3,290,779
RATCHET DRIVE FOR PIPE CUTTER
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This is a continuation-in-part of my copending application, Serial No. 359,193, entitled, "Work Tool," filed August 31, 1964, and abandoned. The present invention relates to a work tool for performing a variety of forming operations such as severing, chamfering, and cutting threads on pipes, rods and the like and more particularly to such a work tool which is quickly and easily converted for such uses with a minimum of effort.

It is essential to provide improved and work tools for performing such forming operations on pipes, rods and the like. Each of these tools is precision machined and involves a substantial investment for the pipe fitter or other workmen utilizing such tools. They also are of such a size that many times they cannot easily be transported when all are required for a given operation.

Another problem present in the use of the conventional prior art tools for the purposes is that they are not easily adapted to pipes and rods which are disposed in confined areas, such as close to walls, in ditches and in other restricted spaces. Such locations normally preclude the use of conventional pipe working tools requiring full rotation of the tools about the pipes. Various prior art devices have provided ratcheting tools having split housings which may be disassembled and reassembled about the pipes for performing the above operations. The somewhat complicated ratcheting mechanisms employed in such tools have necessitated the joining of the separable halves of the tools by removable bolts which must be tediously loosened, withdrawn, reinserted and tightened when fitted about pipes, thus requiring nearly as much time and effort as previous methods of severing the pipes, such as by sawing and the like.

A number of the prior art structures have also provided cutting blade adjusting mechanisms which are usually automatically actuated during ratcheting of the handle of the tool past the adjusting mechanism. These have not provided the amount of control over such cutting blade adjusting as desired or necessary in some environments. Such structures usually provide an adjusting screw through the body of the tool which has a toothed gear head portion which is advanced one tooth during each revolution of the tool about the pipe. This unnecessarily restricts each adjustment of the cutting blade to that provided by the advancement of one tooth of the adjusting screw gear so that the pipe can never be severed accurately. A great number of revolutions of the tool about the pipe required to advance the cutting blade entirely through the wall of the pipe.

Therefore, it is an object of the present invention to provide an improved work tool capable of performing a variety of forming operations on pipes, rods and the like.

Another object is to provide such an improved work tool which is quickly and easily converted for performing a variety of forming operations such as severing, chamfering and cutting threads.

Another object is to provide a ratcheting handle mechanism for the work tool which may be mounted on the tool subsequent to the mounting of the work tool on the pipe or rod.

Another object is to provide a work tool which is adapted to accommodate pipes and rods in a wide range of sizes with a minimum of modification.

Another object is to provide an improved work tool which includes a cutting blade adjusting mechanism which provides a wide range of adjustment of the blade during each adjusting operation.

Another object is to provide a work tool having such an adjusting mechanism wherein the cutting blade is adapted to copet with auxiliary cutting members which are interchangeably mounted within the work tool.

Other objects and advantages of the present invention will subsequently become more clearly apparent upon reference to the following description in the specification.

In the drawings:

FIG. 1 is a perspective view of a work tool embodying the principles of the present invention with portions thereof cross sectioned for illustrative convenience showing the tool adapted to accommodate relatively large size pipes and rods therethrough.

FIG. 2 is a perspective of a pipe support roller assembly for insertion into the work tool to convert the tool to accommodate smaller diameter pipes and rods.

FIG. 3 is a somewhat enlarged central vertical section through the body portion of the work tool of FIG. 1 showing the support roller assembly of FIG. 2 disposed therein.

FIG. 4 is a somewhat enlarged transverse vertical section through the body portion of the work tool taken in a plane generally indicated by the line 4—4 of FIG. 3.

FIG. 5 is a central vertical section similar to FIG. 3 showing the work tool of FIG. 1 having a thread cutting die disposed therein.

FIG. 6 is a somewhat enlarged transverse vertical section through the body portion of the work tool and the thread cutting die taken in a plane generally indicated by the line 6—6 of FIG. 5.

FIG. 7 is a somewhat reduced side elevation of a reaming assembly having a shank portion adapted to be inserted into the body portion of the work tool in a manner similar to the thread cutting die of FIGS. 5 and 6.

FIG. 8 is a front elevation of a second form of the work tool of the present invention intended exclusively as a cutting tool.

