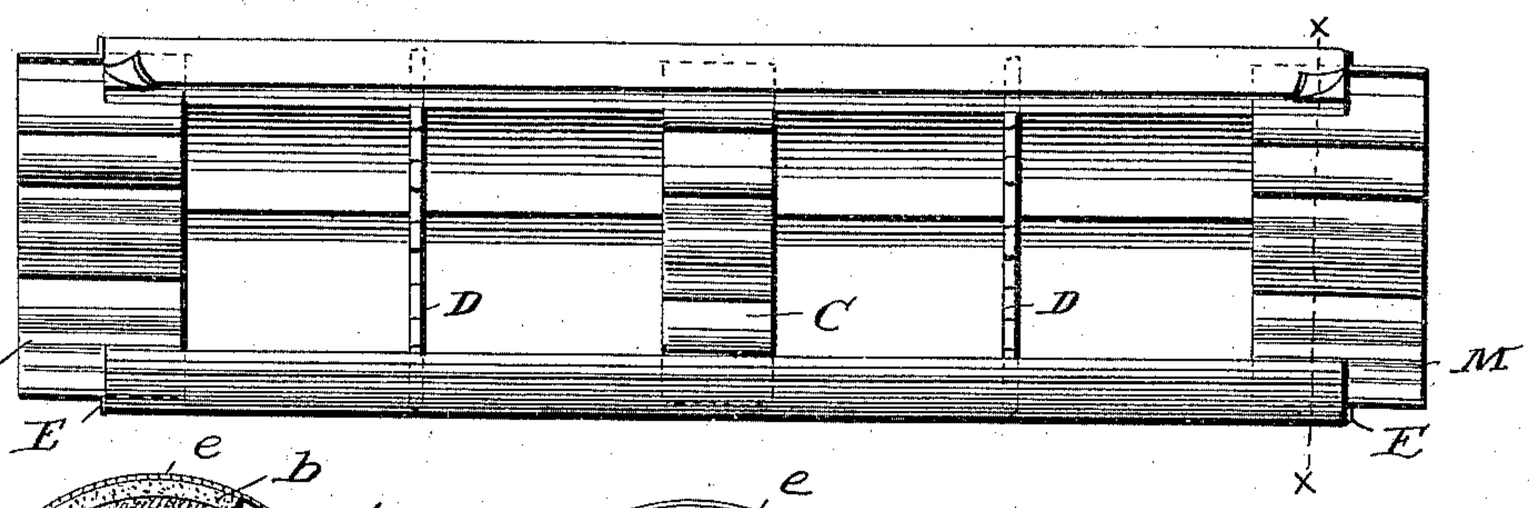
(No Model.)

W. H. NORRIS.

NON HEAT CONDUCTING COVERING.

No. 488,248. Patented Dec. 20, 1892.

Fig. 1.



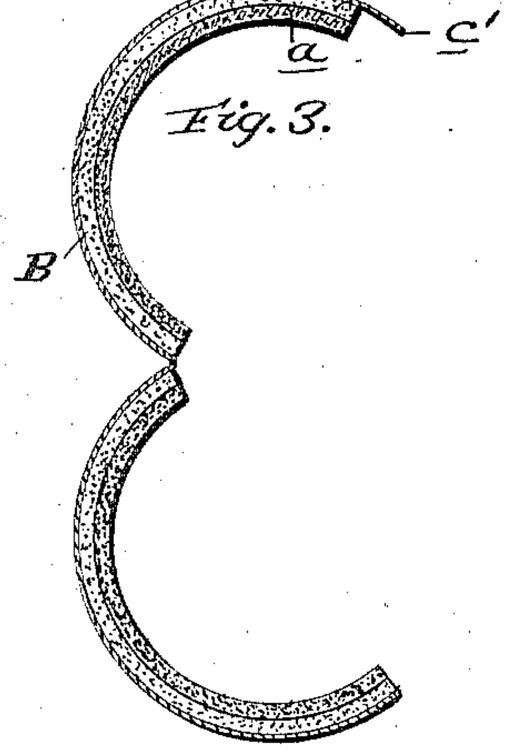


Fig. 3.

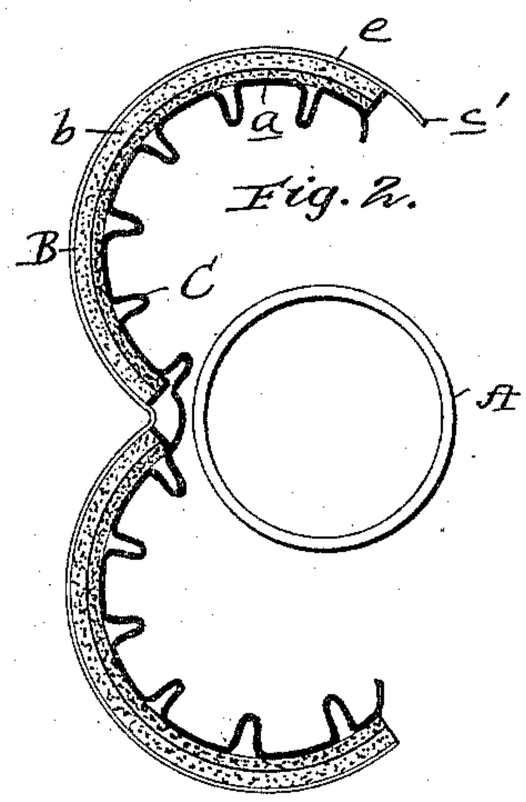


Fig. 2.

