

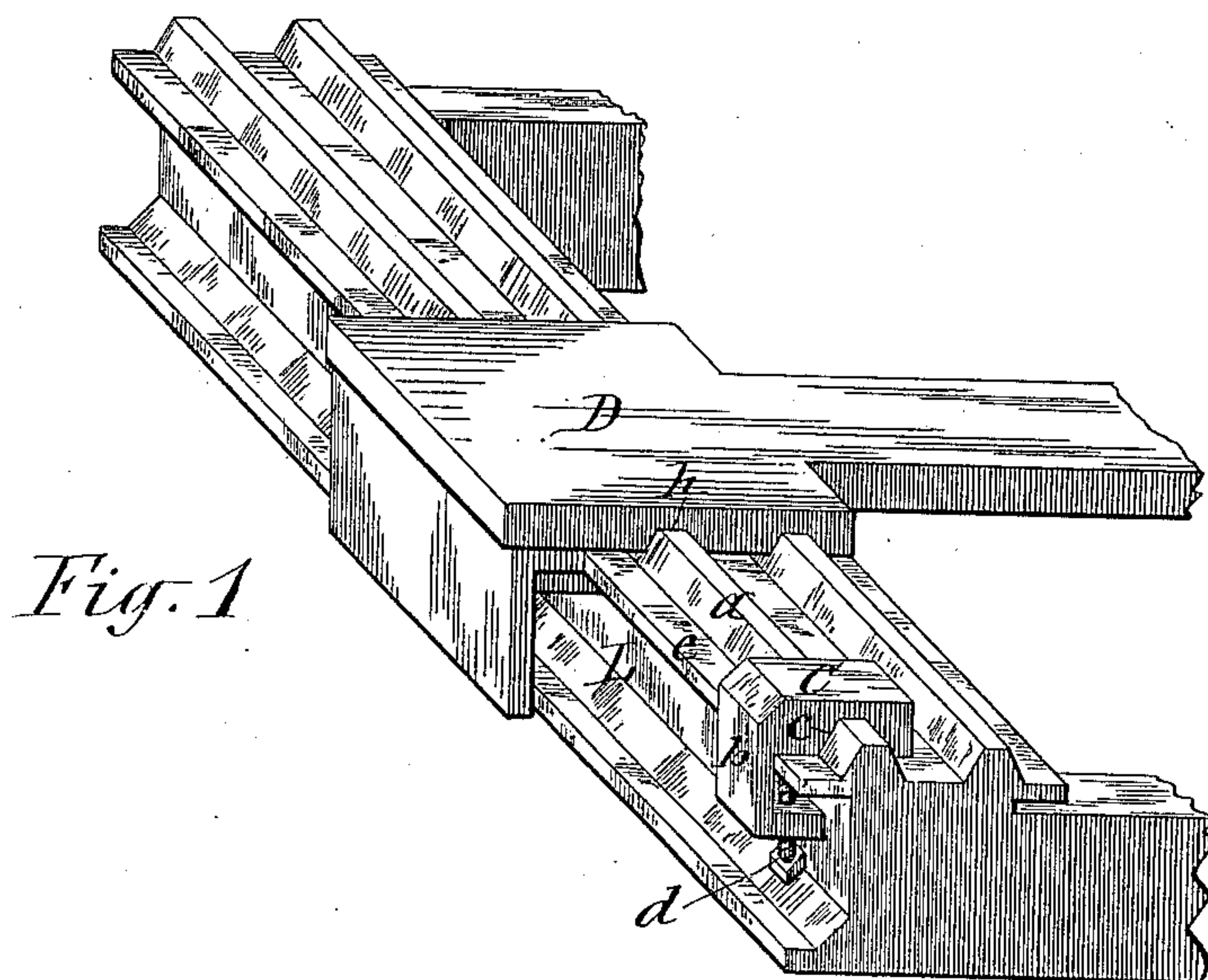
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T. HESLIN.

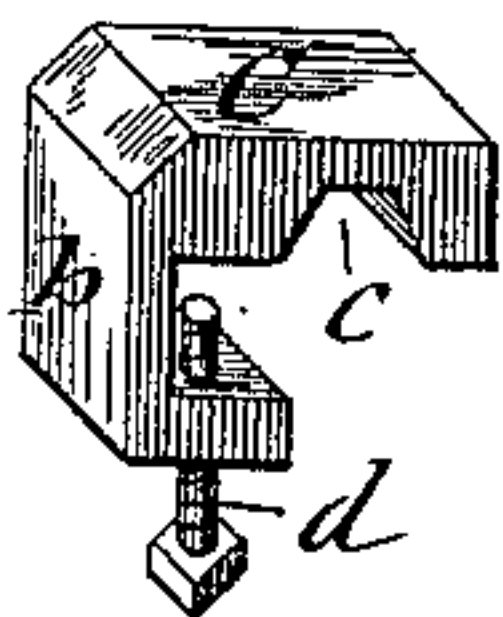
STOP FOR THE CARRIAGES OF SCREW CUTTING LATHES.

No. 387,514.

Patented Aug. 7, 1888.



*Fig. 1*



*Fig. 2*

WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS HESLIN, OF WATERTOWN, NEW YORK.

