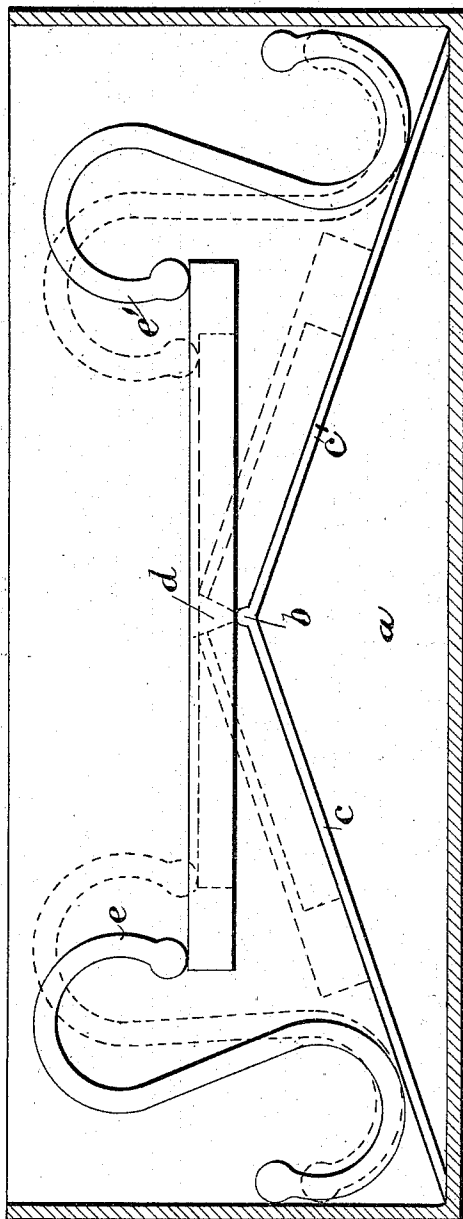


(No Model.)

G. SEELIGMANN.
METHOD OF TESTING TENACITY OF GLUE.

No. 552,731.

Patented Jan. 7, 1896.



Witnesses.
Walter E. Allen.
Walter Allen

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UNITED STATES PATENT OFFICE.

GEORG SEELIGMANN, OF BERLIN, GERMANY.

METHOD OF TESTING TENACITY OF GLUE.

SPECIFICATION forming part of Letters Patent No. 552,731, dated January 7, 1896.

Application filed January 2, 1895. Serial No. 533,570. (No model.)

To all whom it may concern:

Be it known that I, GEORG SEELIGMANN, a subject of the King of Prussia, German Emperor, residing at Berlin, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in Methods of Testing the Tenacity of Glue, of which the following is a specification.

The present invention relates to the determination of the binding strength of glue and other pastes, and is based on the knowledge obtained from manifold experiments that the binding strength of a glue can be considered as corresponding to the quantity of water which a sheet or rod of glue balanced and held on a fixed point must absorb on each side of said fixed point in order to tear or break through at this point from the diminishing adhesive power consequent on the increasing weight of both sides of the sheet or rod glue. The greater the amount of water absorbed necessary to cause the breakage the greater is the binding strength of the glue, &c.

From the above it will be seen that the invention consists of balancing a weighted plate or rod of glue in water, the balancing-point being kept at a constant height, while the two sides of the plate or rod slowly sink in order to exercise a gradually-increasing pull on each other, tending finally to cause a rupture at the balancing-point. The two parts are then weighed and the absorbed quantity of water ascertained.

In order to make my invention clear, reference is made to the accompanying drawing, which represents a longitudinal section of the

apparatus I use as being most suitable for the process.

In the center of a vessel *a*, open at the top and at a suitable height from the bottom, is fixed a cross-bar *b* suitably rounded, and from this bar inclined planes *c* and *c'* extend to the bottom. These planes can, however, be omitted. After the vessel has been filled with water a plate of glue *d* is balanced on the cross-bar *b*. In consequence of the absorption of water and the diminishing of the adhesive power of the two wings of the plate said wings sink until, when the adhesive power is sufficiently diminished, fracture takes place at the cross-bar.

The plate of glue can be prevented from displacement by using S-shaped hooks *e e'*, which can be made in suitable sizes for the different lengths of glue (plates or rods) to be experimented on.

What I claim, and desire to secure by Letters Patent of the United States, is—

The method of determining the binding strength of glue and like substances which consists in balancing a weighed plate or bar of the substance on a suitable support within a vessel containing water and leaving the plate or bar in the water until a fracture is caused, and then weighing the plate or bar to ascertain the weight of the water absorbed.

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

GEORG SEELIGMANN.

Witnesses:

WILHELM SCHWIETHAL,
JOHN B. JACKSON.