

W. S. BROWN & F. M. CRUSE.
RECORDER.

APPLICATION FILED AUG. 17, 1909.

967,321.

Patented Aug. 16, 1910.

2 SHEETS—SHEET 1.

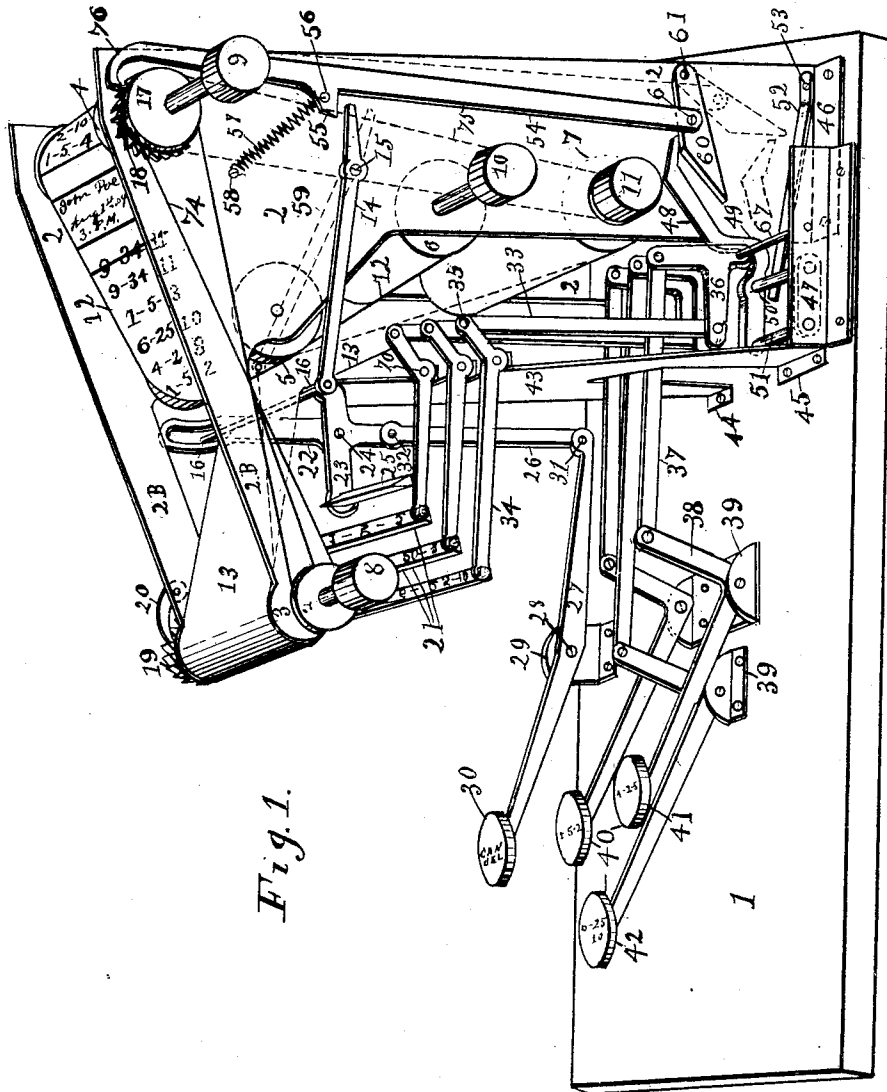


Fig. 1.

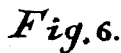
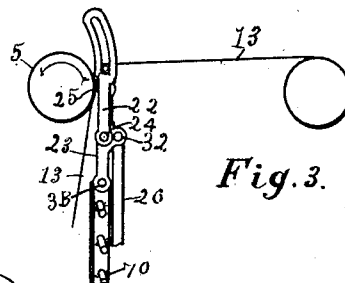
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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RECORDER.

967,321.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed August 17, 1909. Serial No. 513,367.

