2 Sheets—Sheet 1.

C. WALTER.

SLIDE RESTS FOR LATHES.

No. 176,102. Patented April 11, 1876.

FIG. 1.

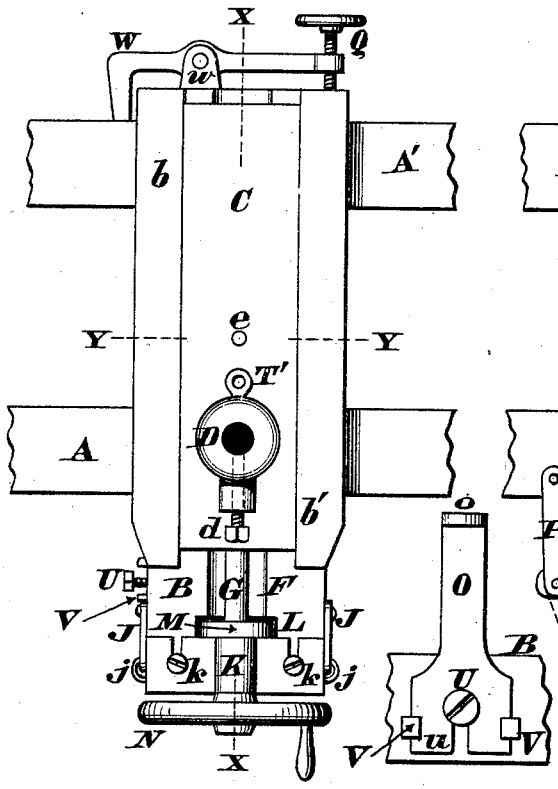


FIG. 2.

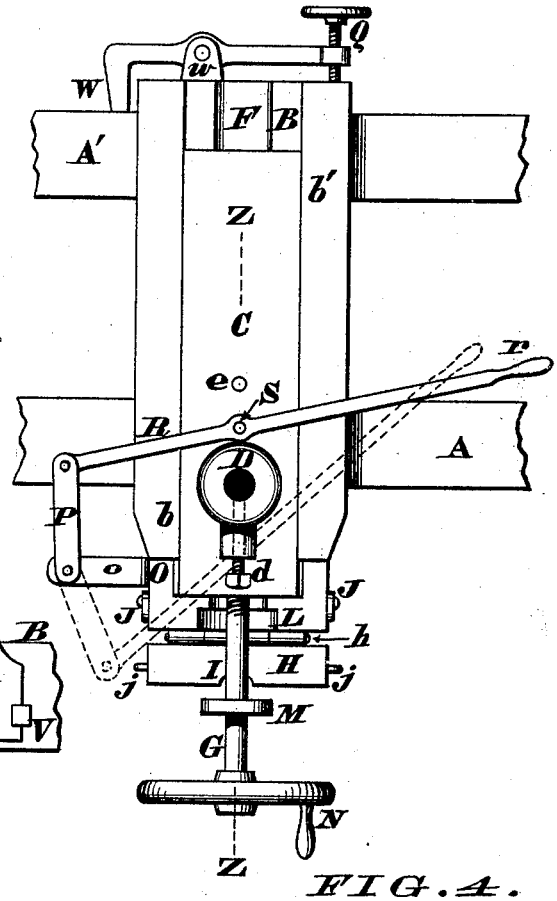


FIG. 3.

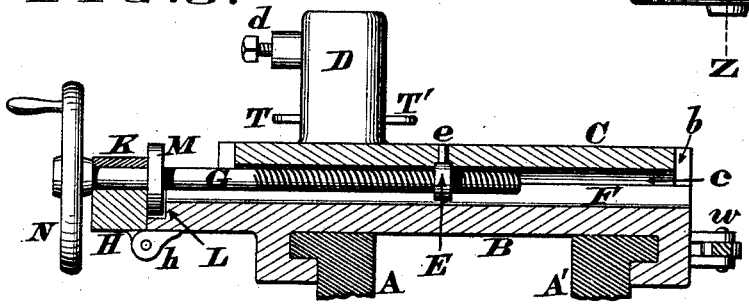


FIG. 4.

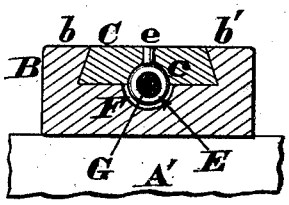


FIG. 5.

