

[54] **DRILL AND TAP ATTACHMENT FOR PIPE CLAMPS**

338,021 3/1886 Bennett..... 408/101
515,976 3/1894 Smith..... 408/108 X

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[57] **ABSTRACT**

[52] U.S. Cl. **408/108, 408/101**

[51] Int. Cl. **B23b 47/00**

[58] Field of Search 408/108, 103, 101, 99,
408/92, 88, 100, 102, 137

This invention relates to a drill and tap attachment for pipe clamps particularly a so-called collar puller for metal pipe and the like, as disclosed in my U.S. Pat No. 3710427 issued January 1973. Particularly, holes are drilled and tapped at intervals in the pipe for the purpose of attaching threaded nipples. The tapping attachment may be adjusted by hand which in turn operates the drilling and tapping unit.

[56] **References Cited**
UNITED STATES PATENTS

226,043 3/1880 Bryant 408/101

4 Claims, 7 Drawing Figures

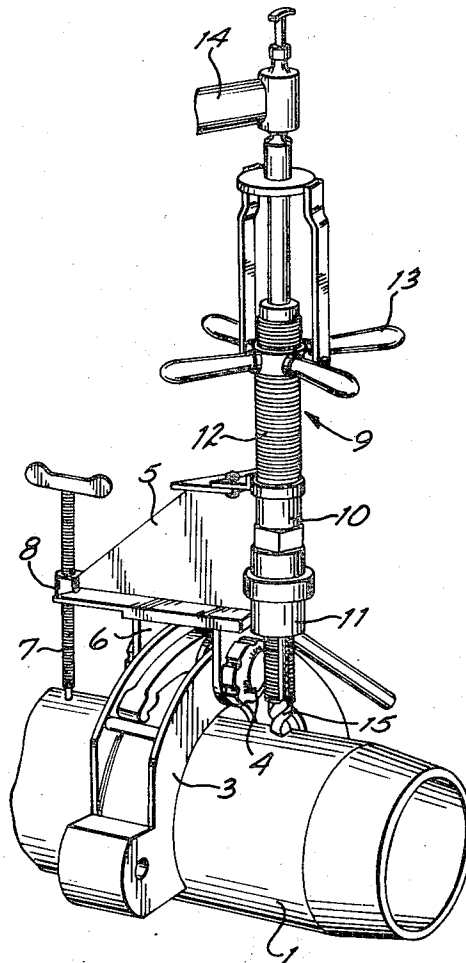


FIG. 1

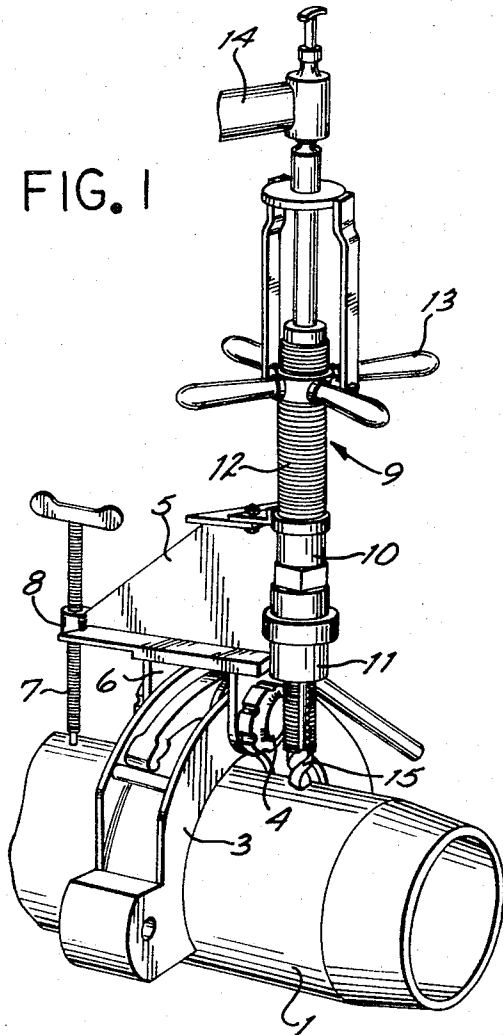


FIG. 2

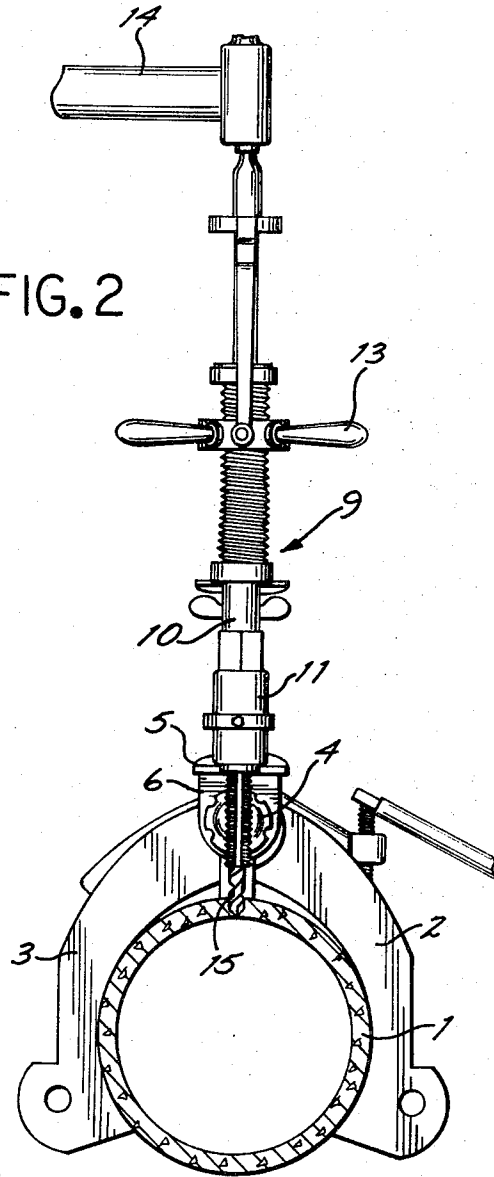


