Sept. 21, 1926. 1,600,927

T. BRYANT

THREAD CUTTING AND CLEANING TOOL

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Fig. 1.

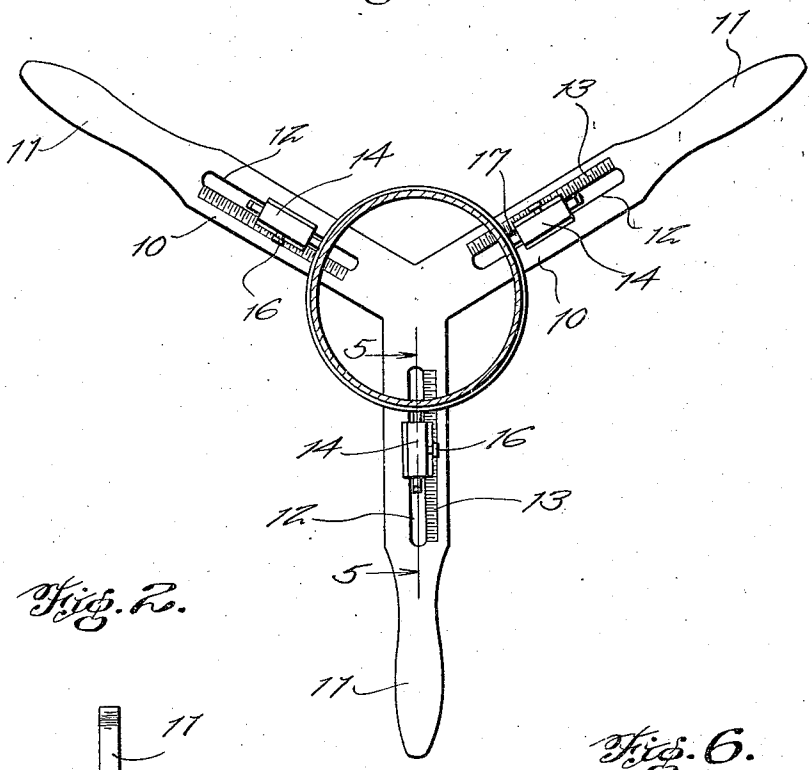


Fig. 2.

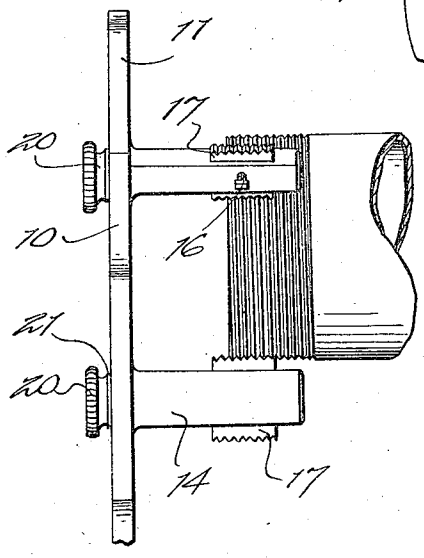
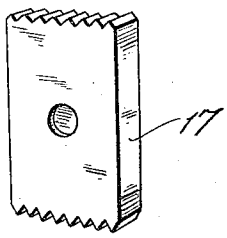


Fig. 6.



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THREAD CUTTING AND CLEANING TOOL

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Fig. 3.

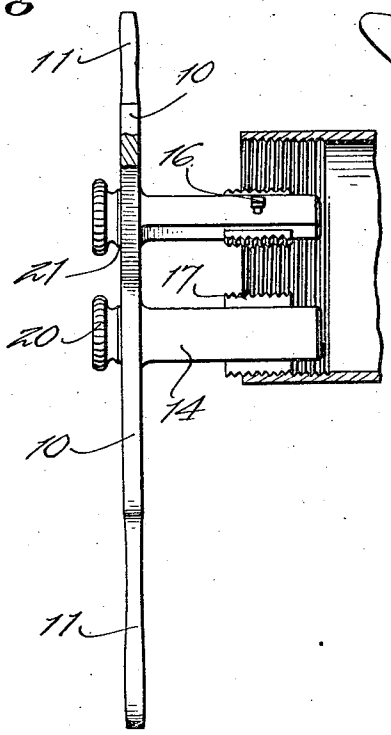


Fig. 4.

