(No Model.)

T. WILLIAMS.

SUPPORT FOR NON-CONDUCTING COVERINGS.

No. 494,312. Patented Mar. 28, 1893.

Fig. 3.

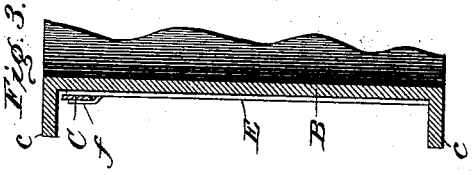
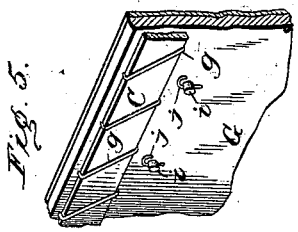


Fig. 5.



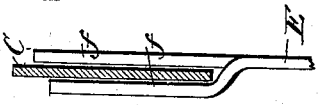


Fig. 2.

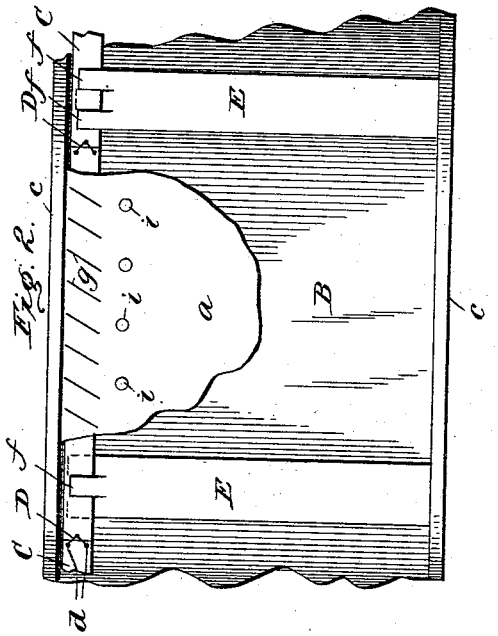


Fig. 4.

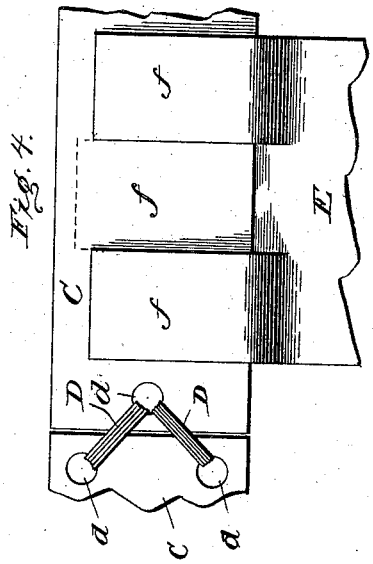
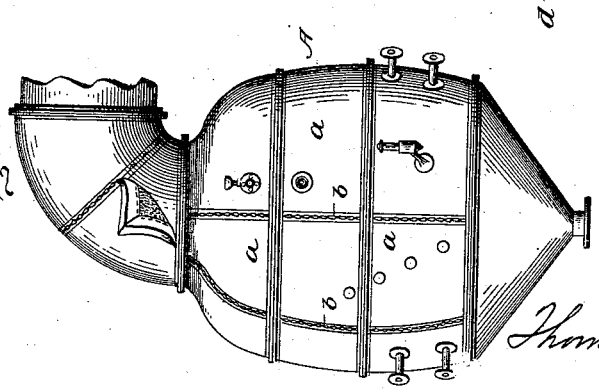


Fig. 1.



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UNITED STATES PATENT OFFICE.

THOMAS WILLIAMS, OF BROOKLYN, NEW YORK.

SUPPORT FOR NON-CONDUCTING COVERINGS.

SPECIFICATION forming part of Letters Patent No. 494,312, dated March 28, 1893.

Application filed September 22, 1892. Serial No. 446,524. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WILLIAMS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Supports for Non-Conducting Coverings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in removable or detachable supports for the non-conducting coverings of heating tanks or vessels; and it consists substantially in such features of arrangement, construction, and combinations of parts as will hereinafter be more particularly described and claimed.

The object of the invention is to provide a simple and secure support by which non-conducting coverings of felt or canvas employed upon heating tanks or vessels will be securely and perfectly maintained in position, a further object of the invention being to enable such non-conducting covering to be quickly placed into position or applied; and also to enable the covering to be removed very quickly either in whole or in part.

The invention is intended more particularly for use in connection with non-conducting coverings employed upon large heating vessels or tanks usually constructed of a number of superimposed sections which are united together by flanges; instances of the kind of heating vessel or tank intended being vacuum pans, evaporating pans, &c., used in sugar refineries, distilleries, and such like places.

