

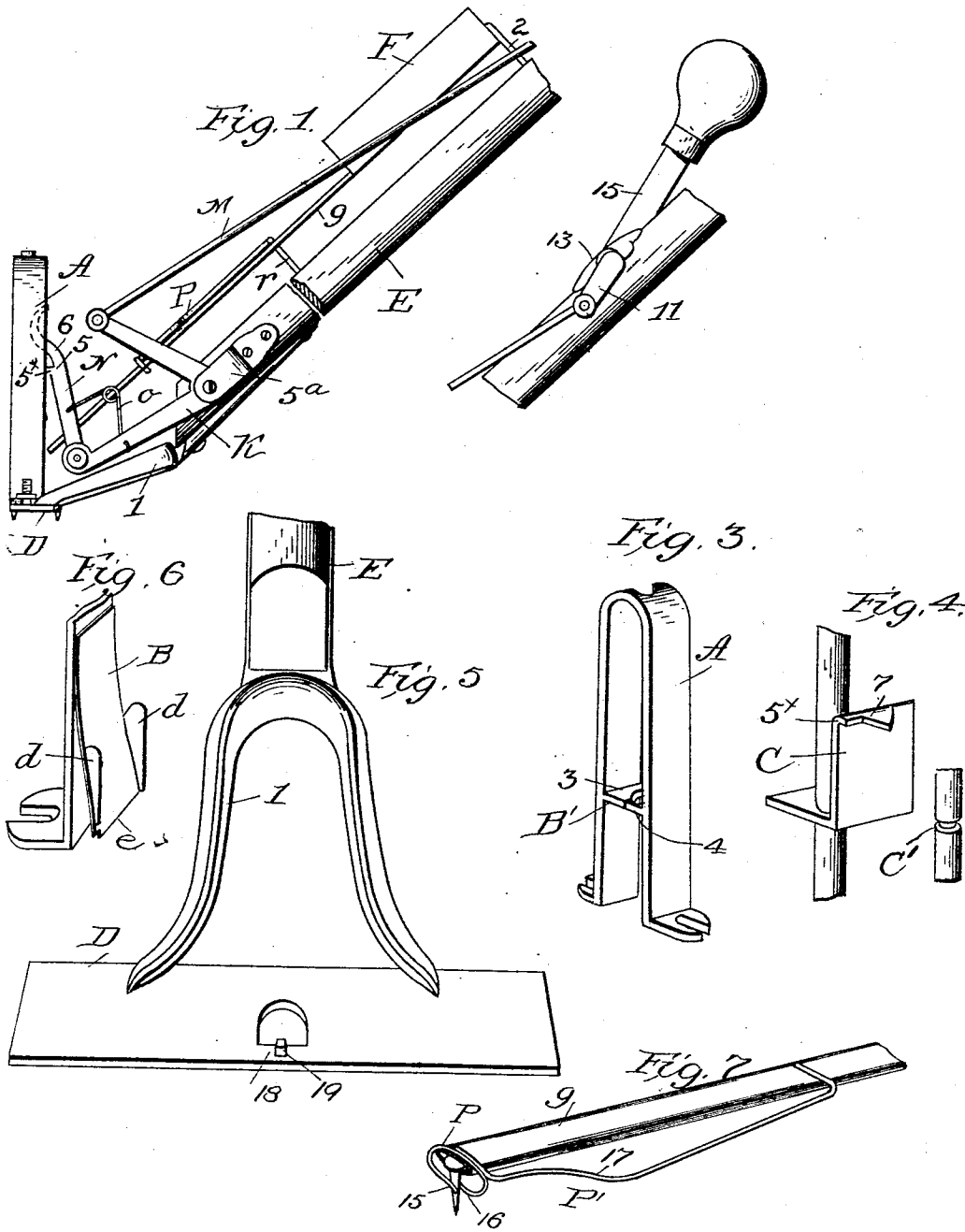
(No Model.)

2 Sheets—Sheet 1.

G. W. KELLEY.
CARPET STRETCHER AND TACKER.

No. 514,474.

Patented Feb. 13, 1894.