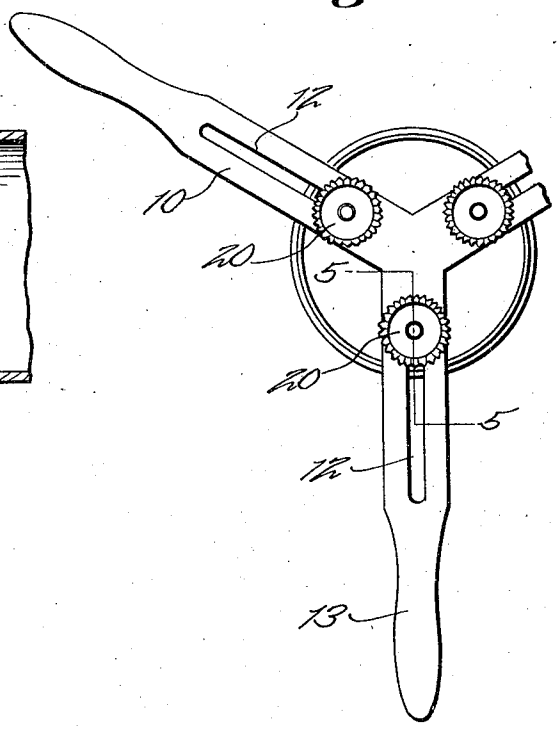
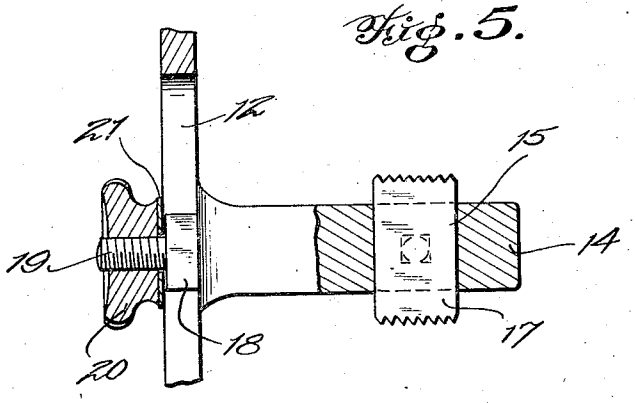


Fig. 5.



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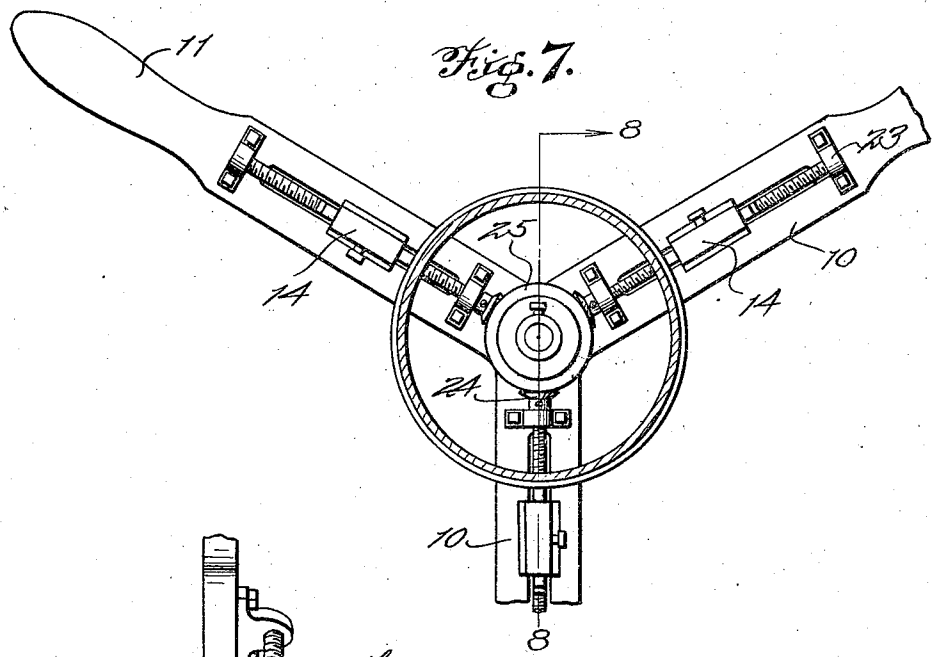
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THREAD CUTTING AND CLEANING TOOL

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Fig. 7.



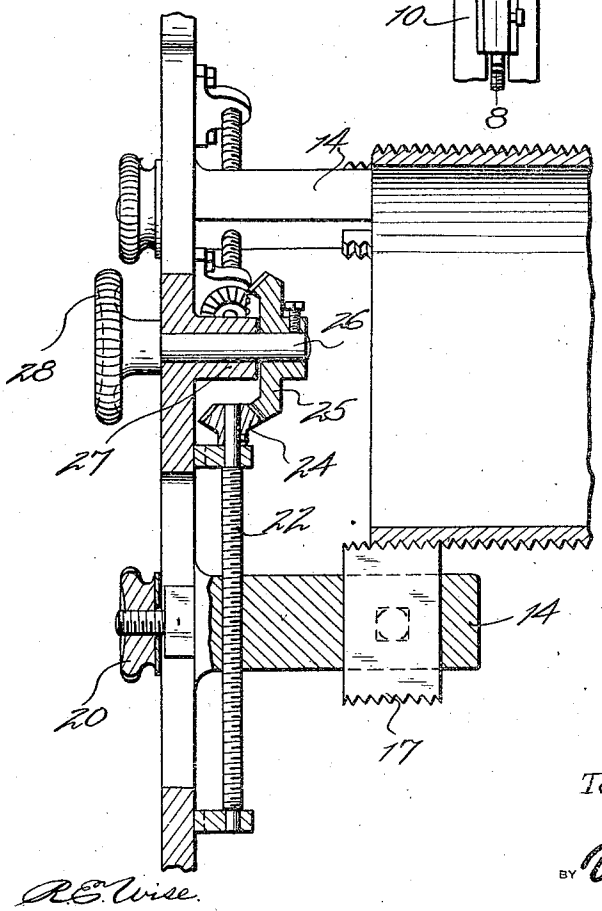


Fig. 8.

