Aug. 27, 1940. D. A. BRENNAN 2,212,896

FASTENER

Filed April 21, 1938

Fig. 1.

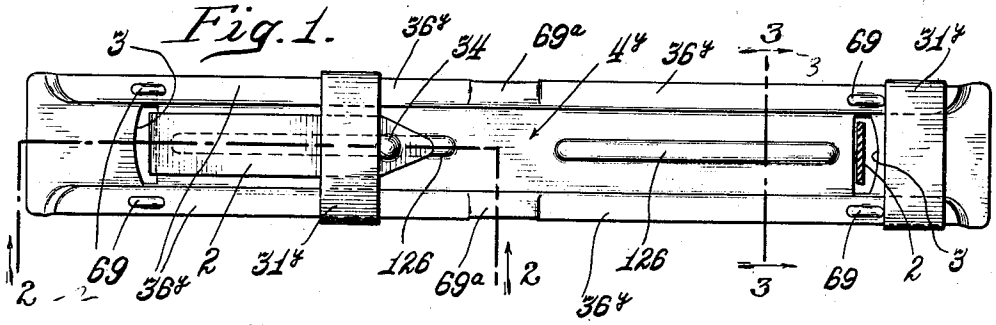


Fig. 2

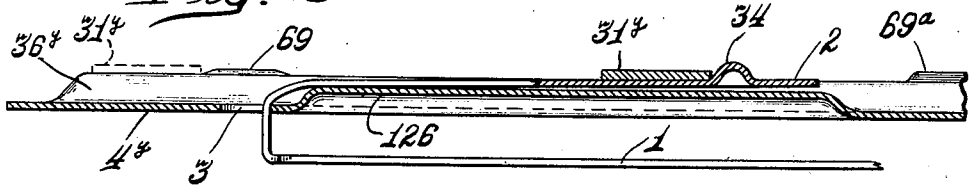


Fig. 3

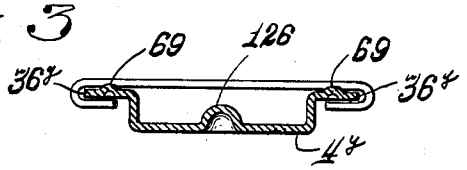


Fig. 4.

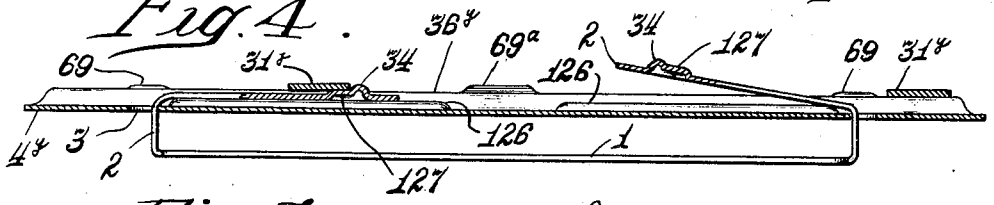


Fig. 5.

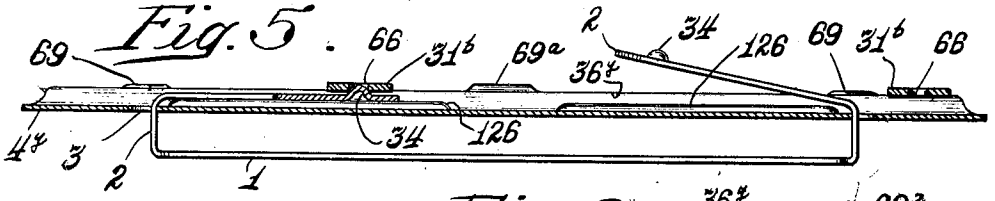


Fig. 6.

