

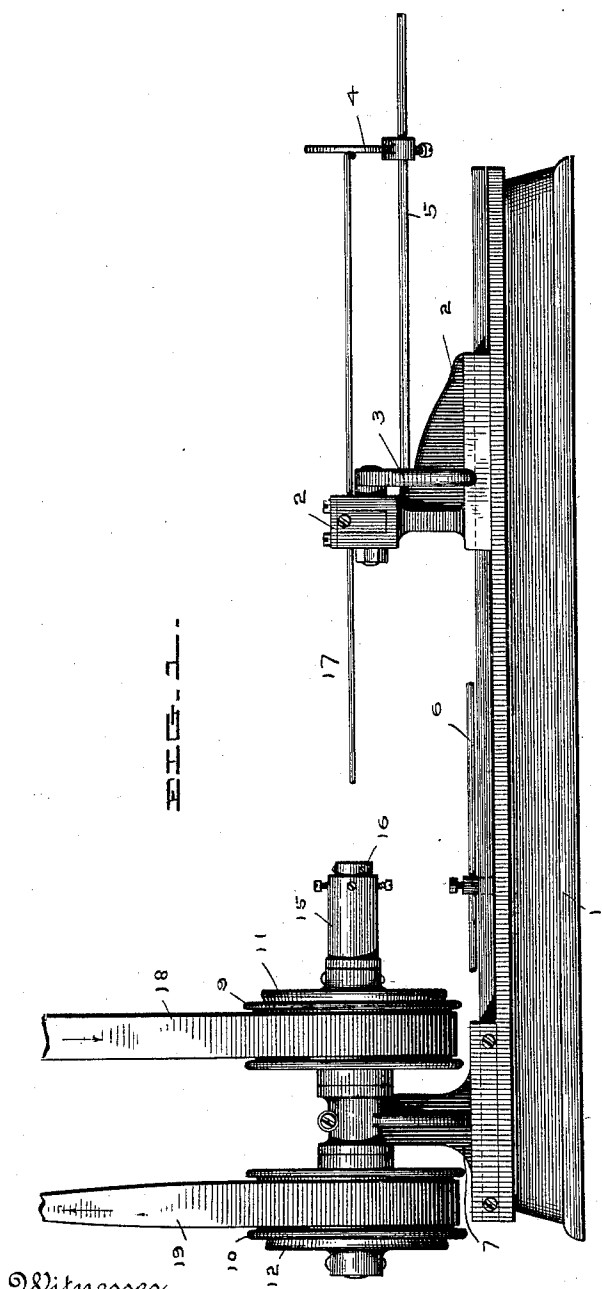
(No Model.)

2 Sheets—Sheet 1.

J. GOEBLER.
THREADING MACHINE.

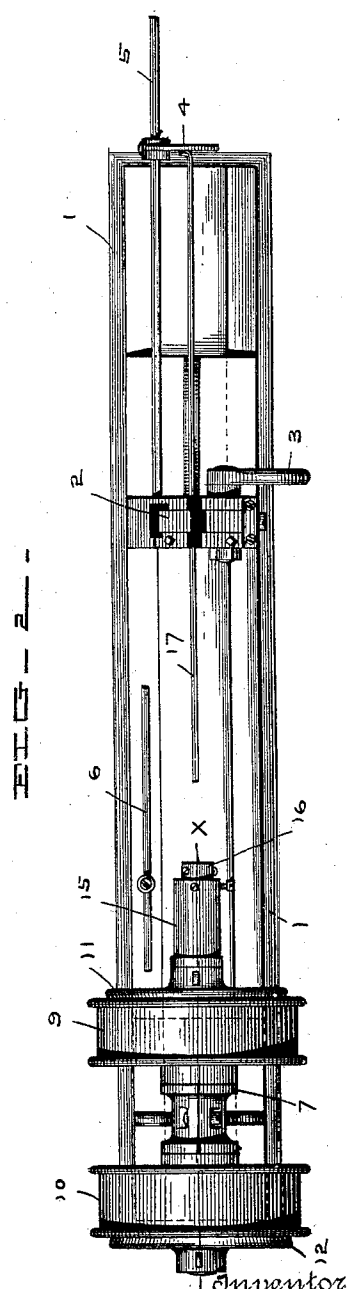
No. 466,605.

