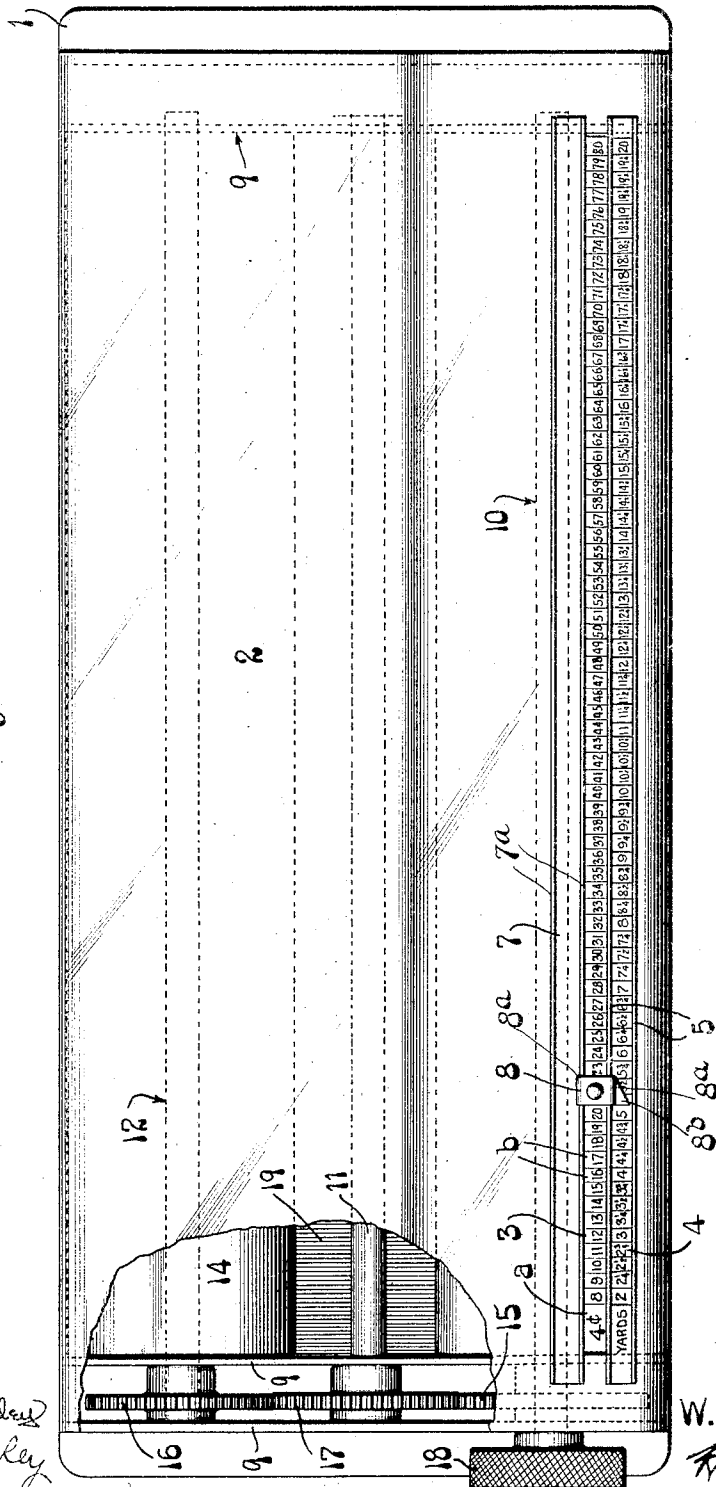


1,039,455.

2 SHEETS---SHEET 1.

Attest
W. J. McCauley
B. L. Browley



Inventor:
W.H. Sleight
BY
Knigh + Cook
ATT'YS.

W. H. SLEIGHT.
 CALCULATING APPARATUS.
 APPLICATION FILED AUG. 28, 1911.

1,039,455.

Patented Sept. 24, 1912.

