

July 11, 1961

O. SEITER

2,991,476

TEXTILE STAPLE TACKER

Filed June 1, 1959

2 Sheets-Sheet 1

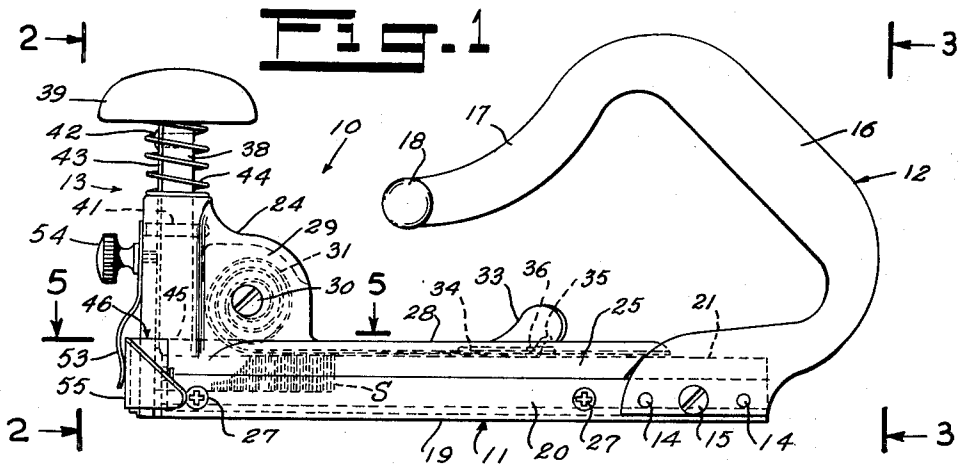


FIG. 2

FIG. 3

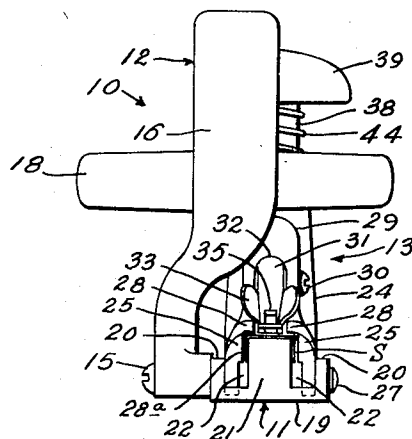
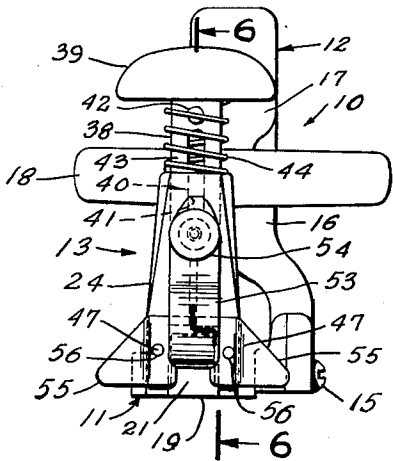
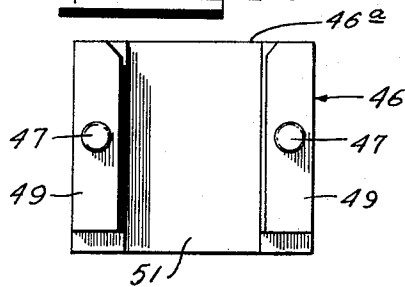
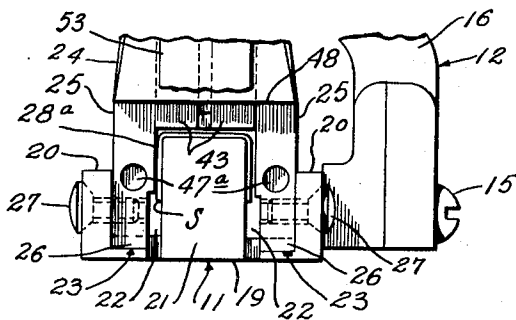


