No. 675,952. Patented June 11, 1901.

D. KELLER.

CHIMNEY COWL.

(Application filed June 27, 1900.)

(No Model.) 2 Sheets—Sheet 1.

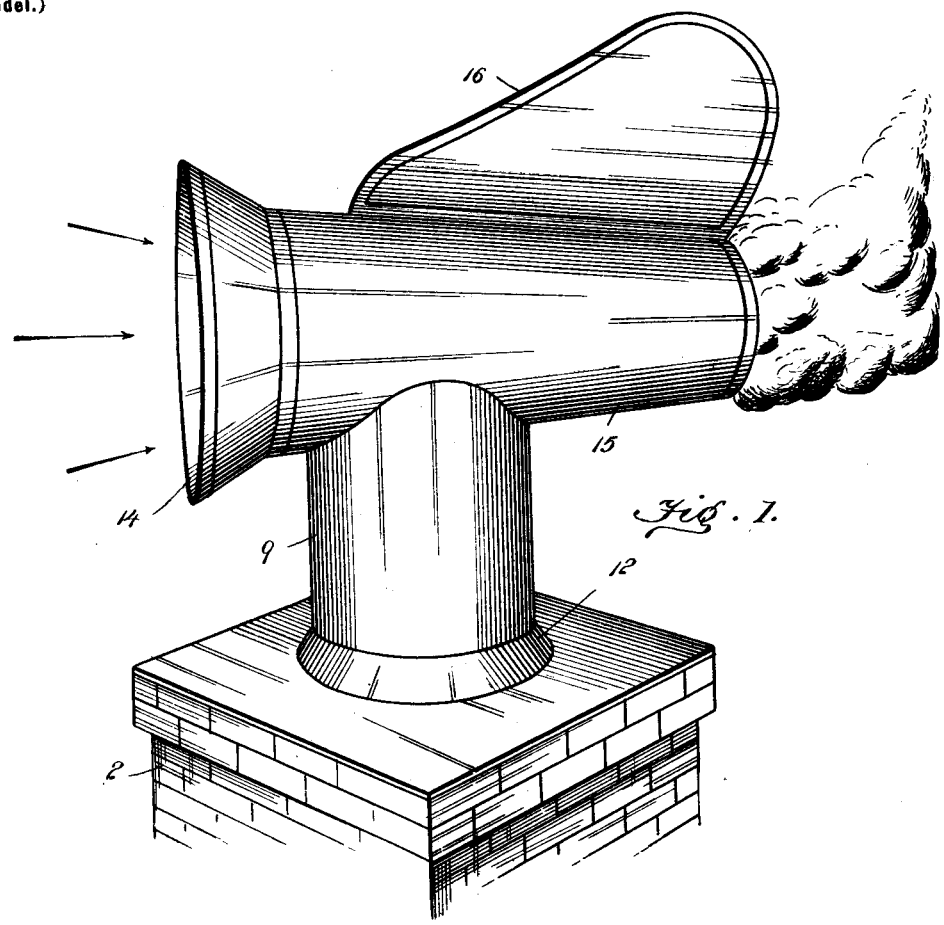


Fig. 1.

Fig. 5.

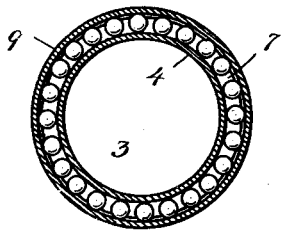
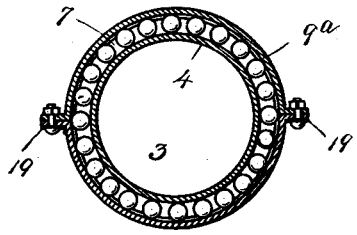


Fig. 6.



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(No Model.) 2 Sheets—Sheet 2.