2 SHEETS—SHEET 2.

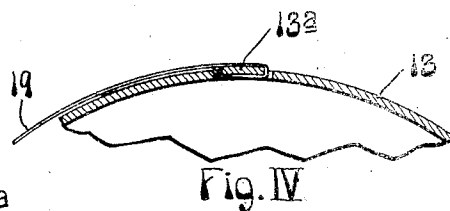
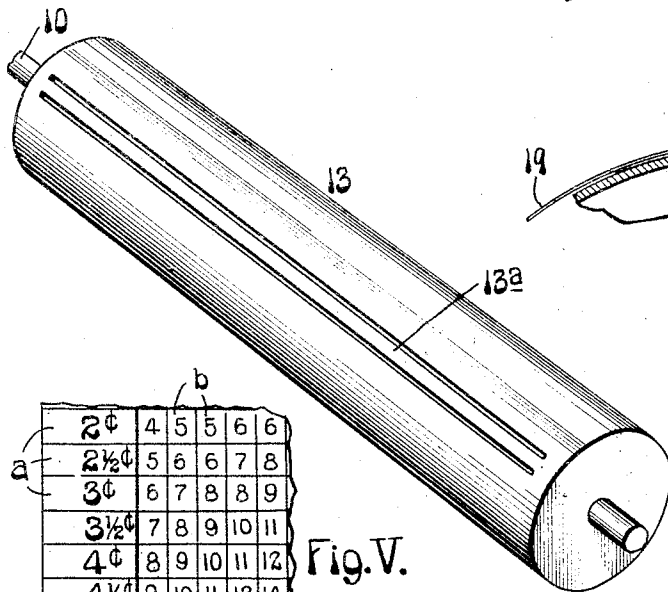
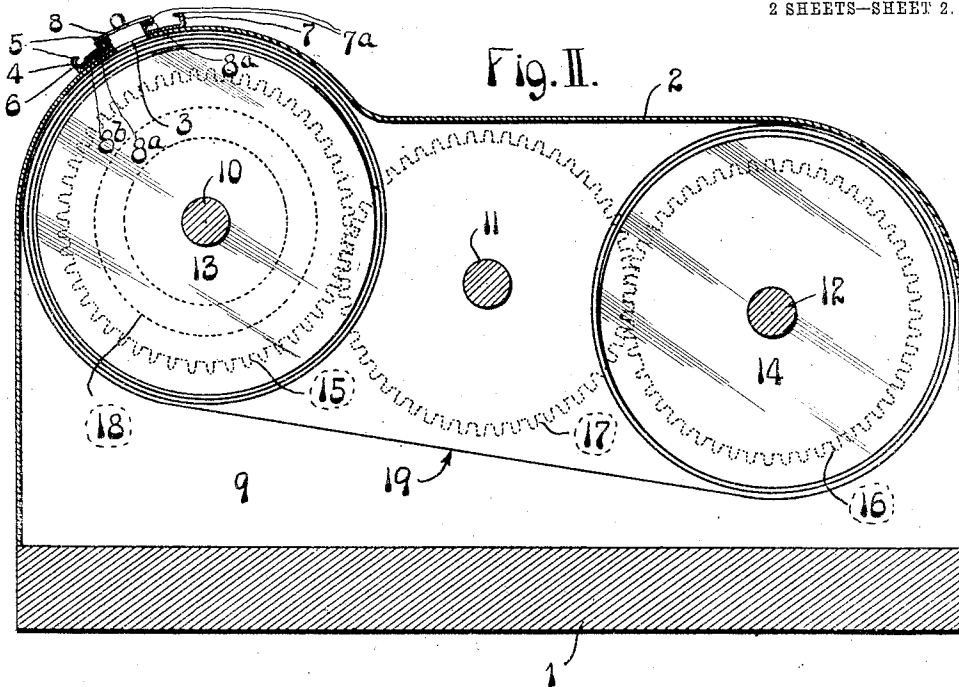


Fig. V.

