

May 20, 1947.

A. H. MAYNARD

2,420,830

FASTENER-APPLYING IMPLEMENT

Filed Nov. 15, 1944

3 Sheets-Sheet 1

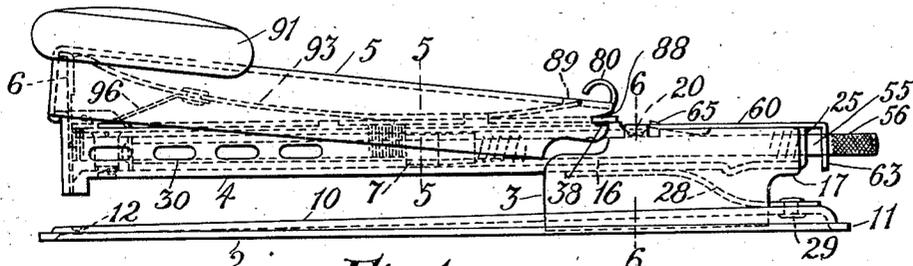


Fig. 1.

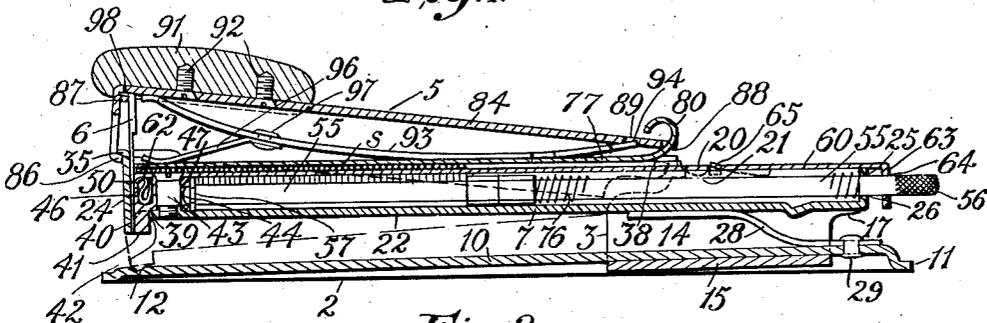


Fig. 2.

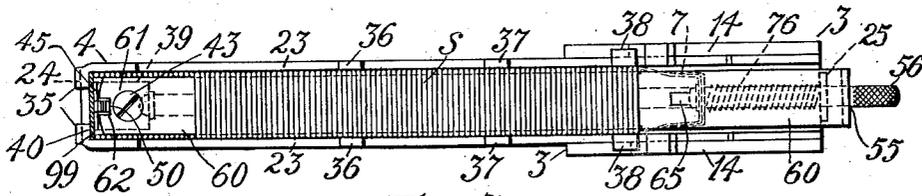


Fig. 3.

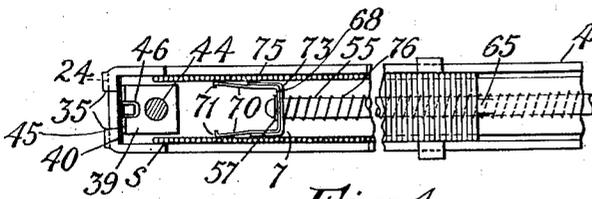


Fig. 4.

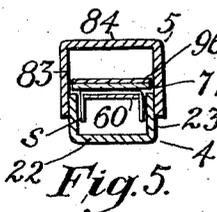


Fig. 5.

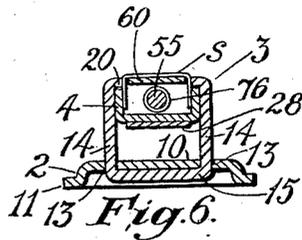


Fig. 6.

