

(No Model.)

C. B. STUART.
DEVICE FOR MAKING FIRES DRAW, &c.

No. 500,628.

Patented July 4, 1893.

Fig. 1

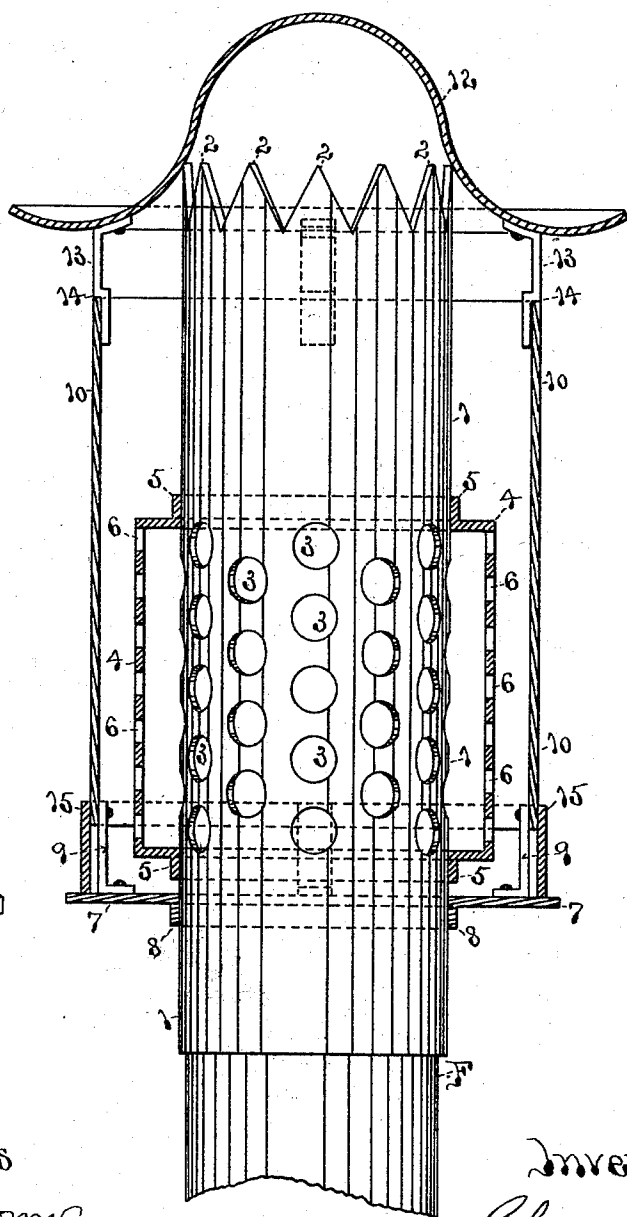


Fig. 2

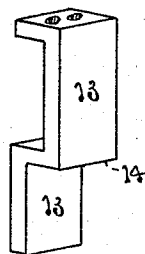
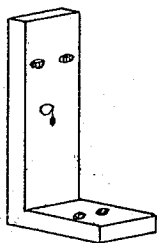


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR MAKING FIRES DRAW, &c.

SPECIFICATION forming part of Letters Patent No. 500,628, dated July 4, 1893.

Application filed January 29, 1892. Serial No. 419,655. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. STUART, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Devices for Making Fires Draw, of which the following is a specification.

My invention relates to the structure commonly known as a head placed upon the upper end of the pipe or flue leading from a stove or grate, and is commonly used and applied to the upper end of such flue or pipe above the decks of vessels, and it consists in certain new and useful constructions and combinations of the several parts of such head, substantially as hereinafter described and claimed.

In the drawings:—Figure 1 is a vertical central section of the head or flue cover constructed according to my invention. Fig. 2 is a perspective view of one of the sockets used in putting the cap upon the head. Fig. 3 is a perspective view of one of the sockets used to hold the external cylinder of the head in place at its lower end.

F represents the upper end of the pipe or flue leading to the grate or stove below it. On this flue I mount the cylinder, 1, which is open at its upper end and is provided with upward projecting points, 2, 2. Through the sides of cylinder, 1, I form a series of holes, 3, 3, made about one inch in diameter. On the outside of cylinder, 1, and covering these holes I place another cylinder, 4, which is provided with heads, 5, 5, fitting snugly over the cylinder 1 and forming collars at the ends of the cylinder, 4, to keep it in position on cylinder 1 and hold its cylindrical portion away from the latter. In the vertical side of cylinder 4 I form a series of holes, 6, 6, which are smaller than the holes, 3, in cylinder 1, say preferably about one-half their diameter. Below cylinder 4 I attach upon cylinder 1 a horizontal flange or collar, 7, which has a tubular portion, 8, embracing the cylinder so that when it is crowded down upon cylinder 1 it will rest in this position. The cylinder 4 is also slipped or crowded upon cylinder 1 to the position shown, and for the purpose of better seating it the cylinder 1 may be made slightly tapering and smallest at the top, if preferable, although that is not necessary.

It will be seen from this construction that the cylinder, 4, and collar, 7, may be drawn off of cylinder, 1, to clean out the soot and ashes which may gather in them.

