

[54] **METHOD AND APPARATUS FOR FEEDING TABS OR DISCS TO AN AUTOMATIC STAPLE OR NAIL GUN**

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[51] **Int. Cl.⁵** F16B 43/00; B27F 7/02; B42B 4/00

[52] **U.S. Cl.** 411/531; 411/162; 411/943; 227/48; 227/50

[58] **Field of Search** 411/154, 155, 160-164, 411/480, 531, 542, 544, 545, 943; 227/39, 48, 50

[56] **References Cited**

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Attorney, Agent, or Firm—Eckert, Seamans, Cherin & Mellot

[57] **ABSTRACT**

A method of feeding the discs to the automatic staple or nail gun includes the steps of providing a plurality of discs stacked atop one another, shuttling a first disc from the stack to a position normal to the staple or nail expulsion path, and retaining that first disc at that position until the staple or nail is expelled from the gun. The apparatus includes a shuttle which is moved from a position immediately below the stack of discs to a second position at which the disc, carried by the shuttle carriage, is grasped by a clip. The clip retains the disc in a position normal to the path of staple or nail expulsion. The discs have dimples protruding from both planar surfaces of the disc. The dimples are predisposed in a predetermined pattern such that the protrusions from one surface form a pattern which is non-equivalent to the pattern formed by the protrusions extending from the other surface of the disc. This dimple pattern is in a peripherally spaced band on the disc. The shuttle carriage is configured to carry these discs on planar surfaces beyond the band of dimples.

13 Claims, 7 Drawing Sheets

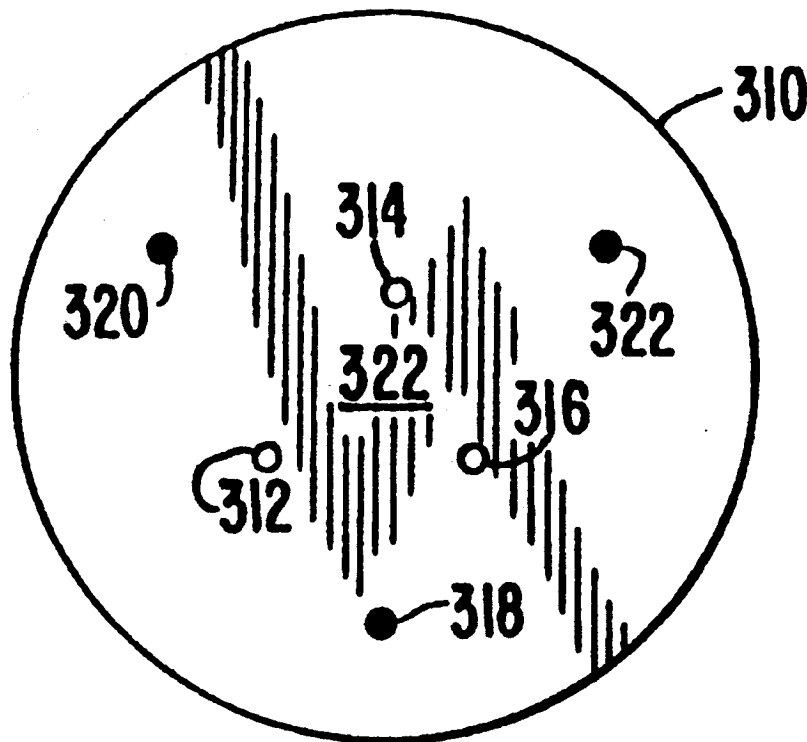


FIG. 1A.

