W. W. SPADONE.

BELT.

APPLICATION FILED SEPT. 27, 1912.

1,100,406. Patented June 16, 1914.

Fig. 1.

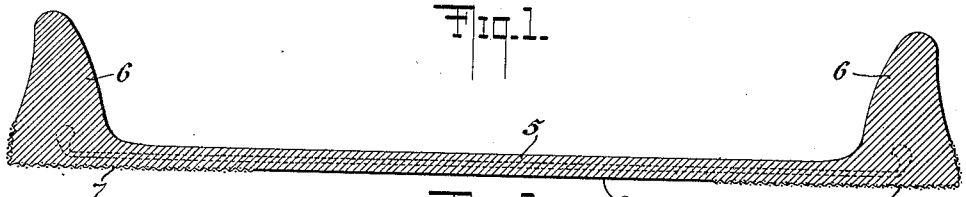


Fig. 2.

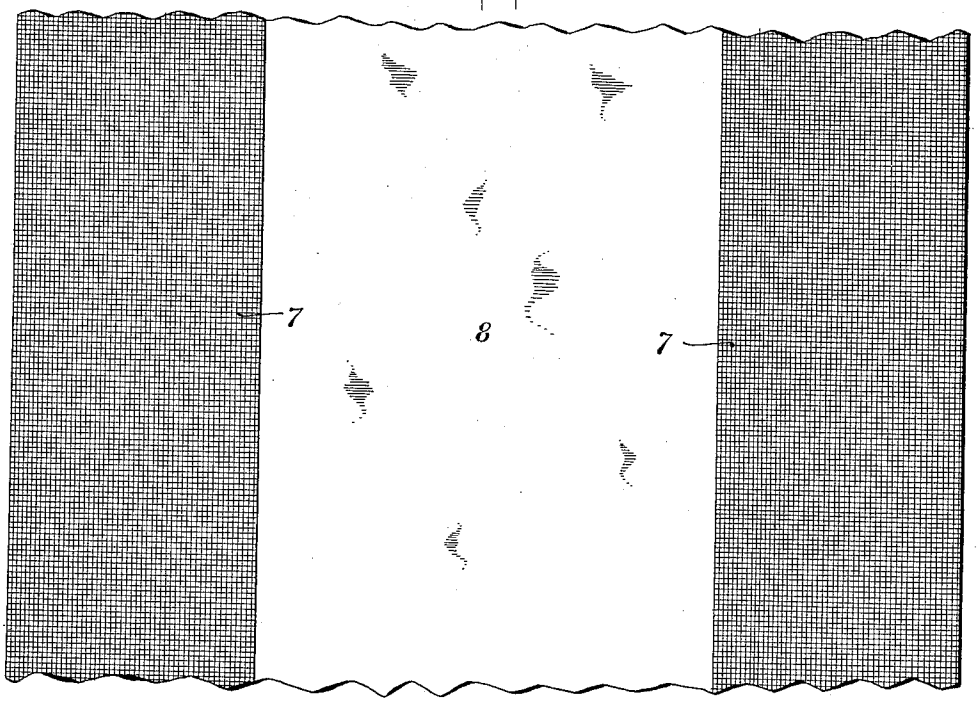
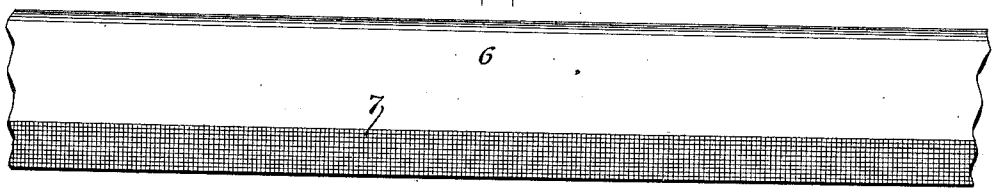


Fig. 3.



WITNESSES

George Du Bon

John A. Kellenberger

INVENTOR

Walter W. Spadone

BY

Briesen & Knauth

ATTORNEYS

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER W. SPADONE, OF NEW YORK, N. Y., ASSIGNOR TO GUTTA PERCHA & RUBBER MANUFACTURING CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

BELT.

1,100,406. Specification of Letters Patent. **Patented June 16, 1914.**

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To all whom it may concern:

Be it known that I, WALTER W. SPADONE, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Belts, of which the following is a specification.

My invention relates to belts and more particularly to that type of such belts known as vanner or concentrator belts. Belts of this description, when in operation, travel over rollers which, in addition to being rotated, are also more or less constantly vibrated. In order to secure the required degree of efficiency it is necessary to keep these rollers well lubricated with oils or greases which during the operation of the belt are spattered or spread upon said belt particularly at and near the edges thereof. Such oils, greases or other lubricants usually have an injurious effect upon the material of which the belts are constructed with the result that those portions thereof at or near the edge become worn out long before the central or remaining portion of said belts which are removed from the effects of such oils and greases have passed a period of usefulness.

