

A. FUNKE.
INSULATION BAG FOR CONDUITS.
APPLICATION FILED JULY 16, 1909.

967,360.

Patented Aug. 16, 1910.

Fig. 1,

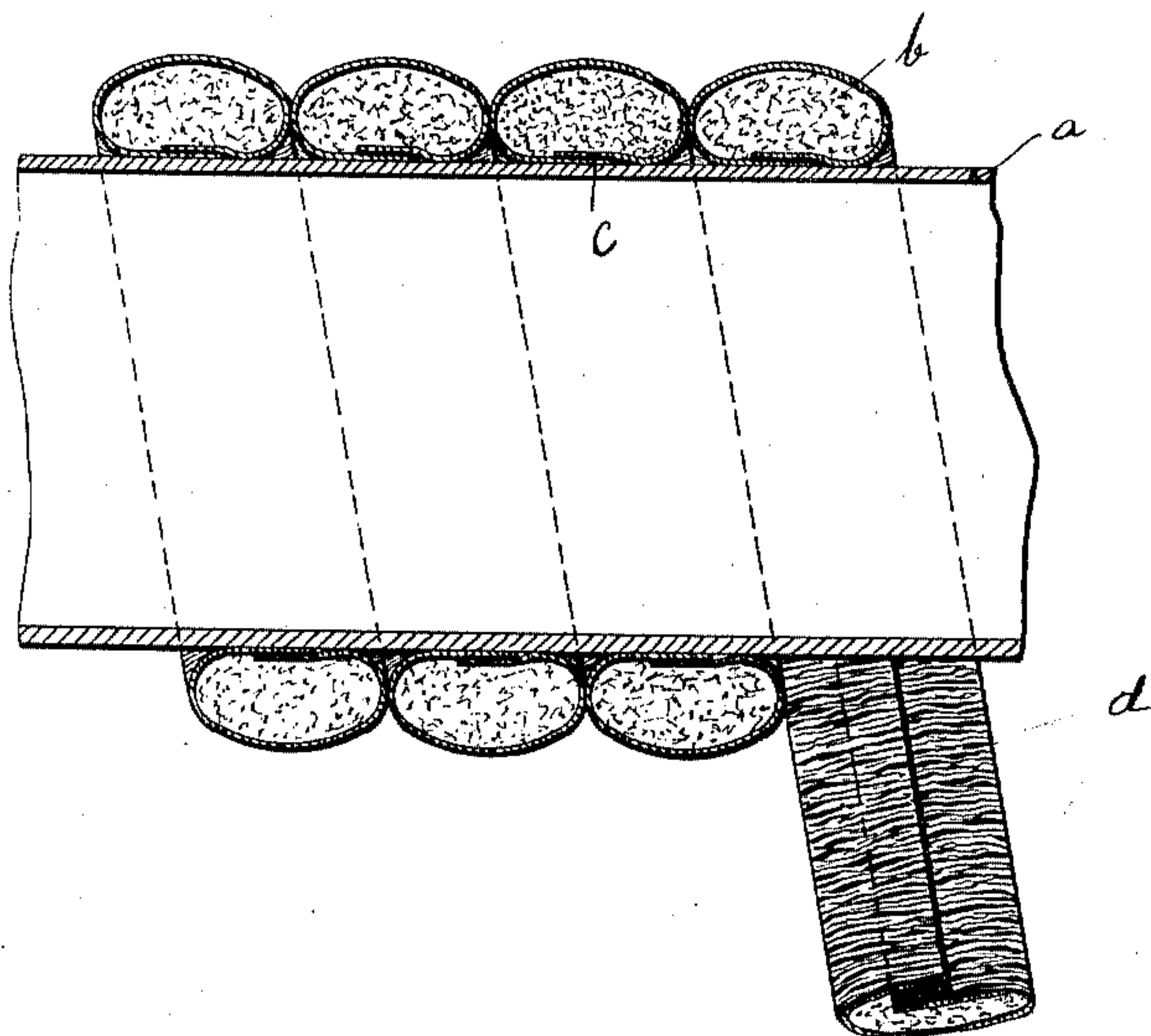
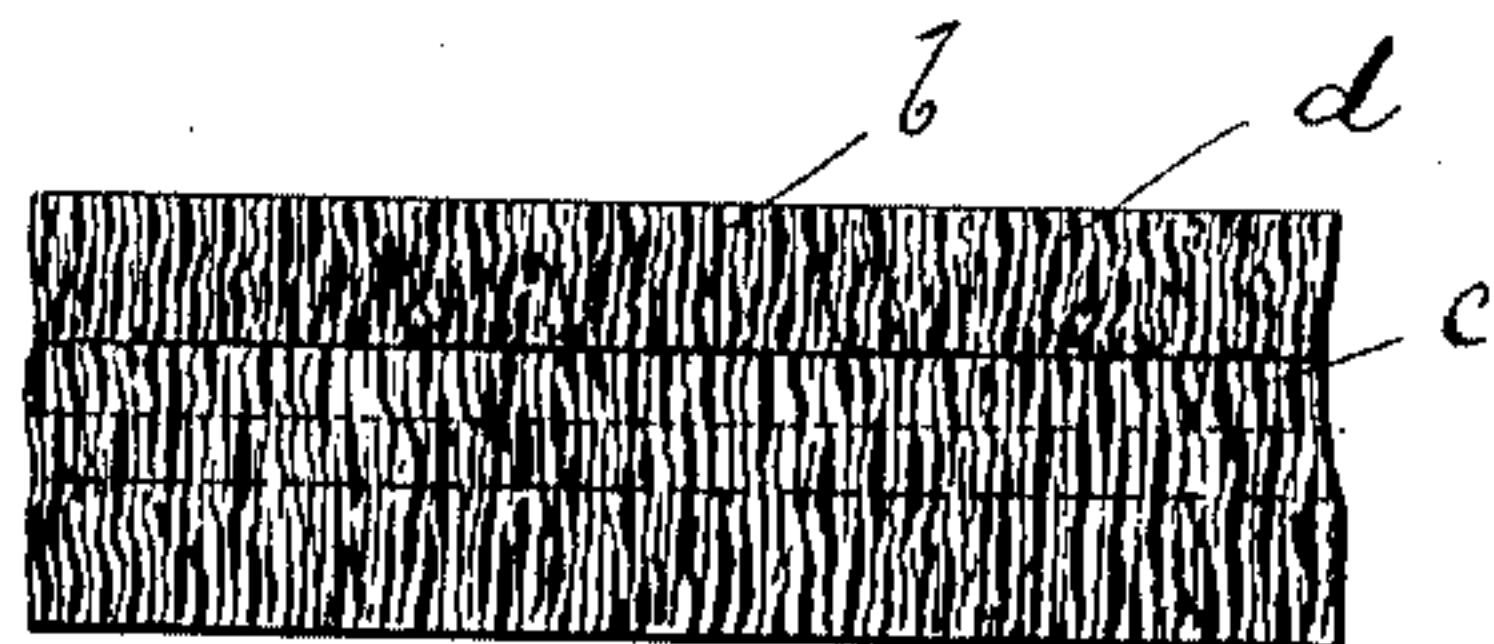


