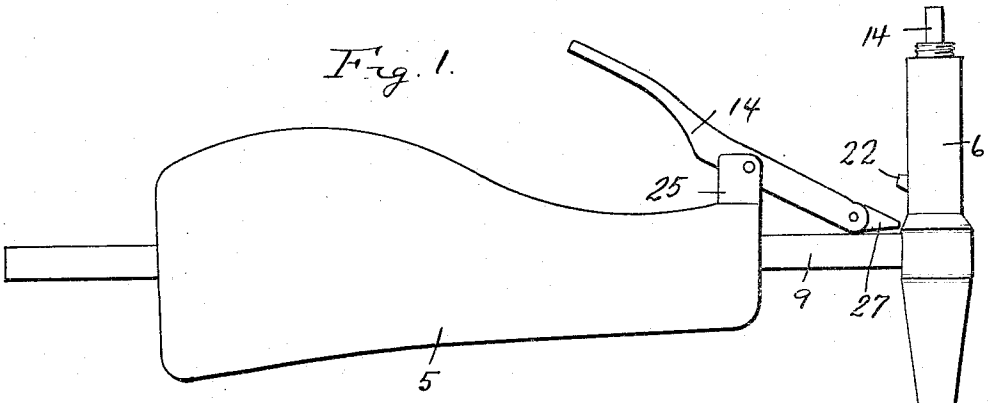
Sept. 22, 1931. W. E. GRAFFIOUS 1,824,399

TACK SETTER

Filed Aug. 26, 1930

Fig. 1.



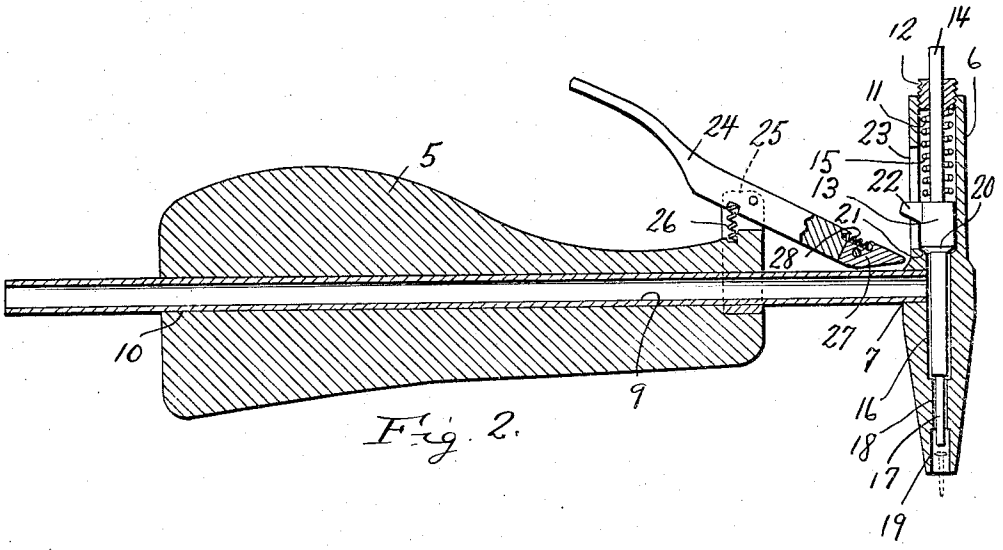
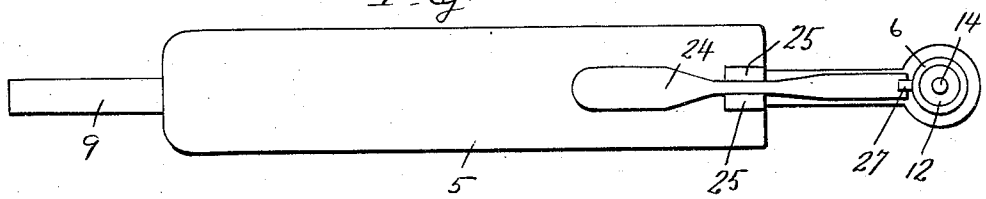


Fig. 2.

Fig. 3.



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Patented Sept. 22, 1931 1,824,399

UNITED STATES PATENT OFFICE

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TACK SETTER

Application filed August 26, 1930. Serial No. 477,913.

This invention relates to certain new and useful improvements in devices known in the art as "tack setters" or that type of device for initially driving a tack into the work whereby the tack will be sufficiently embedded in the work as to facilitate subsequent driving of the tack into the work by a hammer or other suitable implement.

A primary object of this invention is to provide a device of the above mentioned character adapted for retaining the tack through the medium of suction in position on the tack setter prior to forcibly urge the penetrating end of the tack into the work.

A still further object of the invention is to provide a device of this character adaptable to utilize suction for selecting a desired tack and retaining the selected tack in operative engagement with the presser.

Other objects and advantages of the invention will become apparent from a study of the following description, taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevational view of the device,

Figure 2 is a longitudinal sectional view therethrough,

Figure 3 is a top plan view thereof.