FIG. 9 is a side elevation of the work tool of FIG. 8.

FIG. 10 is a rear elevation of the second form of work tool with portions removed for illustrative convenience.

FIG. 11 is a fragmentary transverse vertical section through the body portion of the second form of work tool taken on line 11—11 of FIG. 9.

FIG. 12 is a transverse vertical section through the body portion of the second form of work tool taken on line 12—12 of FIG. 8.

FIG. 13 is a transverse vertical section through the body portion of the second form of work tool taken on line 13—13 of FIG. 9.

Referring more particularly to the drawings, a work tool embodying the principles of the present invention provides a substantially cylindrical, diametrically separable housing or body 11 which has a bore 12 therethrough. The body also includes an inner mounting portion 14 and an outer gate portion 15. The outer gate portion is hinged for swinging movement relative to the mounting portion 14 of the body by a pivot pin 17.

The mounting portion 14 of the body provides a latch mechanism generally indicated by the reference numeral 20 preferably located in substantially diametrically opposed relation to the pivot pin 17. The latch includes a generally arcuate latching end 21 having a notch 22 therein and an opposite peripherally outwardly extended thumb engaging end 25. The latch is swingably mounted
intermediate its ends on a pivot pin 27 constrained in the mounting portion of the body. A compression spring 28 is constrained at its ends between the latch and the mounting portion of the body in respective recesses 50 and 31 in the mounting portion of the latch. The spring urges the latching end thereof toward the gate portion 15 of the body. The end of the gate portion of the body provides a lip 33 which is adapted to be received within the notch 22 of the latch in dependable holding relation between the mounting portion and gate portion of the body. In such position it is disposed substantially coextensively with the outer periphery thereof except for the thumb engaging end 25.

The body 11 of the work tool of the present invention further includes a reduced diameter annular gear flange 35 having a plurality of equally spaced gear teeth 36 thereabout. A substantially flat ring plate 38 of a diameter substantially the same as the diameter of the body is mounted on the body adjacent to the gear flange 35 by a plurality of cap screws 39 extended therethrough in screw-threadable relation within the body. An annular channel 40 is thereby formed between the ring plate and the body above the gear flange 35.

A plurality of elongated axially extended key ways 41 are formed in the body within the bore 12 preferably in equally spaced relation substantially 120° apart. As best shown in FIGS. 1 and 6, one key way is located in the bore portion 34 of the body in centered relation with an upright plane through the diametric center thereof and with the remaining two key ways disposed in the gate portion 15 of the body in symmetrical relation to said upright plane. The key ways terminate within the bore short of the ring plate 38 in an end surface or shoulder 42. A recess 43 is formed within the outer gate portion 15 of the body between the key ways 41. A pair of workpiece support rollers 44 are mounted within the recess 43 in side-by-side substantially parallel relation by a pair of axle screws 46 screw-threadably received in the body and having outer knurled head portions 47 for ease of assembly. The rollers include peripheral portions 48 which extend a short distance within the bore 12 of the body.

The mounting portion 14 of the body includes a relatively large recess 50 in substantially diametrically opposed relation to the smaller recess 43 in the gate portion 15. An elongated arm 52 provided with a bifurcated end 53 and an opposite mounting end 54 is disposed within the large recess. The arm is pivotally mounted by a pin 55 eccentrically of the bore 12 in the body. A circular cutting blade 57 is rotatably mounted within the bifurcated arm 52 by a pin 58. As best shown in FIG. 4, the arm and cutting blade are rotatable within the recess to a position completely removed from the bore 12 of the body and of the key way 41 in the mounting portion 14 thereof. An elongated cutter blade adjusting screw 60 is screw-threadably disposed in the mounting portion 14 of the body 11 and provides an inner end 61 engageable with the bifurcated end 53 of the cutter blade arm 52. The adjusting screw includes an opposite head end 62 outwardly extended from the body.