To all whom it may concern:

Be it known that we, WILLIAM S. BROWN and FRANCIS M. CRUSE, residents of Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Recorders; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a recorder which is to be used for recording sales of articles of which it is desired to record the quantities, price and profits. When certain lines of goods are sold the profits are often very small and when figured out are best expressed decimally and must be predetermined beforehand, it requiring very exact calculation.

The object of our invention is to devise means by which such sales can be quickly and accurately recorded. By pressing one key each sale is recorded in full to-wit: quantity, price and profit, each in separate columns. We accomplish this result by placing the desired figures on a type-bar and the corresponding figures on the keys, each key registering with a type-bar. We have shown three type-bars, it being understood in practice as many can be used as desired, they all being exactly alike.

Another object is to indelibly record the sales upon a band of paper which can be filed away for future reference and inspection.

Another object is to provide means by which the sales of each salesman can be kept separate, as would be the case if a stamp clerk was using the machine in a large post office for the sale of envelopes and newspaper-wrappers.

Another object is to provide means for canceling a print when the wrong print is inadvertently made.

Another object is to provide means for instantly displaying the print to the operator, as soon as made.

Our invention comprehends the construction and arrangement of parts to be hereinafter described, illustrated in the accompanying drawings and succinctly defined in the appended claims.

Figure 1, is a perspective view of our

machine. Fig. 2, a side elevation of the opposite side of the machine, illustrating more fully the canceling key. Fig. 3, illustrating the said key as it would appear at the instant of impact. Fig. 4, a type-bar as attached to one of the pivoted arms. Fig. 5, a tilting frame which is pivotally mounted subjacent to the bell-cranks. Fig. 6, a frame on which is mounted the vibrating arms that carry the type-bars.

Referring to the drawings 1, is a base on which are rigidly affixed metallic plates 2, having laterally extending arms 2^B. Between these plates and arms are pivotally mounted spools 3—4—5—6—7— and 7^B. On one end of the spindles of spools 3—4—6 and 7 are thumb-knobs 8—9—10— and 11, on the other end are ratchet-wheels 63—64—17 and 19 which are engaged by dogs 20—65 and 66 and the bar 54, which prevents adverse rotation. Sheaves are adapted to carry a cord 74, which is for the purpose of winding and rewinding an indelible ribbon 13, when said cord is crossed as now shown, the ribbon is wound off of 7, on to spool 3, and when it is desired to wind it back on spool 7, the cord is placed as indicated by the dotted lines 75. The dog 20, is turned over which rewinds the said ribbon on spool 7. Spool 6, carries a band of printing paper, the free end of which passes around spool 5, and over spool 4, and around 7^B, as best illustrated in Fig. 2. A metal band 71, causes the said paper to circle around spool 7^B and pass out of the machine, said band has a cutting edge 73, to sever the paper when it is desired to take off a portion thereof. A bar 54, having a perforated lateral lug 55, and a bend 76, adapted to engage the teeth 18, is pivoted with a screw 62, to an arm 60, said arm is pivoted to the metallic plate 2, with a screw 61. A spiral spring 57, is hooked into the lug 55, and is attached to plate 2, with a screw 58, the function of this spring is two fold,—to raise the bar 54, up when pulled down and to keep it in contact with the teeth 18. A frame 43, having bends A⁴³—77—44— and 45, is positioned on the base 1, and secured thereto with screws as illustrated in Fig. 1. Arms 34, have rigidly attached thereto rods 70, said rods are pivotally mounted in the holes in the frame 43, (see Fig. 6) one end of said arms have square holes 68, therein to receive the type-bars 21,

