

UNITED STATES PATENT OFFICE.

EDWARD L. WHITE, OF ENGLEWOOD, NEW JERSEY.

PAPER.

No. 852,918.

Specification of Letters Patent.

Patented May 7, 1907.

Application filed May 1, 1906. Serial No. 314,713.

To all whom it may concern:

Be it known that I, EDWARD L. WHITE, a citizen of the United States of America, and a resident of Englewood, county of Bergen, State of New Jersey, have invented certain new and useful Improvements in Paper, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in paper, and particularly to improvements in paper adapted to be employed for the purposes of electrical insulation.

My invention consists in loading the fibrous pulp from which the paper is to be made with pulverized mica, and then continuing the operation of manufacturing the paper in the ordinary way. The result is a paper containing any desired proportion of mica throughout its structure, which paper I have found by actual tests is admirably adapted for electrical insulation purposes.

The mica may be added to the pulp at any time prior to the time the same is taken upon the screens to actually form the paper, and is preferably added after the material forming the pulp has been thoroughly beaten and is in a homogeneous state in practical suspension in water. I preferably supply about twenty per cent. of finely divided mica to the pulp when in this condition, and I continue to agitate the pulp and mica particles together, first in order to thoroughly mix them so that the mass will be homogeneous, and second to keep the mass thus homogeneous,

it being remembered that the mica dust otherwise would be apt to fall to the bottom owing to its greater specific gravity.

I may use more or less mica dust as may be desired, but have heretofore found that twenty per cent. is about the right proportion, a greater amount tending to make the paper too "short" or brittle.

I have referred to the mica particles as "mica dust" and "pulverized mica" for the reason that I find it advantageous to use the mica in as finely subdivided a state as possible. This is for two reasons: first, it is necessary that it be very fine in order to properly fill in the fine interstices between the fibers, second, if it were not fine it would not only fail to fill in these interstices, but would tend to separate the fibers and cause breaks in the paper.

What I claim is:

1. A paper composed of a homogeneous mass of fibrous pulp and pulverized mica.

2. A paper composed of a homogeneous mass containing about eighty per cent. of fibrous pulp and about twenty per cent. of mica particles.

3. Paper containing throughout its composition a substantially uniform proportion of pulverized mica.

In witness whereof I have hereunto set my hand in the presence of two witnesses:

EDWARD L. WHITE.

Witnesses:

JOHN H. WHITE,

JOHN A. WILKINSON.