

S. R. Miles,

Tuyere,

N^o 44,881.

Fig. 1. Patented Nov. 1, 1864.

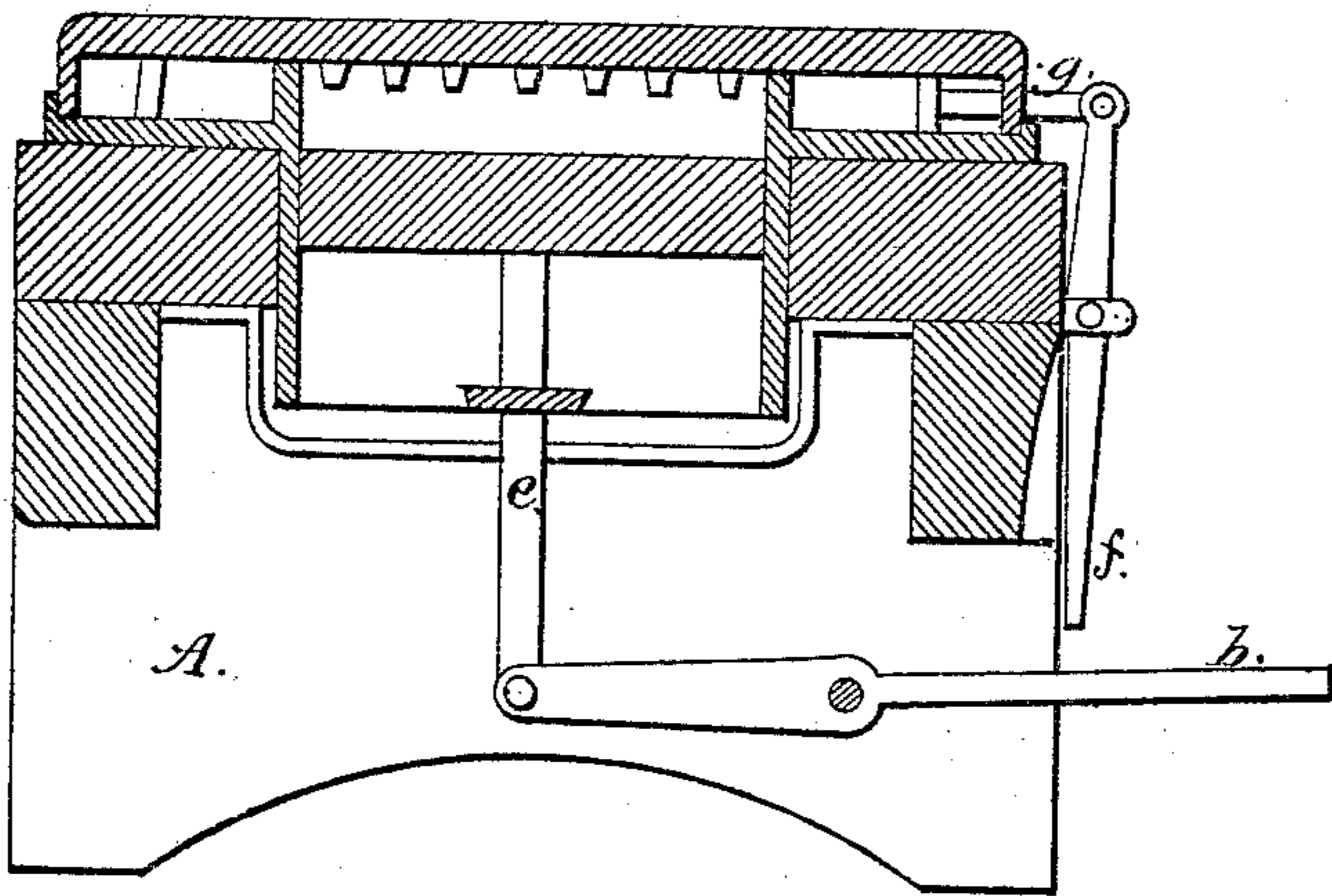


Fig. 2.