Patented Jan. 5, 1892.



Witnesses

H. D. Nealy.
C. B. Griffith.



 Inventor
John Goebler,

By his Attorney

C. P. Jacobs.

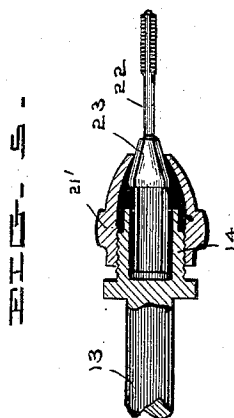
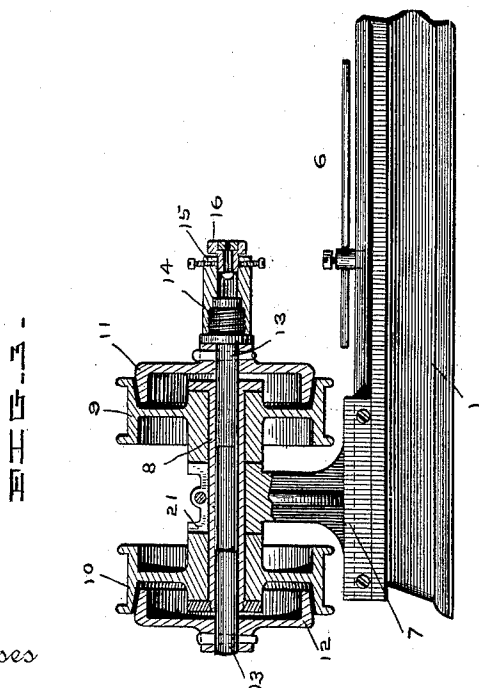
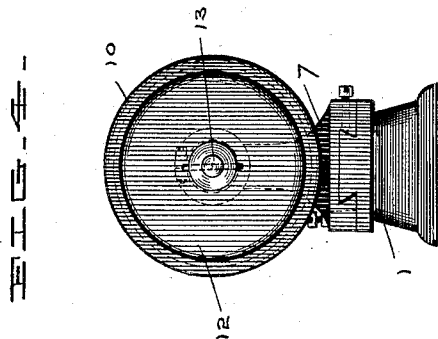
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOHN GOEBLER, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE INDIANA BICYCLE MANUFACTURING COMPANY, OF SAME PLACE.

THREADING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,605, dated January 5, 1892.

Application filed October 5, 1891. Serial No. 407,677. (No model.)

To all whom it may concern:

Be it known that I, JOHN GOEBLER, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful

Improvements in Threading-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

My invention relates to improvements in the construction of friction-clutches for screw-threading machines and will be understood from the following description.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a top plan view. Fig. 3 is a sectional view of the friction-clutch mechanism on the line *xx*, Fig. 2. Fig. 4 is an end view of Fig. 3. Fig. 5 is an enlarged view of the chuck that holds the tap.

In detail, 1 is the base-plate, which has a dovetailed track on its top, on which moves the clamp 2 for grasping the rod.

3 is the handle for operating the same.

4 is an end gage-plate adjustably secured on the rod 5.

6 is a gage-rod adjustably connected to the base-plate for determining the length of the thread.

7 is a standard adjustably connected at the opposite end of the frame, which is bored out to form a bearing for the sleeve 8 and is split at 21, the parts being clamped by a screw, as shown in Figs. 1 and 2, so as to allow the sleeve to be withdrawn when necessary.

