W. JONES.

Machines for Turning Carriage-Axles.

No. 144,908. Patented Nov. 25, 1873.

Fig. 3.

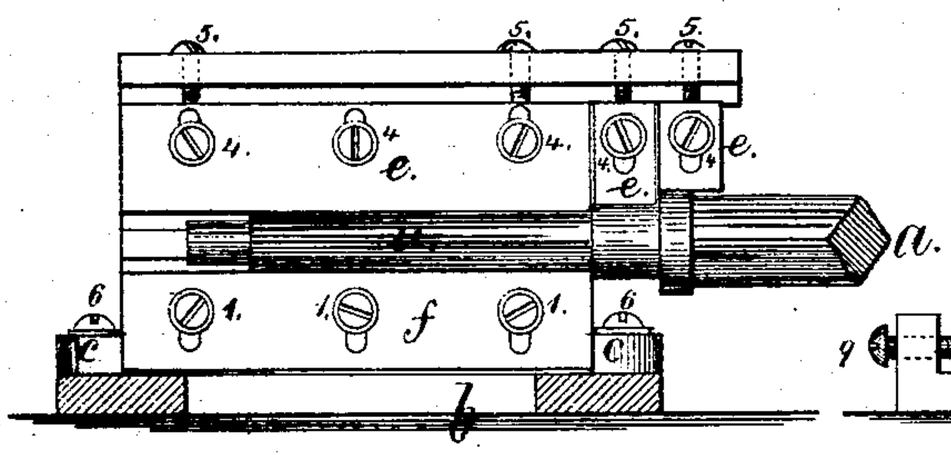


Fig. 2.

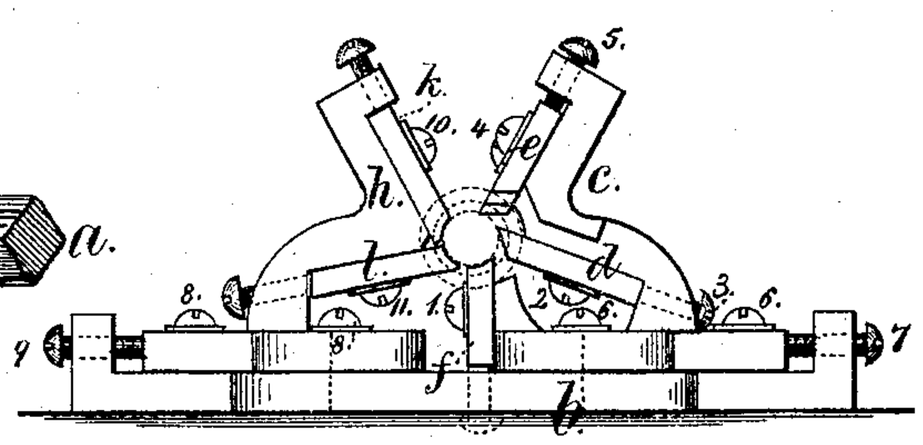
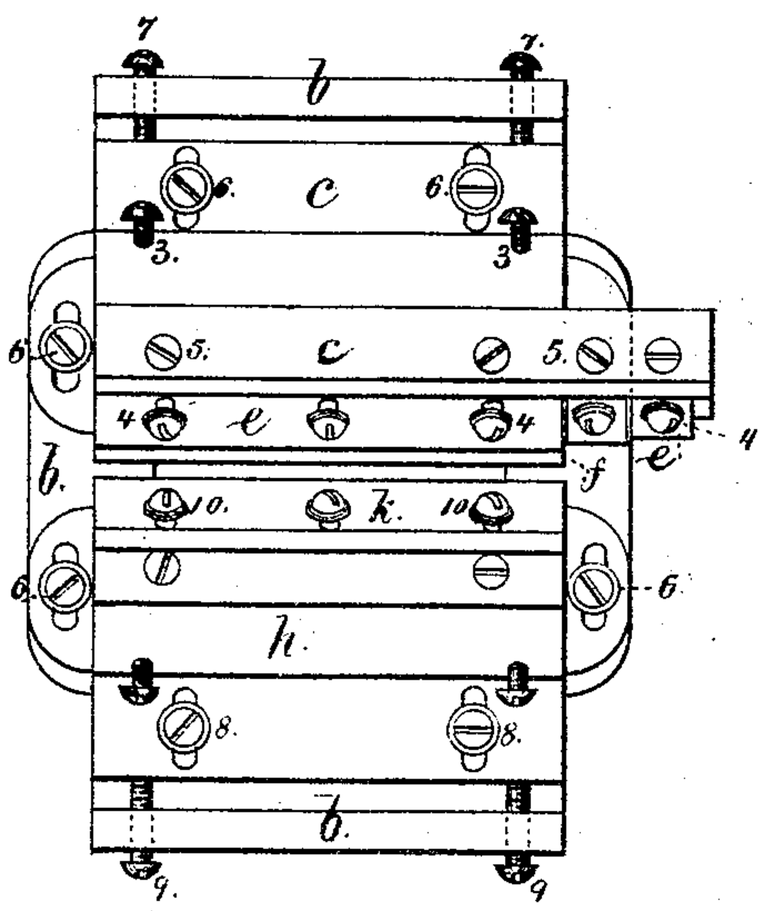


