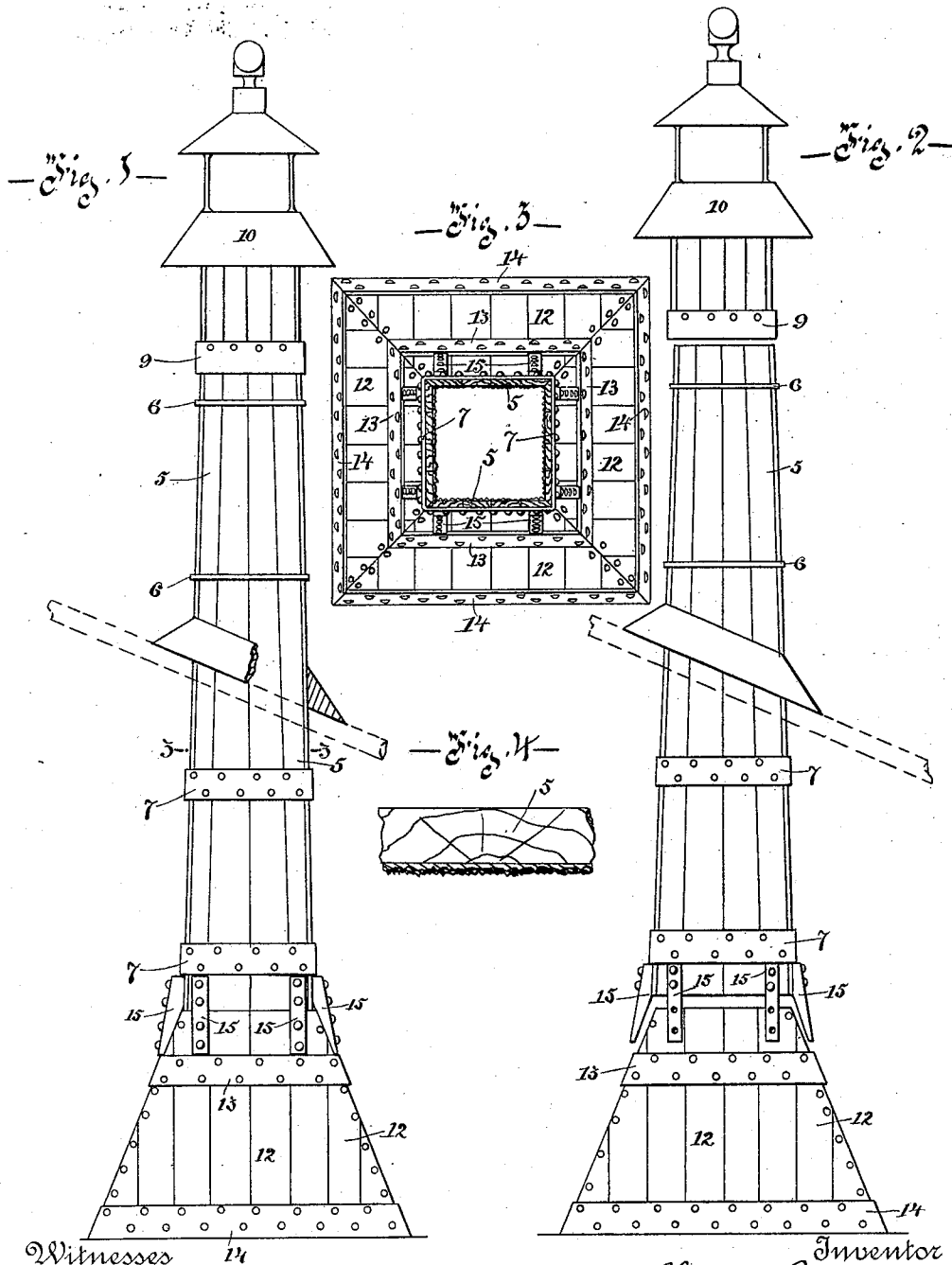


(No Model.)

C. PICKRING.
SMOKE STACK.

No. 570,144.

Patented Oct. 27, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES PICKRING, OF RICHMOND, CANADA.

SMOKE-STACK. I

SPECIFICATION forming part of Letters Patent No. 570,144, dated October 27, 1896.

Application filed March 24, 1896. Serial No. 584,672. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PICKRING, of Richmond, in the county of Richmond and Province of Quebec, Canada, have invented certain new and useful Improvements in Smoke-Stacks; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates more particularly to smoke-stacks for locomotive running-sheds or roundhouses, although it is equally applicable as a smoke-stack or chimney for any form of building.

