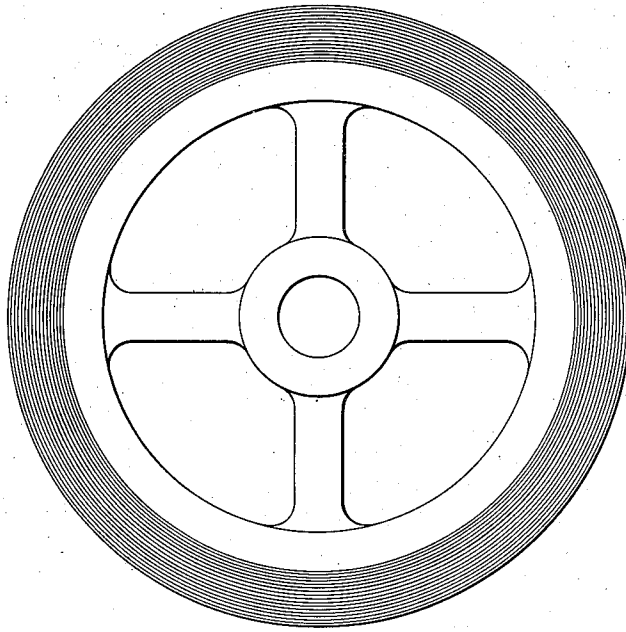


Z. T. SUBERS.
COVERING FOR DRAFT ROLLERS, &c.
APPLICATION FILED JUNE 1, 1908.

938,087.

Patented Oct. 26, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

ZACHARY T. SUBERS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
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COVERING FOR DRAFT-ROLLERS, &c.

938,087.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed June 1, 1908. Serial No. 436,096.

To all whom it may concern:

Be it known that I, ZACHARY T. SUBERS, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Coverings for Draft-Rollers, &c., of which the following is a specification.

The object of my invention is to provide a composition for use in place of leather, rubber, felt, or like materials for the covering of draft rollers, wheels, pulleys, aprons, belts, drums, or like structures which are intended to exert a tractive effect upon textile threads, strands or other materials upon which they act, the term "roller" being hereinafter, for convenience, used in this specification to indicate the general type of structure for whose covering the composition is intended.

The figure in the drawing represents an end view of a roller having a covering of my improved composition applied thereto.

The object of my invention has been to provide a compound having rubber or gutta-percha as a base, for the purpose of imparting to it a certain amount of resiliency and the desired cohesiveness, but differing from ordinary vulcanized rubber in having a fine, granular structure and offering such resistance to compression that its surface can be buffed or sandpapered so as to render it perfectly level and uniform throughout.

The compound comprises rubber or gutta-percha, sulfur, or other vulcanizing agent, and ground leather, either alone or combined with ground cotton, or other textile fiber, a loading or weighting agent, such as zinc white or its equivalent, being also, by preference, added to the compound in order to give it the required body. The following formula is one which has been found to give good results: rubber or gutta-percha—3 kilograms, sulfur—900 grams, ground leather—500 grams, ground cotton or other textile fiber—500 grams, zinc white—600 grams. Departures from the proportions here given may, however, be made within the scope of my invention, depending upon the purity of the rubber employed or the conditions desired in the finished product, the rule being that the less the amount of ground leather and textile fiber employed in the compound the more nearly will it resemble ordinary vulcanized rubber.

While I find it advisable, in all cases, to

combine ground textile fiber with the ground leather, the latter alone, in correspondingly increased proportion, may be employed if desired. In some cases, also, I add about 250 grams of oxid of antimony, which serves the double purpose of an electrical non-conducting agent and a loading or weighting ingredient.

The compound, in a plastic or semi-plastic state, may be pressed into a mold of which the body or hub of the desired roller constitutes the core, and the compound is then vulcanized in the ordinary way while in the mold. The body of the roller may be of any desired material which will withstand the heat necessary for the vulcanization of the covering compound. Upon removal from the mold the roller will have a continuous covering consisting of a homogeneous, cohesive mass, of fine, granular structure, and, while possessing all necessary elasticity it will offer such resistance to compression, that its surface can be rendered perfectly true by buffing, grinding, sandpapering or any other like method.

The tractive effect of a roller covered with my improved composition is much greater than one covered with rubber, leather, felt, cork, or any of the other coverings ordinarily applied to draft rollers and with which I am familiar, experience having demonstrated that a roller covered with my improved compound can be operated with about one-half of the expenditure of power required for the operation of a leather covered roller, this being probably due to the lessened friction arising from the decreased amount of weight necessary to be exerted upon the material under treatment in order to press it into contact with the tractive surface of the roller.

My improved compound is a non-conductor of electricity which is an added advantage in the case of draft rollers for textile machinery, as it prevents the disorganization of the fibers which frequently results from a static charge in the rollers ordinarily used.

I am aware that it has heretofore been proposed to produce compositions containing rubber or gutta-percha, a vulcanizing agent and fibrous material, the latter being sometimes in pulverized form, such compound being usually rolled in sheets for various uses, but I am not aware that it has here-

tofore been proposed to combine ground leather with a vulcanizable rubber or gutta-percha compound, or that it has ever been proposed to provide a draft roller or equivalent device with a continuous, homogeneous covering or coating consisting of rubber or gutta-percha, a vulcanizing agent, and ground fibrous material, such as leather, textile fiber or the like.

10 I claim:

1. A composition for the purpose described, consisting of rubber or gutta-percha, a vulcanizing agent, ground leather, and ground textile fiber.

15 2. A composition for the purpose described, consisting of rubber or gutta-percha, a vulcanizing agent, ground leather, and a weighting or loading ingredient.

20 3. A composition for the purpose described, consisting of rubber or gutta-percha, a vulcanizing agent, ground leather, ground textile fiber, and a weighting or loading agent.

25 4. A composition for the purpose described, consisting of rubber or gutta-percha, a vulcanizing agent, ground fibrous material, and oxid of antimony.

30 5. A composition for the purpose described, consisting of rubber or gutta-percha, a vulcanizing agent, ground fibrous material, a loading or weighting ingredient, and oxid of antimony.

35 6. A draft roller or like structure having a continuous, homogeneous and cohesive surface covering or coating composed of rubber,

a vulcanizing agent, and ground fibrous material.

7. A draft roller or like structure having a continuous, homogeneous and cohesive surface coating or covering composed of rubber, 40 a vulcanizing agent, and ground leather.

8. A draft roller or like structure having a continuous, homogeneous and cohesive surface coating or covering composed of rubber, a vulcanizing agent, ground leather and 45 ground textile fiber.

9. A draft roller or like structure having a continuous, homogeneous and cohesive surface coating or covering composed of rubber, a vulcanizing agent, ground leather, ground 50 fibrous material, and a loading or weighting ingredient.

10. A draft roller or like structure having a continuous, homogeneous and cohesive surface coating or covering composed of rubber, 55 a vulcanizing agent, ground leather, ground fibrous material, and oxid of antimony.

11. A draft roller or like structure having a continuous, homogeneous and cohesive surface coating or covering composed of rubber, 60 a vulcanizing agent, ground fibrous material, a loading or weighting material, and oxid of antimony.

In testimony whereof, I have signed my name to this specification, in the presence of 65 two subscribing witnesses.

ZACHARY T. SUBERS.

Witnesses:

HAMILTON D. TURNER,
KATE A. BEADLE.