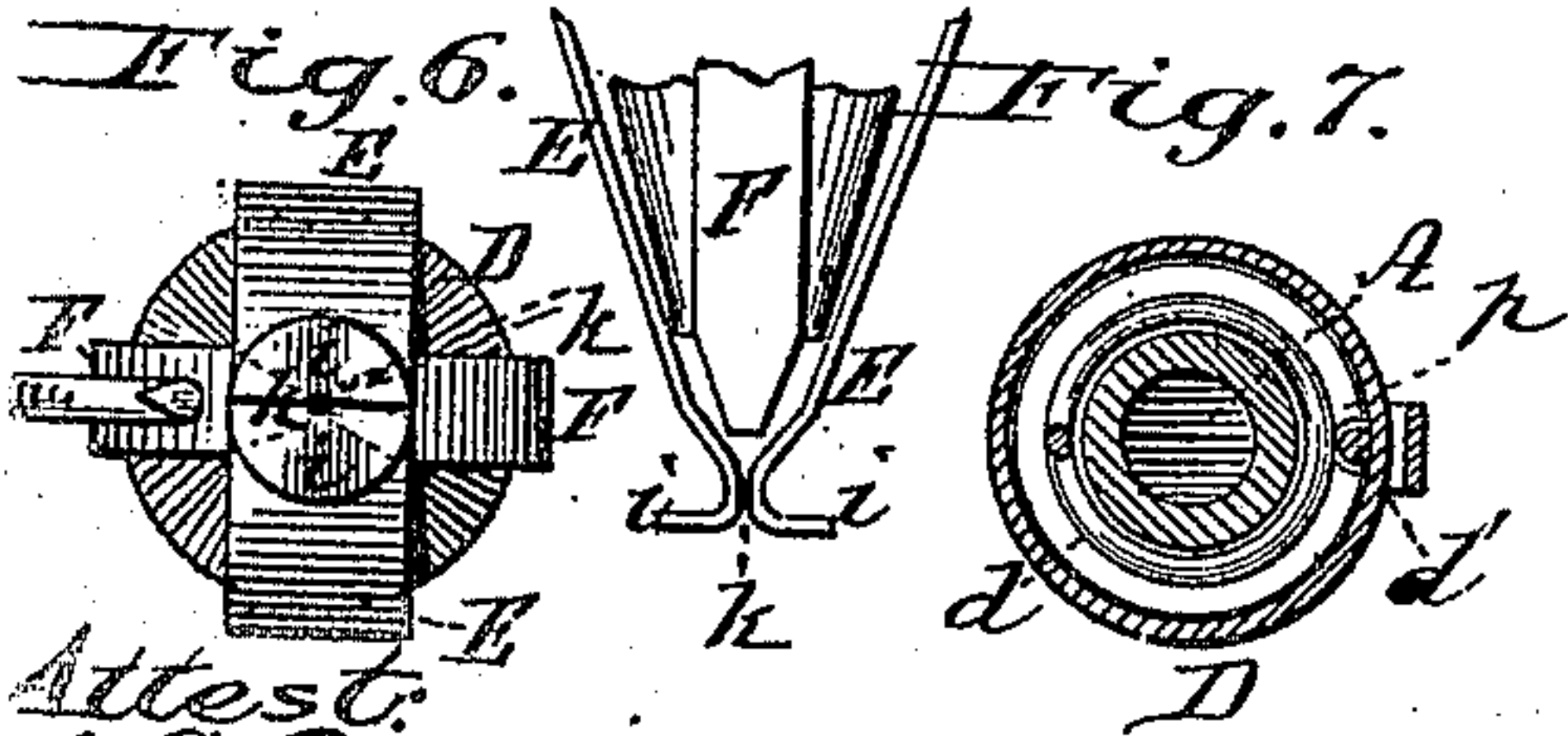