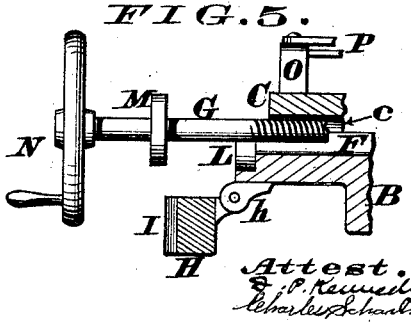
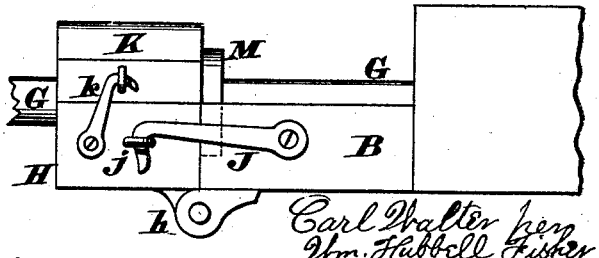


FIG. 6.



Attest.
E. P. Kennedy
Edwards Shadbrook

Carl Walter Jun
Wm. Hubbell Fisher
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2 Sheets—Sheet 2.

C. WALTER.

SLIDE RESTS FOR LATHES.

No. 176,102. Patented April 11, 1876.

FIG. 7.

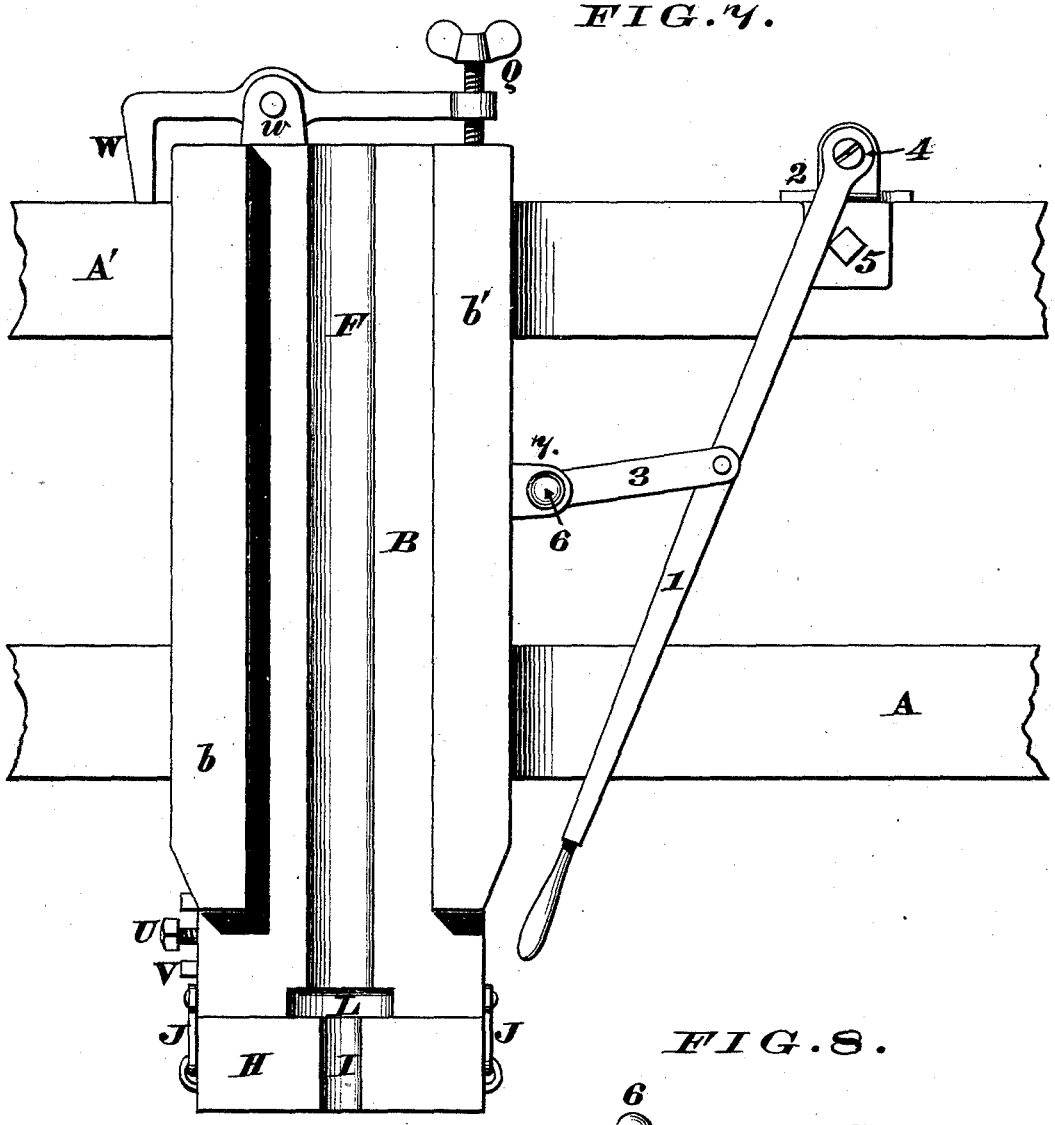
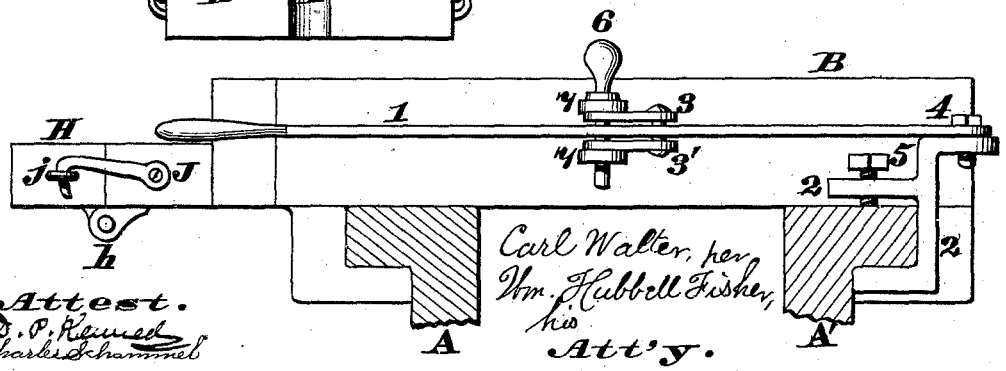


