

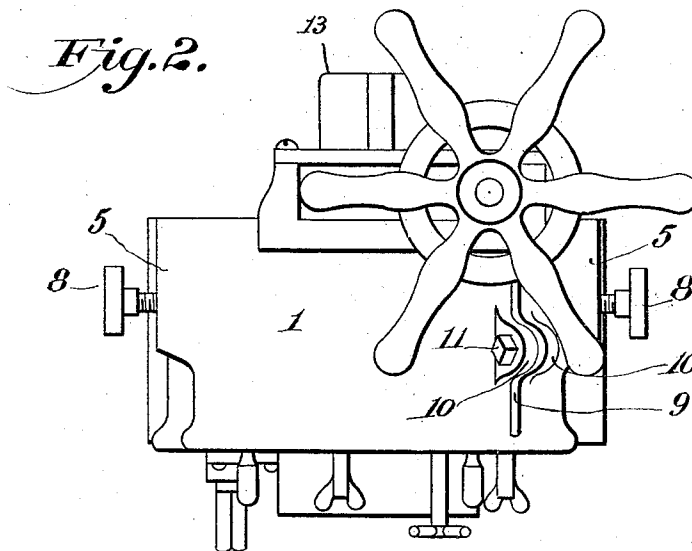
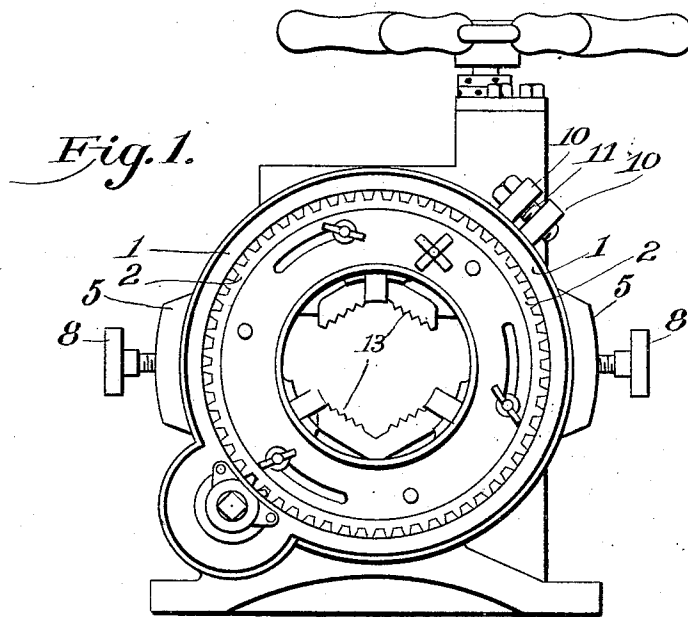
(No Model.)

3 Sheets—Sheet 1.

R. P. CURTIS & J. H. RILEY.
PIPE THREADING MACHINE.

No. 534,636.

Patented Feb. 26, 1895.



WITNESSES:

J. F. French.
M. S. Lueden.

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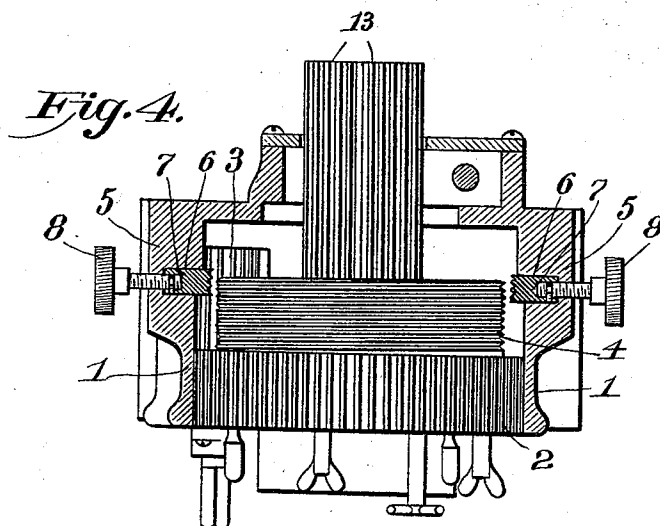
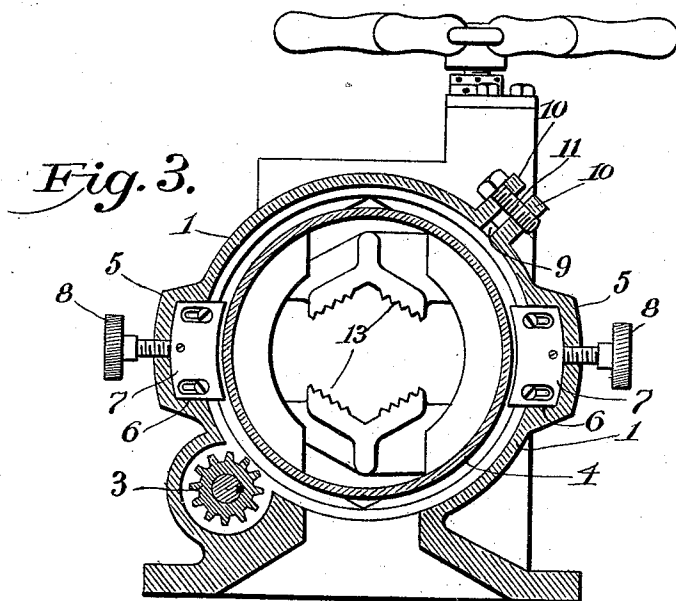
(No Model.)