On the sleeve 8 are mounted the pulleys 9 and 10, the inner faces of these on one side being slightly tapered, as shown in Fig. 3.

11 and 12 are friction-clutches, which are keyed to the enlarged ends of the spindle 13 and revolve therewith. The inner end of this spindle is threaded at 14 to receive the chuck 15, that in turn receives the screw-cutting die 16 or the clamp 21', that holds the tap 22, the die and tap being used alternately, as desired.

In Fig. 1 I show the die 16 connected to the mechanism 17, being the spoke or rod which is to be threaded, this rod being secured in the jaws of the clamp 2, its outer end bearing against the inner side of the gage-plate 4 and the rod 6 being set at the proper distance to determine the length of the thread to be

cut. The rod is pushed into the die 16, and this action forces the clutch 11 into frictional contact with the beveled inner face of the pulley 9 and at the same time pushes the clutch 12 out and away from frictional contact with the inner face of the pulley 10. The contact thus formed between the clutch 11 and the pulley 9 causes the clutch with its die to revolve when power is applied to drive the pulley 9 by its belt 18. When this operation is finished and the thread has been cut of sufficient length, the operator inaugurates the reverse movement by pulling upon the clamp-handle 3, and this operation draws the clutch 12 into frictional contact with the pulley 10, which has heretofore been an idler, and this revolves the mechanism in the opposite direction, unscrewing the threaded rod from the die, while at the same time the clutch 11 is released from contact with the pulley 9, which latter then becomes an idler.

When it is desired to use the tap for threading a hole, the chuck 15 is unscrewed from the threaded end 14 of the spindle 13 and the clamp 21' is screwed on, the tap 22 being inserted in the collet 23 at the proper moment, and as the clamp 21' is screwed down it fastens the grip of its jaws upon the tapering collet 23, thereby clamping and holding the tap 22 firmly in position for operation.

Heretofore, so far as I am aware, machines of this class have been constructed so as to reverse the mechanism or to cause the engagement of the chuck with the pulley by means of the ordinary toothed clutch, which is objectionable for several well-known reasons, and I have therefore substituted for such clutch the friction-clutch herein shown and described and believe the same to be new and original with me.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. In a threading-machine, an adjustable standard secured to a frame-work providing bearings for a sleeve carried in boxings therein, driving-pulleys loosely mounted and adapted to revolve upon such sleeve, a spindle passing through the sleeve, a friction-clutch keyed upon such spindle, a die or tap detachably secured to the inner end of the same, and a movable clamp provided with a

suitable handle or lever adapted to hold and feed the piece to be operated upon to the die or tap, whereby through the feeding movement the inner clutch is brought into frictional contact with the face of its corresponding pulley for revolving the mechanism and the withdrawal of the piece accomplished by reversing the movement of the clamp, bringing the outer friction-clutch in contact with its corresponding pulley, freeing the inner clutch from similar contact, and thereby revolving the machine in an opposite direction, all combined substantially as shown and described.

2. In a screw-threading machine, a pair of friction-clutches mounted upon a spindle having bearings in an upright connected to the base of the frame, their faces adapted to contact with the inner faces of a pair of driving-pulleys mounted loosely upon and revolving with a sleeve, which is in turn mounted on a

central spindle, such spindle carrying a die or tap upon its inner end, and a movable clamp working upon the top of the base-plate for holding the piece to be operated upon, such clamp movable toward the die or tap, whereby the contact of the piece with such die operates to engage one of the friction-clutches with the adjacent pulley and the reversal of the movement of the clamp operates to revolve the other pulley in an opposite direction, freeing the first clutch from its engagement and causing the opposite clutch to contact with its driving-pulley, allowing the release of the piece from the tool, all combined substantially as shown and described.

In witness whereof I have hereunto set my hand this 24th day of September, 1891.

JOHN GOEBLER.

Witnesses:

E. B. GRIFFITH,
C. P. JACOBS.