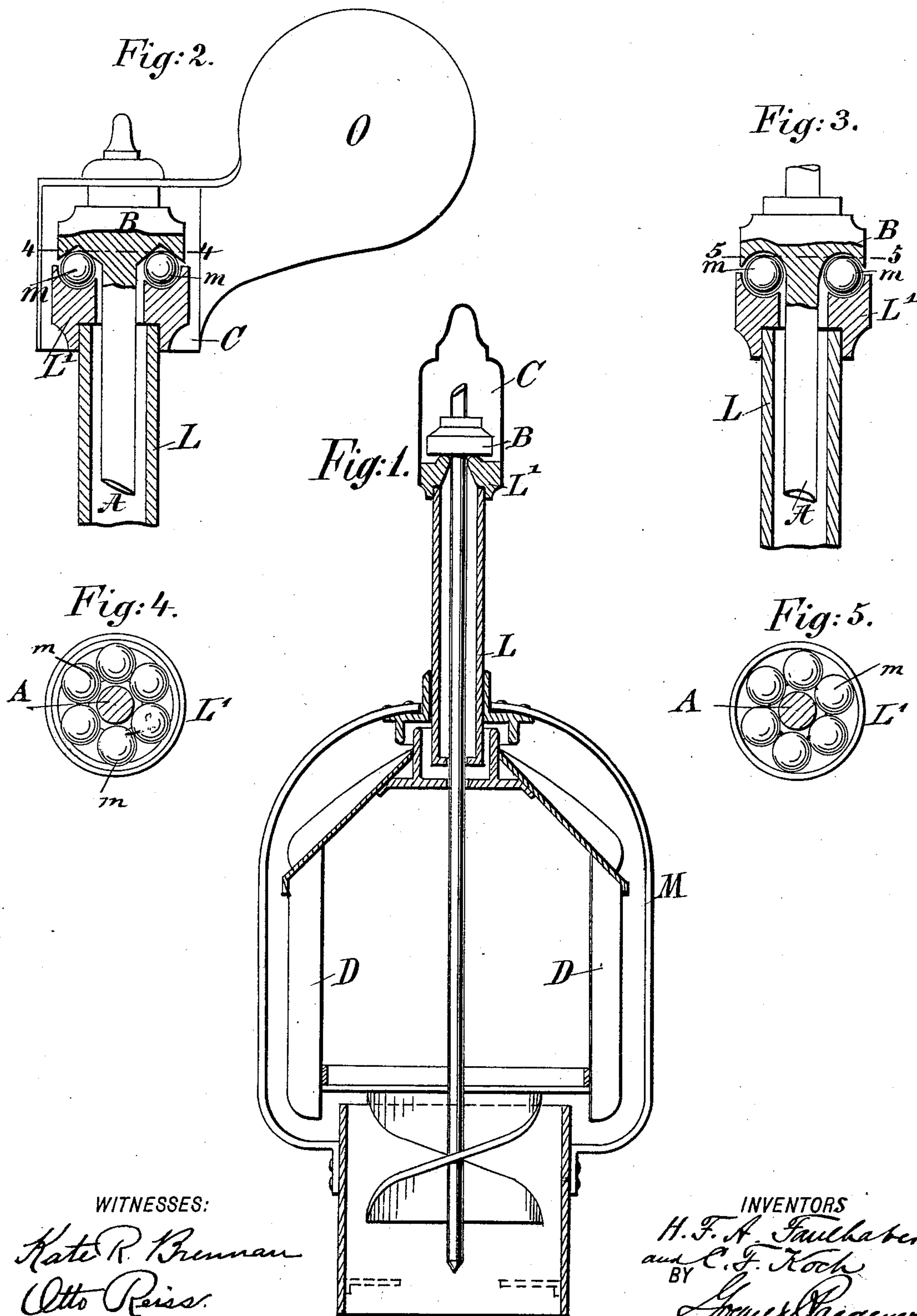


(No Model.)

H. F. A. FAULHABER & C. F. KOCH.
CHIMNEY COWL.

No. 518,398.

Patented Apr. 17, 1894.



WITNESSES:

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CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 518,398, dated April 17, 1894.

Application filed May 4, 1892. Serial No. 431,852. (No model.)

