May 29, 1928. 1,671,733

A. H. MAYNARD

STAPLING MACHINE OR TACKER

Filed July 25, 1925 2 Sheets-Sheet 1

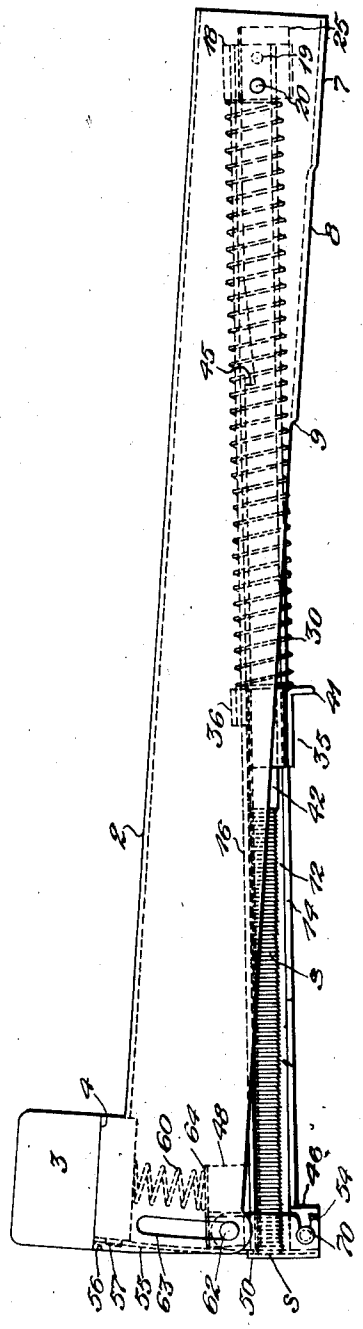


Fig. 1.

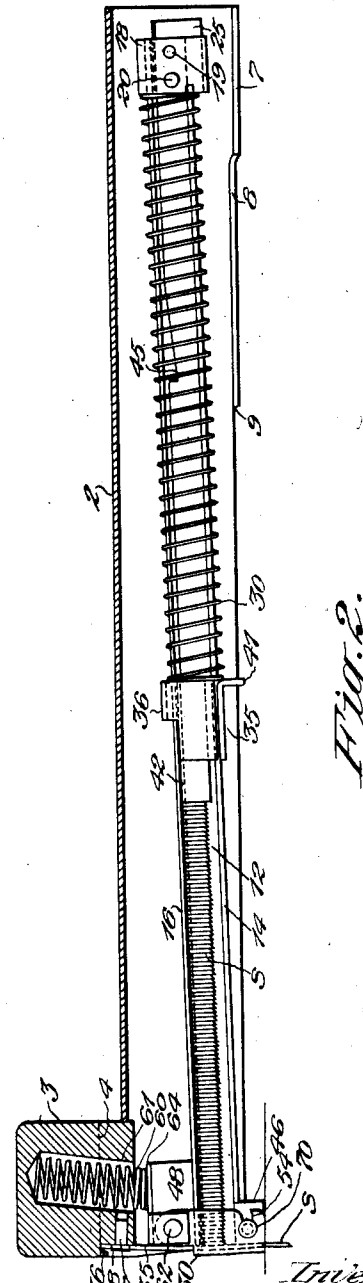


Fig. 2.

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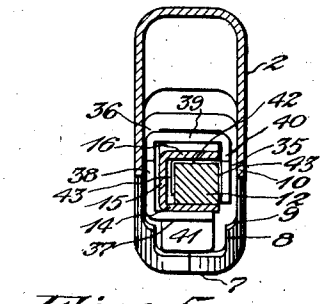


Fig. 5.

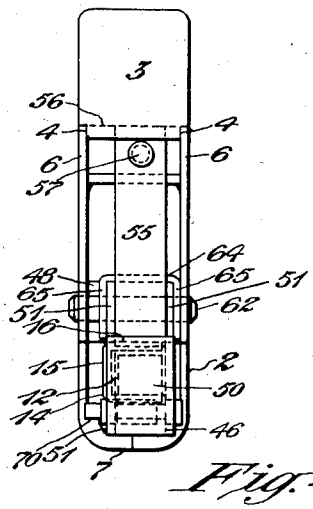


Fig. 4.

