

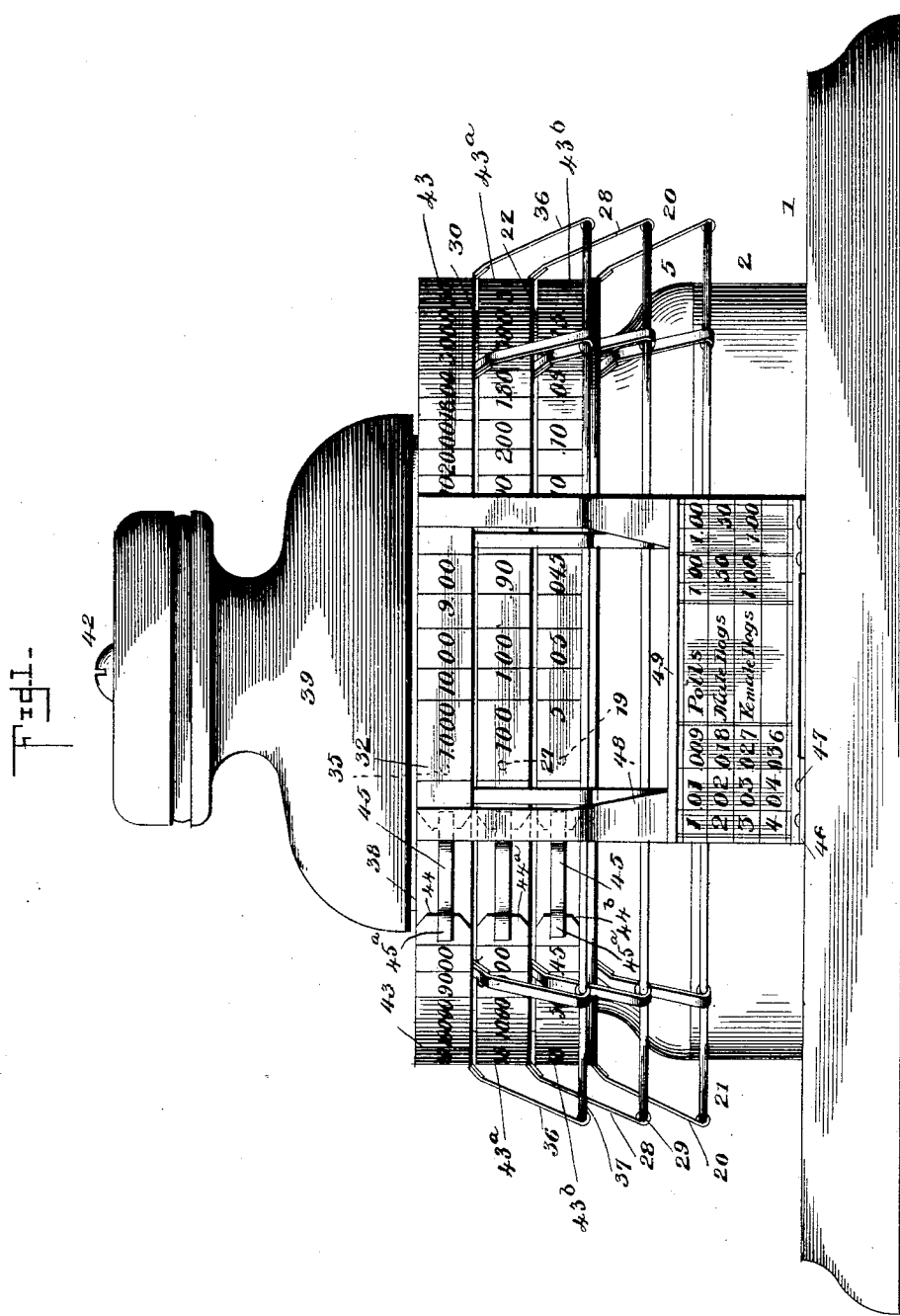
(No Model.)

3 Sheets—Sheet 1.

W. LAMB.
TAX CALCULATOR.

No. 469,654.

Patented Feb. 23, 1892.



Witnesses

John Donnie
Walter Allen

Inventor

William Lamb.