FIG. 8.



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D. P. Kennedy
Charles Shammel

Carl Walter, per
Wm. Hubbell Fisher,
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Att'y.

UNITED STATES PATENT OFFICE.

CARL WALTER, OF CINCINNATI, OHIO.

IMPROVEMENT IN SLIDE-RESTS FOR LATHES.

Specification forming part of Letters Patent No. **176,102**, dated April 11, 1876; application filed March 16, 1876.

To all whom it may concern:

Be it known that I, CARL WALTER, a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Slide-Rests for Lathes, of which the following is a specification:

The first part of my invention comprises a peculiar combination of devices for reciprocating the slide-rest of a lathe transversely of the shears, the rest being arranged so as to be operated with a screw when a gradual and slow feed is required, while a rapid movement of the rest is effected with a hand-lever, as hereinafter more fully explained.

The second part of my invention comprises an instrumentality for shifting the slide-rest carriage longitudinally of the shears, the principal feature of this improvement being a hand-lever, whose rear end is pivoted to a shiftable fulcrum-clamp, which latter is capable of being secured at any desired position on one of the lathe-shears. This lever is coupled to the slide-rest carriage by connecting-rods that can readily be detached, when it is desired to move said carriage by the feed-screw of the lathe.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan of my improved slide-rest, in condition for use with a screw. Fig. 2 is another plan, but showing the rest arranged to be operated with a hand-lever. Fig. 3 is a vertical section of the rest at the line *x x*. Fig. 4 is a transverse section at the line *y y*. Fig. 5 is a vertical section of the forward end of the rest at the line *z z*. Fig. 6 is an enlarged elevation of the forward portion of the rest. Fig. 7 is a plan of the devices for shifting the carriage longitudinally of the lathe, the slide-rest being removed from said carriage; and Fig. 8 is a side elevation of said devices, the lathe-shears being shown in section.

A A′ represent a portion of the shears or sides of a lathe of any approved form. Adapted to be shifted longitudinally of these shears is a bed-plate, B, whose undercut guides *b b′* confine to a rectilinear path the slide C, from which projects the tool-post D, the latter being provided with a customary set-screw, *d*, for retaining the tool securely in position. The under side of this slide is provided with a longitudinal groove, *c*, within which is located a nut, E, which latter is secured to said slide either with a shank, *e*, or otherwise.

The bed-plate B is furnished with a similar longitudinal groove, F, and these two grooves form a channel for the reception of a screw, G, that engages with the aforesaid nut E. This screw is adapted to rotate within a box, H, hinged at *h*, to the forward end of bed-plate B, as more clearly shown in Fig. 6. The bearing or concavity I of this box is in line with the grooves *c* F when said box is maintained in its normal position by the hooks J, and staples *j* or their equivalent devices.

