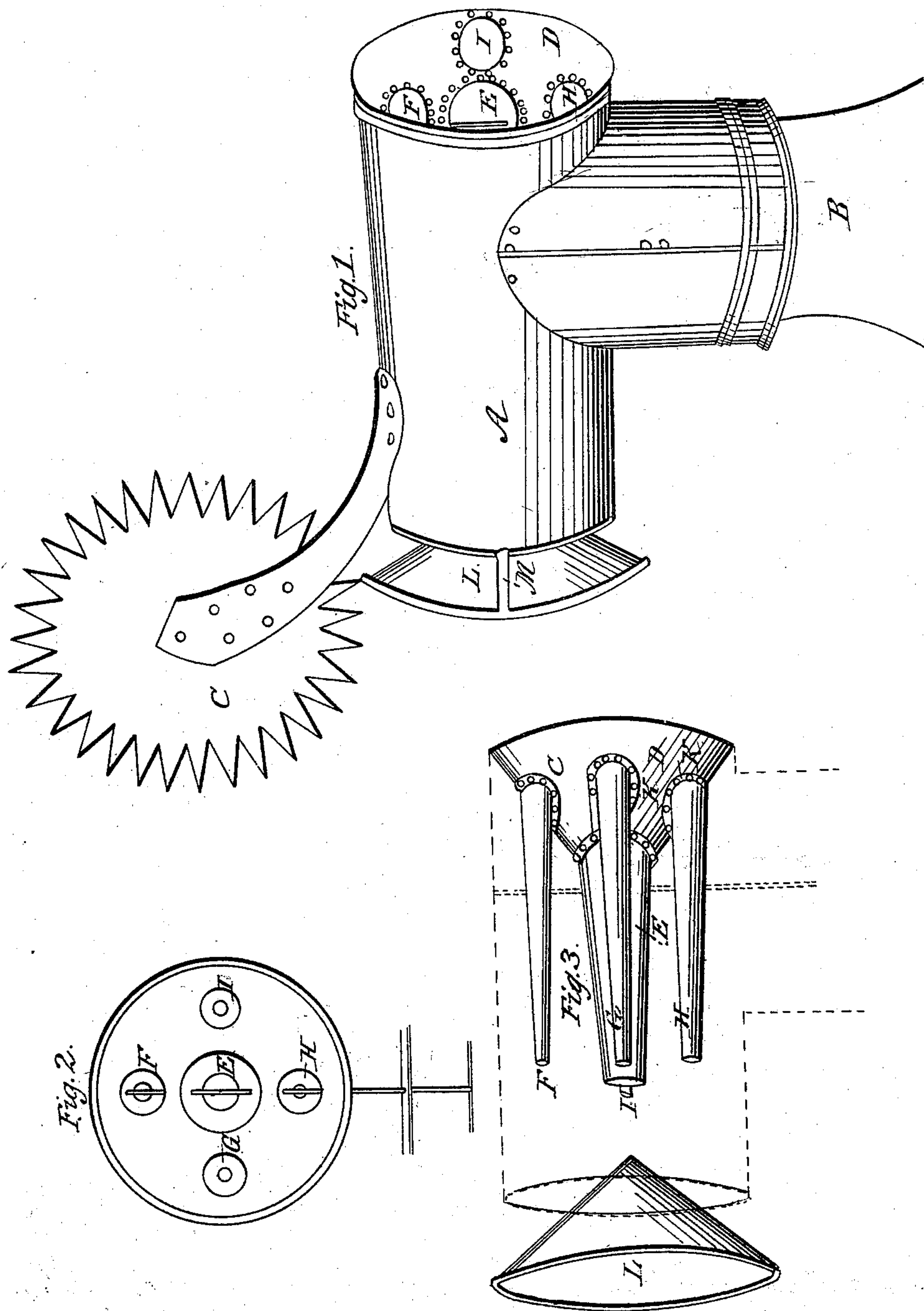


S. M. ALLEN.
Chimney Cowl.

No. 2,568.

Patented April 21, 1842.



UNITED STATES PATENT OFFICE.