## STOP FOR THE CARRIAGES OF SCREW-CUTTING LATHES.

SPECIFICATION forming part of Letters Patent No. 387,514, dated August 7, 1888.

Application filed April 26, 1888. Serial No. 271,962. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HESLIN, of Watertown, in the county of Jefferson, in the State of New York, have invented new and useful Improvements in Screw-Cutting-Lathe Attachments, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

In ordinary screw-cutting lathes the tool-carriage is returned from the end of the cut to the beginning of the cut by the reverse motion of the lead-screw, and thus the tool is maintained in its requisite position in relation to the screw to be cut so as to follow the same successively. This entails the employment of two driving-belts running in opposite directions and shifters for throwing from loose pulleys to fastened pulleys, and also causes a considerable loss of time. To obviate these defects several devices have been resorted to for throwing the tool-carriage out of gear with the lead-screw at the end of the cut of the tool and returning the carriage to the starting-point by hand; but these devices required either a gage or graduated scale adjustably connected to the lathe-bed, or an indicator operated by the lead-screw, so as to indicate the relative position of the tool-carriage and lead-screw, and the manipulation of said devices required a skilled mechanic. Besides this, the adjustment of the tool-carriage to its starting-point caused considerable loss of time, and the devices were expensive and liable to rapid wear.

The object of my invention is to obviate all of said defects; and to that end it consists of a simple inexpensive abutment or stop which is applicable to any ordinary screw-cutting lathe, and is readily secured in proper position to arrest the return movement of the tool-carriage at the starting-point of the screw-threads to be cut, and requires no adjustment and no skilled labor, and is positive and reliable in its operation.

In the annexed drawings, Figure 1 is a perspective view of that portion of the lathe-bed to which my invention is applied, and Fig. 2 is a detached perspective view of the stop.

L represents the lathe-bed, formed with the usual longitudinal guide-rib, *a*, on top and with the horizontal flange *e*.

D denotes the tool-carriage, which rides on the aforesaid bed, and is guided by the rib *a*

entering a groove, *h*, in the under side of the carriage, in the usual manner, the tool-carriage receiving motion from the rotating feed-screw by a two-part nut connected to the carriage, and adapted to be thrown in and out of gear with the feed-screw in the well-known manner. (Not necessary to be here illustrated.)

C represents the stop by which to arrest the return movement of the carriage at the starting-point of the screw-threads to be cut. This stop is applied directly to the lathe-bed, and lies across the rib *a*, with which it engages by a groove, *c*, in the under side of the stop. Said stop is also formed with a pendent yoke, *b*, which reaches under the flange *e* of the lathe-bed, and by a set-screw, *d*, working vertically through the horizontal inward-projecting portion of the yoke and engaging the under side of the flange *e*, the stop C is firmly clamped on the lathe.

In the operation of cutting screw-threads on the article held between the live-spindle and dead-spindle of the lathe the tool-carriage is set in position to bring the tool to the point where the screw-threads are to begin on the aforesaid article. Then the stop C is set in a position to abut against the side of the carriage from which the latter is to move in cutting the screw-threads, and in this position the aforesaid stop is to be securely clamped by tightening the set-screw *d*. When this is effected, the stop is in position to perform its function, and no further adjustment or other manipulation of the stop is required thereafter until another article requiring a different length of screw-threads is put in the lathe. As soon as the stop is fastened on the lathe the latter can be set in motion, and when the tool-carriage arrives at the point where the screw-threads are to terminate, the attendant of the lathe throws the two-part nut of the carriage out of gear with the lead-screw and moves the carriage back to the stop C by hand, and as soon as the carriage strikes the stop the attendant throws the two-part nut again into gear with the lead-screw, which moves the tool-carriage forward to cause the tool to deepen the preceding cut.

It will be observed that by my improvement the use of scales or indicators is dispensed with and the time and care required to properly adjust by said scale or indicator the tool-carriage



in relation to the lead-screw at the beginning of the screw-threads to be cut are saved.

My invention must not be confounded with the numerous devices employed for automatically throwing off the feed on screw-cutting lathes, and thereby stopping the action of the cutting-tool at any given position on the work. A practical machinist will readily comprehend the difference of my invention from such prior devices, and will also readily appreciate the merits of my invention.

My invention is not designed to entirely relieve the attendant of the lathe from attention to the work. He is required to throw the feed out of gear by hand and slide the tool-carriage back to its starting-point.

The object of my invention is to relieve the attendant of the lathe from the care of finding the said starting-point and to insure the precise following of each successive cut of the tool in the previous cut thereof, and this I accomplish by a simple, inexpensive, and convenient device, which the machinist clamps on the lathe-bed so as to abut against the back of

the tool-carriage after the latter has been set back a sufficient distance from the point where the screw-cutting is to commence, and in doing this the machinist need not take particular care in setting the tool-carriage to any particular point.

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

On a screw-cutting lathe, the combination, with the lathe-bed, of a stop clamped rigidly thereon at a point to abut against that side of the tool-carriage from which the latter is to move in cutting the screw-threads, substantially as described and shown.

In testimony whereof I have hereunto signed my name, in the presence of two witnesses, at Watertown, in the county of Jefferson, in the State of New York, this 23d day of April, 1888.

THOMAS HESLIN. [L. S.]

Witnesses:

GEO. W. HICKEY,  
B. A. FIELD.