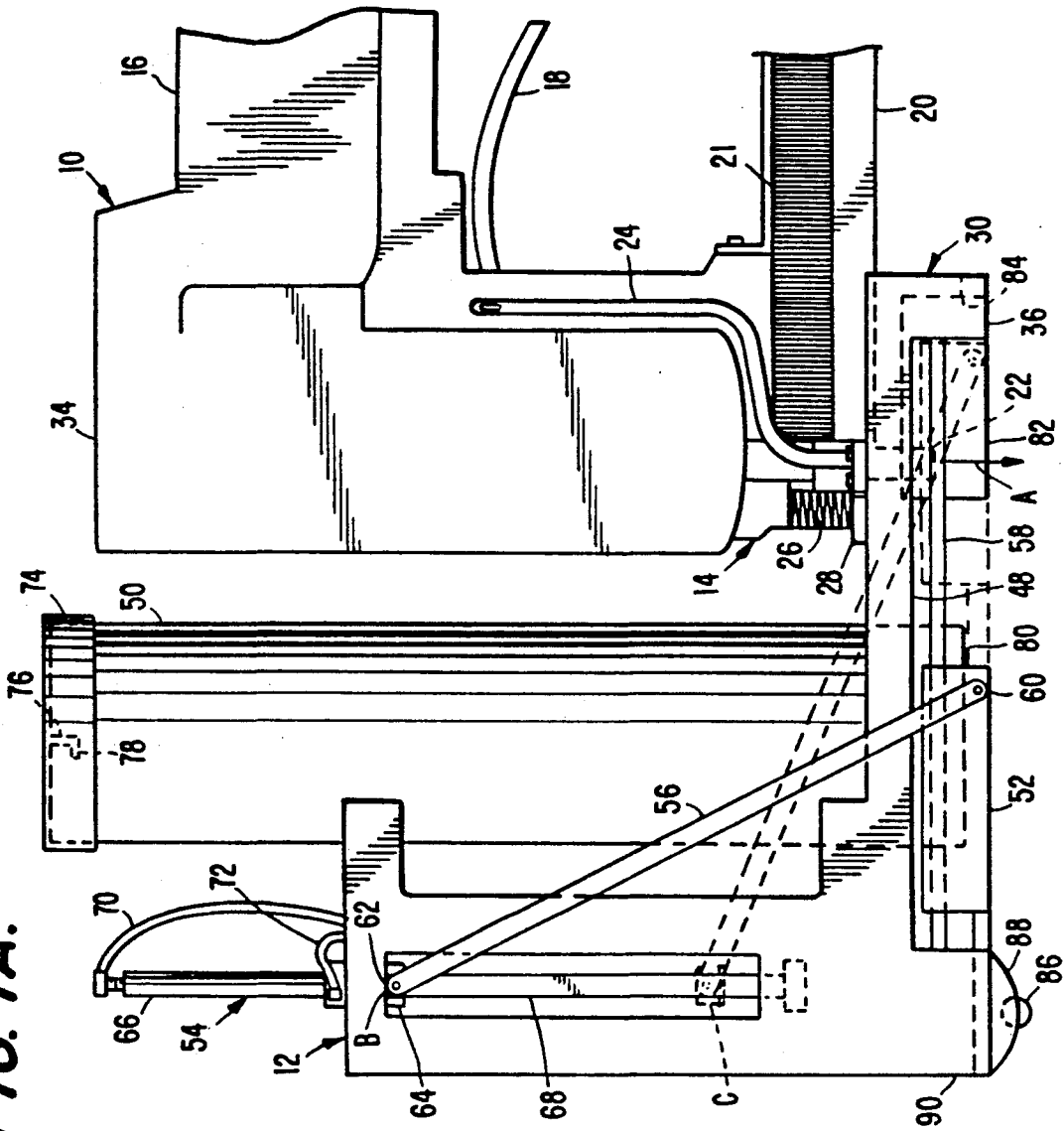


FIG. 1B.

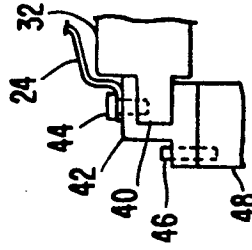


FIG. 2.

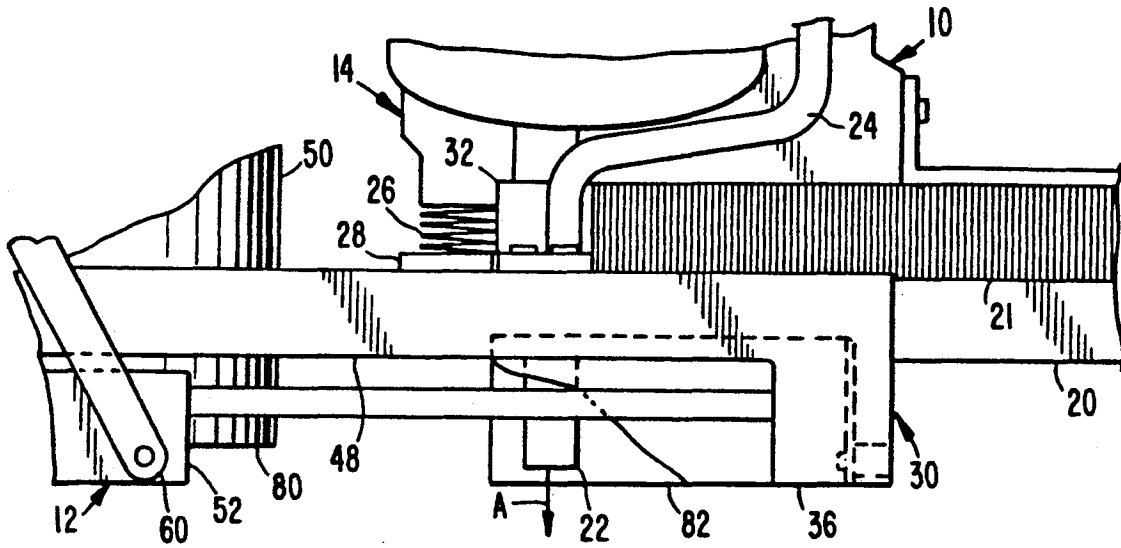


FIG. 3A.