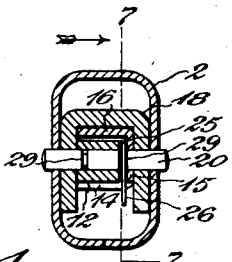


Fig. 6

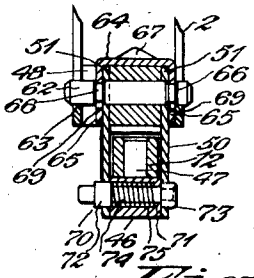


Fig. 8.

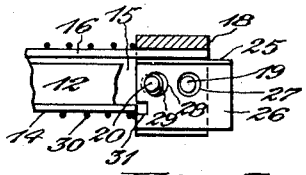


Fig. 7.

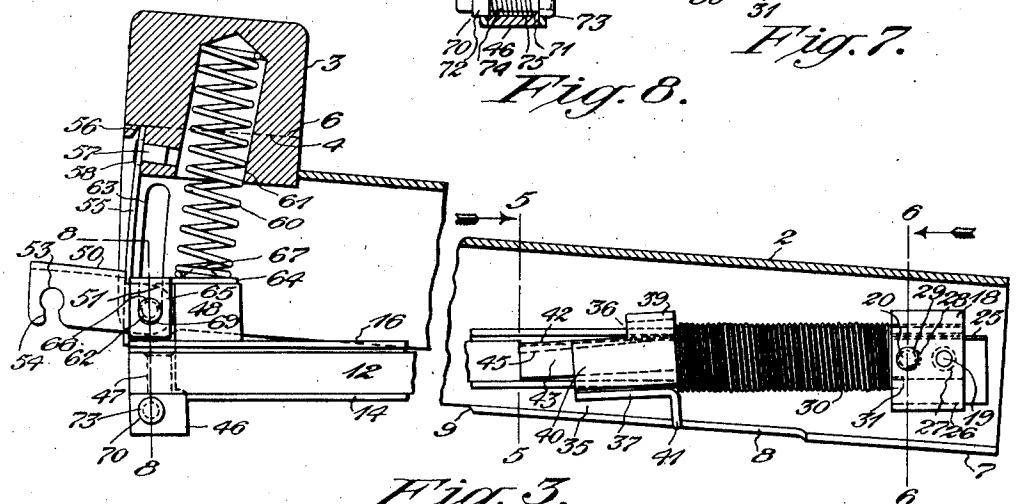


Fig. 3.

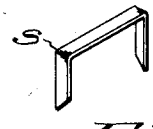


Fig. 9.

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Patented May 29, 1928. 1,671,733

UNITED STATES PATENT OFFICE.

ARTHUR H. MAYNARD, OF WARWICK, RHODE ISLAND, ASSIGNOR TO BOSTON WIRE STITCHER COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

STAPLING MACHINE OR TACKER.

Application filed July 25, 1925. Serial No. 46,149.

This invention relates to hand-operated stapling-machines or tackers for feeding and driving wire staples, tacks, brads or other fasteners, and particularly to a device operated in the manner of a hammer to drive the staples, tacks or the like into wooden cases or boxes in attaching tags or labels thereto, and for other like purposes such as tacking matting or carpet to floors.

A particular object of the invention is to provide a device or appliance of the type specified which may be conveniently wielded in the hand to cause it to operate automatically to feed and drive the staples or other fasteners into place when a blow is struck against the object into which they are to be driven.

Another object of the invention is to provide a device of the type specified which is simple in construction, compact in size, economical to manufacture, proof against derangement or getting out of order, and durable in use under rough treatment.

