

W. G. HOPKINS.
MECHANICAL ACCOUNT BOOK.
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1,028,465.

Patented June 4, 1912.

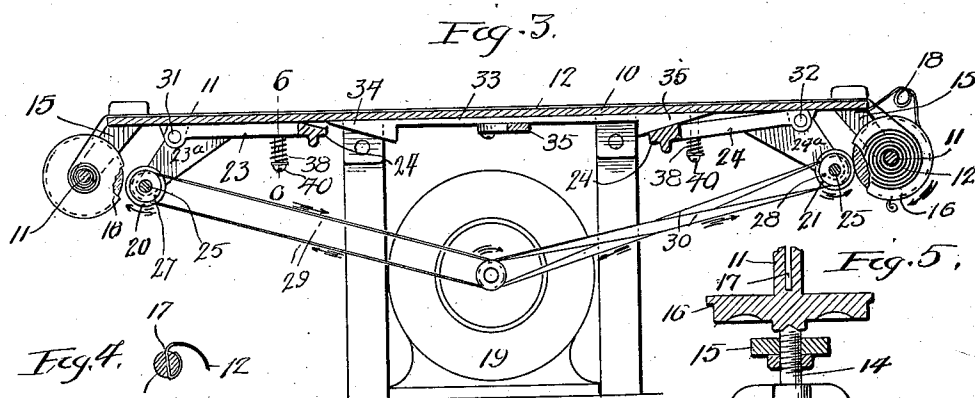
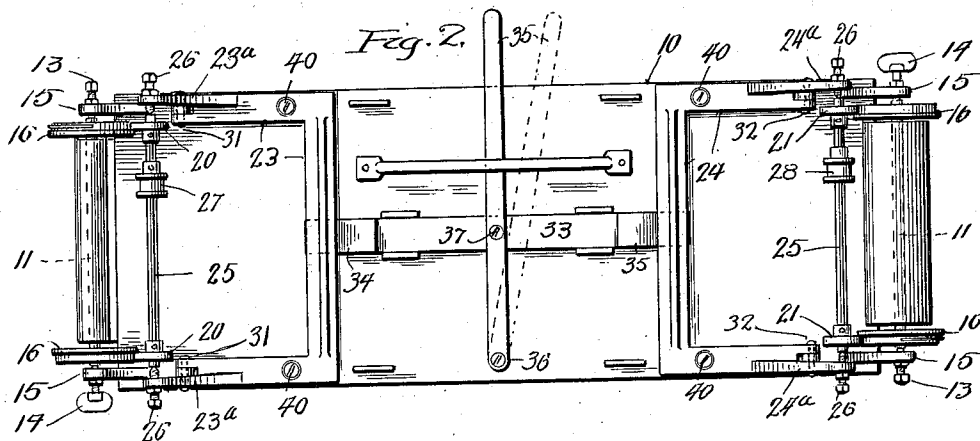
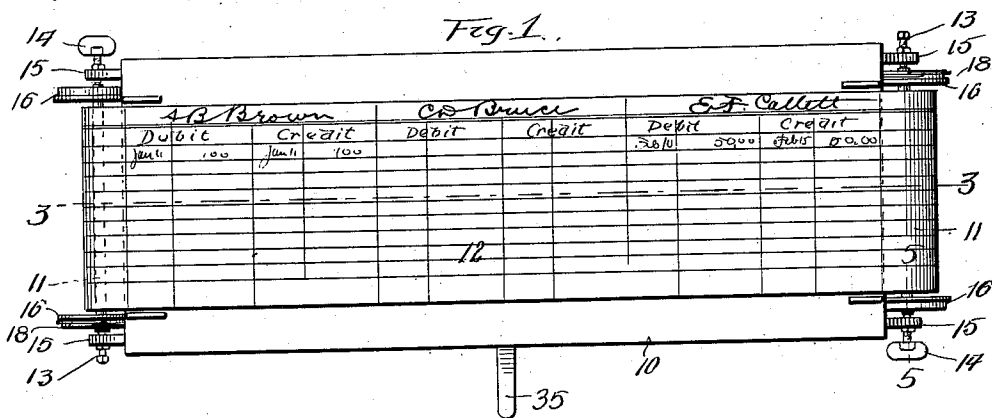


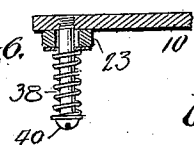
Fig. 4.

Witnesses:

Jean Agness.

