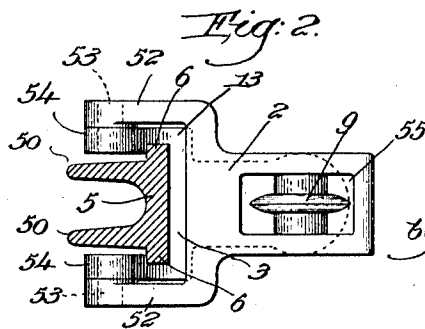
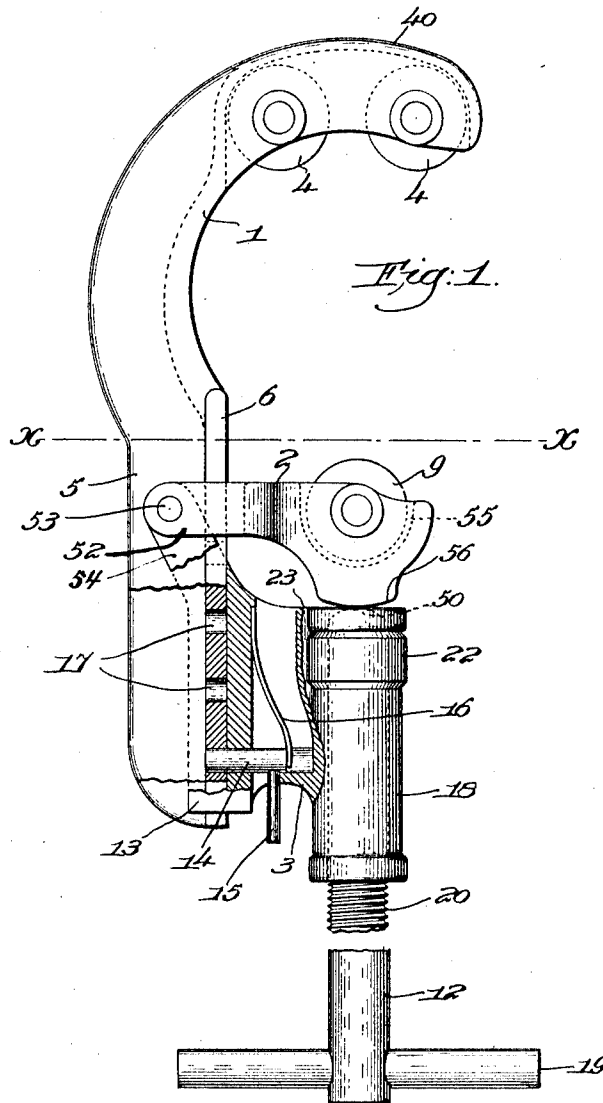


J. H. VINTON.
 QUICK ADJUSTABLE PIPE CUTTER.
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1,012,304.

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Witnesses,
 Edward G. Allen.
 Warren O'Neil.

Inventor:
 J. H. Vinton.
 by Edmonds Hand & Smith
 attys.

UNITED STATES PATENT OFFICE.

JOHN H. VINTON, OF JAMAICA PLAIN, MASSACHUSETTS, ASSIGNOR TO TRIMONT MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

QUICK-ADJUSTABLE PIPE-CUTTER.

1,012,304.

Specification of Letters Patent.

Patented Dec. 19, 1911.

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To all whom it may concern:

Be it known that I, JOHN H. VINTON, a citizen of the United States, residing at Jamaica Plain, county of Suffolk, State of Massachusetts, have invented an Improvement in Quick-Adjustable Pipe-Cutters, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to a pipe cutter or a device for cutting metal pipe. In this type of device the cutting is performed by small rotary knives or cutters placed respectively on a fixed and a movable part. These parts are moved with respect to each other by means of a screw to bring the cutters gradually closer together until the pipe is severed. Owing to the character of material being cut this requires a comparatively fine or close threaded screw, and a consequent slow movement of the parts toward or from each other. This renders the pipe cutter unsuitable for use in cutting different sizes of pipe, which vary several inches in extreme diameter, because of the time required to adjust the parts to the required size.

In the construction illustrated herein embodying my present invention an abutment is slidably mounted on the main jaw shank, and I have provided means to lock fixedly the abutment to the main jaw at desired points, and a cooperating jaw provided with cutting means is pivotally mounted on the abutment independently of the locking means thereof and is adapted to swing toward and from the main jaw, means being provided for adjusting the angular position of such cooperating jaw about its pivotal axis and forcing it toward the main jaw when the abutment is locked from movement. This construction enables the cutter-carrying parts to be quickly and readily set apart to approximate the diameter of the usual or required pipe sizes, and then when the abutment is locked the angular position of the cooperating jaw is slowly adjusted and the cutting means thereon is forcibly moved toward the main jaw as the cutting progresses.

The nature of the invention will appear more fully from the accompanying description and drawings, and will be particularly pointed out in the appended claims.

The drawings illustrate a preferred form of pipe cutter embodying the invention.

In the drawings Figure 1 is a side elevation of the pipe cutter with certain of the parts shown in longitudinal cross section. Fig. 2 is a cross section taken on the line X—X of Fig. 1.

The device comprises in carrying out this invention, three main parts, a relatively fixed part or main jaw 1, a relatively movable part or cooperating jaw 2, and a relatively movable abutment 3.

In the form shown the main jaw 1 is curved at its end to enable it to embrace the largest required size of pipe, and has journaled in its extreme end a pair of rotary cutter knives 4. The jaw is of sufficient width so that it is recessed as indicated at 40 to form a housing for the major portion of the rotary cutting knives. The main jaw extends from the curved end into a straight shank portion 5, and as herein shown the walls of the housing 40 are continued into separate depending flanges 50, so that the strength of the main jaw member is secured with a less depth of flange than would be required if but one flange were used. The straight shank portion at its upper edge is provided with straight ribs or ways 6.

