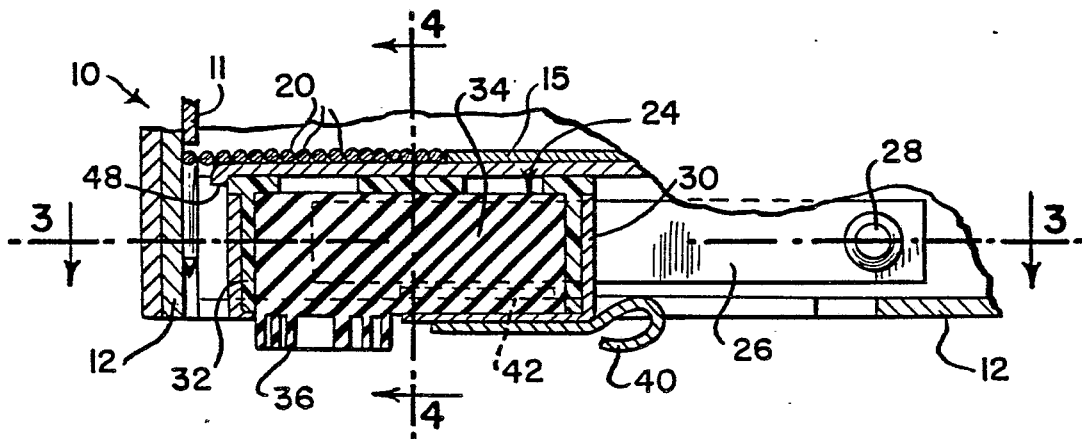


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(54) Title: STAPLING AND MARKING DEVICE



(57) Abstract

A device for simultaneously stapling (52) and marking (54) a workpiece (56) is disclosed which comprises a main body housing (12) for holding driving staples (20) into a workpiece (56) as well as supporting a removable marking unit (24) positioned in the housing (12) in such a manner as to apply an identifying mark (54) to the workpiece (56) when the workpiece (56) is stapled (52).

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Description

1

STAPLING AND MARKING DEVICEBackground of the Invention

With the increasing complexity in the operations of
5 various commercial enterprises, there has been a growing need
to monitor and identify various everyday record keeping and
information handling activities. The inventive device is of
significant value insofar as it permits the identification of
papers by marking them without resort to a separate identifi-
10 cation operation. Specifically, the inventive device allows
the simultaneous application to a document of both a staple
and an identification mark.

Summary of the Invention

In accordance with the present invention, a stapling
15 device is provided with a self-inking stamp, such as a micro-
porous encapsulated stamp, positioned in the housing cavity
formed by the rail which supports the staple strip. During
the stapling operation, as the staple advances through the
papers or other materials to be stapled, the top page or other
20 material is marked with an appropriate legend by the stamp.
The legend is useful in identifying the paper, the individual
who stapled it, the department where the stapling was done,
the day of the week, and so forth.

Brief Description of the Drawings

25 Figure 1 is a side elevation view of the stapling
device constructed in accordance with the present invention;

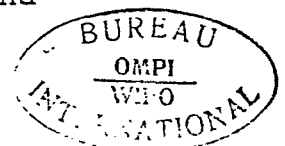
Figure 2 is an enlarged cross-sectional view of the
head of the device;

30 Figure 3 is a cross-sectional view along line 3-3
of Figure 2;

Figure 4 is a cross-sectional view along line 4-4
of Figure 2;

35 Figure 5 is a perspective view of the underside of
the head of the staple housing showing insertion of the self-
inking stamp;

Figure 6 shows a stack of papers after they have
been stamped and stapled by the inventive device; and



- 2 -

1 Figure 7 is a side elevation view of an alternative embodiment of the present invention.

Detailed Description of the Preferred Embodiments

Referring to Figures 1-4, a stapler 10 constructed
5 in accordance with the present invention is illustrated. The stapler comprises a housing 12, a cover 14 and an operating handle 16. Stapling and stamping is done against an anvil 18. Staples 20 are held in housing 12 between the inside wall of the housing and the outside wall of a staple supporting guide
10 22. The staples are urged by a conventional follower block 15 toward the front of the stapler and driven by a driver blade 11 along a channel 13 into the workpiece in a conventional manner. Operation of the stapler thus results in advancing housing 12 toward anvil 18 and driving staples into
15 the workpiece.

