Dec. 3, 1957 E. J. CHARLES 2,814,867

PIPE CUTTER

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Fig. 1.

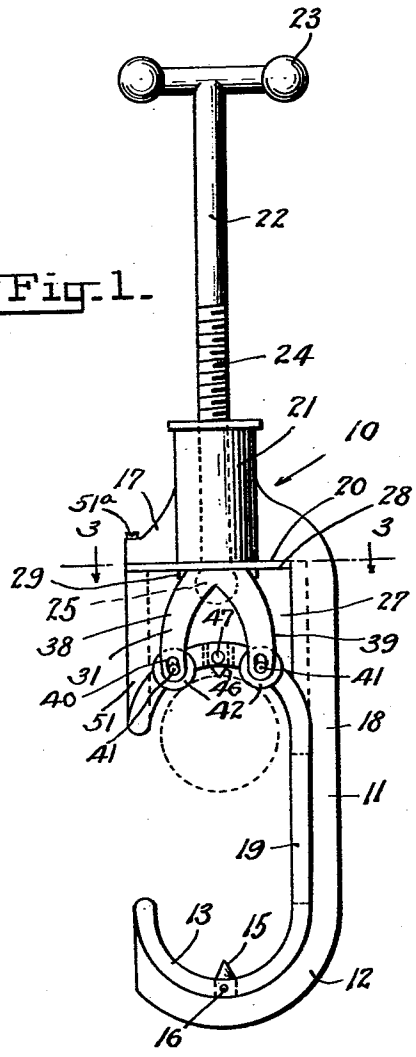
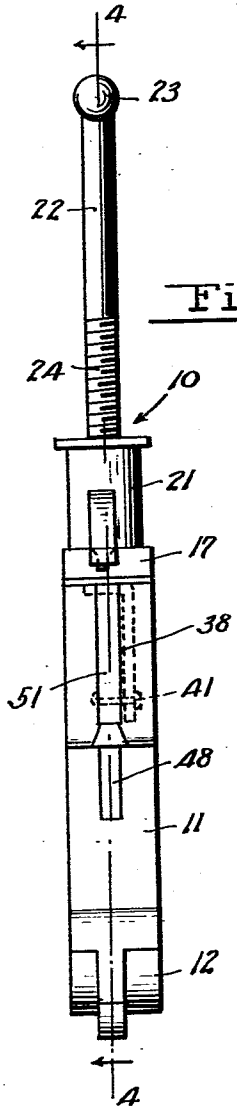


Fig. 2.



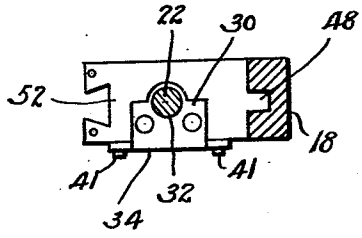


Fig. 3.

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Fig. 4.

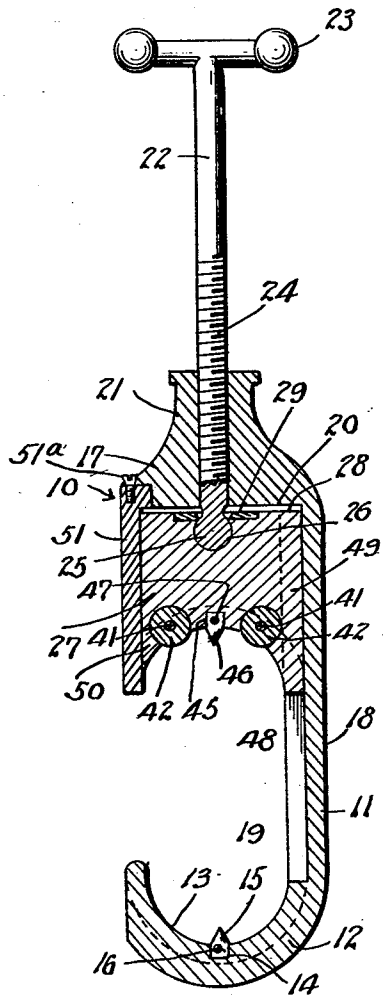


Fig. 8.

