No. 607,726. Patented July 19, 1898.

C. A. BAILEY.

PIPE THREADING IMPLEMENT.

(Application filed Feb. 19, 1898.)

(No Model.)

Fig. 1.

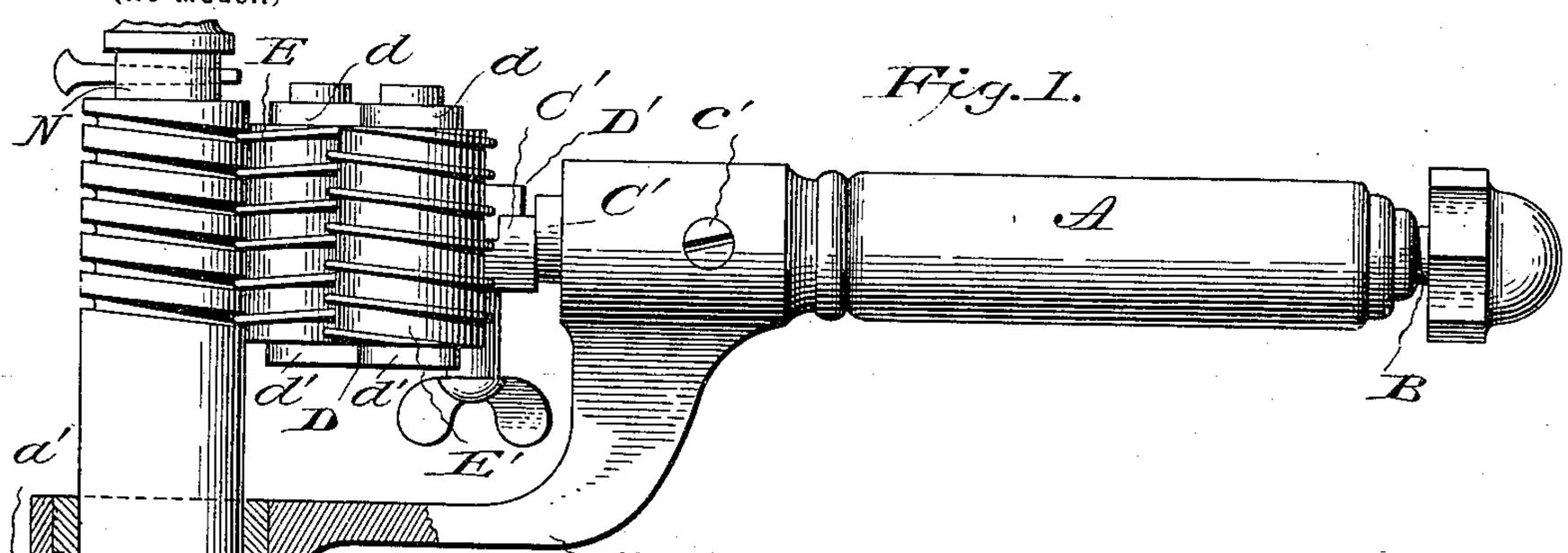


Fig. 2.

