B. A. JONASSON.

Machine for Turning Pipes.

No. 210,857. Patented Dec. 17, 1878.

Fig. 2.

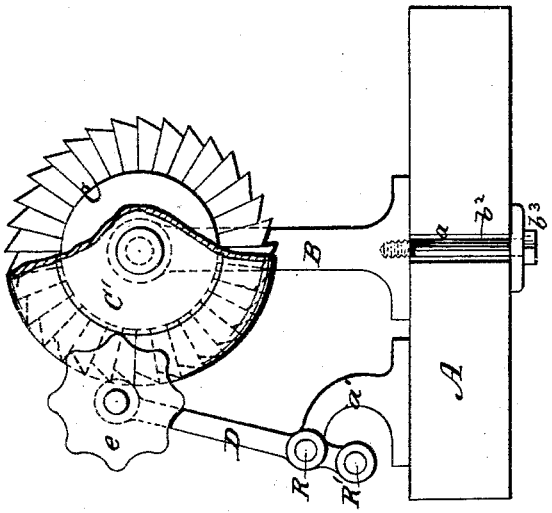


Fig. 1.

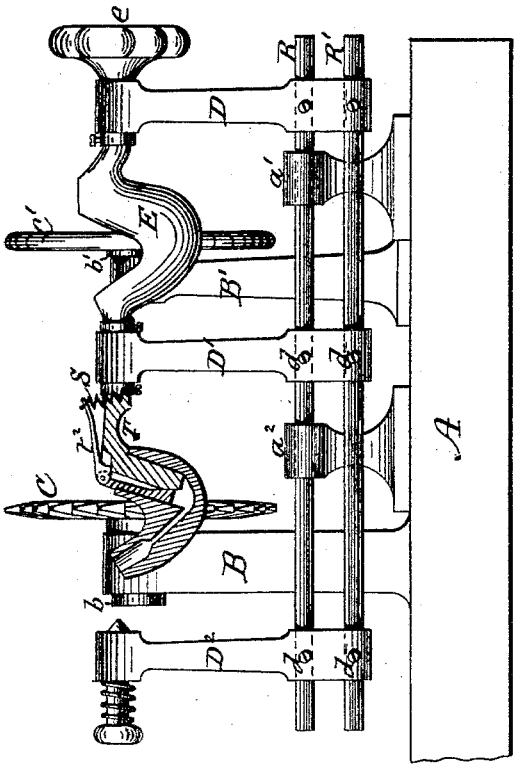
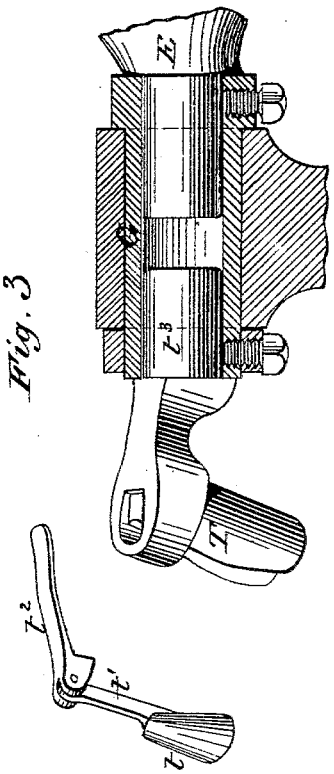


Fig. 3



Witnesses:

E. E. Masson

W. B. Masson

Inventor:

Bengt A. Jonasson

by Lewis Abraham

attorney

UNITED STATES PATENT OFFICE.

BENGT A. JONASSON, OF WARREN, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR TURNING PIPES.

Specification forming part of Letters Patent No. **210,857**, dated December 17, 1878; application filed July 18, 1878.

To all whom it may concern:

Be it known that I, BENGT A. JONASSON, of Warren, in the county of Warren and the State of Pennsylvania, have invented a new and useful Improvement in Machines for Turning Tobacco-Pipes, of which the following is a specification:

My invention consists of a lathe adapted to turn irregular forms, as shown in Figures 1 and 2, and a grooved sectional expansible tap, as shown in Figs. 1 and 3, and hereinafter described.

A is the bed, supplied near its center, lengthwise, with a slot, *a*. Into this slot *a* is permanently fixed a stationary head-stock, B, carrying the shaft *b*. At the end of the shaft *b*, and within the head-stock B, is a rotary cutter-wheel, C, having filing-edges on its face.