By his Attorneys

Knights

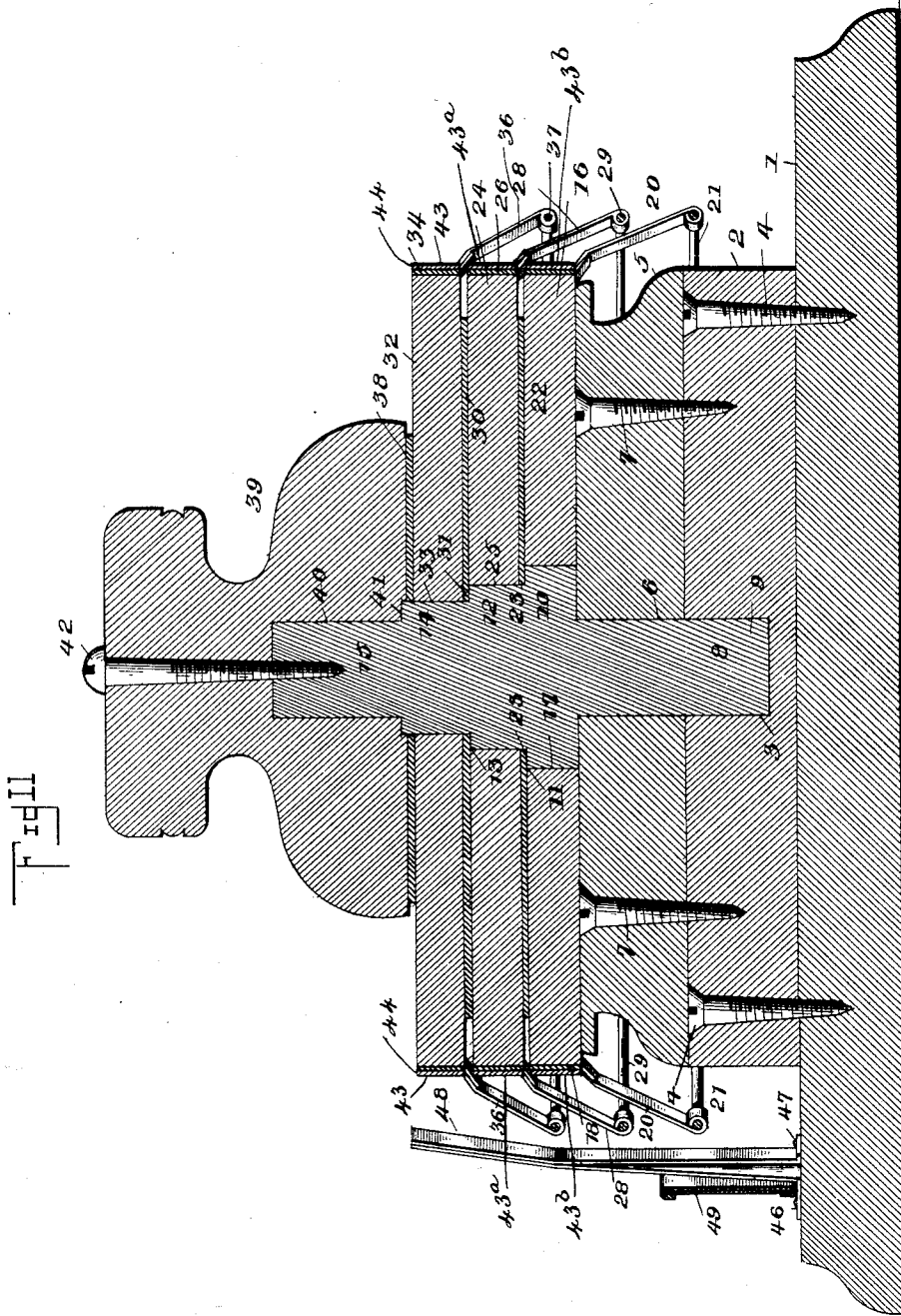
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Knight & Co.

UNITED STATES PATENT OFFICE.

WILLIAM LAMB, OF COVINGTON, INDIANA, ASSIGNOR TO JULIA C. LAMB,
OF SAME PLACE.

TAX-CALCULATOR.

SPECIFICATION forming part of Letters Patent No. 469,654, dated February 23, 1892.

Application filed May 26, 1891. Serial No. 394,175. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LAMB, a citizen of the United States, and a resident of Covington, in the county of Fountain and State of Indiana, have invented an Improvement in Tabular Calculators, of which the following is a specification.

