

1,026,931.

Fig. 1.

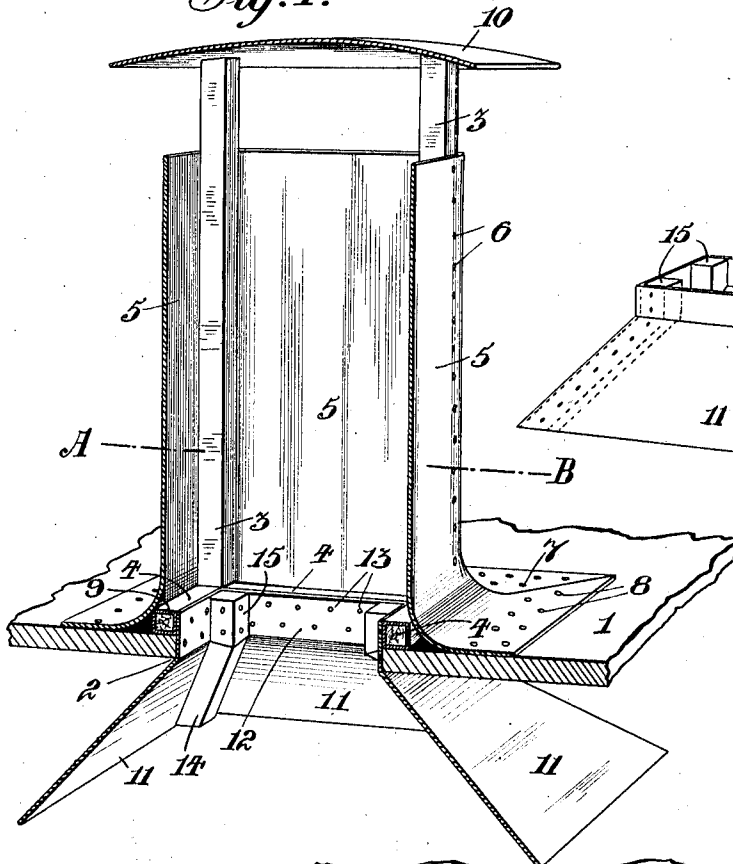


Fig. 3.

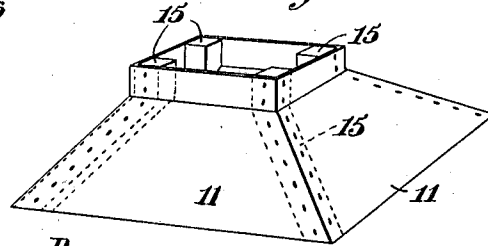
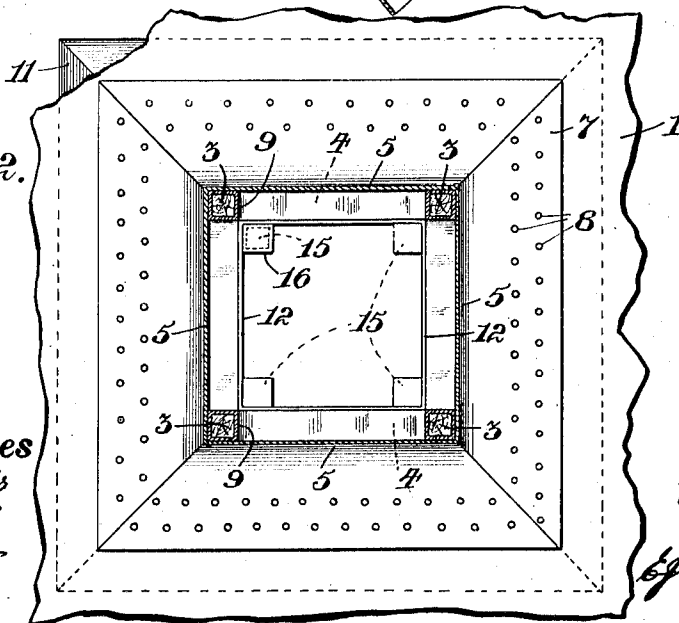


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM SCLATER, OF WESTMOUNT, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF TO
ARCHIBALD WILLIAM STEVENSON, OF MONTREAL, CANADA.

SMOKE-JACK FOR ENGINE-HOUSES.

1,026,931.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed September 26, 1910. Serial No. 583,913.

To all whom it may concern:

Be it known that I, WILLIAM SCLATER, resident of 4876 Sherbrooke street, in the city of Westmount, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Smoke-Jacks for Engine-Houses, of which the following is a specification.

The invention relates to improvements in smoke jacks for engine houses, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel construction and arrangement whereby metallic surfaces only are exposed to the gases passing through the jack.

The objects of the invention are to devise a smoke jack which will withstand the ulterior effects of the gaseous discharges from the stacks of locomotives stalled in engine houses and to provide a simple, cheap and durable construction.

In the drawings, Figure 1 is a sectional perspective view of the complete smoke jack and a portion of the roof of an engine house. Fig. 2 is a cross sectional view on the line A—B in Fig. 1. Fig. 3 is a perspective detail of the interior portion of the device.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a portion of the roof of an engine house having the opening 2 therethrough which is here shown as a square opening.