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Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM G. HOPKINS, OF CHICAGO, ILLINOIS.

MECHANICAL ACCOUNT-BOOK.

1,028,465.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed February 25, 1911. Serial No. 610,688.

To all whom it may concern:

Be it known that I, WILLIAM G. HOPKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Mechanical Account-Books, of which the following is a specification.

This invention relates to books of account, and has for its object to provide a ledger or other account book wherein a large number of accounts may be kept in convenient form on a single long sheet, any account of which may be instantly exposed to view without unnecessary labor on the part of the book-keeper.

It is well known that much time is lost by bookkeepers to find any particular account, because of the necessity of turning over the pages of the book in which the entry is to be made. In my present device the accounts, or a large number of them, are entered upon a long account strip or sheet, which is wound upon two containers spaced far enough apart to allow room for one or two accounts to appear between them, and means are provided whereby either container may be rotated to wind up the sheet thereon and unwind it from the other, so as to present any part thereof to view.

The invention consists in a mechanical account book having a long sheet or strip upon which the accounts are kept, spools for holding said sheet or strip and means for operating said spools to wind the sheet or strip on either spool and unwind it from the other, whereby any portion of the sheet or strip may be brought to view.

The invention further consists in the novel details of construction, arrangement and combination of parts hereinafter described and claimed.

The invention is illustrated in the drawings furnished herewith in which—

Figure 1 is a plan of the account book, Fig. 2 is a plan looking from below, Fig. 3 is a longitudinal section taken on line 3—3, Fig. 1, Fig. 4 is a detail section of one of the spools, Fig. 5 is a detail section taken on line 5—5 Fig. 1, and Fig. 6 is a detail section taken on line 6—6 Fig. 3.

Referring to said drawing 10, represents a table which furnishes a smooth place to write upon. Spools 11, are journaled at the ends of said table, for receiving and holding the account sheet or strip 12 for the accounts. Said spools are located wholly be-

low the table whereby the account strip may lie flat on the table between the spools. Said spools may be journaled in any suitable manner and in the form shown, turn upon oppositely arranged pins or shafts 13, 14, carried by brackets 15, that project down from the lower side of the table 10. One pin for each spool is movable with respect to its spool, that is to say, it may be retracted therefrom to permit the spool to be readily removed from its support whereby another spool carrying another account strip may be inserted in its place. In the form shown, the pins 14, are screw threaded and turn in internally threaded openings in their brackets. This construction is not material broadly speaking, to the invention, but serves to illustrate one form of support for the spools. Each spool may have flanges 16, upon its ends between which the account strip is confined, and the latter is provided with some means whereby the ends thereof may be secured to the spools and as shown, the spools are slotted longitudinally as at 17, through which slots the ends of the account strip is inserted, and when the strip is given a few turns around the spool, there will be little danger of the end pulling through the slot. Associated with the spools are means for rotating either one in a direction to wind the account strip thereon, whereby it may be moved across the table to expose any portion of its length to view. In winding up the strip on one spool, it is obvious that it consequently unwinds from the other and to prevent the strip from unwinding too fast, a brake is provided for each spool, here shown in the form of a spring arm 18, secured to the table and bearing against the periphery of the adjacent flange of the spool. Other forms of brake mechanism will readily present themselves to those skilled in the art, and I do not therefore wish to confine myself to the form shown.

In the form of mechanism shown for rotating the spools a motor 19, is employed, which is supported in any convenient manner below the table, and operatively connected to friction disks 20, 21, carried by tilting frames 23, 24, supported by the table. The disks are arranged in pairs, adjacent to the flanges of the spools and adapted to be brought into frictional contact therewith. Each pair of disks is rigidly mounted upon a shaft 25, journaled upon its tilting frame, as for instance by pins 26, secured in down-

wardly projecting arms 23^a, 24^a, on the tilting frames, and having conical bearing points seated in conical sockets on the ends of the disk-carrying shafts 25. Said shafts 5 are shown as having pulleys 27, 28, secured thereon, that are belted to the motor by belts 29, 30, one belt being a twisted belt whereby when the motor is running, the disks are caused to rotate in opposite directions, and 10 in the proper direction to turn the spools in the direction to wind the strip thereon.

