

POSTSCRIPT.

It is scarcely necessary to observe, that the measures, weights, and coins, proposed in the preceding report, will be derived altogether from mechanical operations, viz: a rod, vibrating seconds, divided into five equal parts; one of these subdivided, and multiplied, decimally, for every measure of length, surface and capacity, and these last filled with water, to determine the weights and coins. The arithmetical estimates in the report were intended only to give an idea of what the new measures, weights, and coins would be nearly, when compared with the old. The length of the standard or second rod, therefore, was assumed, from that of the pendulum; and as there have been small differences in the estimates of the pendulum by different persons, that of Sir Isaac Newton was taken, the highest authority the world has yet known. But if even he has erred, the measures, weights, and coins proposed will not be an atom the more or less. In cubing the new foot, which was estimated at .978728 of an English foot, or 11.744736 English inches, an arithmetical error of a unit happened in the fourth column of decimals, and was repeated in another line in the sixth column, so as to make the result one ten-thousandth, and one-millionth of a foot too much. The thousandth part of this error (about one ten millionth of a foot) consequently fell on the metre of measure, the ounce weight, and the unit of money. In the last it made a difference of about the twenty-fifth part of a grain troy, in weight, or the ninety-third of a cent in value. As it happened, this error was on the favorable side, so that the detection of it approximates our estimate of the new unit exactly that much nearer to the old, and reduces the difference between them to thirty-four instead of thirty-eight hundredths of a grain troy; that is to say, the money unit, instead of 375.64 troy grains of pure silver, as established heretofore, will now be 375.98934306 grains, as far as our knowledge of the length of the second pendulum enables us to judge; and the current of authorities since Sir Isaac Newton's time gives reason to believe that his estimate is more probably above than below the truth; consequently, future corrections of it will bring the estimate of the new unit still nearer to the old.

The numbers in which the arithmetical error before mentioned showed itself in the table, at the end of the report, have been rectified, and the table reprinted.

The head of superficial measures, in the last part of the report, is thought to be not sufficiently developed. It is proposed that the rood of land, being one hundred feet square (and nearly a quarter of the present acre,) shall be the unit of land measure. This will naturally be divided into tenths and hundredths, the latter of which will be a square decad. Its multiples will also, of course, be tens, which may be called double acres, and hundreds, which will be equal to a square furlong each. The surveyor's chain should be composed of one hundred links of one foot each.

THOMAS JEFFERSON, *Secretary of State.*

January 10, 1791.

[NOTE.—The original report (No. 16) has been corrected as above directed.]

1st CONGRESS.]

No. 19.

[3d SESSION.]

MANNER OF AUTHENTICATING PRINTED EDITIONS OF THE LAWS.

COMMUNICATED TO THE HOUSE OF REPRESENTATIVES, FEBRUARY 7, 1791.

FEBRUARY 5, 1791.

THE SECRETARY OF STATE, to whom was referred the memorial of Andrew Brown, printer of Philadelphia, has had the same under his consideration, and thereupon makes the following report:

The memorialist states that he has in contemplation to publish a correct edition of the laws, treaties, and resolutions of the United States, and prays that such measures may be adopted for giving a public authentication to his work, as may ensure its reception throughout the United States.

The Secretary of State observes, that there exists, at present, but a single edition of the laws of the United States, to wit, the one printed by Childs and Swaine; that this edition is authentic, the proof sheets thereof having been carefully collated by sworn clerks with the original rolls in his office, and rendered literally conformable therewith; that the first volume of this edition can now rarely be found, the copies originally printed being mostly disposed of.

That it is desirable that copies of the laws should be so multiplied throughout the States, and in such cheap forms, as that every citizen of the United States may be able to procure them; that it is important, also, that such publications be rendered authentic, by a collation of the proof sheets with the original rolls by sworn clerks, when they are printed at the seat of Government, or in its neighborhood, and by a collation of the whole work, when printed at a distance, and a certified correction of its typographical errors annexed to each volume.

That this, however, if done at the public expense, would occasion an inconvenient augmentation of the number of clerks, as the act of collation requires the presence of three clerks, one to hold the roll, a second a printed copy already authenticated, and a third the proof sheet.

That it would be more reasonable that persons of confidence should be employed at the expense of the editor, to be named and sworn as clerks for the special occasion.

That, in this way, he is of opinion it will be advantageous to the public to permit that the laws to be printed by the memorialist be collated with and corrected by the original rolls, and that a certificate thereof by the Secretary of State be annexed to the edition.

TH: JEFFERSON, *Secretary of State.*