UNITED STATES PATENT OFFICE.

WILLIAM KINSEY, OF CINCINNATI, OHIO.

IMPROVEMENT IN COMPOSITION ROOFINGS.

Specification forming part of Letters Patent No. 118,025, dated August 15, 1871.

To all whom it may concern:

Be it known that I, WILLIAM KINSEY, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Roofing, of which the following is a specification:

My invention consists in a roofing made of a lower layer of tar-paper, covered by an upper layer of textile material coated with a certain preparation hereinafter particularly described, and covered with sand, the whole forming a cheap roofing, easily laid down, easily repaired, and exceedingly durable.

And first, in reference to the materials used in my roofing. The tar-paper used as the substratum of this roofing may be of any of the kinds known to commerce.

The composition with which the upper layer of roofing is first coated, is made: First, of a drying animal-tar—that is, such a tar as when once dried will not melt upon the application to it of heat, but will remain hard until ignited by said heat. Second, of any drying-oil; as, for example, linseed-oil. Third, of any clay; china-clay is usually employed, as it prevents said oil from drying brittle. Before mixing said clay with the aforesaid oil and tar it is well to soften the clay with water. The relative proportions in which these several ingredients are combined are usually as follows, viz.: In every one hundred parts of the composition there are forty-five pounds of tar, twenty-five pounds of oil, and thirty pounds of clay. I claim, however, the right to vary these proportions as experience may dictate.

It may be well to remark that the proportionate amount of linseed-oil employed in this composition may, if desired, be considerably reduced by the addition of resin to the oil, clay and tar, the resin aiding in making the composition adhesive.

These aforesaid ingredients are softened and combined by the application of heat. After the temperature of the mixture has become reduced, but while the mass is still warm, I add such a fluid to it as will enable the ingredients to be easily worked. For this purpose naphtha is usually employed. The composition is then ready to be applied. I then select of textile fabrics the kind most appropriate for use in roofing. This material I coat on both sides with the composition already prepared, by means of appropriate machinery.

Coating the material is preferable to saturating it, since by the former method the middle-connecting fibres of the material are left untouched by the coating, and hence cannot dry brittle, but remain flexible. The fabric thus coated is now in condition for shipping.

In covering a roof, the tar-paper is first laid down. It is well to moisten it before fastening it down, in order to prevent its subsequent expansion and buckling. This textile material coated with composition is then laid over the tarred paper and fastened down. It then receives a second coating either of the composition aforedescribed or of paint. If paint be used, cheap and durable common metallic paint is recommended, or instead of either the said composition or paint for the second coating, it may receive a coating composed of candle-tar and resin thinned with naphtha, such as is commonly used by roofers in making elastic paper-roofing.

Upon the second coating, while yet wet, if desired, sand may be sprinkled for an additional protection to the surface, or the coating may be left unsanded.

Roofing as afore described is cheaper than tin or shingle-roofing. It can be laid upon a roof with ease and rapidity by an unskilled laborer. It is free from the melting and dripping common to tar and other roofs. It will not impregnate or color water, and, finally, can be preserved an indefinite length of time, requiring coating or painting once in five years only.

What I claim as new is—

As an article of roofing, the combination of tar-paper and textile fabric, coated with the preparation of animal-tar, drying oil, and clay described.

WILLIAM KINSEY.

Witnesses:

C. G. HALE,

PHILIP M. SHUEY.