The tilting frames 23, 24, are shown as fulcrumed to the table at 31, 32, and are arranged to be tilted upon their fulcrums to 15 move the desired disks into frictional contact with their spools, by controlling mechanism operated from a point convenient to the user. One form of controlling mechanism may comprise a shift bar 33, slidably 20 guided upon the underside of the table and having means engaging the tilting frames so as to move either one. As shown the bar 33, has wedge like portions 34, 35 that engage with the tilting frames and act to swing 25 them in one direction on their fulcrums, when forced against them. The arrangement is such that the shift bar may be wholly disengaged from either tilting frame, or may be moved to tilt either one as desired. 30 A lever 35, is provided for moving the shift bar and as shown is pivoted to the underside of the table as at 36, and connects with the shift bar, as by a screw or pin 37. The lever conveniently extends to the front of 35 the table where it may be readily shifted to bring either pair of disks into frictional engagement with the spool associated therewith. To hold the disks out of contact with the spools, springs 38, are provided that 40 bear against the tilting frames in a direction to swing the disks away from the spools. The other ends of the springs abut against the heads of bolts 40, that are secured in the table and project down through holes in 45 the tilting frames. Obviously, many equivalent means may be employed for shifting the disks into frictional contact with the spools and I do not therefore wish to limit myself to the form shown. In place of the 50 motor a handle and gearing may be used to drive the disks.

The account strip is ruled in any suitable manner for the character of the accounts to be kept, and the accounts are separated from 55 each other as by vertical lines. The accounts should be arranged upon the sheet in alphabetical order, so as to make the account book "self-indexing." To bring any particular account over the table, the user 60 first observes whether the account would lie on the right or left hand side of the exposed account, and then shifts the lever in the proper direction to effect movement of the strip in the direction to bring the desired 65 account over the table. By regulating the

pressure of the disks on the spool, the user may cause the account strip to travel rapidly or slowly so that when the desired account nears the table, he may slacken its speed and when the account comes to view, 70 he moves the lever to its neutral point to stop the strip. In this manner any account on the strip may be instantly brought over the table, and the task of turning over the leaves of the ordinary account book, is 75 wholly avoided.

It is obvious that any number of account strips may be used with the device, each being wound upon its spool and stored in a suitable cabinet kept for that purpose, and 80 that any account strip and its spool may be readily inserted in the device and the strip threaded in the opposite spool.

I realize that various alterations and modifications of this device are possible 85 without departing from the spirit of my invention, and I do not therefore desire to limit myself to the exact form of construction shown and described.

I claim as new and desire to secure by 90 Letters Patent:

1. In a mechanical account book, the combination of a writing table, a pair of transversely extending spools carried by said table adjacent its ends, whereby a strip of paper, carried by said spools, may extend over and across said writing table from one spool to the other, high speed driving mechanism, normally disconnected from, but capable of being operatively connected with 100 either winding spool to rotate the one in one direction and the other in the opposite direction, and manually controlled power applying and speed regulating mechanism associated with said driving mechanism, for 105 throwing said driving mechanism into operative connection with either winding spool.

2. In a mechanical account book, the combination of a writing table, a pair of transversely extending spools carried by said table 110 adjacent its ends, whereby a strip of paper, carried by said spools, may extend over and across said writing table from one spool to the other, driving mechanism therefor, having two continuously and oppositely rotating 115 spool driving members, and lever controlled mechanism for throwing either of said spool driving members into or out of operative connection with the spool associated therewith. 120

3. In a mechanical account book, the combination of a writing table, a pair of transversely extending spools carried by said table adjacent its ends, whereby a strip of paper, carried by said spools, may extend 125 over and across said writing table from one spool to the other, a continuously running motor, a friction disk associated with each spool, operative connections between the motor and disks for driving them in oppo- 130

site directions, a controlling lever, and operative connections between the lever and disks whereby either may be thrown into frictional contact with its associated spool.

5 4. In a mechanical account book, the combination of a writing table, a pair of transversely extending spools carried by said table adjacent its ends, whereby a strip of paper, carried by said spools, may extend
10 over and across said writing table from one spool to the other, a continuously running motor, a friction disk associated with each spool, operative connections between the

motor and disks for driving them in opposite directions, a controlling lever, operative connections between the lever and disks whereby either may be thrown into frictional contact with its associated spool, and brake mechanism for each spool. 15

In witness whereof I have hereunto set my hand at Chicago, Cook county, Illinois, this 17th day of February 1911. 20

WILLIAM G. HOPKINS.

Witnesses:

FRED HUMBLE,
J. W. AITCHISON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."