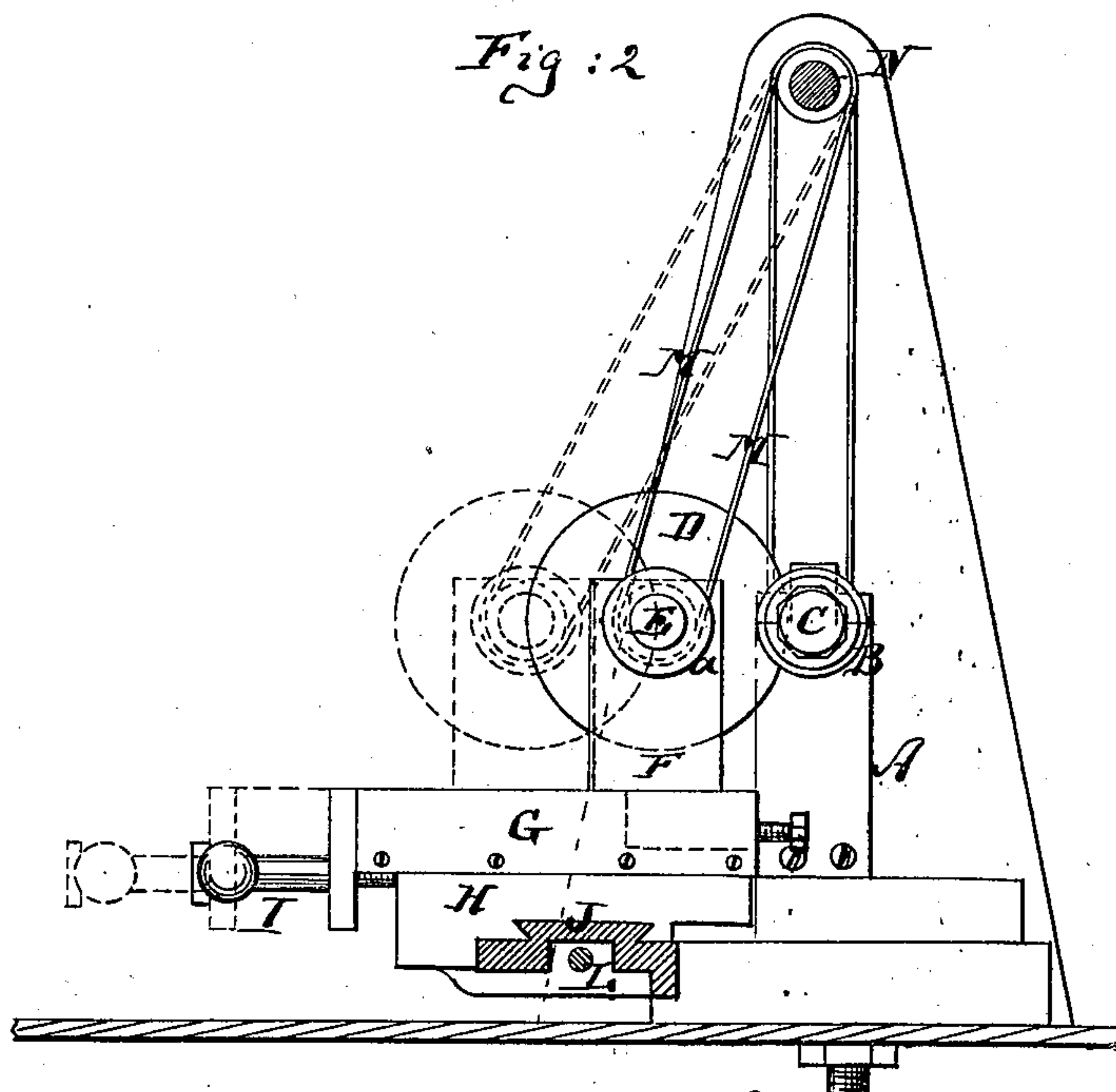
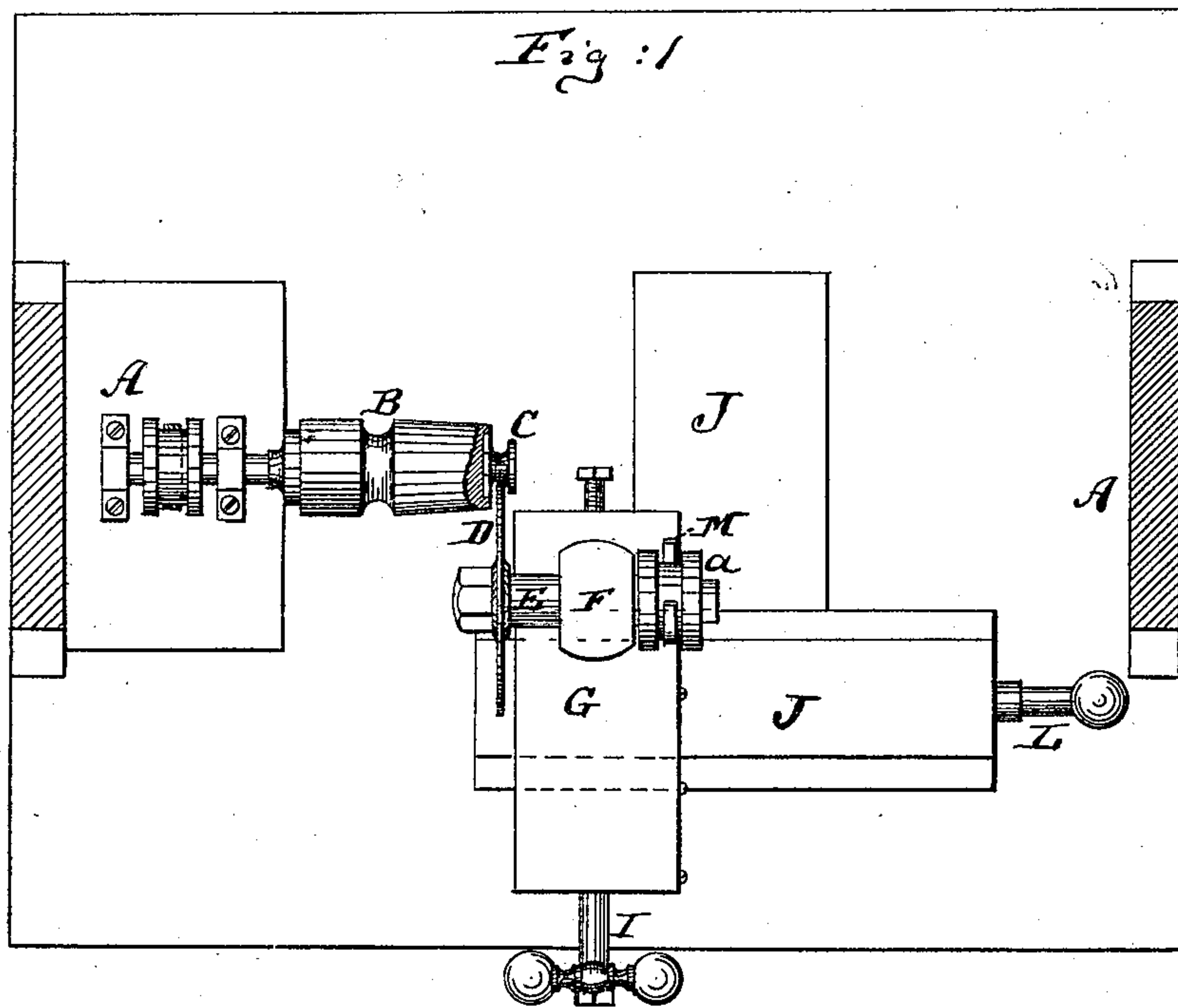


