(No Model.)

S. M. COOK & J. E. SHERMAN.

SHAPER ATTACHMENT FOR LATHES.

No. 441,939. Patented Dec. 2, 1890.

Fig. 1.

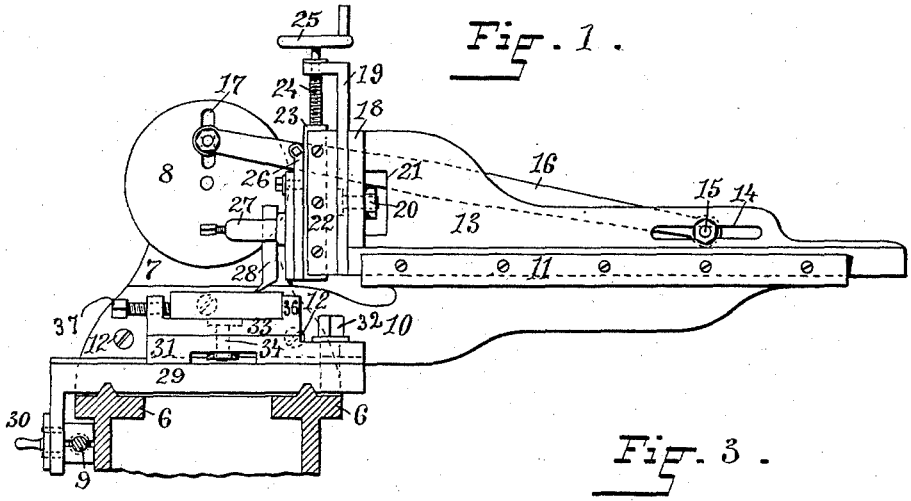


Fig. 3.

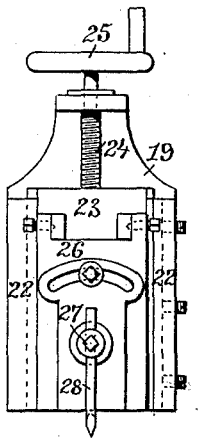
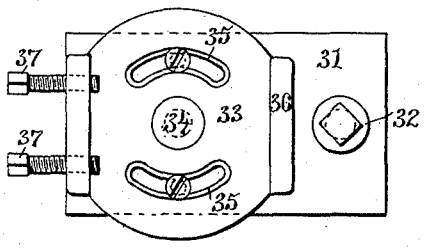


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SHAPER ATTACHMENT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 441,939, dated December 2, 1890.

Application filed January 13, 1890. Serial No. 336,741. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN M. COOK, of Mansfield, in the county of Bristol and State of Massachusetts, and JOHN E. SHERMAN, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Shaper Attachment for Lathes; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to a planer or shaper constructed so as to be readily secured to a lathe to shape or plane articles on the lathe.

The invention consists in the peculiar and novel construction of a bracket provided with ways, a reciprocating tool-head, and an adjustable work-bed adapted to be connected with and operated by a turning-lathe, as will be more fully set forth hereinafter.

Figure 1 is a view of our shaper attachment shown attached to a lathe. Fig. 2 is a plan view of the adjustable work-holder. Fig. 3 is a view of the tool-holder.

Similar numbers of reference indicate corresponding parts throughout.

In the drawings, the numbers 6 indicate the bed or ways of a lathe; 7, the head-stock; 8, the face-plate secured to and turning with the spindle in the head-stock. The head-stock and spindle are constructed in any one of the usual manners for constructing these parts in power-lathes, with or without the usual change-gears for driving the leading-screw 9, or a hand-operated feed mechanism may be used in connection with the screw 9. The bracket 10 is provided with the slide or way 11. The bracket 10 is shown secured to the head-stock 7 by the screws 12, so as to project at right angles beyond the bed of the lathe. The carriage 13 slides in the way or bed 11. It is provided with the slot 14, in which the wrist-pin 15 is adjustably secured, and on the outer end of the said wrist-pin 15 the connecting-rod 16 is pivoted. The other end of the connecting-rod 16 is pivoted to a wrist-pin adjustably secured in the slot 17 of the face-plate, so that on turning the spindle of the lathe in the head-stock, and with it the face-plate 8, the carriage 13 is reciprocated, sliding outward and inward at right angle to the bed or the ways of the lathe. The forward end of the carriage 13 is provided with the vertical bed-plate 18, to which the bed 19 is secured by the swivel-bolt 20, the nut of which can be turned with a wrench to secure the bed 19 at any desired angle. The opening 21 is made in the carriage to receive the nut and turn the same. The bed 19 is provided with the ways 22, in which the tool-carriage 23 slides, and is adjusted by means of the screw 24, provided with the hand-wheel 25, in the usual manner in which the tools or cutters of shapers or planers are adjusted.

26 indicates the hinged tool-holder, 27 the tool-post, and 28 the tool or cutter.

The number 29 indicates the bed of the slide-rest, which is provided with the usual attachments (indicated by the number 30) for connecting and disconnecting the bed of the slide-rest and the leading-screw 9, or for moving the slide-rest by hand. To the bed 29 of the slide-rest the work-holder is secured, consisting of the plate 31, the under surface of which is formed so as to slide in the ways on the bed 29 of the slide-rest, and is secured by the bolt 32 and the adjustable clamp-plate 33, pivotally secured to the plate 31 by the bolt 34 and adjustably secured by bolts extending through the segmental slots 35. The work is held between the abutment 36 and the screws 37.

In machine-works, where a variety of light work is done, it is most desirable to at times use a shaper or planer. An engineer or a tool-maker is usually limited to the use of a lathe, and any economical attachment by which the lathe can be transformed into a shaper-planer and slotting-machine is a great boon to the mechanic, enabling him to do with one machine a large variety of work. The bracket 10, secured to the ordinary power-lathe, as shown in Fig. 1, either in the exact manner shown or in some other convenient manner, the connection with the face-plate made, and the work-holder substituted for the slide-rest, secures a shaper, slotter, or planer by which good work can be readily done through the mechanism of the lathe. The work may be

regularly fed to the cutter by connecting the bed 29 with the leading-screw, or the work may be fed by hand. All the parts can be constructed of any desired strength, so as to perform work of considerable magnitude.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, with the bed of a lathe, the head-stock, the slide-rest connected with the leading-screw, the plate 31, secured to the slide-rest, the adjustable clamp-plate 33, adapted to hold and feed the work, the bracket 10, secured to the head-stock and provided with ways 11, the carriage 13, provided with the adjustable tool-holder, and the connecting-rod 16, adjustably secured to the carriage and to the head-stock, substantially as shown and described.

In witness whereof we have hereunto set our hands.

STEPHEN M. COOK.
JOHN E. SHERMAN.

Witnesses:
J. A. MILLER, Jr.,
M. F. BLIGH.