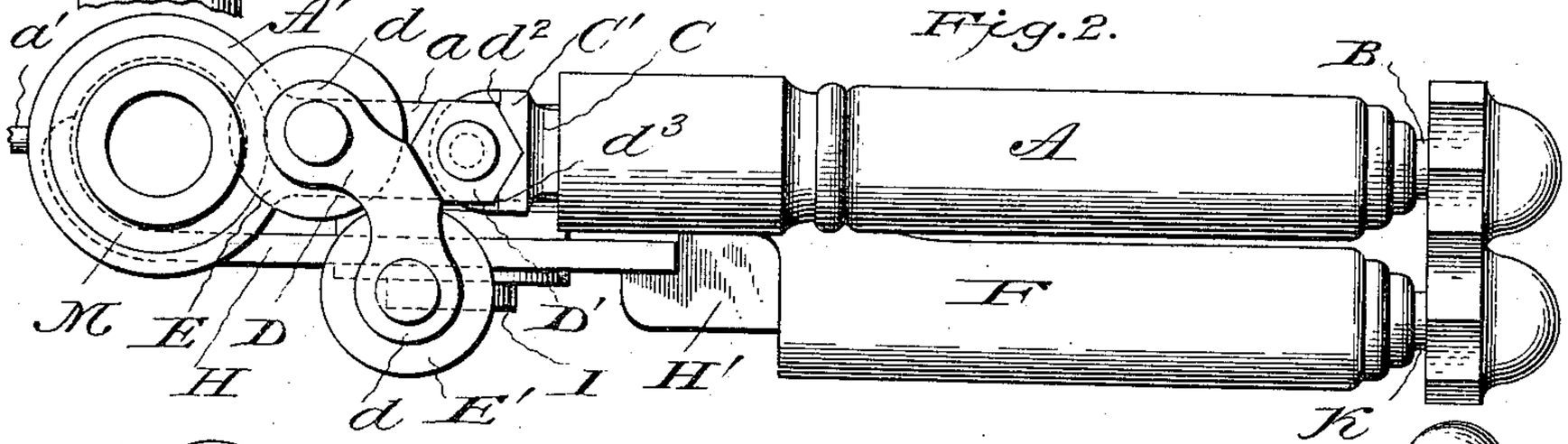


Fig. 3.

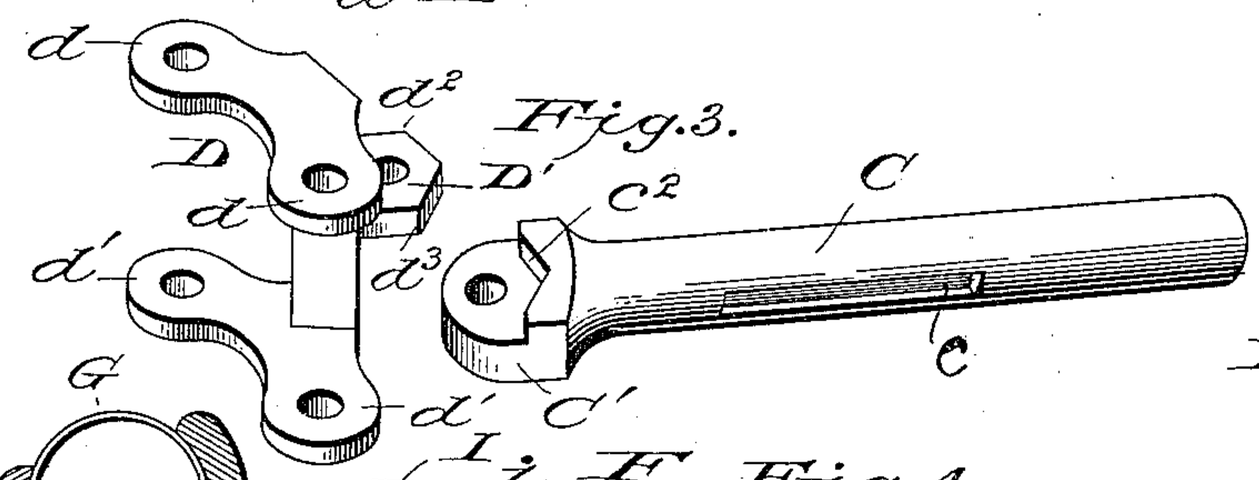


Fig. 5

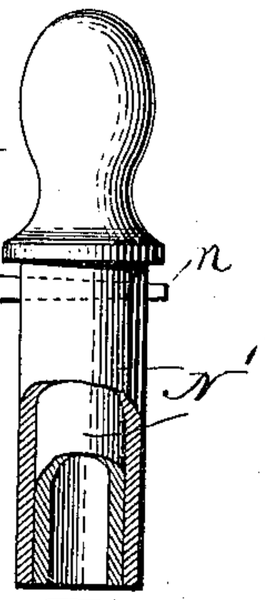
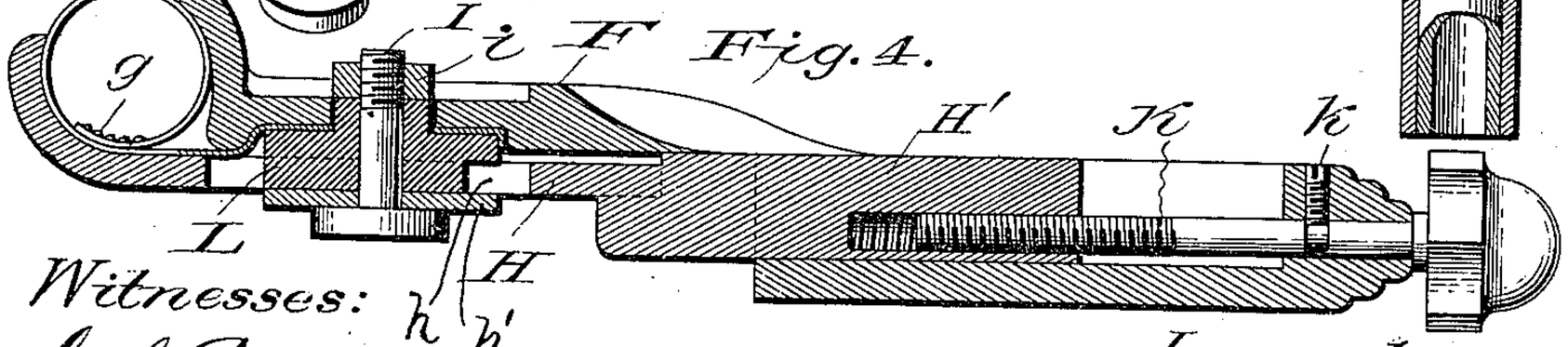


