Aug. 20, 1935. E. J. GERETY 2,011,625

WRITING BOARD

Filed Feb. 5, 1934

Fig. 1.

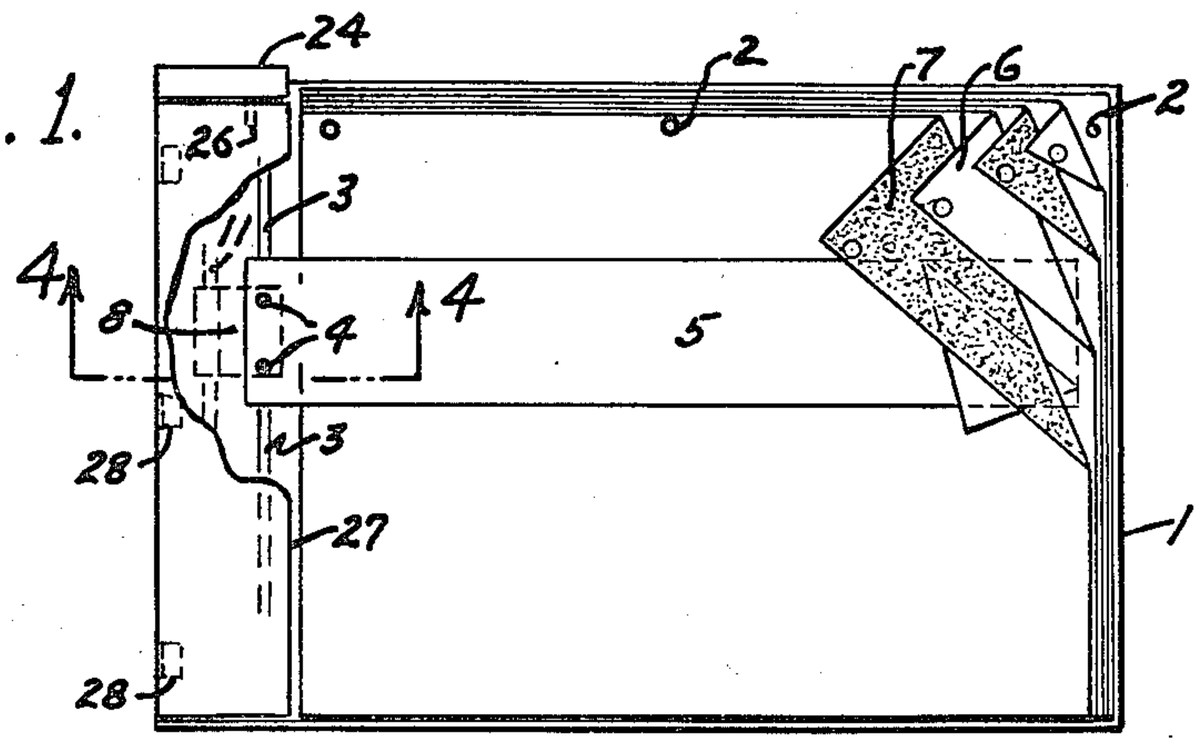


Fig. 2.

