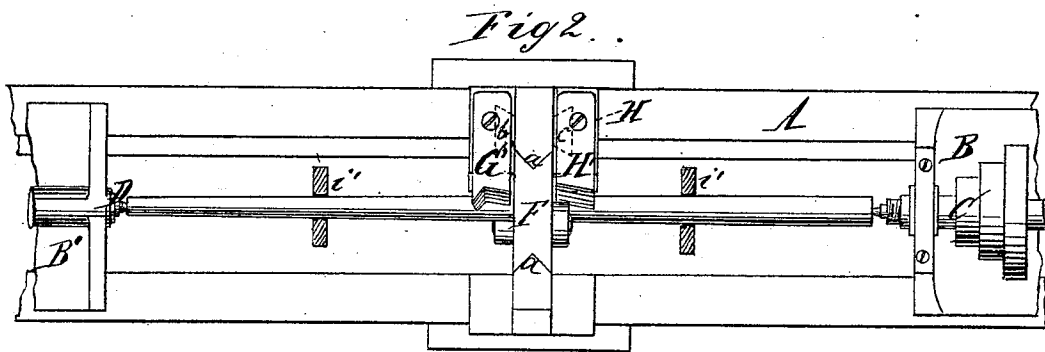
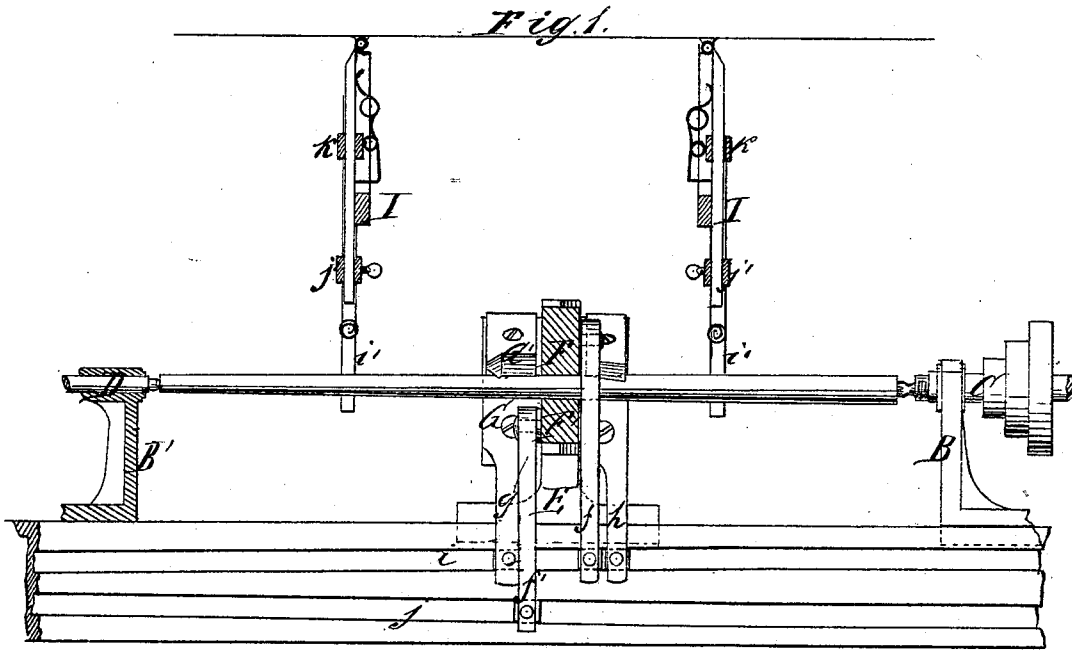


J. MOESSINGER.
Lathes.

No.148,234.

Patented March 3, 1874.



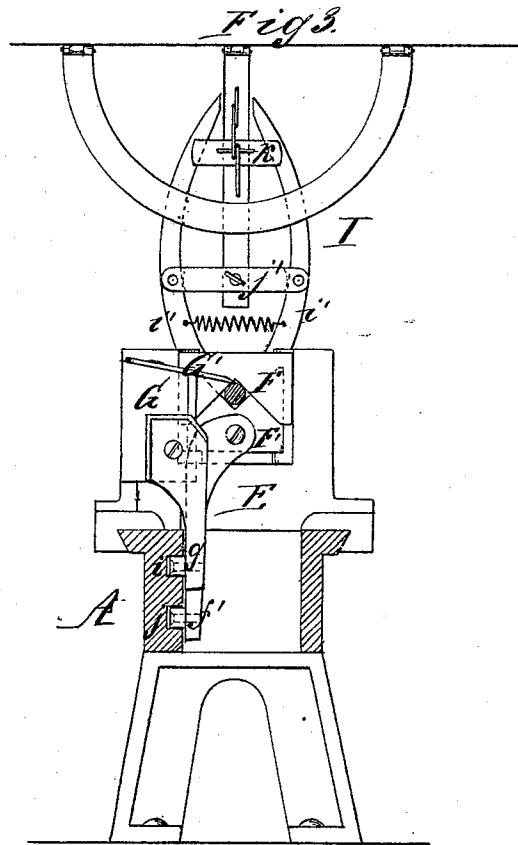
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UNITED STATES PATENT OFFICE.

