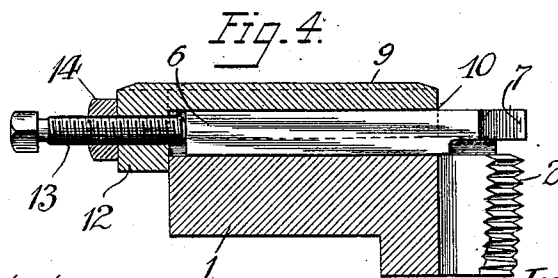
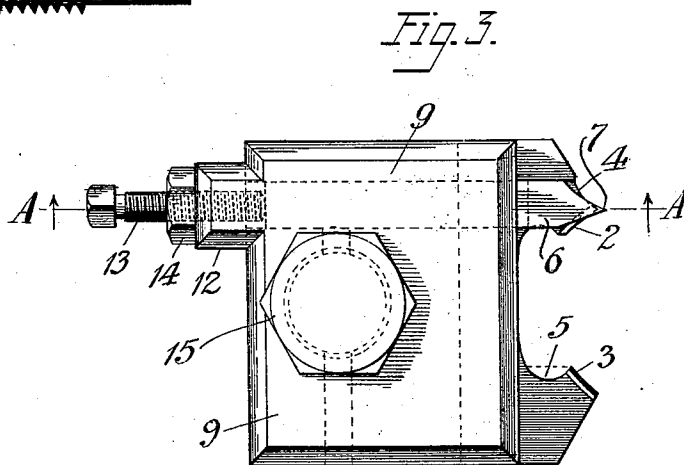
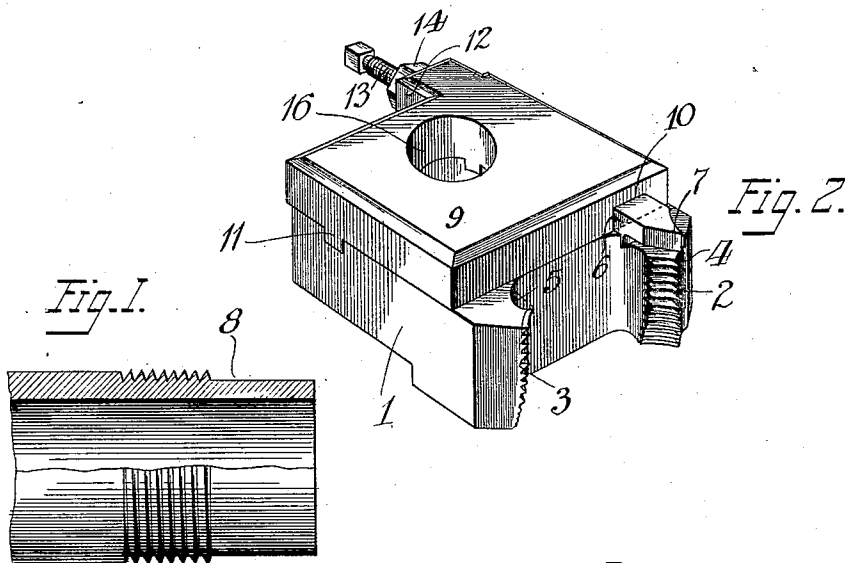


P. I. CLARK.
 COMBINED THREAD CUTTING DIE AND MILLING DEVICE.
 APPLICATION FILED MAR. 5, 1910.

980,864.

Patented Jan. 3, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

PHILO I. CLARK, OF CHICAGO, ILLINOIS, ASSIGNOR TO PAUL KESSLER, OF CHICAGO, ILLINOIS.

COMBINED THREAD-CUTTING DIE AND MILLING DEVICE.

980,864.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed March 5, 1910. Serial No. 547,471.

To all whom it may concern:

Be it known that I, PHILO I. CLARK, a citizen of the United States of America, and a resident of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Combined Thread-Cutting Dies and Milling Devices, of which the following is a specification.

The main object of the present invention is to provide a cutting tool adapted to cut threads on iron pipe, and to simultaneously mill or trim away stock near the end of the pipe in such a way as to leave a cylindrical shoulder. Such a shoulder is particularly useful when the pipe is coupled up by certain forms of steam pipe couplings, which need not here be described, but which have a packing which can be forced against such a cylindrical shoulder to obviate the necessity for a steam-tight connection at the threads.

