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D. C. BAILLY
HEAT SCREEN FOR STEAM CHESTS.

APPLICATION FILED APR. 15, 1905.

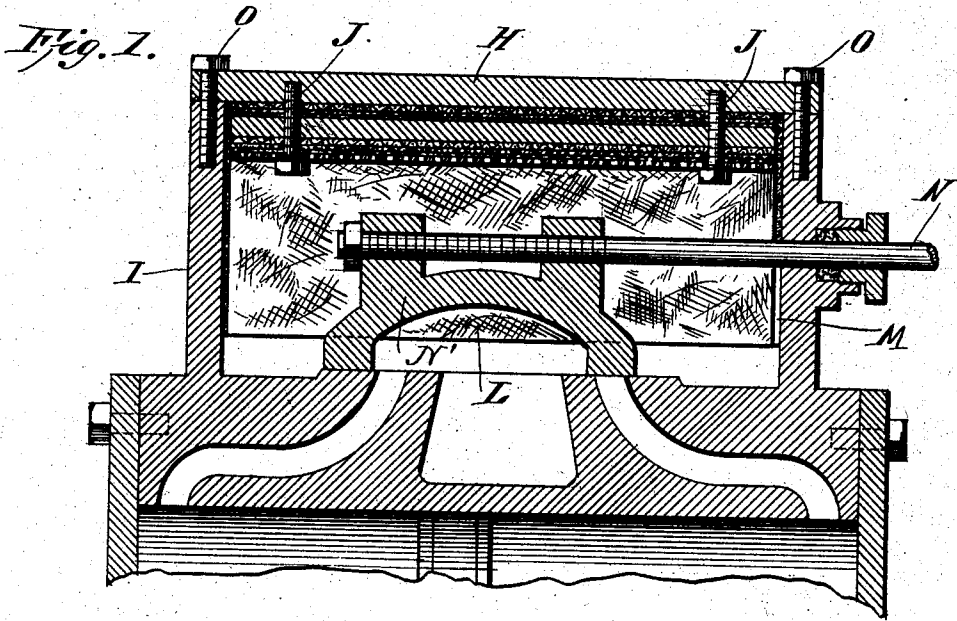


Fig. 3.

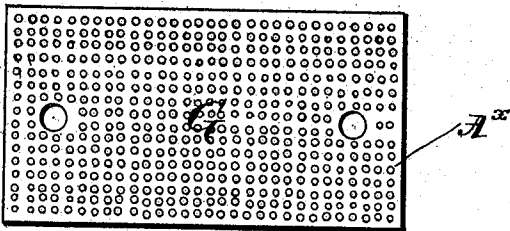
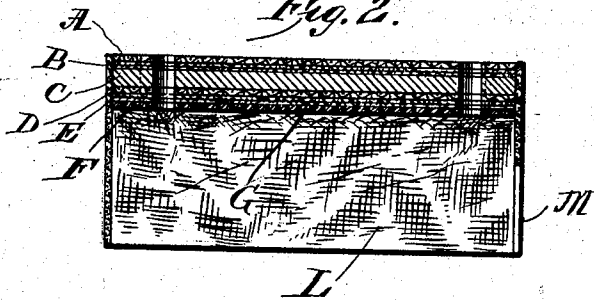


Fig. 2.



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TO SAMUEL H. BARRY, OF FENTON, MINNESOTA.

HEAT-SCREEN FOR STEAM-CHESTS.

No. 815,780.

Specification of Letters Patent.

Patented March 20, 1906.

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To all whom it may concern:

Be it known that I, DONA CHARLEY BAILLY, a citizen of the United States, and a resident of Real, in the county of Clay and State of Minnesota, have made certain new and useful Improvements in Heat-Screens for Steam-Chests, of which the following is a specification.

My invention relates to certain novel features of construction and to combinations of parts more fully hereinafter described and claimed.

Referring to the accompanying drawings, forming a part of this application, Figure 1 is a vertical longitudinal section of a steam-chest provided with my device. Fig. 2 is a plan view of the device removed, and Fig. 3 is a longitudinal section showing the different layers of which it is composed.

The object of my invention is to prevent the condensation of steam in steam-chests, due in part to the reduction in pressure in passing from the governor to the steam-chest and the consequent loss of heat and to the further loss of heat due to the radiation from the steam-chest covering. My invention is intended to prevent this radiation, and with this object in view I provide a heat-screen A^x (shown in Figs. 2 and 3) and composed of sheets of non-heat-conducting material arranged on the internal face of the steam-chest cover and comprising from within outward a sheet of canvas A, a sheet of asbestos B, a core of pine wood C, a second sheet of asbestos D, a second sheet of canvas E, a sheet of fiber F, and a sheet of perforated metal G, and I secure the heat-screen to the cover H of the steam-chest I by means of screw-threaded bolts J, passing through the screen and into the inner faces of the steam-chest cover. The sheets A, B, C, D, and E are of a size to correspond with the internal faces of the steam-chest cover, while the sheet of fiber F is provided with depending portions L, closely conforming to the internal faces of the side and end walls of the steam-chest I, and provided at one end with a slot M to receive the valve-rod N, attached to the valve N'.

To assemble the parts, the screen A^x is secured to the steam-chest cover H by means of the bolts J, and the cover, with the attached screen, is placed in and over the opening of the steam-chest, and the cover is se-

cured in place by the usual screw-threaded bolts O.

By the use of the above-described screen I obtain a much greater efficiency with a small amount of fuel and water than is possible to obtain without its use, even by an increased consumption of fuel and a greater amount of water.

It will be evident that the screen may be used on any type of engine and on any form of steam-chest by varying its shape to conform to the shape and size of the steam-chest.

I do not limit myself to the exact order of placing the sheets together, since it is evident that such order may be varied within wide limits, nor do I choose to limit myself to the material of which the different sheets are composed, as it is obvious that other non-heat-conducting material may be used with similar results.

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

1. The combination of a steam-chest, a cover for the chest, a heat-screen for the cover comprising a core of wood, sheets of asbestos on each face of the core, sheets of canvas covering the asbestos, a sheet of fiber covering the internal face of the internal sheet of canvas, and provided with depending portions, a perforated metallic sheet upon the face of the sheet of fiber and within the depending portions, and screw-threaded bolts for securing the heat-screen to the steam-chest cover.

2. The combination of the steam-chest, a cover for the chest, a heat-screen for the cover comprising a core of wood, alternate sheets of asbestos and canvas on either face of the core, a sheet of fiber on the internal sheet of canvas and provided with depending portions, a perforated metallic sheet on the sheet of fiber and within the depending portions, and means to secure the screen to the steam-chest cover.

3. The combination of a steam-chest, a cover therefor, a heat-screen for said cover comprising a core of wood, alternate sheets of asbestos and canvas on either face of the core, a perforated metallic sheet on the internal face of the heat-screen, and means for securing the screen to the cover.

4. The combination of a steam-chest, a cover therefor, a heat-screen for the cover comprising a core of wood, sheets of non-

heat-conducting material on either face of the core, and means for securing the screen to the cover.

5 5. The combination with a steam-chest, of a cover therefor, a heat-screen for the cover comprising a core of wood provided with sheets of non-heat-conducting material on

its face, and means for securing the screen to the cover.

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Witnesses:

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