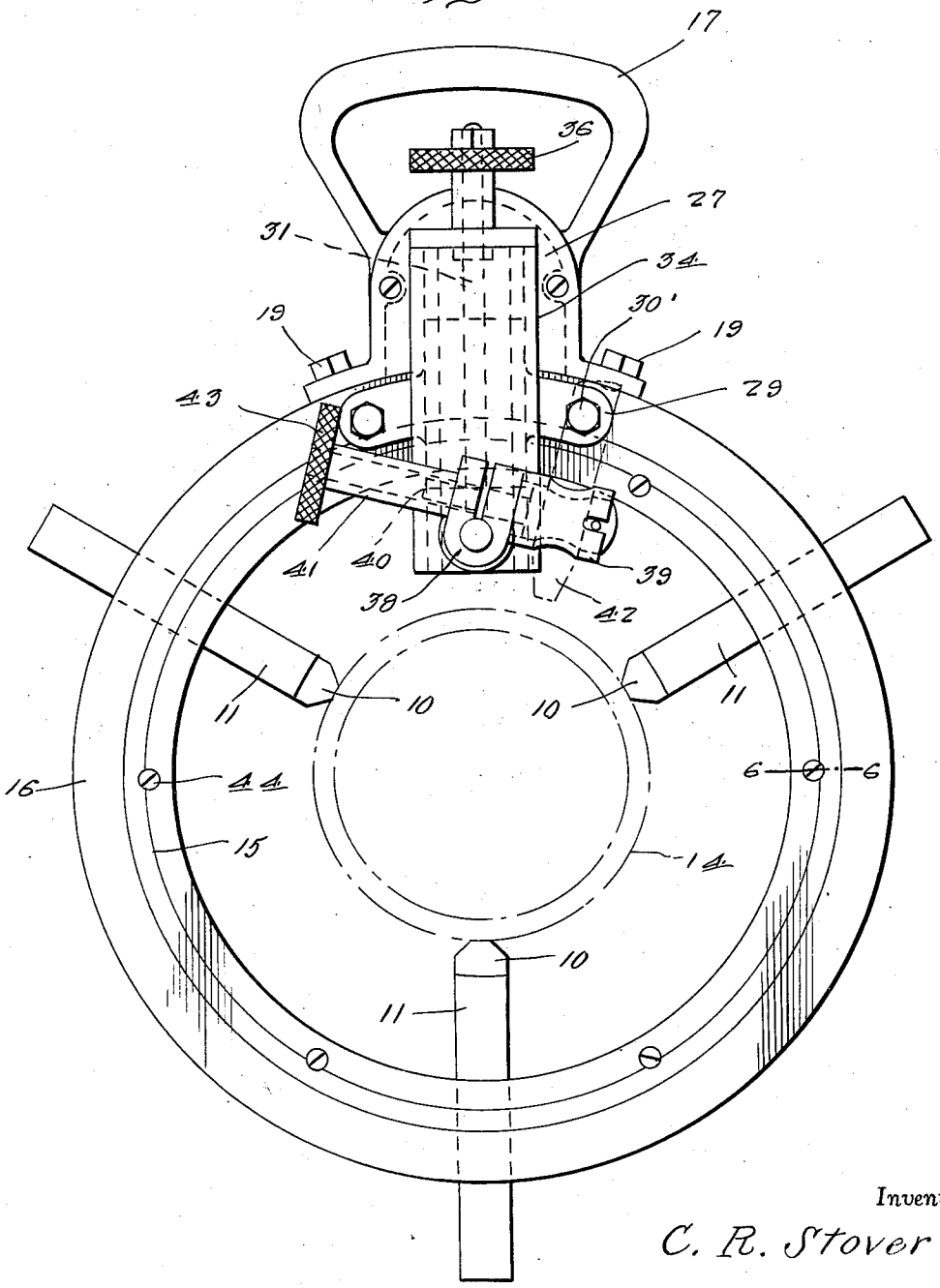
Aug. 17, 1937. C. R. STOVER 2,090,431

PIPE CUTTING APPARATUS

Filed April 2, 1936 3 Sheets-Sheet 1

Fig. 1.