My invention has for its object to provide an improved machine for facilitating the calculation of taxes.

My improvements consist in features of novel construction hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a front elevation of my improved tabular calculator. Fig. II is an axial section extending from the front to the back of the machine and looking toward the left-hand side thereof. Figs. III and III^a show the scale for the upper wheel. Figs. IV and IV^a show the scale for the intermediate wheel. Figs. V and V^a show the scale for the lower wheel. Fig. VI is a perspective view of a portion of the periphery of a wheel, showing a double-spring clip for securing the ends of a scale-strip. Fig. VII is a perspective view of a portion of the post and a portion of a disk, showing the connection between these parts.

The base comprises a base-plate 1, a circular intermediate plate 2, having an axial hole 3 and secured to the base-plate by screws 4 or other suitable fastenings, and a circular bearing-plate 5, having an axial hole 6 and secured to the intermediate plate by screws 7 or other suitable fastenings.

Rigidly fixed in the axial hole of the bearing-plate by means of its reduced lower end 9 is a round vertical post 8, having a lower step 10, formed with recesses 11, an intermediate step 12, formed with recesses 13, an upper step 14, and a reduced upper end 15.

16 is a horizontal lower wheel having a central eye 17, fitting around the lower step of the post, a peripheral ring 18, secured by fastenings 19, and a skirt-frame depending from the peripheral edge, comprising inclined arms 20 and hoop 21. This wheel is rotated around the lower step and is supported on

the bearing-plate of the base. Above this wheel is located a lower partition-disk 22, having an eye receiving the lower step and wings 23, fitting in the recesses 11 of the latter for connecting the lower disk with the lower step. The disk is held from turning by this connection, because the post is fixed.

24 is a horizontal intermediate wheel located above the lower partition-disk, having a central eye 25, fitting around the intermediate step of the post, a peripheral ring 26, secured by fastenings 27, and a skirt-frame depending from the peripheral edge, comprising inclined arms 28 and a hoop 29. This intermediate wheel is supported on the lower step and rotates on the intermediate step and is kept out of contact with the lower wheel by means of the fixed lower disk.

Located above the intermediate wheel is an intermediate partition-disk 30, having an eye receiving the intermediate step, and wings 31, fitting in the recesses 13 of the latter, the wings thus connecting it with the intermediate step and preventing the disk from turning.

Located above the intermediate disk and supported on the intermediate step is a horizontal upper wheel 32, having a central eye 33, fitting around the upper step of the post, a peripheral ring 34, secured by fastenings 35, and a skirt-frame depending from the peripheral edge, comprising inclined arms 36 and a hoop 37.

38 is an upper partition-disk located over the upper wheel and formed with an eye receiving the upper step of the post. Surmounting the whole is a crown-block 39, having a hole 40, receiving the upper reduced end of the post, and a circular recess 41 around the hole in which the upper edge of the upper step projects. The crown-block holds the wheels and disks in place and is secured by a screw 42, penetrating the upper reduced end of the post. The upper wheel has its ring provided with a tax-scale 43. (Shown in Figs. III and III^a.) The intermediate wheel has its ring provided with the tax-scale 43^a. (Shown in Figs. IV and IV^a.) The lower wheel has its ring provided with the tax-scale 43^b. (Shown in Figs. V and V^a.) The figures of the scales 43, 43^a, and 43^b are arranged in vertical position or in a position transverse

of the wheels, while the latter are arranged in horizontal, so that while the wheels are rotated in a horizontal plane they present lines or columns of figures in a vertical plane, which facilitates the work of addition and enables the amounts to be rapidly added together. The scale 43 of the upper wheel is provided with a series of figures extending around its periphery in sets of two or more numbers or amounts, to wit: 1,000, 10.00, and 9.00, and the multiples of these numbers or amounts. The scale 43^a of the intermediate wheel is provided with another series of figures extending around its periphery in sets of two or more numbers or amounts, to wit: 100, 1.00, and .90, and the multiples of these numbers or amounts. The scale 43^b of the lower wheel is provided with still another series of figures extending around its periphery in sets of two or more numbers or amounts, to wit: 5, .05, and .045, and the multiples of these numbers or amounts. The scales 43, 43^a, and 43^b are marked on removable scale-strips 44, 44^a, and 44^b, respectively, and fastened to their respective wheels by means of double spring-plates 45, secured to the ring or stamped out thereof, having their free ends 45^a holding the strips to the rings by bearing on the ends thereof.