With reference more in detail to the drawings, it will be seen that 5 designates a suitable handle having extending longitudinally therethrough an open ended tubular member 9 arranged within an axial bore 10. Mounted vertically on the forward end of the member 9 in spaced relation to the forward end of the handle 5 is a somewhat elongated tubular head 6 that is provided intermediate its upper and lower ends with a suitable lateral opening 7 for accommodating the forward end of the member 9. The head 6 in the upper end portion thereof is provided with a longitudinally extending socket 11 and a plug 12 is threaded in the upper end of the socket.

Adapted for reciprocatory movement within the socket 11 is a plunger 13 that has a stem 14 extending axially therethrough and projecting beyond the upper and lower ends of the plunger 13. The upper portion of the stem 14 is adapted to slide through a suitable opening provided in the plug 12, while the lower portion of the stem operates within a vertical bore 16 formed in the head 6 concentric the socket 11.

At its lowermost end, the plunger 13 is provided with a beveled shoulder 20 adapted to contact with a beveled seat 21 in the lower end of the socket 11. The shoulder 20 is normally maintained in contact with the seat 21 through the medium of a coil spring 15 convoluted about the upper end portion of the stem 14. Spring 15 has one end bearing against the plug 12, and its lower end bearing against the upper end of the plunger 13. The plunger 13 also has integral therewith a lateral lug 22 that is operable in a vertical slot 23 formed in the wall of the socket 11.

A lever 24 is pivoted intermediate its ends between a pair of spaced parallel ears 25 rising from the forward end of the handle 5 and the lever 24 is normally urged to rotate about its pivot in one direction under action of a spring 26 between the lever 24 and the handle 5 as suggested in Figure 2. Pivoted to the forward end of the lever 24 is a dog 27 that is normally urged in one direction through the medium of a spring 28.

Obviously, upon rocking the lever 24 against the action of the spring 26, the dog 27 will engage the lug 22 urging the piston 13 upwardly against the action of the spring 15. As the plunger 13 is being so urged upwardly, it is apparent that the free end of the dog 27 will ride over the beveled face of the lug 22 to be finally disengaged from the lug at a predetermined point in the upward travel of the plunger 13 whereby the plunger 13 under action of the spring 15 will be forced downwardly, so that the reduced end 17 of the stem 14 will engage the head of the tack to be driven into the work as will be hereinafter more manifest.

The reduced end, or hammer end 17 of the stem operates in an outer bore 18 that connects the bore 16 with a tack accommodating socket 19 in the lower end of the head 6.

In the operation of the device, the free or

rear end of the tube 9 is adapted to be connected by any suitable source capable of creating a suction through tube 9, bore 18 and socket 19, whereby upon proper manipulation of the tool when the socketed end 19 of the tool is disposed adjacent a desired tack, the suction in the socket 19 will draw the tack into the socket for retaining the same longitudinally within the socket as suggested in Figure 2. The tack retained in the socket in this manner may have its penetrating end disposed adjacent the work into which the tack is driven. When so positioned relative to the work, the operator by placing the thumb of the hand holding the handle 5, on the free end of the lever 24, may rock the lever about its pivot against the action of the spring 26 so that the dog 27 will engage the lug 22 urging the piston 13 upwardly within its socket 11.

When the dog 27 is moved out of engagement with the lug 22 as herein before set forth in detail, and the plunger 13 is urged downwardly under action of spring 15, the free end of the hammer end 17 of stem 14 will forcibly engage the head of the tack within the socket 19 to force the penetrating end of the tack to penetrating or piercing engagement with the work and the tool may then be removed, leaving the tack partially driven into the work. The tack may then be further driven into the work for the desired distance by a hammer or any other suitable tool.

I am fully aware that in the prior art devices of this character have been used, but to my knowledge, the means for normally retaining the tack in operative position with the tool has consisted in the use of a magnet whereas, the present invention uses in lieu of a magnet suction for retaining the tack in operative relation with the tool.

Even though I have herein shown and described the preferred embodiment of my invention, it is to be understood that the same is susceptible to changes fully comprehended by the spirit of the invention as herein described, and the scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. A tack setting tool comprising in combination a handle, a suction tube extending through said handle, a head mounted on one end of said suction tube, a tack receiving socket in the lower end of said head, said head having a vertical bore connecting said tube with said socket and tack engaging hammer means mounted in said head for forcibly ejecting a tack from said socket.

2. A tack setting tool comprising in combination, a suction tube, a head mounted on one end of said suction tube, a tack receiving socket in the lower end of said head, said head having a vertical bore connecting said tube with said socket, and tack engaging hammer means mounted in said head for forcibly ejecting a tack from said socket, said last mentioned means comprising a socket formed in said head, a plunger mounted for reciprocation in said socket, a pivoted member exteriorly of said head, said plunger and said pivoted member provided with cooperating means for moving said plunger in one direction relative to said socket, and spring means for urging said plunger in an opposite direction relative to said socket.

In testimony whereof I affix my signature.

WILLIAM E. GRAFFIOUS.