S. G. NORTH & A. M. NORTON.

LATHE-DOGS.

No. 193,721. Patented July 31, 1877.

Fig. 1.

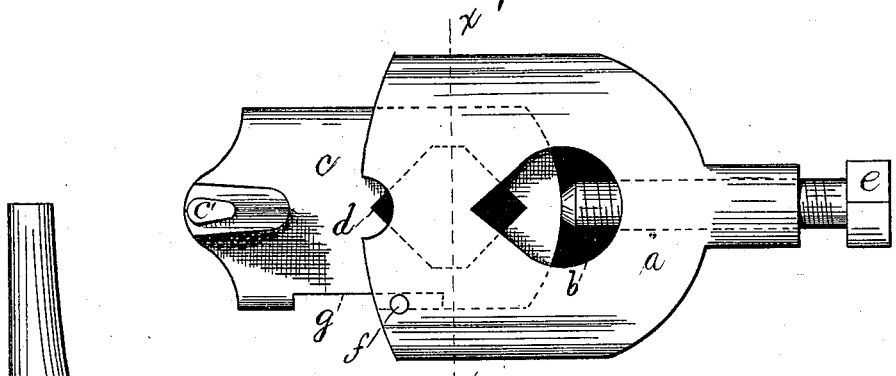



Fig. 2.

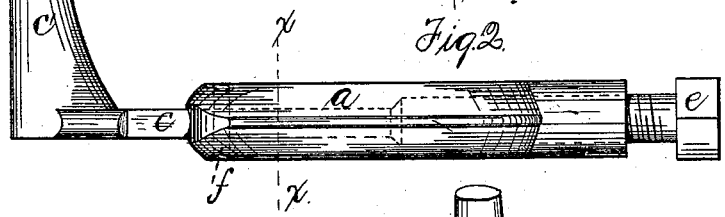



Fig. 3.

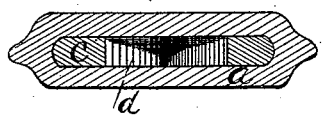
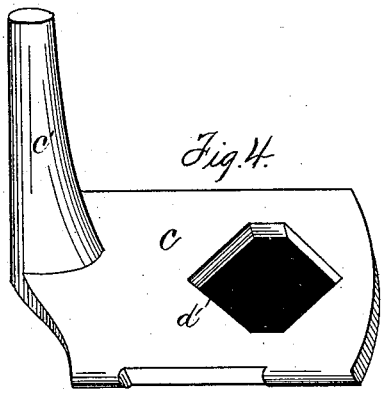



Fig. 4.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

SELDEN G. NORTH AND AURELIUS M. NORTON, OF HIGGANUM, CONN.

## IMPROVEMENT IN LATHE-DOGS.

Specification forming part of Letters Patent No. **193,721**, dated July 31, 1877; application filed March 24, 1877.

*To all whom it may concern:*

Be it known that we, SELDEN G. NORTH and AURELIUS M. NORTON, of Higganum, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements pertaining to Lathe-Dogs, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a face view. Fig. 2 is a side view. Fig. 3 is a cross-section of the body-piece, plane *x x*. Fig. 4 is a detail view of the slide.

The letter *a* denotes the hollow body-piece, cast all in one piece, preferably of malleable iron or steel, with the orifice *b* through it. One end of the orifice is angular. Into this body-piece slips the slide *c*, bearing the tongue or arm *c'*, which locks into the face-plate of the lathe, and having through it the orifice *d*, one or both ends of which may be angular. The screw *e*, running through the end of the body-piece, bears upon the inner end of the slide. A pin, *f*, driven through the body-piece, acting in conjunction with the mortise *g*, made in one side of the slide, (or, in large dogs, the mortise may be through the body of the slide,) limits the play of the slide in the body-piece. The two orifices—the one in the slide, and the one in the body-piece—act in conjunction to form a rectangular orifice, which may be made larger or smaller at pleasure, to embrace different sizes of stock, and their hold or gripe on the stock can be regulated by the screw at pleasure.

By these means the article to be worked is held or pressed mediately by the set-screw, and the dog is rendered more universal in its application, and more certain, sure, and reliable in its hold. The dog will hold and gripe a greater variety of sizes; the surface of the stock is not abraded, no matter how nicely finished, and the dog is practically balanced, whatever the adjustment of its jaws.

This device is convertible into a tap-wrench by developing the outer ends of the slide and set-screw into handles.

It is an essential feature of this invention that the body-piece *a* fit to both sides and both edges of the slide *c*, and mainly incase and cover it, to prevent any considerable wabble or play of the slide within the body-piece, such play of the parts—one upon the other—having a tendency to mar and abrade the surface of nicely-finished stock held by it. At the same time it is essential that the body-piece, having these requisites, be so shaped as to admit of being cast in one solid piece for the attainment of strength and cheapness.

The covering or incasing of the slide by the body-piece has also the advantage of protecting their contact-surfaces from grit and dirt.

By making the body-piece of the shape shown, we are enabled to make the slide of a plain rectangular bar.

We claim as our improvement and invention—

In combination, the hollow body-piece *a*, cast in one solid piece, fitting to the sides and edges of the slide, and having orifice *b*, the inner slide *c*, having the orifice *d* and mortise *g*, the set-screw *e*, and the pin or screw *f*, all arranged to operate as hereinbefore described.

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