No. 686,577. Patented Nov. 12, 1901.

B. BORDEN.

PIPE THREADING MACHINE.

(Application filed Dec. 11, 1900.)

(No Model.)

Fig. 1.

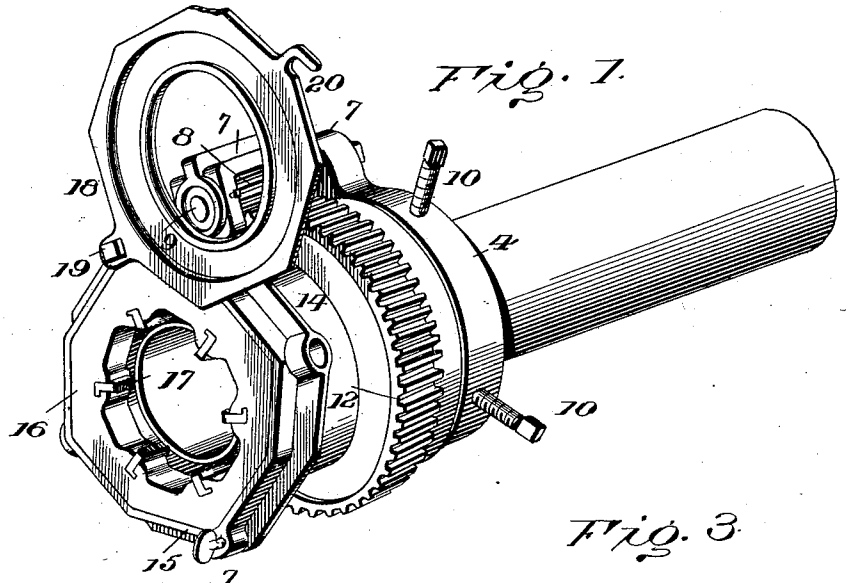


Fig. 2.

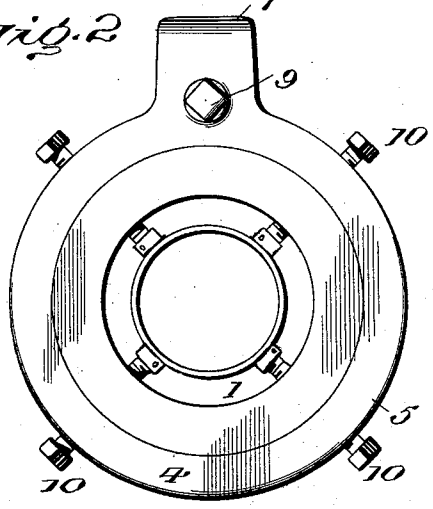


Fig. 3.

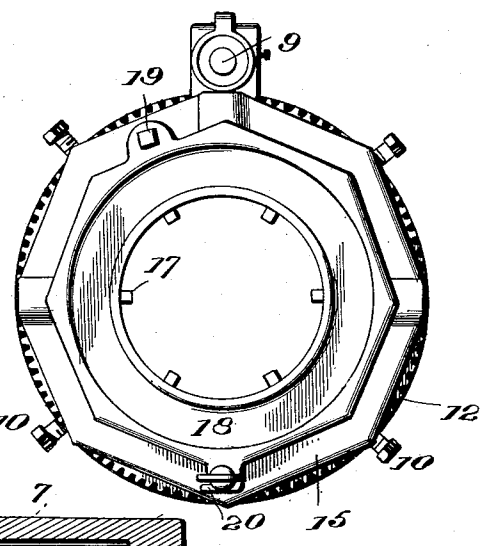
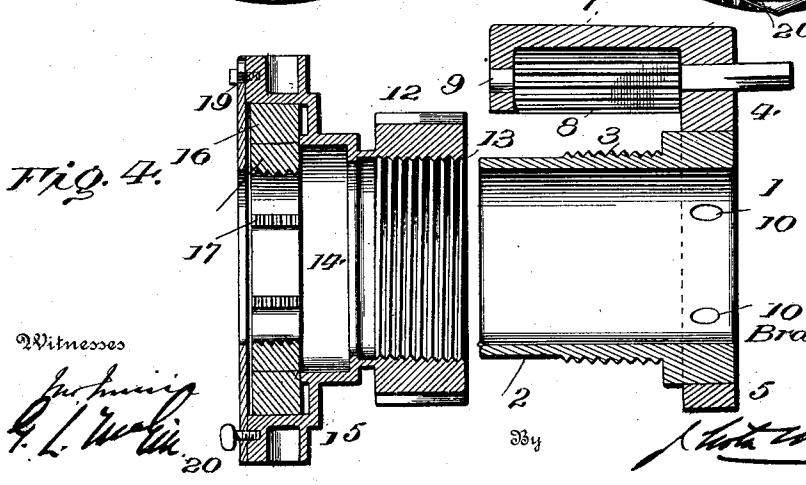


Fig. 4.