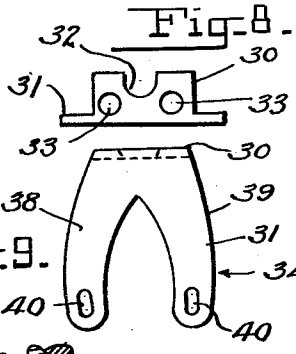


Fig. 9.

Fig. 5.

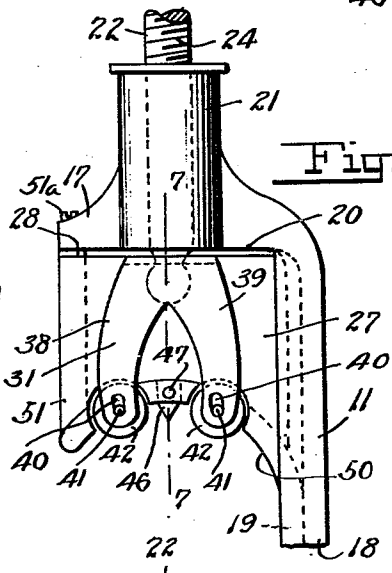


Fig. 7.

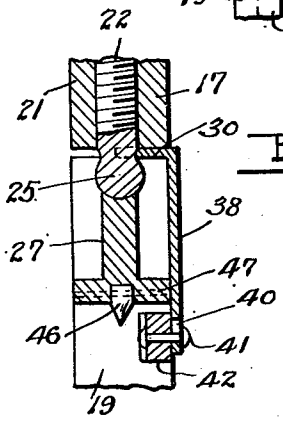
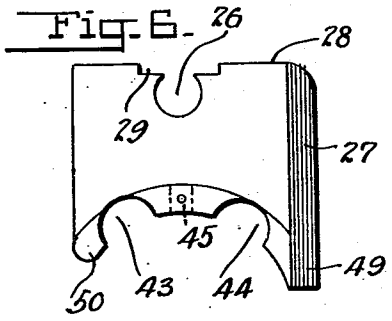


Fig. 6.



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PIPE CUTTER

Ethelred J. Charles, Brooklyn, N. Y.

Application June 6, 1956, Serial No. 589,747

1 Claim. (Cl. 30—94)

This invention relates to improvements in pipe cutters and more particularly to the pipe cutter disclosed in my application bearing Serial No. 377,118, now abandoned.

An object of the invention is to provide a guide means that will maintain the pipe cutter in proper cutting position while it is being revolved around the pipe section being cut.

The pipe cutter embodying the invention comprises a body having a fixed jaw and a movable jaw and the guide means is associated with the movable jaw for the proper alinement thereof.

With the above and other objects and advantages in view, the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawings in which:

Fig. 1 is a side elevational view of a pipe cutter embodying the invention;

Fig. 2 is a front elevational view of Fig. 1;

Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a longitudinal sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a detailed fragmentary view of a guide means for the pipe cutter;

Fig. 6 is a perspective view of the movable jaw of the pipe cutter;

Fig. 7 is a detailed fragmentary sectional view on the line 7—7 of Fig. 5;

Fig. 8 is an elevational end view of a section of the guide means; and

Fig. 9 is an elevational side view of the guide means of Fig. 8.

Referring more in detail to the drawings, wherein like parts are designated by like reference numerals, the reference numeral **10** is used to generally designate a pipe cutter embodying the invention.

The pipe cutter **10** comprises a C-clamp **11** having an arcuate shaped fixed jaw **12** at one end thereof. The C-clamp **11** is T-shaped in cross-section and the fixed jaw **12** has a flat inner face **13**, which is provided with a centrally radially disposed opening **14**. Positioned in the opening **14** is a bit **15** that may be retained therein by any well known fastening means **16**. The bit **15** projects beyond the flat arcuate shaped face **13** of the fixed jaw **12** and is adapted to penetrate a pipe section.

