(No Model.)

2 Sheets—Sheet 1.

W. A. SCOTT, Jr.

COVERING FOR BOILERS.

No. 519,137.

Patented May 1, 1894.

Fig. 11.

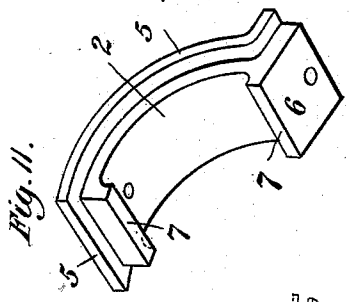


Fig. 10.

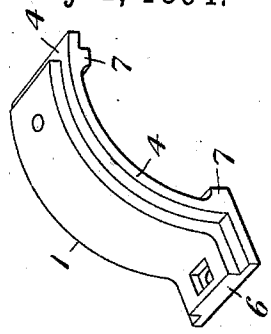
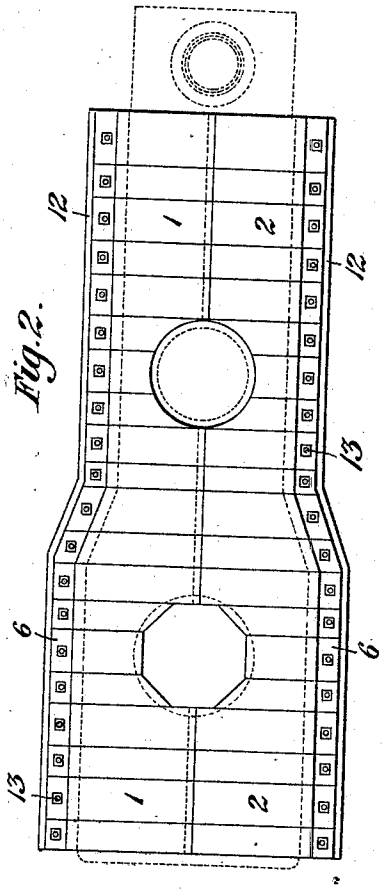


Fig. 1.

Fig. 2.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

W. A. SCOTT, Jr.

COVERING FOR BOILERS.

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Fig. 3.

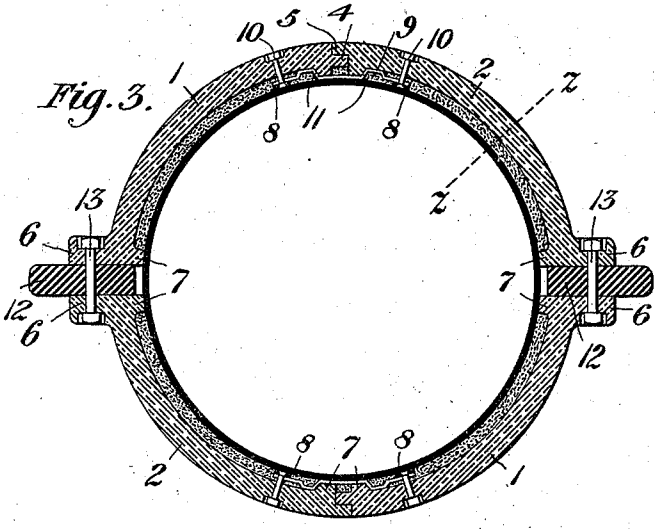


Fig. 5.

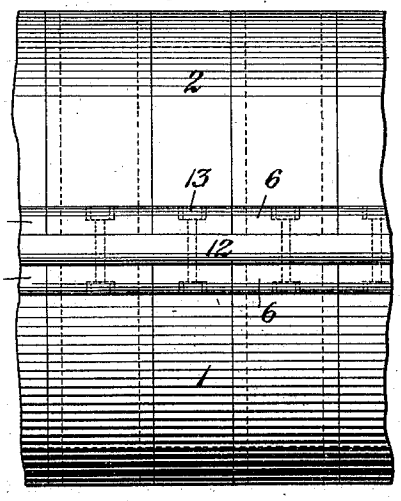


Fig. 4.