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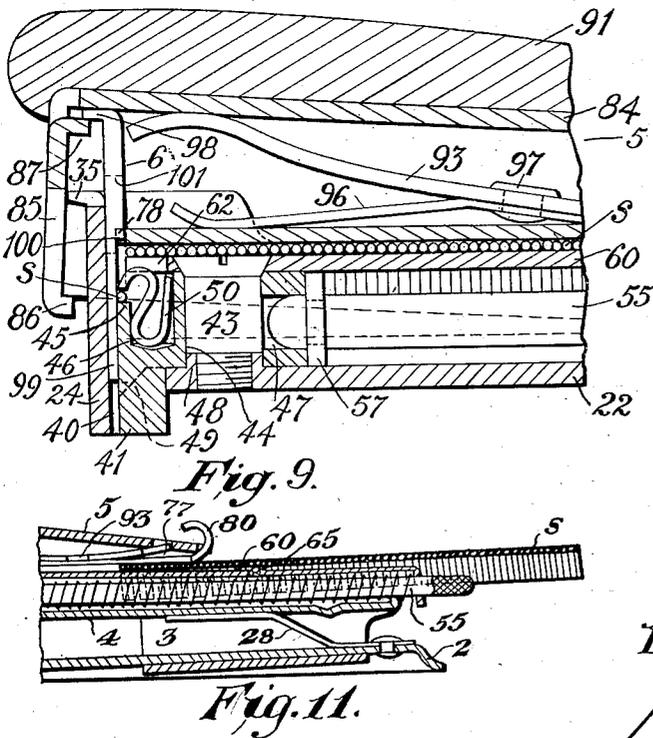
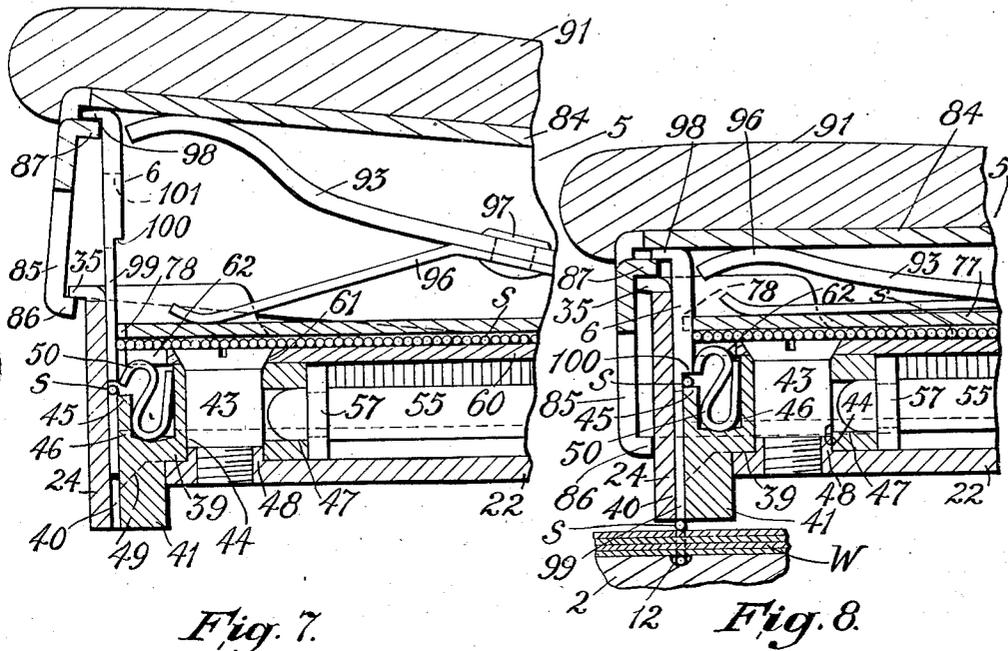
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3 Sheets-Sheet 3

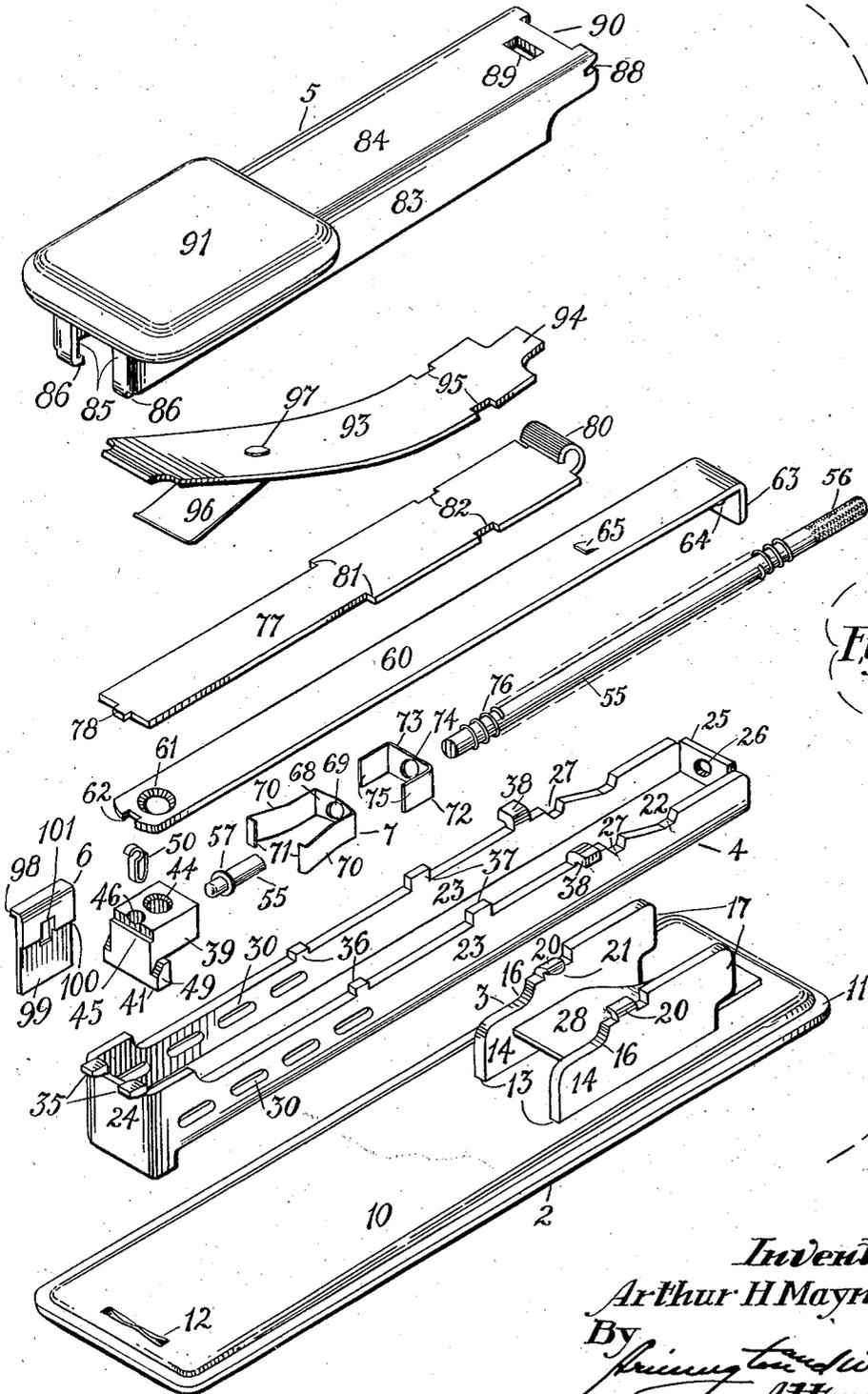


Fig. 10.