The C-clamp **11** has an opposite end **17** that extends laterally from the end of a central portion **18** thereof. The central portion **18** of the C-clamp **11** has a straight inner face **19**, which extends at right angles to an inner flat face **20** of the end **17**.

The end **17** has an internally threaded hub portion **21** that is axially alined with the opening **14** in the fixed jaw **12**.

A screw operating rod **22** is threadedly carried by the hub portion **21** and a transversely disposed handle **23** is provided at the outer end of the rod **22**. The rod **22** is

threaded at **24** to correspond with the threads of the hub portion **21** and a ball **25** is formed on the inner end of the rod **22** at the termination of the threads **24**.

The ball **25** is seated in a complementary semi-circular shaped socket **26** in a movable jaw **27**. The movable jaw **27** has a flat face **28** that is complementary to the flat face **20** of the end **17**.

The flat face **28** of the movable jaw **27** has a rectangular shaped recess **29** therein that is circumjacent to the socket **26** to receive a holding plate **30** of a guide **31**. The plate **30** has a cutout **32** therein to engage the screw **22** and openings **33** in the plate **30** permit fasteners to pass therethrough to fix the plate to the movable jaw **27**.

Extending from the plate **30** at right angles thereto is a substantially V-shaped portion **34** of the guide **31**. The portion **34** comprises a pair of slightly curved legs **38** and **39**.

Each outer end of each of legs **38** and **39** is slotted as at **40**, Fig. 9, to receive a stub shaft **41** of a guide roller or cutter **42**. The movable jaw **27** is provided with a pair of spaced semi-circular shaped recesses **43** and **44**, Fig. 6, to receive the rollers or cutters **42** therein. Positioned in the movable jaw **27**, intermediate of the recesses **43** and **44**, is an opening **45** to receive a bit **46** which is retained therein by a fastener **47**.

The inner face **19** of the central portion **18** is provided with a longitudinally axially extending groove **48** which functions as a guide or slideway for a lug **49** that extends laterally from the inner edge of the movable jaw **27**.

The lug **49** extends for the length of the movable jaw **27** and sliding in the groove **48** mounts the movable jaw **27** in sliding relation to the portion **18** and also prevents rotation of the movable jaw **27** on the ball **25**.

The movable jaw **27** has an arcuate flat inner face **50** which is opposed to the inner face **13** of the fixed jaw **12**. The rollers or cutters **42** and the bit **46** extend through the surface of the face **50**, thus the bits **15** and **46** are in axial alinement and when the jaws **12** and **27** are brought into proximity with each other the bits **15** and **46** will penetrate a pipe section positioned intermediate of the jaws **12** and **27**.

As the movable jaw **27** is moved in a straight line toward the fixed jaw **12** within the confines of the C-clamp **11**, the movable jaw **27** is prevented from twisting or turning by the groove **48** and lug **49** and a dove tail block **51** engaging in a dove tail slot **52**. The block is affixed to the end **17** as indicated at **51a**. The rod **22** is rotated by turning the handle **23** and the rotation of the rod **22** moves the movable jaw **27** towards the fixed jaw **12**.

While the structure of the pipe cutter is shown in my co-pending application, the improvement constituting the present invention includes the guide means whereby the bits **15** and **46** are retained in perfect alinement to provide a perfect circle cut.

Regardless of how carefully the pipe cutter is used by the operator, there is a chance that the cut will not be in a perfect circle and the guide embodying the invention has been provided to insure a perfect cut and efficient operation at all times.

It is believed that from the foregoing description the operation and construction of the invention will be apparent to those skilled in the art and it is to be understood that changes in the minor details of construction, arrangement and combination of parts may be resorted to provided they fall within the spirit of the invention and the scope of the appended claim.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

A guide for a pipe cutter having a body, a fixed jaw and a movable jaw on the body comprising a plate, means for securing said plate to said movable jaw, a substantial-

ly V-shaped portion extending at right angles to said plate and integral therewith, said V-shaped portion including a pair of legs parallel to said movable jaw, and a guide roller mounted on the end of each of said legs, said legs each having an elongated slot therein and each roller having a stub axle slidably mounted in each of said slots.

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