To all whom it may concern:

Be it known that we, HERMANN FRIEDRICH AUGUST FAULHABER and CHRISTOPH FRIEDRICH KOCH, subjects of the King of Würtemberg, German Empire, and residents of Schwabisch Hall, Germany, have invented certain new and useful Improvements in Chimney-Cowls, of which the following is a specification.

10 Chimney cowls, screw ventilators, &c., in which the spindle is rigidly connected with the rotative part of the cowl have the disadvantage that the bottom bearing end of the spindle becomes clogged by rust, soot, &c.,
15 thus rendering it very difficult for the rotative part to turn. This drawback cannot be entirely avoided by providing the bottom bearing with protecting casings and the like.

20 The object of our invention is to provide a new and improved cowl in which the bottom bearing for the rotative part is completely avoided, and thus the stopping of said rotative part by rust and soot is also avoided.

25 The invention consists in the combination with a cowl casing, of a tube projecting upward from the same, a spindle passed through the casing and tube, a collar fastened to the spindle and resting on the top of said tube, and a protecting casing separate from the collar and extending sufficiently far above and
30 below the bearing parts as to afford a complete guard against the entrance of water and a substantial protection against dust the rotative part of the cowl being attached to the spindle.

35 The invention also consists in the construction and combination of parts and details which will be fully described hereinafter and finally pointed out in the claim.

40 In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of our improved chimney cowl. Fig. 2 is an enlarged detail view of the top part, showing a modification. Fig. 3 is a similar view, showing another modification. Fig. 4 is a sectional view,
45 on the line 4 4, of Fig. 2, showing the ball bearing, and Fig. 5 is a similar view, on the line 5 5, of Fig. 3, showing the ball bearing.

50 Similar letters of reference indicate corresponding parts.

The spindle A is provided at its upper end with a collar B, which rests on a bearing ring L' formed on the upper end of an upwardly projecting tube L fastened at its lower end to the casing M of the cowl. The rotative cylinder D of the cowl is fastened to the said
55 spindle A and suspended by means of the same from the top of the tube L. Rust and soot cannot effect the support for the said spindle and the rotating cylinder, and thus
60 the same can turn very freely. For the purpose of reducing the friction still more, the ring L can be provided with a groove for receiving balls m, surrounding the upper end of the spindle and forming a ball bearing, the
65 collar B being provided at its under side with a groove also fitting the balls, as is shown in Figs. 2 and 3. In this manner the spindle a is guided concentrically to the tube L, and at
70 the same time is held a greater or less distance from the end of the tube. As shown in Figs. 2 and 3 three of the balls are larger and three of the balls are smaller. The collar B is thus supported by the larger balls
75 and the smaller balls merely serve for holding the larger balls at the proper distance from each other. In Fig. 2 the groove for the balls is so arranged that the pressure of the balls on the ring L is vertical. In Fig. 3 the
80 grooves are so arranged that the pressure exerts itself outward and downward.

If the cowl is to be provided with a vane O, the same can be attached in any suitable manner to the top of the spindle or to the collar B, as shown in Fig. 2.

85 It will be seen that in both forms shown in Figs. 1 and 2 respectively, either the bearing-ring L' and collar B are inclosed by a dust-protecting casing C, Fig. 1, rising from the tube L, or by a casing C', Fig. 2, depending from the
90 vane O. The casings C or C' are separate from the collar B and extend sufficiently far above and below the point of bearing as that the bearing surfaces are fully protected against dust and rain, and should the spindle
95 A for some reason be accidentally raised within the tube L, the protecting casing will prevent the loss or displacement of the ball-bearings, in case they are employed.

Having thus described our invention, we 100

claim as new and desire to secure by Letters Patent—

5 In a chimney-cowl, the combination with a cowl-casing and an upwardly projecting tube fixed thereto, at its lower end of a spindle passed through the tube and carrying the ro-
tative part of the cowl, a collar fixed to the top of the spindle and adapted to turn upon the upper end of the tube, and a protecting
10 casing separate from said collar and extending sufficiently far above and below the bear-

ing parts as to protect the latter against dust and rain, substantially as herein shown and described.

In testimony that we claim the foregoing as 10 our invention we have signed our names in presence of two subscribing witnesses.

HERMANN FRIEDRICH AUGUST FAULHABER.
CHRISTOPH FRIEDRICH KOCH.

Witnesses:

JOHANNES HÄFELE,
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