3 Sheets—Sheet 2.

R. P. CURTIS & J. H. RILEY.
PIPE THREADING MACHINE.

No. 534,636.

Patented Feb. 26, 1895.



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(No Model.)

3 Sheets—Sheet 3.

R. P. CURTIS & J. H. RILEY.
PIPE THREADING MACHINE.

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Fig. 5.

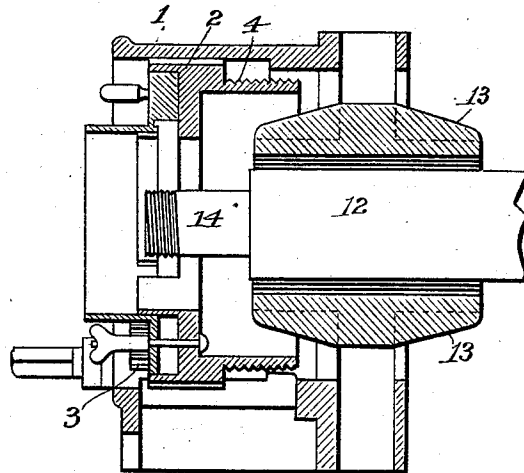
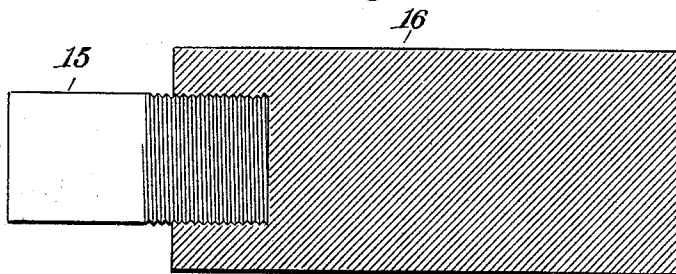


Fig. 6.



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UNITED STATES PATENT OFFICE.

RODERICK P. CURTIS, OF SOUTHPORT, AND JAMES H. RILEY, OF BRIDGEPORT,
ASSIGNORS TO CURTIS & CURTIS, OF BRIDGEPORT, CONNECTICUT.

PIPE-THREADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,636, dated February 26, 1895.

Application filed March 5, 1894. Serial No. 502,382. (No model.)

To all whom it may concern:

Be it known that we, RODERICK P. CURTIS, residing at Southport, and JAMES H. RILEY, residing at Bridgeport, in the county of Fairfield, State of Connecticut, citizens of the United States, have invented certain new and useful Improvements in Pipe-Threading Machines; and we 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.

Our invention has reference to pipe threading machines, of the class in which a rotatory die carrying ring is supported and journaled within a surrounding casing, and has especial reference to the construction of the casing and the arrangement of the lead blocks with the end in view to insure a perfect circumferential bearing for the die carrying ring, and also to greatly increase the capacity of the machine.

In the accompanying drawings which form a part of this specification Figure 1 is a front elevation of a machine constructed in accordance with our improvement; Fig. 2, a plan view; Fig. 3, a transverse vertical section; Fig. 4, a horizontal section; Fig. 5, a central vertical longitudinal sectional elevation, showing our improved machine adapted for use in threading a bolt whose diameter is very large at the point where it is held by the vise, and Fig. 6, a detail sectional elevation of an ordinary nipple holder with a nipple therein preparatory to threading.