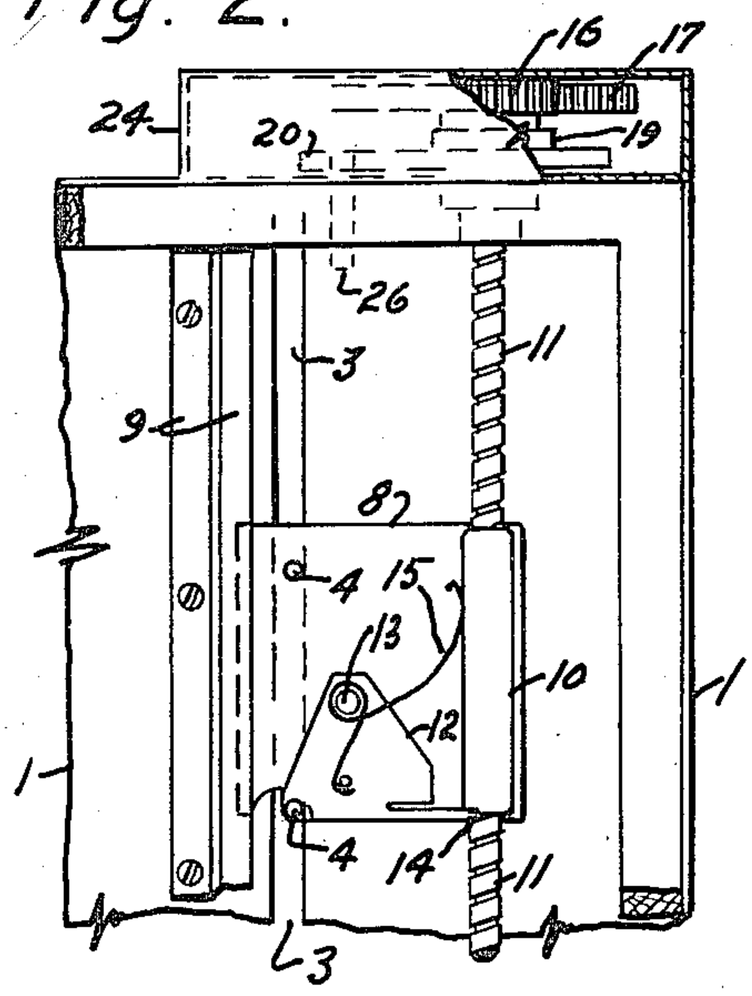


Fig. 3.

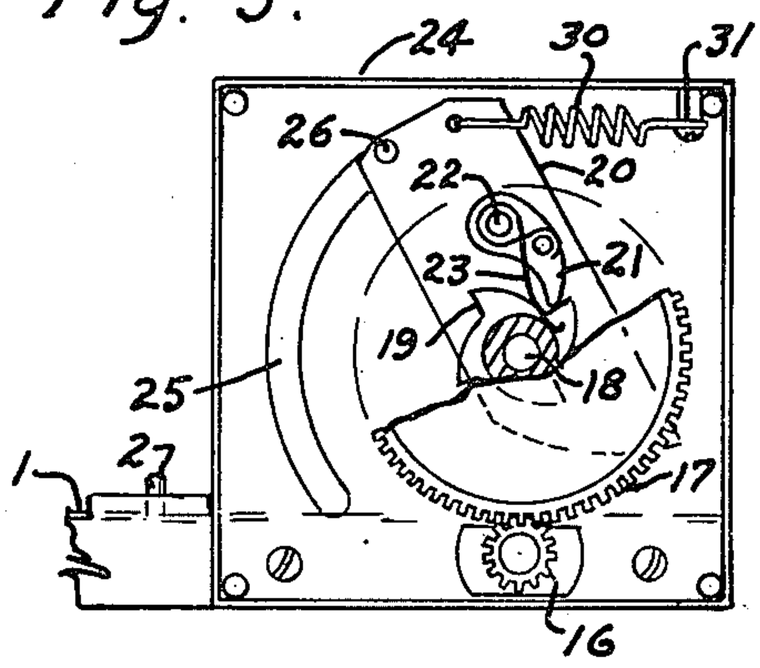


Fig. 4.

