(Model.)

T. F. BINGHAM.

BEE SMOKING APPARATUS.

No. 264,614. Patented Sept. 19, 1882.

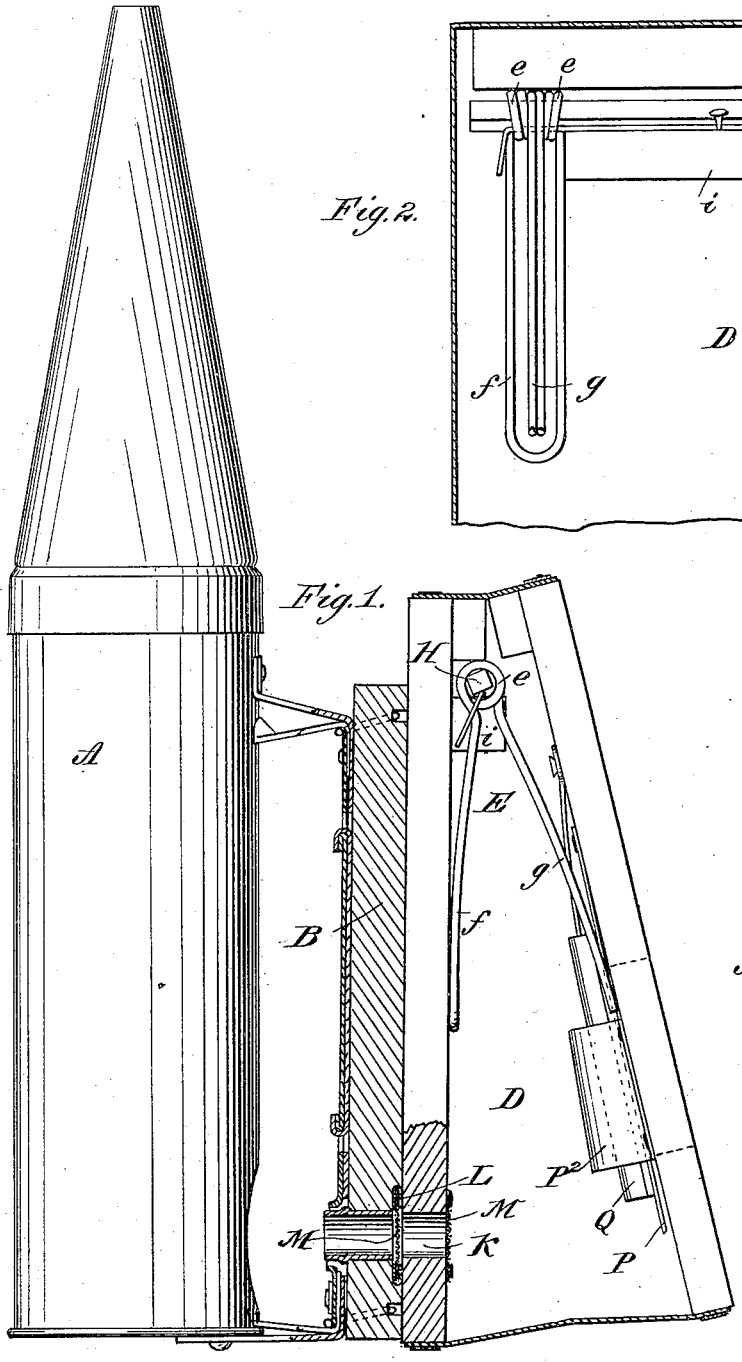

Fig. 1.