The invention has for its object to provide a smoke-stack that will be more durable, require less labor, and cost less than smoke-stacks hitherto produced, as well as being much lighter, since it may be made of wood, and yet be capable of withstanding as great a degree of heat as smoke-stacks or chimneys heretofore used, besides being adjustable.

My invention may be said, briefly, to consist in coating the inside face of the material of which the smoke-stack or chimney is made, which may even be wood or similar combustible material, with sand or other vitrifiable material, caused to adhere thereto preferably by first painting the inside of the stack or chimney and then applying the sand while the paint is wet. The combination of paint and sand when subjected to the action of the gases, smoke, and heat passing through the stack becomes gradually petrified or converted into a stony hardness capable of resisting any cutting instrument, such as a knife or saw, and forms an absolutely fireproof coat or layer, thus allowing the use of combustible material, such as wood or any other cheap and light material, in the construction of the stack or chimney.

The invention may be said, further, to consist in the special construction of the stack and forming the top of same adjustable and tapered toward its upper end, as more particularly hereinafter described and claimed.

For full comprehension, however, of the invention reference must be had to the accompanying drawings, forming a part of this specification, in which like symbols indicate the same parts, and wherein—

Figure 1 is a side elevation of my improved smoke-stack or chimney; Fig. 2, a similar

view thereof, but with its sections separated for purposes of illustration; Fig. 3, a transverse horizontal sectional view taken on line 3 3, Fig. 1; and Fig. 4, a similar view to Fig. 3, but only of a portion thereof enlarged.

I consider it advantageous for many reasons to construct the smoke stack or chimney in sections—viz., a body-section, a top section, and a flared bottom section, all secured together in any suitable manner.

The body-section is preferably tapered toward its upper end and is formed of a series of tapered strips 5, of wood, bound together by bands 6, preferably of iron and movable, and bands 7, preferably of wood, thus forming a rectangular conduit tapering slightly from one end to the other, and the inside face thereof is coated with sand by first painting such inside face and then applying the sand while the paint is wet. This may be done to each strip of wood before they are bound together, but preferably when the parts are formed in two halves ready to be put together.

The top section is constructed similarly to the body-section except that it is straight throughout its length and has a band 9, of extended width and preferably of wood, secured to and adapted to project beyond the lower end thereof in order to receive the upper end of the body-section. The upper end of this top section may be furnished with any desired form of chimney-jack 10, of any length.

The bottom section is also preferably constructed similarly to the body-section excepting that it is tapered outward from the top to the bottom thereof and to a much greater extent than such body-section and the strips 12 thereof are bound together by bands 13 and 14, preferably of wood, these last-mentioned sections being preferably secured together by means of strips 15, each secured at one end to the bottom of the body-section and their other ends adapted to fit over and be secured to the upper end of the bottom section.

It will be obvious that the smoke-stack or chimney can be made in one piece if desired, and of any desired shape or of any suitable material, and many other changes made without departing from the spirit of my invention.

What I claim is as follows:

1. A smoke-stack or chimney having its inside face coated with sand, for the purpose set forth.
- 5 2. A smoke-stack or chimney formed of a combustible material presenting an approximately smooth inside surface and such surface coated with a petrifiable material, for the purpose set forth.
- 10 3. A smoke-stack or chimney formed of wood presenting an approximately smooth inside surface and such surface coated with a petrifiable material, for the purpose set forth.
- 15 4. A smoke-stack or chimney formed of a combustible material and coated on its inside surface with sand, for the purpose set forth.
- 20 5. A smoke-stack or chimney formed of wood and coated on its inside surface with sand for the purpose set forth.
- 20 6. A smoke-stack or chimney formed of wood and coated on its inside surface with paint and sand, for the purpose set forth.
- 25 7. A smoke-stack or chimney rectangular in cross-section and formed of a number of parallel wood boards with transverse straps holding same together, and coated on its inside surface with petrifiable material, for the purpose set forth.
8. A wood smoke-stack comprising a body section, top section and flared bottom section 30 with its inside surface fireproofed, for the purpose set forth.
9. A wood smoke-stack rectangular in cross-section and comprising a body-section, top section and flared bottom section with its inside surface fireproofed, for the purpose set forth. 35
10. A wood smoke-stack rectangular in cross-section comprising a body-section, top section and flared bottom section with strips 40 15 for connecting the last-named sections together, for the purpose set forth.
11. A wood smoke-stack rectangular in cross-section comprising a body-section, top section and flared bottom section formed of 45 a number of parallel wood boards with transverse straps holding same together, the top section overlapping the body-section and strips 15 for connecting the body and bottom sections together, for the purpose set forth. 50

Montreal, March 13, 1896.

CHARLES PICKRING.

Witnesses:

FRED. J. SEARS,
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