

# UNITED STATES PATENT OFFICE.

WILLIAM SIEGMANN, OF BALTIMORE, MARYLAND, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SAGAX WOOD COMPANY, A CORPORATION OF DELAWARE.

## PROCESS FOR MAKING ARTIFICIAL-WOOD PRODUCTS.

No. 866,691.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed January 14, 1907. Serial No. 352,295.

### *To all whom it may concern:*

Be it known that I, WILLIAM SIEGMANN, a subject of the Emperor of Germany, and residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Processes for Making Artificial-Wood Products, of which the following is a specification.

This invention relates to a process of producing a wood substitute, the product of which may be utilized in many places where wood is now commonly employed, as for instance, for railroad cross-ties, fence posts and in the construction of buildings, or in fact any place to which it is adapted.

An object of this invention is to provide a compound which will withstand the action of the elements to such an extent as to be unaffected by changes in temperature, the same being impervious to water and unaffected by dampness.

An object of this invention is to produce the wood substitute in which rail spikes may be embedded, the same as are now embedded in wood cross-ties, and the invention further contemplates a production of a wood substitute which will prove comparatively inexpensive to manufacture as well as strong and durable and efficient and satisfactory in use.

With the foregoing and other objects in view, the invention consists in the ingredients and the proportions substantially set forth and compounded in the manner stated.

In producing the wood substitute, I employ preferably one part of ground straw, one part sawdust, two parts of asphalt, two parts cement acting as a binder consisting of one part of calcined magnesite, one-half part boracic acid, one-half part of sal ammoniac, one-half part of colophonium, all of which foregoing ingredients are commingled by agitation, tumbling or stirring, after which the said ingredients are dampened by

30° Baumé solution of magnesium chlorid. The solution is added to the ingredients until the same is thoroughly dampened, but not until a plastic compound is produced, it being my purpose to sufficiently dampen the compound as to cause the adherence of the parts when compressed hydraulically or otherwise.

While I have set forth the preferred formula for the production of this wood substitute, I have found that the said proportions may be varied within predetermined bounds to suit particular requirements.

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is—

1. A wood substitute comprising straw, saw-dust, asphalt and a binder.
2. A wood substitute comprising straw, saw dust, asphalt and a binder; all being commingled by agitation.
3. A wood substitute consisting of straw, saw dust, asphalt and a binder consisting of calcined magnesite, boracic acid, salammoniac, colophonium, and magnesium chlorid.
4. A wood substitute consisting of one part ground straw, one part saw dust, two parts asphalt and two parts cement.
5. A wood substitute consisting of straw, saw dust, asphalt and a cement, said cement consisting of one part calcined magnesite, one-half part boracic acid, one part salammoniac, one-half part colophonium suitably dampened by magnesium chlorid.
6. A wood substitute consisting of one part ground straw, one part saw dust, two parts asphalt and two parts cement, said cement consisting of one part calcined magnesite, one-half part boracic acid, one part salammoniac, one-half part colophonium suitably dampened by magnesium chlorid.

In testimony whereof I affix my signature in the presence of two witnesses, this 14th day of January, 1907.

WILLIAM SIEGMANN.

Witnesses:

FRANK S. APPLEMAN,  
A. HENRY KRONE.