A control mechanism for the work tool is generally indicated by the reference numeral 65. The control mechanism includes a separable, diametrically split ring portion 66 providing hinged inner and outer halves 67 and 88, respectively. The inner and outer halves are swingable between opened and closed positions about a hinge pin 69 and are held in their closed position by a latch mechanism 70 similar to the latch mechanism 20 for the roller portion 44. A hook 72 and an opposite thumb-engaging end 73. The latch is pivotally mounted intermediate its ends by a pin 74 rigidly mounted in the inner half 67 of the control ring 66. The hook and 72 of the latch is adapted to receive in constraining relation a lip 75 on the adjacent end of the outer half 88 of the ring under the urging of a compression spring 76 between the thumb end 73 of the latch and the inner half 67 of the control ring. In such latched position, the ring provides a circular bore of a diameter only slightly larger than the diameter of the gear flange 35 of the body. Correspondingly, the control ring 66 is adapted to be freely rotatably mounted relative to the body.

The inner half 67 of the control ring 66 has a radially extended boss 77 which circumscribes an elongated bore 78 opening into the bore 76 of the ring. A pair of outwardly opening pin holes 79 are individually disposed within the bore but the latch is disposed on the opposite sides of the bore. A reversible ratchet assembly, generally indicated by the reference numeral 80, is mounted on the boss. As best shown in FIG. 6, the ratchet assembly provides a pawl 82 slidable mounted in the bore on a control shaft 83 which is biased inwardly of the bore 76 of the control ring 66 by a compression spring 84. The pawl includes a camming ramp 85 and a diametrically opposed substantially straight body driving surface 86. A knurled control knob 87 is mounted on the outer end of the control shaft 83 for lifting and rotating the pawl within the bore for reversing the direction of ratcheting. A depending pin 88 is mounted on the head for selective insertion into one of the pin holes 79 to maintain the pawl in either described position.

The control mechanism 65 further includes an elongated work tool actuating handle 90 which provides an elongated tubular housing 91. As best shown in FIG. 3, the casing is supported in offset upwardly extended relation from the control ring 66 by an integral connecting web 92 in outwardly spaced aligned relation with the adjusting screw 60 when the control ring is disposed on the body 11. A handle bar 93 has a depending bowl portion 94 which is mounted in telescopic relation on the upper end of the casing. An elongated cylindrical stem 95 is axially intimately slidable disposed within the casing and has an upper square end, as viewed in cross section, extended through the handle bar and connected thereto by a screw 96. The stem mounts at its lower end a depending boss head wrench 97 which is normally positioned upwardly against the lower end of the casing by a compression spring 98 disposed about the stem within the sleeve between the upper end of the casing and the handle bar 93.

An auxiliary workpiece or pipe support roller assembly 100 is shown in FIG. 2 to adapt the tool for supporting relatively small diameter pipes within the bore 12 of the body 11 sufficiently closely adjacent to the cutter blade 57 so as to be severed thereby with the normal stroke of the blade. The auxiliary support assembly provides a bifurcated block 102 which rotatably mounts a pair of roller 103 identical to the rollers 44 of FIG. 1. The mounting block 102 includes a shank portion 104 which is adapted to be intimately received within the recess 43 in the gate portion 15 of the body after removal of the axle screws 46 and rollers 44. The shank portion 104 includes a pair of spaced substantially parallel bores 105 therethrough which are adapted to receive the axle screws 46 to hold the auxiliary roller assembly in the body, as shown in FIG. 3. A relatively small diameter pipe 107 is indicated by the broken lines in FIG. 3 and is thereby positioned sufficiently closely to the cutter blade 57 for severing by the usual stroke of the blade.

Alternatively, a pipe thread cutting die 110, as shown in FIGS. 5 and 6, is adapted to be inserted within the bore 12 of the body. The die includes a plurality of integral keys 111 which are slidably received in the key ways 41 of the body. Each of the keys 111 has a triancularly shaped notch 112 which mates with the cutter blade 57 in the body when the keys abut the periphery of the key ways, as shown in FIG. 5. The periphery of the die also has a pair of elongated arcuate slots 113 which receive the extended peripheral portions of the rollers 44. Accordingly, the rollers need not be removed from the body when inserting the die into the bore 12.
A reaming cutter 114 is shown in FIG. 7 providing an elongated cylindrical shank portion 115 substantially identical to the die 110. The shank has a plurality of annularly equaled spaced longitudinally extended integral keys 116, each of which has a V-shaped notch 117 therein adapted to be registered with the cutter blade 57 when disposed radially of the bore 11 of the body 11. The shank also provides a pair of elongated arcuate slots 118 similar to the slots 113 in the die for accommodating the extended peripheries of the rollers 44.