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UNITED STATES PATENT OFFICE

2,420,830

FASTENER-APPLYING IMPLEMENT

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Application November 15, 1944, Serial No. 563,499

14 Claims: (Cl. 1—3)

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This invention relates to improvements in fastener-applying implements for attaching papers and other sheets, fastening tags to articles of commerce, and securing other articles to various objects.

One object of the invention is to simplify and improve the construction of the device by avoiding the use of pins, rivets and screws, and to render the parts easier to assemble in manufacturing the implement and to disassemble them for repair or replacement.

Another object is to provide easier and more convenient means for loading the implement with a supply of fasteners.

Another object is to provide improved fastener-feeding and driving means for preventing the driving of a second fastener before the first one has been discharged from the implement.

Another object is to provide improved means for feeding the fasteners to the driving means and for retracting the feeding means when a supply of fasteners is loaded in the implement.

Further objects of the improvement are set forth in the following specification which describes a preferred form of construction of the implement, by way of example, as illustrated by the accompanying drawings.

In the drawings:

Fig. 1 is a side elevational view of the complete implement;

Fig. 2 is a longitudinal sectional view of the same;

Fig. 3 is a plan view of the magazine-arm for containing the fasteners or wire staples, showing the staple-feeding means in operative position;

Fig. 4 is a similar fragmentary plan view of the magazine-arm showing the staple-feeding means as being retracted therein with the spring-arms of the staple-pusher sliding between the legs of the staples;

Fig. 5 is a transverse sectional view on line 5—5 of Fig. 1 showing the relation between the magazine-arm and staple-driving lever of the implement;

Fig. 6 is a transverse sectional view on line 6—6 of Fig. 1;

Fig. 7 is a greatly enlarged longitudinal sectional view through the forward end of the magazine-arm and the staple-driving lever showing the parts in position before a staple is driven;

Fig. 8 is a similar sectional view showing the parts in position at the end of the staple-driving operation with the staple illustrated as driven into the work and clinched on its under side;

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Fig. 9 is a similar sectional view showing the staple-driving means as partly returned to inoperative position with a staple retained in reserve position to be finally advanced beneath the staple-driver when the latter is withdrawn completely to its inoperative position;

Fig. 10 is a composite perspective view showing the several parts of the implement in disassembled relationship; and

Fig. 11 is a fragmentary sectional view showing the rearward end of the implement and illustrating the staple strip in the act of being inserted into the magazine.

Referring first to Figs. 1 and 2 of the drawings, the present improved fastener-applying implement comprises, in general, a base or support 2 provided with a mounting 3 at its rearward end for pivotally supporting a magazine-arm 4 containing a supply of staples *s*; a fastener-applying lever 5 pivoted to the magazine-arm 4; a staple-driver 6 at the forward end of the lever 5; and staple-feeding means 7 within the magazine-arm 4 for advancing the staples to deliver them individually to the staple-driving means.

The base 2 may take any usual form but is preferably constructed from sheet-metal struck up to provide a raised upper platform 10 bounded by a lower marginal flange 11 adapted to rest upon a desk or other suitable support, see Figs. 1 and 6. The forward end of the base 2 may be formed with clincher-grooves 12 of usual construction. The mounting 3 for the magazine-arm 4, see Fig. 6, is also constructed of sheet-metal in substantially U-shape and suitably fastened to the rearward end of the base 2. For this latter purpose the base 2 is provided with suitable slots 13 through which the side walls 14 of the mounting 3 project upwardly to form standards and with the bottom wall 15 welded or otherwise suitably fastened to the under side of the raised top plate 10 of the base. As shown in Fig. 1, the upper portions of the side walls 14 of the mounting 3 are recessed rearwardly at 16 in reversely curved marginal portions and at the rearward end the walls are formed with overhanging terminal portions 17, see also Fig. 10. Rearwardly of their recessed portions the upright walls 14 are formed with lugs 20 bent inwardly at substantially right-angles and rounded on their under sides at 21 to form pivots for mounting the magazine-arm 4.

As shown in Fig. 10, the magazine-arm 4 is preferably constructed of sheet-metal in channel-shape with a bottom wall 22 and vertical side walls 23 joined at the front by an end wall 24.