Further objects of the improvement are set forth in the following specification, which describes a preferred embodiment of the invention as illustrated in the accompanying drawings. In the drawings:

Fig. 1 is a side elevation of the improved stapling-machine or tacker;

Fig. 2 is a longitudinal sectional view of the same, showing the parts of the device in position under impact when the blow is struck to drive the staple;

Fig. 3 is a similar enlarged fragmentary sectional view showing the two opposite ends of the stapling-machine or tacker;

Fig. 4 is an enlarged end view of the device;

Fig. 5 is a cross-sectional view taken on line 5—5 of Fig. 3;

Fig. 6 is a similar cross-sectional view taken on line 6—6 of Fig. 3;

Fig. 7 is a part-sectional view of the rear end of the staple-core of the machine, taken on line 7—7 of Fig. 6;

Fig. 8 is a cross-sectional detailed view of the front portion of the device, taken on line 8—8 of Fig. 3; and

Fig. 9 is a perspective view of the staple used with the improved device.

The invention consists in general in providing a hammer-like stapling-machine or tacker having a magazine for holding the staples or other fasteners within its handle, means for automatically feeding the staples or fasteners therefrom to the setting-device, and a driver operated when a blow is struck with the head of the hammer to drive the staples or fasteners into the work.

While the invention is herein shown and described as embodied in a machine for setting substantially U-shaped staples it may be employed for driving fasteners of other types such as tacks, brads, nails or the like.

Referring first to Figs. 1 and 2 of the drawings, in the embodiment of the invention as herein shown the device comprises an elongated hollow handle 2, preferably constructed of sheet-metal which is shaped to a substantially rectangular contour in cross-section and formed with rounded corners as illustrated particularly in Fig. 6. At the forward end of the handle 2 its arched top-portion is cut away to receive a rectangular block or hammer-head 3, usually constructed of steel. The sides of the block or head 3 are cut away or recessed at 4, see Fig. 4, and the strips of metal sheared away from the top of the handle 2 are flattened out in upwardly-projecting wings 6 which abut the recessed sides of the block 3 and are welded or otherwise secured thereto to fasten the head to the handle. At its rearward end the handle 2 has a full rectangular section at 7, see Fig. 1, and forwardly of this bottom of the handle is cut away throughout a portion of its width to provide a longitudinal slot or opening 8 shown in Figs. 2 and 5. The rounded under corners of this part of the handle are left intact to provide a smooth hand-hold at the rear end of the handle, but forwardly of the point 9 the whole under part of the handle is cut away, thus leaving an inverted U-shaped cross-section as shown at 10 in Fig. 5.

As before stated, the handle 2 forms the magazine for receiving a supply of staples which are arranged to feed forwardly therein along a guide, carrier or core 12 extending longitudinally within the sides of the handle. As shown more particularly in Figs. 3 and 5, the staple-carrier or core 12 consists of a rectangular bar which is pivoted at its rearward end to the sides of the handle 2. The U-shaped staples *s*, shown in detail in Fig. 9, are straddled across the top of the bar or core 12 and slide thereon along under the action of the feeding-means to be later described. To retain the staples

in place on the core 12 a suitable guard 14 overhangs its top in spaced relation thereto. As shown in Figs. 3 and 5, the guard 14 may consist of a strip of sheet-metal folded into channel-shape with one of its sides abutting the under side of the core 12 and welded or otherwise fastened thereto. The vertical side 15 of the guard 14 extends upwardly parallel with and in spaced relation to the side of the core 12 to provide a clearance for the legs of the staples straddling the core; while the top portion 16 of the guard overlies the top of the core with a space therebetween of appropriate width to permit the staples to slide freely therethrough.