JOHN MOESSINGER, OF NEW YORK, N. Y.

IMPROVEMENT IN LATHES.

Specification forming part of Letters Patent No. **148,234**, dated March 3, 1874; application filed September 4, 1873.

To all whom it may concern:

Be it known that I, JOHN MOESSINGER, of the city, county, and State of New York, have invented a new and useful Improvement in Lathes; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a horizontal section of the same. Fig. 3 is a transverse section of the same.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of guide-grooves, in the inner surface of the frame or shears of a turning-lathe, in combination with four arms, which catch in said guide-grooves, and two of which control the position of steadying-jaws, while the other two control the position of two knives, said arms, steadying-jaws, and knives being attached to a slide-rest, operating, in respect to one or more suspended steady-rests, in such a manner that, when the lathe is set in motion, the two knives cut the blank down to the desired shape, while the steadying-jaws are always kept in close contact with the surface of the same, and thereby billiard-cues or other articles of a similar nature can be steadied while being turned with ease and facility. With the lathe is combined a steady-rest, which is suspended from above, and composed of clamping-jaws, which can be brought in contact with the article to be turned in such a manner that when the slide-rest approaches the steady-rest can be readily swung out of the way, and, after the slide-rest has passed, it can be readjusted without loss of time.

In the drawing, the letter A designates the frame of a turning-lathe, on which are secured the head-stocks B B', one of which forms the bearings for the spindle C, and the other for the center slide D. On the frame A moves the slide-rest E, which is provided with guideways *a a*, for two jaws, F F', which are intended to steady the article to be turned. On one side of the guideways *a a* is formed a guideway, *b*, for a slide, G, carrying the roughing-knife G', and on the opposite side of said guide-

ways *a a* is formed a guideway, *c*, for a slide, H, carrying the finishing-knife H', and from each of the jaws F F', and of the slides G H, extend arms *f f' g h*, which serve to control the position of the steadying-jaws and of the knives in the following manner: In the inner surface of the frame A are two grooves, *i j*, which are curved and inclined in opposite directions, the curvature and inclination of the groove *i* being made to correspond to that of the surface of the article to be turned, while the curvature and inclination of the groove *j* is precisely the same as that of the groove *i*, but opposite to it in position—that is to say, the highest portion of the groove *i* adjoins the lowest portion of the groove *j*, and vice versa. From the arms *f f' g h* project pins, and the pins of the arms *f g h* engage with the groove *i*, while the pin of the arm *f'* engages with the groove *j*. As the slide-rest traverses on the frame, the steadying-jaws F F' are opened or closed by the grooves *i j* to correspond to the shape of the article to be turned, and said article is steadied throughout the entire operation of turning, both jaws being held firmly in contact with the surface of the article to be turned, whatever may be the position of the slide-rest. At the same time the knives G' H' are moved up or down by the arms *g h* and groove *i*, so that they cut the blank down to the desired form; and, since the arms *g h* extend down in a direct line from the knife-slides G H, the knives are not permitted to spring, and the work comes out properly finished. With my lathe is combined a steady-rest, I, which is suspended from above, being hinged to the ceiling, or to any other suitable support above the lathe, in such a position that it can swing in the direction of the length of the lathe. Said steady-rest consists of two jaws, *i' i'*, which are pivoted to the hanger *j'*, and the tail ends of which are exposed to the action of a spreading-slide, *k*. By moving this slide upward between the tails of the jaws, the jaws are caused to close up against the surface of the article to be turned. The spreading-slide is retained in position by a friction-spring, and by a spring-catch or any other suitable means. Two or more such steady-rests may be applied, according to the length of the article to be turned.

In turning a billiard-cue, I commence at the thickest end, and I steady the thin end by the hinged steady-rest or steady-rests. When the slide-rest approaches one of the steady-rests, such rest can be readily swung out of the way, and, after the slide-rest has passed, the steady-rest can be readjusted with little loss of time, and without stopping the motion of the lathe.

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

1. The slide-rest E, having the steadying-jaws F F', knives G' H', and arms *f f' g h*, in

combination with the guide-grooves *i j* in the frame, all constructed, arranged, and operating, in respect to a suspended steady-rest, I, substantially as and for the purpose specified.

2. A steady-rest, I, suspended from above, and provided with clamping-jaws *i i* and a spreading-slide, *k*, substantially in the manner herein set forth.

JOHN MOESSINGER.

Witnesses:

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