The side walls 23 of the arm 4 are provided with a series of oblong openings 30 spaced along its forward portion to provide windows for revealing the staples in its interior to indicate when the supply is about to be exhausted. At its rearward end the bottom wall 22 is extended and bent upwardly in a transverse wall 25 formed with a circular opening 26. The upper portions of the side walls 23 are recessed adjacent their rearward ends with a pair of tapered notches 27 adapted to engage the rounded under sides 21 of the lugs 20 to form a pivotal joint between the arm 4 and the base 2. A leaf-spring 28, see Fig. 2, of substantially S-shape has its rearward portion secured to the base 2 by means of a rivet 29 with its forward portion underlying the bottom wall 22 of the arm 4 to maintain the latter with its recessed notches 27 engaging the rounded under sides 21 of the lugs 20. By this improved form of construction the magazine-arm 4 is pivotally mounted above the base 2 without the use of pins, screws or other added elements, being adapted to rock downwardly against the resilient pressure of the spring 28.

At the forward end of the arm 4 its front wall 24 is formed at the top with a pair of spaced lugs 35 bent forwardly and rounded in beveled form on their under sides as shown most clearly in Fig. 10. The lugs 35 function for a purpose later explained. The opposite side walls 23 of the arm 4 are formed with pairs of upstanding lugs 36 and 37 spaced at a distance apart and designed for a purpose explained later. Rearwardly of the lugs 37 is a pair of lugs 38 bent at right-angles to project outwardly from the side walls 23 and adapted to serve as pivots for the staple-applying lever 5.

Located between the side walls 23 of the arm 4 at its forward end is a hardened metal block 39 disposed with its forward flat face spaced from the inner face of the front wall 24 to provide a narrow throat 40 through which the staples are driven, see Figs. 2, 3 and 10. The main portion of the block 39 seats against the bottom wall 22 of the arm 4 and at its forward end the block is formed with a depending portion 41 projecting through a lateral slot 42 in the bottom wall. A stud 43 extends through a vertical bore 44 in the block 39 with its end screwed into a tapped hole in the bottom wall 22 of the arm 4 to fasten the block in place; the beveled head of the stud being partly received in a counterbore at the top of the block. Preferably, a boss 48 is formed on the bottom wall 22 projecting upwardly into the bore 44 in the block 39. The main portion of the block 39 is of a width to adapt the legs of the staples *s* to slide between its sides and the inner faces of the side walls 23 of the arm 4, but its lower depending portion 41 is of greater width, being dimensioned to entirely fill the space between the side walls. By this form of construction the block 39 is provided with outwardly projecting portions at its forward lower end, these portions being beveled off at 49 on the front to adapt the ends of the staple legs to slide downwardly thereon with an easy action. The forward face of the block 39 is recessed at the top to provide a transverse ledge 45 constituting a rest for each staple prior to its being delivered to the staple-driver in the manner to be explained hereinafter. Above the ledge 45 the forward face of the block 39 is formed with a substantially circular vertical opening or pocket 46 for holding a spring-latch 50 to be described later. The rearward end of the block 39 is formed with a circular hole 47

for receiving the end of a rod 55 which serves as the manually-operable means for retracting the staple-feeding device or pusher 7.

Overlying the top of the block 39 at its forward end and extending rearwardly the full length of the arm 4 is a plate 60 which forms a platform or rest for the staples *s* to adapt them to be fed therealong to the staple-driving means. The forward end of the plate 60 is provided with a counterbored hole 61, see Figs. 8 and 10, for receiving the tapered head of the stud 43 which secures the block 39 in place whereby the stud serves to fasten the plate in position. The forward edge of the plate 60 is of slightly arcuate contour and at its center is a rectangular notch 62 overlying the pocket 46 in the block 39. The rearward end of the plate 60 rests on the upstanding end wall 25 of the arm 4 and is formed with a downwardly-bent portion 63 provided with a hole 64 through which the rod 55 projects to anchor the plate at this end. The plate 60 is formed with an upwardly-inclined lug 65 sheared from the metal and struck up to provide a detent-shoulder at its forward edge.

The rod 55 is slidable through the hole 64 in the down-turned portion 63 of the plate 60 and the opening 26 in the end wall 24 of the arm 4, being provided with a knurled end at 56 for convenience in grasping it. Its forward end is rounded to adapt it to enter the hole 47 in the block 39 with an easy action when the rod 55 is pushed forwardly. A relatively thin collar or washer 57 is riveted to this end of the rod 55 to form an annular flange which provides an abutment engaging the staple-pusher 7 to retract it when the rod 55 is withdrawn.

The staple-feeding means or pusher 7 consists in a bifurcated spring-element, see Figs. 4 and 10, comprising a cross-member 68 formed with a central hole 69 to adapt it to slide longitudinally of the rod 55 and provided with forwardly-projecting spring-arms 70 bent inwardly toward each other at their ends to form terminal portions 71 for engaging with the legs of the rearmost staple in a series. Straddling the sides of the pusher 7 is a bifurcated yoke-element 72 formed with a cross-piece 73 bored with a central hole 74 for receiving the rod 55 and having opposite lateral arms 75 for straddling the rearward portion of the arms 70.

The pusher 7 is assembled on the rod 55 with the arms 75 of the yoke-member 72 enclosing its sides to limit the outward swinging movement of the spring-arms 70. By this form of construction the yoke 72 acts to prevent the ends of the spring-arms 70 of the pusher from expanding to such an extent that they would dog against the sides of the arm 4 and prevent free movement of the pusher forwardly in the arm. Surrounding the rod 55 at the rear of the pusher 7 is a helical spring 76 having its rearward end bearing against the rearward wall 25 of the arm 4. The spring 76 thus is held under compression whereby it tends to slide the pusher 7 forwardly with its forward motion limited by the flange or washer 57 at the forward end of the rod 55.