Second form

A second form of the present invention is shown in FIGS. 8 through 13 and is intended exclusively as a pipe-cutting and rod-cutting tool. The work tool of the second form, like the first form, provides a substantially cylindrical diametrically separable body 211 which has a bore 212 therethrough. The body has an inner mounting portion 214 and an outer gate portion 215 which are hingably interconnected by a pivot pin 217. The gate portion provides a latch mechanism generally indicated by the reference numeral 220 preferably located in substantially diametrically opposed relation to the pivot pin 217. The latch includes a generally arcuate latching end 221 having a notch 222 therein and an opposite thumb-engaging end 223. The latching end is integrally disposed on a pin 227 constrained in the gate portion of the body. A compression spring 228 is constrained at its ends between the latch and the gate portion of the body in respective recesses 230 and 231. The spring urges the latching end thereof toward the inner mounting portion 215 of the body. The mounting portion of the body provides a lip 233 which is adapted to be received within the notch 222 of the latch in dependably holding relation.

The body 211 of the second form of the work tool of the present invention includes a reduced diameter diameter annular gear ring 235 having a plurality of equally spaced gear teeth 236 thereabout. The gear ring has an outer integral flange 238 which defines between it and the body an annular channel about the gear ring 235. The inner mounting portion 214 of the body 211 includes a recess 243 which communicates with the bore 212. A pair of workpiece support rollers 244 are disposed within the recess 243 in side-by-side substantially parallel relation by a pair of axle screws 246 screw-threadably received within a mounting block 247 slidably mounted within the recess. The rollers include peripheral portions 248 which extend a short distance from an arcuate surface 249 of the mounting block corresponding in curvature to the bore 212 in the body 211.

The gate portion 215 of the body 211 includes a substantially radially extended opening 250 therein in substantially diametrically opposed relation to the recess 243 in the inner mounting portion 214. The opening provides oppositely serrated side walls 252 providing a plurality of notches or teeth 253. A blade mounting block 254 having opposite serrated sides 255 providing teeth 256 corresponding to the teeth 253 of the opening is adapted to be thereby constrained within the opening 250 in a plurality of radially adjacent positions with respect to the bore 212 of the body 211. A circular cutting blade 257 is rotatably mounted within the mounting block by a pin 258. An adjusting setscrew 260 having a head 261 rotatably mounted in bore 262 provides a positioner with respect to the bore 212 of the body 211. A circular cutting blade 257 is rotatably mounted within the mounting block by a pin 258. An adjusting setscrew 260 having a head 261 rotatably mounted in bore 262 provides a positioner with respect to the bore 212 of the body 211. The adjusting setscrew provides an inner end 262 engageable with the roller mounting block 247 and provides an opposite outer end 263 extended slightly outwardly from the periphery of the body.

A control mechanism for the second form of the work tool is generally indicated by the reference numeral 265. The control mechanism includes a forked member hav-
The ring portion 66 of the control mechanism 65 is then mounted on the gear flange 35 of the body in a manner similar to that just described for disposing the ody about the pipe. The inner and outer halves 67 and 68 are first swung apart by manipulation of the latch mechanism 70, in the manner previously described for the latch 20, and the two halves extended into the annular groove 40 above the gear flange 35 of the body. These halves are then clamped together until the latch mechanism automatically locks the ring in the circumscribing rotary relation about the gear flange 35.