FIG. 3

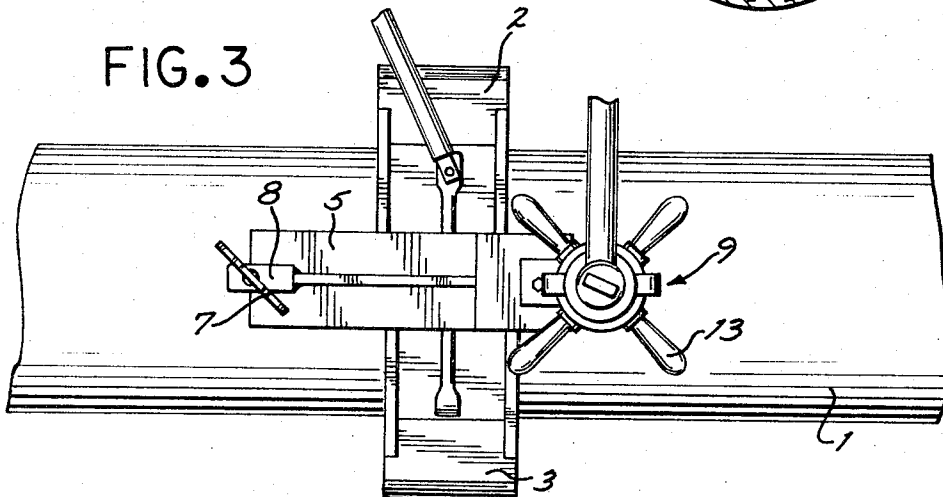


FIG. 4

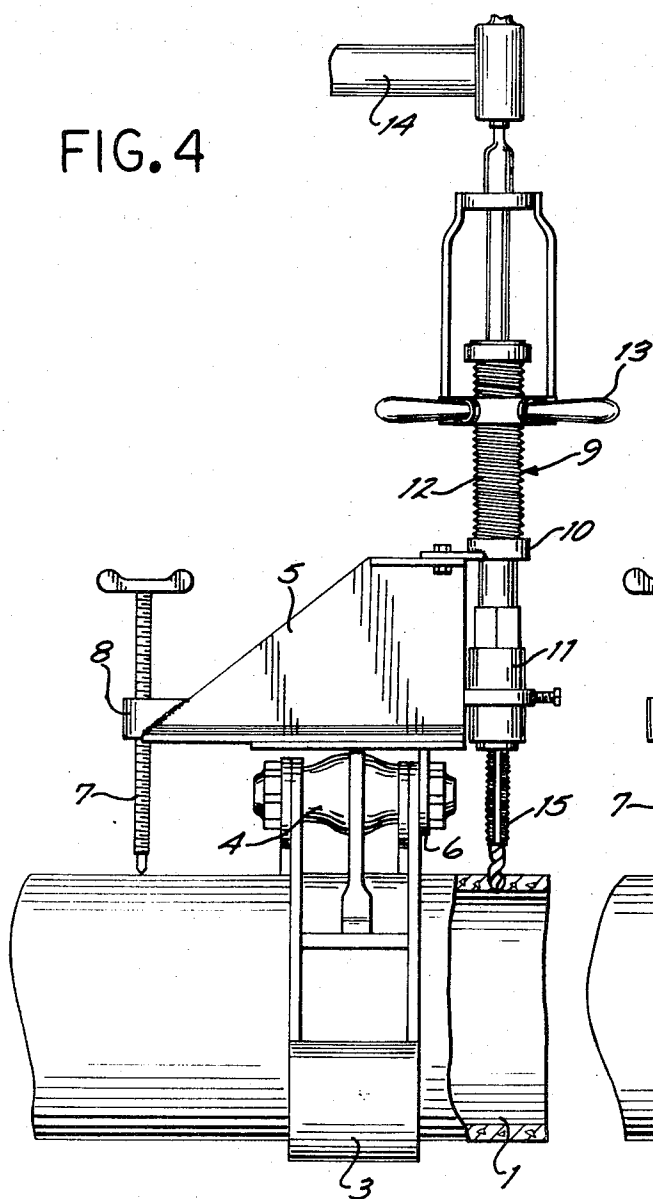


FIG. 5

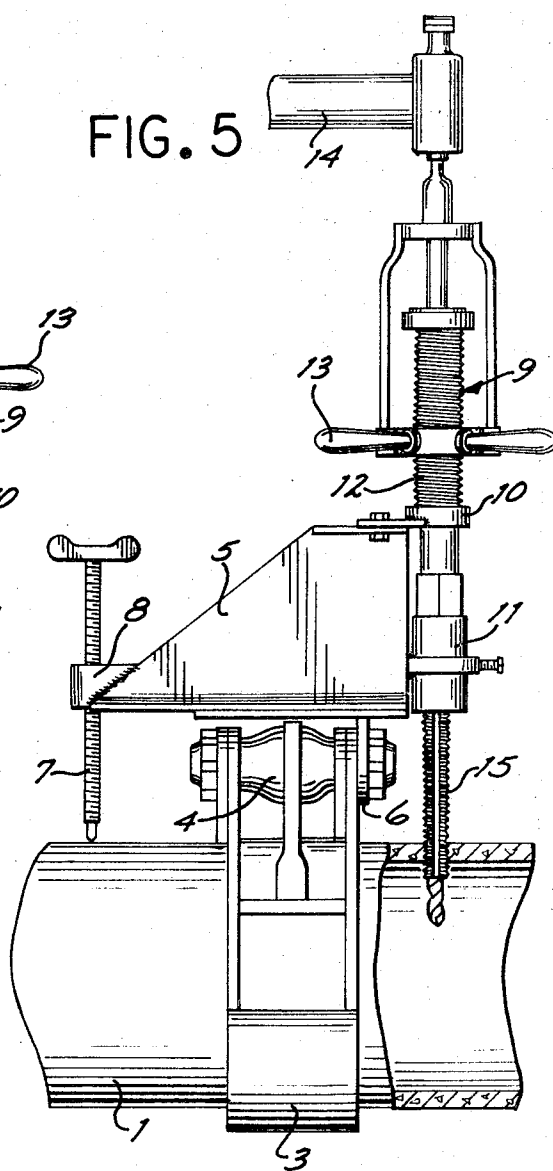


FIG. 6

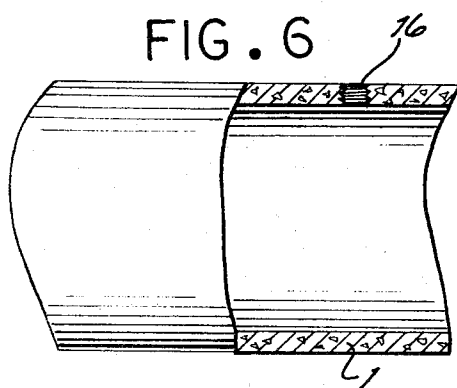
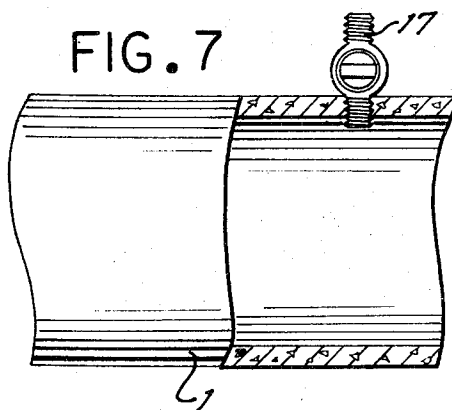


FIG. 7



DRILL AND TAP ATTACHMENT FOR PIPE CLAMPS

An object of my invention is to provide a novel tapping attachment which can be mounted on the pipe without digging a recess around the pipe at the point where drill and tap hole is to be provided.