A relatively flat plate 77 is mounted on the arm 4 overlying the staple-guide or rest 60 on which the staples are fed to the driving means. The plate 77 is mounted in elevated relation to the rest 60 to provide a space therebetween for free passage of the staples therealong, while serving as a guard to prevent the staples from rising up on the rest. The plate 77 is formed with a relatively narrow projection 78 at its forward end

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and has a portion of reduced width at its rearward end curved upwardly and knurled or corrugated on its surface to provide a finger-hold 80. The plate or guard 77 seats on the upper edges of the sides 23 of the arm 4 and is held from longitudinal displacement by the lugs 36 and 37. The forward portion of the plate is narrowed at the sides to provide shoulders 81 abutting the edges of the lugs 36 and rearwardly thereof the plate is notched at 82 to receive the lugs 37, see Fig. 10. It will be noted by reference to Fig. 2 that an opening is provided beneath the rolled extension 80 at the rearward end of the plate 77 for the insertion of the staples onto the rest or guide-plate 60.

The staple-driving lever 5, see Figs. 1, 2 and 10, is constructed of sheet-metal in inverted channel-shape with a top wall 84 and depending sides 83. At its forward end is a transverse wall connecting its side walls 83 which is cut away at its center, see Figs. 2 and 10, to form lateral portions 85 with an opening therebetween. The lower ends of the lateral portions 85 are bent inwardly to provide detents 86 for a purpose explained later. The upper portion of the front wall is sheared to form a narrow strip of the metal which is bent inwardly at right-angles to provide a lug 87 for connecting the staple-driver 6 with the lever 5, see Fig. 2. At the rearward end of the lever 5 its sides 83 are cut away to conform to the curved contour at the top of the side walls 14 of the mounting 3. The rearward ends of the sides are formed with substantially V-shaped notches 88 adjacent the top of the lever which are adapted to engage with the outwardly-projecting lugs 38 on the arm 4 to provide a pivotal connection between the lever and the arm. Referring to Fig. 10, a rectangular slot 99 is formed in the top wall of the lever 5 and the end of the wall is cut away with a wider opening 90 at the rearward end of the lever. Surmounting the top of the lever 5 at its forward end is a hand-rest 91 having a convex upper face and recessed on its other side to overlie the front and sides of the lever. The hand-rest 91 may be constructed of "Bakelite" or other suitable plastic material and fastened in place on the top of the lever 5 by means of screws 92, shown in Fig. 2 of the drawings.

The staple-driver lever 5 is held in raised relation to the magazine-arm 4 by means of a leaf-spring 93 of bowed shape having its rearward end narrowed to provide a projection 94 for engagement within the slot 99 in the top wall 84 of the lever; while its forward end is narrowed and curved downwardly to engage underneath the top wall of the lever, see Fig. 2. The rearward end of the spring 93 is formed at its sides with slots 95 for engaging with the lugs 37 on the sides of the arm 4. Attached to the under side of the spring 93 is an auxiliary leaf-spring 96 fastened thereto by a rivet 97 and having its forward end curved to bear against the top of the plate or staple-guard 77. The auxiliary spring 96 is of thinner material than the main spring 93 so that it will yield more easily. The spring 93 acts to maintain the lever 5 in raised position above the magazine-arm 4 while said arm is held elevated above the base 2 by the spring 23. During operation of the implement, however, when pressure is applied to the hand-rest 91 the relative greater resistance of the main spring 93 will cause the arm 4 to be swung downwardly against the tension of the spring 23 until the forward end of the arm presses against the work; whereafter the spring 93 and auxiliary spring 96 will yield to

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adapt the lever 5 to be moved downwardly toward the arm 4 to operate the staple-driver 6 to apply a staple to the work.

The staple-driving lever 5 is assembled on the arm 4 with its V-shaped notches 88 engaging the outwardly-projecting lugs 38 on the sides of the arm and with the curled over end projection 80 of the plate or guard 77 passing through the cut-out opening 90 in the end of the top-wall 84 of the lever. With this connection between the parts the projection 94 on the end of the spring 93 impinges against the edge of the slot or opening 89 in the top of the lever 5 to maintain the engagement between the notches 88 and the lugs 38 on the arm 4. During the assembling of the parts the lever 5 is placed in position with its inwardly-bent detent lugs 86 underlying the forwardly-projecting lugs 35 on the arm 4 whereby to limit the upward movement of the lever relative to the arm under the tension of the spring 96.

The staple-driver 6 consists in a relatively flat hardened blade, shown most clearly in Figs. 8 and 10, having its upper end bent at right-angles to provide an overhanging ledge portion 98 adapted to hook over the inwardly-bent lug 87 to mount the driver on the lever 5. The lower portion of the staple-driver 6 is cut away to provide a blade 99 of less thickness adapted to slide freely in the staple throat 40 formed by the space between the forward wall 24 of the arm 4 and the forward face of the block 39. By this form of construction a relatively sharp shoulder or abutment 100 is provided on the rearward side of the staple-driver 6 midway of its length, this shoulder forming a striking edge for engaging the top of a staple to detach it from the strip or stick of staples in the magazine-arm 4 and carry it downward onto the ledge 45 to be eventually fed forward under the lower edge of the narrower blade-portion 99 of the driver 6 after a previously fed staple has been driven into the work. Formed adjacent the center of the staple-driver 6 is a rectangular opening 101 adapted to receive and clear the forward projection 78 on the staple-guard 77 as the driver descends under the action of the lever 5.

