

UNITED STATES PATENT OFFICE.

EDWARD J. YETTER, OF DENVER, COLORADO.

ROOFING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 633,255, dated September 19, 1899.

Application filed September 13, 1898. Serial No. 690,858. (No specimens.)

To all whom it may concern:

Be it known that I, EDWARD J. YETTER, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Roofing Compositions; and I do hereby 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.

This invention relates to compositions of matter particularly adapted for use in preparing roofing-sheets; and the object is to provide a composition which will be superior to any heretofore produced in economy of production, durability, and effectiveness in use and adaptability to different conditions.

It may be well to preliminary discuss one of the ingredients which I employ—namely, what is known as “gilsonite” or “uintahite,” a comparatively new hydrocarbon product, the nature of which is explained in an article by Locke, appearing in the *Transactions of American Institute of Mining Engineers*, Vol. 16, page 162. This article states, among other things, that gilsonite possesses superior qualities as the principal ingredient in a roofing composition, and appreciating this fact I have in evolving the present invention aimed to produce a composition which will effectively utilize this substance. Used alone gilsonite has not proven satisfactory for roofing or paving purposes, being too brittle, and, moreover, not adapted for use as a base which can be tempered down to the proper consistency. I propose to combine gilsonite with asphaltum and a suitable oil in such a manner that the advantages of the gilsonite as an ingredient of a roofing composition can be had, the asphaltum supplying the deficiencies apparent when the gilsonite is used alone, and I am thus enabled to procure a mixture that possesses elastic and pliable properties such as desired in roofing-sheets and one which is at the same time durable and possessed of the required commercial characteristics. It is feasible to cover paper, cloth, or any fabric with a heavy coating of this composition—say one-eighth of an inch thick or, perhaps,

thicker—without having the coating too soft, so as to run in high temperatures when used on a steep roof, while at the same time it is not too hard and brittle in cold temperatures. Heretofore in roofings of the type to which my invention relates coatings as thick as one-eighth to one-half an inch have not proven successful, and it has been customary to employ a thin coating or coatings between layers of paper with another thin coating on top, such a product requiring painting to complete it. Roofings have been made out of asphaltum with a heavy coating on top covered with sand or gravel as a protecting agency, but these roofings are found to be very brittle and are objectionable for this reason. In evolving my invention I have been able to arrive at a temper of the composition far less brittle than that in the asphaltum roofings hereinbefore referred to, while a thick smooth coating is produced which requires no painting.

In carrying out my invention I employ asphaltum as a base, but I avoid the materials heretofore used for tempering the same, as I have found that in almost every case they either destroy its qualities or its cementing properties. Thus instead of employing lime, rosin, sand, or the like, as has heretofore been done, I combine with the asphaltum the substance known as “gilsonite,” which being of the asphaltum nature readily combines therewith chemically and besides producing the desired temper it adds quality. An excess of gilsonite would make the composition too brittle, and it is for this reason that I employ the asphaltum as the base and add only sufficient gilsonite and oil to produce the proper temper.

In producing my composition I subject the ingredients to a sufficient degree of heat to effect their desired union into a homogeneous mass; but as asphaltums vary a great deal in conditions of softness and hardness, requiring more or less of the gilsonite, I do not confine myself to any set formula of preparation or any particular degree of heat. In using a Trinidad lake asphaltum the following formula has been found satisfactory: Two parts or one hundred pounds of asphaltum, one part or fifty pounds of gilsonite, and

three-fourths part or thirty-eight pounds of oil. Any suitable oil is used—such as petroleum, maltha, or linseed-oil—and for the purpose of producing a light, durable, and
5 finished product I may apply a coating of powdered mica, talc, or asbestos, which will be pressed into the composition coating.

My composition is particularly well adapted to withstand high degrees of heat, not being affected to an appreciable extent by the
10 sun's rays, while at the same time it has proven to be comparatively pliable in cold temperatures, and thus a commercially successful product in all climates.

Having thus fully described my invention, 15 what I claim as new, and desire to secure by Letters Patent of the United States, is—

A roofing composition consisting of asphaltum proper, gilsonite or uintahite, and a suitable oil combined substantially in the pro- 20 portions specified.

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

EDWARD J. YETTER.

Witnesses:

CHAS. A. ARMSTRONG,
LOUIS F. EPPISH.