In the present embodiment of the invention the staple-core 12 is pivoted to the rearward end of the handle 2 by any suitable means, and preferably it is hinged thereto by an improved construction of releasable pivot illustrated in Figs. 6 and 7. As shown in these views, a U-shaped yoke 18 of folded sheet-metal is fitted across the top and sides of the core 12, see also Fig. 3, with its sides abutting the inner faces of the sides of the handle 2. The yoke 18 is fastened to the core 12 by a cross-pin or rivet 19 shown in Fig. 3, or it may be secured thereto in any other suitable manner. A pivot-pin 20 is inserted through holes in the sides of the handle 2 and registering holes in the sides of the yoke 18 and in the core 12 to provide a swivelled joint between the core and the handle. The pivot-pin 20 is held in place by a novel latch construction as next described. As shown in Figs. 6 and 7, the latch 25 consists of an angle-shaped strip of relatively thin sheet-metal having its upper portion held between the top of the core 12 and the overlying side 16 of the guard 14. The vertical wing 26 of the latch 25 is held in the space between the side 15 of the guard 14 and the side of the core 12 and projects downwardly beyond the bottom of the core. In this wing 26 are two circular openings or holes 27 and 28. The hole 27 accommodates the rivet or pin 19 which fastens the yoke 18 to the core 12 and is of sufficient diameter to allow the latch 25 to slide laterally to a slight extent. The other hole 28 is of a size to adapt the pivot-pin 20 to slide therethrough, the pin 20 being formed with a peripheral groove 29 with which the edge of the hole engages when the latch is slid to the right as viewed in Fig. 7.

Preferably, the pin 20 has two peripheral grooves 29 equidistantly spaced from its ends to that the pin may be inserted into the handle either way and the latch will in each case be engaged with one of the grooves. The latch 25 is normally slid to the right under the action of a spring 30 which surrounds the guard 14 and staple-core 12 as illustrated in Fig. 3. The spring 30 has the main function of operating the staple-pusher 35, to be later described, which feeds the staples along the core 12. It will be noted from Fig. 7 that the latch 25 has a notch 31 cut in its edge to accommodate the end of the staple-guard 14 when the latch is slid to the left. The latch 25 may be slid to the left against the action of the spring 30 to aline its hole 28 with the body portion of the pin 20, this action causing the edge of the hole to release the groove 29 in the pin whereby the latter may be withdrawn from the handle to disconnect the staple-core therefrom. Through the novel construction and arrangement of the parts as last described the two main elements of the device are pivoted together in such manner as to provide for convenient assembling and quick detachment of the parts for repairs or replacement. Moreover, no screws, bolts, or rivets are required, yet the fastening means is secure and efficient for the purpose designed.

The staple-pusher 35 consists of a two-part sheet-metal slide or traveler, the main portion of which encloses the guard 14 attached to and surrounding the staple-core 12, see Fig. 5. As shown particularly in this view the outer or main portion of the pusher 36 is folded into substantially rectangular shape in cross-section, having its under side or wing 37 abutting the under side of the guard 14, its vertical wall 38 extending upwardly parallel with the side 15 of the guard, and a narrowed top-portion 39 extending across parallel with the side 16 of the guard 14 in spaced relation thereabove. A fourth side or wall 40 projects downwardly across the open side of the guard 14. At the rearward end of the main member 36 is a tab 41 bent downwardly at right-angles to provide a finger-piece adapted to be grasped by the hand to slide the pusher rearwardly on the staple-core 12. As shown in Fig. 3, the finger-piece 41 slides through the slotted opening 8 in the bottom of the handle 2 so as to be within convenient reach of the operator's finger.

The staple-pusher proper consists in a channel-shaped member 42 constructed of thinner sheet-metal than the main member 36 and arranged to straddle the sides of the core 12 as shown in Fig. 5. The member 42 slides beneath the over-hanging portion 16 of the guard 14 and one of its legs 43 is welded, brazed, riveted or otherwise secured to the inside face of the downwardly extending wall 40 of the main member 36. The pusher 35 is normally urged toward the forward end of the core 12 by the spring 30 which is preferably formed with its coils of rectangular shape so that it may be more compactly disposed around the guard 14 enclosing the core. The spring 30 abuts against the yoke 18 at the rearward end of the core 12 and at its forward end bears