The spring 50 seated in the pocket 46 at the forward end of the arm 4 acts as a means for holding a staple s severed from the strip in reserve position on the ledge 45 of the block 39 before it is transferred into the throat 40 to be driven at the next operation of the staple-driver.

The construction and arrangement of the parts of the implement having been described in detail its method of operation is explained as follows: With the parts of the implement in the positions shown in Fig. 1 the magazine-arm 4 may be loaded with a supply of staples s by inserting them in under the guard 77 at the rear of the lever 5, see Fig. 11, and sliding them forwardly on the plate or rest 60. This operation may be performed while the staple-feeding means or pusher 7 is in its forward position abutting the collar 65 57 on the rod 55 or, in other instances, engaging the last few staples remaining in the magazine-arm 4. The staples are usually joined together in a stick or refill and the stick will generally be of a length to underlie the guard 77 and project slightly at the rear thereof so that the rear-most staple is positioned in front of and engaging the detent 65.

It now becomes necessary to retract the staple-pusher 7 to engage it in back of the legs of the 75 rear-most staple in the series and this is accom-

plished by simply drawing the rod 55 rearwardly by grasping its knurled end 56 in the fingers. Referring to Fig. 4, as the rod 55 is withdrawn the collar 57 at its forward end will engage with the cross-member 60 of the bifurcated pusher 7 to retract the latter within the magazine-arm 4. As the pusher 7 is retracted in this manner its arms 70 will contract inwardly toward each other to permit their ends to pass between the legs of the several staples. The pusher 7 thus may be retracted readily through the whole series of staples in the stick until the inwardly-bent terminal portions 71 of its arms 70 spring outwardly to abut the legs of the rearmost staple in the series. It will be understood that the pusher 7 is retracted against the tension of its spring 76 by the withdrawal of the rod 55 and when its arms 70 have been engaged with the rearmost staple *s* in the arm 4 the rod may be slid forwardly again to its inoperative position shown in Fig. 2 and indicated by dotted lines in Fig. 3.

With the staple-pusher 7 in engagement with the rearmost staple in the series the spring 76 will tend to force the whole series of staples forwardly whereby to feed them individually to the applying means. As will be observed by reference to Fig. 7, the lower edge of the staple-driver 6 is never caused to be raised above the top of the staple-rest 60. That is to say, the detent-lugs 35 at the forward end of the arm 4 engage with the detent-lugs 86 on the lever 5 to limit the upward movement of the latter under the action of the spring 93 whereby to maintain the staple-driver 6 in position with its bottom edge beneath the staple-rest 60 so that the staples are prevented from feeding into the throat 40 in which the driver operates. Consequently, when the implement is first loaded with staples the first operation of the lever 5 will fail to apply a staple to the work, but during this operation the foremost staple in the series will be separated from the stick and carried down into position to rest on the ledge 45 in reserve for driving at the next operation of the lever. This positioning of a staple in reserve is accomplished by the engagement of the shoulder or abutment 100 on the staple-driver 6 with the crossbar of the foremost staple in the series, see Figs. 7 and 8. As the driver 6 moves downward, the crossbar of the staple *s* will depress the forward upper end of the spring-latch 50 whereby to cause the staple to pass thereby and seat on the ledge 45 as shown in Fig. 8. Then, as the staple-driver 6 is raised the end of the latch 50 will spring forwardly into position to overlie the crossbar of the staple *s* to prevent it from rising upwardly or being displaced from the ledge 45, see Fig. 9. After the staple-driver 6 has been withdrawn to the upper end of its stroke, as shown in Fig. 7, the staple-pusher 7 will come into action under the tension of its spring 76 to slide the whole series of staples forwardly until the foremost one brings up against the rearward face of the driver. During this forward feeding of the staples in the series the legs of the foremost staple will act against the staple *s* on the ledge 45 to feed it off therefrom and into the throat 40 beneath the lower edge of the driver 6. Now, at the next downward stroke of the lever 5 the staple-driver will engage the top of the staple *s* in the throat 40 to drive it into the work, indicated at W in Fig. 8, to cause the ends of its legs to be clinched on the under side thereof by means of the clincher-grooves 12 in the base 2. During this latter driving action another staple *s* will be detached from

the strip and carried down onto the ledge 45 so that after each staple is driven and the driver raised to its uppermost position, a fresh staple will be fed forwardly off from the ledge 45 and into the throat 40. In this way the implement may be operated to apply staples to the work continuously; it being preferable to load the magazine-arm 4 with a fresh supply of staples before the last remaining one is applied to the work. The operator may observe the progress of the feeding action of the staples through the windows 39 in the sides of the arm 4 so that when the last staple in the strip or stick approaches the end of the arm, a new supply may be inserted into the magazine before the initial supply is exhausted. In this way the implement may be maintained in condition for applying a staple at the first operation of the driving-lever 5 without necessitating an idle stroke of the driver to sever a staple from the stick and advance it to reserve position on the ledge 45.