FIG. 4

FIG. 7



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Fig. 5

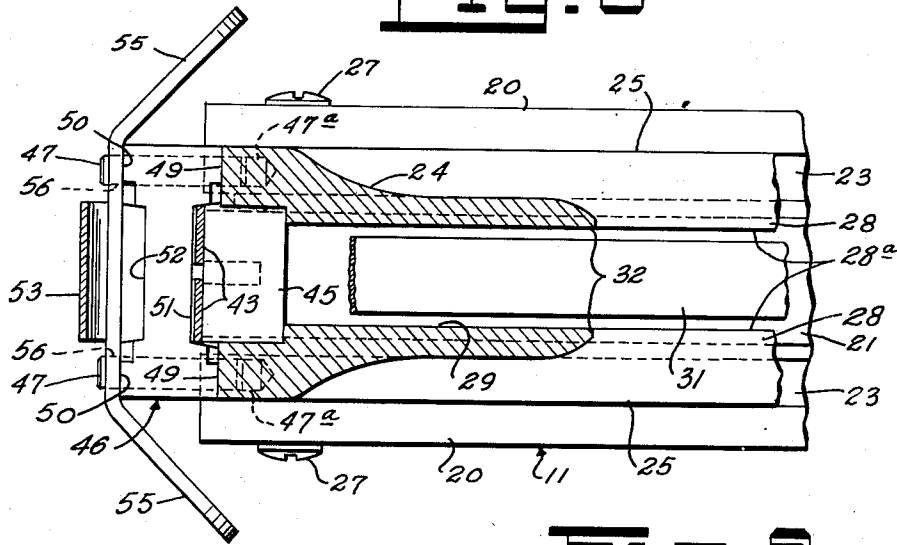


Fig. 6

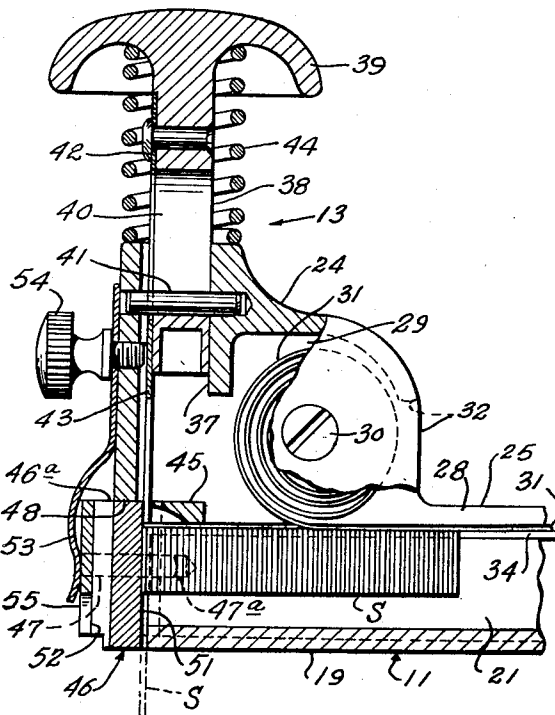


Fig. 8

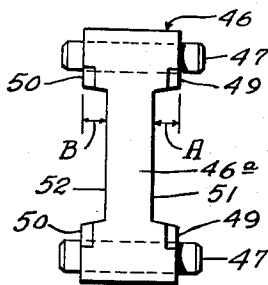


Fig. 9

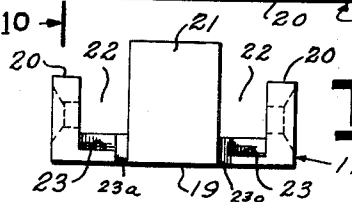
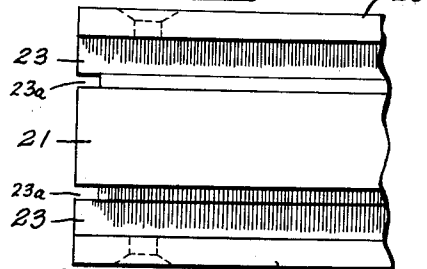


Fig. 10

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TEXTILE STAPLE TACKER

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3 Claims. (Cl. 1—49)

This invention relates to stapling tools and is directed particularly to improvements in compression staplers of the type used in tacking textiles, cardboard, screening, insulation and the like sheet materials.

Ordinary tacking staplers of the above nature are designed for and can be used only with one thickness of staple. It is the principal object of this invention to provide a stapler having adjustable mechanism allowing its use selectively with different thicknesses of staples.

A more particular object is to provide a stapler of the character described including a reversible staple guide plate, one side of which is provided with a guide channel operative with staples of one thickness, and the other side of which is provided with a guide channel operative with staples of another thickness, and manually operable mechanism for holding one or another selectively of the guide channels in operative position in the stapler.

Other objects, features and advantages of the invention will be apparent from the following description when read with reference to the accompanying drawings wherein like reference numerals denote corresponding parts throughout the several views.