Seated within the staple supporting guide 22 is a self-inking stamping element 24 of the microporous encapsulated type which is held in position by a pair of spring members 26. Spring members 26 are secured to staple supporting
20 ing guide 22 by rivets 28. The self-inking stamping unit 24 comprises an external metal body 30 within which is supported a plastic casing 32. Metal body 30 serves the purpose of providing a rigid case which can be supported by spring members 26. The small size of spring members 26 allows the
25 placement of unit 24 between the legs of the staples. A rubber stamp 34 made of a microporous plastic or rubber material is disposed within plastic casing 32. Rubber stamp 34 includes a stamping surface 36 which is shaped to form the appropriate legend.

30 Insofar as it may be desirable to change the legend which is stamped by the inventive device, the rubber stamp unit 24 may be removed. Referring to Figure 5, the unit 24 is first slid to the rear of the device in the direction indicated by arrow 38. This operation is facilitated by handle
35 40 secured to unit 24. When the unit reaches its most rearward position, locking tabs 42 are then in alignment with mating slots 44. Unit 24 may then be removed from the body

1 in the direction indicated by arrow 46. A new stamping unit
may then be placed in the inventive device by simply rever-
singing this process. It is noted that the forward action of
the unit in the direction opposite that indicated by arrow 38
5 is limited by a forward stud 48 extending from staple sup-
porting guide 22.

Dimensionally, the distance between the bottom
surface 43 of the locking tabs 42 and the top surface 31 of
the casing 32 is substantially equal to the distance between
10 the bottom surface 21 of the staple supporting guide 22 and
the inside surface 23 of the guide 22, thus securing the
stamping unit 24 in place.

As illustrated in Figure 6, operation of the inven-
tive device results in the application of both a staple 52
15 and a marking legend 54 to the workpiece 56. The use of the
device is particularly advantageous insofar as the stamping
of the workpiece and driving of the staple is done in one
operation. The inventive stamping and stapling device may
take other forms such as the form of the desk stapling and
20 stamping device 10' illustrated in Figure 7. This device is
essentially identical in its operation to the stapler device
illustrated in Figures 1-6. The device 10' comprises a
housing 12' and a cover 14'. Stapling and stamping by sur-
face 36' are performed against an anvil 18'.

25 In the operation of the present invention, the
marking in stamping surface 36 is supplied with sufficient
ink between staplings and markings through ink migration to
the surface. Thus, each time the device is actuated a staple
is driven through the workpiece and a mark made thereon.

30 While the preferred embodiment of the invention has
been disclosed, it is, of course, understood that various
modifications in the size and configuration of the parts will
be obvious to those of ordinary skill in the art and these
modifications are within the spirit and scope of the inven-
35 tion which is limited only by the appended claims.



1 CLAIMS

1. A stapling and marking device, comprising:
- (a) anvil means;
 - (b) a housing having a front portion disposed
5 over said anvil means;
 - (c) staple supporting means disposed in said housing for supporting a plurality of staples;
 - (d) means for urging said staples toward the
10 front of said housing;
 - (e) means for driving said staples into a workpiece;
 - (f) marking means for marking a workpiece during stapling of the same; and
 - (g) means for supporting said marking means
15 within said housing underneath and within said staple supporting means.
2. A stapling and marking device as in Claim 1, wherein said housing includes an opening for receiving said
20 marking means and said means for supporting said marking means within said housing comprises a pair of spring members.
3. A stapling and marking device as in Claim 2, wherein said opening includes a pair of slots and said marking
25 means comprises a marker holder with a pair of locking tabs which mate with said slots during insertion of said marking means into said housing.
4. A stapling and marking device as in Claim 3, wherein the distance between the bottom surface of said locking
30 tabs and the top surface of said marker holder substantially equals the distance between the bottom surface of said staple supporting means and the inside surface of the top of said staple supporting means, whereby the locking tabs and top surface of said marking means is securely held between said housing and said staple supporting means.
- 35 5. A stapling and marking device as in Claim 4, further comprising handle means secured to said marker holder.