The adjusting screw 60 is hand-rotated inwardly of the ody to move the cutter blade 57 against the periphery f the pipe within the bore 12 of the body. The ratchet assembly 80 is then manipulated to position the plate 82, s shown in FIG. 2, with the drive member 75 being engaged against one of the teeth 36 of the gear flange 35 of the ody 11. In such position, the body 11 is rotated in a clockwise direction, as viewed in FIG. 1, by downward swinging movement of the handle 90. During such movement and when the adjusting screw 60 is facing the operator, the adjusting screw can be rotated to force the outer blade 57 in deeper pipe penetration. Such adjustment is accomplished by return ratcheting of the camming ramp 85 past the teeth of the gear flange upon downward swinging movement of the handle relative to the ody 11 whereby the handle is in a position to register the box head wrench 97 thereof with the head end 62 of the adjusting screw. It is noted that the handle can be moved into alignment with the adjusting screw by manipulation of the handle in either direction of swinging movement. If further adjustment is desired prior to the body and cutter making a full revolution about the pipe, the ratchet pawl 82 is lifted by manipulation of the nob 87 to permit independent downward swinging movement of the handle relative to the body. The ratchetawl automatically returns to its engaged position upon release of the knob by the compression spring 84. When the box head wrench 97 is registered with the head of the adjusting screw, the handle bar 93 is shaved axially toward the body against the compression spring 98 to extend the stem 95 from the casing 91. Such action uses the box head wrench 97 to close about the head end 62 of the adjusting screw 60. The handle bar 93 is rotated to move the adjusting screw inwardly of the body which forces the cutter blade into deeper pipe penetration. It is noted that the amount of each adjustment is not restricted during any one engagement of the adjusting screw and is only limited by the strength of the operator and the hardness of the pipe being severed.

After adjustment, the axial tension on the handle bar 93 is relieved which permits the compression spring 98 to return the handle bar and stem 95 outwardly of the casing 91. Such movement of the stem lifts the box head wrench 97 from the head end 62 of the adjusting screw 60. Upon further reciprocating swinging movement of the handle 90, the body 11 and cutter blade 7 continue to be rotated about the pipe. During each revolution of the body and cutter blade, the handle and adjusting screw are alignable for further adjustment until the pipe is completely severed. The latch members 10 and 70 are then easily manipulated, as previously described, to open their respective body and ring so that the work tool is quickly and easily disengaged from the pipe in condition for immediate fitting about another pipe subsequent to end 21 of the pipe to pivot the name outwardly in compressing relation against the spring 28. Such action subsequently automatically returns the matching end inwardly of the pipe upon dropping the lip into the notch 22. The ody is thereby quickly and easily fitted about the pipe to be severed in a circumscribing relation without any judicious loosening and tightening of bolts, as in conventional cutting tools.

The work tool of the present invention is easily converted for cutting threads by inserting the thread cutting die 110 into the bore 12 of the ody. It is noted that such insertion is possible even with the pipe support rollers 44 in place within the body wherein the extended peripheral portions of the rollers are received within the arcuate slots 113 of the die 110. The die 110 is positioned against the shoulders 42 of the key ways 41 which receive the keys 111 of the die. The die is dependably constrained in such assembled position within the body by hand tightening of the adjusting screw 60 to force the cutter blade 57 into the aligned V-shaped notch 112 in the key. It is significant to note that the cutter blade serves the dual function of severing the pipe when the work tool is employed as a pipe cutter and as a locking device for holding the thread cutting die within the body. The handle 90 is then manipulated in the appropriate direction after manipulation of the ratchet assembly 80 to rotate the box head wrench 97 about the die into the pipe in the conventional manner.

As previously described, the reamer 114 may also be mounted in the work tool for chamfering the inner edge of the pipe after severing. The shank portion 115 thereof is received within the bore in an identical manner as that previously described for the die 110 with the cutter blade 57 again locking the reamer in place by engagement with the not 117 in the adjacent key 116 thereof.

The operation of the second form of the present invention shown in FIGS. 8 through 13 is substantially similar to that previously described for the first form of the invention. In the second form, however, the forked member 266 of the control mechanism 265 permits the control mechanism to be mounted on the body 211 entirely from the nearest side thereof by a single thrusting movement of the forked member against the gear ring 235 of the body. After the separable body 211 is latched in place in circumscribing relation about the pipe or rod to be severed in the identical manner as previously described for the body 11 of the first form of the invention, the latching end 272 of the latch mechanism 270 is opened outwardly by depressing the thumb-engaging end 273 thereof. This enables the legs 266 to be extended about the gear ring 235 after which the latch is released to permit the surface 275 thereof intimately to engage the gear ring through an arc of somewhat more than 180° dependably to hold the control mechanism on the body.

With the forked member 266 disposed in such latched position on the gear ring 235, the pawl 262 is forced by the compression spring 282 into the alignment space between the teeth 236 on the gear ring. As best shown in FIG. 13, the drive surface 287 is engaged with the adjacent tooth so that the control mechanism and the body 211 can be rotated in a clockwise direction. Reciprocation of the handle 290 is permitted by the ratchet assembly 290 with the ramp portion 286 of the pawl
riding over the teeth 236 of the gear ring. Upon counterclockwise movement of the handle, the body is held stationary with the ratcheting of the handle by the engagement of the cutter blade 257 with the pipe or rod being severed.