against the rearward edges of the side walls 38 and 40 of the main pusher-member 36. Referring particularly to Figs. 1 and 2, a notch 45 is cut in the upper face of the staple-core 12 with which the forward end of the pusher-member 42 engages when the whole pusher is slid rearwardly to the position illustrated in Fig. 3. The purpose of this arrangement is to provide means for latching the staple-pusher 35 in its rearward position to facilitate the application of the staples to the forward end of the core 12. When the staple-pusher 35 is slid rearwardly by the pressure of the fingers on its tab 41 the tendency of the spring 30 will be to rock the forward end of the pusher-member 42 downwardly so that as it reaches the position illustrated in Fig. 3 it will be tilted to engage its forward edge with the notch 45 in the core 12. After the staples have been slid on to the core 12 the pusher 35 may be released to adapt it to act to feed the staples forward by merely pressing its forward end upward to disengage its edge from the notch 45.

At the forward end of the core 12 is a hammer-block 46, preferably constructed of hardened steel and fastened to the under side of the core by a rivet 47 projecting upwardly through a hole therein. A second longer block 48 is fastened to the top of the forward end of the staple-core 12, being preferably welded to the upper wall 16 of the staple-guard 14. Pivoted to the forward end of the block 48 is a door or gate 50 which is normally held in position with its vertical front wall spaced slightly away from the end of the staple-core 12 to provide a channel through which the staples are driven as they feed off from the end of the core. It will be noted that the forward end of the handle 2, staple-core 12 and block 46 are formed on an arc struck from the pivotal center on which the staple-core swings, the wall of the gate 50 being also shaped to conform to the same radius.

The staple-driver 55 consists of a relatively flat hardened blade also conforming to an arcuate shape on a radius struck from the pivot of the core 12 to adapt it to slide across the forward end of the core 12 and block 46 at the rear of the front wall of the gate 50. The upper end of the driver 55 abuts the recessed forward end of the hammer-head 3 on the handle 2, with its edge seated in a notch 56 to take the thrust of the driver under the blow struck to drive the staples into place. A rivet 57 driven into a hole in the front of the head 3 has an enlarged head 58 engaging a hole in the upper end of the driver 55. The gate 50 normally holds the driver 55 in place with its upper edge seated in the notch 56, but the driver may be removed for repair or replacement by removing the gate to allow the driver-blade to be tilted to release it from the head of the rivet 57 so that it can be withdrawn from the notch 56.

A coil spring 60 is seated in a bore or pocket 61 in the under side of the head 3 with its lower end bearing against the top of the block 48, the spring normally tending to swing the core 12 downwardly with respect to the handle 2. The swinging movement of the core 12 in relation to the handle 2 is limited by a pin 62 having its ends sliding in arcuate slots 63 in the sides of the handle 2. This same pin 62 forms the pivot for the gate 50, being inserted through a transverse hole in the upper block 48 and fastened in place by a novel construction as next described. Seated on the top of the block 48 is a sheet-metal plate 64 having ears 65 folded downwardly at each side to straddle the block with a space therebetween. The gate 50 has ears 51 held in the space between the sides of the block 48 and the ears 65 on the plate 64, the ears on the gate being pivoted on the pin 62. As shown in Figs. 3 and 8 the pin 62 is formed with peripheral grooves 66 spaced outwardly beyond the ears 51 of the gate 50 and adapted to be engaged by the edges of holes 69 in the ears 65 of the plate 64. The holes 69 are of such diameter as to allow the main or body portion of the pin 62 to pass therethrough when the plate 64 is raised to aline the holes with the transverse hole in the block 48. When, however, the plate 64 is pressed down against the top of the block 48 the holes 69 will be carried into eccentric relation with respect to the pin 62 so as to engage the grooves 66 in the pin to lock it from lateral movement whereby to hold the parts in assembled relation. The plate 64 is held down against the top of the block 48 under the pressure of the spring 60, a teat or protuberance 67 being struck up from the top of the plate to enter the end coil of the spring to hold the latter from lateral displacement.