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UNITED STATES PATENT OFFICE.

TOM BRYANT, OF CROSS PLAINS, TEXAS.

THREAD CUTTING AND CLEANING TOOL.

Application filed August 6, 1924. Serial No. 730,499.

This invention relates to tools and has especial relation to thread cleaning and cutting tools, an object being to provide a tool of this character which is capable of cutting threads, restoring mutilated threads and removing rust, grease or other extraneous matter from the threads so as to restore them to their original condition.

Another object of the invention is the provision of a tool for the above purpose which is simple in construction, easily adjusted to the diameters of different pipes and the like and which is capable of chasing either an internal or external thread.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is an elevation showing the position of the tool in use, a pipe being shown in cross section.

Figure 2 is a side view of Figure 1.

Figure 3 is a view similar to Figure 2 but showing a tool used upon internal threads, parts of the view being shown in section.

Figure 4 is a front elevation illustrating the tool as used in Figure 3, one arm of the tool being broken away.

Figure 5 is an enlarged fragmentary section on the line 5—5 of Figure 4.

Figure 6 is a detail perspective view of one of the dies.

Figure 7 is a view similar to Figure 1 showing a different form of the invention.

Figure 8 is an enlarged fragmentary sectional view taken on the line 8—8 of Figure 7.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the improved tool is shown as comprising a body which includes radially disposed arms 10. These arms are connected at their inner end and their outer ends are formed to provide handles or grips 11. The arms are further provided with longitudinally disposed slots 12 and extending along one edge of these slots are graduations 13.

Removably and adjustably secured to the arms 10 are right angularly disposed stands 14 which are provided with slots 15 and removably secured within these slots by means of set screws 16 are thread cutting and cleaning dies 17. The inner ends of the stands 14 are provided with reduced rectangular portions 18 which have a sliding fit within the slots 12, while extending from these rectangular portions 18 are threaded shanks 19 which receive binding nuts 20. Washers 21 are interposed between the nuts and the adjacent faces of the arms 10.

In Figures 7 and 8 there is illustrated a form of the invention in which all of the stands are simultaneously adjusted. For this purpose the stands 14 are provided with transversely arranged threaded openings for the reception of threaded rods 22, the latter being mounted upon the arms 10 in bearing brackets 23, whereby the threaded rods may rotate but will be held against longitudinal movement. The inner ends of the rods 22 have secured thereon beveled pinions 24 but are engaged by a beveled gear 25, the latter being secured upon the inner end of a short shaft 26. The shaft 26 is mounted within a bearing sleeve 27 provided in the frame at the juncture of the arms 10 and has secured upon its outer end a hand wheel 28. By this means, the stands 14 may be simultaneously adjusted, after which they may be secured in adjusted position by the binding nuts 20.

It will be apparent from the foregoing description and accompanying drawings that the invention provides a tool for the purpose mentioned which is capable of adjustment for cutting threads of different diameters and may be conveniently used for cutting internal or external threads, adjustment being effected by adjusting the stands 14 in accordance with the graduations 13.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. A tool of the character described comprising a plurality of radially disposed arms connected together, each arm having a longitudinal slot, a die holder of rectangular contour in cross section carried by each arm and projecting laterally from one side thereof, each holder having a transverse slot adjacent the free end thereof, a die received by said slot, a threaded element carried by the holder and used to hold the die fixed relatively to the latter, a reduced rectangular portion at the other end of the holder for

sliding engagement with the walls of the adjacent slot, a threaded shank extending from the reduced portion, and a nut associated with said shank for maintaining the holder fixed with relation to said arm.

2. A tool of the character described comprising radially disposed arms connected together, each arm having a longitudinal slot, a die holder mounted on each arm and projecting laterally from one side thereof, a reduced rectangular portion at one end of the holder for sliding engagement with the adjacent walls of said slot, said holder having a transverse slot adjacent its other end, a threaded die received by said slot, means for holding the die fixed to the holder, a pair of apertured lugs projecting from each arm above and below the slot thereof, a rod journaled in each pair of lugs and arranged at one side of and parallel with the adjacent arm, the holder on said arm having a transverse threaded bore to engage the threads on said rod, a pinion carried by the inner end of each rod, a shaft journaled at a right angle to said rod, and a gear carried by said shaft and meshing with said pinion, whereby all of said holders are simultaneously adjusted longitudinally of the arms.

In testimony whereof I affix my signature.

TOM BRYANT.