(see Fig. 4) which bars have reduced threaded extensions 69, to receive jam-nuts. The other ends of said arms are bifurcated to receive pivoted links 33, which are pivotally connected to bell-cranks 36, which are pivotally mounted on a rod 67, one end of which is mounted in an angle-plate 47, screwed to the base 1, and the other end in the plate 2. Bent bars 38, are pivoted to angled irons 39, which are screwed to the base 1, these bars are connected to the aforesaid bell-cranks with links 37. On the free ends of said bars are keys. A bar 48, having a bend 49, is rigidly connected to a link 78, by means of rods 50, and 51, the free ends of the rod 51, is pivoted in the angled iron 47, and the plate 2, beneath the bell-cranks 36, the free end of the bar 48, contacts with the arm 60. An arm 23, approximately T shaped is rigidly affixed to a rod 35, see Fig. 6, which rod is pivotally mounted in the frame 43, the free end of arm 23, bears a cancel-bar 25, V shaped in cross-section which is attached in the same manner as the type-bars 21. An upwardly extending arm 22, having a curved opening 78, in the free end thereof is pivotally connected to the arm 23, with a screw 24, a link 26, is pivotally connected to arm 23, and a lever 27, with screws 31, and 32. The lever 27, is pivotally attached to the lug 29, with a screw 28. An arm 14, is pivoted to the plate 2, with a screw 15. The free end of this arm has rigidly attached thereto a laterally extending rod 16. The free end of said rod passes through the opening 78, and is free to move up and down therein when the arm 14, is tilted as indicated by the dotted lines 59.

Having described the construction and assembling of our machine we will describe its operations generally.

An indelible ribbon 13, is wound around spool 7, the free end thereof is passed up over the rod 16, and wound around the spool 3, often enough to give it traction, and the dog 20, keeps it intact. A band of printing paper is wound on spool 6, passed around spool 5, and over spool 4, and thence between spool 4, and 7^B, (see Fig. 2) and the end left free. The machine is now ready for operation. If a sale is to be recorded (six stamped envelopes for instance) the key 42, is pressed down (said key having printed thereon, 6—25—10) the bell-crank contacts the rod 50, of the tilting frame which frame contacts the pivoted arm 60, and bears it down as indicated by the dotted lines which brings the bar 54, down and imparts to the spool 4, an intermittent rotative movement, which moves the printing paper the required distance, coincident therewith the lug 55, contacts the end of the lever 14, and throws the rod 16, up against the arms 2^B, which causes the indelible ribbon to contact with the printing paper on the roller 5. It is to be

noted when the arm 60, is borne down a certain distance the downward movement of the arm 54, ceases but the tilting frame and the bell-cranks and the key must move on far enough to cause the type-bar to strike the ribbon 13, against the printing paper 12, and make the desired print 6—25—10. After which the spring 52, acting on the rod 50, throws the tilting bar up and said rod throws the bell crank and the key back to a normal position. The spring 57, pulls the bar 54, up and the lever 14, drops down into a normal position again and lets the ribbon 13, down so the print made is in full view of the operator. If the operator discovers he has touched the wrong key it becomes necessary to cancel the said print, he then presses the cancel key 30, and the bar 25, starts toward the said print, and the slot 78, carries the rod 16, (see Figs. 2 and 3) up against the printing paper ahead of the cancel bar 25, and holds it in position until the bar strikes the ribbon against the print. It is to be observed the operation of the cancel key does not move the printing paper but if it is desired to make several transverse lines on the printing paper as shown in Fig. 1, the thumb-knob 9, is turned and the cancel key struck as often as desired. For instance, if operators were changed a transverse line is made under the last print which is used later for footing up. The next operator can then write his name, the day of the month and the hour and the minute, and commence operation. It will be readily seen that each operator's work is kept separate from the others and can be filed away as a permanent record.

We claim—

1. In a recorder, a base having vertical plates secured thereto, said plates having laterally extending arms, spools pivotally mounted between said plates, carrying a band of printing paper, a pivoted spool to deflect said paper, spools pivotally mounted between said arms and plates carrying an indelible ribbon, means for intermittently winding said paper and ribbon, means for reversing the travel of said ribbon, means for deflecting said ribbon to contact the printing paper preparatory to receiving the impact of the type, means for striking the type against the ribbon and paper to make a print.

