

UNITED STATES PATENT OFFICE.

JOHN W. KUMPH, OF DANVERS, MASSACHUSETTS.

VULCANIZED FIBROUS COMPOSITION.

No. 860,751.

Specification of Letters Patent.

Patented July 23, 1907.

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To all whom it may concern:

Be it known that I, JOHN W. KUMPH, a citizen of the United States, and a resident of Danvers, in the county of Essex and State of Massachusetts, have invented an
5 Improvement in Vulcanized Fibrous Composition, of which the following description is a specification.

The object of my invention is the production of a sheet substance having all the usual characteristics of leather in respect of toughness, appearance, finish,
10 flexibility, durability, etc., my product being particularly adapted for use in making traveling bags, carriage tops, harness trimmings, boots and shoes, usual leather novelties, bookbindings, coverings for furniture, etc. To this end I employ refuse scrap rubber, scrap leather,
15 antimony oxid, zinc oxid, red lead, palm oil, rosin, lime, litharge, and sulfur. The proportions of these ingredients will be varied according to the purpose for which the stock is to be used, and as it is desired that the stock should be hard or soft, thick or thin, etc.

For general use I employ by weight about 34 parts of the refuse scrap of rubber, 50 parts of scrap leather, 2 parts each of antimony, zinc, rosin and sulfur, 4 parts each of the red lead and litharge, and 1 part each of lime and palm oil. These are ground thoroughly and mixed or
25 kneaded together, and are then sheeted and cured or vulcanized at a temperature of about 280 degrees Fahrenheit. I have found by experiment that these ingredients are necessary, and that the results indicate some reaction or series of reactions, the exact nature of
30 which I have not found it possible to determine. The result is a highly flexible and exceedingly tough, hard, leather-like sheet capable of being creased, stitched, molded or shaped, and otherwise treated exactly the same as leather, and capable of producing exactly the
35 same appearance and finish as leather.

The most common uses to which my improved article of manufacture is put are the manufacture of mats, table covers, furniture coverings, carriage and automobile tops, automobile clothing, boots and shoes, (particu-
40 larly overshoes, hunting boots, waterproof leggings, etc.), suit cases, book bindings, etc.

My artificial leather does not deteriorate or become rotten, brittle or hard as is the case with the usual so-

called artificial leathers having a vulcanized rubber foundation. Moreover, it does not crumble, but is 45 tenacious, practically unstretchable, and yet highly pliable and flexible. The chief ingredients also, being of a scrap nature, are inexpensive, and yet the leather scrap gives the desired lightness and fibrous consistency, uniting with the rubber scrap in this respect, the
50 result being that the kneaded mass is capable of being sheeted into exceedingly thin or thick layers, and capable of receiving any calendered surface or coating or finish desired. It may have a cloth backing, and be hard or soft, according to the purpose to which it is to
55 be put.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. The herein described artificial leather, consisting of refuse scrap rubber, scrap leather, rosin, antimony, palm
60 oil, lime, zinc, red lead, litharge and sulfur mixed and vulcanized together in sheet form.

2. The herein described artificial leather, consisting of approximately 85 per cent of scrap rubber and scrap leather, the leather predominating, approximately one per-
65 cent each of palm oil and lime, and two per cent each of antimony, rosin, and zinc, and approximately five per cent of vulcanizing ingredients, all of said ingredients being thoroughly ground and mixed together, and vulcanized in sheet form. 70

3. The herein described artificial leather, consisting of approximately 85 per cent of scrap rubber and scrap leather, the leather predominating, approximately one per cent each of palm oil and lime, and two per cent each of antimony and rosin, four per cent of red lead, and approxi-
75 mately five per cent of vulcanizing ingredients, all of said ingredients being thoroughly ground and mixed together, and vulcanized in sheet form.

4. The herein described artificial leather, consisting of approximately 85 per cent of scrap rubber and scrap
80 leather, the leather predominating, approximately one per cent each of palm oil and lime, and two per cent of antimony, four per cent each of red lead and litharge, and one per cent of sulfur, all finely ground and mixed together, and vulcanized in sheet form. 85

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

JOHN W. KUMPH.

Witnesses:

JESSIE ENDICOTT WEDGE,
JOSIAH F. BLY.