

them to take testimony relative to illegal votes. But, Mr. Chairman, the principle has been sanctioned again and again by Congress; and, in addition to the cases heretofore named to the committee, I will, on the present occasion, only notice one; it is a case decided from Tennessee, in the 13th Congress: Thomas and Kelly. The circumstances of this case will be found applicable to the case before the committee. If I have been able to make myself understood by the committee, I presume there is a final end of the petitioner's claim. It is less substantial than the shadow of a shade.

Perhaps I owe an apology to the committee for the trouble I have given them in this case; but I trust they will credit me when I assure them that my prevailing wish has been, from the beginning, to render their investigation as easy and agreeable as possible. In the present communication I have deemed it advisable, for the sake of brevity, to omit a number of circumstances which are of some importance to the different views which might be taken of this case.

JEREMIAH COSDEN.

To the Honorable JOHN SLOAN, *Chairman of the Committee of Elections.*

[17th CONGRESS.]

No. 520.

[1st SESSION.]

### WEIGHTS AND MEASURES.

COMMUNICATED TO THE HOUSE OF REPRESENTATIVES, MARCH 11, 1822.

Mr. LOWNDES, from the committee to whom had been referred "the report on weights and measures," made by the Secretary of State on the 22d of February, 1821, reported:

That so comprehensive a view has been given in the document referred to them of the origin and history of the measures and weights now in use in the United States, and so full an examination of the different proposals which have been made for their improvement, that they deem it scarcely necessary to do more than to submit the resolutions which they think it expedient that Congress should pass at this time. Their object is only to "render uniform and stable the measures and weights which we at present possess."

To effect this, they propose that the President shall cause application to be made to the English Government to allow models of the yard, the Winchester bushel, wine gallon, and pound, (*avoirdupois*), to be procured from its offices. For the purpose of easy and perfect comparison, it may be well that the yard should be traced upon the rod of platina, in the possession of the Department of State, on which is traced the French metre. These models should be made with the utmost accuracy which the art and science of England can give, and, if satisfactory to Congress, should be declared the standard yard, bushel, liquid gallon, and pound, of the United States. There is some difference of opinion as to the material of which the standards shall be formed. The committee will not detain the House by a full exposition of the reasons which lead them to conclude that at least the standards of length and weight should be of platina, as the material on which time is found to produce the smallest change. The Secretary of State, who adopts an opposite opinion, has said that "the very extraordinary properties of platina, its unequalled specific gravity, its infusibility, its durability, its powers of resistance against all the ordinary agents of destruction and change, give it advantages and claims to employment as a primary standard for weights and measures and coins, to which no other substance in nature has equal pretensions. Should the fortunate period arrive when the improvement in the moral and political condition of man will admit of the introduction of one universal standard for the use of all mankind, it is hoped and believed that the platina metre will be that standard." But, if the immutability of platina recommend it so strongly as a standard for all nations, and all time, it can hardly be amiss to adopt it for the interval which may elapse before the universal adoption of a natural standard. This interval the Secretary and the committee may be willing to shorten, but it seems likely to last as long as diversities of laws and language among men. If the standard pound shall be of platina, it must, of course, be made equiponderant with the English pound *in vacuo*, and the same means must be used in making the models of weight which are intended for distribution among the States. The standards of measures of capacity must probably be of copper or brass, and the careful preservation of all the standards may be provided for in the law which shall establish them. The committee think it best that they should be kept in the Department of State, and used only to verify the models which may be issued under the authority of the Government.

The committee believe that, by distributing accurate copies of these standards among the States, the present inequality of weights and measures will be so far removed as to leave little practical inconvenience in that regard. They propose that the President shall cause to be procured such a number of copies or models of these standards of weight and measure, with their most convenient multiples and divisions, as may be necessary to allow one model of each standard to be lodged with the clerk of each district court of the United States, and one to be given to each State and Territory, to be disposed of as its Legislature may direct. The most convenient material for those copies will probably be copper or brass, but the determination of this question may best be referred to the authority which shall procure them.

It is believed that no other obligation will be required to enforce, on the part of the officers in the service of the United States, the use of weights and measures conformed to the standards established by law, than that which a sense of duty, and a dependance upon the Government for their continuance in office, must produce. The committee think it best that Congress, after providing the standards of weights and measures, and furnishing models of them to every State, should leave it to the laws of the several States to enforce their use by persons who are not in the service of the United States. In the custom-houses and land offices, the measures and weights may be provided from the same funds, and under the same authority, which have been hitherto employed. The committee suppose it necessary only to provide for such a distribution of models as may make it easy to verify the weights and measures which may be used either by public officers or in private transactions. It was proposed by a former committee of the House of Representatives, in a report made in January, 1819, that the relations between the different standards should be accurately ascertained and declared in the law which should establish them. It was

observed, that "the determination of the proportions between lineal measures and measures of capacity, and between both these and weights, may have some effect in enabling us to detect, without too difficult a process, the defects of measures of capacity, and possibly of weights, in common use. For this purpose it would perhaps be convenient to establish not merely the cubical contents of the common measures of capacity, but to fix determinate forms for all these, and dimensions whose correctness might be ascertained by the common measures of length." But the relations between the standards cannot be ascertained with that absolute certainty which should be exacted in a law fixing permanent standards. The calculation of the dimensions of vessels of capacity is found, even by the most practical artists, to be so uncertain that they rely entirely upon the trials by the weight of water which they contain. It is of some importance that the forms of measures of capacity which are used in commerce should be left to depend upon the material or the art which it is found most convenient in the different parts of our country to employ. And, in fine, those relations and dimensions which it is useful to know, will be ascertained by philosophical inquiry, and published in books of easy reference. Indeed, they have been so.