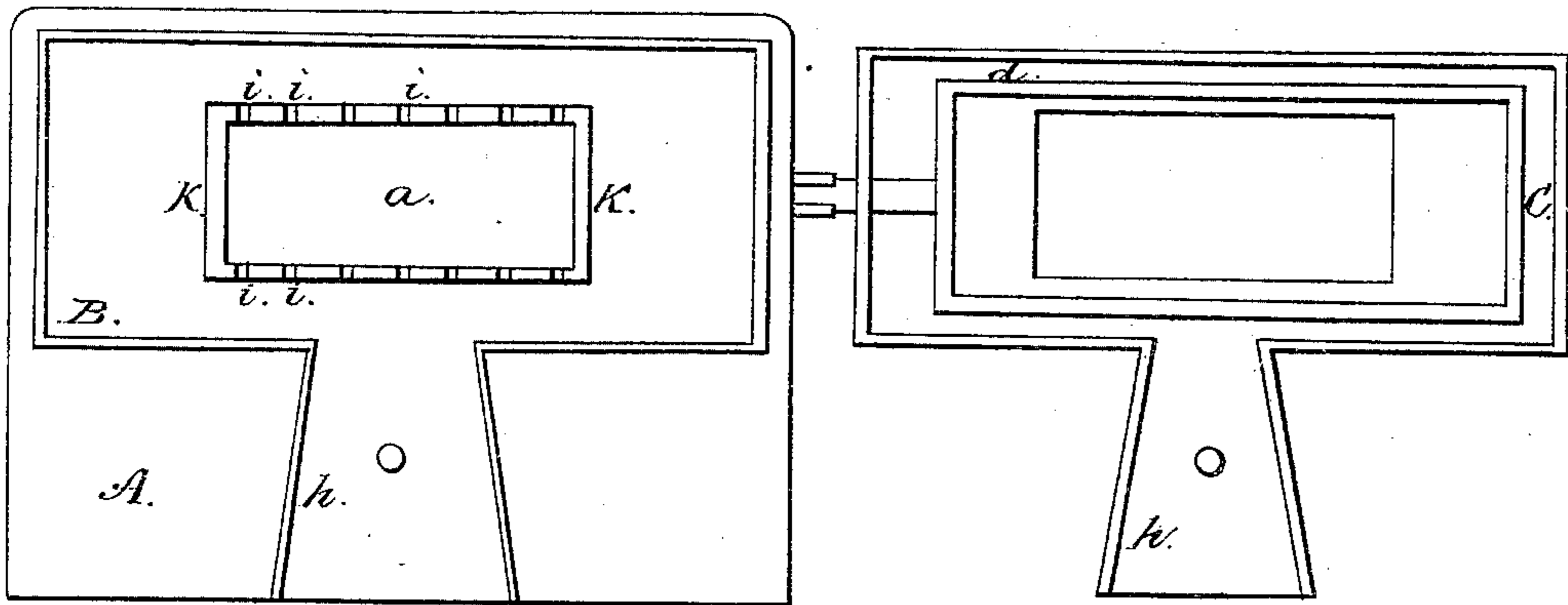
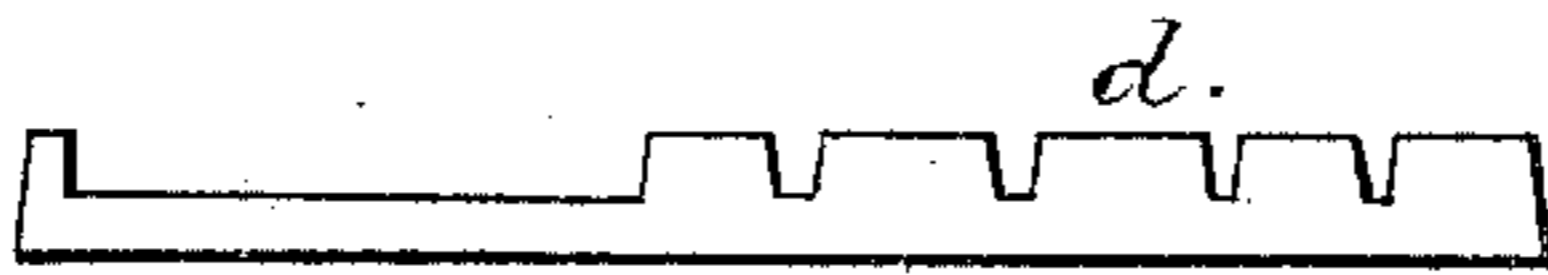


