F. E. STANLEY.

CONNECTING ROD.

APPLICATION FILED OCT. 13, 1911.

1,134,973. Patented Apr. 6, 1915.

Fig. 1.

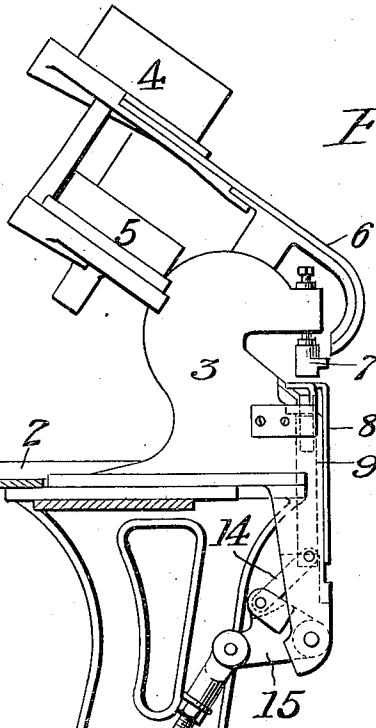


Fig. 2.

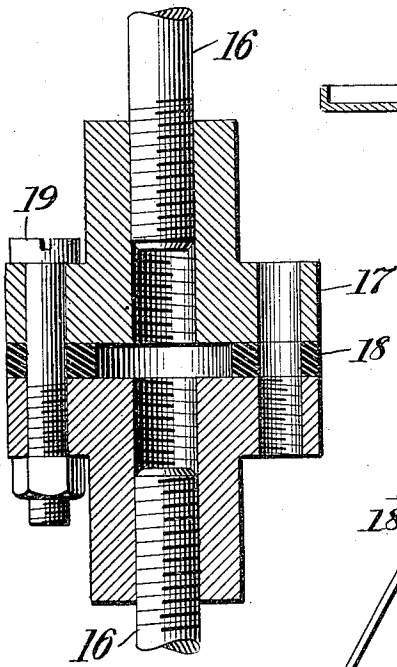
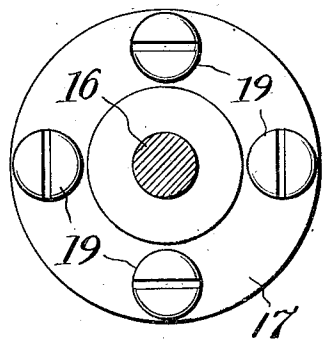


Fig. 3.



Witnesses.

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by Wm. F. Finckel, Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK E. STANLEY, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CONNECTING-ROD.

1,134,973. Specification of Letters Patent. Patented Apr. 6, 1915.

Application filed October 13, 1911. Serial No. 654,554.

To all whom it may concern:

Be it known that I, FREDERICK E. STANLEY, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Connecting-Rods, of which the following is a full, clear, and exact description.

In that type of machines used for affixing buttons and other fasteners to garments and other articles by means of tacks, it is customary for the machine maker to send out the machine adjusted for the customer's work. If it be attempted to use the machine on articles thicker or thinner than those for which the machine is so adjusted, it is likely that the work will be spoiled; and while a skilled mechanic may readily readjust the machine to suit different thicknesses yet if the ordinary machine-operator be not, as is usually the case, a skilled mechanic, and undertakes to readjust the machine, the trouble is likely to be intensified rather than remedied.

It is the object of this invention to provide means for automatically caring for variations in thickness, without the necessity for readjustment of the machine; and to this end the invention consists of a compensating connecting rod for connecting the actuated mechanism with the actuating mechanism, said rod being divided and provided with a coupling containing and substantially concealing a resilient, preferably rubber pad, which is adapted to maintain the connecting rod in condition to hold the actuated mechanism in proper relation to the work, as I will proceed now to explain and finally claim.

The invention is designed primarily for use in the connecting rod of a machine in which the tack is moved up to the fastener to engage the same and properly set it, but the invention is not limited to the details of the setting mechanism. Examples of the machine to which my invention is applicable may be seen in the patents of Frederick E. Stanley and Frank E. Warner, No. 639,456, dated December 19, 1899, and Alfred J. Shipley, No. 579,017, dated March 16, 1897.