In the accompanying drawings I have illustrated my invention as applied to a vacuum pan, and in these drawings Figure 1 represents an elevation of a vacuum pan when covered by a non-conducting covering, the parts of which covering that join being shown as fastened together by a strong lacing usually termed "bonnet lacing." Fig. 2 is a view illustrating one section of the vacuum pan, and showing the manner in which my improved removable or detachable support serves to maintain the non-conducting covering in proper position between the flanges of the pan section, the covering in this instance being but partially shown. Fig. 3 is a vertical sectional elevation of the preceding figure. Fig. 4 is an enlarged view in detail representing the manner of securing the encircling bands or hoops for the pan in place, and also better illustrating the form of vertical support for the hoop, as well as the manner in which the adjacent ends of the encircling band or hoop are fastened or joined together. Fig. 5 is a view in detail showing the manner in which the non-conducting covering is secured to the encircling band or hoop; as well also as the manner in which the outer covering of canvas is attached to the felt or non-conducting material.

In carrying my invention into effect I employ for the section of vacuum pan an encircling band or hoop which surrounds the section immediately beneath the upper flange of said section, the ends of the said band or hoop being securely joined together by means of wires or loops passed through openings or holes made in the ends of the band. I also employ a suitable number of vertical metal strips the lower ends of which rest upon the lower flange of the section of vacuum pan, and the upper end of said vertical metal strip is so shaped or formed as to receive the encircling band or hoop in such manner as to firmly maintain or hold the said band or hoop up into position beneath the upper flange of the pan section. The felt or non-conducting covering being attached at its upper edge to the encircling band or hoop by means of wire stitching it is obvious that such felt or non-conducting covering will be held snugly in position around the pan. It should be understood that the vertical metal supporting strips for the encircling band as well as the band itself lie beneath the felt or covering and rest against the copper body of the vacuum pan, thereby rendering the parts unexposed and furnishing to the pan a neatly covered appearance. The felt or non-conducting covering itself is preferably made up of a number of different sections so as to enable any part thereof to be raised or taken out when required, and it will be observed that the meeting edges of the said sections are firmly drawn

together by a tight lacing similar to the ordinary "bonnet lacing." The canvas is secured to the felt by means of tacks or rivets passing through from one side and secured on the other side by means of hooks or loops.

Referring to the accompanying drawings by the letters marked thereon, A represents the vacuum pan as it appears when covered in the manner herein explained; *a* representing the separate sections or blocks of non-conducting material; and *b* representing the lacing by which the said blocks or sections of material are firmly joined together.

B represents one of the sections of which the vacuum pan is composed, the same having a continuous flange *c* on both its upper and lower edges.

C indicates the metal hoop or band which surrounds the section of pan immediately beneath the upper flange thereof, the meeting ends of said hoop or band being formed or provided with holes or openings *d*, through which openings a wire fastening D is passed for securing the ends of the hoop or band together. The said hoop or band rests in the space formed by slitting the upper end of the vertical supporting strips E so as to form tongues *f* on the opposite sides of the band, substantially as shown. The said vertical supporting strips E may be differently formed at their upper ends, and in fact the band may be secured thereto in any suitable manner, but the manner of slitting the strips at the upper end and then bending the separate tongue formed thereby slightly outward has been found the most convenient in practice, since it facilitates the ready placing of the parts in position as well as the separation or removal thereof when desired. As shown in the drawings the felt G is secured to the encircling band or hoop by means of wire stitching *g*, while the outer covering or canvas is secured to the felt by means of small rivets *i* passing through from one side and fastened on the other side by means of small hooks or loops *j*.

It is thought from the foregoing description that the nature and objects of my invention will be fully understood, and it will of course be obvious that immaterial changes could be made in the general form of parts shown and still be within the scope intended. I do not therefore wish to limit myself to precise details since I might wish to resort to several changes in the manner of joining and arranging the devices which serve as the support for the covering. It will be seen that the covering will be held in place evenly and compactly, and that the same can be readily removed either in sections or in entirety whenever desired.

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

1. A support for the non-conducting covers of vacuum pans and the like, consisting of a removable encircling band or hoop and a removable support for the said band or hoop, substantially as described.

2. A support for the non-conducting coverings of vacuum pans and the like, consisting of an encircling band or hoop and a vertical support into which said band or hoop is removably received, substantially as described.

3. A support for the non-conducting coverings of vacuum pans and the like, the same consisting of a removable encircling band or hoop united at its ends by means of a wire or similar fastening, and a removable vertical support for said band or hoop, substantially as described.

4. A support for the non-conducting coverings of vacuum pans and the like, the same consisting of an encircling band or hoop, and a vertical support for said band or hoop having its upper end slit and bent outwardly so as to form a space into which the band or hoop is received, substantially as described.

5. A support for the non-conducting coverings of vacuum pans and the like, the same consisting of a band or hoop to which the covering is attached, and a vertical support for the band, the said support being provided at its upper end with means for receiving and holding said band, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS WILLIAMS.

Witnesses:
W. L. DONCASTER,
HENRY TUDEMANN.