The committee have proposed to establish but one standard of weight. It will be necessary that accurate models of the grain and its usual multiples should be provided, to verify the weights which are used for the precious metals and for medicine. The law which shall establish the standard pound may declare the grain to be the seven thousandth part of the pound, as frequent and careful examination has shown it to be.

The committee submit the following resolutions:

*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,* That the President of the United States be requested (if the consent of the Government of Great Britain shall be given thereto) to cause to be traced on a rod of platina the yard of the year 1601, which is kept in the British exchequer; to cause to be made of platina a pound, of the weight *in vacuo* of the English avoirdupois pound; and that he also cause to be made, of whatever material he shall deem best for standards of those measures, a vessel of the same capacity as the standard Winchester bushel, and also a vessel of the same capacity as the standard wine gallon of England.

*Resolved,* That the President be requested to cause to be made, for distribution among the States and Territories, and for the purpose of verifying the weights and measures used therein, models of the yard, on which shall be traced its divisions of feet and inches; models of the bushel, half-bushel, quarter-bushel or peck, thirty-second part of a bushel or quart; models of the wine gallon, of the wine quart and pint; models of the pound, half-pound, quarter-pound, of the sixteenth of a pound or ounce, of the seven thousandth part of a pound or grain; models of the pennyweight or twenty-four grains, of the scruple or twenty grains, and of the apothecaries' dram or sixty grains; models of the weight of twelve and a half pounds, of twenty-five pounds, of fifty pounds, and of one hundred pounds; that these models of weight and measure be formed with the utmost practical exactness from the weights and measures procured under the authority of the foregoing resolution; and that the number to be procured of each model shall not exceed —.

17th CONGRESS.]

No. 521.

[1st SESSION.]

## EXTENSION OF A PATENT RIGHT.

COMMUNICATED TO THE HOUSE OF REPRESENTATIVES, MARCH 12, 1822.

Mr. BUTLER, from the Committee on Agriculture, to whom was referred the petition of Anthony Dey and James Macdonald, reported:

The petition alleges that the said Macdonald, at the expense of the said Dey, has invented and constructed a new and useful machine for breaking and cleaning of hemp and flax in an unrotted state; and that the said Dey has discovered the means by which hemp and flax, after being cleaned in an unrotted state in their machine, may be bleached by a process hitherto unknown; that they believe their method of dressing hemp and flax is of very great importance to the agricultural interest of the country; and, therefore, ask an extension of the exclusive right to make, construct, use, and vend to others to be used, the said invention and discovery.

From the evidence adduced by the petitioners, it appears that they have invented a machine for breaking and cleaning hemp and flax in an unrotted state, which is different in its principles and construction from any machine that ever has been used for that purpose; and that the said Dey has also discovered a process, never before used, for bleaching hemp or flax after it has been dressed in an unrotted state; and, also, it appears, by the certificates of respectable gentlemen who have witnessed the operation of the machine, that it will, by the power of one horse, with the assistance of one man and three boys, separate the integument and wood from the fibrous part of the hemp and flax plants, and clean the same, at the rate of one pound in a fraction of time, even a minute, fit for bleaching.

The petitioners further assure us, from the operation of one machine by horse power, with the attendance of one man and three boys, from one thousand six hundred to two thousand pounds of unrotted hemp or flax may be cleaned in a day, yielding from four to five hundred pounds after it is bleached; and that, by the addition of another machine, which can be moved by the same horse, with the addition of one man and one boy more, from eight hundred to one thousand pounds may be cleaned at an expense not exceeding five dollars. And the committee are informed by Mr. Dey that one man can bleach three hundred and fifty pounds of hemp or flax, after it has been cleaned by their machine, in a day, at an expense of one dollar and seventy-five cents for the article which he uses in the process.

From these calculations, it appears that any quantity of unrotted hemp or flax, taken from the field where it is raised, may be broken, cleaned, and bleached, at a rate of less than two cents per pound, delivered in a bleached state; and, allowing one cent per pound for the plant as it comes from the field, the whole cost (except for the wear of the machine) in growing this valuable plant, and breaking, cleaning, and bleaching it, will be less than six cents per pound. The committee are not informed what the cost of hatching or combing it, (which is done after it is bleached,) and preparing it for the manufacturer, would be; but presume it will not exceed two cents per pound. If the information the committee have received and their calculations are correct, either hemp or flax may be raised, dressed, and prepared for the best manufacture, at an expense of eight cents, and not exceeding, in any case, ten cents per pound.