The gate 50 is locked in closed position, as illustrated in Figs. 1 and 2, by means of a latch-pin 70 shown in detail in Fig. 8. The gate 50 has circular holes 53 in its sides with narrowed slots 54 leading thereto. The latch-pin 70 slides through a transverse hole 71 in the hammer-block 46. The latch-pin 70 is provided with two hubs 72 and 73 of larger diameter than the main portion of the pin, the hub 73 being riveted to the right-hand end of the pin as shown in Fig. 8. These hubs are of a diameter to adapt them to pass through the circular openings 53 in the sides of the gate 50, but are too large to pass through the slots 54 leading into said openings. A coil spring 74 seated in an enlarged counter-bore 75 in the block 46 acts against the hub 72 to hold the pin 70 in position with the other hub

73 abutting the side of the block 46. By pressing on the end of the pin to slide it to the right, as viewed in Fig. 8, the main portion of the pin is brought into position to allow it to pass through the slots 53 in the sides of the gate 50 when the latter is closed down into position as illustrated in Figs. 1 and 2. When the pin 70 is released from end pressure its spring 73 will force it back into the position shown in Fig. 8 to seat the enlarged hubs 72 and 73 in the circular openings 53 in the sides of the gate 50 to lock the latter in place as shown in Figs. 1 and 2.

The construction and arrangement of one embodiment of the invention having now been described, its method of operation will next be explained: To load the device the staple-pusher 35 is drawn back on the core 12 until its forward edge is opposite the notch 45, when the tendency of the spring 30 will be to rock the pusher into the position shown in Fig. 3 to lock it in engagement with the notch. The gate 50 is now released from its latch by sliding the pin 70 in the manner as previously explained, after which the gate is swung outwardly into the position shown in Fig. 3. The staples *s* are then slid on to the front end of the core 12 beneath the overhanging portion 16 of the guard 14, the usual manner of charging the machine being to place the stick on which the staples are packaged in alinement with the core so that the staples may be slid off from the stick and on to the core. After a supply of staples has been placed in straddled relation on the core 12 the gate 50 is closed down into position as shown in Figs. 1 and 2 and locked in place by means of the latch-pin 70. The staple-pusher 35 is then released by tilting its forward end upward to disengage its edge from the notch 45, whereupon the spring 30 will slide the pusher forwardly to cause it to bear against the rearmost staple *s* in the series straddled on the core 12. The pressure of the pusher 35 against the staples will cause them to be held in alinement in close juxtaposition, with the forward staple in the series bearing against the vertical wall of the gate 50, see Fig. 1.

The device is now ready for use and the operator grasps the handle 2 at its rearward end to wield the appliance in the manner of a hammer. After the article to be stapled or tacked in place has been brought into position a blow is directed thereagainst at the point where the staple is to be driven and the action of the mechanism of the machine is as follows: As the hammer-block 46 is brought against the object the force of momentum acting on the relatively heavy head 3 of the device will cause the latter to continue in the general direction in which the blow is being struck to carry the driver 55 down across the forward end of the core 12. That is to say, the hammer-head is caused to move downwardly with respect to the core 12 against the force of the spring 60, whereby the lower end of the driver 55 is carried down against the top of the forward staple of the series which has been pushed off from the end of the core 12, and the driver on continuing its stroke will slide down through the opening between the end of the core 12 and the forward wall of the gate 50 to force the staple therethrough to drive it into the work in the manner as indicated in Fig. 2.

Immediately the blow has been struck and the staple driven into place the recoil of the spring 60 will lift the hammer-head 3 to swing the handle 2 upwardly with respect to the core 12, thus returning the driver to position above the end of the core, as shown in Fig. 1. As the driver is retracted after the operation of setting the staple the spring 30 acts to urge the staple-pusher 35 forward to slide the whole series of staples along the core 12 to again push one off from the end of the core into the channel at the rear of the vertical wall of the gate 50. It will be understood that the swinging movement of the handle 2 with respect to the core 12, during the operation of the device in the manner as above explained, is limited by the cross-pin 62 sliding in the slots 63 whereby the handle is restrained from swinging away from the core to such an extent as to release the driver 55 from engagement with the gate 50.

