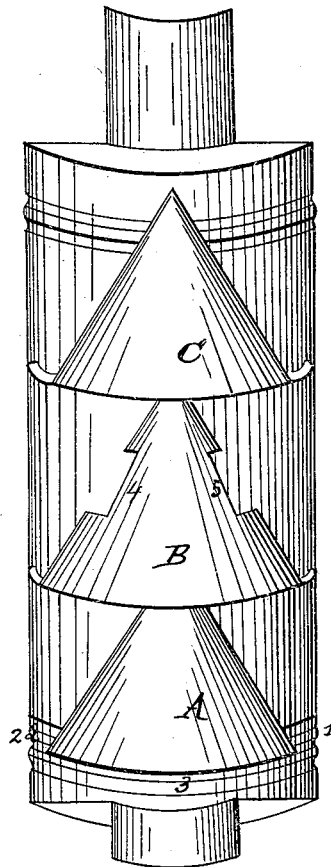


J. CRIMMNIUS.

Stovepipe Drum.

No. 53,954.

Patented April 17, 1866.



witnesses  
D. Prehane Duffell  
W. G. Thompson

Inventor  
John. Crimmnius

# UNITED STATES PATENT OFFICE.

JOHN CRIMMINS, OF DETROIT, MICHIGAN.

## STOVE-PIPE DRUM.

Specification forming part of Letters Patent No. 53,954, dated April 17, 1866.

*To all whom it may concern:*

Be it known that I, JOHN CRIMMINS, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful machine for saving or economizing heat and fuel in coal or wood stoves and preventing the soot and ashes from accumulating in the pipes or drums thereof, styled the "Crimmins Heat and Fuel Saving Drum;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and the letters of reference marked thereon, said drawing being a perspective view, whereby others skilled in the art can make and use the same.

My invention consists in providing a cylindrical stove-drum, erected perpendicularly over a stove and in proportion to the size thereof, with certain interior cores or funnels of sheet-iron or other malleable metal placed above each other and arranged in the manner following, viz: Within the drum, and just above the entrance of the smoke-pipe into the same, is set a perpendicular cone of funnel shape, which extends upward in the drum about one-third of its (the drum's) length, the lower line of this cone being about three inches from the base of the drum. This cone is held in its place by three or more flanges or strips of sheet-iron or other malleable metal, attached or riveted to it and the body of the drum, and when fixed the circumference of its base is distant one and a half inch and upward from the interior sides of the drum, leaving this space to allow the passage of the smoke through the drum. Immediately above this (first) cone, and in the interior of the drum, is a second and the middle or central cone, attached or held in its place in like manner as the first cone, and having its apex extending upward and into the third cone about one-half of said third cone's length or height. This cone is of the same general shape as the first, but broader at its base, so as to leave on a wood-stove a space of about one-quarter of an inch and on a coal-stove a space of about one-half an inch between the circumference of its (the cone's)

base and the interior of the drum. Said space being designed to allow the ashes and soot to pass down. In both sides of this second cone, and as near as practicable to its apex, two square openings are cut, proportioned in size to the size of the smoke-pipe to which the drum is attached—*i. e.*, in a stove-pipe of six inches in diameter these openings are each about three inches square. Through these openings the smoke passes. Without these square openings in the second cone the heat, after descending and passing around the base of the first cone, would find itself in the direct line of the draft, and would pass with it along the side of the drum straight up to the stove-pipe without entering the second or third cone and experiencing the detention designed thereby; but by broadening the base of the second cone, so as to narrow the space for the upward passage or draft, and cutting these openings or slits in the middle cone, the ascending heat is in large measure first drawn in and detained in the middle cone, and then thrown into the apex of the third cone, where it is held until it again passes around the base of the third cone and out of the drum into the stove-pipe. The third cone and highest is placed immediately over the central or middle cone, with its apex about on a line or even with the upper end of the drum, and its base lowered until about opposite and around the middle of the second cone. This upper or third cone is in shape similar to the first or lower one, and is fastened or held in its place in the same manner as said first cone.

The operation and construction are obvious from the foregoing.

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

The construction, combination, and arrangement, within cylindrical stove-drums, of three or more cones, substantially as and for the purposes herein set forth and described.

JOHN CRIMMINS.

In presence of—

D. BETHUNE DUFFIELD,  
HENRY M. DUFFIELD,  
W. G. THOMPSON.