Fig. 10.

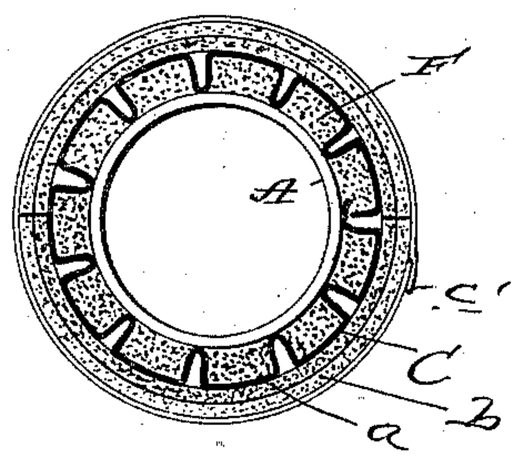


Fig. 4.

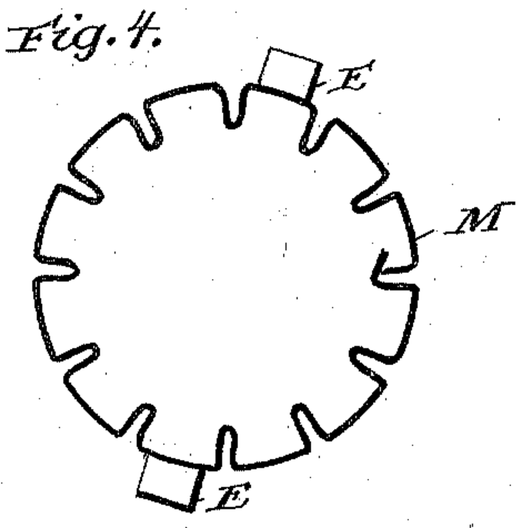
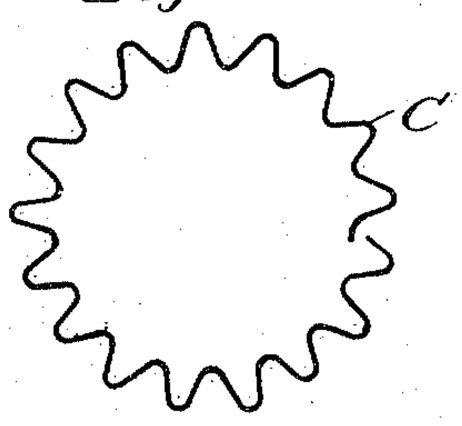


Fig. 6.



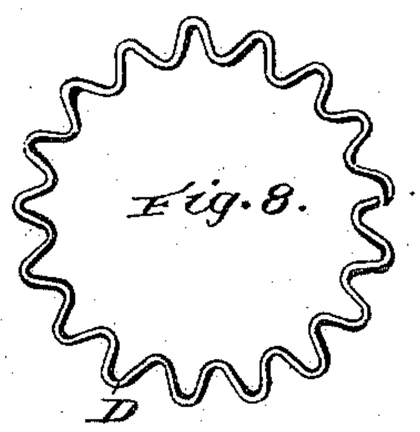


Fig. 8.

Fig. 5.

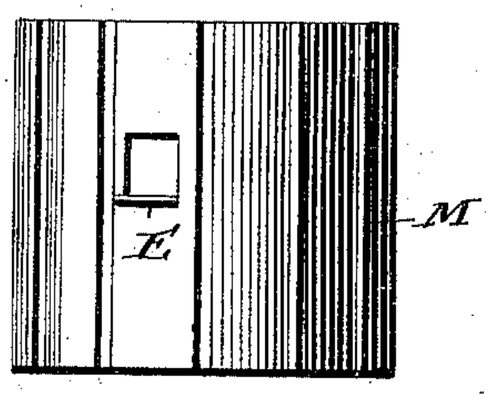


Fig. 7.

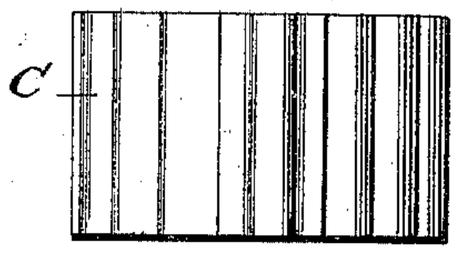
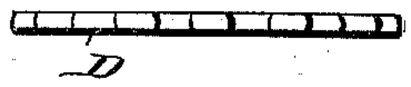


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM H. NORRIS, OF SPOKANE, WASHINGTON.