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C. R. Stover

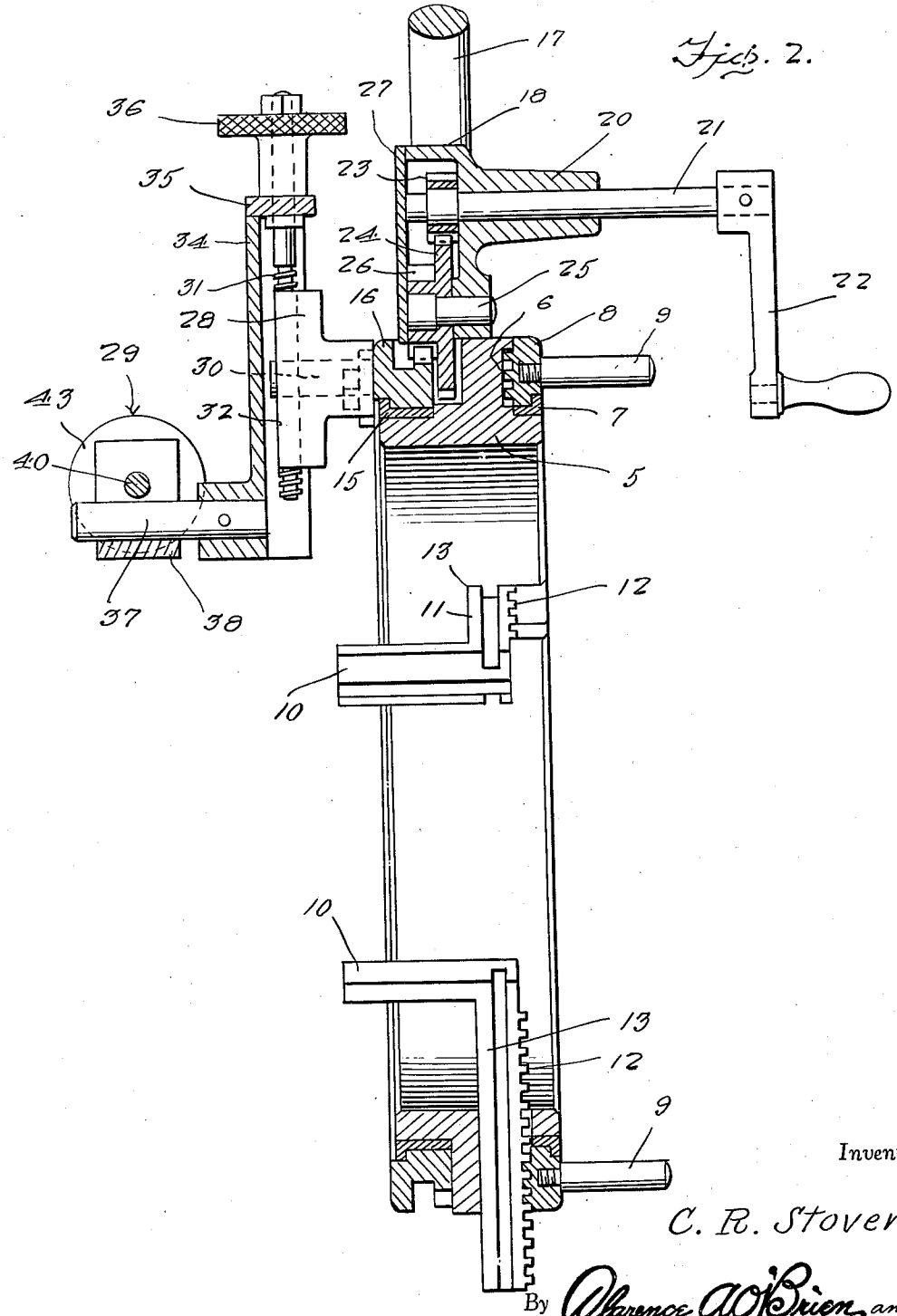
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Fig. 2.




