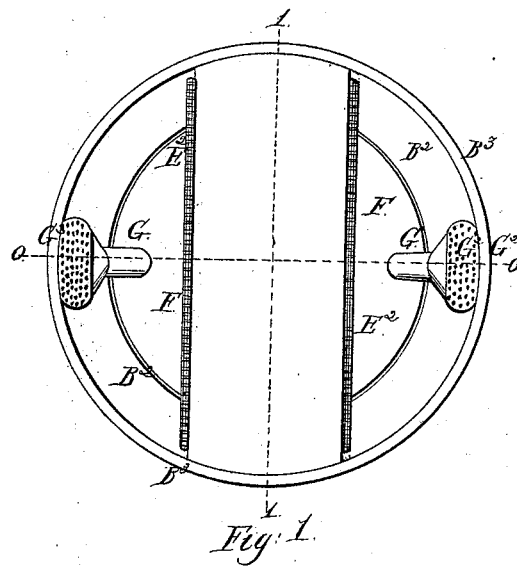
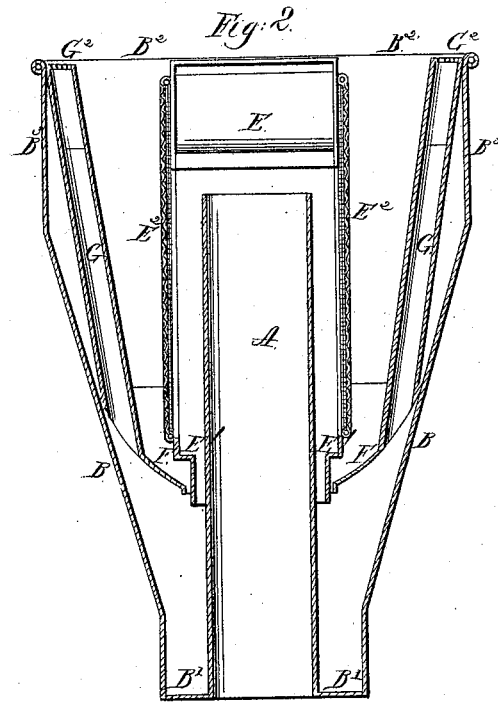
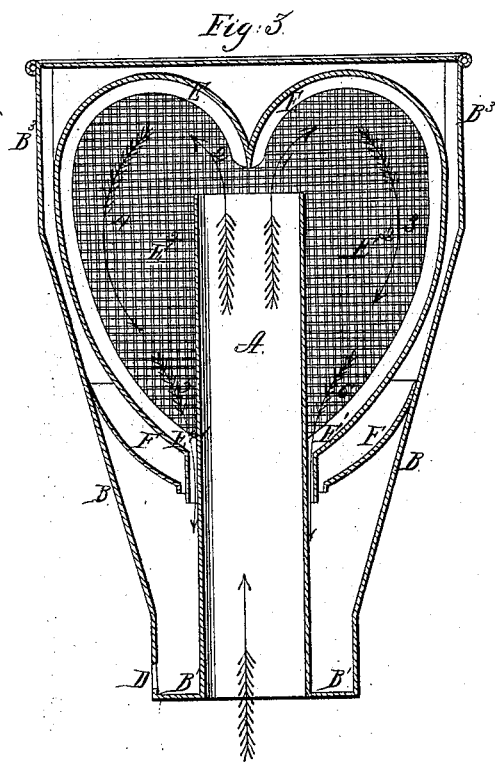


*S. Swett, Jr.,
Spark Arrester,*

No. 4,715,

Patented Aug. 26, 1846.



UNITED STATES PATENT OFFICE.

SAMUEL SWETT, JR., OF BOSTON, MASSACHUSETTS.

SPARK-ARRESTER.

Specification of Letters Patent No. 4,715, dated August 26, 1846.

To all whom it may concern:

Be it known that I, SAMUEL SWETT, JR., of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Apparatus for Arresting Sparks, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

10 Figure 1 is a top view or plan. Fig. 2 is a vertical section at the line *x x* of Fig. 1. Fig. 3 is a vertical section at the line *o o* of Fig. 1.

A represents the usual smoke pipe. B is an outside case that surrounds the smoke pipe A, commencing at the circular bottom plate B' and gradually increasing in diameter to the top of the smoke pipe A forming an inverted hollow frustum of a cone or funnel for confining the sparks having a door D near the bottom thereof for removing the sparks. The upper portion of the case, which is extended above the top of the smoke pipe is made cylindrical as at B^s—the same diameter as the upper end of the funnel shaped portion of the case. E is a heart shaped cap, or bonnet, placed over the upper end of the smoke pipe for turning the sparks downward around the outside of the smoke pipe A into the bottom of the case—the smoke pipe passing through a circular collar inserted into a round hole in the bottom of the heart shaped cap of a diameter a little greater than the diameter of the smoke pipe forming a space E' between the pipe and collar large enough for the sparks to pass through said space into the case. The

edges of the heart are made solid and smooth for the purpose of turning the sparks to the right and left in a curved direction and then downward toward the outside of the pipe as indicated by the arrows 1, 2, 3, 4, 5, 6. The sides of the heart shaped cap are closed with reticulated wire, or metallic gauze E², of meshes small enough to arrest the small light sparks and at the same time allow the smoke to pass freely through to the upper or cylindrical end of the smoke pipe which is entirely uncovered as at B².

F is a concave circular partition plate secured to the inside of the case and surrounding the outside of the smoke pipe without touching it for guiding the sparks to the bottom of the case. The arrows 3, 4, 5, 6, indicate the direction that the sparks will take after leaving the top of the smoke pipe, and upper part of the cap.

G G are two pipes extending from the top of the case to the bottom of the concave plate F for ventilating the apparatus covered on top with wire gauze as at G², G².

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

Placing a heart shaped cap or bonnet E having solid edges and reticulated sides, inside the outer case B and over the upper part of the smoke pipe A, in the manner and for the purpose set forth, or other mode substantially the same, and for a like purpose.

SAMUEL SWETT, JR.

Witnesses:

HENRY B. STANTON,
JOEL P. BISHOP.