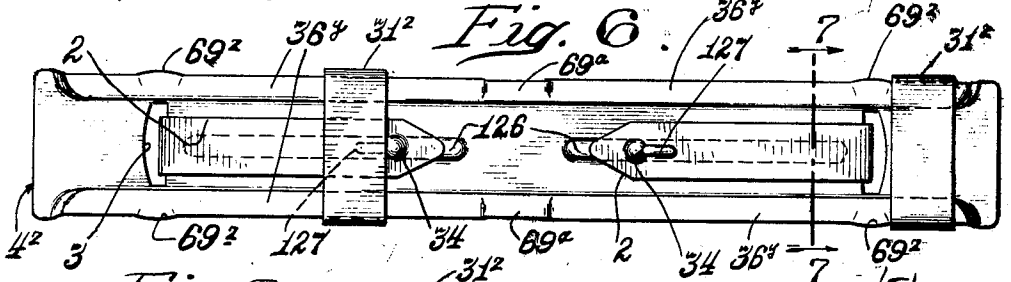
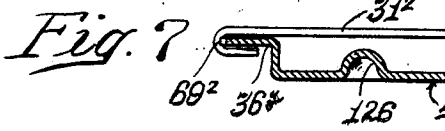


Fig. 7



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2,212,896

FASTENER

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Application April 21, 1938, Serial No. 203,293

7 Claims. (Cl. 24—153)

The invention relates to paper fasteners of the type having spaced prongs and a compressor apertured to receive said prongs, and more particularly to the compressor thereof.

An object of the invention is to provide a paper fastener compressor of the type having latches slidable thereon, one confined to each end, having means to retain the latches frictionally at either side of the respective prong apertures therein.

Another object is to provide fastener compressors of the aforesaid type with novel structural details and a novel arrangement of parts.

Another object is to provide a novely constructed paper fastener compressors which are inexpensive to construct, simple to operate and highly efficient in use.

The foregoing and such other objects of the invention as will more fully appear hereinafter as the description proceeds will be more readily understood from a perusal of the following specification, reference being had to the accompanying drawing, in which:

Fig. 1 is a plane view of another form of fastener.

Fig. 2 is a longitudinal sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a transverse sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a central longitudinal sectional view of another embodiment of the invention.

Fig. 5 is a sectional view similar to Fig. 4 showing another embodiment of the invention.

Fig. 6 is a plan view of another type of fastener.

Fig. 7 is a transverse sectional view taken on line 7—7 of Fig. 6.

In the drawing, like numerals identify like parts.

Referring particularly to the device shown in Figs. 1, 2 and 3 the fastener includes a base 1 provided at its ends with bendable prongs 2 adapted to pass through spaced openings 3 in a compressor 4*y* when the latter is placed in cooperative position with the base for binding papers together in a file. The base 1 normally is positioned to lie flat against the bottom of a file of papers (not shown) with the prongs extending through suitable spaced openings therein. The compressor 4 which preferably consists of an elongated strip of material, is adapted to receive the prongs 2 through apertures 3 therein, after which the prongs are bent down over the top face of the compressor.

The compressor 4*y* has longitudinal marginal flanges 36*y* each formed with an offset 69*a* substantially midway between the compressor ends to define two pairs of parallel tracks, one pair extending inwardly from each end of the compressor. These offsets 69*a* may be upwardly as shown, or downwardly. A central longitudinal rib 126, shown in two sections, may be continuous between said apertures but preferably stopping short of said apertures.

Ribs or projections 69, provided one in each track, preferably in transverse alignment with the adjacent aperture 3, are of sufficient height to resist free sliding of the latches 31*y* past the apertures in either direction, thereby providing frictional elements to frictionally retain the latches at the respective compressor ends outwardly of the apertures prior to assembling the fastener.

After the prongs 2 are bent down inwardly toward each other over and against the central rib 126, the latches are shifted past said frictional elements 69 into position over the underlying prong. Movement of the latches inwardly off the free end of said prongs is prevented by stops 34 on the prong ends. The central offset 69*a* in each marginal compressor flange 36*y* also prevents movement of either latch inwardly beyond the transverse center of the compressor.

When the latch 31*y* is in latching position over the prong, said prong is confined between said latch and the underlying rib 126, and free movement of the latch is resisted by the inherent resiliency of the prong.

In Fig. 4, the same compressor as is shown in Fig. 1 is illustrated. In this embodiment the base 1 has its prongs 2 formed on their ends with stops 34 and short tapered ribs 127. As shown, the ribs 127 co-act with the latches 31*y* to firmly bind the prong between the associated latch and central compressor rib 126 to prevent free sliding of the latch outwardly off the prong end.