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES A. BAILEY, OF CROMWELL, CONNECTICUT.

PIPE-THREADING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 607,726, dated July 19, 1898.

Application filed February 19, 1898. Serial No. 670,929. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BAILEY, a citizen of the United States of America, residing at Cromwell, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Pipe-Threading Implements; 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 is an implement for threading soft-metal pipe and is an improvement upon the construction shown and described in my prior patent, No. 598,279, dated February 1, 1898.

The primary object of my present invention is to provide the carrier with two spirally-ribbed rolls, one forming a right-hand thread upon the pipe and the other a left-hand thread, the said rolls being connected to the carrier in such manner that either one can be readily moved into an operative position with respect to the lever and pipe and firmly held in such position without interfering with the feed of the carrier.

The present invention also embodies the employment of a device for holding the pipe during the operation of forming a thread thereon, the said holder supporting a ring which forms the fulcrum for the lever which carries the threading tools or rolls, and is also adapted for use in turning the pipe in making a coupling.

Having the above ends in view, this invention consists in the construction and combination of the parts, as hereinafter particularly described, and specifically set forth in the appended claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a front elevation of a pipe-threading implement constructed in accordance with my invention. Fig. 2 is a plan view. Fig. 3 is a detail perspective view of the improved roll-carrier. Fig. 4 is a longitudinal section view through the device which clamps the pipe and forms a support for the threading implement. Fig. 5 is a view of the plug.

A designates the lever of the threading implement proper, the said lever being similar in construction to that shown and described in my prior patent hereinbefore referred to, with the single exception that the curved arm *a* is provided at its outer end with a larger ring, (designated by the letter A′,) the said ring having set-screws *a′* extending into the same to make proper connection with the holding device hereinafter described. The feeding-screw in the outer end of this lever is lettered B herein, and the carrier which is fed by the screw is designated by the letter C, the spindle of the carrier having a groove *c*, Fig. 3, engaged by the set-screw *c′*, Fig. 1.

My improvement to the threading implement consists in having the yoke D of the carrier adjustable upon the head of the spindle C and in providing said yoke with two sets of upper and lower members *d* and *d′*, respectively, for the purpose of carrying two rolls or dies E and E′, the spiral rib on one being pitched to form a right-hand thread on the pipe and that on the other roll or die forming a left-hand thread. In order to bring either one of the rolls into an operative position in line with the operating-lever A, the yoke is provided with an integral projection D′, provided with angular corners d^2 d^3, which are adapted to engage an angular recess c^2 at the inner end of the head C′ of the spindle C, the parts being securely held in an adjusted position by a bolt and nut, as shown. In adjusting the yoke with respect to the spindle the nut is loosened, and after raising the yoke out of engagement with the head of the spindle it is turned and the other corner brought into engagement with the recess, after which the nut is tightened upon the parts.

