(No Model.)

F. J. FELDT.

KEY SEATING ATTACHMENT FOR METAL PLANING AND SHAPING MACHINES.

No. 483,714. Patented Oct. 4, 1892.

Fig. 1.

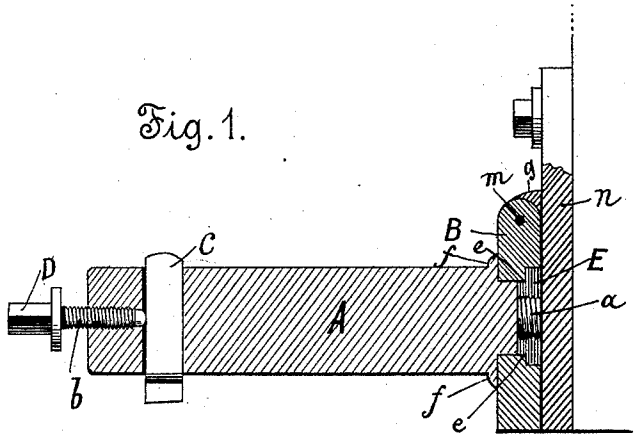


Fig. 2

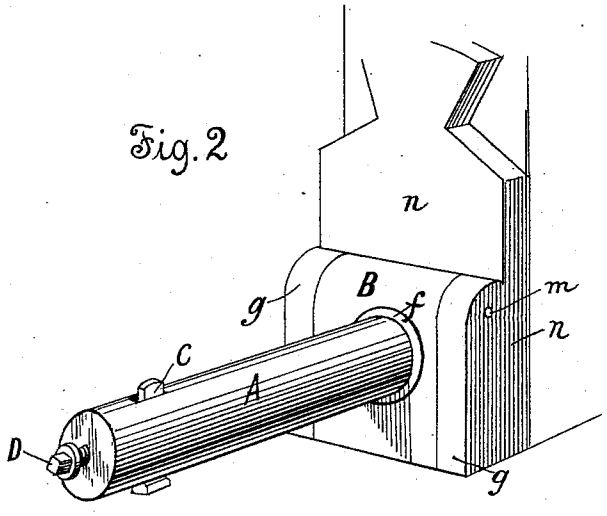
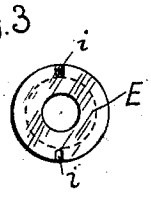


Fig. 3



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UNITED STATES PATENT OFFICE.

FERDINAND J. FELDT, OF PEORIA, ILLINOIS.

KEY-SEATING ATTACHMENT FOR METAL PLANING AND SHAPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 483,714, dated October 4, 1892.

Application filed November 5, 1891. Serial No. 410,938. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND J. FELDT, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Key-Seating Attachments for Shaping and Metal-Planing Machines; 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.

My invention relates to certain new and useful improvements in metal planing and shaping machines, and more particularly to an attachment for cutting key-seats, by means of which an attachment is provided for metal planing and shaping machines, being simple in construction, effective in operation for the purpose designed, and durable and cheap in first cost.

More particularly my invention relates to a key-seating attachment for shaping-machines attached to a carriage designed to move back and forth and bearing with it in such movement the slotting attachment designed to cut key-seats and groove metal. The essential features of my invention consist of the metal extension A, slotted at its forward end to bear the cutting-tool C, and provided with a threaded perforation in its forward end and at right angles with a slot in which the cutting-tool C is borne, and further provided with the set-screw D, threaded, as at *b*, designed to secure the cutting-tool in position, and the hinged trap-plate B, to which the extension A is secured, and the means for the attachment of the extension A to the trap-plate B.

That my invention may be more fully understood, reference may be had to the accompanying drawings, in which—

Figure 1 is a cut sectional view showing my slotting attachment properly adjusted in connection with the carriage of a metal-planing machine. Fig. 2 is a perspective view of my improvement properly attached for work or operation. Fig. 3 is a detailed view of a tap or nut.

In the drawings, *n* is a metal-plate designed to be secured to the forward end of a carriage or sliding frame attachment for a metal planing and shaping machine and is provided with the lugs *g g*, and between said lugs is fitted the metal trap B, pivoted to the lugs, as at *m*, thus enabling it to swing freely upon the said pivot. A is a metal extension provided with the rim *f* to add to its strength or to assist it in bearing heavy strains. The extension A bears partially through the opening *e* in the trap-plate B and is provided with the threaded extension *a*, upon which is designed to be screwed the tap or nut E, the same fitting within the angular recess in the trap-plate B, and is screwed in position by means of a socket-wrench fitted into the socket-holes *i i*, as shown in Fig. 3. The extension A is further provided with a transverse slot, in which is designed to be carried the cutting-tool C. D is a set-screw for securing the cutting-tool in position. The extension thus provided, designed to bear the cutting-tool, is, by the adjustment shown and described, made perfectly rigid and incapable of being sprung or twisted from its proper alignment, but in operation is carried forward in a direct and straight line, and its attachment and detachment are the very simplest, thus rendering it a practical tool or attachment that will cut the very hardest of metals, even phosphor-bronze, or, in fact, any metal that may be desired to be slotted or grooved.

The construction of attachments designed for the same purpose has heretofore been very crude and insufficient, it being usual to provide a very short extension-bearing through the perforation in the trap B, and provided with a slot, within which was fitted a cutting-tool and secured therein by means of a set-screw pressing the tool against the face of the trap or washer provided thereon, the said tool curving and extending forward a considerable distance and provided with a depending cutting-edge, thus making a very flexible extension that was very liable to spring when applied to the metal in its operation, and the advantages of my improved attachments over the old forms consist in the rigidity of its attachment and its freedom from spring in its operation.

In operation as a slotting attachment the metal desired to be operated upon is first fixed rigidly in position and in alignment with

the extension A. The carriage to which the extension is attached moving forward brings the cutting-edge of the tool C in contact with the metal, grooving the same slightly as the extension and tool are borne forward, and when the groove or slot has been cut the desired length or the tool or carriage has traveled its maximum distance the extension and tool are returned with the return of the carriage, and with its return the extension A is borne upward slightly, the same swinging freely upon the plate B, the cause of the same being pivoted, as at *m*, the cutting-tool C dragging over and borne up by the surface of the metal until it reaches its original or first position, when the operation is renewed and repeated until the slot or groove is cut to a sufficient depth to adapt it as a key-seat or whatever purpose designed.

My attachment may be made of any material and in any proportion desired—namely, it may be made longer, shorter, thicker, or narrower, as desired, and may be varied in form and means of attachment to suit the application in which it may be desired to be used.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination, in a metal planing and shaping machine or the sliding carriages thereof, of the plate *n*, secured to the forward end of the carriage and provided with the lugs *g g*, the pivoted metal trap-plate B, held in position, as at *m*, and provided with the opening *e*, and the metal extension A, provided with the rim *f f* and with the threaded extension *a*, upon which is designed to be screwed the nut E in the angular recess of the trap-plate B, the said extension A being further provided with the cutting-tool C, carried in a transverse slot in the forward end and secured in position by the set-screw D, all substantially as described and set forth.

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

FERDINAND J. FELDT.

Witnesses:
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