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Fig. 3.

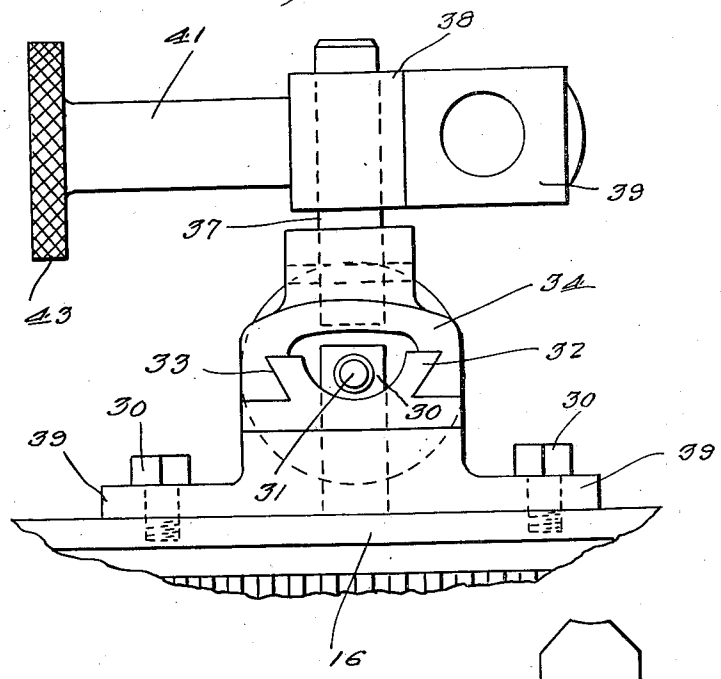



Fig. 4.

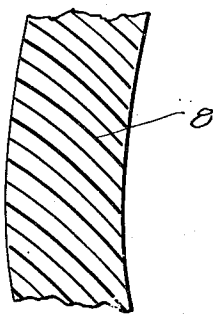



Fig. 5.

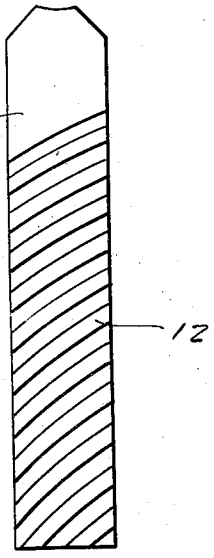
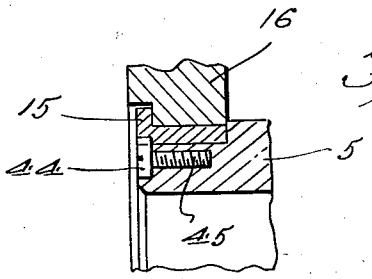



Fig. 6.




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Patented Aug. 17, 1937

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# UNITED STATES PATENT OFFICE

2,090,431

## PIPE CUTTING APPARATUS

Charles Ralph Stover, Elkview, W. Va.

Application April 2, 1936, Serial No. 72,382

1 Claim. (Cl. 266—23)

This invention appertains to new and useful improvements in means for mounting an acetylene torch in such a manner as to uniformly cut a pipe with the least amount of manual effort required in gauging and handling the torch.

Another important object of the invention is to provide an apparatus of the character described, wherein the torch is fed into the pipe in a uniform manner, so that the pipe is cut uniformly around its circumference.

Other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 represents a side elevational view of the apparatus.

Figure 2 represents a vertical sectional view through the structure.

Figure 3 represents a bottom plan view of the apparatus.

Figure 4 is a fragmentary elevational view of the scroll gear ring.

Figure 5 represents an elevation of one of the racks.