The device or tongs adapted to hold the pipe and form a bearing for the threading implement comprises a lever F, having a flexible metal band or strap G, which is rigidly secured to said lever at one end and formed into a binding-coil beyond the end of said lever, the free end of said strap being provided with teeth *g*, which bite into the pipe. By passing the pipe into the coil and turning the lever in the proper direction the teeth will bite into the pipe, and the strap being then wound thereon will bind and hold by

frictional contact, the end having the teeth being held in engagement by the part of the strap which overlaps the same. In order to hold the engagement of the binding-coil, a slide H is mounted upon the lever and provided with a curved end, which is brought to bear against said binding-coil, the slide being held by a block L, which passes through a rectangular opening therein and through a slot *h* in the lever, being connected to the parts by a bolt I, engaged by a nut *i*, and bearing against a washer-plate *h'* on the under side of said lever. The adjustment of this slide is accomplished by a screw K, which turns in a threaded opening in the end of a shank H', extending from the slide into an opening in the handle portion of the lever, the screw having a head and being held against longitudinal movement by a pin *k*, which passes through the end of the lever and engages a groove in the shoulder of said screw. The metal strap is clamped upon the lever by the block L, held by the bolt I. This device provides a means for holding the pipe during the operation of threading the same and also supports a ring M, which forms a bearing for the threading implement. The ring has an arm *m*, by which it is secured to the lever F and raised a suitable distance therefrom, the said ring also having a peripheral groove, with which engage the set-screws *a'* of the ring A' on the lever A.

In threading a soft-metal pipe with my improved implement a plug N is first inserted in the end of the pipe to prevent its being crushed in by the roll or die which forms the thread, said plug comprising removable sleeves N', held by a wedge *n*, in order that the diameter may be increased and diminished.

The operation of the improvements herein shown and described will be readily understood, and it will be obvious that I provide for quickly changing the rolls of the threading implement to form right and left hand threads, also that the device for holding the pipe while being threaded is adapted for use as tongs for turning a pipe in making a coupling.

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

1. In an implement for threading soft-metal pipe, the combination of a lever revoluble around the pipe, a yoke or bracket carrying two rolls or dies, and means for securing said yoke or bracket adjustably with respect to the lever, substantially as shown and for the purpose set forth.

2. In an implement for threading soft-metal pipe, the combination, of a lever revoluble around the pipe, a carrier adjustable therein, a yoke or bracket carrying two rolls said rolls having spiral ribs pitched in opposite directions, and means for adjusting the yoke or bracket upon the adjustable carrier, substantially as shown and for the purpose set forth.

3. In an implement for threading soft-metal pipe, the combination, of a lever revoluble around the pipe, a carrier adjustable in said lever, a yoke or bracket carrying two rolls having spiral ribs pitched in opposite directions, a projection on the yoke or bracket presenting angular corners adapted to engage an angular recess in the carrier, and means for holding the parts adjusted, substantially as shown and for the purpose set forth.

4. A holder for the purpose set forth, comprising a lever and a flexible metal strap secured to the end of said lever and formed into a binding-coil, the free end of the strap having teeth, substantially as shown and described.

5. A holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, a slide engaging the binding-coil, and means for holding the adjustment of the slide, substantially as shown and described.

6. A holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, a slide engaging the binding-coil, and a screw adjusting said slide, substantially as shown and described.

7. A holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, a slide engaging the binding-coil, a screw adjusting said slide, and means for holding the adjustment, substantially as shown and described.

8. A holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, a slide engaging the binding-coil, a screw adjusting the slide, and a bolt passed through the slide and lever, the bolt also clamping the strap to the lever through the intervention of a plate, substantially as shown and described.

9. A holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, a slide engaging the binding-coil, and means for holding the slide adjusted, together with a bearing-ring carried by the lever, substantially as shown and described.

10. In combination, a holder for the purpose set forth, comprising a lever, a flexible metal strap secured to the end of said lever and formed into a binding-coil, means holding the coil wound upon the pipe, and a bearing-ring carried by the lever; together with a lever carrying a spirally-ribbed roll, and a ring on the last-mentioned lever bearing upon the ring of the other lever, substantially as shown and described.

11. In combination, a holder for the purpose set forth, comprising a lever, a flexible

metal strap secured to the end of said lever and formed into a binding-coil, means holding the coil wound upon the pipe, and a bearing-ring carried by the aforesaid lever, the bearing-ring having a peripheral groove; together with a lever carrying a spirally-ribbed roll, a ring secured to said lever or formed integrally therewith, and set-screws passing through said ring into the same, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. A. BAILEY.

Witnesses:

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