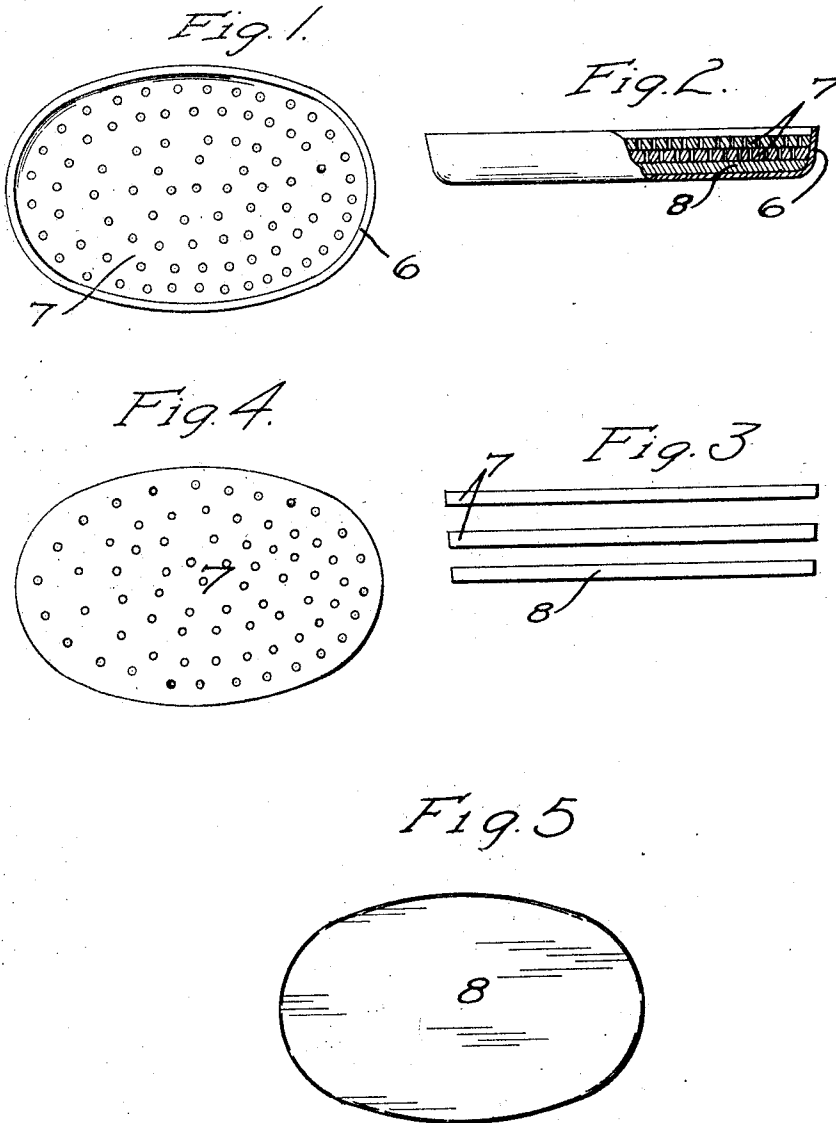


L. RISK.
VULCANIZING FUSE.
APPLICATION FILED SEPT. 25, 1916.

1,209,206.

Patented Dec. 19, 1916



WITNESSES

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LOREN RISK, OF MINNEAPOLIS, MINNESOTA.

VULCANIZING-FUSE.

1,209,206.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOREN RISK, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Vulcanizing-Fuses; 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.

My invention has for its object to provide an improved vulcanizing fuse especially adapted for use in vulcanizing patches on pneumatic tires, but adapted, nevertheless for more general use.

The fuse, as preferably constructed, comprises a thin sheet metal pan and a combustible element therein, the latter being made up of a multiplicity of layers or pieces of fiber or straw board coated and more or less saturated with combustible material. This combustible material is preferably a mixture of potassium nitrate (saltpeter) and pulverized charcoal in warm water, the fiber board layers being dipped and soaked in this liquid and then dried.

As an important feature of this invention, either all or part of the board sheets are perforated, but in the preferred arrangement wherein about three sheets of the board are employed, all but the lower are perforated, and the lower or bottom sheet or board is imperforate, but nevertheless, coated or saturated with the combustible material.

The preferred form of the improved fuse is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a plan view of the improved fuse; Fig. 2 is a side elevation thereof, with some parts sectioned; Fig. 3 is a side elevation showing the sheets or boards that make up the combustible element; Fig. 4 is a plan view of one of the perforated sheets; and Fig. 5 is a plan view of the imperforate bottom board or sheet.

The sheet metal fuse pan is indicated by the numeral 6.

The perforated boards or sheets of the combustible element are indicated by the numeral 7 while the imperforate bottom board or sheet thereof is indicated by the numeral 8. These boards or sheets 7 and 8 are of such size and shape that they fit the rim of

the pan and when pressed into the pan will be frictionally held in place.

The vulcanizing fuse of the general character herein disclosed, and wherein imperforate fuse sheets or plates have not been employed, burn very slowly and have a tendency to collect moisture which makes the burning thereof not only slow, but uneven. The perforate fuse sheets or plates not only give greater surface exposed to the air during combustion, and hence, make combustion more or less rapid to complete, but may permit the more intimate association of the pulverized carbon and saltpeter, which, in itself, insures more complete and quicker combustion, and furthermore, these perforations prevent the combustible element from becoming moisture soaked and insures good combustion, even where considerable moisture is present.

If all of the boards or sheets of the combustible material should be perforated, the combustion might in some cases be a little too rapid, and hence, preferably the bottom sheet or plate is imperforate. In this arrangement, the combustion will be very intense, rapid and complete over the entire upper part of the fuse, but the completion of the combustion will be delayed and prolonged by the imperforate bottom sheet or board.

The efficiency of the vulcanizing fuse above described, has been thoroughly demonstrated in practice, and in the use thereof, has been found that not only will the combustion be complete and intense, but that it will be even over the entire bottom surface of the pan 6. It is, of course, understood that in the operation of vulcanizing a patch on the inner tube of a tire, for example, the bottom of the pan will be clamped against the vulcanizing patch while the latter is properly applied on the tool.

What I claim is:

1. A vulcanizing fuse comprising a combustible element made up of a multiplicity of perforated combustible sheets or boards, certain of which are perforated, and certain of which are imperforate.

2. A vulcanizing fuse comprising a combustible element made up of a multiplicity of combustible sheets or boards held together, the bottom board being imperforate and the upper boards being perforate.

3. A vulcanizing fuse comprising a combustible element made up of a multiplicity

of perforated combustible sheets or boards, certain of which are perforated, and certain of which are imperforate, and a metal pan containing said combustible element.

- 5 4. A vulcanizing fuse comprising a combustible element made up of a multiplicity of combustible sheets or boards held together, the bottom board being imperforate and the upper boards being perforate, and

a metal pan containing said combustible element.

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

LOREN RISK.

Witnesses:

CLARA DEMAREST.

BERNICE G. WHEELER.