FIG. 1 is a side elevational view of an improved compression stapler embodying the invention,

FIG. 2 is a front elevational view thereof,

FIG. 3 is a rear elevational view thereof,

FIG. 4 is a partial front elevational view, on a larger scale than FIG. 2, and with the reversible staple guide plate and front guard member removed,

FIG. 5 is a partial horizontal enlarged cross-sectional view of the stapler, taken along the line 5—5 of FIG. 1, looking in the direction of the arrows,

FIG. 6 is a partial enlarged vertical cross-sectional view of the stapler, taken along the broken line 6—6 of FIG. 2,

FIG. 7 is an elevational view of the reversible guide plate, shown separately,

FIG. 8 is a top view thereof,

FIG. 9 is a plan view of the front end portion of the stapler base, shown separately, and

FIG. 10 is a front elevational view of the stapler base, shown separately.

Referring now in detail to the drawings, my improved compression stapler, designated generally by the numeral 10, comprises an elongated rectangular base 11 having fixed thereto at one end a curved handle 12, and at the other end a staple guide and compression plunger mechanism 13. The lower end of the handle 12 is rigidly fixed against the side of the base 11 by a pair of dowel pins 14 and a machine screw 15. The handle 12, which is preferably of cast aluminum, has an upwardly and inwardly inclined hand grip portion 16 which extends into a downwardly-curved forward portion 17 terminating in a lateral T-bar 18.

The base 11, which is preferably of steel, is formed with a flat bottom surface 19, upstanding parallel side wall portions 20, 20, and a central upstanding wall portion 21, of greater height than the side wall portions 20. The upstanding wall portions 20, 20 and 21 of the base 11 are rectangular in cross-sectional shape, and define, at each side of the central wall portion 21, rectangular channels 22, 22 along which the usual stack of aligned strip metal staples S is fed in the manner described below. The bottom surfaces of the channels 22, 22 are each provided with longitudinal grooves 23, 23 (FIGS. 4 and 5) said

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grooves being of somewhat lesser width than the width of the channels 22, 22 and extending sidewardly from the inner surfaces of the side wall portions 20, 20. Moreover, between the grooves 23 and the center portion 21, a pair of vertical cutouts 23a are employed for allowing accumulated staples to discharge without jamming.

The compression plunger mechanism 13 comprises a housing member 24, preferably of cast metal, providing a pair of opposed, parallel elongated base portions 25, 25, the lower ends 26, 26 of which fit into the grooves 23, 23 of the base 11. Two pairs of machine screws 27 extending horizontally through the side wall portions 20, 20 of the base 11 and into the base portions 25, 25 of the housing member 24, serve to securely hold said base 11 and said housing member 24 in assembled relation.

The upper ends of the base portions 25, 25 of the housing member 24 curve inwardly over the top of the central upstanding wall portion 21 of the base 11, as indicated at 28, 28, and the inner surfaces of said base portions 25, 25 extend in spaced parallel relation to the top and side surfaces of said central wall portion 21 to define therewith a U-shaped longitudinal channel 28a (FIG. 5) from front to back which serves as a magazine and guide means for storing and feeding the staples S (FIG. 3).

In order to push the stack of staples S forward automatically to bring new staples into position after a previous stapling operation, the housing member 24 is formed at its forward end and above the base portions 25, 25 thereof with a spring chamber 29 extending transversely, and through which is a horizontal screw 30 which fixedly supports in said spring chamber the inner end of a loosely coiled flat spring 31 (FIG. 6). The rear end of the spring chamber 29 of the housing member 24 is formed with an opening 32 through which the free end of the spring 31 extends.

Secured to the free end of the spring 31 is a finger grip member 33 having a pusher 34 which rides in the U-shaped longitudinal channel 28a and behind the staple strip stack S (FIGS. 1, 4, 6). The pusher 34 is formed at its rear end with upwardly-extending tongue 35 which fits into an opening 36 in the finger grip member 33, whereby the pulling force of the coil spring 31 will be coupled to said pusher for resiliently pushing the staples forward in their magazine (FIGS. 1, 3).

The compression plunger mechanism 13 comprises manually operated means for forcing staples S, one at a time, downwardly through the front end of the base 11 for stapling. To this end, the housing member 24 of the compression plunger mechanism 13 is formed with a front rectangular vertically-extending guide opening 37 (FIG. 6) within which is slidably disposed a vertical rectangular push bar 38 formed at its upper end with a smooth, rounded knob 39. The push bar 38 is provided with a central, longitudinal slot 40 through which a stop pin 41, anchored at each end in the housing member 24, extends to limit the upper and lower extent of travel of said bar.

Fixed against the front face of the push bar 38, as by a rivet 42, and extending downwardly from the lower end of said bar 38, is a flat, hardened staple driver 43 of the same width as the central wall portion 21 of the base 11. A coil compression spring 44 surrounding the push bar 38, and constrained between the upper end of the housing member 24 and the underside of the knob 39, normally holds said push bar in its uppermost position, as illustrated in FIG. 6.

