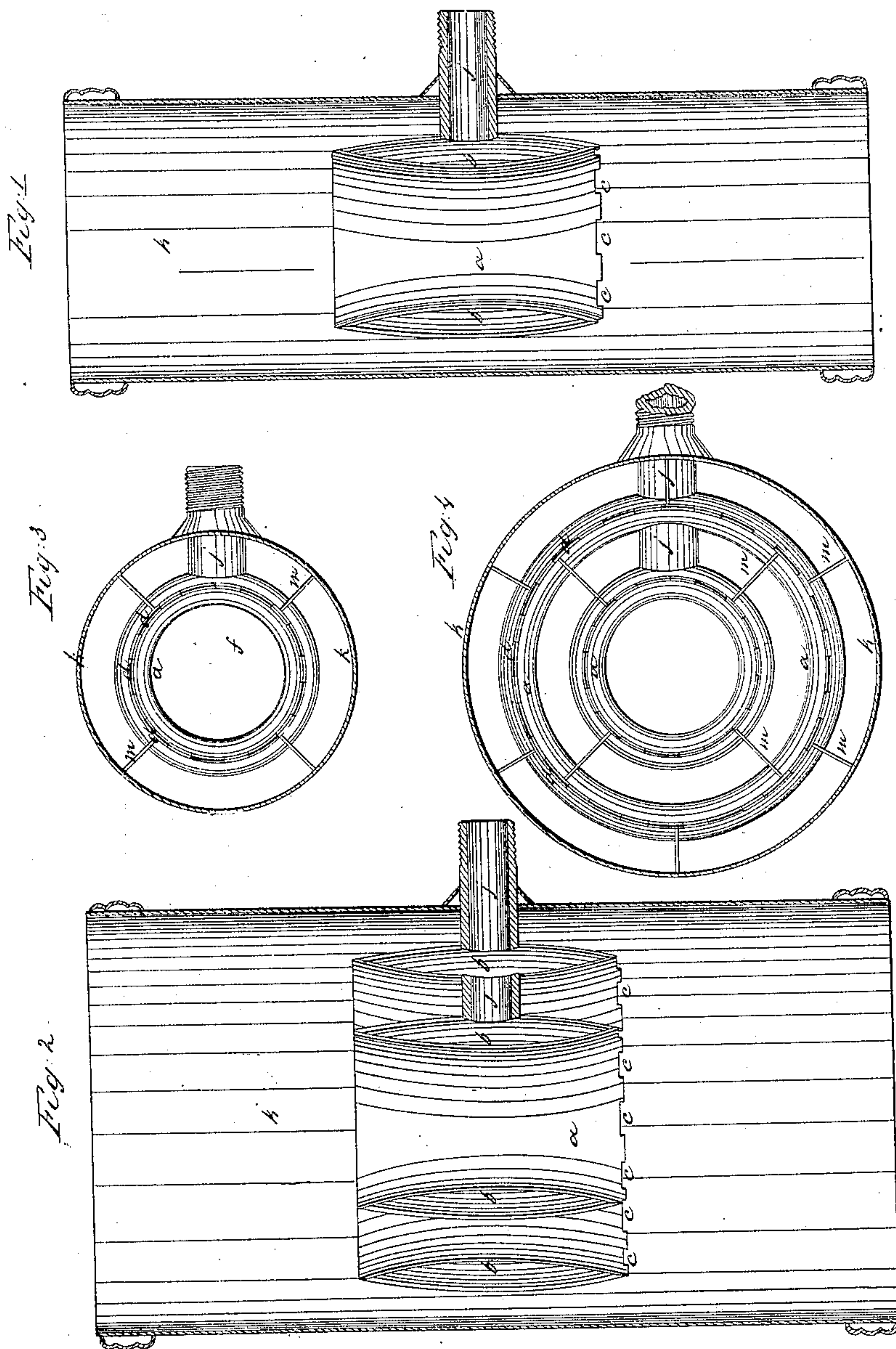


S. R. Wilmot,

Blast Machine,

N^o 63,595.

Patented Apr. 2, 1867.



Witnesses.

M. B. Remick

J. A. Remick

Inventor

S. R. Wilmot

per M. B. Remick atty.

United States Patent Office.

SAMUEL RUSSEL WILMOT, OF BRIDGEPORT, CONNECTICUT.

Letters Patent No. 63,595, dated April 2, 1867.

IMPROVEMENT IN STEAM BLOWERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL RUSSEL WILMOT, of Bridgeport, in the county of Fairfield, and State of Connecticut, have invented a new and useful Blower, to be used either in the chimneys or in connection with the ash-pit of furnaces, or for blowing fires, and that the following, taken in connection with the drawings, is a full, clear, and exact description thereof. In the drawings—

Figure 1 is a longitudinal section through the blower.

Figure 2 is a similar section through a modification thereof; and

Figures 3 and 4 are elevations of figs. 1 and 2.

My invention is in that class of blowers in which a current of air is induced by a current of steam escaping through apertures, and when applied in the chimney it draws air through the fire; when applied below the grate-bars, or to forge fires, it forces a mingled current of air and steam through the burning fuel.

My invention relates to a peculiar construction of steam jet; its object is to expose an extended surface of steam to the air in such manner as to draw along a comparatively large current of air with the expenditure of a comparatively small current of steam.

In the drawings my jet is represented as surrounded by a pipe through which the air enters, and through which the combined current of air and steam is passed into the ash-pit. When the jet is employed in a chimney, the chimney itself will form the pipe.

In the drawings the jet is represented as annular and circular. I prefer this form, but the jet may be in a line straight or curved, extending across the pipe, or may be of any form that fancy or expediency may dictate, enclosing an open space.

In the drawings the jet is shown at *a*; it is composed of two pieces of sheet metal, brazed or otherwise secured together at the edges, and each bent away from the other at or near a point equidistant from the edges, forming a cavity, *b*, large, crosswise near the centre, and forming an edge at each end. A series of notches, *c c c*, is then to be filed or otherwise cut in one of the edges, thus forming a series of small slits, *d d d*, each slit leading into the cavity of the jet. The jet thus formed permits air to flow past it without much resistance, and will cause a comparatively small quantity of steam to escape in a very thin sheet with a large surface. When the jet is annular or surrounds an open space, *f*, air will pass through the open space and around the jet, being drawn along by the steam. The jet is to be connected with a pipe, *j*, through which steam may be admitted and may be supported in the pipe or chimney *k* by ribs *m m*. In large chimneys, or where a strong blast or a large amount of air is required, I intend to place rings or jets of annular cross-section as a whole, one outside of the other, as shown in figs. 2 and 4, and when necessary to employ three, four, or more rings, all concentric or nearly so, with annular passages or open spaces between, through which air may pass. My sheet-metal jet may be formed so that its cavity ends in an edge at that extremity only through which the steam issues, but I prefer to have both extremities sharp, as shown, for the reason that the air then passes the jet (which is always an obstruction) with less resistance than if it impinged against a blunt, curved, or flat surface.

I claim as of my own invention—

The steam jet herein described, made of sheet metal, and with small slits entering its cavity from the exterior edge of the jet, substantially as specified.

S. R. WILMOT.

Witnesses:

IRVING C. SMITH,

J. A. SANGUILLY.