2¢	4	5	5	6	6
2½¢	5	6	6	7	8
3¢	6	7	8	8	9
3½¢	7	8	9	10	11
4¢	8	9	10	11	12
4½¢	9	10	11	12	14
5¢	10	11	13	14	15
5½¢	11	12	14	15	17
6¢	12	14	15	17	18

Attest
A. J. McCauley
B. L. Crowley

Inventor:
 W. H. Sleight
 by *Knapp & Cook*
 Attys.

UNITED STATES PATENT OFFICE.

WILLIAM H. SLEIGHT, OF ST. LOUIS, MISSOURI.

CALCULATING APPARATUS.

1,039,455.

Specification of Letters Patent. Patented Sept. 24, 1912.

Application filed August 28, 1911. Serial No. 646,460.

To all whom it may concern:

Be it known that I, WILLIAM H. SLEIGHT, a citizen of the United States of America, residing at 5648 Etzel avenue, in the city of St. Louis and State of Missouri, have invented new and useful Improvements in Calculating Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an apparatus intended more particularly for calculating or computing the valuations or selling prices of commodities, and has for its object the production of an apparatus of this kind that is simple and inexpensive and affords a wide range of computations; also to provide an apparatus of the kind mentioned in which the tables employed may be readily replaced by other tables produced at a minimum expense.

In the drawings, Figure I is a top or plan view of my apparatus with a portion of the casing at one of its ends partly broken out to afford a view of the mechanism within the casing; Fig. II is a vertical cross-section through the apparatus; Fig. III is a perspective view of one of the winding spools to which the valuation table sheet is applied; Fig. IV is an enlarged cross-section of a fragment of one of the spools illustrating the manner in which the table sheet is secured thereto; and Fig. V is a face view of a fragment of the valuation table sheet.

In the drawings, 1 designates the base of the casing of my apparatus, and 2 is the hood of the casing, the latter being provided with a sight opening or slot 3 extending longitudinally thereof and through which a line of characters upon the valuation table sheet to be hereinafter described, may be observed.

Secured to the hood of the casing adjacent to the sight opening 3 and extending longitudinally along one side of said sight opening is a pocket member 4 preferably of U-shape in cross-section and provided at its upper free edges with inturned flanges 5. This pocket member receives and holds a measurement scale 6 that may bear characters indicating measurements of any nature it is desired to indicate. In the illustration of Fig. I the measurements indicated are those of yards, and numerals are employed on the scale indicating 2 yards and upward

in consecutive arrangement with fractions of yards also indicated. At the other side of the sight opening 3 opposite that at which the pocket member 4 is located, is preferably arranged a second U-shaped pocket member 7 that may be utilized as a holder for a name strip or plate, or for any other desired purpose, this pocket member having inturned flanges 7^a and being similar in structure to the pocket member 4.

8 is an indicator that is slidable upon the pocket numbers 4 and 7, this indicator being preferably of such construction as to span the sight opening 3 in the casing hood and having inturned flanges 8^a which embrace the contiguous inturned flanges 5 and 7^a and a pointer or finger 8^b which extends across, or partially across, the measurement scale 6 adjacent to said sight opening, whereby it is made serviceable in indicating at one and the same time a character viewed through the sight opening alongside its body and a character upon the measurement scale alongside its pointer or finger 8^b intended to be viewed as being in correspondence with each other.

The base 1 of my apparatus is surmounted by end standards or bearing members 9 that serve to support a front shaft 10, an intermediate shaft 11 and a rear shaft 12 extending longitudinally of the apparatus. The shafts 10 and 12 bear spools 13 and 14 designated respectively as winding and take-up spools, and said shafts have fixed to them, respectively, spur wheels 15 and 16 arranged in mesh with an intermediate spur wheel 17 serving as a transmission wheel to provide for a movement imparted to one of the shafts 10 and 12 being transmitted to the other of said shafts. To provide for the rotation of the spools 13 and 14 I apply to the shaft of one of these spools a knob or other suitable turning device, the turning device shown in the drawings consisting of a milled knob 18 fixed to the shaft 10 that carries the spool 13.