Due to the novel form of the present staple-driving mechanism, insurance is provided against driving one staple before another has been ejected from the machine. Stated another way, with the present construction of the implement it is impossible to drive one staple on top of another should the first staple operated upon remain in the machine due to a partial or incomplete stroke of the staple-driver. This provision insures against the chance of clogging the machine by driving one staple on top of another and thereby cause injury to the mechanism.

It has been explained that the essential parts of the implement are assembled by simply sliding them into place to effect a proper engagement therebetween, the particular form of construction of the implement thus providing for economy in its manufacture and also facility and convenience in disassembling the parts for repair or replacement. In disassembling the parts, the driving-lever 5 may be removed by merely pressing the reduced end 94 of the spring 93 downwardly through the slot 89 at its rearward end to release it from the edge of the slot, this being readily accomplished by using any sharp instrument. With the spring 93 released from the slot 89 the lever 5 may be drawn forwardly to disengage its detent-lugs 86 from the lugs 35 at the forward end of the arm 4 so that it can be lifted off therefrom. The guard 77 then may be removed from the arm 4 and the latter disconnected from its pivot lugs 38 by pressing its rearward end downwardly against the tension of the spring 28. The staple-rest 60 may be removed by withdrawing the single stud 43 which also releases the block 39. Thereafter the rod 55 may be drawn forwardly to release it from its bearing 25 at the end of the arm 4. Then, should it be necessary, the elements of the staple-pusher 7 may be slid off from the rearward end of the rod. Thus, it will be observed that the present improved form of construction provides for the greatest facility and expedition in assembling the parts during manufacture of the implement or in disassembling them for their repair or replacement.

While the improved implement is herein shown and described as embodied in a preferred form of construction, it is to be understood that modifications may be made in the structure and arrangement of its parts without departing from the spirit or scope of the invention. Therefore, without limiting myself in this respect, I claim:

1. In a fastener-applying implement, a base,

standards on said base formed with laterally-projecting lugs, a channel-shaped magazine-arm for containing the fasteners formed with notches in its opposite sides for engaging with the lugs on the standards, a spring acting between the base and the arm to maintain the notches in engagement with the lugs to pivotally mount the arm on the standards, a lever pivoted to the arm, a driver mounted on the lever for reciprocation relative to the arm, and means within the magazine-arm for feeding the fasteners to position them beneath the driver.

2. In a fastener-applying implement, a base, parallel standards rising from the base and formed with lugs projecting laterally therefrom with rounded faces on their under sides, a channel-shaped magazine-arm for containing fasteners, said arm formed with tapered notches engageable with the lugs on the standards, a spring between the base and arm for holding the arm in raised position with its notches engaged with the lugs on the standards to pivotally connect the arm with the base, a lever pivoted to the magazine-arm, a driver mounted on the lever for reciprocation relative to the arm, a spring between the arm and the lever for normally maintaining the latter in raised position, and means within the arm for feeding fasteners to deliver them to the driver.

3. In a fastener-applying implement, a base, a channel-shaped magazine-arm for containing fasteners, said arm provided with a throat at its forward end and formed with laterally-projecting lugs at its sides, means for pivotally mounting the magazine-arm above the base, resilient means for maintaining the arm in raised position above the base, a lever of inverted channel-shape formed with notches at its rearward end engageable with the projecting lugs on the sides of the magazine-arm to pivotally connect the lever therewith, a spring between the arm and the lever for normally holding the latter in raised position above the arm, said spring acting to maintain the notches at the end of the lever in engagement with the lugs on the arm, a driver carried by the lever for reciprocation in the throat at the end of the arm, and means within the arm for feeding the fasteners into position to be driven by the driver.

4. In a fastener-applying implement, a base, a channel-shaped magazine-arm provided with a vertical throat at its forward end and laterally-projecting lugs adjacent its rearward end, a lever of inverted channel-shape straddling the magazine-arm and formed with tapered notches at its rearward end engaging the lugs on the sides of the arm, a bow-shaped spring arranged between the arm and the lever for normally holding the latter in raised position on the arm, the end of said spring engaging the lever for holding its notches in engagement with the lugs on the side of the arm, a driver carried by the lever for reciprocation in the throat of the arm, and means for feeding the fasteners in the arm to position them beneath the driver.

5. In a fastener-applying implement, a base, a channel-shaped magazine-arm pivoted above said base, said arm formed with a throat at its forward end and laterally-projecting lugs adjacent its rearward end, a lever of inverted channel shape arranged with its sides straddling the sides of the arm and formed at its rearward end with V-shaped notches engaging the lugs on the arm, said lever having a slot in its upper wall, a driver-blade mounted at the forward end of the lever

and depending therefrom for reciprocation in the throat of the arm, a bow-shaped spring located between the top wall of the lever and the arm for normally holding the lever in raised position, said spring having its rearward end engaging the edge of the slot in the lever to maintain the notches in the latter in engagement with the lugs on the arm, and means for feeding fasteners forwardly in the arm to deliver them to the driver.

6. An implement of the type indicated comprising a base, parallel standards on the base provided with laterally-projecting lugs, a magazine-arm for containing a supply of fasteners, said arm formed with notches for engaging the lugs on the standards and having laterally-projecting lugs on its sides, resilient means between the base and arm for maintaining the notches in the arm in engagement with the lugs on the standards to pivotally mount the arm above the base, a lever having notches in its end engageable with the lugs on the arm for pivotally connecting the lever thereto, a spring between the arm and the lever acting to maintain the notches in the lever in engagement with the lugs on the arm, a driver at the forward end of the lever reciprocable relative to the arm for driving the staples therefrom, and means within the magazine-arm for feeding the staples to the driver.