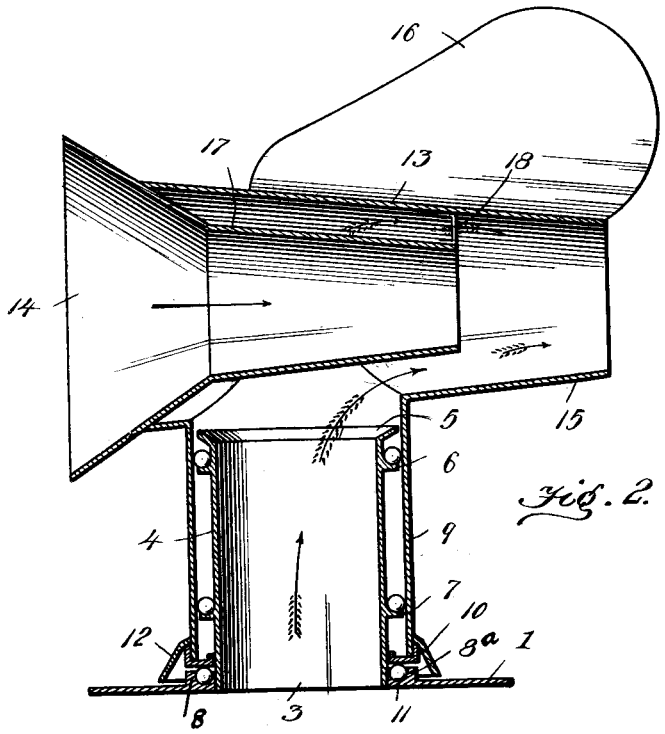

Fig. 2.

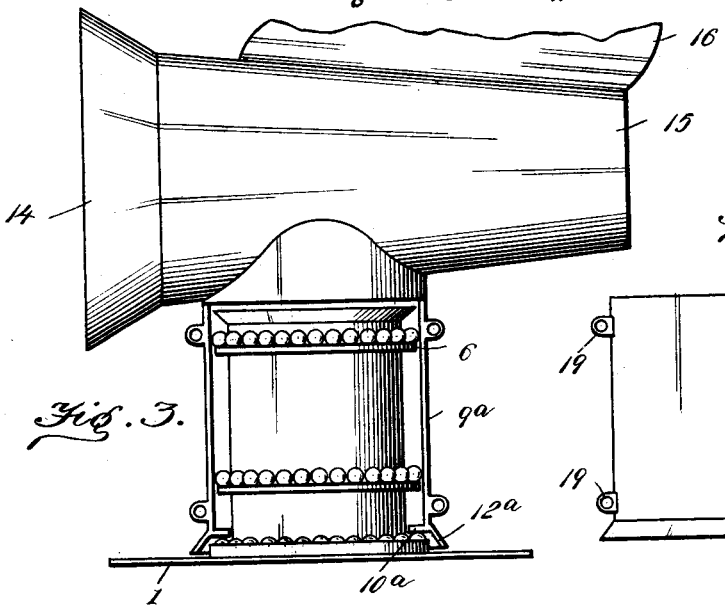

Fig. 3.

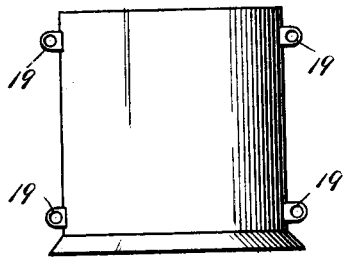

Fig. 4.

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UNITED STATES PATENT OFFICE.

DANIEL KELLER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO FRANK WILSON, OF SAME PLACE.

CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 675,952, dated June 11, 1901.

Application filed June 27, 1900. Serial No. 21,811. (No model.)

To all whom it may concern:

Be it known that I, DANIEL KELLER, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented new and useful Improvements in Chimney-Cowls, of which the following is a specification.

My invention relates to those chimney-cowls which are provided with means for inducing the required draft in the chimney and are provided with roller-bearings for facilitating the rotation of the cowls.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and its novel features will be definitely claimed.

In the drawings, Figure 1 is a view in perspective of a portion of a chimney with my improved cowl applied thereto. Fig. 2 is a vertical section of the cowl. Fig. 3 is a side elevation of a modified form of the device with one of its plates removed. Fig. 4 is an elevation of one of the side plates detached. Fig. 5 is a horizontal section of the construction shown in Figs. 1 and 2, and Fig. 6 is a horizontal section of the modified form of the device shown in Fig. 3.