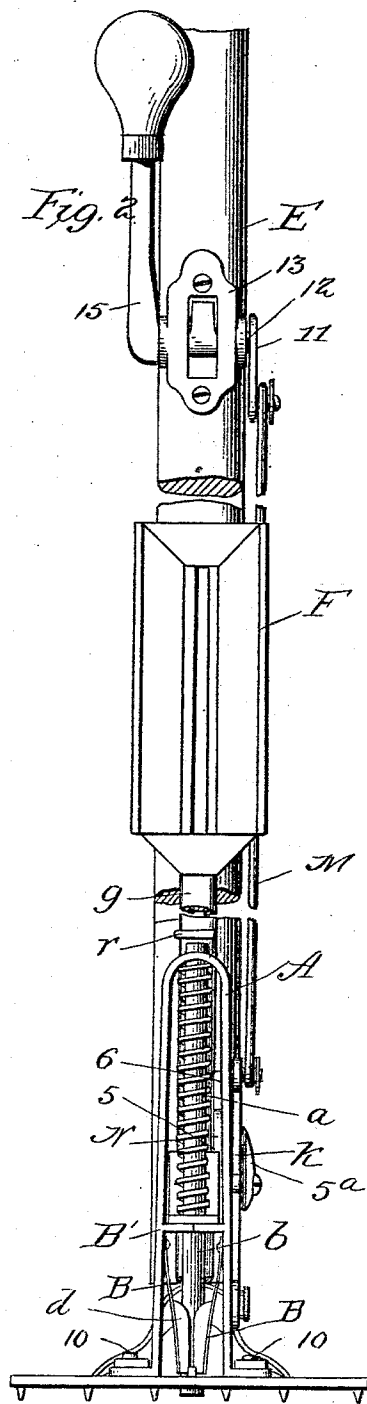
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UNITED STATES PATENT OFFICE

GEORGE W. KELLEY, OF MUSKEGON, MICHIGAN.

CARPET STRETCHER AND TACKER.

SPECIFICATION forming part of Letters Patent No. 514,474, dated February 13, 1894.

Application filed March 30, 1893. Serial No. 468,284. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. KELLEY, a citizen of the United States of America, residing at Muskegon Heights, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Carpet Stretchers and Tackers, of which the following is a specification, reference being had therein to the accompanying drawings.

It is the object of my invention to provide a combined carpet stretching and tacking implement in which a minimum number of parts are used to produce a highly effective device.

In the drawings, Figure 1, is a side view of the implement complete; Fig. 2, a front view, and Figs. 3, 4, 5, 6 and 7 are views of details.

The carpet stretching portion of the implement comprises the base plate D having brads or spurs on its under side to engage the carpet, said plate having also a forked arm 1 connecting it to the handle E extending at a proper angle to the plate D to enable the operator to use the implement readily by grasping the handle. The tacks to be driven are placed in the reservoir F secured at one end to the handle by the wire 2, soldered to the reservoir and having its other end driven into the wooden handle. This reservoir has sloping sides and a slotted bottom, so that the tacks can arrange themselves with their points projecting downward through the slotted bottom and in position to slide into and down along the tack runway g which has a slotted bottom corresponding substantially to that of the reservoir. The runway connects with the reservoir at its upper end and is supported from the handle by the wire posts r driven into the handle and having right angular upper ends soldered to the runway. The tacks are delivered one by one from the lower end of the runway between the spring guides B, B, secured to the opposite sides of the housing A secured by bolts 10, passing through its slotted feet and through the stretcher plate D. These guides receive and retain the tack in vertical position with its point downward. The guides incline inwardly toward each other and have side lips or flanges d which retain the tack in position to be driven by the driving plunger b, which is movable vertically through the upper

