C. C. GIBSON.

CUTTING AND STAMPING MACHINE.

APPLICATION FILED NOV. 24, 1911.

1,038,741.

Patented Sept. 17, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

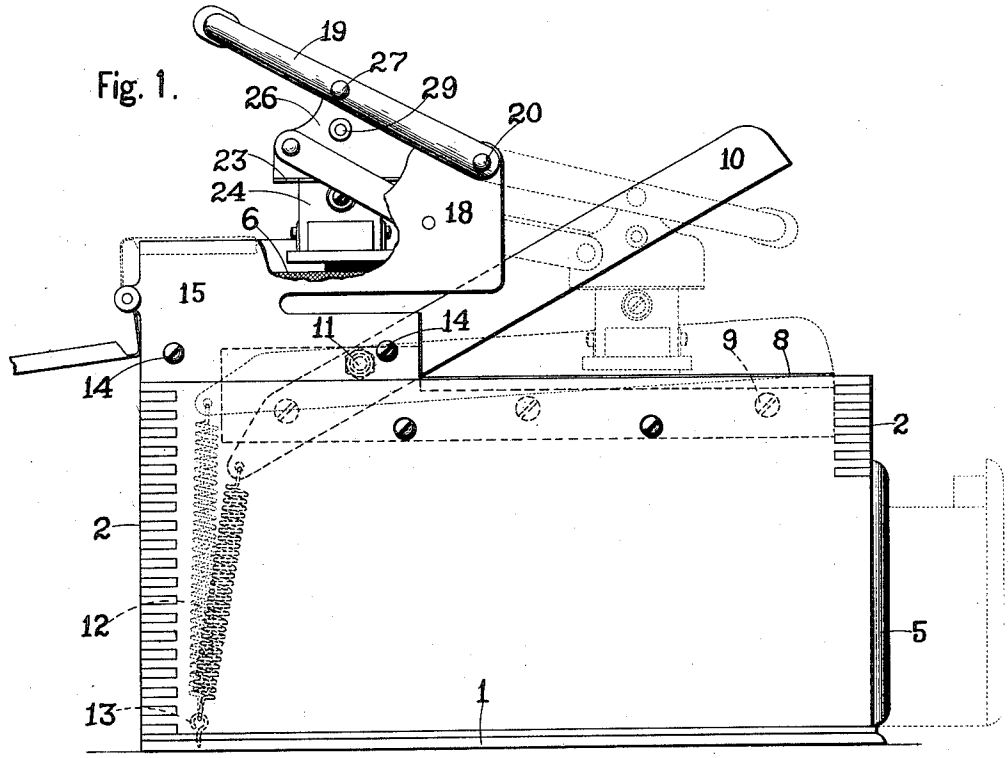
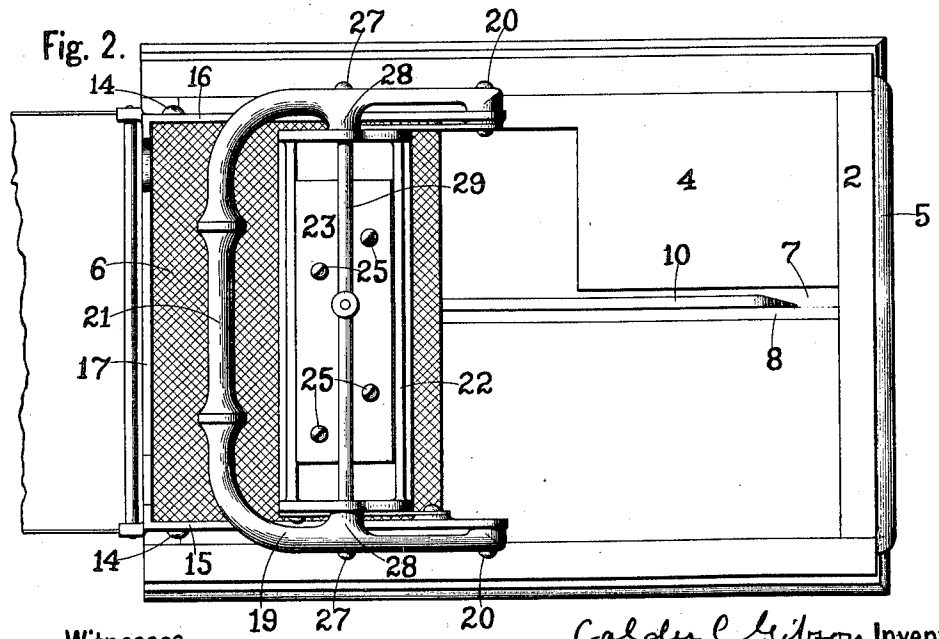


Fig. 2.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 3.