Witnesses

Inventor

Bradford Borden

By Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

BRADFORD BORDEN, OF WARREN, OHIO.

PIPE-THREADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 686,577, dated November 12, 1901.

Application filed December 11, 1900. Serial No. 39,489. (No model.)

To all whom it may concern:

Be it known that I, BRADFORD BORDEN, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Pipe-Threading Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to pipe-threading machines.

The objects of the invention are, first, to provide a machine of this character capable of being used wherever required without the necessity of securing it to a base or any support other than that derived from the pipe to be threaded; second, to construct a machine which shall be simple in construction and capable of easy operation, and, third, one wherein the operations of the driving-gear and the cutting mechanism are rendered accurate and effective.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective. Figs. 2 and 3 are opposite end views. Fig. 4 is a vertical sectional view with the parts separated.

Referring to the drawings, 1 designates the leader feed-screw, composed of a tubular portion 2, having throughout a portion of its length a male thread 3.

4 is a frame having a ring or circular portion 5, removably held on the enlarged end of the feed-screw, and an overhanging portion 7, wherein is located an elongated driving-pinion 8, the shaft 9 of which is fitted in openings in the parallel portions of said overhanging portion 7. A crank-handle is designed to be applied to the outer end of this shaft. Through the ring 5 and the feed-screw are passed bolts 10, by which a pipe is firmly clamped after its insertion in the tubular portion of the feed-screw, said bolts serving the double purpose of clamping frame 4 upon the end of the feed-screw and holding a pipe within the latter.

12 designates a large gear-wheel having a female thread 13 for engaging the thread of the feed-screw, said gear-wheel being in mesh with the pinion 8. Integral with an enlarged cylindrical portion 14, carried by and projecting from wheel 12, is a housing 15 of polygonal formation in vertical section. In this housing is the die-block 16, the exterior contour of which conforms to that of the interior of the housing. In this way the die-block rotates with the housing and the gear-wheel. The cutting-dies 17 project inwardly from the die-block. The latter is inclosed within the housing by a keeper-plate 18, pivoted at 19 and provided with a hook 20, which engages with and is held by a thumb-screw 21 at a point opposite the pivot of the keeper-plate.

In practice the pipe to be threaded is inserted through the tubular portion of the feed-screw until its forward end enters between and is held by the bite of the dies 17, after which the bolts 10 are screwed in to hold the feed-screw upon the pipe and the frame 4 upon the feed-screw. The pinion 8 is rotated by the crank-handle or other suitable means, imparting a rotary motion to the wheel 12. The length of the pinion being greater than the width of the gear-wheel, the latter as it is being rotated is permitted to move lengthwise as it works on the thread of the feed-screw. The rotation of the gear-wheel and the housing effects the turning of the die-block, and the dies of the latter cut a thread on the pipe corresponding to the pitch of the thread of the feed-screw and the coacting female thread of the gear-wheel.

It is obvious that a device constructed in accordance with my invention possesses many advantages. The clamping mechanism insures the accurate positioning of the pipe, and any slant thereof will cause the frame and feed-screw to assume the same position. Furthermore, no support for the machine other than that afforded by the pipe itself is necessary.

I claim as my invention—

1. A pipe-threading machine comprising an externally-threaded feed-screw, a frame removably mounted thereon having an overhanging portion, a gear-pinion journaled in said overhanging portion, a gear-wheel having an internal screw-thread designed to coact with the thread of the feed-screw, said gear-wheel meshing with said pinion, a die-block carried by said gear-wheel, and means

for uniting said frame and feed-screw and clamping a pipe in the latter, substantially as set forth.

2. In a pipe-threading machine, a feed-screw externally threaded throughout a portion of its length, a removable frame having a circular portion surrounding said feed-screw, means for securing said frame and holding a pipe within the feed-screw, an overhanging portion on said frame, a gear-pinion in said overhanging portion, a gear-wheel having an internal screw-thread designed to coact with the thread of the feed-screw, said gear-wheel meshing with said pinion, and a die-block carried by said gear-wheel, substantially as set forth.

3. A pipe-threading machine comprising an externally-threaded feed-screw, a removable frame having a circular portion surrounding said feed-screw formed with openings coincident with openings in said feed-screw, an overhanging portion on said frame, a gear-pinion journaled in said overhanging portion, a gear-wheel having an internal screw-thread designed to coact with the thread of the feed-screw, said gear-wheel meshing with said pinion, a housing carried by said gear-wheel, a die-block in said housing, and clamping-screws passed through said coincident openings of the frame and feed-screw for uniting said parts and clamping the pipe to be threaded, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

BRADFORD BORDEN.

Witnesses:
FRANK S. CHRYST,
E. L. KING.