On the upper side of the collar, 7, is riveted the upwardly projecting braces, 9, 9, as shown, and to their upper ends at some distance above the collar is riveted the outer cylinder, 10, so as to form an annular opening between it and the collar, 7, all around the head. The outer cylinder, 10, projects upward and has its upper end at some distance below the top of the inner cylinder 1. A cap, 12, helmet-shaped and in the form of a cylindrical cone with rounded top, is provided with a series of downwardly projecting struts, 13, 13, riveted underneath its outer edge so as to project downward from it, and provided with shoulders 14, 14, which rest upon the upper end of the cylinder 10, while the lower ends of the struts pass inside of the latter. This construction holds the cap, 12, firmly in position on top of the head, while providing a smoke escape passage between the upper end of the cylinder and the cap, and for further securing of the latter it is allowed to come down upon the points, 2, 2, of the inner cylinder. This forms a set of apertures between points 2, 2, and the cap, through which the smoke escapes, first, into the chamber between the outer and inner cylinders, and thence underneath the cap, 12, over the upper edge of the outer cylinders, and affords an additional safeguard against disturbance of the draft. It will be observed that this set of apertures between the upper end of the cylinder, 1, and the cap, 12, are above the annular aperture between the cap and the outer cylinder, 10, so that any side drafts through said outer space will not strike the said inner apertures.

Around the outer circumference of the outer cylinder, 10, is placed an annular sleeve, 15, which slides up and down upon the cylinder so closely as to remain in the position in which it may be placed. This sleeve is made wide enough to cover the aperture between the flange, 7, and the lower end of the outer cylinder, 10, when it is slid down so as to rest upon the flange. It thus forms a damper adapted to close the lower aperture, when leaving it open would disturb the draft of the fire. I thus obtain a head which is of com-

paratively short length or height above the deck of a vessel, and which is so constructed as to keep out rain and to draw under extremely adverse conditions. It can be made
 5 less than fifteen inches in length and work well with a six inch flue, F, on which it is placed. It thus allows the booms and sails of the vessel to swing clear over it, and when the spill of the wind downward from the sail
 10 makes contrary and eddy currents of varying intensity it will not affect the draft, as with ordinary heads. Under adverse conditions it will be found desirable to close the damper, 15, and leave the entire draft of the
 15 flue to escape through the passage between the cap, 12, and the outer cylinder, 10, but when a greater draft is required, on account of less wind which of course gives less spill of the air current out of the sails, the damper
 20 15 may be shoved upward on the exterior of cylinder, 10, and the draft of the flue will be greatly increased.

The cylinder, 4, might in some cases be omitted, where the location of the head on ship-board is not under particularly adverse conditions, and this is accomplished by merely leaving it off, but in most cases it will be found preferable to retain it, as there are very few places where, under some directions of wind
 30 with relation to the vessel, adverse conditions will not exist.

What I claim as new and of my invention—

1. The combination of the inner perforated cylinder, 1, the outer cylinder, 10, and the
 35 cap, 12, covering both cylinders and provided with apertures between it and cylinder 1 and an annular opening between the cap and the outer cylinder underneath the former and below the line of apertures between the inner
 40 cylinder 1 and the cap, substantially as described.

2. The combination of the inner perforated cylinder, 1, the outer cylinder, 10, surrounding the perforated portion of the inner cylinder and provided with an air draft around its
 45 lower edge, and the cap 12 having apertures between itself and cylinder 1 and covering both

cylinders and arranged to afford an air draft opening between itself and the upper end of the outer cylinder and below the line of apertures between the inner cylinder 1 and the cap, substantially as described. 50

3. The combination of the inner perforated cylinder, 1, the outer cylinder, 10, surrounding the perforations of the same and provided with an air draft and damper, 15, at its lower end, and the cap, 12, covering the inner cylinder and arranged to form an air draft opening underneath it and around the top of the outer cylinder, substantially as described. 60

4. The combination of the inner cylinder, 1, provided with perforations, the surrounding cylinder, 4, inclosing these perforations and being itself provided with perforations, 6, 6, the outer cylinder, 10, surrounding the perforations of cylinder, 4, and the cap, 12, covering the inner cylinder and arranged to form an air draft opening between it and the upper end of the outer cylinder, substantially as described. 70

5. The combination of the inner perforated cylinder, 1, the perforated cylinder, 4, surrounding the perforations of cylinder 1, the outer cylinder, 10, surrounding the perforations of cylinder 4 and provided with an air draft opening at its lower end, and the cap, 12, covering the inner cylinder and arranged to leave an air draft opening between itself and the upper end of the outer cylinder, substantially as described. 80

6. The combination of the inner perforated cylinder, 1, the surrounding perforated cylinder, 4, the outer surrounding cylinder, 10, provided with an air draft passage at its lower end, the damper, 15, for closing the same, and the cap, 12, covering the inner cylinder, 1, and arranged to form an air draft opening between itself and the outer cylinder, 10, substantially as described. 85

CHARLES B. STUART.

Witnesses:

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