It will be observed from the above that my invention provides a particularly simple, compact and efficient device of the type specified which operates automatically when wielded as a hammer to feed the staples into position and drive them into the work, one after another without interruption until the supply of staples carried in the device is exhausted. The construction and arrangement of the appliance provides for convenient loading of the magazine with the staples while the feeding means or staple-pusher is locked in inoperative position so as to avoid accidental discharge of the staples.

It is also to be noted that the mechanism of the device is simple in construction, compactly arranged and so designed as to be capable of economical manufacture to reduce the whole cost of the machine. The parts of the mechanism are designed for strength and staunchness and freedom from wear or deterioration to insure greater durability in use when the device is subjected to rough handling. Moreover, the construction and arrangement of the parts makes for greater facility in assembling the mechanism or removing the parts for repair or replacement.

While I have herein illustrated a pre-

ferred embodiment of the device as adapted for use with a common type of fasteners, it is to be understood that modifications may be made in the structure and arrangement of its parts and in its method of operation without departing from the spirit and scope of the invention. Therefore, without limiting myself to the exact details of construction herein shown and described, I claim:

1. In a device of the type specified, the combination of a handle, a weight on the handle, a driver operated by said weight, staple-carrying means hinged to the handle, means to feed the staples on the carrying-means to deliver them successively into position beneath the driver whereby when a blow is struck a staple will be driven into the work, and means to frictionally detain the forward staple in position beneath the driver until the blow is struck.

2. In a device of the type specified, the combination of a handle, a weight on the handle, a driver connected to be operated from said weight through the action of momentum when a blow is struck, staple-carrying means carried by the handle, means to successively feed the staples off from the carrying-means beneath the bottom of the driver whereby said staples are driven when the driver is operated under the impact of the blow, and a gate at the end of the carrying-means for holding the forward staple in place until it is driven by the driver.

3. In a device of the type specified, the combination of a handle, a weight on the handle, a driver connected to be operated by said weight through the force of momentum, staple-carrying means swivelled to the handle and projecting into position at the rear of the driver, means to feed the staples along the carrying-means to successively position them beneath the driver to cause them to be driven during each stroke of the driver acting under the impulse of the weight when a blow is struck, and means to frictionally retain the forward staple in place beneath the driver previous to the driving action thereof.

4. In a device of the type specified, the combination of a handle, a weighted hammer-head on the handle, a driver connected to be operated from said hammer-head, a staple-carrying member pivoted at one end to the handle with its opposite end arranged at the rear of the driver, means to feed the staples along the carrying-member to deliver them beneath the driver whereby the latter acts to drive them into place when a blow is struck and the hammer-head moves the driver with respect to the carrying-member, and means for retaining the fed staple in position beneath the driver until the latter acts thereon.

5. In a device of the type specified, the combination of a handle, a hammer-head at one end of the handle, a driver connected to said head, a staple-carrying member extending longitudinally of the handle and pivoted to swing with respect to the hammer-head, means for feeding the staples along the carrying-member to deliver them successively beneath the driver whereby the latter acts to drive them into the work when a blow is struck and the hammer-head moves with respect to the staple-carrying member, and means for frictionally retaining the fed staple in position beneath the driver until the latter acts thereon.

6. In a device of the type specified, the combination of a handle, staple-carrying means on the handle, means to feed the staples along the carrying-means, a gate at the end of the staple-carrying means to hold the individual staples in position in advance thereof, and a weighted driver reciprocable between the gate and the staple-carrying means and adapted to be operated when a blow is struck to drive the staples into the work.

7. In a device of the type specified, the combination of a handle, a weighted hammer-head at one end of the handle, a staple-carrying member hinged to the handle, a driver connected to the hammer-head and adapted to be reciprocated thereby across the end of the staple-carrying member when a blow is struck with the hammer-head, a gate at the end of the staple-carrying member, means to successively feed the staples from the carrying-member into position against the gate and beneath the driver, and resilient means acting between the hammer-head and the staple-carrying member to normally hold the driver in raised position above the staples being fed.