The guide opening 37 in the housing member 24 is so disposed and arranged that the flat staple driver 43 is in lateral register with the central wall portion 21 of the base 11, and passes close by the front end of said wall portion in face to face relation therewith when the knob 39 is manually depressed, by the palm of the hand for example.

The length of the staple driver 43 is such that when the

knob 39 is fully depressed, the lower end of said driver will be substantially flush with the bottom surface 19 of the base 11. It will be understood that when the staple driver 43 is in its uppermost position, the lower end thereof will be in register with a bridge member 45 secured within the housing member 24 and arranged in spaced relation above the front end of the central wall portion 21 of the base 11 to allow free passage of staples.

Means is provided at the front end of the stapler to allow the use of different thicknesses and sizes selectively, of staples S. To this end, a staple guide plate 46 is provided, either side of which can be secured to the front of the stapler for guiding the driving of two thicknesses of staple strips S. As illustrated in FIGS. 7 and 8, the staple guide plate 46 is generally rectangular in shape and fitted with a pair of side pins 47 projecting at each side which serve to accurately locate said guide plate with respect to the front end of the rectangular base 11. For this purpose, the front end of the base portions 25, 25 of the housing member 24 are provided at each side with cylindrical socket openings 47a adapted to receive the projections of the side pins 47.

As illustrated in FIGS. 4 and 6, the front ends of the base portions 25, 25 of the housing member 24 are undercut from the front end of the rectangular stapler base 11 to provide a shoulder 48 under which the top edge 46a of the guide plate 46 fits. The vertical side wall portions 49, 49 or 50, 50 of the guide plate 46 contact the end faces of the undercut base portions 25, 25.

As illustrated in FIG. 8, vertical grooves 51, 52 are formed in each side of the staple guide plate 46, of different depths corresponding to the thicknesses of staples being used in the stapler. Thus, the slot 51 having a depth designated by "A," when placed in facing relationship against the front end of the stapler, as described above, could be of such size as to admit a thicker staple, whereas the opposite slot 52, having a lesser depth, designated "B," could be placed against the front end of the stapler and be of such size as to admit a thinner staple.

The staple guide plate 46 is held in place on the stapler in its selected position by means of a leaf spring 53, one end of which is removably secured against the front surface of the housing member 24 by a thumb screw 54. The leaf spring 53 is yieldable so as to allow staples of different thicknesses to be used in the same machine. A winged guard member 55 fits against the outer side of the staple guide plate 46, and has a pair of openings 56 therein for locating the side pins 47 of said guide plate. The lower end of the leaf spring 53 bears against the outer surface of the guard member 55, holding it, together with the guide plate 46, in position on the stapler.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be

understood that this form is shown for the purpose of illustration only, and that the invention is not limited to the specific disclosure but may be modified and embodied in various other equivalent forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new and for which it is desired to secure Letters Patent is:

1. In a compression stapler, the combination comprising a rectangular base member, means for guiding staples along the length of said base member toward the forward end thereof, a staple guide plate having vertical slots of different widths on its opposite sides, yieldable releasable means securing said guide plate against said one end of said base member, the vertical slots of said guide plate when it is secured against the forward end of said base member, being in communication with said staple guiding means, and forming together with said forward end of said base a vertical opening allowing downward passage of staples of two different thicknesses, and manually operable means for vertically driving a staple through said vertical opening for stapling.

2. The invention as defined in claim 1, wherein said releasable securing means comprises two pairs of pins projecting from opposite sides of said guide plate, a pair of socket openings in said one end of said base member for selectively receiving said projecting pins, and leaf spring means for yieldably urging said guide plate against said base member.

3. In a compression stapler, the combination comprising a rectangular elongated base member, means for guiding staples along the length of said base member toward the front end thereof, a staple guide plate, releasable means for securing selectively one side or the other of said guide plate against said one end of said base member, the sides of said guide plate each having a vertical slot which, when facing said base member in a selected position of said guide plate, is in communication with said staple guiding means, and forms with said one end of said base a vertical opening allowing downward passage of staples of different thicknesses, and manually operable means for vertically depressing a staple in said vertical opening for stapling, the vertical slots of said guide plate being of different thicknesses to allow, selectively, staples of different thicknesses to be used in the stapler.

References Cited in the file of this patent

UNITED STATES PATENTS

2,580,065	Anstett	Dec. 25, 1951
2,857,596	Allen	Oct. 28, 1958