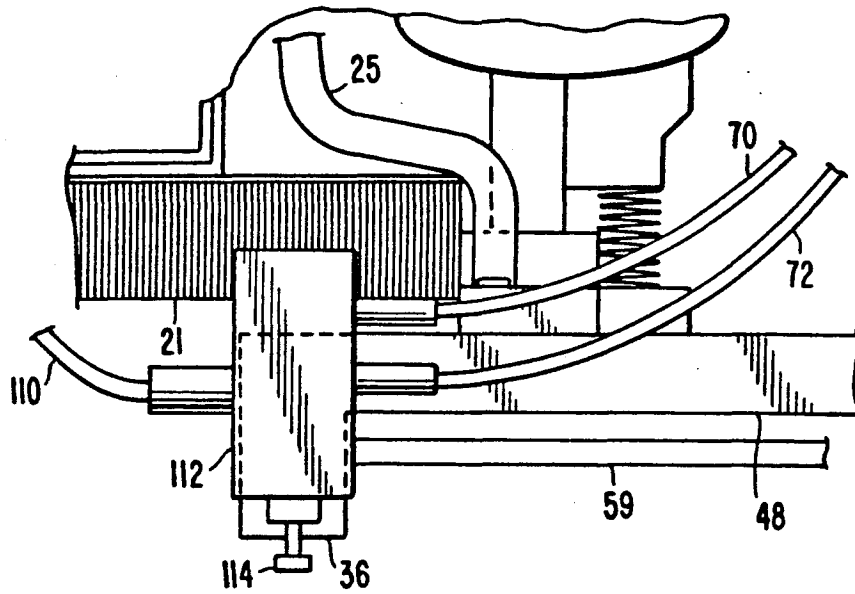


FIG. 3B.

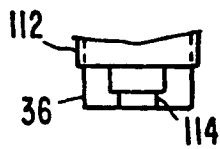


FIG. 4.

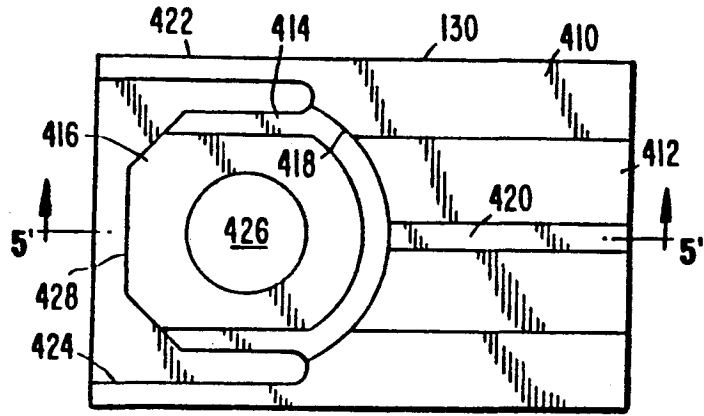


FIG. 5.

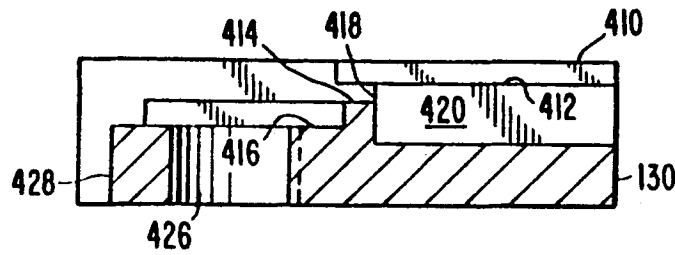


FIG. 6.

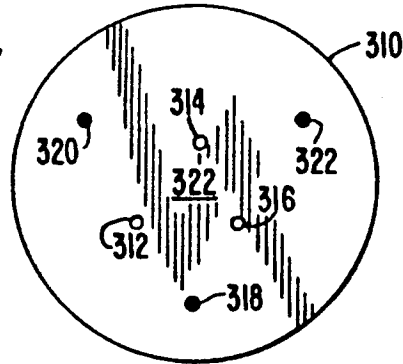


FIG. 7.

