

# United States Patent Office.

JOHN T. DAVIS, OF JERSEY CITY, NEW JERSEY, AND WILLIAM C. SELDEN,  
OF BROOKLYN, NEW YORK.

*Letters Patent No. 70,421, dated November 5, 1867.*

## IMPROVED COMPOSITION FOR PACKING JOURNAL-BOXES, JOINTS, &c.

" The Schedule referred to in these Letters Patent and making part of the same.

Be it known that we, JOHN T. DAVIS, of Jersey City, in the State of New Jersey, and WILLIAM C. SELDEN, of Brooklyn, in the State of New York, have invented a new and useful Composition for Making Joints and Packing; and we do hereby declare that the following is a full, clear, and exact description of the same, and of the methods of compounding and using it.

The invention consists of a composition of paper-pulp, soapstone, and sulphate of zinc, manufactured in proper shape for packing stuffing-boxes, making joints, and like uses.

The above substances are usually compounded, by weight, in the following proportions: paper-pulp, sixteen parts; soapstone, one part; and sulphate of zinc, one part. The pulp gives the composition most of its body and consistency; the soapstone acts as a lubricant; and the sulphate of zinc makes it to a great extent non-combustible.

The composition is made as follows: Powdered soapstone and a solution of sulphate of zinc are added to the paper-pulp when in a semi-fluid state, and the materials thoroughly incorporated by agitating and stirring the mass.

For making joints, the composition is spread out in sheets of the desired thickness, substantially as in making paper, or several sheets may be pressed together. When used for packing, the soft composition is either poured or pressed into moulds of the desired shape, or forced out through a die, the form of which determines the section. Packing is made, also, by rolling up sheets of the composition till the desired size is attained. After the composition is put into shape, it is simply dried, when it is ready for use. The packing for stuffing-boxes is generally made circular, in section, so that it may have an opportunity to swell when it absorbs moisture. The packing is often encased in cotton cloth, and, by proper machinery, a case may be knit about it. The use of the casing is principally to prevent injury to the material before it is put in place, and to confine the soapstone powder which adheres to the pulp.

It is not necessary to use the exact proportions above mentioned. The soapstone may be entirely omitted in making sheets for joints. The sulphate of zinc may be replaced in the composition by many other non-combustible mineral substances which dissolve in water, or which, not being gritty, will adhere to the pulp like the soapstone. The sheets of the composition, when used for joints, may have cloth cemented to them.

The composition may be made in any of the various forms which are given to India rubber, for the purpose of preventing leakage, and may be applied to the same uses in substantially the same manner.

We claim as new, and desire to secure by Letters Patent—

1. A composition of paper-pulp, soapstone, and sulphate of zinc, or its equivalent, substantially as and for the purposes specified.

2. A composition of paper-pulp and sulphate of zinc, substantially as and for the purposes set forth.

JNO. T. DAVIS,  
WM. C. SELDEN.

Witnesses:

W. F. HERBERT,  
F. P. SHERWOOD.