C. FEST.
Grinding-Lathe.

No. 215,901.

Patented May 27, 1879.



Witnesses:
John C. Tyndridge
T. B. Mosher

Inventor:
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by his attorney A. J. Jansen

UNITED STATES PATENT OFFICE

CHARLES FEST, OF NEW YORK, N. Y., ASSIGNOR TO GEORGE P. FARMER,
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IMPROVEMENT IN GRINDING-LATHES.

Specification forming part of Letters Patent No. **215,901**, dated May 27, 1879; application filed
December 20, 1878.

To all whom it may concern:

Be it known that I, CHARLES FEST, of the city, county, and State of New York, have invented a new and Improved Lathe for Working Pearl and other Goods, of which the following is a specification.

Figure 1 is a top view, partly in section, of my improved lathe. Fig. 2 is a cross-section of the same.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has for its object to adapt a lathe for the turning of articles made of mother-of-pearl—such as sleeve-buttons, &c.—which heretofore could only be turned or made by hand, owing to the impracticability of using stationary cutting-tools in connection with them on a machine. The invention is, however, also applicable to the turning or sawing of other substances on a lathe.

In order to adapt articles of pearl to operation on a machine, or vice versa, it is necessary to use rotary cutting or abrading devices which are adjustable in every direction, horizontally as well as longitudinally; and my invention consists in combining, with the rotary head of a lathe, that carries the article of pearl to be turned, a rotating cutting-tool, whose support is swiveled in a slide that is capable of longitudinal as well as transverse adjustment, the shaft of the rotary tool being revolved by means of an elastic belt, all as hereinafter more fully described.

In the accompanying drawings, the letter A represents the frame-work. B is the head or work-carrier, the same being adapted to receive the article, C, to be turned. D is a rotating tool, made of emery or other substance, and fitted upon the shaft E, that is hung in a post, F, which is swiveled or otherwise secured in a plate, G.

The plate G is capable of lateral adjustment on a support, H, and is connected with a screw, I, by means of which it may be so adjusted laterally.

The support H is placed upon a lower plate, J, and can be adjusted thereon lengthwise by means of a suitable screw, L.

It appears that the support F of the shaft E is capable of horizontal displacement both in a lateral and longitudinal direction, thus permitting the tool D to be brought to such parts of the work to be turned as may be requisite to produce the desired shape.

Motion is imparted to the shaft E by means of an elastic belt, M, which is placed around the driving-shaft N and around a grooved pulley, a, that is mounted upon the shaft E.

It is quite necessary that the belt M should be elastic—namely, that it be capable of following the lateral and longitudinal displacements of the shaft E without losing its hold upon said shaft and its capacity of rotating the same. Therefore, in the combination specified, the elastic belt constitutes an important element.

The operation of the machine need hardly be further described.

It is evident that the work to be turned is properly fitted into the head B, and that thereupon the operator, the belt M having been applied, regulates the position of the cutting or grinding edge of the tool D by turning the screws I and L as occasion may require, thus producing all shapes which it may be desired to impart to the article C.

The invention is also applicable for turning or sawing ivory, wood, metal, or other substances; and a saw may be substituted in the lathe for the rotary tool D.

I do not confine myself to the use of the machine on pearl.

I claim as my invention—

In combination with the laterally and longitudinally adjustable shaft E, having grooved pulley a, the elastic belt M, arranged to follow the movements of the shaft E, and to retain its hold upon the said shaft, substantially in the manner specified.

CHARLES FEST.

Witnesses:

T. B. MOSHER,
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