The structure shown in Fig. 5 is like that illustrated in Fig. 1, except that here each latch 31*b* has an aperture 66 to receive the stop-projection 34 on the underlying prong to interlockingly retain the latch over the prong end.

Figs. 6 and 7 show a slightly modified compressor structure wherein the vertical friction ribs of the previously described devices are eliminated and lateral flares 69*z* are provided one on the free edge of each track 36*y* adjacent each aperture 3. As best shown in Fig. 7, the overall width of the compressor at the flares is slightly greater than the inside transverse width of the latches 31*z* so that frictional resistance is offered each

time the latches are moved past the apertures. This arrangement is functionally different than those just described because the frictional resistance transversely tends to straighten out any upward bowing effected in the resilient bridge portions of the latches due to their having been forced up over the short rib 127 on the prong ends.

Obviously the base elements shown in Fig. 1 or 5 or the apertured latch shown in Fig. 5 can be substituted for the respective elements applicant has elected to show in Fig. 6 for the purpose of illustration.

Although various exemplary forms and adaptations of improved compressors have been illustrated in the accompanying drawing and described in detail in the foregoing specification, it is to be understood that said illustrations and description are illustrative rather than restrictive and that each device may vary in structural details without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A compressor for paper fasteners having apertures adjacent its ends, companion tracks arranged in pairs extending inwardly from the ends, a longitudinal rib between said apertures, a latch mounted for sliding along each pair of tracks, and an upstanding projection on each track in transverse alignment with each aperture to frictionally retain the latches at the respective ends.

2. A paper fastener compressor comprising, in combination, an elongated plate apertured inwardly of each end, companion tracks arranged in pairs extending inwardly from the ends, a longitudinal rib between said apertures, latches one mounted for sliding freely along each pair of tracks, and an elongated rib on each track in transverse alignment with each aperture to frictionally retard movement of the latches past their respective aperture.

3. A paper fastener compressor comprising, in combination, an elongated plate apertured inwardly of each end, longitudinal flanges on said plate extending outwardly transversely, said flanges being elevated from the plane of said plate and being continuous substantially from end to end of said plate, two latches slidable freely along said flanges, an offset in each flange substantially at the compressor center to confine said latches one to each end, and a frictional element on each flange in transverse alignment with the respective aperture to frictionally retard free movement of the latches respectively past their respective aperture.

4. A paper fastener compressor comprising, in combination, an elongated plate apertured inwardly of each end, a central longitudinal rib between said apertures, longitudinal flanges on said plate extending outwardly transversely, said flanges being elevated from the plane of said plate and being continuous substantially from end to end of said plate, two latches slidable along said flanges, an offset in each flange substantially at the compressor center to confine said latches one to each end, and a frictional element on each flange in transverse alignment with the respective aperture to frictionally retard free movement of the latches respectively past their respective aperture.

5. A paper fastened compressor comprising, in combination, an elongated plate apertured inwardly of each end, at least one longitudinal central rib on the top face of said plate stopping short of said apertures, longitudinal flanges on the marginal edges of said plate, said flanges being in a plane above the top of said rib, latches mounted on and slidable freely along said flanges, and projections on each flange one aligned with each aperture to frictionally retard movement of the latches past said apertures.

6. A paper fastener compressor comprising, in combination, an elongated plate apertured inwardly from each end, longitudinal central ribs on the upper face of said plate extending inwardly from and stopping short of said apertures, longitudinal flanges on the marginal edges of said plate, said flanges being elevated above the plane of the top of said ribs, latches mounted on and slidable along said flanges, projections on each flange one aligned with each aperture to frictionally retard movement of the latches past said apertures, and a stop in each flange midway the ends of said plate to confine the latches one to each end.

7. A paper fastener compressor comprising, in combination, an elongated plate adapted to receive prongs bent down thereover, upwardly and outwardly turned marginal flanges on the longitudinal edges of said plate, said flanges defining a longitudinal channel adapted to receive said prongs, a longitudinal rib of uniform height in said channel, latches bridging the channel mounted for longitudinal sliding on said flanges, and a projection on each flange inwardly of the ends thereof to frictionally retard movement of the latches inwardly from the ends of said plate.

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