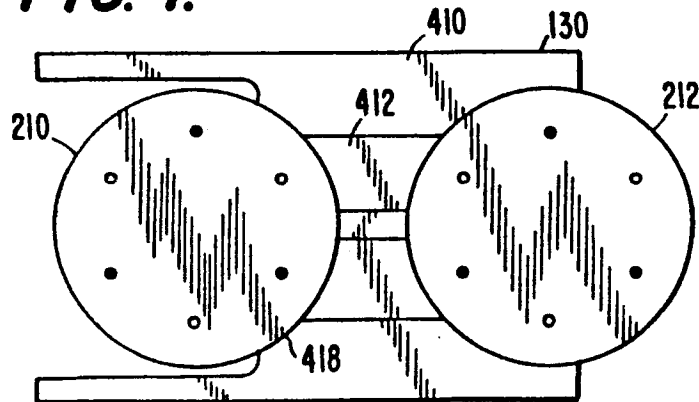
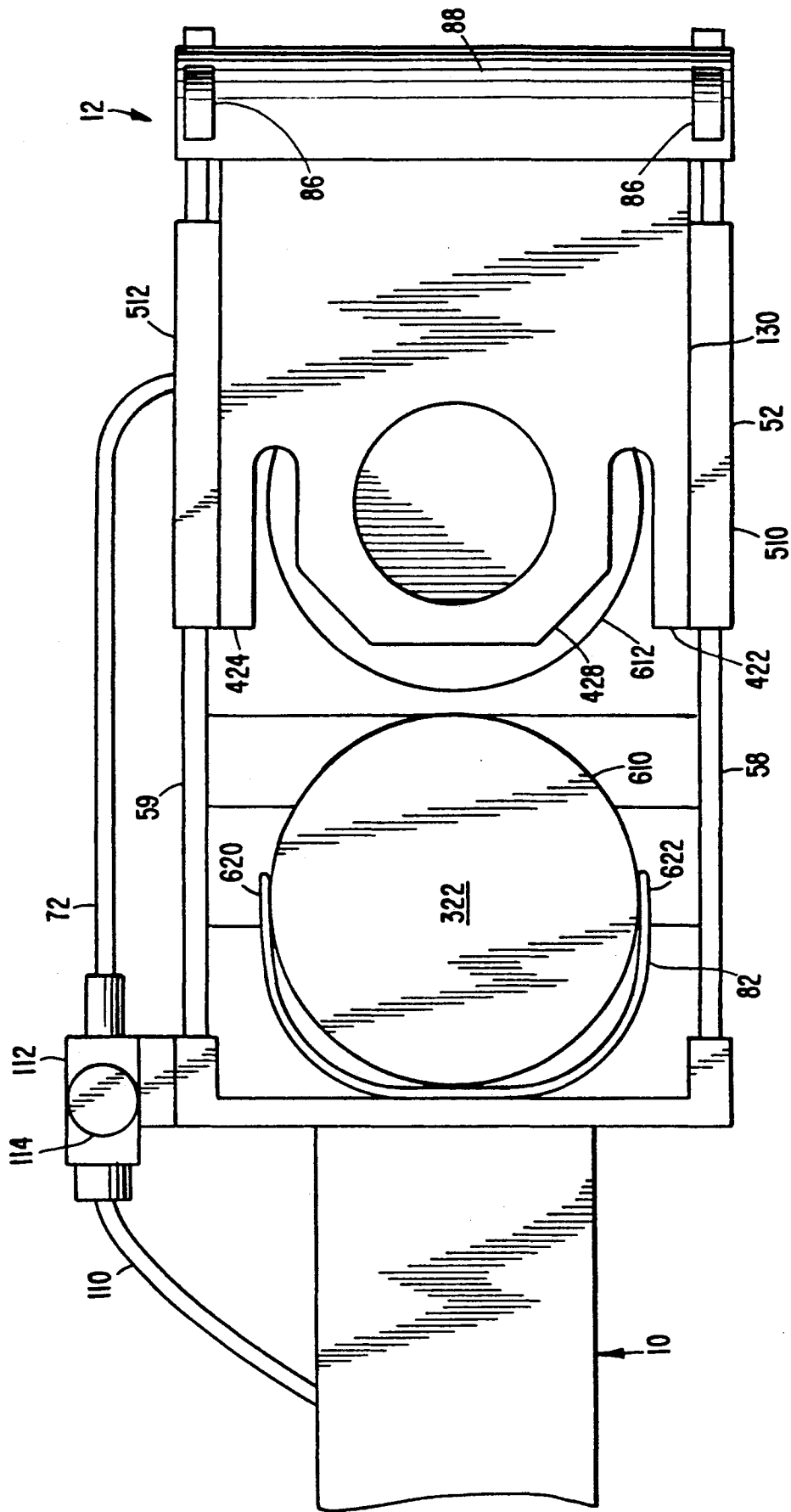


FIG. 8.



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