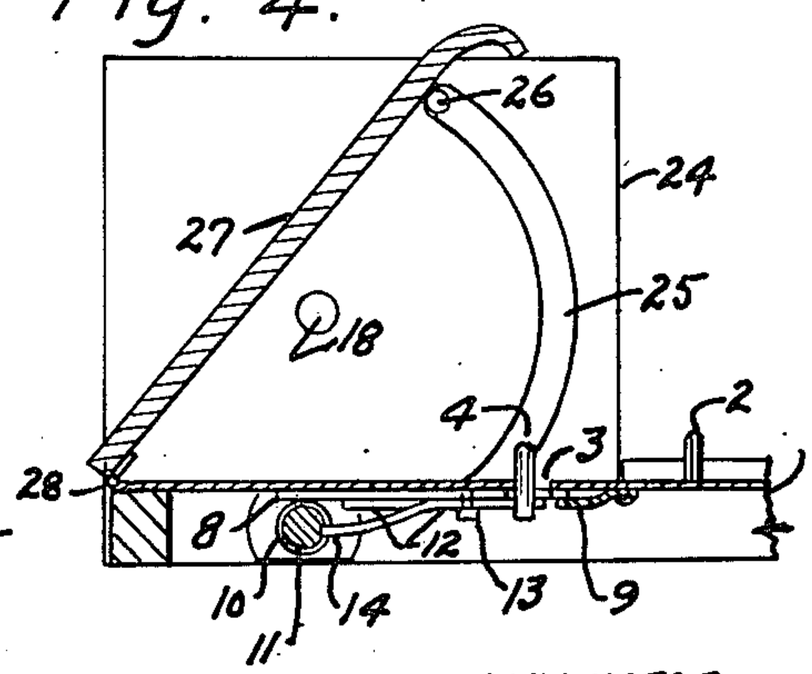
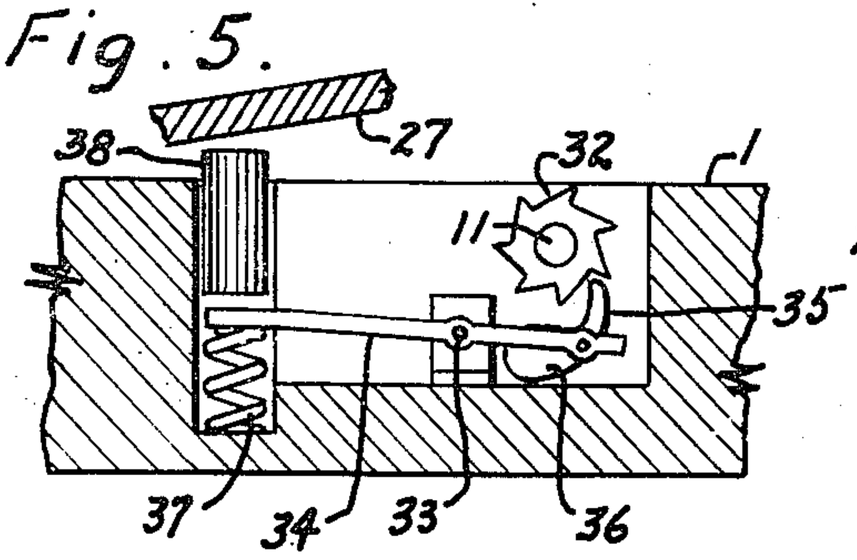


Fig. 5.



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UNITED STATES PATENT OFFICE

2,011,625

WRITING BOARD

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Application February 5, 1934, Serial No. 709,731

14 Claims. (Cl. 282—29)

My invention relates to writing boards, and particularly to those which are used for manifolding-bookkeeping and for writing by the blind.

In a great many commercial houses, and particularly in brokerage houses, it is customary to employ what is known as a master sheet upon which all the data relating to the execution of purchase and sale contracts is entered. It is also customary to enter this data on forms known as comparisons and confirmations which are exchanged between the parties involved and which are hereinafter referred to as entry slips.

In order to facilitate the bookkeeping, the entry slips are placed on top of the master sheet in manifolding relation whereby, when the entry is made on the entry slip, it is duplicated on the master sheet. Each new entry is made on the master sheet in a space immediately below the preceding entry.

In such a system it is necessary for the operator to exercise extreme care to prevent the overlapping of orders on the master sheet. Even when the writing board is equipped with a line indicator which can be adjusted to properly locate the entry slip on the master sheet, the bookkeeper often forgets to make the necessary adjustment of the line indicator and, consequently, makes two or more entries in the same space on the master sheet.

The main object of my invention is the provision of a device of the character described equipped with means for holding the entry slips on the master sheet and with further means which, in the ordinary usage of the board, causes the entry slip holding means, hereinafter referred to as a spacer, to move a distance corresponding to one full entry space on the master sheet before the entry of each new entry slip without any conscious act on the part of the operator.

It is a further object of my invention to provide a device of the character described which will be simple in construction and operation and error proof.

Another object of my invention is the provision of a device of the character described which will make it possible for blind persons to write in straight, evenly spaced lines.

Further objects and advantages of my invention will be apparent from the following detailed description of the accompanying drawing in which:

Fig. 1 is a plan view of my device with a portion thereof broken away.

Fig. 2 is a fragmentary bottom view of my device showing the relation between the spacing member and the worm which operates it.

Fig. 3 is a face view of the mechanism which operates the worm with parts broken away for the sake of clearness.

Fig. 4 is a vertical section through the line 4—4 of Fig. 1, and

Fig. 5 is a detailed view of a modified form of worm activating mechanism with certain of the parts in section.

