(No Model.)

U. J. WAKEMAN.

HEATING DRUM OR SPARK ARRESTER.

No. 374,436. Patented Dec. 6, 1887.

Fig. 1.

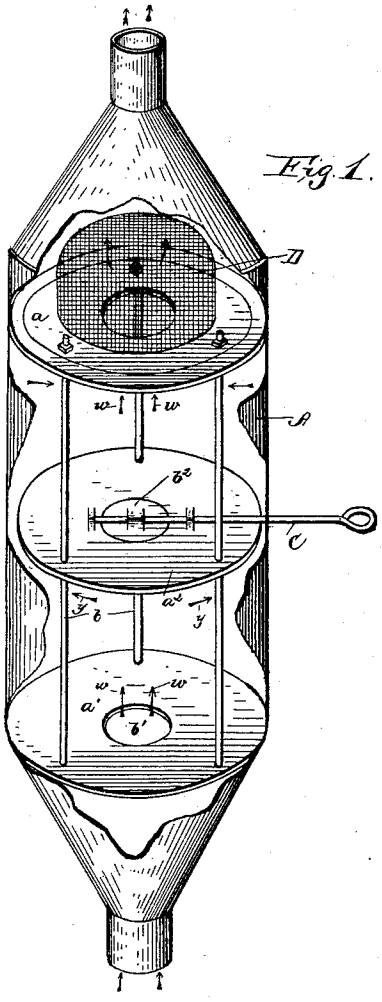
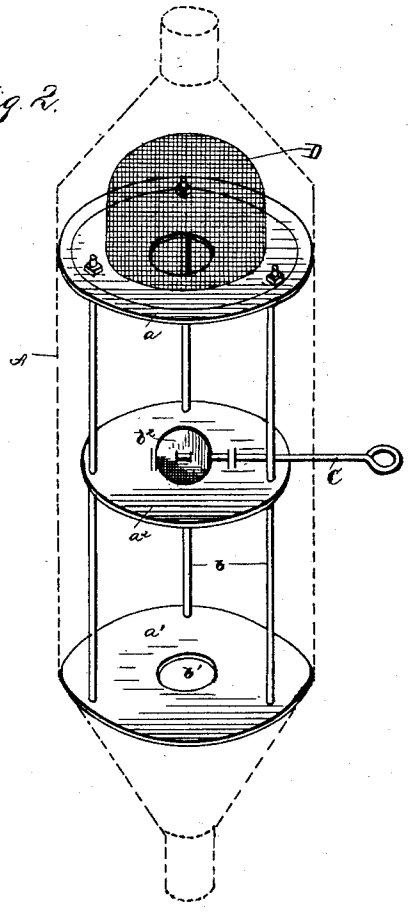


Fig. 2.



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UNITED STATES PATENT OFFICE.

URIAH J. WAKEMAN, OF BIG RAPIDS, MICHIGAN.

HEATING-DRUM OR SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 374,436, dated December 6, 1887.

Application filed July 12, 1887. Serial No. 244,113. (No model.)

To all whom it may concern:

Be it known that I, URIAH J. WAKEMAN, a citizen of the United States of America, residing at Big Rapids, in the county of Mecosta and State of Michigan, have invented certain new and useful Improvements in Heating-Drums or Spark-Arresters, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in heating-drums or spark-arresters; and it consists in the detailed construction, combination, and arrangement of the parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my invention with parts broken away, and Fig. 2 is a similar view showing the drum or casing in dotted lines.

This invention is designed to be applied to a stove-pipe of any ordinary cooking or heating stove, or to any smoke-stack, &c.

In carrying out my invention I employ a long cylinder or drum, A, the end and cap of which are approximately cone shape and taper into narrow extensions for fitting to the stove-pipe. Within this cylinder or drum A are disposed three or more circular plates, the upper and lower ones, *a a'*, of which fit snugly against the inner surface of the cylinder or drum, as shown, while a narrow space is left between the centrally-disposed plate a^2 and the cylinder or drum. These plates are connected together by and secured to three or more vertically-disposed rods, *b b*, the upper ends of which are threaded and provided with nuts for retaining the same in position. Each circular plate has a central aperture, *b'*, formed therein, the aperture in the plate a^2 having a damper, b^2, working therein, the same being controlled by a horizontally-disposed handle, C, projecting beyond the cylinder or drum. This handle of the damper b^2 is held in place by suitable keepers, and is passed through an eye formed by a piece of metal struck out from the center of the damper.

D is a spark-arrester disposed on the upper circular plate, *a*, over the central opening therein, said spark-arrester being made of wire screen, circular in horizontal section at its center, and of approximately inverted-U shape in vertical section.

From what has been said it will be seen that the current of air will cause the sparks on entering the lower end of the cylinder or drum to pass in the direction of the arrows *w*, and until the fire in the stove from which the sparks are egressing is sufficiently started or under way the damper b^2 is caused to occupy a vertical position, permitting the sparks and smoke to pass through the opening or aperture of the central plate, a^2, and on out through the cone-shaped top of the drum.

After the fire is sufficiently started, the damper is turned into a horizontal position, causing the sparks and smoke to pass in the direction of the arrows *y* and up around the sides of the central plate against the inner surface of the cylinder or drum, and upon passing through the aperture in the upper plate, *a*, the sparks are prevented from passing out through the upper end of the drum by reason of the wire screen D before described, while the smoke passes on out through the upper end of the drum into the stove-pipe.

My invention comprises simple and effective means for retaining for a limited time the heat passing from the stove to the pipe of which my invention is attached, and also prevents the sparks from the fire from passing through the drum into the upper pipe, which frequently causes fire and resulting damages.

I claim as my invention—

1. The herein-described heating-drum, comprising the cylinder or drum having cone-shaped ends, the circular plates connected by rods and having central apertures, the middle smaller one of which plates is provided with a damper, and the wire screen spark-arrester disposed over the central aperture in the top one of said plates, all constructed and arranged substantially as shown and described.

2. The combination, with the cylinder or drum, of the series of circular plates disposed

therein and having central apertures, the central one of said plates being smaller than the others and having a damper working in its central aperture, substantially as shown and described.

3. The combination, with the cylinder or drum having the cone-shaped ends, of the circular plates having central apertures, the nutted rods connecting said plates, the damper working in an aperture of the central smaller one of said plates, and the spark-arrester disposed on the upper surface of the topmost plate over the aperture thereof, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

URIAH J. WAKEMAN.

Witnesses:

S. G. WEBSTER,

WINFIELD S. TUCKER.