

W. E. GIBBS.
ACCOUNT BOOK.

No. 547,543.

Patented Oct. 8, 1895.

[illegible][illegible]

Figure 3 is a graph showing the relationship between the angle of incidence (i) and the angle of refraction (r) for a light ray passing from air to glass. The graph is plotted on a grid with the horizontal axis labeled i and the vertical axis labeled r . The title "FIG. 3." is at the top center. The axes are labeled 0° at the origin, ∞ at the top right, and 3° on the left and 4° on the right. The data points are labeled A, B, C, A', B', and C'. Points A, B, and C are on the left side of the graph, and points A', B', and C' are on the right side. The points A, B, and C are connected by a straight line, and the points A', B', and C' are connected by a straight line. The lines are labeled N on the left and N' on the right.

Witnesses.

W. B. Seward.
George Barry.

x William E. Gibbs | 1798 | 1874.
by attornys. Brown & Ward

UNITED STATES PATENT OFFICE.

WILLIAM E. GIBBS, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO CHARLES M. DENNISON, OF NEW YORK, N. Y.

ACCOUNT-BOOK.

SPECIFICATION forming part of Letters Patent No. 547,543, dated October 8, 1895.

Application filed December 29, 1893. Serial No. 495,038. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GIBBS, of Westfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Account-Books, of which the following is a specification.

My invention relates to an improvement in account-books in which provision is made for reading the footings of columns on previous pages in the columns of subsequent pages without the necessity of transferring or carrying forward such previous amounts.

The invention consists, broadly, in providing the leaves of the account-book with openings, located in alignment with the column or columns on the leaf, said openings being so arranged that when the leaf is folded over onto an adjacent leaf the opening or openings will rest over a portion of the adjacent leaf in alignment with a corresponding column on that leaf.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents the right and left hand pages of an account-book spread open, their hinged connection at the back of the book being assumed to be along the line xx . Fig. 2 represents a similar view of two succeeding pages of the book, the leaf containing pages 4 and 5 being assumed to have been folded over onto the left-hand page in Fig. 1; and Fig. 3 represents a similar view of two succeeding pages of an account-book, showing the openings in the leaves arranged alternately at the top and bottom of the columns instead of at the bottom of the columns only.

The pages represented in Fig. 1 are numbered 3 and 4, the left-hand page being denoted by L and representing, as is common, the debit side of an account-book, and the right-hand page being denoted by R and representing, as is usual, the credit side of an account-book. The columns for receiving the names are denoted by N, and those for receiving the several classes of accounts are denoted on the debit-page by A B C, and on the credit-page by A' B' C'. The succeeding pages 5 and 6, represented in Fig. 2, are denoted, the debit-page by L' and the credit-page by R', the columns receiving the same designation,

as in Fig. 1. In the form in which I have chosen to illustrate the invention, I have shown three columns on each page for receiving the numerical value of different items or transactions; but it is to be understood that the number of columns may be greater or less than three, as may be found expedient and as the particular business for which the book is used may require. Each leaf is provided with an elongated opening at the foot of each column, the several openings being arranged in zigzag form in a horizontal direction, taken in the line of the openings, alternately an opening and a blank space, as shown.

Referring now particularly to the leaf containing pages 4 and 5, there is an opening O through the leaf at the left of the foot of the column A', which opening is formed in that position for use in connection with the column C on the left-hand page L' when the leaf containing pages 4 and 5 is folded over. An opening O' is formed at the foot of the column A', and below the opening O' an opening O² is formed at the foot of the column B' above the opening O' and in alignment with the opening O', and an opening O³ is formed at the foot of the column C' below the opening O² and in alignment with the opening O'. When the leaf containing the pages 4 and 5 is folded over, as shown in Fig. 2, the opening O will fall in alignment with the column C on the left-hand page, the opening O' in alignment with the column B, the opening O² in alignment with the column A, and the opening O³ to the left of the column A to be brought into service when the leaf containing said pages 4 and 5 is folded to the right, as shown in Fig. 1. On the leaf succeeding the one provided with the pages 4 and 5 and shown in Fig. 6 as having the page 6 is provided with zigzag series of openings, four in number, and occupying positions in the same vertical columns as those hereinbefore referred to, but arranged in the reverse order from those on the preceding leaf. In the same manner the several successive leaves of the book are perforated, the zigzags of each consecutive leaf being in reverse order.

In practice, suppose the credit-column A' on page 4 contained the numerical items "4.25,"

"1.30," and the column A' on page 6, the next succeeding right hand or credit page, contained the item "71.00." In footing up the column A' on page 4 the sum total "5.55" is written through the opening O', and hence on the blank space in the column A' of page 6, the decimal-lines of the several columns on page 4 being arranged to correspond with the decimal-lines on page 6 when the leaf containing pages 4 and 5 rests in its position shown in Fig. 1, and with the decimal-lines of the columns on the page L when the leaf containing pages 4 and 5 is folded over into the position shown in Fig. 2. After the column A' has been footed up and the sum total written, as stated, through the opening O', the leaf containing pages 4 and 5 is turned over into the position shown in Fig. 2, and the sum "5.55" will be found in the column A' of page 6. The items in the column A', including the "5.55," may be then footed up and their sum total "76.55" written through the opening in the column A' onto the space of the next succeeding page, which would correspond to page 4, so far as the arrangement of openings is concerned. In this manner footings of successive corresponding credit-columns may be introduced into those columns without re-writing and without the necessity of turning back a leaf to refresh the memory as to the amount.

The openings hereinabove referred to for carrying forward the footings on the credit side of the account are also used in a similar manner for carrying forward the items on the debit side of the account as follows: Suppose the column A on page 3 contains the items "7.20," "42.01," the footing will be "49.21," which is written on the space immediately above the opening at the foot of that column. When the leaf containing pages 4 and 5 is folded over into the position shown in Fig. 2, it will be found that the footing "49.21" appears through the opening in the column A on page 5, the next succeeding corresponding debit-page, and it, together with the items of the column A, which in this instance consists of a single item "3.11," may be footed up and the total "52.32" placed on the space below the opening in the column A on page 5. In this manner the footings of

the several columns on the debit side may be carried forward without any transferring of the amounts and without the necessity of turning the leaf for the purpose of refreshing the memory.

In the modified form shown in Fig. 3 the zigzag arrangement of the openings extends from bottom to top of the successive columns instead of a short distance only at the bottoms of the columns; but the principle in practice is the same. I prefer the form shown in Figs. 1 and 2, for the reason that it admits of adding all of the columns downwardly or in the same direction and placing the footings at the end of the column, where the footing operation terminates.

While I have shown the openings of elongated form, I do not wish to be understood as making the shape of the openings an important factor, as it is only a matter of choice, the object being to render them sufficiently large to readily receive the footings or permit the footings to be read through them and at the same time so shape them as to render them less liable to weaken to any serious extent the fabric of the leaf.

By the above construction and arrangement an accountant is relieved from liability to error in transferring footings from page to page, while at the same time the integrity of the book along the margin of its leaves is maintained, the openings being located where they are not liable to prove any injury to the leaf structure.

What I claim is—

1. An account book having its leaves provided with a series of openings, arranged at the ends of a plurality of columns on its page and in zigzag order, substantially as set forth.

2. An account book having its leaves provided with zigzag series of openings, the decimal point line in the column on the leaf provided with one of the openings being arranged to correspond with the decimal point line on the page of an adjacent leaf when the said first named leaf is laid on said adjacent leaf, substantially as set forth.

WILLIAM E. GIBBS.

Witnesses:

FREDK. HAYNES,
IRENE B. DECKER.