The reference-numeral 1 designates the base-plate of the cowl, secured to a chimney 2 and provided with a central opening 3, from which projects upwardly a cylindrical pipe 4. The upper end of the pipe 4 is formed with a flaring top flange 5, and below said flange are parallel annular upper and lower grooved flanges 6 and 7, constituting ball-races.

8 designates an annular vertical flange rising from the base-plate 1 and provided with a channel 8^a, forming a raceway for antifriction-balls.

The numeral 9 designates a cylindrical casing which fits over the pipe 4 and forms the retaining means for the balls located in the raceways of the annular flanges 6 and 7. The lower end of this casing 9 rests upon a flanged ring 10, supported upon the balls 11 in the channel 8^a, and depending from said casing 9 adjacent to its lower end is a flared rim 12, which extends over the ring 10, as clearly shown in Fig. 2.

In assembling the parts thus far described the ring 10 is placed over the lower end of the pipe 4 before the latter is secured to the base 1. The casing 9 is then placed over the pipe 4 and supported upon the upper surface of the ring 10, and the flaring rim 12, which has been loosely slipped upon the lower end of casing 9, is moved down to the position shown in Fig. 2, after which it is soldered to the casing 9, as is also the flange of the ring 10.

13 designates the main discharge-funnel of the cowl, having the usual flared end 14, the contracted end 15, and projecting wind-vane 16.

Within the funnel 13 and forming a continuation of the flaring end 14 thereof is a supplemental funnel 17, which extends within the funnel 13 beyond the casing 9. The inner end of the supplemental funnel 17 is secured to the inner surface of the discharge-funnel 13 by brackets 18.

By the construction thus described the air-currents entering the funnel 17 are discharged at a point within the funnel 13 beyond the point of entrance to said funnel 13 of the smoke from the pipe or stack 4, thus preventing any downdraft through said pipe 4 and creating a horizontal draft or suction, which serves to draw up the smoke and products of combustion through the pipe 4, or, in other words, forcing an upward draft through the stack or pipe 4.

It will be observed that the suspending means for the supplemental funnel 17 are entirely above the stack or pipe 4, so that the latter is left free and unobstructed for the passage of the products of combustion.

The rows of antifriction-balls permit of the free rotary movement of the cowl with the minimum amount of friction.

In Figs. 3, 4, and 6 I have illustrated a modified form of the invention which is designed especially for large chimneys and correspondingly heavy attachments. In this embodiment of the invention the casing 9^a is formed with an integral flaring flange 12^a and an integral annular flange 10^a. Said casing and its projecting flanges are of cast metal and are formed of two semicircular sections having projecting perforated ears 19, by means

of which the sections are bolted together. In this modified construction the antifriction-balls are employed in substantially the same relation as has been described in connection with Fig. 2.

I would have it understood that I reserve the right to make such further modifications and variations in the details of construction of the improvement as may fall within the scope and purview of the invention as expressed and defined in the following claims:

I claim—

1. A chimney-cowl comprising a base-plate provided with a central opening, a vertical flange having a channel surrounding the opening and providing a raceway, antifriction-rollers located in the channel, a cylindrical pipe formed with a flaring top flange, and parallel upper and lower flanges having grooves providing raceways, antifriction-rollers located in the grooves and a cylindrical casing having a discharge-funnel, a ring whereby the casing is supported on the antifriction-rollers in the channel, and a flared rim surrounding the ring and vertical flange.

2. A chimney-cowl comprising a base-plate provided with a central opening, a vertical flange having a channel surrounding the opening and providing a raceway, antifriction-rollers located in the channel, a cylindrical pipe formed with a flaring top flange, and parallel upper and lower flanges having grooves providing raceways, antifriction-rollers located in the grooves and a cylindrical casing having a discharge-funnel, a flanged ring whereby the casing is supported on the antifriction-rollers in the channel, and a flared rim surrounding the flared ring and vertical flange.

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

DANIEL KELLER.

Witnesses:
HUGH M. STERLING,
HERBERT D. LAWSON.