The particular object of my invention is to overcome these objections and defects and to construct concentrator belts in such a manner that the zones or portions thereof which are ordinarily affected by the oils, greases or other lubricants will be effectively protected against the same and will consequently have a period of usefulness corresponding substantially to that of the remaining zones or portions of the belt which are out of the reach of such oils, greases or other lubricants.

My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a cross-section of my improved belt; Fig. 2 is an inverted face view of a portion thereof and Fig. 3 is an edge elevation of a portion of my improved belt.

In the drawings which illustrate an example of my improvement 5 represents the body of the belt which may be of any suitable and known construction, and as shown, is provided with flanges 6 extending lengthwise at opposite edges of said body. The protecting medium shown in the drawings comprises a layer of fabric or other suitable material 7 which is impregnated with an oil, grease or other lubricant resistant or in some cases simply coated or otherwise treated with said resistant. This lubricant resistant may be of any suitable kind and may comprise any ingredient or mixture of ingredients adapted to produce the desired results, that is to substantially resist the injurious effects of the oil, grease or other lubricant. For instance, I have found a mixture of balata and inorganic mineral matter mixed in varying proportions for resisting different types of lubricants to be very effective for the intended purpose and have in some instances found it of advantage to add rubber in suitable proportions to this mixture.

In the example of my invention illustrated in the drawings, this fabric or other layer 7 is located along opposite edges of the belt body 5 and extends inwardly therefrom so as to cover the inner surface of said body for a distance from said edges to protect the said body and so as to leave the intermediate or central portion or zone 8 which is outside of the reach of the oil, grease or other lubricant unprotected. The said layers 7 also extend about the opposite edges of said body and over the outer surfaces of the flanges 6 a sufficient distance to adequately protect the same against the effects of said oil, grease or other lubricant. It will, of course, be understood that the amount of belt and flange surfaces covered by said layers 7 may be varied to meet the requirements of any particular case and that in some instances the entire inner surface of the body 5 as well as the entire outer surfaces of the flanges 6 may be covered with this oil or other lubricant resisting layer if this is found desirable. The layers 7 may be attached to the belt in any suitable manner, as for instance, by vulcanization.

In constructing my improved belt I prefer to build up the body and flanges in any usual manner and to apply the fabric or other layers 7 thereto while said body and flanges are in a green or uncured state. It is to be understood that the layers 7 have been impregnated, coated or otherwise treated with the oil-resistant previous to their application to the body and flanges.

The materials in this condition being in a tacky state will adhere together and may then be placed in a mold or other device and vulcanized or cured in the customary way. In this way the belt and flanges and the fabric or other layers 7 become a substantially integral or homogeneous structure. In order that the layers 7 may be flush with those portions of the belt surfaces not covered thereby I may either press said layers into the belt material while it is in a green or uncured state or I may remove sufficient belt material from the portions over which the layers 7 are to extend before said layers are placed upon the belt as described to secure this result. As the layers 7 are usually not of very great thickness it is not absolutely necessary that the same should lie flush with the portions of the belt surfaces not covered thereby and said layers 7 may simply be laid upon the belt surfaces or those portions thereof which are to be covered and protected.

In operation as the oil, grease or other lubricant from the rollers is spread or spattered it will reach only the layers 7 which will resist the injurious effects thereof and consequently protect those portions of the belt which are covered thereby. These layers will be effective at least a sufficient length of time to permit a maximum amount of service to be obtained from the unprotected portions of said belt so that the entire belt has a uniform and maximum period of usefulness and substantially no one part thereof becomes useless before any other part. With belts which are entirely unprotected against the effects of the oils, greases or other lubricant, the edges and portions near the same as well as the flanges become worn out and useless long before the remainder of the belt which is outside of or removed from the effects of said oils or greases shows any material signs of wear. These objections and disadvantages are entirely overcome in my invention and a belt, all parts of which have a substantially equal period of usefulness, is produced without material increase in the cost of production or manufacture.

Various changes in the specific form shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. A vanner belt comprising a body, longitudinal flanges located along opposite edges of said body, and separate strips of fabric extending along the bottom surface of said body and inwardly for a distance from opposite edges thereof and further extending about said opposite edges and upwardly for a distance over the flanges, said strips being impregnated with an oil or grease resistant and connected with said body and flanges.

2. A vanner belt comprising a body, longitudinal flanges located along opposite edges of said body, and separate strips of fabric extending along the bottom surface of said body and inwardly for a distance from opposite edges thereof and further extending about said opposite edges and upwardly for a distance over the flanges, said strips being treated with balata and inorganic mineral matter and connected with said body and flanges so as to lie flush with the bottom surface of the body and the outer surfaces of the flanges.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WALTER W. SPADONE.

Witnesses:
TERENCE J. MORRIS,
JOHN O. KELLOGG.