7. A device of the type indicated comprising a base, a channel-shaped magazine-arm pivoted above the base, a rest extending longitudinally within the arm for supporting the staples in straddled relation thereon, a plate-like guard seated on the sides of the arm in spaced relation above the rest for preventing the staples from rising up on the rest, a lever pivoted to the arm, a driver mounted on the lever for reciprocation relative to the arm, and a spring mounted between the guard and the lever for holding the guard seated on the arm and normally maintaining the lever in raised relation to the arm.

8. A device of the type indicated comprising a base, a channel-shaped magazine-arm pivoted above the base, a rest extending longitudinally within the arm in spaced relation to the sides thereof to adapt staples to be straddled thereacross, a guard seated on the sides of the arm overlying the rest in spaced relation thereto, a lever pivoted to the arm, a spring bearing against the guard to hold it seated on the arm and acting against the lever to normally maintain it in raised relation to the arm, a staple-driver reciprocable by said lever relative to the arm, and means for feeding the staples forwardly in the magazine to deliver them to the staple-driver.

9. A device of the type indicated comprising a base, a channel-shaped magazine-arm pivoted above the base, a plate-like rest extending longitudinally within the arm in spaced relation to the sides of the latter, means for mounting the rest at the forward and rearward ends of the arm to adapt it to support staples straddled thereacross, a plate-like guard seated on the sides of the arm overlying the rest in spaced relation thereto, a lever pivoted to the arm, a spring between the lever and the guard for holding the latter seated on the arm and normally maintaining the lever in elevated position with respect thereto, a staple-driver mounted at the forward end of the lever, and means for feeding the staples forwardly on the rest to deliver them to the staple-driver.

10. In a staple-applying implement, a channel-shaped magazine-arm having a throat at its forward end, a relatively flat staple-rest extending

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longitudinally within the arm, means for supporting said rest at its forward and rearward ends to adapt it to mount a series of staples straddled thereacross; a plate-like guard overlying the sides of the arm in spaced relation above the staple-rest, a spring bearing against the guard to hold it in position on the arm and engaging the lever to normally maintain it elevated above the arm, a staple-driver at the forward end of the lever, and means for feeding the staples along the rest to deliver them to the driver.

11. In a device of the type indicated, a magazine-arm for containing a supply of staples, a rest extending longitudinally of the arm for supporting a series of staples thereon, a throat at the forward end of the arm, a ledge extending laterally across the arm at the rear of the throat and below the staple-rest, a spring-latch at the rear of the ledge adapted to engage over the crossbar of a staple to retain the latter on the ledge after it is fed off from the rest, a driver having a blade reciprocable in the throat and provided with a shoulder extending thereacross above the blade for engaging the top of a staple fed from the rest to carry it down onto the ledge, and means for reciprocating the staple-driver in the throat at the end of the arm.

12. In a device of the type indicated, a channel-shaped magazine-arm having a transverse wall at its forward end, a staple-rest extending longitudinally within the arm in spaced relation to the sides thereof to adapt it to support a series of staples thereon; a block at the forward end of the arm for supporting the end of the rest, said block located with its forward face spaced from the end wall of the arm to provide a throat therebetween and having a transverse ledge at the rear of the throat with a pocket adjacent thereto, a spring-latch seated in the pocket with its end overlying the ledge, a staple-driver having a relatively narrow blade reciprocable in the throat at the front of the block and provided with an overhanging shoulder overlying the ledge on the block, and means for reciprocating the staple-driver in the throat at the end of the arm.

13. In a device of the type indicated, a magazine-arm of substantially channel-shape having its forward end closed by a vertical wall, an element seated at the forward end of the arm with its face spaced from the forward wall thereof to provide a vertical throat and formed with a trans-

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verse ledge above the throat, a staple-rest extending from said element longitudinally of the arm to adapt it to support a series of staples straddled thereacross, a staple-driver having a blade adapted to slide in the throat between the forward wall of the arm and the front of said element and formed with an overhanging shoulder above the blade overlying the ledge on the element to adapt it to engage a staple fed from the rest and carry it down onto the ledge, a spring-latch for maintaining the staple in place on the ledge, means for reciprocating the driver in the throat of the arm; and means for feeding the staples forwardly on the rest to cause them to be operated on by the driver to carry the foremost staple down onto the ledge and thereafter feed it into the throat to be driven by the next operation of the staple-driver.

14. In a device of the type indicated, a magazine-arm of channel-shape, a staple-rest extending longitudinally within the arm to adapt it to support a series of staples straddled thereacross, a throat at the forward end of the arm for receiving the staples to adapt them to be driven there-through, a transverse ledge at the rear of the throat below the top of the rest, a spring-latch overlying the ledge, a staple-driver having a blade reciprocable in the throat at the end of the arm and a shoulder at its top for engagement with a staple fed from the rest to carry the latter down onto the ledge, means for advancing the staples in the arm to feed a staple resting on the ledge into the throat beneath the staple-driver, and means for reciprocating the driver to cause it to carry a staple down onto the ledge and concurrently drive the staple previously fed into the throat.

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