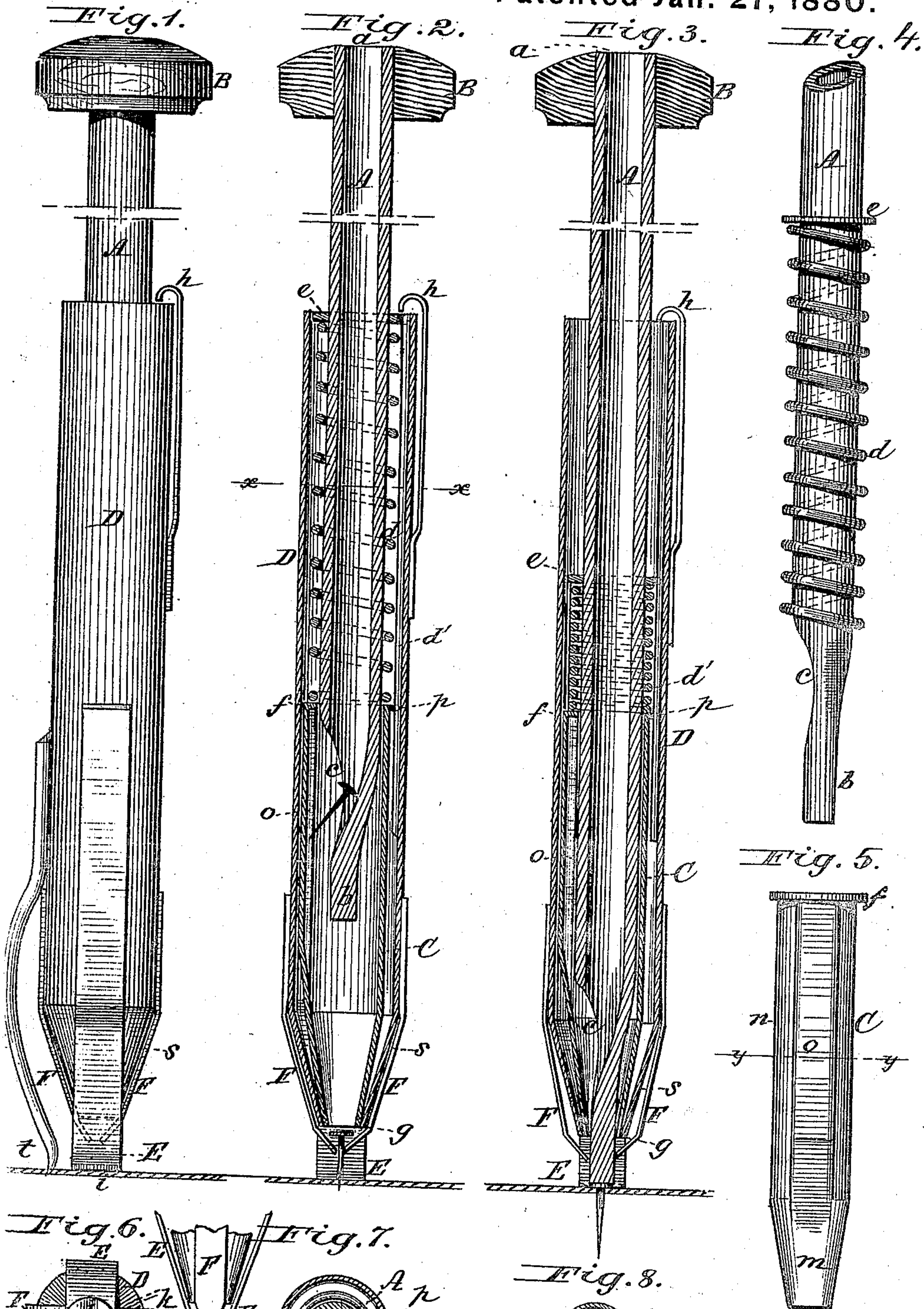


