

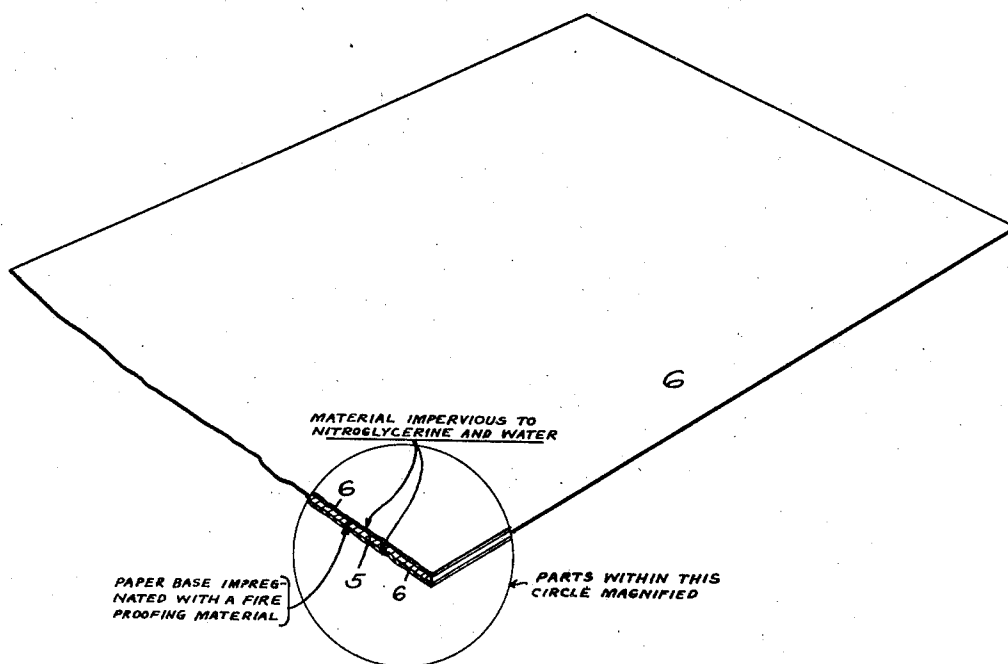
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M. BRANDT

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WATERPROOFED, FIREPROOFED PAPER AND METHOD OF MAKING THE SAME

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UNITED STATES PATENT OFFICE.

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WATERPROOFED, FIREPROOFED PAPER AND METHOD OF MAKING THE SAME.

Application filed January 22, 1925 Serial No. 4,123.

To all whom it may concern:

Be it known that MILLARD BRANDT, a citizen of the United States, residing at Tamaqua, in the county of Schuylkill and State of Pennsylvania, has invented certain new and useful Improvements in Water-proofed, Fireproofed Paper and Methods of Making the Same, of which the following is a specification.

The object of my invention is to provide a water-proofed and fire-proofed paper to be used in connection with materials which are susceptible to deterioration from water or moisture and are inflammable, such as explosives. The invention contemplates the provision of paper prepared with suitable fire-proofing inorganic salts such as ammonium chloride, ammonium phosphate, aluminum sulphate and alum and further treated with suitable water-proofing materials such as rubber, cellulose acetate, casein and asphaltic materials.

Among the objects of my invention is to provide a water-proofed and fire-proofed paper for use in wrapping or packing explosives. In the case of dynamite the general practice is to line the boxes, in which the dynamite is placed, with a waxed paper, the purpose of which is to protect the dynamite from moisture or water and to hold any nitroglycerine or any other liquid explosive ingredient which might exude from the dynamite. In the tests which I have made, I have found that my water-proofed and fire-proofed paper is more impervious to water and nitroglycerine than the waxed paper and has the added advantage of being fire-proof; which is obviously desirable.

It should be understood that my water-proofed and fire-proofed paper is not limited in its use to lining dynamite boxes but is also intended for use in wrapping other explosives and materials which are susceptible to deterioration from moisture or water or are inflammable.

Among the various combinations which I prefer to use in the manufacture of my water-proofed and fire-proofed paper are rubber and ammonium chloride. I prefer the former because it is flexible and is very impervious to water and oils, and the latter because it has good fire-proofing properties, gives strength to the paper and does not make it brittle.

In the manufacture of my water-proofed and fire-proofed paper, either or both the water-proofing and fire-proofing materials may be incorporated with the paper stock before it is made into sheets, or either or both may be added to the sheets after they are made. Also, my water-proofed and fire-proofed paper may be made by cementing or sticking together, with some suitable water-proofing material, two or more sheets of fire-proofed paper. While I have named a number of fire-proofing materials and a number of water-proofing materials which may be alternatively used, it is to be understood that this patent is intended to include the broad thought of providing a paper which is, at one and the same time fire-proof and water-proof so that danger of explosion is reduced, deterioration of the wrapped product from the effect of moisture is prevented and the possibility of the leakage of exuded explosive constituents, such as nitroglycerine, from the wrapper, is guarded against.

A paper suitable for the purposes set forth is shown in the accompanying drawing wherein 5 is the base of thin, flexible paper, which is impregnated with a suitable fire-proofing material such as ammonium chloride. This base is coated with a water-proof and nitroglycerine proof coating 6 such as paraffine, rubber or the like.

Having thus clearly set forth the essential features of my invention, and shown by example how it may be applied, I claim and desire to secure by Letters Patent:

1. A water-proofed and fire-proofed flexible paper for packing or wrapping materials which are susceptible to deterioration from moisture or water and are inflammable, such as explosives, comprising a flexible paper impregnated with an inorganic salt or salts, to render it fire-proof and water-proofed by treatment with a flexible water-proofing composition.

2. A water-proofed, nitroglycerin-proof, fire-proofed flexible wrapping paper, impregnated with a material capable of fire-proofing the said paper, and coated with a thin film of a flexible substance which is impervious to both water and nitroglycerin.

3. A water-proofed, nitroglycerin-proof, fire-proofed paper of such flexibility as to adapt it for use as a wrapping paper, im-

pregnated with a material capable of fire-proofing the said paper, and coated on both sides, with a thin film of a flexible substance which is impervious to both water and nitroglycerin. 10

5 4. A water-proofed, nitroglycerin-proof, fire-proofed flexible paper of such flexibility

as to adapt it for use as a wrapping paper treated with ammonium chloride to render it fire-proof and treated with rubber to render it water and nitroglycerin-proof.

In testimony whereof he affixes his signature.

MILLARD BRANDT.