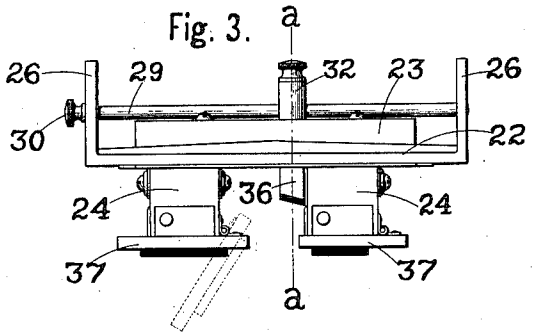


Fig. 4.

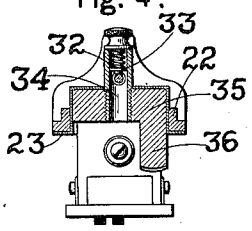


Fig. 5.

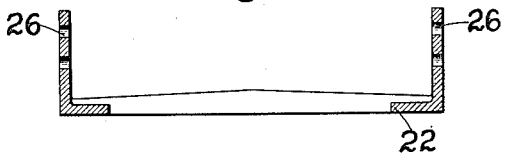


Fig. 6

Fig. 7.

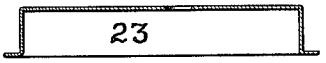


Fig. 8.

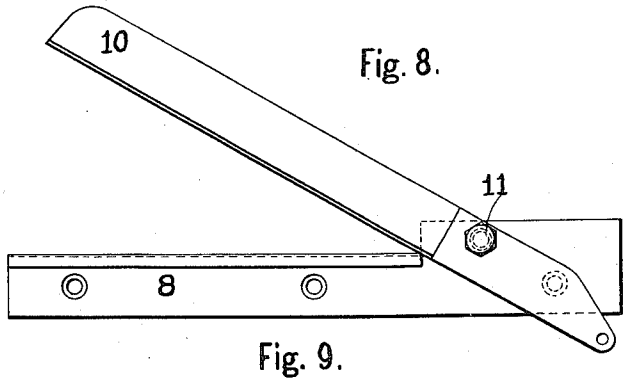
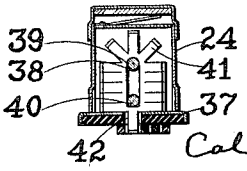


Fig. 9.



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UNITED STATES PATENT OFFICE.

CALDER C. GIBSON, OF BUFFALO, NEW YORK.

CUTTING AND STAMPING MACHINE.

1,038,741. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed November 24, 1911. Serial No. 662,092.

To all whom it may concern:

Be it known that I, CALDER C. GIBSON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Cutting and Stamping Machines, of which the following is a specification.

This invention relates to that class known as cutting and stamping machines in which a portion of a bill, coupon, invoice, or other paper is completely severed or cut off, and at the same time a date and other particulars or records are printed on each portion.

One of the features of the invention has reference to the novel arrangement of a knife or other cutting implement in the path of the operating handle of the printing stamp, so that the knife or other cutting implement will be moved to sever a portion of a paper at the same time that the printing stamp is moved to print certain particulars thereon.

Another feature of the invention has reference to the removable attachment of the printing stamp to its operating handle, so that the stamp may be detached and another substituted, or the date or other particulars thereon may be changed.

The principal object of the invention is to provide a simple, quick and convenient machine which will simultaneously print and cut coupons, bills, invoices, or other papers, such as for instance gas bills in which a small stub is printed at one side of the bill proper and is adapted to be severed at the same time that the bill is stamped.