Fig. 2,



Witnesses:
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UNITED STATES PATENT OFFICE.

ANTON FUNKE, OF WESTIG, GERMANY, ASSIGNOR TO THE PAPYRUS ARTIFICIAL PAPER MANUFACTURING COMPANY, OF HOBOKEN, NEW JERSEY.

INSULATION-BAG FOR CONDUITS.

967,360.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed July 16, 1909. Serial No. 508,025.

To all whom it may concern:

Be it known that I, ANTON FUNKE, a subject of the German Emperor, residing at Westig, Prussia, Germany, have invented certain new and useful Improvements in Insulation-Bags for Conduits, of which the following is a specification.

It is well known to insulate conduits as for instance steam inlet pipes, etc., by covering the pipes with a packing consisting of bags filled with an insulating material as for instance infusorial earth. In order to attain the required flexibility for this packing the bags have hitherto been prepared by a special bobbin machine. However, this method is very complicated rendering the cost of manufacture of the insulation packing very high. On the other hand bags made up of individual strips the sides of which are joined together by gluing or sewing are almost inflexible and hence useless.

The object of my invention is to remove these drawbacks by constructing such bags of individual strips and giving them the required flexibility by providing the strips with fine cross crinkles corrugations and folds either before, at, or after joining the sides of the strips together.

As material for the bags any kind of textile fabrics, asbestos or any crape or crinkled paper may be used. When using textile fabrics or asbestos the same may be cross plaited in ordinary manner and when the bag is composed of individual strips the latter may be crinkled when joining the strips by pasting or sewing. On the other hand when using craped or crinkled paper as the so called water proof crape paper no special work is required, as the strips already have the required extendibility so that the bags as soon as the strips are joined and filled with the insulation material may be readily wound around the pipes. The joints insure the bags against undesired stretching. These joints may be reinforced in any suitable manner, as for instance, by the insertion of strips of particularly well insulated or non-inflammable material or by having the side edges of the strips overlap each other.

If for instance water glass is used as glue for joining the strips together the same forms *per se* an impregnation against singeing.

The joints of the individual strips which are on the inner faces of the bag when the latter is wound around the pipe, rest on the latter, hence need not be made to stretch or expand. On the other hand the outer face of the bag being formed with cross folds, crinkles or corrugations are allowed to sufficiently yield by virtue of these cross crinkles or corrugations so that in spirally winding the bag around the pipe the required curvature is easily obtained.

The entire bag or the material used herefor may in order to protect the same from burning be impregnated with well known chemical substances, as sulfate of ammonia, a solution of boracic acid, water glass, or the like.

The new insulation bag may be made to be used for single or multiple winding, by having its cross-section made circular, oval or angular.

Over the hitherto used bob-work bags the bag of the present invention has the advantage of being easy and cheap to manufacture, particularly when the same is made of crape paper.

My invention is illustrated in the accompanying drawing in which—

Figure 1 is a longitudinal section of a pipe with the new packing wound around the same and Fig. 2 shows the joint face of the bag.

In the drawing *a* denotes the pipe and *b* the bag filled with insulation material.

The bag shown in the present example is made of crape paper cut in long strips, the side edges *c* of which are glued together or as shown in Fig. 2 sewn together. The strips are provided with cross crinkles, corrugations or folds *d* so as to render the outer face of the bag extendible.

What I claim and desire to secure by Letters Patent is:

1. A bag for the insulation of conduits consisting of a piece of fibrous material which is provided with successive cross crinkles or folds and the edges of which are secured together to form a tube.

2. An insulation for conduits, consisting of a piece of fibrous material which is provided with successive cross crinkles or folds and the edges of which are secured together to form a tube, and a filling of insulating material.

3. A bag for the insulation of conduits consisting of individual strips having successive cross crinkles or folds and the edges of which are secured together to form a
5 tube.

4. An insulation for conduits, consisting of individual strips having successive cross crinkles or folds and the edges of which are

secured together to form a tube, and a filling of insulating material. 10

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

ANTON FUNKE.

Witnesses:

ELLIS V. LEVY,

MAX D. ORDMANN.