NON-HEAT-CONDUCTING COVERING.

SPECIFICATION forming part of Letters Patent No. 488,248, dated December 20, 1892.

Application filed January 6, 1892. Serial No. 417,172. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. NORRIS, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Felt Paper Covering for Steam-Heating Pipes; and I do 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.

My invention has relation to improvements in non-heat conducting coverings for steam pipes, boilers, and other conduits and receptacles that are subjected to a high heat, and it has for its general object to provide a highly efficient covering, of a cheap and simple construction, and one embodying materials that are cheap and readily obtainable.

With the foregoing end in view, the novelty of the invention will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which:

Figure 1, is a side elevation of a section of my improved covering in a partly opened position upon a steam or other pipe. Fig. 2, is a transverse section taken in the plane indicated by the line *x*, *x*, of Fig. 1, looking toward the end of the section. Fig. 3, is a transverse section of the sectional cylindrical jacket. Fig. 4, is an end elevation of one of the end collars removed. Fig. 5, is a plan view of the same. Fig. 6, is an end elevation of the middle collar. Fig. 7, is a plan view of the same. Fig. 8, is an elevation of one of the intermediate collars designed to be placed at points between the middle and end collars. Fig. 9, is a plan view of the same, and Fig. 10, is a transverse section taken in the plane indicated by the line *x*, *x*, of Fig. 1, with the casing and the end collar closed upon the pipe.

In the said drawings, similar letters indicate corresponding parts throughout the several views, referring to which

A, indicates a steam pipe or other heat conducting conduit; and B, indicates the cylindrical jacket of my improved covering, which comprises an inner layer *a*, of asbestus, or other non-conducting substance, an intermediate layer of manifolded felt paper *b*, and an outer layer *e*, of canvas. This jacket B, is formed into two semi-circular, and flexibly connected sections, by cutting through the layer of asbestus and manifolded felt paper to the outer layer of canvas; and the layer of canvas of one section is extended beyond the free edge thereof as shown at *c'*, and is adapted to be connected to the other section by glue or the like to secure the sections together and in position upon the pipe.

C, indicates the middle collar of the covering for holding the jacket B, away from the pipe. This collar C, which occupies a position as shown in Fig. 1, is formed by fluting a strip of sheet metal and bending the same into a circular form, and lapping its ends as better shown in Fig. 6, of the drawing.

D, indicate the intermediate collars which are designed to assist the middle collar C, in holding the jacket B, away from the pipe. These collars D, which are not subjected to as great a strain as the collar C, as they occupy the intermediate position illustrated, are respectively formed from a fluted wire which is bent into a circular form and has its ends lapped as better illustrated in Fig. 8.

The end collars M, of my improved covering which are better illustrated in Figs. 4 and 5, of the drawings, are preferably formed respectively from a strip of fluted sheet metal bent to form a circle and having its edges resting contiguous to each other as illustrated. Struck up from the collars M, and preferably at diametrically opposite points midway the length thereof, are the wings E, which are designed and adapted to engage the ends of the jacket B, and prevent the collars from entering the same a greater distance than about that illustrated.

Interposed between the end collars M, and the pipe A, as better illustrated in Fig. 10, of the drawings, are fillings F, of asbestus, mortar, or the like, whereby a dead air space is created within the covering between the end collars M, which is a highly important desideratum.

By reason of the contiguous ends of the collars C, D, and M, being simply lapped or brought adjacent to each other, it will be readily perceived that they are free to expand and contract, which is also an important desideratum.

From the foregoing description read in connection with the drawings it will be perceived that I have provided a covering of a cheap and simple construction adapted to carry out its functions in an efficient manner.

Having described my invention what I claim is:—

1. In a non-heat conducting covering for steam pipes, substantially as described, the combination with a jacket; of the end collars M, formed by bending fluted sheets of metal into circles; the said collars having their ends loosely lapped and also having the struck up wings E, adapted to engage the ends of the jacket; and the non-conducting fillings interposed between the end collars and the pipe on which the covering is mounted adapted to create a dead air space within the jacket between the end collars, substantially as and for the purpose set forth.

2. In a non-heat conducting covering for steam pipes and the like, the combination with a jacket comprising two longitudinal sections flexibly connected together, the middle collar C, formed from a sheet of fluted metal and the intermediate collars D, formed from fluted wire, interposed between the jacket and the pipe upon which it is mounted; of the end collars M, formed by bending fluted sheets of metal into circles; the said collars having their ends loosely lapped and also having the struck up wings E, adapted to engage the ends of the jacket; and the non-conducting fillings interposed between the end collars and the pipe on which the covering is mounted adapted to create a dead air space within the jacket between the end collars, substantially as and for the purpose set forth.

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

WILLIAM H. NORRIS.

Witnesses:
S. P. DOMER,
F. L. ALGER.