S. S. GRANNIS.  
Carpet-Tacker.

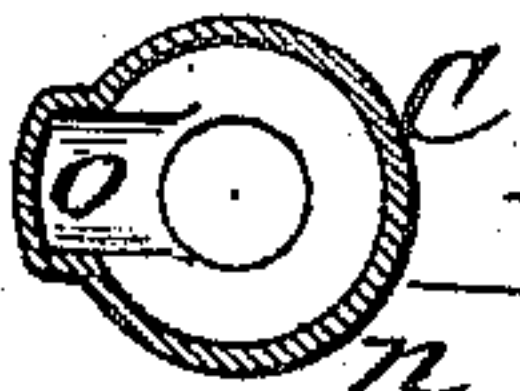
No. 223,905.

Patented Jan. 27, 1880.



Attest:  
W. L. Perrine  
Cloyd Harris.

Fig. 8.



Inventor.

By *Sidney S. Grannis*  
*Johnson and Johnson*  
Att.



# UNITED STATES PATENT OFFICE.

SIDNEY S. GRANNIS, OF RED WING, MINNESOTA.

## CARPET-TACKER.

SPECIFICATION forming part of Letters Patent No. 223,905, dated January 27, 1880.

Application filed July 28, 1879.

*To all whom it may concern:*

Be it known that I, SIDNEY S. GRANNIS, of Red Wing, in the county of Goodhue and State of Minnesota, have invented certain new and useful Improvements in Carpet-Tackers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to produce a carpet-tacker capable of being operated by a person standing erect, and generally to simplify and better this class of inventions.

I take a pipe or tube long enough to be grasped with ease by the person when erect, and this tube I make perform the functions of both tack-conduit and hammer by welding its lower end or terminating it in a driver and leaving a side orifice near said end for the escape of the tack. This tube operates within a short inclosing-case having an open tapering lower end, and a spiral spring causes the retraction of the tack-conducting hammer after the blow.

As the tack leaves the tube and passes down with its point going through the open tapering end of the short inclosing-case two small strap-springs serve to guide it and keep it in vertical position, whereby to properly receive the hammer stroke, and to guide its course to a small hole between two larger spring-jaws at right angles to the smaller guide-springs, and which support the device and hold the tack while being driven. As the hammer strikes, both sets of spring-jaws open to free the tack.

Within the inclosing-case, and conforming to its shape at the bottom, is a supplemental tack-conduit adapted to receive the tack from the side orifice of the main conduit in a manner to prevent its turning end for end as it escapes, and to provide a directing-channel to receive the tack from the orifice in the conduit-hammer. I attach to the inclosing-case a carpet-stretching hook curved to take hold of the carpet at one side of the spring-jaws, and

without interfering with the supporting function of the jaws.

In the accompanying drawings, Figure 1 represents an elevation of my improved carpet-tacker; Fig. 2, a vertical section, showing the tack in position just before the hammer is driven down; Fig. 3, a similar view, the hammer being shown as having driven the tack; Fig. 4, a detail of the conduit-hammer; Fig. 5, a detail of the supplemental tack-conduit. Fig. 6 shows the driving end; Fig. 7, a section at *x x* of Fig. 2, and Fig. 8 a section of the supplemental tack-conduit.

The tack-conduit A is of metallic tubing, sufficiently long to reach from the floor to the hands of a person standing, and of a diameter to permit of the free passage of the tack-head. This tubing A is provided at its top with a knob, B, to receive the impact of the hand, and it has a receiving-hole, *a*, for the insertion of the tack. The lower end is contracted and welded to form a hammer end, *b*, and immediately above this hammer end, on one side, is an orifice, *c*, for the escape of the tack.

The preferred configuration is best understood from the detail. Thus I make both hammer and tack-conduit of the same piece of tubing.

A spiral spring, *d*, embraces this tube, and is seated at the top against a collar-flange, *e*, on the tube, and at the bottom upon the flange *f* of an independent supplemental tack-conduit tube, C, to be presently described; or it may be seated upon a collar.

The tube and its spring are embraced by an inclosing-case, D, held from lateral turning independent of the tack-conduit A by an interior rib, *d'*, or in any suitable manner. This case D conforms at the bottom to the construction of the tube end by a conical termination, *s*, having an open truncated apex, *g*, as shown, of a diameter sufficient for the passage of the hammer end. The ascent of the tube-hammer conduit A is limited by a spring-stop, *h*, attached to the case.

Two strong flat metal springs, E E, are attached on opposite sides of the inclosing-case, near the lower end, and, projecting downward, meet at a short distance below the opening *g* in lip-like jaws *i i*, to form a rest for the de-



vice, and semicircular cavities in their inner contiguous faces form a passage-hole, *k*, Fig. 6, for the tack-point as it drops from the opening in the case. In order to guide the tack to this opening and to keep it in vertical position to receive the hammer, I provide a similar set of lighter strap-springs, *F F*, nearly meeting at right angles to the large springs and above the meeting-point of the large springs. These springs *F F* do not meet, but are a sufficient distance apart to permit the passage of all of the tack except its head. Then when the hammer strikes the tack the springs *F* are forced apart to release the head, and almost immediately the stout springs *E* are forced apart as the tack is driven home.