1 6. A stapling and marking device as in Claim 4,
further comprising stud means for limiting forward motion of
said marking means.

5 7. A stapling and marking device as in Claim 4,
wherein said marking means comprises a self-inking marking
element and said marking means is disposed in said housing
inside said staple supporting means.

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FIG. 1

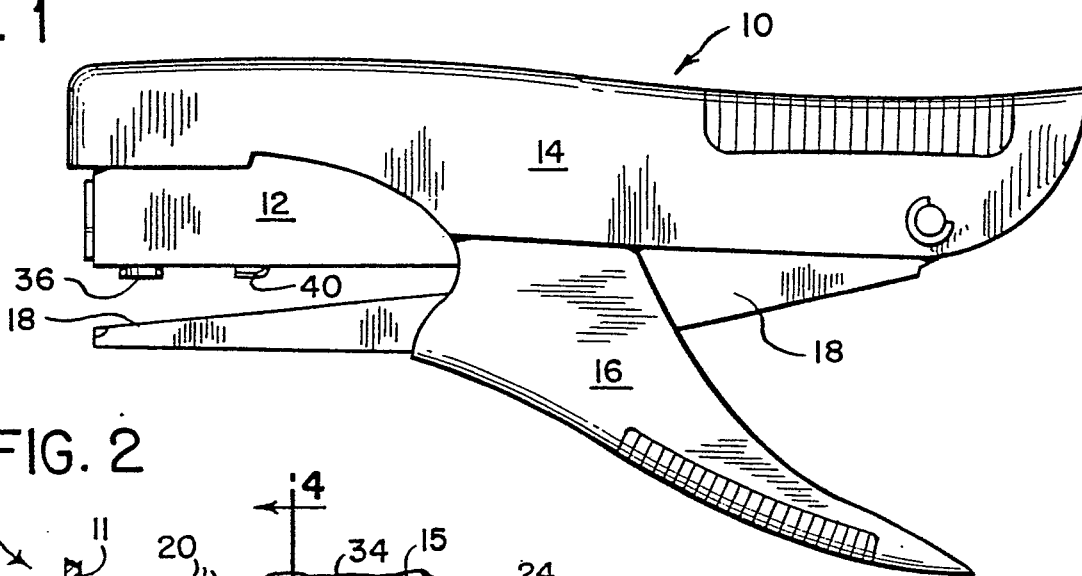


FIG. 2

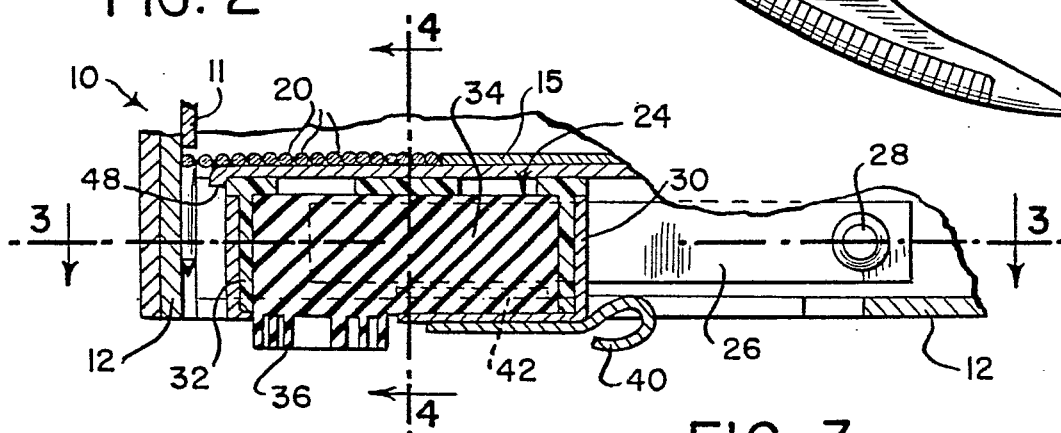


FIG. 3

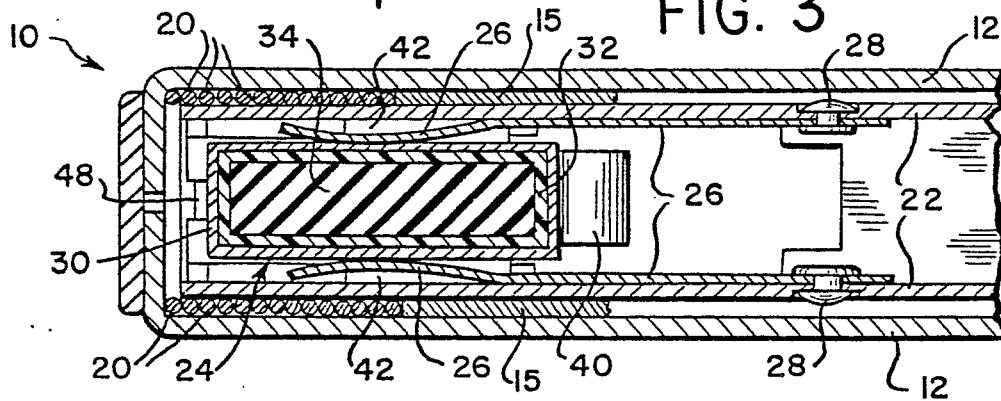
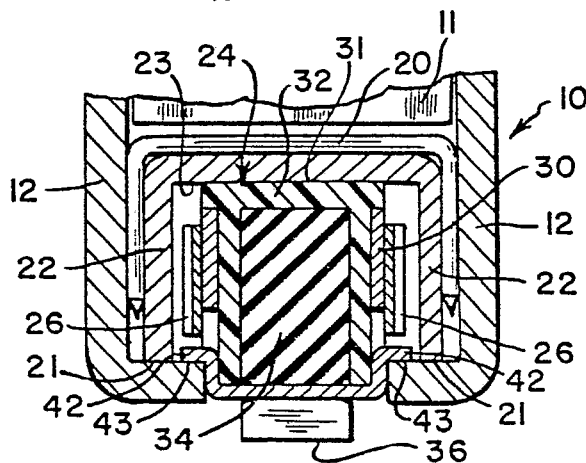