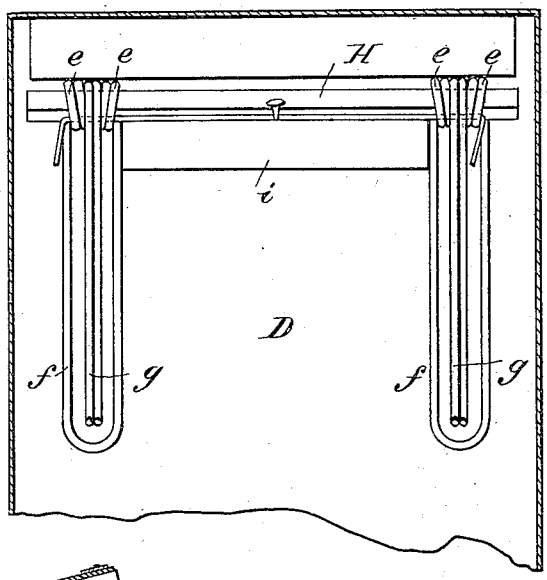

Fig. 2.

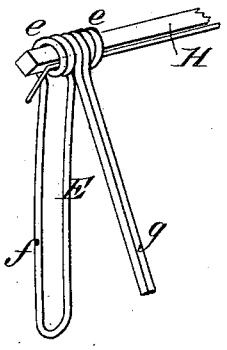

Fig. 3.

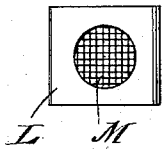

Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

TRACY F. BINGHAM, OF ABRONIA, MICHIGAN.

BEE-SMOKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 264,614, dated September 19, 1882.

Application filed March 16, 1882. (Model.)

To all whom it may concern:

Be it known that I, TRACY F. BINGHAM, of Abronia, in the county of Allegan and State of Michigan, have invented a new and useful Improvement in Bee-Smoking Apparatus, of which the following is a full, clear, and exact description.

My invention relates to certain improvements on that for which Letters Patent were granted to me under date of January 29, 1878, No. 199,611, and reissued under date of July 9, 1878, No. 8,326.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my invention with the bellows in longitudinal section. Fig. 2 is an inside view of one of the leaves, showing the springs. Fig. 3 is a perspective view of the spring and its carrying-rod. Fig. 4 is a detail view of the screen.

A represents the stove, and B the board connected therewith and carrying the bellows D, as in my patent above referred to.

My improved spring E is made of a wire, which is first bent double midway of its length. Then midway of said doubled length it is bent to form coils *e*. This forms a V-shaped spring with two branches, *f g*. The branch *g* is composed of the two parts of the wire between the coils *e* and the ends of the wire, and the branch *f* is composed of the two parts between the coils and the point where the wire is first doubled. The parts which form the branch *g* are close together and work between the coils of the branch *f*. Two of these springs thus formed are used for operating the bellows by separating the leaves. They are carried by a bar, H, near the ends thereof, said bar being passed through the coils *e* and attached to a block, *i*, fastened to one of the leaves of the bellows, or secured in any suitable manner. The spring thus formed operates more effectually than the one employed in my patent aforesaid.

The exhaust-nozzle K of the bellows is provided with a wire netting or screen, M, which may be tacked or nailed to the leaf, as shown on the inner side thereof in Fig. 1, or may be slipped behind a perforated plate, L, as shown on the outer side of said leaf in Fig. 1 and in detail in Fig. 4. This screen serves as a spark-arrester, and prevents the entrance of sparks or coals into the bellows.

Instead of using leather for the valves Q, the lining P and covering-band P^2 are composed of artificial leather, or of some material which will not be affected by weather or attract rats or mice.

The advantages of my invention are: the spring E, being formed with two branches and oscillating from the coils as a center, operates more effectually and with less friction than the one heretofore employed. The screen M acts as a spark-arrester, and prevents the entrance of sparks or fire into the bellows. The artificial leather or substitute employed in connection with the valve does not become stiff and brittle from atmospheric influences, and is not liable to be destroyed by rats or mice.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a bee-smoking apparatus, the combination, with the bellows D, of the spring E, provided with the coils *e* and branches *f g*, and carried by the bar H, as herein shown and described.

TRACY F. BINGHAM.

Witnesses:
JAS. SMITH,
CHAS. W. EDSELL.