arched part of the housing and the transverse guide B' formed by the two sections 3, 4 on the opposite sides of the housing, each section having a semi-circular opening which when the sections are brought together form a circular opening to receive and guide the plunger. The plunger is pressed normally downward by a strong spiral spring a encircling the rod and at its upper end bearing against the arched part of the housing. The plunger has a right angular lifting plate C secured thereto by fitting in the groove C' Fig. 4 and the lower end of the spring presses on this plate to drive the plunger down when released, after being lifted by the pawl N having the tooth 5 to engage the lips 5* on the plate and a curved upper extension 6 to engage the upper arched part of the housing in order to tilt the pawl back when it reaches its upper limit of movement and thus release the plunger which then is driven violently down by its spring to drive the tack. The pawl is pivotally carried by bell crank lever K pivoted to the side of the handle and held by a clip 5* a spring o being used to press the pawl normally forward to engage the lifting plate. The spring o is connected at its ends to the pawl and the bell crank lever respectively. The lifting plate has a rearwardly projecting lug 7, which acts as a lateral bearing for the upper end of the pawl. The bell crank K is operated by a rod M connecting it to a crank shaft which includes the crank arm 11 connected to the rod M, the bearing part 12 journaled between the bearing plate 13 and the handle, and the operating crank arm 15, at the right hand end of the shaft to which any suitable knob or handle is attached. The bearing plate is slotted centrally and the crank shaft has a central tapered stud projecting through said slot and adapted to bear on the end walls thereof and limit the movement of the crank shaft in either direction. This limits the throw of the bell crank K. The tack feed cut off, comprises the wire loop P encircling the runway and having its free ends 15--16 overlapping but out of contact with each other and located directly below the slot in the run way, the space between the two overlapping ends being sufficient to permit the passage of the shank of the tack. The loop is carried by a spring arm P' at-

tached to the runway and having a cam surface 17, in the path of the rear arm of the bell crank lever K so that as said lever is moved rearwardly the spring arm will be pressed aside operating the cut off loop laterally of the runway and thus feeding the tacks one by one from which point they move down by gravity and fall point downward between the spring flanged guides; the plunger at this time is being raised by the pawl and the tack is free to fall from the runway.

It will of course be understood that the upright arm of the bell crank lever is arranged to control and operate the spring arm P' so as to prevent double feeding.

The opening in the plate D, for the passage of the tack and plunger is closed across the front by the bar 18 having a stud 19 adapted to afford a bearing for the lower ends of the side flanges *d* of the spring guides so that should the spring on one side be stronger than that on the other there will be no tendency to press the weaker guide out of proper position. The guides are extended as at *e* down into the opening to form a longer bearing for the tacks. I prefer to place the knob or handle on the crank arm centrally of its end to project in line with said arm. This allows the handle to lie in the hollow of the hand while being pressed back.

I claim—

1. In combination, the base plate, the handle attached thereto, the housing projecting up from the plate, the spring plunger guided in the housing, the pawl operating vertically of the housing and arranged to contact with a portion thereof as it completes its upward movement, whereby the pawl will be positively released and the operating mechanism for the pawl, substantially as described.

2. In combination, the base plate, the handle, the housing projecting up from the plate,

the spring plunger guided thereby, the lifting plate on the plunger, the spring between the lifting plate and the upper end of the housing, the pawl for engaging the lifting plate having its upper end in the path of a portion of the housing to be released thereby and the means for operating the pawl, substantially as described.

3. In combination, the base plate, the handle, the housing on the base plate, the spring driving plunger guided in the housing, the pawl having a tooth 5, for lifting the plunger and the upper extension to engage a portion of the housing to release the plunger, the bell crank pivoted to the handle and pivotally supporting the pawl, the spring for pressing the pawl and the means for operating the bell crank, substantially as described.

4. In combination, the perforated base plate, the housing extending up over the opening in said plate, the leaf spring guides B, B secured at their upper ends to the opposite sides of the housing and converging downwardly, said guides having side flanges *d*, and lower projecting portions *e* adapted to extend down into the opening in the base plate, and the stud 19 on the plate to engage the guides, substantially as described.

5. In combination, the tack driving mechanism, the handle, the rod M, and the means for operating the same consisting of the crank shaft having a handle and a central spur or projection and the slotted bearing plate for securing the crank shaft to the handle, the said spur or projection extending through the slot in the plate substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. KELLEY.

Witnesses:

WILLIAM A. WHITE,
HARVEY TURRELL.