In the accompanying drawing, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation, partly in section, of a power button-setting machine of the type represented in the above-mentioned patents, in which my compensating connecting rod is shown. Fig. 2 is a longitudinal section and Fig. 3 is a top plan view of the coupling, on a larger scale, showing the ends of the connecting rod in place.

The frame or stand 1, table 2, head 3, button and tack turrets 4 and 5, button raceway or feed-chute 6, button holder 7, tack holding jaws 8, tack plunger or setting die 9, driving shaft 10, eccentric 11, band-wheel 12 for connection with the power shaft and controlling treadle 13 are shown as of approved construction. The plunger or die 9 is connected by a link 14 with an elbow-lever 15 pivoted in the lower part of the head, and this lever is connected by rod 16 with the eccentric 11, so that said plunger or die has a longitudinal reciprocating motion to lift the tack into contact with the article and the button on the opposite side of such article and fasten the button to the article. During this operation the tack head rests upon the plunger or die and is held by the jaws 8 until set; the article is supported on the said jaws, and as the tack is set, the jaws part and release it, so that the article may be moved to receive another button.

As already stated, the working mechanism is adjustable to adapt it to work of given thickness. This is accomplished by dividing the connecting rod 16, say about midway of its length, and connecting its adjacent ends by a coupling 17. This coupling preferably comprises two similar flanged members, having screwthreaded hubs into which the adjacent ends of the connecting rod are screwed, as shown in Fig. 2, in detail, so that the rod may be adjusted for the desired throw. Between the flanges of the coupling is placed a thick annular pad 18 of rubber or equivalent resilient material, and then the halves of the coupling with the rubber pad interposed are securely united by bolts 19 passed through holes in the flange of one of the coupling members so as to permit relative longitudinal movement, and preferably screwed into the flange of the other coupling member and provided with suitable nuts. The bolts 19 also pass through holes in the pad 18, and thus hold the pad in place. This method of attachment of the parts prevents wear on the threaded portion of the bolts. By this con-

struction, the machine may be adjusted to set buttons firmly on one thickness of cloth or other material, and if a greater thickness be used, the rubber pad without further adjustment will compress enough to set buttons thereon without causing the button or tack to cut the fabric, and without straining or injuring the machine.

It is important that the rubber pad be protected from deteriorating atmospheric and other influences, and this protection is very amply afforded by the coupling construction herein shown, since only the periphery of the pad is exposed. The liveliness of the rubber, therefore, is not readily attacked, and the durability and efficiency of the coupling is correspondingly enhanced.

While the connecting rod herein shown is specially designed for a button-setting machine for use by garment makers, whose goods present variations in thickness, still I do not limit the invention to that single use. Nor is the invention limited to that class of button setting machines in which the tack is moved up to the button.

The invention is not limited to machines for setting buttons, but is applicable to machines for attaching other articles, such as trouser-bars, and other fasteners or articles for which a tack or its equivalent is the attaching medium. Further, the invention is applicable as well to machines operated by foot or other mediums, as to machines operated by power; and hence, by the term "actuating mechanism," herein used, I mean to include any means by which the machine is set in operation to accomplish its purpose. In view of these facts, it is to be understood that the title herein given the invention is not intended to limit the applicability, excepting as herein otherwise specifically and in terms claimed.

What I claim is:—

1. A connecting rod for use between an actuated mechanism and an actuating mechanism, comprising a divided rod, a coupling composed of similar flanged members adjustably secured to and carried by the respective parts of the rod, a pad of resilient material interposed between the flanges of the coupling members and adapted to absorb the shock of end thrust between the coupled ends of the rod, and bolts slidably engaging holes in one of said coupling members and rigidly secured to the other coupling member and passing through the resilient pad and serving to hold said coupling members in operative relation.

2. A connecting rod for use between an actuated mechanism and an actuating mechanism, comprising a divided rod, a coupling composed of similar flanged members adjustably secured to and carried by the respective parts of the rod, a resilient pad interposed and secured between the flanged members of the coupling to take up strains of end thrust incident to encountering work of greater thickness than that for which the rod is primarily adjusted, and bolts passing through and connecting said flanges and pad, said bolts slidably engaging holes in one of said flanges and screwthreaded into the other flange and fixedly held therein.

In testimony whereof I have hereunto set my hand this 12th day of October A. D. 1911.

FREDERICK E. STANLEY.

Witnesses:
CHARLES FEHL,
PERCY WARNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."