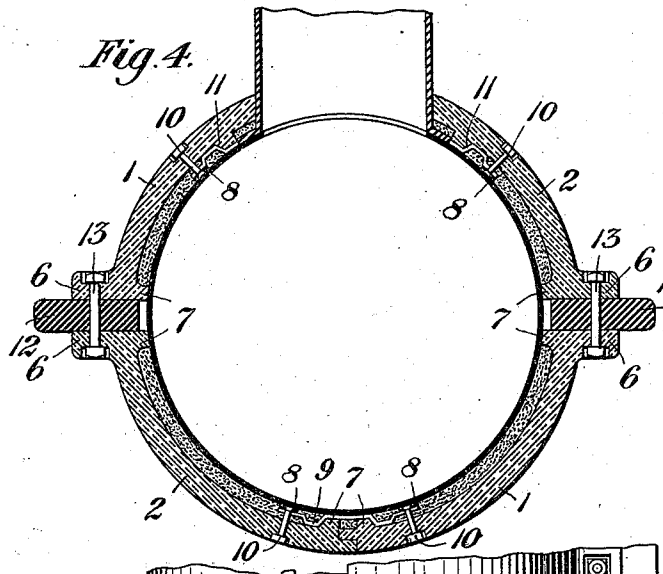


Fig. 6.

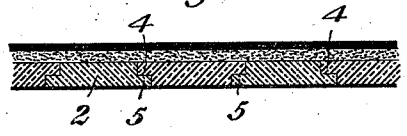


Fig. 7.

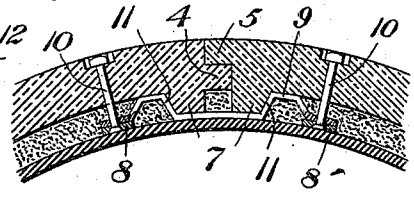


Fig. 9.

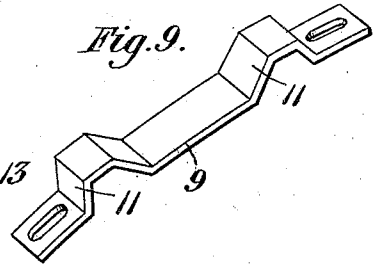
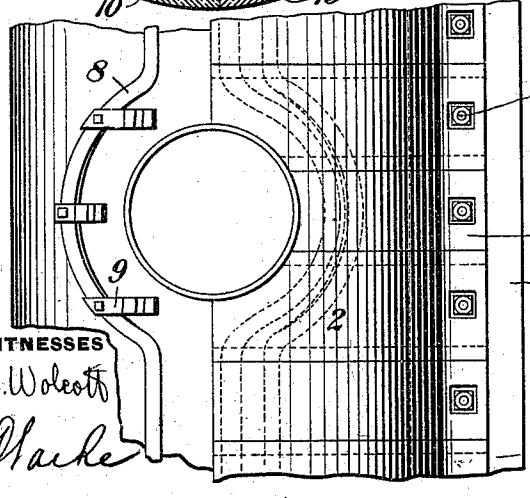


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM A. SCOTT, JR., OF PITTSBURG, PENNSYLVANIA.

COVERING FOR BOILERS.

SPECIFICATION forming part of Letters Patent No. 519,137, dated May 1, 1894.

Application filed November 1, 1893. Serial No. 489,726. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SCOTT, Jr., a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Coverings for Boilers, of which improvements the following is a specification.

The invention described herein relates to certain improvements in non-conducting coverings for boilers, and has for its object a construction of covering or protecting tile whereby they form when applied to the boiler, a continuous cover for the body of the boiler, and whereby they may be firmly secured together and to suitable supports forming parts of the structure of which the boiler, itself, forms a part.

In general terms the invention consists in the construction and combination, substantially as hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a view in side elevation of a locomotive having my improved boiler covering applied thereto, the outlines of the locomotive being shown in dotted lines. Fig. 2 is a top plan view of the same. Figs. 3 and 4 are transverse sections of the boiler, the planes of sections being indicated by the lines *x*, *x*, and *y*, *y*, respectively. Fig. 5 is a view in side elevation, on an enlarged scale, of a portion of the boiler. Fig. 6 is a sectional view on an enlarged scale, the plane of section being indicated by the line *z*, *z*, Fig. 3. Fig. 7 is a sectional detail view, on an enlarged scale, showing the manner of connecting adjacent ends of the covering blocks or tiles. Fig. 8 is a top plan view of a portion of the boiler a portion of the covering being removed so as to show a portion of the harness employed for holding the covering blocks in position. Fig 9 is a perspective view of one of the locking strips. Figs. 10 and 11 are perspective views of two of the covering tiles.