At the opposite end of the slot *a* is another movable head-stock, B′, which, on a short spindle, b^1, carries a revolving guide-wheel, C′, the periphery of which impinges against the shaping-block E. The movable head-stock B′, at its lower end, is supplied with a sustaining-rod, b^2, which can be slid forward and backward through the slot *a*, and when in proper position is held by means of the nut b^3. By this means the two head-stocks B and B′, with their bearings and wheels, can be kept at any required distance from each other, the slot *a* acting as a track for guiding the head-stock B′.

In the front part of the bed A, passing through eyes in the two bent standards a^1 and a^2, is a rod, R, which, besides passing through the eyes of the standards a^1 a^2, also passes through eyes pierced in the swinging arms D D^1 D^2, and are held by means of screws *d d d*. This rod R, with the several parts it carries, can thus be guided backward and forward through the eyes of the standards a^1 a^2 until stopped by the arms D. The swinging arms are each weighted at their lower ends. Below the rod R is another rod, R′, which also passes through other eyes in the swinging arms D D^1 D^2, but not through the standards a^1 a^2. When the rod R′ is forced inwardly, it impinges against the curved parts of the standards a^1 a^2, beyond which it cannot pass, and the arms, with the several parts they carry, above the axle-point formed by the rod R, thus become inclined outwardly away from the rotary cutter and the guiding-wheel C. A contrary movement will bring the upper parts of the swinging arms, with the several devices they carry, inwardly against the wheels C C′. The upper parts of each swinging arm D D^1 D^2 are each pierced with a circular slot in order to carry a spindle, which spindle carries several members, as follows:

First, the shaping-block E, which has the contour of the exterior of the pipe-bowl desired to be turned. This block-piece is made to impinge against the periphery of the wheel C′, it being guided by means of the hand-wheel *e* when the lathe is set in motion, the rod R, carried through the eyes of the standards a^1 a^2, acting as a guideway. The shaping-block E is located between the swinging arms D D^1.

Secondly, between the swinging arms D D^1 the pipe-blank is held in position to have its exterior brought against the surface of the cutting-wheel C, and it is maintained in position by means of a peculiar expansible tap, which, in combination with the other several parts, forms the main feature of my invention. This tap T is split in two pieces. The main body has a tapering wedge cut into it, larger at its lower end, but growing gradually smaller toward the upper end. A movable section, *t*, having its inner face fitting into the portion cut out of the main body, forms the complete tap, so that the whole tap, when not expanded, presents externally the same configuration as the interior of a pipe-bowl. The movable section *t* terminates upwardly in a stem, t^1, which is hinged onto a handle or lever, t^2. This handle is kept in proper position by means of the spirally-coiled spring S, and it is manifest that according to the degree of force brought to bear on the lever-handle t^2, it will be correspondingly depressed or elevated, throwing the jaws of the tap more or less apart. The spring S and lever-handle t^2 being always within the control of the workman enables him to expand or contract the sectional tap, so as to adjust it to the interior of the pipe-bowl, whatever may be its size, and it can as readily be released when the exterior of the bowl is properly shaped.

The whole tap is adjusted and kept in place by means of a stem or spindle, t^3, fitting into

a sleeve, G, in the swinging arm D^1. The swinging arm D^2 carries a clutch, or any of the well-known holding devices used on lathes.

Having now clearly described the several parts of my improved device, I will now show the manner of operation.

The material of which the pipe is made is first reamed out with an auger-bit and the stem bored, both in the usual manner. The blank bowl is then brought to the machine. It is then adjusted onto the expansible tap T. The lever t^2 is depressed and confined to proper tension by means of the spring S. The other clutch on the swinging arm D^2 is then adjusted on the pipe-blank, and the gearing is set in motion, causing the cutter-wheel C to revolve. The workman then slides the rod R into position, and brings the pipe-blank against the cutting-surface of the wheel C by moving the handle *e*. As the workman impinges the block E against the guide-wheel C, the pipe-blank follows the same course.

What I claim as new is—

1. The expansible tap T, consisting of a main shank provided with a groove, and a secondary section, *t*, hinged to the main shank, and shaped so as to fit into the groove, in combination with the coiled expanding-spring S, substantially as described.

2. In a pipe-turning machine, the following form E, arranged within swinging arms D D^1, in combination with the sectional expansible tap T, substantially as described.

BENGT A. JONASSON.

Witnesses:
ALEX. H. MCKELVY,
A. R. CROWELL.