Referring back to the description of the manner in which the spiral spring is preferably seated at its bottom upon the flange of an independent supplemental tack-conduit, this conduit *C* consists of a tube of peculiar construction fitting loosely within the inclosing-case. Its top terminates in a collar-flange, *f*, acting as a seat for the spiral spring *d*, (which retracts the hammer,) while at its bottom it has a truncated conical termination, *m*, similar to that of the inclosing-case. It may or may not extend down to the apex-opening of the inclosing-case. It is partially circular and partially rectangular in cross-section, the circular part *n* permitting of the hammer's passage, while the rectangular part forms a recess, *o*, or passage for the tack as it passes from the orifice *c* of the main conduit. It is necessary that the supplemental tube should have its recess part in exact juxtaposition to the orifice of the main tube. This is effected by notches *p* in the flanges and a guide-bead, *d'*, on the inner side of the inclosing-case.

The purpose of the supplemental recessed tube is to receive the tack direct from the orifice, and thereby prevents its turning end for end. This is illustrated in Fig. 2, where it will be seen that as the tack falls before the hammer is driven home it passes directly into the recess. This supplemental tube serves also to shield the outer case from wear or being cut through by the hammer striking a tack that may become lodged.

A rigid finger, *G*, is secured to the casing, and has a curved point, *t*, standing free of the springs, so as to take hold of the carpet and stretch it as each tack is driven.

The operation is as follows: Placing the lower end of the tacker at the desired point, insert the tack in the knob-opening, point downward, and it immediately passes down the tube through the tube-orifice into the channel *o* of the supplemental tube *C*, from whence it drops, point downward, almost through the inclosing-case opening, its point being guided by the small spring-jaws into the hole *k* between the large spring-jaws, the head of the tack resting upon the sloping ends of the small springs. Then the hammer is pressed

down, and the hammer end, passing out, parts the pairs of springs and forces the tack before it into the floor, the momentum of the long pipe and a slight blow of the hand being sufficient. The coil-spring then acts to raise the tube-hammer, and the operation may be repeated.

In tacking the first and second sides of the carpet no directions are necessary. To stretch the other sides, press the carpet forward with the foot, provided with rubber shoes or soles. Starting at a suitable distance from the edge, strike the carpet with a forward movement of the feet; then with the hook adjust the edge and tack it, as above set forth; but the carpet might be stretched in any suitable manner.

I claim—

1. In a carpet-tacker, a tubular tack-conduit terminating in a driving-hammer, and provided above said hammer end with a lateral tack-escape orifice, in combination with a suitable inclosing-case having a tack-exit.

2. In a carpet-tacker, the tack-conduit *A*, terminating in a hammer, and provided with a lateral tack-discharge orifice, in combination with an inclosing-case provided with the spring-jaws *F*, for guiding and holding the tack in position for being driven.

3. In a carpet-tacker, a tubular tack-conduit provided with a bottom lateral tack-escape orifice, and terminating in a driving-hammer, in combination with an inclosing-case provided with the spring-jaws *F*, for guiding and holding the tack in position, and the larger spring-jaws *E*, terminating in resting-lips *i*, pierced by the tack-point, substantially as and for the purpose described.

4. In a carpet-tacker wherein a tube tack-conduit driver operates within an inclosing-case, the combination, with said tube-driver, of a supplemental tack-conduit having a recess opening in juxtaposition to and forming a continuation of the tack-orifice of said tube-driver, substantially as and for the purpose described.

5. In a carpet-tacker, the supplemental tube tack-conduit provided with a collar, *f*, in combination with tack-tube *A*, provided with collar *e*, a lifting-spring, *d*, and the inclosing-case, as set forth.

6. In a carpet-tacker, the inclosing-case for the tack conducting and driving mechanism, provided with meeting spring-jaws *E*, terminating in resting-lips *i i* for the device, and with spring-jaws *F*, at right angles to the latter, and nearly meeting within them, for the purpose of directing the tack, as set forth.

7. In a carpet-tacker, the spring-stop *h* on the inclosing-case *D*, in combination with the upper flange-collar, *e*, of the tube *A*, for limiting the upward movement of the driving-tube, substantially as described.

8. In a carpet-tacker, the hook *G* on the inclosing-case, in combination with the spring-



jaws E, terminating in resting-lips i, substantially as described.

9. In a carpet-tacker, the operating-knob B, provided with a central opening, a, into tube  
5 A for the insertion of tacks, substantially as set forth.

In testimony that I claim the foregoing I

have hereto affixed my signature in the presence of two witnesses.

SIDNEY S. GRANNIS.

Witnesses:

O. M. HALL,

W. C. WILLISTON.