A specific construction embodying this invention is illustrated in the accompanying drawings, in which—

Figure 1 is a section of a pipe cut by a tool embodying my invention. Fig. 2 is a perspective view of the tool. Fig. 3 is a plan of the same. Fig. 4 is a sectional elevation along the line A—A of Fig. 3.

In the construction shown, the pipe cutting device comprises a die-block 1, having at its front face a pair of threaded bits 2 and 3, which are of usual construction, except that they are under-cut at their front or cutting edges. This under-cutting is shown at 4 and 5, Fig. 3.

A chisel-like cutter 6, fits in a rectangular socket or groove in the upper face of block 1, and has at its front or cutting edge a flat or chisel-shaped nose 7, arranged in such position that when the die is turned with respect to the pipe to cut the threads, the cutter edge will mill or strip away the threads near the end of the pipe to leave a smooth, cylindrical shoulder, such as that shown at 8 in Fig. 1.

A cap 9 is carried on the top of the die-block and has a rectangular slot 10, inclosing the upper part of the cutter, and serving to hold the cutter in its socket. A depending rib 11 on the under face of the cap fits in a transverse groove in the die-block, and takes whatever transverse thrust may be put on the cap. The grooved relation of the cap, the die-block and the cutter prevents rela-

tive movement of the several parts. At the rear of the cap and integral therewith is a depending boss 12, through which passes an adjusting screw 13 having its forward end bearing on the rear end of the cutter, and serving as a stop therefor. This adjusting screw governs the position of the cutter with respect to the pipe, and affords positive means for advancing the cutter, even when it is in operation. A lock nut 14 is serviceable to hold the adjusting screw in fixed position.

A bolt 15 passes through the central aperture 16 of the cap, and through a somewhat larger aperture in the die-block, and serves to clamp the cap and die-block together and to hold them firmly in the die stock, not shown. Although but one die-block is here illustrated, it will be understood that this may be one of a pair or set, and that a plurality of them may be assembled in a stock and operated in usual manner.

When the cutting device is turned on the end of a pipe, it cuts the threads in ordinary manner, though with more than ordinary efficiency, because of the under-cutting of the forward or active edge of each threaded bit. After the die-block is advanced along the pipe far enough to bring the end of the pipe into contact with the flat nose 7 of the cutter, the cutter mills or trims away the threads at the end of the pipe, leaving a shoulder 8, which may be as wide as is desired, in accordance with the distance the die-block is advanced along the pipe. The stop at the rear end of the cutter takes the end thrust, and at the same time, affords means for adjusting the cutter toward or from the pipe, even when the cutter is in operation. The grooved relation of the cap and the die-block insures rigidity of the entire structure.

Although but one specific embodiment of this invention is herein shown, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention.

I claim:

1. In a pipe-cutting device, the combination of a die-block having threaded bits, a cutter having a flat nose, a cap holding said flat-nosed cutter in position near said threaded bits, adjusting means carried by said cap and pressing on the end of said

cutter to govern the depth of its cut, and interlocking means formed on said die-block and cap and extending transversely of the cutter.

5 2. In a pipe-cutting device, the combination of a die-block having a socket, a cutter in said socket, a cap secured to said block and having a groove for said cutter, a boss on said cap, an adjusting screw passing
10 through said boss and bearing on the end of said cutter, and interlocking means on said cap and die-block for preventing slippage of one on the other.

15 3. In a pipe-cutting device, the combination of a die-block having threaded bits, a groove and a socket, a cap having a socket to receive a portion of said tool and a rib fitting in said groove, said cap having also a
20 boss, and an adjusting screw carried by said boss and bearing on the end of said cutter to govern the depth of its cut.

4. The combination of a die-block having

threaded bits and having a socket and a groove, a cutter in said socket, a cap holding 25 said cutter in place and having a rib seated in said groove, said cap having a boss, and a screw carried by said boss and bearing on the end of said cutter.

5. The combination of a die-block having 30 threaded bits, said block having a rectangular groove forming a socket, a flat-nosed cutter seated in said socket, a cap seated on said block and having a groove fitting over said cutter, a bolt passing through said cap 35 to hold it on said block, and an adjusting screw bearing on the end of said cutter, said cap having a boss in which said screw is threaded.

Signed at Chicago this 28th day of Feb- 40
ruary, 1910.

PHILO I. CLARK.

Witnesses:

EUGENE A. RUMMLER,
MARY M. DILLMAN.