The invention also relates to certain details of construction which will be hereinafter described and claimed, reference being had to the accompanying drawings in which:

Figure 1 represents a side elevation of the improved machine showing the knife and printing stamp in their non-cutting and non-printing position in full lines and in cutting and printing position in dotted lines. Fig. 2 is a top plan view of the improved machine. Fig. 3 is a detached front view of the printing stamps and their supporting frame, also showing one of the hinged supporting bottom pieces partially open in dotted lines. Fig. 4 is a vertical section through the printing stamp-supporting frame on line "*aa*", Fig. 3. Fig. 5 is a vertical longitudinal section through the printing stamp-supporting frame. Fig. 6 is a detached view of the locking bar for the printing stamps. Fig. 7 is a transverse section through the dished shell to which the printing stamps are attached. Fig. 8 is an enlarged detached view of the cutting knife and its complementary stationary blade. Fig. 9 is a fragmentary section through one of the printing stamps to show the interior construction of the same.

In referring to the preferred adaptation of the machine shown in the accompanying drawings in detail like numerals designate like parts.

In the adaptation shown the printing and cutting mechanisms are mounted on a box which is constructed with a slot for the passage of the cutting knife and an opening through which the severed portions of the coupons or other papers drop into the interior of the box.

Referring to Figs. 1 and 2, the box is composed of a bottom 1, ends 2, and a top 4, and the front of said box is provided with an opening in which a drawer 5 is slidably mounted, as shown in Fig. 1.

An ink pad 6 is arranged on the rear portion of the top of the box and a longitudinal slot 7 is cut in the box top in front of the ink pad for the passage of a cutting knife as will be more specifically described farther on.

A stationary cutting blade 8 is fastened rigidly to one of the side walls of the slot 7 by screws 9 and a movable cutting blade or knife 10 forming the movable cutting implement is pivoted to one side of the stationary blade to a laterally raised or elevated portion of the rear end thereof by a bolt 11, as shown in Figs. 1, 2, and 8.

It will be noted by referring to Fig. 8 that the pivotal bolt 11 is located in a plane sufficiently above the horizontal plane of the cutting edge of the stationary blade 8 to produce an extremely acute shearing angle, in fact the two opposed cutting edges are almost parallel when in cutting position. The great advantage of this is that the cutting operation does not have a tendency to force the article being cut laterally out from beneath the movable cutting knife.

The movable cutting member, blade or knife 10, is normally maintained in an elevated non-cutting position by a spring 12, as shown in dotted lines in Fig. 1, the spring being attached at its upper end to the rear end of the cutting blade or knife, and at its

lower end to an eye 13 fastened to the bottom of the box, as shown in dotted lines in accompanying drawings.

The spring does not extend vertically downward, but at an outward angle diagonally toward the box corner so that the tendency of the spring is not only to maintain the cutting blade normally in a non-cutting position, but also to exert sufficient lateral pull to keep the edge of the movable cutting blade in close contact with the stationary blade, so that a keen, quick and positive cutting effect is produced.

The printing mechanism is mounted above the box being supported by a metal frame which is attached to the box by screws 14 and projects above the top thereof. This metal frame is composed of two side members 15 and 16 and an end 17, as shown in Figs. 1 and 2, and also forms an inclosing frame for the ink pad 6.

The side frame members 15 and 16 are each provided with forwardly and upwardly extending enlargements 18 to the front corners of which the ends of a U-shaped operating lever 19 is pivoted by pins 20, as shown in Figs. 1 and 2.

The U-shaped lever is provided with a central hand-grasping portion 21 and a frame 22 is extended between the longitudinal portions of the U-shaped lever below the central hand-grasping portion 21 in which the printing stamps are removably mounted.

The construction of this stamp-supporting frame will be understood by referring to Figs. 1, 2, 3, 4, and 5, the frame being of rectangular form and having a rectangular opening in which a metal dished shell 23, also of rectangular form and attached to the boxes 24 containing the printing stamps by screws 25, is removably fitted.

The frame 22 is provided with two upwardly extending vertical end ears 26 through the upper portions of which pivoting pintles 27 are inserted to pivot the frame to the U-shaped lever. Bosses, or enlargements, 28, are formed near the middle of the longitudinal portions of the U-shaped lever through which the pintles 27 are fitted, as shown in Figs. 1 and 2.

