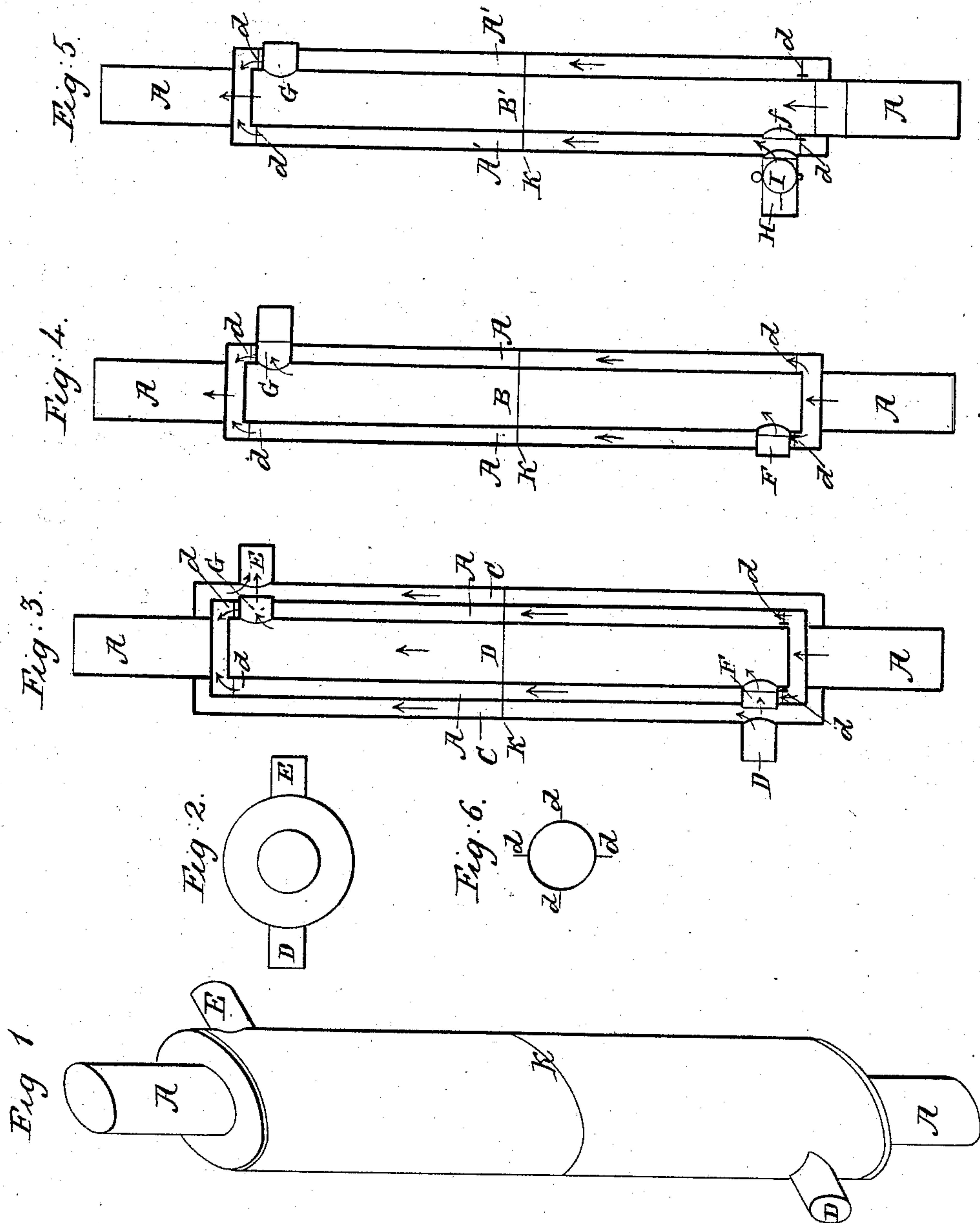


H. G. WHITAKER.  
Stovepipe Drum.

No. 55,939.

Patented June 26, 1866.



Witnesses.  
Joseph Steen  
George A. Hainey

Inventor.  
Harvey L. Whitaker.

# UNITED STATES PATENT OFFICE.

HARVEY G. WHITAKER, OF BRATTLEBOROUGH, VERMONT.

## STOVE-PIPE DRUM.

Specification forming part of Letters Patent No. 55,939, dated June 26, 1866.

### *To all whom it may concern:*

Be it known that I, HARVEY G. WHITAKER, of Brattleborough, in the county of Windham and State of Vermont, have invented a new and useful Improvement in Stove-Pipe Drums; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is an isometric projection of apparatus complete. A A, funnel for conveying smoke from stove or furnace to chimney; D, pipe for conveying cold air to air-chambers; E, exit-pipe for heated air.

Fig. 2 is a plan of apparatus complete. A, smoke-funnel; D and E, the same as in Fig. 1.

Fig. 3 is a longitudinal section of apparatus complete for conveying heated air into an adjoining apartment. A A A A, smoke funnel; B, interior air-chamber; C C, exterior air-chamber; D, pipe for conveying cold air into C C; F, pipe for conveying a portion of the current of cold air from C C into B; G, exit-pipe for heated air from B into C C; E, exit-pipe for heated air from both air-chambers; *d d d d*, steady-pins, for the purpose of keeping air-chamber B in the center of funnel A A.

The action is thus: The cold air enters at D and F, passes up air-chambers B and C C, becoming heated in its passage by being in contact with funnel A A, and is conveyed through G and E into an adjoining apartment. The arrows in the drawings show the directions of the different currents.

Fig. 4 represents the apparatus converted into another form, to be used for the purpose of saving fuel. Similar letters refer to similar parts. (See Fig. 3.) In this form the cold air enters at F, becomes heated in its passage up B, and passes out G into the same or an adjoining apartment, while at the same time

the heat is radiating from the surface of funnel A A.

Fig. 5 represents the apparatus converted into still another form, for the purpose of retaining the heat and preventing its radiating into the apartment. A B' A is the smoke-funnel, the caps having been removed from both ends of B' and a piece of pipe inserted in the bottom of it, connecting it with funnel A. The pipes G and F are closed. A' A' is the air-chamber, opening at top into funnel A. H is the entrance-pipe for cold air. I is a damper for regulating the supply of cold air. In this form the cold air enters at H, passes up air-chamber A' A', thence into funnel A, with smoke and heat from B', thus keeping funnel B' constantly surrounded with a body of cold air, thereby preventing the heat from radiating into the apartment.

Fig. 6 is a plan of a band, with steady-pins attached, which is slipped on the ends of B for the purpose of keeping it in the center of A A. The apparatus is capable of being easily converted into the different forms, being jointed at *k*, and the pipes having movable caps.

I am aware that stove-pipe drums with internal air-heating chambers have been hitherto devised. Hence I do not wish to be understood as claiming such device; but,

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

The combination of the internal drum, B, intermediate drum, A, and external drum, C, with the pipes D E F G, when the parts are constructed and arranged in the manner and for the purposes herein described.

HARVEY G. WHITAKER.

Witnesses:

GEORGE A. HINES,  
JOSEPH STEEN.