Fig. 3.



Witnesses;
J. H. Alexander,
J. M. Hughes.

Inventor;
S. R. Miles.

UNITED STATES PATENT OFFICE.

S. R. NILES, OF RAWSONVILLE, MICHIGAN.

IMPROVEMENT IN TUYERES.

Specification forming part of Letters Patent No. 44,881, dated November 1, 1864; antedated November 8, 1861.

To all whom it may concern:

Be it known that I, S. R. NILES, of Rawsonville, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Tuyere-Irons; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, in which—

Figure 1 is a longitudinal section, and Fig. 2 a plan with the top thrown back, thus showing the slide and its mode of operation.

The nature of my invention consists in the employment and arrangement of such devices, as will be hereinafter fully set forth.

To enable others skilled in the art to make and use my invention, I will now describe its construction and operation.

A represents merely a platform or stand, which is provided with a flue, as fully shown in Fig. 2.

B represents the lower portion of the tuyere, which should be secured to the platform A, and is also provided with an aperture in its center, corresponding with the flue just referred to.

h is a neck, extending out from part B, and rests thereon. Said neck should expand from the main portion of the tuyere, as seen in Fig. 2, then around the whole lower part, B, there should be a narrow flange turned or cast, ending on either side of the end of neck *h*.

k represents an elevation, extending around the flue in part B. Said elevation is provided with notches *i i i*, as seen in Fig. 2, the object of which will be hereinafter more fully set forth.

C is the top portion of the tuyere, which is likewise provided with an aperture like those described. The flange around it should be much deeper than on the lower part and made to fit on the inner side of said flange on the part B. The neck should be curved, thus admitting the nozzle of the bellows. The parts when placed together should be secured tight,

which will prevent the escape of the blast from the bellows.

d represents a slide, one section of which is shown in Fig. 3. It will be observed that said slide *d* is provided with notches to about one-half or two-thirds of its length, while the remaining portion of it on both sides is cut away, leaving a wide space, as fully represented in Fig. 3. The slide is placed between the two parts of the tuyere, which are then secured together.

g is an arm which connects slide *d* to lever *f*. Said lever *f* is pivoted to the side of platform, as seen in Fig 1.

a represents a movable bottom; *b*, a lever, and *e* a connecting-rod which connects lever *b* to the movable bottom *a*. Thus it will be plain that I can make a fire of any depth I please, or I can, by the employment of this lever *b* and movable bottom *a*, throw out the cinders and refuse in the fire-place by the employment of the damper or slide *d*. I can make any size fire which the necessities of the case may demand.

Thus, if I wish a small fire, I move the lever *f* until one hole or notch in the damper *d* comes opposite to one in the elevation on part B. The draft will then only be admitted to a small portion of the flue, and will consequently have the desired effect. If a large fire is required, the damper or slide *d* is regulated accordingly.

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

1. The employment of the movable bottom *a*, in combination with lever *b*, substantially in the manner and for the purpose specified.

2 Damper *d*, lever *f*, movable bottom *a*, lever *b*, and top *c*, when all shall be constructed and arranged in the manner and for the purpose described.

S. R. NILES.

Witnesses:

ALFRED C. SMITH,
JAMES H. BUCKLER.