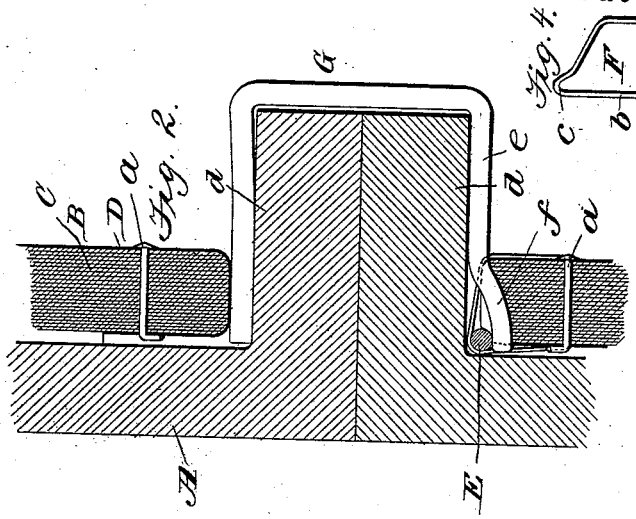
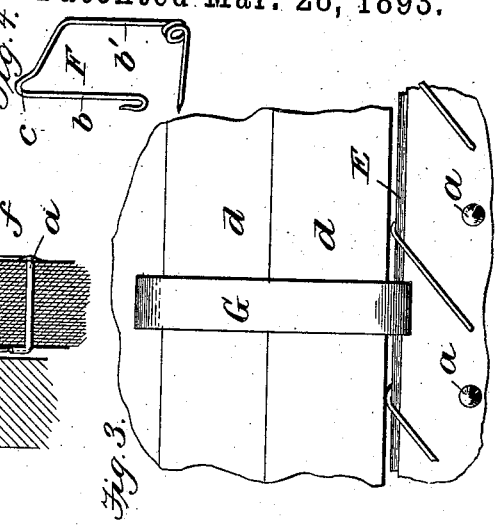
(No Model.)

T. WILLIAMS.

REMOVABLE FASTENING FOR NON-CONDUCTING COVERINGS.

No. 494,313. Patented Mar. 28, 1893.





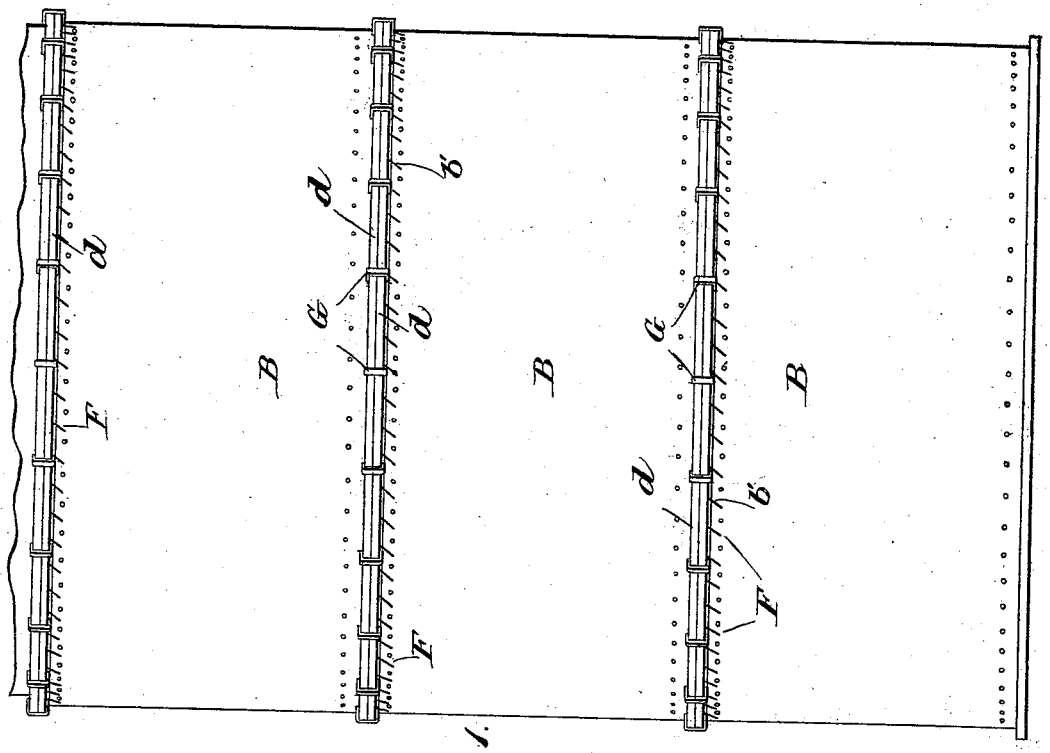


Fig. 1.

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UNITED STATES PATENT OFFICE.

THOMAS WILLIAMS, OF BROOKLYN, NEW YORK.

REMOVABLE FASTENING FOR NON-CONDUCTING COVERINGS.