Similar numbers of reference denote like parts in the several figures of the drawings.

1 is the casing; 2, the die carrying ring journaled circumferentially within said casing and having spur teeth on its periphery; 3, the pinion journaled in said casing and engaging with the teeth on the ring whereby the latter may be revolved, and 4 is the lead screw which extends rearwardly from said ring.

5 are hubs which are formed on the casing on opposite sides thereof, said hubs having therein pockets 6 which open within the casing. Within these pockets are lead blocks 7 capable of a free sliding movement, with which blocks are connected thumb screws 8

which extend outwardly through the hubs and afford means whereby the lead blocks are projected or retracted toward and away from the lead screw 4.

The engagement of the lead blocks with the lead screw will of course cause the ring when revolved to travel inwardly or outwardly as the case may be, thereby carrying the dies toward or away from the object to be threaded.

In the use of machines of this description, the pipe or bolt to be threaded frequently comprises a body portion of large diameter and a reduced end upon which latter the thread is to be cut; also the machine must be capable of cutting threads upon a nipple one end of which latter has been previously threaded and is contained within an ordinary nipple holder necessarily of a much greater diameter than the nipple itself. Furthermore, it is necessary that the vise should grasp the object to be threaded as close up as possible to the portion on which the thread is to be cut, in order to hold the same steady and to prevent any shake or vibration which would otherwise occur if any considerable length of the pipe or bolt projected beyond the vise.

Heretofore the lead blocks have been assembled within the casing against the inner wall thereof, and said blocks accordingly projected so far inwardly that it was necessary to use a lead screw of a limited diameter, and this called for so small a lead screw that in instances where the object to be threaded was larger in diameter at the point where it was grasped by the vise and also where a nipple in a nipple holder was to be threaded, it was impossible to cut the threads because the lead screw was so small that the vise jaws could not enter the same. In instances of this nature, it has been found necessary to use a large sized machine although the diameter of the portion to be threaded would of itself warrant the use of a machine of a much smaller size.

In Fig. 5 we have shown our machine with a bolt 12 held between the vise jaws 13, the diameter of the bolt itself being much greater than that of the end portion 14 on which the thread is to be cut, and it will be observed

that the jaws and the bolt are contained wholly within the hollow lead screw 4.

In Fig. 6 we have shown a nipple 15 in a nipple holder 16, and it will also be observed that the diameter of the latter is much greater than that of the nipple and that the vise jaws in holding the same would have to be distended in substantially the manner illustrated at Fig. 5.

By the use of our improvement as heretofore described, a machine of a medium size is rendered capable of doing work which has hitherto required the use of the larger sizes of such machines, and this greatly increases the capacity and market value of the machine without in the slightest degree impairing its strength or facility in operation. In the cutting of threads upon these large sizes of pipe there is a great resistance opposed to the action of the threading dies, and in time this will cause a slight wearing of the circumferential bearing in the casing which journals the die carrying ring. We have, however, provided for this by forming a slot 9 through the casing from front to rear, lugs 10 being provided on opposite sides of the slot, and a screw bolt 11 passing through said lugs. These lugs are cast with the casing, the slot being formed by coring. By turning the bolt said lugs may be drawn together sufficiently to take up any lost motion between the die carrying ring and casing and to afford a snug bearing for said ring.

While the yielding of the casing to the action of the bolt and nut is not appreciable to

the eye, it nevertheless is ample to compensate for the wearing hereinbefore mentioned.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a pipe threading machine, the casing, the die carrying ring journaled circumferentially within the casing and having spur teeth on its periphery, a driving pinion engaging said spur teeth, a lead screw connected to said ring and projecting rearwardly therefrom, said casing having radial pockets external to the lead ring, lead blocks within said pockets, and means for adjusting the lead blocks in the pockets to engage the outer face of the lead ring, all combined substantially as described.

2. In a pipe threading machine, the integral casing, the die carrying ring journaled in the casing, the lead ring connected to said die carrying ring, the radial pockets in the casing external to the lead ring and having adjustable lead blocks and means for adjusting the same, said casing being split at one side, and having projecting lugs and set screws whereby the split may be more or less closed, all combined substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

RODERICK P. CURTIS.
JAMES H. RILEY.

Witnesses:

F. W. SMITH, Jr.,
M. S. LONGDEN.