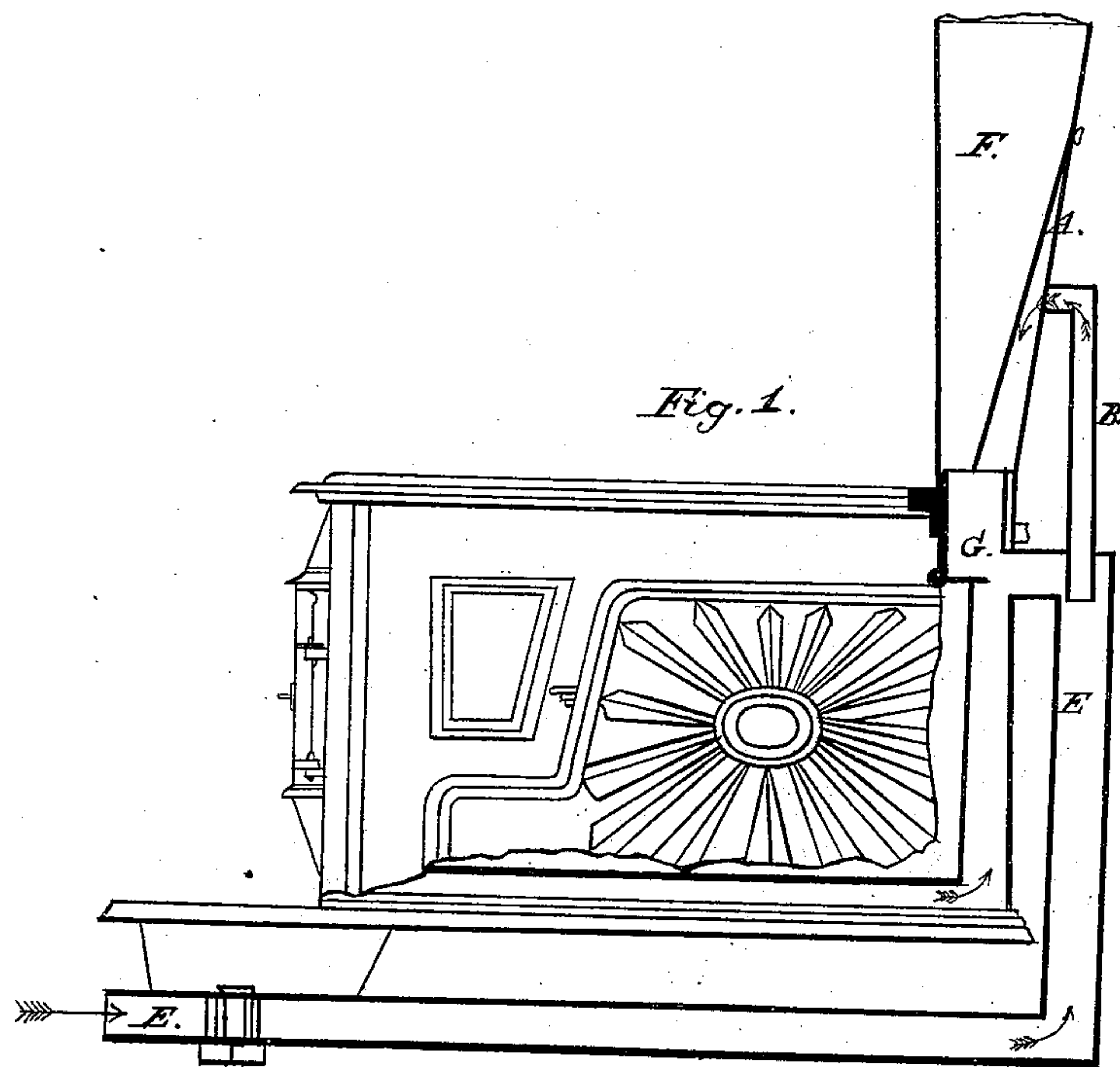
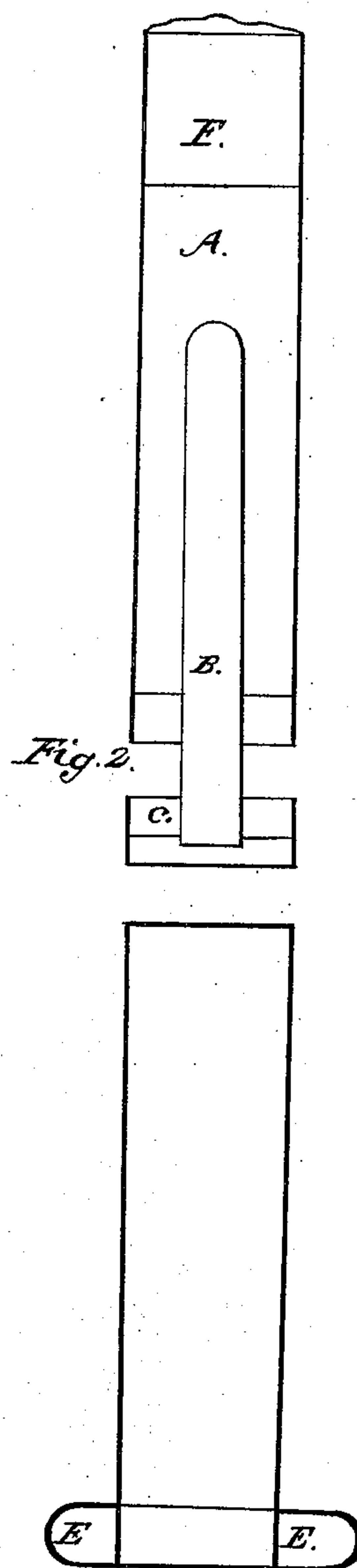
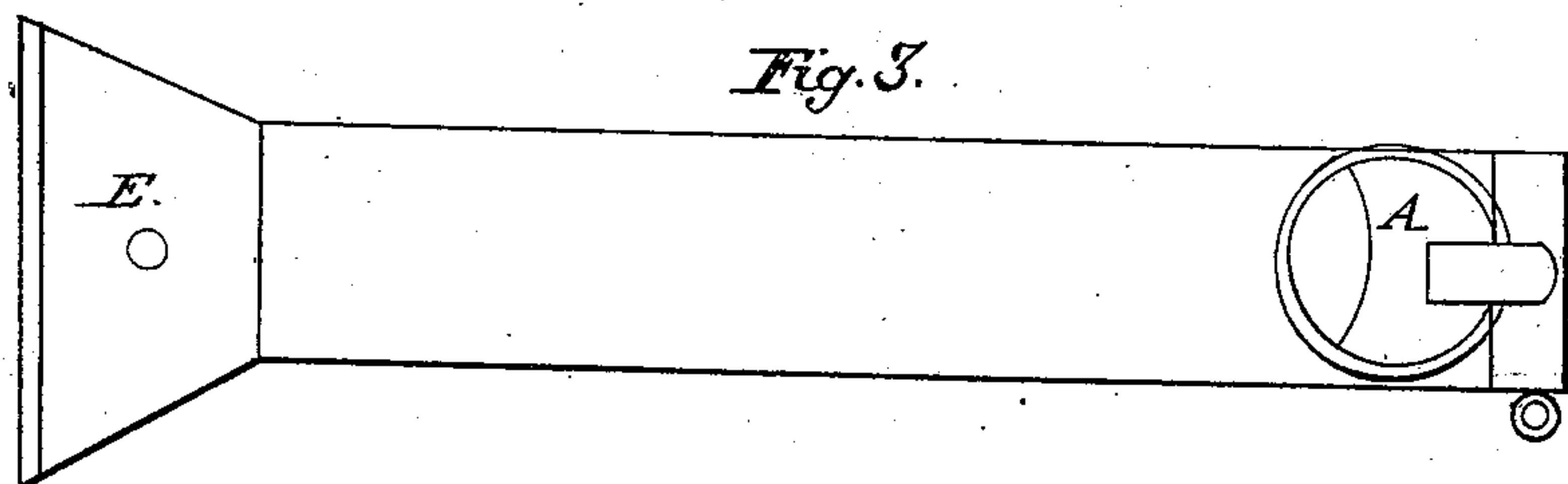