K is the cap of the box, which cap is secured with bolts, thumb-screws or hooks K, or any other devices that will allow the ready detachment of said cap.

The extreme forward end of bed-plate B is furnished with a recess, L, that is adapted to receive a collar, M, of screw G, by which means any longitudinal shifting of said screw is prevented. N is a hand-wheel or crank wherewith the screw is rotated.

Projecting vertically from bed-plate B is a bracket, O, whose horizontal arm *o* has pivoted to it a pair of links, P, that are connected to a lever, R, having a handle, *r*, and a downwardly-projecting stud, S. This stud is adapted to engage with either of the perforated lugs T T′, that project horizontally from the tool-post D.

The bracket O is slotted at the lower end to receive a screw or bolt, U, wherewith said bracket is secured to the bed-plate of the rest.

Lugs V or their equivalent devices may be employed for maintaining the bracket in a vertical position.

W is a dog, pivoted to bed-plate B at *w*, and provided with a screw, Q, whose inner end is adapted to bear against the rear end of plate B, and thereby force the dog so tightly against shear A as to prevent any shifting of the rest longitudinally of the shears.

The devices for shifting the bed-plate or carriage B longitudinally of the shears consist, essentially, of a hand-lever, 1, fulcrum-clamp 2, and a pair of connecting-rods, 3 3′, said lever being pivoted to the clamp at 4. 5 is a set-screw, wherewith the fulcrum-clamp 2

is maintained at any desired point upon the shear A′. 6 is a removable pin, connecting the rods 3 and 3′ with ears 7, that project horizontally from one side of the bed-plate B.

When the slide C is to be reciprocated transversely of the shears A A′ the bracket O P and levers R *r* are dispensed with, and the collar M is retained in its socket L by means of the box H K, which is maintained in line with bed-plate B by the hooks J. By turning the wheel N either to the right or left the screw G causes the slide C to advance or retract along the guides *b b′* in the usual manner, the dog Q W serving to prevent any shifting of the slide transversely of shears A A′. This use of the screw serves to impart a slow and gradual transverse feed of the slide; but when it is desired to move the latter with greater rapidity the following changes are effected: The retaining devices K are first unslackened, so as to permit removal of cap K, after which hooks J are disengaged from staples *j*, and the box H turned down to the position shown in Figs. 2 and 5, so as to disengage the collar M from its socket L. The bracket O *o* is now applied to bed-plate B, and secured in position by the devices U V, the pin S of lever R being engaged with either of the perforated lugs T T′, which act leaves the slide C free to be reciprocated as rapidly as may be desired when the operator grasps the handle *r*.

The bracket may be readily detached from the bed-plate, the box closed up, and the collar engaged within its socket, when it is again desired to employ the screw G for operating the slide.

The bed-plate B and its attachments can be shifted very quickly along the shears by employing the devices shown in Figs. 7 and 8, the fulcrum-clamp 2 being first secured to the shear A′ by set-screw 5, and the rods 3 3′ connected to the ears 7. The carriage B C can now be shifted either to the right or left by simply grasping the handle of lever 1 and then throwing said lever in either direction, the dog W Q being first disengaged from shear A′.

As the fulcrum 2 can be clamped at any desired point on the shear A′, it is evident that by shifting said fulcrum the lever 1 may be made effective at any part of the lathe.

This rapid movement of the slide-rest carriage longitudinally of the lathe will save much time that would be consumed in operating said carriage by the usual feed-screw.

What I claim as new, and desire to secure by Letters Patent, is—

1. A slide-rest for lathes, when adapted to have either a slow or a rapid movement transversely of the shears, substantially as herein described and set forth.

2. The combination of hinged box H *h* J *j* and removable cap K *k*, for engaging the collar M of feed-screw G with the recess L of bed-plate B, for the purpose specified.

3. The detachable bracket O *o* U V and links P, for permitting the engagement of lever R S with either of the perforated lugs T T′, for the purpose designated.

4. The dog Q W, pivoted at *w* either to the front or rear end of bed-plate B, for the object stated.

5. The combination of lever 1, shiftable fulcrum-clamp 2 5, rod or rods 3, and attachments 6 and 7, as and for the purpose herein specified.

CARL WALTER.

Attest:
D. P. KENNEDY,
CHARLES SCHAMMEL.