The shell 23 together with the printing stamps are fastened in the frame by a locking bar 29 constructed as shown in Fig. 6 and having an enlarged knurled knob 30 at one end forming a convenient finger-grasping portion and an intermediate reduced portion, 31.

The locking bar 29 is adapted to be fitted through openings in the end ears and a horizontal opening in a vertical tubular portion 32 extending up from the shell 23 and to be fastened in place in said horizontal opening by a spring-pressed slide 33 fitted in a vertical opening 34 in the portion 32, as shown in Fig. 4, and having an enlarged projecting knurled upper end and a depending lower end adapted to engage in the groove of the reduced portion 31, as shown in Fig. 4. The vertical tubular portion 32 has its lower end screwed into a block 35 which is fitted in the metal dished shell, as shown in Fig. 4.

The block 35 is provided with a depending portion 36 which is adapted to contact with the top of the movable cutting member or knife and move it downward as the U-shaped lever, together with the printing stamps are swung forward and downward into a printing position by the operator.

The printing devices *per se* each consists of the box 24 having a bottom opening which is closed normally by a bottom plate or piece 37 hinged at one side to the box; said plate or piece being adapted to open downwardly, as shown in dotted lines in Fig. 3 and a rubber band 38 mounted on rollers 39 and 40 located within the box and having a series of projecting type bars 41.

The bottom plate 37 is provided with a slot 42 through which one of the type bars fits when the plate is closed against the box, as shown in Fig. 9.

It will be noted by referring to Fig. 8 that the cutting knife is pivoted to the stationary blade at a point above the horizontal plane of the cutting edge of the said stationary blade.

The advantage of this is that the shearing angle between the cutting edges of the blades is so acute that the paper is cut easily, quickly and evenly without in any way moving or disturbing the position of the paper sheet on the top of the box.

I claim:

1. In a machine of the class described, the combination with a main frame, of printing mechanism pivotally linked to said main frame and including a stamp supporting frame, a block fitted in the stamp supporting frame and having a vertical extension provided with a vertical opening and a transverse opening intersecting the vertical opening, a locking bar slidably mounted in the stamp supporting frame and fitted through the transverse opening in the vertical extension of the block and a spring slide in the vertical opening of the vertical extension.

2. In a machine of the class described, the combination with a main frame, of printing mechanism pivotally linked to said main frame and including a stamp supporting frame, a block fitted in the stamp supporting frame and having a vertical extension provided with a vertical opening and a transverse opening intersecting the vertical opening, a locking bar slidably mounted in the stamp supporting frame and fitted through the transverse opening in the vertical extension of the block and a spring slide in the vertical opening of the vertical extension;

said locking bar having an intermediate reduced portion and said spring slide having a depending lower end adapted to engage in the groove of the reduced portion.

3. In a machine of the class described, the combination with a main frame, of printing mechanism pivotally linked to said main frame, and including a stamp supporting frame, a block fitted in the stamp supporting frame and having a vertical extension provided with a vertical opening and a transverse opening intersecting the vertical opening, a locking bar slidably mounted in the stamp supporting frame and fitted through the transverse opening in the vertical extension of the block and a spring slide in the vertical opening of the vertical extension; said locking bar having an intermediate reduced portion and said spring slide having a depending lower end adapted to engage in the groove of the reduced portion and an enlarged finger gripping upper portion.

4. In a machine of the class described, the combination with a main frame, of printing mechanism pivotally linked to said main frame and including a stamp supporting frame having a rectangular opening, a dished shell fitted in said rectangular opening, a vertical block extending from said shell and having a horizontal opening, printing stamps attached to said shell, and a locking bar adapted to be detachably fitted through the horizontal opening in the vertical block.

5. In a machine of the class described, the combination with a main frame, of printing mechanism pivotally linked to said main frame and including a stamp supporting frame having a rectangular opening, a dished shell fitted in said rectangular opening, a vertical block extending from said shell and having an intermediate horizontal opening and a vertical upper opening, printing stamps attached to said shell, a locking bar adapted to be detachably fitted through the horizontal opening in the vertical block, and a spring locking slide in the vertical upper opening adapted to engage the locking bar.

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Witnesses:
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CARL SCHRAMM.