

T. P. SCRIPTER.  
Improvement in Furnaces.

No. 115,111.

Patented May 23, 1871.

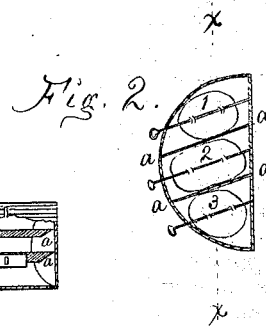
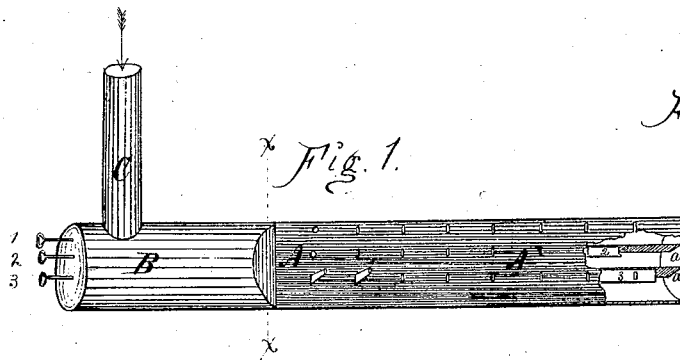
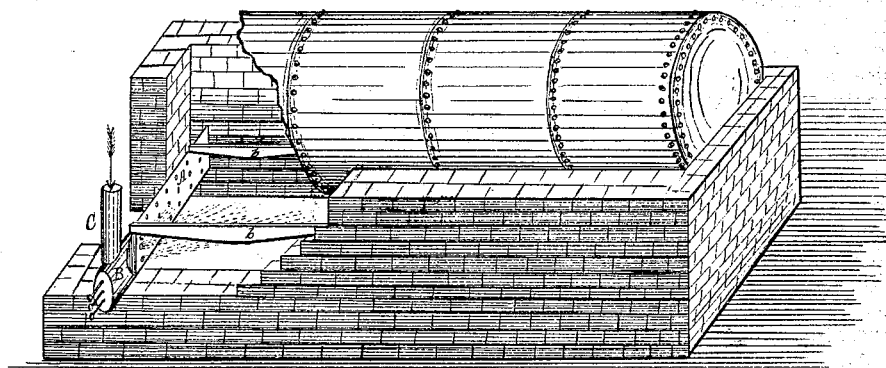


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

TIMOTHY P. SCRIPTER, OF DES MOINES, IOWA.

## IMPROVEMENT IN FURNACES.

Specification forming part of Letters Patent No. 115,111, dated May 23, 1871.

I, TIMOTHY P. SCRIPTER, of Des Moines, in the county of Polk and State of Iowa, have invented certain Improvements in Furnaces, of which the following is a specification:

My invention is a means provided to conduct and distribute an artificial current of air to and in the fire of a furnace in such a manner that the air can be perfectly controlled and regulated in quantity and in application to all parts of the fuel and fire, or to such particular portions thereof as may require it. It consists in dividing a distributing-pipe into three separate chambers by partitions that incline upward in the manner hereinafter set forth.

Figure 1 in my drawing is a perspective view of my partitioned distributing-pipe connected with a reservoir and a conducting-pipe. A A is the part divided into three distinct chambers. It is of half-round form, and may be made of cast metal or sheet metal riveted together, and of various sizes adapted for variously-formed furnaces. Part of the flat side at the right end is removed to show the partitions and sliding registers. *a a* represent the partitions. These extend through the entire length and form the roofs of the two lower chambers. They stand at an angle of about forty-five degrees, and give direction to the current of air that passes from the chambers through the openings under the roof-partitions. 2 3 represent two of the sliding registers. There are three of these, one in each chamber. They are connected with the handles 1 2 3, represented at the left end of the figure. These sliding registers have holes corresponding with the openings in the chambers, and by their use the passage of air from the chambers is regulated. The holes may vary in form and size and conductors may be attached. B is an air-reservoir connected with the distributing-pipe. C is a conducting-pipe connected with a fan. The division-line *x x* indicates the position of the dampers or valves represented in Fig. 2.

Fig. 2 is a vertical cross-section, showing the manner in which the chambers in the distributing-pipe may be opened and closed. *a a*, the partitions; 1 2 3, the dampers.

Fig. 3 is a perspective view, showing the position of my distributing-pipe under the front ends of the grate-bars of a furnace. *b b* are two grate-bars, and indicate the place for the fuel and fire directly over my distributing-pipe. The dotted lines indicate the direction of the air as it escapes from the chambers through the registers. The upper chamber directs to the front part of the fire; the middle one to the middle of the grate-bars and fire; the lower one to the rear part of the fire.

By means of my separate chambers and the sliding registers I can conduct the current of air and distribute it to all parts of the fire, or concentrate it to the front, or middle, or rear, as may be required, and at the same time regulate the quantity by leaving the holes or valves only partly open.

By means of the dampers represented in Fig. 2 the air may be shut off from the chambers. This may not be required, and the dampers may be used or not, as desired.

I am aware that numerous modes of conducting air to furnace-fires are in use. But a distributing-pipe with three chambers, having angling roofs to direct the current, I claim as new and greatly advantageous.

### Claim.

I claim as my invention—

The distributing-pipe A A with angling roof-partitions *a a*, combined with the sliding registers, the reservoir B, the conducting-pipe C, all made and operated to conduct an artificial current of air to a furnace-fire in the manner described.

TIMOTHY P. SCRIPTER.

Witnesses:

L. H. SCRIPTER,  
S. HARBERT.