Referring to the drawing in detail, 1 represents a platen made of any suitable material, preferably a light metal such as aluminum provided with studs 2 for aligning sheets of paper. These studs can be replaced by any other paper aligning means in common use. For example, the sides of the platen can be projected above the surface of the platen to provide confining walls for aligning the paper. Spaced from one side of the platen is a slot 3 in which ride a pair of pins 4 which are adapted to receive a perforated strip of paper 5. If the device is to be used for writing by blind persons, the strip of paper 5 is replaced by the conventional line guide shown in Patent No. 1,372,360.

The strip of paper 5 represents an entry slip, and when in position on the board, it extends over a pile of master sheets 6 and carbons 7. Of course, several entry slips can be used in manifold relation or the top sheet of the pile of sheets on the platen may be a master sheet and the under surface of the entry slip may be coated with carbon. It is to be understood that any conventional manifolding relation can be employed.

The pins 4 are carried by the spacer 8 which is in the form of a flat plate having one of its sides riding on the lip 9 and having at its other side a sleeve 10 encircling a worm 11 which is journalled in the opposite sides of the board. One of the pins 4 is rigidly mounted on the plate 8. The other pin is mounted on a plate 12 pivoted on plate 8 at 13 and having a finger 14 extending into the groove of the worm 11. The finger 14 is normally spring pressed into the groove of the worm 11 by a spring 15. Of course, any other conventional spring arrangement can be employed for this purpose. The portion of the plate 8 surrounding this latter pin 4 is cut away to permit lateral movement of the pin. By this construction, when the spacer 8 has been moved to the end of worm 11 step by step, as will be hereinafter explained, the finger 14 can be withdrawn from the groove of the worm 11 simply by moving the pin 4 laterally and the spacer 8 can be slid along worm 11 to the starting position. Rigidly keyed

to the shaft of the worm 11 at its upper end is a gear 16 which meshes with a larger gear 17 which, in turn, is rigidly secured to shaft 18. Rigidly mounted on shaft 18 is a ratchet 19. A plate 20 is loosely mounted on shaft 18 and carries a pawl 21 pivoted on pin 22 and having its free end spring pressed against ratchet 19 by a spring 23 in such a manner that, during counter clockwise movement of the plate 20 around the shaft 18, pawl 21 will slip over ratchet 19 and, during clockwise movement of the plate 20 around the shaft 18, the pawl 21 will engage one of the teeth of ratchet 19 and cause rotation of the shaft 18, the gears 17 and 16, and the worm 11.

The ratchet mechanism, the gears and the plate 20 are enclosed in a case 24 secured to the platen 1 at the upper end of the worm 11. In the inner face of the case 24 is an arcuate slot 25. Protruding through this slot is a pin 26 which is mounted on the plate 20. The pin 26 extends into the path of travel of the plate 27 having one of its sides hinged to the platen 1 at 28 and being of such a width that its free side 29, when pressed down wardly on the platen, constitutes a clamp for clamping the entry slips in position while entries are being made thereon. The pin 26 is normally held in the upper end of the slot 25 by a spring 30 fastened at one end to a pin 31 in the case 24, and at its other end to the plate 20.

In using the board, the bookkeeper places an entry slip on the pins 4 and then presses the plate 27 down to clamp the entry slip in place. The downward movement of the plate 27 presses the plate 26 downwardly, thereby moving plate 20 counter clockwise against the action of spring 30 and moving the pawl 21 over the ratchet 19 to a position where it will engage one of the teeth of said ratchet. When the entries are made on the entry slip, the operator releases the plate 27, whereupon spring 30 pulls plate 20 clockwise and imparts rotation to the worm 11 through the gears 17 and 16. Rotation of the worm 11 causes the spacer 8 to move down. The distance which the spacer moves after each entry on the master sheet is regulated by the length of the arcuate slot 25, the spacing of the teeth on ratchet 19, the ratio between gears 17 and 16 and the pitch of the groove in worm 11. Any one of these factors can be changed to adjust the distance moved by the spacer in each operation.

It is to be understood that the ratchet mechanism in Fig. 3 can be replaced by any one of the numerous conventional ratchet mechanisms for accomplishing the same result. It is to be noted that the mechanism described above causes movement of the spacer on the release of plate 27 from clamping position. This is the preferred arrangement. According to my invention, however, a ratchet mechanism can be employed which will cause movement of the spacer upon movement of plate 27 into clamping position.