STEPHEN M. ALLEN, OF BOSTON, MASSACHUSETTS.

CHIMNEY-COWL.

Specification of Letters Patent No. 2,568, dated April 21, 1842.

To all whom it may concern:

Be it known that I, STEPHEN M. ALLEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Blowers or Hoods or Cows usually applied to the tops of chimneys for the purpose of increasing the draft of the same or preventing them from smoking, of which the following is a full and exact description, reference being had to the accompanying drawings, which, combined herewith, form my specification, wherein I have set forth the principles of my improvement, by which it may be distinguished from other inventions for a similar purpose, together with such parts or combinations as I claim and for which I solicit Letters Patent.

Figure 1, of the above mentioned drawings is a perspective elevation of a cowl containing my improvements. Fig. 2, is an elevation of its windward end, and Fig. 3, is a perspective representation of the air cones inserted in the body of the cowl, as will be hereinafter described.

In the construction of my improved chimney blower, so far as regards a revolving right-angled tubular cap A, Fig. 1—turning on the top of a cylindrical pipe B, (inserted in the upper part of a vertical flue), by the operation of the wind on a vane C—it is the same as those heretofore used. But instead of having that end which is opposed to the quarter from which the wind blows closed, as is customary, I form the same reëntering or open, by the insertion of a conical mouth-piece or head D, as seen in the drawings, into which I introduce a series of horizontal conical tubular frusta E, F, G, H, I, their ends in contact therewith being fitted air tight or nearly so by flanges and rivets as seen at K, K, K, &c., Figs. 1, and 3. The number and size of these tubes may be varied according to circumstances. Their opposite ends are carried several inches beyond or project over the opening of the vertical flue, in the direction of the mouth of the cowl as seen in Fig. 3. The effect of the introduction of these tubes is as follows: The mouths of the tubes being always presented to the windward, cause the air impinging against the windward end of the cowl to be concentrated and to rush through

the tubes with great velocity, and the smoke rising through the chimney, commingling with the several moving currents, is rapidly forced out by the same, thus causing the smoke and hot air below, to rise and take the place of that so discharged, by which operation a very strong draft is created in the flue, which will be increased according to the strength of the wind.

The leeward end of the horizontal pipe or cap A or that end from which the smoke, &c., issues or is discharged, is arranged with a hollow cone L in front of the mouth of the pipe. The base of this cone is somewhat larger in diameter than the horizontal pipe and the apex comes a little within the mouth of said pipe. This cone is confined to the horizontal pipe by means of two or more curved bars or rods M M the ends of which are connected to the periphery of the base of the cone and the interior of the mouth of the pipe L as shown in Figs. 1, and 3. This arrangement of the leeward end of the pipe A of the cowl is intended to prevent the wind from blowing down the chimney when it rebounds or is reflected from an adjacent wall or roof or when (as frequently occurs) by any sudden gust of wind the discharging end is turned around to the windward, the conical shape being peculiarly calculated to protect the mouth of the pipe or cap A, as it deflects or reflects or stops the wind in whichever direction it may come and at the same time allows free egress to the smoke, &c., from the chimney. This method of protecting the mouth of the cap or pipe A is particularly essential and indeed almost indispensably necessary to smoke blowers having such an internal construction as that above described as a counter current would effectually stop the operation of the conical air pipes and destroy the utility of the smoke blower.

The method of supporting the cowl, on the chimney, so that it may be turned about by the action of the wind on the vane does not differ essentially from others in common use.

Having thus described my invention I shall claim—

Protecting the mouth or leeward end of the discharging pipe of a turning cowl by a hollow cone, the diameter of the base of

which shall be somewhat larger than the diameter of the mouth of the discharging pipe; and I also claim the combination of the said cone with the conical air tubes arranged in the interior of the discharging pipe, the whole being constructed and operating substantially as above described.

In testimony that the foregoing is a true

description of my said invention and improvement I have hereto set my signature this twenty fifth day of February in the year eighteen hundred and forty two.

STEPHEN M. ALLEN.

Witnesses:

R. H. EDDY,

EZRA LINCOLN, Jr.