Figure 6 represents a fragmentary sectional view taken substantially on the line 6—6 of Figure 1.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the apparatus includes an annulus 5 having a rabbeted portion 6. A flanged ring 7 is secured to this annulus 5, at the rabbeted portion 6, to retain the scroll gear ring 8 in position on the annulus 5, so that the same can be rotated by its handles 9, which project laterally, as shown in Figure 2.

Pipe centering boots 10 are provided in any number desired, and each is provided with a longitudinally grooved shank 11 having arcuate-shaped ribs 12 disposed transversely thereon and adapted for mesh with the scroll gear 8. The shanks 11 extend through openings 13 in the annulus 5, in the manner suggested in Figure 1, and obviously, by rotating the scroll gear 8, the boots 10 can be moved inwardly or outwardly to properly center a pipe 14 within the annulus 5.

The opposite edge portion of the annulus 5 is circumferentially reduced and around this is disposed the flanged ring 15 for holding the ring gear 16 in place on the annulus 5.

As is clearly shown in Figures 1 and 2, an inverted U-shaped handle 17 has the legs thereof secured to or formed with the gear casing 18, which is secured by screws 19 to the top portion of the annulus 5. An elongated barrel 20 extends laterally from this gear casing 18 and serves as a bearing for the shaft 21, which is equipped with the hand crank 22 at its outer end.

The end portion of the shaft 21, within the casing 18, is provided with the pinion 23 meshing with the gear 24 on the stub shaft 25. The hub of this gear 24 is in the form of a pinion 26 which meshes with the gear teeth of the ring gear 16. Obviously, by rotating the shaft 21 by the hand crank 22, the ring gear 16 will be revolved on the annulus 5. A removable cover plate 27 is provided for the gear casing 18.

A horizontally disposed T-shaped body 28 is secured by ears 29 and screws 30′ to the ring gear 16 and this forms part of the acetylene torch carrier, generally referred to by the numeral 29. Extending through the T-shaped body 28 is the stud 30 which is provided with a transversely extending and threaded bore at its outer end portion through which the feed screw 31 is disposed. As is apparent in Figure 3, the outer portion of the T-shaped body 28 is provided with a dovetail formation 32 engaged into the dovetail grooveway 33 of the elongated block 34, which is provided with an end wall 35 through which the smooth end portion of the screw 31 is journaled. The screw, at its outer end, is provided with a knob 36 whereby the same can be rotated.

The inner end of the body 34 is provided with a laterally and outwardly extending pin 37 on which the clamp 38 is engaged. The clamp 38 forms part of the acetylene torch tip holder. The numeral 39 represents the head of this holder which is provided with a threaded shank 40 extending through the leg portions of the clamp 38 and over which the internally threaded shank 41 of the knob 42 is engageable. Obviously, by feeding the barrel 41 inwardly against the clamp 38, the head 39 and barrel 41 will be clamped against opposite sides of the clamp 38, so as to retain the clamp firmly in place on the pin 37, thus retaining the torch tip 42 in proper position with relation to the work 14.

Obviously, when the crank 22 is rotated, the ring 16 revolves on the annulus 5, and in this manner the torch is turned around the work, and as the cut is made, the knob 36 can be rotated to gradually feed the torch carrier 29 closer to the work, or away depending on the size of the pipe.

As can be seen in Figure 6, the flanged rings 7 and 15 are retained in place by the heads 44 of screws 45 driven into the annulus 5.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and

materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

A structure of the class described comprising, an annulus, a ring rotatably mounted on one side of said annulus having gear teeth, work-centering members mounted on said annulus having rack teeth meshing with the gear teeth, laterally projecting handles on the said ring for rotating said ring, said work-centering members being radially movable upon rotation of said ring, a second rotatably mounted ring on the other side of said annulus, having gears disposed on the outer periphery thereof, a gear box secured laterally of the periphery of said annulus, a gear rotatably mounted therein in mesh with the teeth on the periphery of said second gear, a pinion gear in mesh with the gear in said gear box, handle means for rotating said pinion gear, a torch holder mounted on said second ring, and means for radially and pivotally adjusting said holder.

CHARLES RALPH STOVER.