SPECIFICATION forming part of Letters Patent No. 494,313, dated March 28, 1893.

Application filed February 15, 1892. Renewed February 16, 1893. Serial No. 462,617. (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 Removable Fastenings 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 fastenings for the non-conducting coverings for filters, boiling apparatus and the like; and it consists substantially in such features of construction, arrangement and combinations of parts as will hereinafter be more particularly described.

The invention has reference more particularly to clamps or fastenings for holding the non-conducting coverings of large boiling kettles or similar vessels in their proper positions around the vessels, so that no portion of the said vessel shall become uncovered or exposed in use due to the sagging or accidental displacement of such covering.

The invention has for its principal object to enable the non-conducting coverings for the vessels to be readily secured in place, and also to permit of the quick and ready removal thereof, substantially as will hereinafter more fully appear when taken in connection with the accompanying drawings in which—

Figure 1 represents an elevation of a kettle, boiler or tank when constructed of three or more superimposed sections and having a non-conducting covering, envelope or wrapper secured in place by my improved fastening. Fig. 2 is an enlarged sectional elevation of the contiguous portion of two kettle sections when covered and united by means of my improved fastening. Fig. 3 is an enlarged view in detail, and representing more clearly the arrangement of the hangers or hooks intermediate of the clamps or fastenings. Fig. 4 is a detail perspective of the hook or hanger.

In carrying my invention into effect I provide the usual non-conducting covering of felt or similar material which is inclosed in the ordinary canvas or similar wrapper or covering, the said wrapper or covering being secured around the felt in any suitable manner, preferably by rivets (not shown). To the upper edge of said non-conducting covering a metal ring is secured by means of a series or number of hooks or hangers of peculiar construction, as will hereinafter be more particularly described; and then at suitable distances apart the securing clamps are fitted into place, the clamps and the hooks or hangers combining between them to hold the covering properly in place around the vessel or kettle on which the same may be used. In instances of very large and high boiling kettles, such for instance as are used in sugar refineries and similar places, it is common or usual to construct the vessel or kettle of several sections superimposed one above the other; and, for insuring the proper fitting of the sections upon each other it is usual to provide annular flanges on the edges thereof so as to form a seat or even connection between the sections.

My invention is especially adapted for this class of vessels or kettles as will more fully appear on reference to the accompanying drawings by the letters of reference marked thereon.

A represents a kettle or boiling vessel when constructed of three or more superimposed sections and covered by a non-conducting covering B of felt and canvas or other suitable material.

C represents the felt material, and D its wrapper or envelope of canvas, the latter being fastened to the former by means of rivets *a* arranged in any suitable number and at proper distances apart.

E represents an iron or other metal ring which surrounds the vessel or kettle and which is fastened or secured to the upper edge of the non-conducting covering by means of a series or number of hooks or hangers F arranged at suitable distances apart and forming a means of suspension of such covering from the ring. These hooks or hangers are constructed of two legs or depending members *b*, *b'*, which "straddle" or embrace the two sides of the non-conducting covering at its

upper edge, as shown, and, if desired, the ends of these legs or members may be bent or turned over so as to enter the covering and be thereby more firmly secured in place. Or, in lieu of entering the covering a rivet may be passed through the covering at the places where the hooks are arranged, and thereby serve to hold them in place see Fig. 4. For all practical purposes however I have found that by giving the outer leg or member *b'* a diagonal turn or direction, and forming the point of intersection of the legs with a loop as is shown at *c*, a substantial fastening is derived, and answering all the purposes for which intended.

The several sections of the kettle or vessel being flanged as shown at *d*, the covering is placed around the same so that its lower edge will rest upon the flange as seen in Fig. 2, while the upper edge of the covering is maintained snugly in place beneath the flange of the next succeeding lower section by means of metal clamps G which fit or embrace the flanges of the united sections substantially as is illustrated in the drawings. These clamps are preferably of malleable iron, and the end of the under portion *e* thereof is so bent, curved or turned at *f* as to receive the iron or metal ring E, see Fig. 2.

From the foregoing it will be seen that a simple and effective mode of fastening is attained, and also that by the use thereof the non-conducting coverings can be quickly fitted into place and again removed whenever desired.

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

1. In a non-conducting covering for boiling kettles or vessels a removable fastening consisting of an encircling ring or band, a clamp embracing said ring or band on the under side, and a hook or hanger suspended on said ring or band and united at its lower ends by means of a fastening pin or the like, substantially as described.

2. In a non-conducting covering for boiling kettles or vessels, a removable fastening consisting of an encircling ring or band, a suspending hook or hanger, and a securing clamp, substantially as described.

3. In a non-conducting covering for boiling kettles or vessels constructed of a number of superimposed flanged sections, the combination of a ring or band encircling said sections and a non-conducting covering, hooks or hangers from which the covering is suspended, and a securing clamp embracing the flanges of the vessel and the encircling band, substantially as described.

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

THOMAS WILLIAMS.

Witnesses:
JAMES S. CASE,
HERMAN H. TORBERG.