In the practice of my invention the tiles 1 and 2, which are formed by thoroughly burning or chunking fire clay, then molding it to a shape to conform to or approximately to the shell of the boiler and again burning, are preferably made in pairs as shown in Figs. 10 and 11, one member of the pair being formed with a lip 4 extending along at least three sides of tile adjacent to its inner face, as shown in Fig. 10, and the other member 2 being provided with a similar lip 5, adjacent to its outer face, as shown in Figs. 6 and 11.

In applying these tiles or blocks to locomotive boilers, it is preferred to form the tiles of such length as to extend about one quarter of the way around the boiler shell, and to form one end of each tile with an angular portion 6, as shown in Figs. 10 and 11, whereby it may be secured to a portion of the boiler structure as, for example, the running board of a locomotive. Each of the tiles or blocks is provided on its inner face with projections or ribs 7, near their ends for holding the tiles a short distance away from the shell of the boiler and the recesses formed by these projections are filled with asbestus, mineral wool, or other fibrous non-conductor indestructible by heat, and which will serve as a cushion for the tile, as shown in Figs. 3, 4, 6 and 7.

In applying these tiles or blocks to a locomotive boiler, a harness consisting of longitudinal metal strips 8 and transverse tie strips 9 are laid in position on the boiler, the longitudinal and transverse strips being held together by bolts 10, which are adapted to pass through suitable holes in the tiles. As shown in Fig. 8, the longitudinal strips 8 are suitably bent so as to pass around the steam-chest, sand box or other projection on the shell of the boiler. Two pairs of longitudinal strips, one for the upper and the other for the lower side of the boiler, are employed, and the tie strips 9 connect the members of each pair, except where the longitudinal strips pass around a projection on the boiler. At such points the tie strips extend only to the base of such projections. As shown in Figs. 3, 4, 7 and 9, the tie strips are so bent as to form lugs 11 which project in behind the ribs 7, on the tiles or blocks and thereby holding the same in position. After the harness has been placed in position as described, the tiles having the asbestus packing in its recesses, are placed in position, the angular portions 6 of the tiles resting against the running board 12, and the opposite ends of the tiles abutting against each other at the up-

per and lower sides of the boiler with their lips 4 and 5 overlapping as shown in Figs. 3, 4 and 7. It will be understood that the ends of the tiles covering portions of the boiler in line with the steam chest or other projection thereon are suitably shaped to fit closely around the base of such projection. The tiles are secured to the running board or other projection by bolts 13 passing through the running board and the angular portions 6 of the tiles as shown in Fig. 4, and by the bolts 10 of the harness, passing up through holes in the tiles. It is preferred to enamel the outer surfaces of the tiles so as to render them impervious to moisture and facilitate their cleaning.

I claim herein as my invention—

1. In a covering for boilers, the combination of a harness formed of longitudinal and transverse metal strips resting upon the boiler and a series of fire clay tiles secured to the harness whereby the tiles are held upon the boiler, substantially as set forth.

2. In a covering for boilers, the combination of boards or supports running longitudinal of the boiler and a series of fire clay tiles adapted to fit around the boiler and provided with angular portions adapted to be secured to the boards or supports, substantially as set forth.

3. A fire clay tile for covering boilers having its inner face shaped to conform to or approximately to the shell to be covered, and provided at one end with a portion formed at an angle to the body of the tile and perforated for the passage of bolts, whereby the tile may be secured to a suitable support arranged longitudinal of the boiler, substantially as set forth.

4. In a covering for boilers, the combination of a series of tiles fitting around the boiler and provided on their inner sides with ribs and tie strips provided with lugs engaging said ribs, thereby preventing a separation of the ends of adjacent tiles, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM A. SCOTT, JR.

Witnesses:

DARWIN S. WOLCOTT,

F. E. GAITHER.