19 designates a valuation table sheet secured at its ends to the spools 13 and 14 adapted to be wound upon and unwound from said spools in order that the characters present on said sheet may be observed through the sight opening 3 in the casing of the apparatus. For the sake of convenience in connecting said table sheet to said spools and disconnecting it therefrom with readiness and ease, I provide the spools, which

are preferably of shellform, with pairs of slots extending longitudinally thereof, thereby furnishing separated webs such as that indicated at 13^a to which the table sheet 5 may be secured by the simple act of passing it through the slots around the webs and locating the ends of the sheet beneath portions extending thereover as best indicated in Fig. IV. The valuation table sheet 19 is provided with a series of tables extending transversely of the sheet and comprising numerals of characters *a* indicating the value of a given measurement or a commodity or article of merchandise, the characters *a* being followed by characters *b* indicating the value of a multiplication of the said given value indication. A line of the characters including the one indicating the value of a given measurement and computations following it, is shown in Fig. I, viewed through the sight opening 3 in the casing of the apparatus, and several fractional lines arranged in consecutive order are shown in Fig. V.

In the practical use of my calculating apparatus the operator manipulates the device by turning one of the shafts (for instance, shaft 10), whereby the valuation table sheet 19 is unwound from one of the spools of the apparatus and wound onto the other spool. In such operation the operator so moves the valuation table sheet as to bring into view through the sight opening 3 a character *a* indicative of the value of a unitary measurement and a character *b* indicative of a multiple of said unitary measurement. By so doing the operator brings into view through the sight opening 3 in the casing of the apparatus such characters as will show, on the table sheet opposite the proper character on the measurement scale, the value of the particular measurement with respect to which knowledge of the value may be desired, the only requisite in the operation, aside from the movement of the valuation table, being a proper adjustment of the indicator 8, to position said indicator alongside of the proper character in the indicator scale 6.

As an example of the steps required in making a calculation or computation of the value of a given measurement of a piece of merchandise at a certain price, I will take the measurement and price indicated in the drawings of Fig. I. In this example the measurement is 5 yards and the price of the merchandise per yard is \$.04. To calculate the value or price of such measurement the operator adjusts the indicator 8 until it is alongside of the numeral 5 in the measure-

ment scale 6 and adjusts the valuation sheet 4 until the numeral 4 (among the characters *a*) is in view through the sight opening 3 of the apparatus. When this has been done it is found that the multiple character *b* in line with the exposed character *a* and directly opposite the scale character 5 alongside of the indicator 8, is 20, thus showing the total valuation of the measurement of 5 yards of merchandise at \$.04 per yard. It is apparent that the value of any other measurement may be ascertained in like manner upon the proper adjustment of the indicator 8 and the valuation table.

I claim:

1. A calculating machine comprising a base, end standards, a front shaft carrying a spool, a rear shaft carrying a spool, a valuation table sheet having its ends wound around the spools, a hood having a longitudinal sight-slot, a longitudinal pocket along the front side of the sight-slot, a longitudinal pocket along the rear side of the sight-slot and an indicator extending across the sight-slot and having flanges embracing the contiguous flanges of the pockets and a pointer extending over the front pocket.
2. A calculating machine comprising a base, end standards, a front shaft carrying a spool, a rear shaft carrying a spool, a valuation table sheet having its ends wound around the spools, a hood having a longitudinal sight-slot, a U-shaped longitudinal pocket along the front side of the sight-slot, having inturned flanges, a U-shaped longitudinal pocket along the rear side of the sight-slot, having inturned flanges, and an indicator extending across the sight-slot and having inturned flanges embracing the contiguous inturned flanges of the pockets and a pointer extending over the front pocket.
3. A calculating machine comprising a base, end standards, a front shaft carrying a spool, a rear shaft carrying a spool, an intermediate shaft, spur wheels connecting the shafts, a valuation table sheet having its ends wound around the spools, a hood having a longitudinal sight-slot, a longitudinal pocket along the front side of the sight-slot, a longitudinal pocket along the rear side of the sight-slot, and an indicator extending across the sight-slot and having flanges embracing the contiguous flanges of the pockets and a pointer extending over the front pocket.

WM. H. SLEIGHT.

In the presence of—

A. J. McCauley,
B. L. Crowley.