

UNITED STATES PATENT OFFICE.

FRANCIS X. GOVERS, OF OWEGO, NEW YORK, ASSIGNOR TO AMERICUS MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CASEIN GLUE.

No. 799,599.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed November 12, 1904. Serial No. 232,516.

To all whom it may concern:

Be it known that I, FRANCIS X. GOVERS, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented new and useful Improvements in Casein Glue, of which the following is a specification.

This invention relates to adhesives, and particularly to compositions of this character containing casein or compounds of casein, and has for its particular object to provide a strong stable waterproof casein glue of high penetrating power which is free from the disadvantages of casein glues and cements which have been heretofore used.

I have discovered that a glue composition containing casein, trisodium phosphate, sodium hyposulfite, and formaldehyde is possessed of greater strength, stability, and penetrating power than has been obtained prior to the practice of this invention. Such a composition will not thicken nor decompose, but will remain in a satisfactory workable condition for practically an indefinite period. It has an acid reaction, and its use is not attended by the injurious effects upon fabrics, brushes, and the like which is incident to the use of casein glues and cements containing relatively large amounts of alkali. It forms a very strong joint, which is practically waterproof.

In preparing my improved glue I dissolve the casein in a solution of trisodium phosphate and sodium hyposulfite and add the formaldehyde, preferably in the form of the forty-per-cent. aqueous solution known as "formalin."

The proportions of the ingredients of my improved compositions may be varied in accordance with the uses to which it is to be applied. The following proportions, by weight, produce a glue which is particularly satisfactory for general use: casein, fifty parts; trisodium phosphate, ten parts; sodium hyposulfite, five parts; formaldehyde, 1.5 parts; water, one hundred and fifty parts.

While the alkaline hyposulfite which I prefer to employ is that also known as "thiosulfate," the true hyposulfite may also be used.

My improved composition is not only adapted for use as a glue, but can be advantageously employed either alone or with other materials as a covering for leather and wood or as a coating for the interior of barrels and such and any other uses for which my composition if found to be adapted are contemplated as within the exclusive protection for which application is hereby made.

It is to be understood that my invention is not limited to the exact proportions of the ingredients specified, as these may be varied within wide limits without departing from the spirit of my invention or sacrificing any of its advantages. It is to be further understood that chemical equivalents of the ingredients herein specified may be substituted therefor within my invention and the scope of the appended claims.

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

1. A glue containing casein and an alkaline hyposulfite.

2. A glue containing casein, a hyposulfite and formaldehyde.

3. A glue containing casein, an alkaline phosphate, an alkaline hyposulfite and formaldehyde.

4. A glue containing casein, sodium hyposulfite and formaldehyde.

5. A glue containing casein, trisodium phosphate, sodium hyposulfite and formaldehyde.

6. A waterproof glue composition having an acid reaction containing casein, sodium hyposulfite, formaldehyde and water.

7. The herein-described glue composition consisting of casein, trisodium phosphate, sodium hyposulfite, formaldehyde and water.

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

FRANCIS X. GOVERS.

Witnesses:

KATHRYN LA MONTE,
ALFRED PFIRLAY.