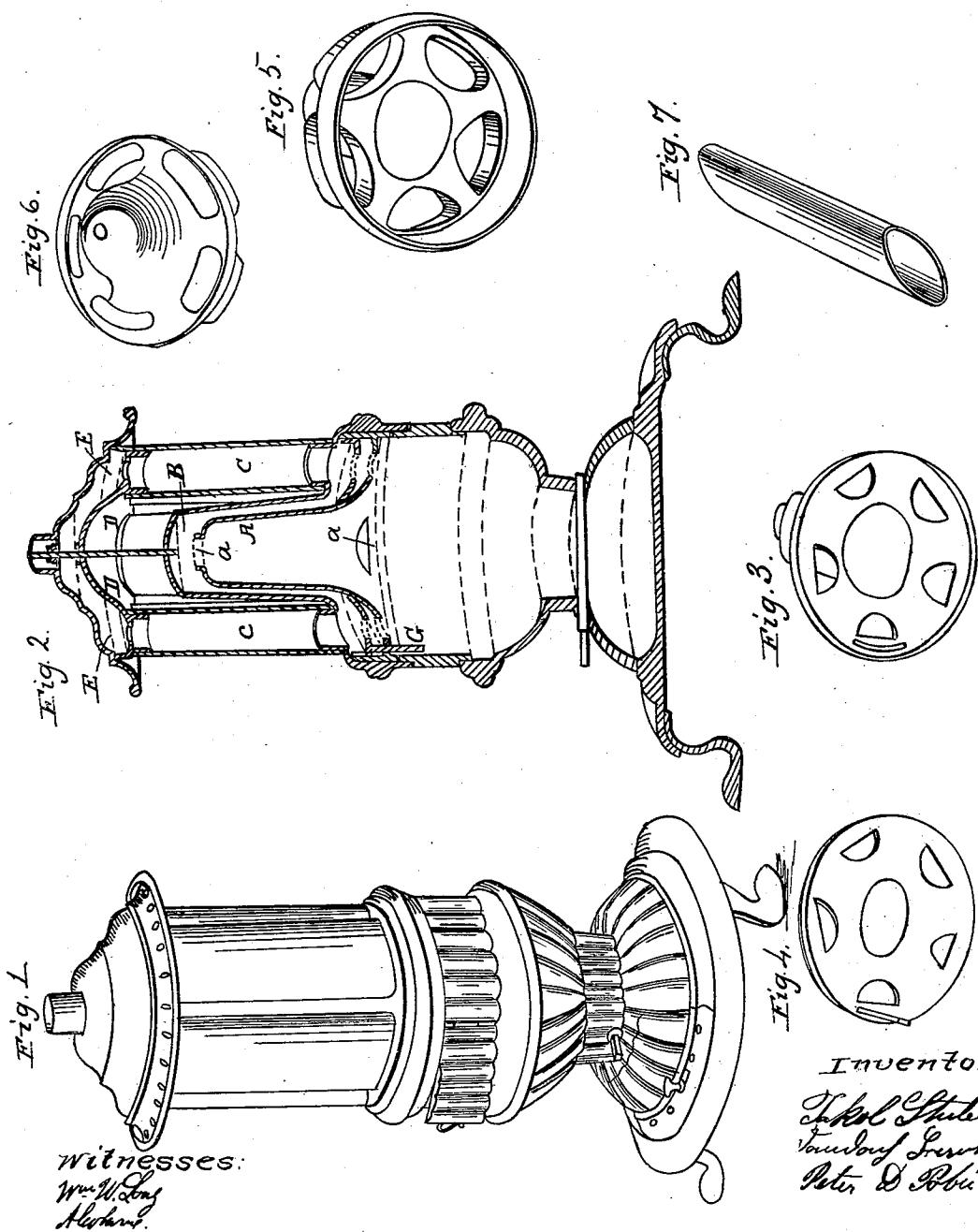


STUBER, FRANK & TOBIE.

Heating Stove.

No. 29,530.

Patented Aug. 7, 1860.



# UNITED STATES PATENT OFFICE.

JAKOB STUBER, FRIEDRICH FRANK, AND PETER D. TOBIE, OF UTICA, NEW YORK.

## STOVE.

Specification of Letters Patent No. 29,530, dated August 7, 1860.

To all whom it may concern:

Be it known that we, JAKOB STUBER, FRIEDRICH FRANK, and PETER D. TOBIE, of the city of Utica, county of Oneida, and State of New York, have invented a new and Improved Coal-Stove, called "The Excelsior Gas-Consumer;" and we do 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.

The nature of our invention is a coal stove so constructed as to consume all the gas generated from the ignited coal, and thus obtaining a much larger amount of heat from the same amount of fuel, than can be obtained from any of the ordinary coal burners.

The base of the stove is cylindrical in form and smallest at the grate. The top of the cylinder, which is calculated to vary in length, according to the size of the stove, is closed by an iron plate fitting on the top thereof, and perforated with holes, at regular distances, around its outer edge. In the center of this plate there is a hollow cone, open at the top and bottom and running up such distance as the designer may indicate to make the stove of proper proportion.

The holes in the perforated plate are closed by a collar placed upon and revolving around the hollow cone and fitting into a rim which is placed around the outer edge of the perforated plate, and which acts as a damper. Over this hollow cone is placed a larger hollow cone which is closed at the top and runs down to within a short distance of the bottom of the smaller cone, leaving a space between them. This larger

cone flanges out at the bottom and connects with sheet iron flues placed around and let through the outer edge thereof, by which they are held in their place at the bottom and at the top by a plate through which they are let. Over this plate there is still another which forms the top of the stove. The whole are held together by a rod running from the top of the larger hollow cone to the plate at the top of the sheet iron flues, and fastened by a nut working in a thread cut in the top of the rod.

Figure No. I is a perspective view of the stove complete in all its parts. Fig. No. II is a transverse section of the stove,

showing the internal arrangement of the parts. Fig. No. III is the perforated plate at the top of the cylinder with the hollow cone attached. Fig. No. IV is the collar placed upon and revolving around the smaller hollow cone and acting as a damper to close the holes in the perforated plate. Fig. No. V is the larger hollow cone, with the flange at the bottom, showing the connection of the sheet iron flues. Fig. No. VI is the plate at the top of the sheet iron flues, and Fig. No. VII is one of the sheet iron flues.

The fire having been made in the cylinder the damper should be kept open allowing the draft to pass directly through the flues C C until ignition has fully taken place, when the damper should be closed, which forces the draft up the smaller hollow cone A, through the openings a a, into the larger hollow cone B, from thence down the aperture between the two hollow cones to the sheet iron flues C C, thence up the same to the aperture between plates D D at the top of the flues C C and plate E E, the top of the stove, into the stove pipe, F being the rod and not attached which holds the stove together.

The hollow cone A and the apertures between the two hollow cones A and B form a vacuum into which the gas generated by the burning coal escapes and is consumed. The hollow cone B and the sheet iron flues C C present a very large radiating surface for the escape of the heat.

G represents a pin which is attached to the collar revolving around the smaller hollow cone acting as a damper and by which it is worked.

What we claim as new and desire to secure by Letters Patent, is—

The arrangement of the perforated plate with smaller hollow cone A, attached, larger hollow cone, B, and flues C, C, in connection with the revolving damper Fig. No. IV, the whole being constructed and operated in the manner and for the purposes set forth.

JAKOB STUBER.  
FRIEDRICH FRANK.  
PETER D. TOBIE.

Witnesses:

Wm. W. LONG,  
ALEX. COBURN.