Still another object of my invention is to provide a novel collar jack for pipe which can be mounted on the pipe from the top and thus avoid having to cut an arcuate or circular space around the pipe.

Still another object is to provide a novel machine attachment which permits mounting the tapping machine on a collar jack and thus utilizing the collar jack for a dual purpose of both a collar jack or gripping tongs and a drilling and tapping machine.

Other objects, advantages, and features of my invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

IN THE DRAWING:

FIG. 1 is a perspective view of my tongs and tapping machine in operative position.

FIG. 2 is an end view of my tapping machine and collar jack.

FIG. 3 is a top plan view of my tapping machine and collar jack.

FIG. 4 is a side elevation of my tapping machine and collar jack.

FIG. 5 is a view similar to FIG. 4 but illustrating another position of the parts.

FIG. 6 is a fragmentary side elevation of a section of pipe with a drilled and tapped hole therein.

FIG. 7 is a fragmentary side elevation of a pipe section illustrating a fitting mounted in said pipe.

REFERRING MORE PARTICULARLY TO THE DRAWING:

My tapping attachment for a collar jack gripping tongs is adapted to engage a pipe 1 through an arc somewhat greater than 180°. The main gripping portion of the tongs consists of a first arcuate shoe 2 and a second arcuate shoe 3. The shoes 2 and 3 partly encircle the pipe 1 and thus hold the collar jack securely in position. My U.S. Pat. No. 3,710,427, Jan. 16, 1973, illustrates the structure and mounting of the shoes 2 and 3 thus pivotally attaching these shoes in operative position around the pipe 1. A mounting plate 5 is attached to the shoes 2 and 3 through medium of two depending ears 6-6. Thus the frame 5 is securely held in its proper vertical position.

A stabilizing screw 7 is threaded through the boss 8, thus enabling the screw 7 to be manually adjusted to engage the pipe 1 and prevent the tool from rocking back and forth when in operation. The axis of the screw 7, as shown in FIGS. 1-3, is substantially parallel to the axis of the tapping attachment 9 and is in a plane sub-

stantially common with the pivotal axes of the shoes 2 and 3 and the tapping attachment 9.

A tapping attachment 9 is mounted on the rear edge of the mounting plate 5 by means of the collars 10 and 11. The tapping attachment itself consists of a threaded advancing screw 12 which screws through the collars 10 and 11. This is also termed a tapping machine feed screw. The feed screw can be adjusted vertically by the manually operated handles 13. A tapping machine power source 14 is mounted on the upper end of tapping attachment 9 in the usual and well known manner and its operation is well-known. A drill and tap 15 is secured to the lower end of the drilling attachment 9 and this unit not only drills a hole in the pipe 1, but also taps that hole. Such a hole is shown at 16 and it receives fitting 17 through which liquid or gas is fed.

IN OPERATION

The shoes 2 and 3 are first securely clamped to the pipe 1 without necessitating digging a trench around the pipe. The frame 5 is now leveled with the screw 7 so that the drilling attachment 9 will drill accurately through the wall of the pipe by means of the drilling and tapping attachment 15. The drill can be adjusted vertically as required by the handles 13 after which the power unit 14 is activated and the drill is forced through the wall of the pipe and the hole is tapped.

Having described my invention, I claim:

1. A drill and tap attachment for a pipe clamp comprising a pair of arcuate shoes engagable with the pipe, means for pivotally attaching the shoes together, a mounting plate overlying the shoes and being supported thereon, a drill and tap means supported on the mounting plate on one side of said shoes, said drill and tap means including means for feeding and driving a drill and tapping tool supported therein relative to the pipe, a screw member threadingly supported on the mounting plate on the other side of the shoes, the axis of said screw member being substantially parallel to the axis of said drill and tap means and in a plane substantially common with the axes of said pivot means and said drill and tap means, whereby said screw member can be adjusted to engage the pipe to level and stabilize the mounting plate relative to the pipe.

2. A drill and tap attachment as recited in claim 1 wherein said feeding and driving means includes power drive means.

3. A drill and tap attachment as recited in claim 1 wherein said feeding and driving means includes a tapping machine feed screw.

4. A drill and tap attachment as recited in claim 1 wherein said feeding and driving means includes a tapping machine feed screw and power drive means connected to the drill and the tapping tool.

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