Such a mechanism is shown in Fig. 5 in which 11 represents the end of the worm, on which is rigidly mounted a ratchet 32. Fulcrumed at 33 is a lever 34. On the short end of the lever a pawl 35 is pivoted and is provided with a weight 36 which forces it into engagement with the teeth of ratchet 32 upon upward movement of that end of the lever 34. The other free end of the lever 34 rests on a spring 37 which normally presses it upwardly. Resting on the free end of the lever is a plunger 38 which is normally projected by spring 37 into the path of travel of the plate 27.

When the plate 27 is pressed into clamping position it depresses plunger 38 and the free end of lever 34 against the action of spring 37. This moves the pawl end of lever 34 upwardly thereby turning ratchet 32 and worm 11 which, in turn, causes movement of the spacer 8. The distance moved by the spacer 8 in each operation can be adjusted by varying the position of fulcrum 33 and the length of plunger 38. The ratchet mechanism in this modification can also be replaced by any one of a number of known ratchet mechanisms which perform the same function.

It is to be understood that, while the structure described above and shown in the drawing represents the preferred embodiment of my invention, my invention is not restricted thereto, but also contemplates various mechanical modifications thereof. For example, instead of using a worm for step by step movement to the spacer, I can employ a chain. The essential feature of my invention is the provision of a writing board of the character described which is provided with means for imparting a step by step movement to the spacer upon the up or down movement of the clamping member, and I consider within the scope of my invention any mechanical arrangement which will accomplish this result.

In the appended claims, both the entry slips referred to above and the slotted writing guide used by blind persons are embraced by the term "entry strip".

Having thus described the end and objects of my invention, and illustrated a preferred embodiment of the same, what I claim as new and useful and desire to secure by Letters Patent is:

1. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, means comprising a movable element for cooperating with said spacer to hold the entry strip in place and means actuated by the movement of said element for automatically moving said spacer along said space a predetermined distance after each successive entry is made on said main sheet.

2. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, and means, actuated by the movement of said element, for imparting motion to said spacer.

3. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with pins for receiving a suitably perforated entry strip and locating said entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, and means, actuated by the movement of said element, for imparting motion to said spacer.

4. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement ver-

tically of said space, said spacer being provided with pins for receiving a suitably perforated entry strip and locating said entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, and means, actuated by the movement of said element, for imparting motion to said spacer.

5. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, means for moving said element away from said platen when the pressure thereon is released, and means, actuated by the movement of said element away from said platen, for imparting motion to said spacer.

6. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement vertically of said space, said spacer being provided with means for locating an entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, means for moving said element away from said platen when the pressure thereon is released, and means, actuated by the movement of said element away from said platen, for imparting motion to said spacer.

7. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet and means, actuated by the movement of said element toward said platen, for imparting motion to said spacer.

8. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, a movable clamp for holding said entry strip in place on said main sheet, and means, actuated by movement of said clamp, for imparting motion to said spacer.

9. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, a movable clamp for holding said entry strip in place on said main sheet and means, actuated by movement of said clamp into clamping position, for imparting motion to said spacer.

10. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, a movable clamp for holding said entry strip in place on said main sheet and means, actuated by movement of said clamp out of clamping position, for imparting motion to said spacer.

11. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said platen when an entry is made on said main sheet, a mechanism actuated by the movement of said element and operatively connected to said spacer to impart step by step motion thereto, and means for disengaging said spacer from said mechanism whereby said spacer can be freely moved manually in its path of travel.

12. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, said spacer being provided with means for locating an entry strip on said main sheet, a movable clamp for holding said entry strip in place on said main sheet, a mechanism actuated by movement of said clamp and operatively connected to said spacer to impart step by step motion thereto, and means for disengaging said spacer from said mechanism whereby said spacer can be freely moved manually in its path of travel.

13. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a slot in said platen along one side of said space, a worm mounted on the underside of said platen parallel to said slot, a plate riding on said worm, pins carried by said plate and projecting through said slot, a plate hinged on said platen and adapted to be pressed against said platen each time an entry is to be made on said main sheet, and means operated by the movement of said hinged plate for rotating the worm and thereby imparting motion to the plate riding on said worm.

14. A writing board comprising a platen having a space for supporting a main sheet upon which entries are to be made, a spacer mounted adjacent said space and adapted for movement along one side of said space, pins on said spacer for receiving a perforated entry strip and locating it on said main sheet, an element normally projecting above the surface of said platen and adapted to be pressed against said pins for holding the entry strip thereon and means activated by the movement of said element for imparting motion to said spacer.

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