FIG. 4



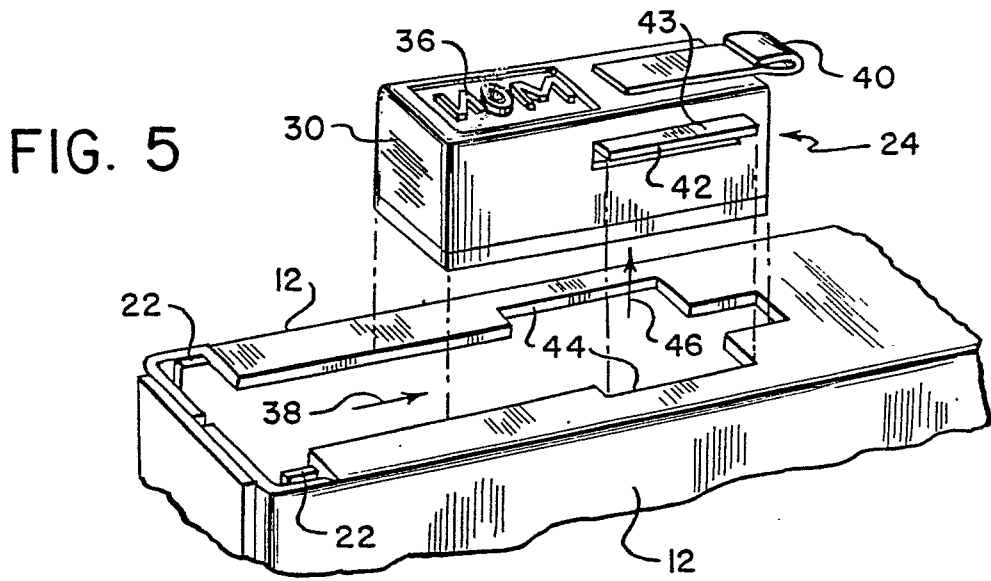


FIG. 6

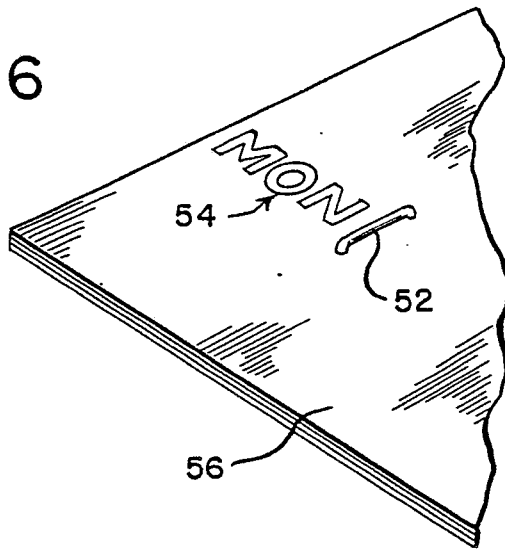
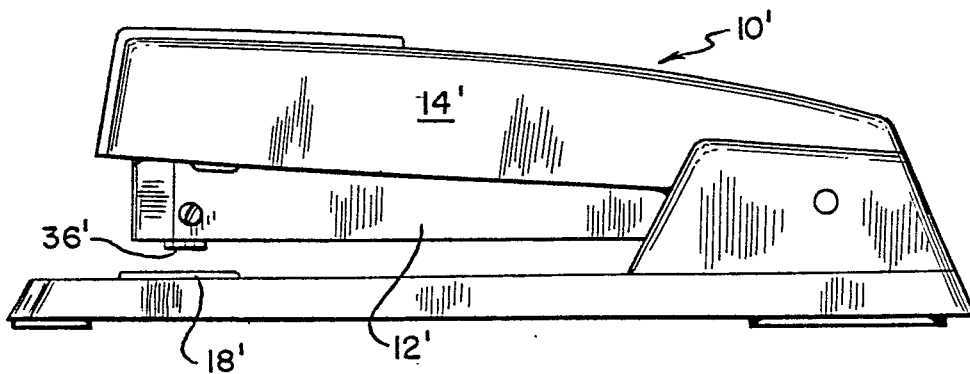


FIG. 7



INTERNATIONAL SEARCH REPORT

International Application No PCT/US79/0328

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ³				
According to International Patent Classification (IPC) or to both National Classification and IPC				
INT. CL. B01C 7/00; B01C 7/02 U.S. CL. 207/150		2/00720		
II. FIELDS SEARCHED				
Minimum Documentation Searched ⁴				
Classification System	Classification Symbols			
U.S.	207/150, 256			
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁵				
III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹⁴				
Category *	Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷	Relevant to Claim No. ¹⁸		
X	U.S., 4,213,690 PUBLISHED 23 NOVEMBER 1979 HOFFMAN	1-7		
X	U.S., 4,086,700 PUBLISHED 22 AUGUST 1968 MACKRECHNIE	1-7		
X	U.S., 4,071,740 PUBLISHED 06 SEPTEMBER 1977 SUTTON	1-7		
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<p>* Special categories of cited documents: ¹⁵</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> "A" document defining the general state of the art "E" earlier document but published on or after the international filing date "L" document cited for special reason other than those referred to in the other categories "O" document referring to an oral disclosure, use, exhibition or other means </td> <td style="width: 50%; border: none;"> "P" document published prior to the international filing date but on or after the priority date claimed "T" later document published on or after the international filing date or priority date and not in conflict with the application, but cited to understand the principle or theory underlying the invention "X" document of particular relevance </td> </tr> </table>			"A" document defining the general state of the art "E" earlier document but published on or after the international filing date "L" document cited for special reason other than those referred to in the other categories "O" document referring to an oral disclosure, use, exhibition or other means	"P" document published prior to the international filing date but on or after the priority date claimed "T" later document published on or after the international filing date or priority date and not in conflict with the application, but cited to understand the principle or theory underlying the invention "X" document of particular relevance
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IV. CERTIFICATION				
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