I provide the machine with an index-frame 30 having supporting-plates 46, secured by fastenings 47 to the base-plate and provided with upwardly-projecting fingers 48, between which the amount and taxes desired may be brought perpendicularly to each other and calculated. 49 is a card-holder secured to the lower portion of the index-frame and provided with a card having the matter represented in Fig. 1 of the drawings printed or marked thereon.

The tax-scales may be marked directly on the wheels.

The skirt-frames provide means by which the wheels may be adjusted.

In this invention I make the tax-scale by combining the tax at any given rate on any number of one thousand dollars with the tax at the same rate on any number of one hundred dollars and with the tax on five dollars and on any multiple of five dollars up to one hundred dollars. Thus—

	Valuation.	First installment at one per cent.	Second installment at nine-tenths of one per cent.
Tax on...	\$1,000	\$10 00	\$9 00
Tax on...	100	1 00	90
Tax on...	5	5	04.5
	\$1,105	\$11 05	\$9 94.5

The tax on one dollar to four dollars and poll and dog taxes are provided for in the separate scale attached to the lower part of the index-frame.

A valuable feature of my invention is the combining of the tax on the denomination of one thousand dollars with the tax on one hundred dollars and with that on five dollars

and on multiples of five dollars up to one hundred dollars.

By using this triple combination it requires only about one-fourth the number of calculations to make a tax-scale for any given rate that it does by any other combination that I have ever seen or know of, and is easily made, being written or printed on plain strips of paper in direct lines without any cut-out space or other irregularities, and as a tax-scale can seldom be used but once, consequently requiring the making of many of them, the saving of time and labor in making them by my invention I consider as valuable. By the arrangement of these wheels one above the other, with paper strips containing the tax-scale written or printed thereon, attached to the periphery of each and fastened at either end with spring-clamps or otherwise, and provided with a skirt-frame depending from the lower edge of each wheel, by which they are rotated, so as to bring the amount desired perpendicular to each other, so that they may be combined mentally, speedily, and with accuracy, the calculations of taxes on this machine is less complicated and speedier than by any other tax-calculator that I have seen or know of. The wheels may be made of wood or metal.

I show only a portion of the tax-scale on the machine.

In the working machine the wheels will be made of metal and of sufficient size to contain the tax-scale at any given rate on any amount from one dollar up to twenty thousand dollars.

The tax-scale is made at rate of one dollar on the one hundred dollars or one per cent. for the first installment and at the rate of ninety cents on the one hundred dollars or nine-tenths of one per cent. for the second installment.

There will be a tabular scale compiled on the same plan as the tax-scale for the use of each machine, showing the taxes on any amount from one dollar to twenty thousand dollars at any rate from one mill to two dollars on the one hundred dollars, and from which the required amounts may be entered on the paper strips attached to the peripheries of the wheels in the machine, thereby saving time and liability of errors in making the calculations at the time of preparing the scales for the machine.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of a post and three horizontal wheels, the lower wheel having a strip attached to its periphery and on which are printed or written in separate amounts the percentage or tax at a given rate on five dollars and on each multiple of five dollars up to ninety-five dollars, on the intermediate wheel a like strip with the separate amounts of percentage or tax at the same rate on one hundred dollars and on each multiple thereof

up to nine hundred dollars, and on the upper wheel a like strip with the separate amount of percentage or tax on one thousand dollars and on each multiple thereof up to twenty
5 thousand dollars, the amounts of tax or percentage being so placed on the strips that any three of the amounts desired (one on each wheel) may by the rotation of the wheels be brought into column vertical to each other
10 and the sum of such three amounts be equal to the percentage or tax on the amount required at the given rate.

2. The combination of a post, a lower horizontal wheel having a skirt-frame by which

it is rotated, an intermediate horizontal wheel 15 having a skirt-frame by which it is rotated, and an upper horizontal wheel having a skirt-frame by which it is rotated, the peripheries of the wheels being adapted to receive scales, substantially as described. 20

3. A wheel having a scale on its periphery and a skirt-frame depending from the periphery, substantially as described.

WILLIAM LAMB.

Witnesses:

JAMES BINGHAM,
ANNA HERSHBERGER.