2. In a recorder, a base having vertical plates bearing laterally extending arms, a plurality of spools pivotally mounted between said plates, and arms, two of said spools carrying a band of printing paper, a pivoted spool to deflect said paper, spools carrying an indelible ribbon, means for intermittently winding and rewinding said ribbon, means for deflecting said ribbon to contact the printing paper, means for striking the type against said ribbon and paper to make a print, means for holding said rib-

bon and paper in contact until the type strikes said ribbon and recedes, substantially as described.

3. In a recorder, a base having vertical plates, said plates having laterally extending arms, a plurality of spools pivotally mounted between said plates and arms, two of said spools carrying a band of printing paper, a pivoted spool to deflect said paper and means for striking the type against said paper, spools carrying an indelible ribbon, means for intermittently winding and re-winding said ribbon coincident with the said paper, means for deflecting said ribbon to contact the printing paper preparatory to receiving the impact of the type to make a print, means for holding said ribbon and printing paper in contact until a print is made and the type recedes and means for returning the ribbon to its normal position to bring the print into full view of the operator.

4. In a recorder, a base having mounted thereon vertical plates, said plates having laterally extending arms, spools pivotally mounted between said plates carrying a band of printing paper, a pivoted spool deflecting said paper, pivoted spools carrying an indelible ribbon, means for intermittently winding said paper and ribbon simultaneously, means for deflecting said ribbon to contact said paper and hold it until the type strikes them and makes a print, and recedes, means for returning said ribbon to its normal position to bring the print into full view of the operator, a frame mounted on the aforesaid base, arms having laterally extending rods pivotally mounted in said frame, one end of said arms being bifurcated to receive links, their other ends having square holes therein, bars having type thereon denoting quantity, price and profit and means for rigidly attaching said bars to said arms, substantially as described.

5. In a recorder, a base having mounted thereon vertical plates, said plates having laterally extending arms, spools pivotally mounted between said plates carrying a band of printing paper, means for deflecting said paper, spools carrying an indelible ribbon, means for intermittently and simultaneously winding said paper and ribbon, means for deflecting said ribbon to contact said paper, and means for striking the type against said ribbon to make a print and means for returning said ribbon to its normal position to bring the print into full view of the operator, a frame mounted on the aforesaid base, arms having laterally extending rods pivotally mounted in said

frame, one end of said arms being bifurcated to receive links, their other ends having square holes therein, bars bearing type denoting quantity, price and profit, and means for rigidly attaching said bars to said arms, bell-cranks pivotally mounted on a rod, links uniting said cranks to the arms aforesaid, a tilting frame beneath said bell-cranks, links connecting said bell-cranks to levers, keys having printed thereon numerals denoting quantity, price and profit, substantially as described.

6. In a recorder, a base having affixed thereto vertical plates, said plates having laterally extending arms, spools pivotally mounted between said plates and carrying a band of printing paper, a means for deflecting said paper, spools carrying an indelible ribbon, means for deflecting said ribbon to contact the aforesaid printing paper and means for striking the type against said deflected ribbon to make a print on the paper aforesaid, an upwardly extending frame secured to said base on arm pivotally mounted on said frame subjacent to said indelible ribbon, an upwardly extending member pivoted to the central portion of said arm, the free end thereof provided with a circular opening, the free end of the aforesaid bar being provided with a laterally extending canceling bar V shaped in cross section, a link pivoted to a downwardly extending lug and pivotally connected to a titling bar, substantially as specified.

7. In a recorder, a base having affixed thereto vertical plates, said plates having laterally extending arms, spools pivotally mounted between said arms, carrying a band of printing paper, means for deflecting said paper, spools carrying an indelible ribbon and means to deflect said ribbon to contact the aforesaid deflected paper, means for striking the type against said ribbon to make a print on the paper, means to bring the print in full view of the operator, means for canceling a print, means for moving the printing paper and ribbon simultaneously preparatory to making a print, keys on operating levers bearing numerals denoting quantity, price and profit, manual operable means for moving the printing paper, as described and set forth.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

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Witnesses:

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