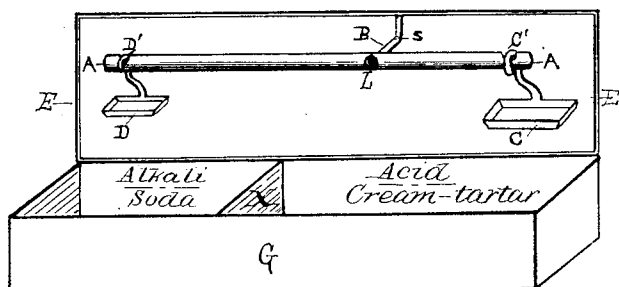


(No Model.)

O. H. JADWIN.
PROPORTIONAL BALANCE.

No. 481,618.

Patented Aug. 30, 1892.



WITNESSES:

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PROPORTIONAL BALANCE.

SPECIFICATION forming part of Letters Patent No. 481,618, dated August 30, 1892.

Application filed April 20, 1891. Serial No. 389,734. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO H. JADWIN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented an improvement in the manner of packing antagonistic chemicals—such as the component parts of baking-powders, sedlitz-powders, and the like—in one and the same package without deterioration, of which the following is a specification.

My invention relates to an improvement in packing antagonistic chemicals—such as the component parts of baking-powders, sedlitz-powders, and the like—in the same package without deterioration; and it consists in fitting to the lid of the receptacle in which said chemicals are to be packed a ratio-scale, hereinafter more fully described, whereby the unskilled can combine the antagonistic chemicals in suitable proportions for the formation of the desired compound.

It also consists in the combination of parts and details of construction hereinafter described and claimed.

In the drawing the figure represents in perspective an open box or receptacle divided so as to contain the component parts of the preparation known as "baking-powder" in their proper relative quantities, and to the lid of this box is attached the ratio-scale.

The ratio-scale consists of a scale-beam A, pivoted at L out of the center of the beam to a pivot-shaft B, which is fastened to the box-lid at S. The arms of the scale-beam vary in relative length directly as the proportion between the chemicals which the box is to contain. There are two pans C and D, whose relative sizes and weights vary in the same proportion. The larger one C is suspended from the shorter arm of the beam in a notch C' and is provided with a larger bale than that of D, so that it cannot be hung on the notch D' at the other end of the arm, where the smaller pan D is suspended.

This being the mechanism, the practical operation is as follows: As the lid of the box is lifted the scale-beam slides forward on the pivot to the head of the pivot, where its play is limited, and the pans being suspended at the proper points, the desired quantity of one chemical—say of soda or the alkali, if baking powder is to be made—is put in the pan that overhangs the compartment of the box from

which the chemical was taken. Then the exact amount of the other chemical—say of 55 cream-tartar or similar acid—can be apportioned by placing such a quantity of it in the other pan as will bring it to a balance. If the pans are then removed and emptied, their contents will when mixed be combined in the 60 proper proportions necessary to form the proposed compound. The scale-beam is preferably made of metal so thin that when the lid E E of the box or receptacle is shut down the beam can slide back along the axis or pivot 65 B and rest flat against the lid, (against which it can be caught.) Thus the lid of the box can be tightly closed upon the sides and upon the partition X, so that in transportation there can be no commingling of the chemical 70 in one compartment with that in the other, and hence no deterioration results from the action of one chemical upon the other.

I have shown my ratio-scale as applied to the measurement of solids; but it may also 75 be adapted in like manner to liquids which enter in varying proportions into a resulting compound without departing from the spirit or my invention.

I am aware that graduated scales have been 80 used; but my invention does not relate to the employment of such scales, but to the use of a ratio-scale in the measurement for combination of two substances in unvarying and unvariable proportions, no matter what the 85 weight of materials weighed may be. If the proportion of the substance entering into the compound is to be varied, a differently-proportioned scale and box must be used.

What I claim as my invention is— 90

The herein-described box, scale-beam, and scale-pans, constructed in such a manner that the smaller of the two compartments of the box, the shorter arm of the scale-beam, and the lesser of the two scale-pans shall bear, 95 respectively, to the larger of the two compartments of the box, longer arm of the scale-beam, and greater of the two scale-pans the same proportions that the component parts of the chemical compound to be contained in 100 the box sustain one to the other.

ORLANDO H. JADWIN.

Witnesses:

HENRY W. JESSUP,
THEODORE M. TAFT.