Fig. 1.



Inventor.

Willis Jones.

per Samuel W. Serrell

atty.

Witnesses,

Chas. Smyth

Geo. D. Walker.

UNITED STATES PATENT OFFICE

WILLIS JONES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR TURNING CARRIAGE-AXLES.

Specification forming part of Letters Patent No. **144,908**, dated November 25, 1873; application filed May 2, 1873.

To all whom it may concern:

Be it known that I, WILLIS JONES, of Brooklyn, E. D., in the county of Kings and State of New York, have invented an Improvement in Means for Finishing Axles and similar articles, of which the following is a specification:

Axles have heretofore usually been turned up to a pattern in a lathe, filed, and then ground into the box of the hub. This is expensive, and the axle is not adapted to fit any box except the one into which it is ground.

My present invention is made for the purpose of finishing axles and similar articles with great accuracy, so as to render it unnecessary to resort to grinding, and also to lessen the expense of manufacture.

I make use of a scraping or finishing tool mounted in an adjustable holder or stock, and made in sections, to facilitate sharpening and adjusting, in combination with adjustable pressers, that serve to support the axle during the finishing operation and prevent any tremulous movement.

In the drawing, Figure 1 is a plan. Fig. 2 is an end view; and Fig. 3 is a longitudinal section, showing the cutters, their stocks, and the tool-holding rest, as adapted to use in finishing the surface of the axle, Fig. 3.

The axle *a* is turned off in the rough in any ordinary lathe, and, to subject the same to the finishing operation of my improved mechanism, I mount it upon the arbor of a lathe having a long center, that will allow the finishing mechanism to be moved back for introducing or withdrawing the axle. Upon the bed of the lathe is a rest-plate, *b*, that can be connected with the screw to move the same endwise after being moved up to place in any usual manner. The stock *c* carries the tools *d* and *e*, that are finishing-cutters, and also the presser *f*, that is made with a square or slightly-concaved edge to form a supporting-bearing for the axle while being finished. The presser is clamped by the screws 1 1 after it has been adjusted to place. The cutter *d* is clamped by the screws 2, and set up by the screws 3, that pass through the stock *c*, and in the lower part of the stock *c* are openings to give access to the screws 2. The cutter *e* is made in sections, so as to more easily allow for adjustment to the size of axle to be acted upon, and for finishing the collars or shoulders of such axle, and for sharpening with facility. The screws 4 are employed for holding these cutters to the stock, and the screws 5 serve to set them up to their work with accuracy. The stock *c* is clamped to the plate *b* by the screws 6, and adjusted bodily thereon by the screws 7. A stock, *h*, held to the plate *b* by screws 8, and adjusted by screws 9, serves to carry the pressers *k* and *l*. These take a bearing against the axle to support the same while being finished, and they are attached by screws 10 11.

I claim as my invention—

The stock *c*, constructed as specified, and supporting the adjustable cutters *d* and *e* and presser *f*, in combination with the stock *h* and presser or pressers *k l*, the parts being adjustable, substantially as and for the purposes set forth.

Signed by me this 28th day of April, A. D. 1873.

WILLIS JONES.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.