The movable abutment 3, is provided with a base portion 13, which straddles the ways 6 on the shank of the jaw 1, and is provided with grooves fitting said ways. A large, preferably cylindrical, stud 14 is mounted to slide freely on this abutment and transversely, or at right angles to the plane of the ways 6. A pin 15 is connected to the stud 14 and extends out through a slot in the abutment to the outside thereof, and a suitable spring such as the leaf spring 16, is mounted in a cavity on the inside of the abutment and presses against the head of the stud 14 normally to project the stud toward the shank of the jaw 1. This shank is provided with a row of holes 17 longitudinally thereof, adapted to receive the end of the stud, and these holes are spaced at suitable distances apart to correspond to the general variations in different sizes of pipe.

The abutment 3 is formed to present a hollow sleeve portion 18 which receives the handle 12. This handle is provided with a cross bar 19 and is shown as a cylindrical rod having a central screw-threaded section 20. A

screw-threaded nut 22 fits the screw-threaded portion 20, is seated in a recess in the abutment 3, and straddles the web 23 thereof, whereby it is prevented from turning so that upon turning the handle 12 its end 50 is projected more or less beyond the abutment.

The movable or cooperating jaw 2 is formed as a yoke-shaped member, the legs 52 of the yoke straddling the base of the abutment and being pivoted at 53 to projections 54 from the base of the abutment extending beneath the ways 6 and forwardly toward the curved jaw. This cooperating jaw member 2 is also recessed at its upper end as indicated at 55 to present a housing within which is pivotally mounted a rotary cutter knife 9. The pivot 53 of the jaw member 2 is offset a considerable distance from the longitudinal axis of the handle 12. The opposite face of the jaw member 2 is curved as shown at 56 and the end 50 of the handle is also curved, and these curved portions remain in contact during all positions to which the cooperating jaw member 2 is adjusted about its pivots during the operation of cutting the pipe.

It will thus be seen that in order to adjust the cutting knife 9 toward and from the cutter knives 4 the stud 15 is raised and the abutment slid along the shank 5 until the cutter knives are separated approximately the diameter of the pipe to be cut, when the stud 14 is dropped into one of the holes 17 thus locking the abutment firmly in adjusted position. Then to adjust the movable or cooperating jaw member 2 with its rotary cutting knife 9 toward the main jaw, it is only necessary to turn the handle 12 when the cooperating jaw member 2 will be swung about its pivot 53, and the cutting means on said jaw member will be forced into the pipe deeper and deeper as the cutting progresses.

The pipe cutter as thus constructed is of a very strong construction, and is of a compact form. It may be used for a large variety of sizes of pipe, and the adjustment for the cutting operation is secured with great accuracy.

In the construction described the parts 4-4 are referred to as rotary cutting knives, and may be of such construction. These members may also be constructed as rolls which press down the burs formed by the rotary cutting knife 9.

The invention having been described, what is claimed as new and desired to be secured by Letters Patent, is:

1. A pipe cutter comprising a main jaw, an abutment movable thereon, means for fixedly locking the abutment to the main jaw at desired points, a cooperating jaw pro-

vided with cutting means and pivotally mounted on said abutment independent of the locking means therefor and adapted to swing toward and from the main jaw, and means for adjusting the angular position of the cooperating jaw about its pivotal axis and forcing it toward the main jaw when the abutment is locked from movement.

2. A pipe cutter comprising a main jaw having a straight shank, an abutment, movable longitudinally upon the shank, means for locking the abutment fixedly to the main jaw shank at desired points, a cooperating jaw provided with cutting means and pivotally mounted on said abutment to swing toward and from the main jaw, and a rotatable, longitudinally movable handle carried by the abutment and bearing against the free end of the cooperating jaw, for adjusting the angular position of the said jaw about its pivotal axis on the abutment and forcibly moving the cutting means toward the main jaw when said abutment is locked.

3. A pipe cutter comprising a main jaw, an abutment slidably mounted on said main jaw, means for locking said abutment fixedly to the main jaw at desired points, a cooperating jaw provided with cutting means and carried by and pivotally mounted on said abutment independent of the locking means therefor and adapted to swing toward and from the main jaw cutting means, and means carried by said abutment for adjusting the angular position of the cooperating jaw about its pivotal axis and forcing the cutting means on said jaw toward the main jaw.

4. A pipe cutter comprising a main jaw having a straight shank provided with ways, an abutment mounted to slide on said ways on said shank, means mounted wholly on said abutment to lock it to said shank at desired points, a cooperating jaw independent of the locking means, provided with cutting means and straddling said abutment and said ways and pivotally connected to said abutment beneath said ways, and means carried by said abutment for adjusting the angular position of the cooperating jaw about its pivotal axis and forcing the cutting means toward the main jaw when the abutment is locked.

5. A pipe cutter comprising a main jaw curved and recessed at its ends to present a housing, rotary members pivotally mounted in said housing, said jaw extended to present a straight shank, cutting means mounted to move longitudinally on said shank toward and from the rotary members and also having a swinging movement, means to lock the said cutting means from bodily movement while permitting swinging movement thereof, and independent means

for effecting a forcible swinging movement
of said cutting means toward the rotary
members, while the cutting means is locked
from bodily movement longitudinally of the
5 shank.

name to this specification, in the presence
of two subscribing witnesses.

JOHN H. VINTON.

Witnesses:

NATHAN HEARD,

FREDERICK S. GREENLEAF.

In testimony whereof, I have signed my

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."