E. HAMBURGER.

Stovepipe.

No. 68,437.

Patented Sept. 3, 1867.



Witnesses:

R. H. Brown
A. Murphy

Inventor:

E. Hamburger

United States Patent Office.

E. HAMBURGER, OF DETROIT, MICHIGAN.

Letters Patent No. 68,437, dated September 3, 1867.

IMPROVEMENT IN STOVE PIPES TO PROMOTE COMBUSTION.

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, E. HAMBURGER, of Detroit, in the county of Wayne, and State of Michigan, have invented a new and useful Improvement in Fuel-Saving Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation.

Figure 2 is a vertical section of the apparatus, as applied in fig. 1; and

Figure 3 is a horizontal section of the same.

The nature of my invention consists in the construction and arrangement of the pipe or flue of fuel-burning apparatus, the device consisting in dividing the flue F at or near its lower part by an oblique diaphragm, A, (shown in figures,) so as to form a chamber open at the bottom into the throat of the stove or furnace, into which chamber the external cold air is admitted by one or more pipes or openings, (in the drawings by the pipe B.) The specific gravity of the cold air thus admitted being greater than that of the smoke and gaseous products of combustion, the latter are pressed back to the fire and their immediate escape by the flue retarded, by which a more perfect combustion is secured and economy of fuel attained.

Fig. 1 shows a stove or heater with the apparatus attached, the air entering at E, and passing in the direction indicated by the arrows through the pipe B. In the smoke pipe F, leading from the stove, is a partition or diaphragm, A, arranged as shown in the figure, which divides the smoke pipe obliquely into two parts, forming a chamber, open only at the bottom, into the upper part of which the cold air from the trunk E and pipe B enters. The stream of cold air, by reason of its greater specific gravity than that of the smoke and heated products of combustion from the fire in the stove or heater, descends through the chamber formed by the diaphragm, as described, and, uniting and mixing with the smoke of the fire at the opening at the bottom of the chamber, enters the stove or heater, pressing back the smoke, &c., having a tendency to prevent its immediate escape through the smoke pipe. This being at the throat of the stove, where the temperature is high, the smoke and combustible gases, which would otherwise escape, being mingled with the fresh air from the pipe B, are almost totally consumed, the incombustible products making their way off by the smoke pipe.

I claim as my invention, and desire to secure by Letters Patent—

The construction of the flue or pipe of fuel-burning apparatus, by dividing the same by an oblique diaphragm, A, forming a cold-air chamber, open at bottom into the throat of the stove or furnace, into which chamber the external air is admitted by one or more pipes or openings, retarding the escape of smoke and partially-consumed gases from the fire, and securing a more perfect combustion and economy of fuel, substantially as and for the purpose shown.

E. HAMBURGER.

Witnesses:

JAS. W. ROMEYN,
GEO. SEAMAN.