3 are square wooden posts rigidly secured to the roof 1 at the corners of the opening 2 and extending upwardly forming the frame for the exterior portion of the device.

4 are square wooden distance pieces secured to the roof 1 between the posts 3 at the edge of the opening 2 and secured to said posts 3.

5 are the walls preferably of sheet copper forming the chimney portion of the device and rigidly secured to the posts 3 by the copper nails 6 and at the lower ends 7 flared outwardly and rigidly secured to the roof by the copper nails 8, said walls terminating at their upper ends toward the top ends of the post 3, thus said posts will project slightly above said walls 5.

9 are sheathings preferably of copper completely covering in the wooden posts 3 and the distance pieces 4, consequently in the in-

terior of the chimney portion of the device, only completely metallic surfaces will be exposed.

10 is a cowl preferably of sheet copper slightly curved and rigidly secured to the top ends of the posts 3 by suitable copper nails.

11 are the walls of sheet copper or other metal forming the smoke-bell or the interior portion of the device, said bell being here shown as of rectangular shape, and having the walls 11 bent upwardly at their upper ends 12 and rigidly secured to the side edges of the opening 3 and to the distance pieces 4 by the copper nails 13.

14 are wooden lengths preferably square in cross section and having the walls 12 rigidly secured thereto.

15 are shorter wooden lengths secured to the upper ends of the wooden lengths 14 and having said walls 12 securely fastened thereto, said short lengths 15 being in vertical arrangement and said lengths 14 sloping outwardly and downwardly from the lengths 15. The wooden lengths 14 and 15 form the frame of the smoke-bell and are completely covered by sheathings 16 of copper or similar metal, so that the said bell presents a complete metallic surface to the gaseous vapor arising from the smoke stack of a locomotive.

The present practice in regard to smoke jacks is to build them of wood, sheet asbestos and various forms of common metal piping, but in all these practices, certain objections have always been existent. The wooden jacks are, of course, very perishable and the asbestos jacks expensive and not as durable in many ways as metallic chimneys.

It will be seen from the foregoing that I provide in an extremely simple manner a smoke jack built up on a wooden skeleton frame, but so arranged the metallic sheathings and plates that every wooden part of the smoke jack is entirely covered in by metal and it may be here mentioned that I prefer to use sheet copper for the plates and sheathing, as this metal will better withstand the injurious effects of the gaseous discharges from the stacks of locomotives and at the same time can be very easily worked. The provision of the wooden frame, besides lightening the structure gives a convenient means of attaching the plates and sheathings, that is to say, by nailing thereto.

What I claim as my invention is:

1. In a smoke jack for engine houses, a chimney portion having a frame formed of a plurality of wooden posts sheathed in metal and rigidly secured to the roof of the engine house and projecting upwardly therefrom and metal walls rigidly fastened to the roof and extending part way up said posts, a cowl of metal rigidly secured to the top ends of said posts and smoke-bell rigidly secured to said roof and having a frame formed of a plurality of wooden lengths sheathed in metal and metal walls rigidly secured to said frame and extending upwardly into said chimney.

2. In a smoke jack for engine houses, a chimney portion having a frame formed of four wooden posts projecting upwardly and rigidly secured to the roof of the engine house and sheathed in copper, and sheets of copper securely fastened to the roof beyond the base of said posts and extending up said posts and secured thereto and forming the walls in rectangular arrangement, a sheet of copper suitably curved and secured to the top ends of said posts and forming a cowl, and a smoke-bell having a frame formed of wooden lengths sheathed in copper extending from underneath said roof into said chimney portion and sheets of copper rigidly secured to the said wooden lengths and forming the walls and extending upwardly into said chimney portion.

3. In a smoke jack for engine houses, the combination with the roof of an engine house having a square opening there-through, of a chimney portion having four wooden posts rigidly secured to the roof at the corners of said opening and sheathed

in copper and walls of copper rigidly secured to the outer sides of said posts and to the roof and terminating intermediate of the height of said posts, a cowl formed of sheet copper and rigidly secured to the top end of said posts, and a smoke-bell having a frame of wooden lengths turned upwardly at their inner ends and sheathed in copper and walls of copper bent upwardly at the upper end and secured to the inner edge face of said opening in the roof.

4. In a smoke jack for engine houses, the combination with the roof of an engine house having a square opening there-through of a chimney portion formed of four wooden posts rigidly secured to the upper surface of the roof at the corners of said opening and sheathed in copper, distance pieces secured to said posts and the roof between said posts and copper walls secured to said posts and fastened to the roof and extending upwardly over said distance pieces and terminating intermediate of the height thereof, and a cowl of copper rigidly secured in the top end of said posts and a smoke-bell having a wooden frame sheathed in copper and copper walls turned upwardly at the upper ends and rigidly secured to said roof at the edge face of said opening and to said distance pieces.

Signed at the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, this 20th day of September, 1910.

WILLIAM SCLATER.

Witnesses:

G. H. TRESIDDER,
H. DAVIS.