8. In a device of the type specified, the combination of a hollow handle, a staple-carrying core extending longitudinally within the handle and pivoted thereto at one end, a driver reciprocable across the opposite end of the staple-core, a weighted hammer-head for reciprocating the driver under the impact of a blow struck against the work, means to feed the staples along the core to deliver them successively beneath the driver, and means for retaining the delivered staple in position beneath the driver until the latter acts thereon.

9. In a device of the type specified, the combination of a hollow handle, a staple-core extending longitudinally within the handle and pivoted thereto at one end, a hammer-head on the handle, a driver connected to said hammer-head and adapted to be reciprocated across the end of the staple-core, a pusher slidable on the staple-core to feed the staples successively into position beneath the staple-driver, a spring for sliding

said pusher, and means at the end of the staple-core for holding the fed staple in position under the pressure of the spring.

10. In a stapling or like machine, the combination with means for driving the staples into the work, of means for feeding the staples to the driving-means comprising a core across which the staples are straddled, said core formed with a notch in its side, a pusher enclosing the core and slidable therealong, and a spring for sliding the pusher, said pusher adapted to be tilted automatically under the pressure of its spring as it reaches the rearward end of the core to cause it to engage the notch in the core to hold the spring contracted in the manner and for the purpose substantially as specified.

11. In a stapling or like machine, the combination of a staple-core for receiving the staples in straddled relation thereon, a driver reciprocable across the end of the core, a gate pivoted above the end of the core and provided with a vertical wall arranged in spaced relation with respect thereto, said gate having sides adapted to enclose the sides of the core, openings in the sides of the gate having contracted slots leading thereto, and a latch-pin slidable transversely of the core and having reduced portions adapted to enter the slots leading to the openings in the sides of the gate to allow the gate to be closed and latched by sliding the pin to engage its enlarged portions with the openings in the gate.

12. In a device of the type specified, the combination of a handle, a staple-carrier pivoted at one end to the handle, a hammer-head on the handle positioned above the opposite end of the staple-carrier, a driver carried by the hammer-head and adapted to be reciprocated thereby across the end of the staple-carrier, a spring acting between the hammer-head and the carrier to normally hold the driver raised above the end of the carrier, and a pin projecting from the carrier and engaging a slot in the side of the handle to limit the movement of the hammer-head with respect to the carrier.

13. In a stapling or like machine, the combination of a staple-driver, a staple-core along which the staples feed to the driver, a block mounted on the top of the core, a gate having wings straddling the sides of the block, a pin inserted through the block and engaging holes in the wings to pivotally mount the gate, said pin formed with peripheral grooves at its ends, a yoke having its sides straddling the block and formed with holes for receiving the pin, and means for holding said yoke in position to engage the edges of its holes with the grooves in the pin to lock the latter in place.

14. In a device of the type specified, the combination of a hollow handle, a staple-core comprising a bar extending longitudinally within the sides of the handle, a channel-shaped staple-guard enclosing the sides of the core with its sides in spaced relation thereto, a pivot-pin projecting through the core and engaging holes in the sides of the handle, said pin formed with a peripheral slot, and a plate-like member slidable in the space between the guard and the core and having a hole through which the pivot-pin projects, the edge of said hole being adapted to engage the peripheral groove in the pin to lock the latter in position.

15. In a device of the type specified, the combination of a hollow handle, a staple-core comprising a bar extending longitudinally within the handle, a staple-pusher slidable on the core, a spring for sliding the pusher, and means to pivot the core to the sides of the handle comprising a cross-pin extending therethrough and formed with a peripheral groove, and a plate having a hole through which the pin extends, said plate being acted upon by the pusher-spring to slide it longitudinally with respect to the core to cause the edge of its hole to engage the groove in the pin to lock the latter in place.

In testimony whereof I affix my signature.

ARTHUR H. MAYNARD.