During either direction of movement of the handle 290, the drive end 295 thereof is alignable with the adjusting screw 260 in an identical manner to the handle and adjusting screw of the first form of the invention. When aligned, the handle 290 may be axially positioned toward the body by overcoming the spring force of the detent 297 to insert the drive end of the handle into the bore 263 of the adjusting screw, as shown in FIG. 11. Subsequent rotation of the handle 299 advances the adjusting screw against the roller mounting block 247 to advance the rollers 244 farther into the bore 212 of the body. Assuming that the pipe or rod being severed is stationary, such inward movement of the rollers after engagement with the pipe or rod causes the cutter blade 257 to be drawn farther inwardly in greater penetrating relation within the pipe or rod as before, subsequent similar adjustments are made upon alignment of the handle with the adjusting screw during rotation of the body until the pipe or rod is completely severed. It will be noted that the cutter blade adjusting operation is substantially similar to that of the first form of the invention with the only change in the second form being alignment of holding the cutter blade stationary and advancing the rollers inwardly of the bore in the body. In the first form of the invention the rollers are held stationary and the cutter blade swung inwardly of the bore. In either structure, rotation of the adjusting screw by the control handle causes the cutter blade more deeply to penetrate the pipe or rod being severed. It is further noted that in the first form of the invention, the auxiliary roller assembly 100 may be substituted for the rollers 44 so as to position relatively small diameter pipes and rods sufficiently inwardly of the bore in the body so as to dispose them within the range of cutter means. This feature is accomplished in the second form by the blade adjustment provided by the serrated blade mounting block 254 and correspondingly serrated side walls of the opening 250 in the body.

In view of the foregoing, it is readily apparent that the structure of the present invention has provided an improved work tool which is quickly and easily converted for a variety of pipe working operations with a minimum of modification. Both forms of the present invention are adapted to accommodate a wide range of pipe sizes and can be easily fitted about pipes disposed in confined areas which locations normally preclude the use of conventional cutters. It is further significant that the extent of adjustment of the cutter blade of each form is not limited during any one adjustment thereof with the blade of the first form providing the dual function of a cutter and as a locking device dependably to constrain other pipe cutting members within the body of the work tool.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiments, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatuses.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A work tool comprising a body having a bore adapted to receive a workpiece therethrough; a cutter means including a toothed member releasably slidably movable in the body being diametrically opposed to said cutter member; and control means having a ratcheting portion providing spaced leg members permitting transverse mounting of said control means on said body for rotating the body about said workpiece in one direction of manipulation and ratcheting said control means relative to the body in the opposite direction of manipulation, said control means including a drive portion selectively engageable with said control member selectively to position the cutter means in either direction and being releasably engageable with said adjusting member when in said registered position.

2. A work tool comprising a body having a bore adapted to receive a workpiece therethrough; a rotatable cutter member; means including a toothed member releasably slidably mounting said cutter member in interlocking relation within the body axially of the bored for radially adjustably positioning the cutter member in a plurality of fixed positions inwardly of said bore; a workpiece support member slidably mounted within the body in diametrically opposed relation to said cutter member; an adjusting screw, screw-threadedly disposed in the body having an end engageable with said support member selectively to position the same inwardly of said bore against said workpiece to engage the same with the cutter member and having an opposite actuating end; and a work tool control member having a ratcheting portion providing a pair of spaced leg members permitting transverse mounting of the control member on the body for rotat ing the body about said workpiece in one direction of manipulation and ratcheting said control member relative to the body in the opposite direction of manipulation, said control member including an off-set elongated axially positionable handle having a drive head selectively registrable with said actuating end of the adjusting screw during manipulation of said control member in either direction and being releasably engageable with said actuating end of the adjusting screw in said registered position.

3. A work tool comprising a body having a bore adapted to receive a workpiece therethrough; a rotatable cutter member; means including a toothed member releasably slidably mounting said cutter member in interlocking relation within the body axially of the bored for radially adjustably positioning the cutter member in a plurality of fixed positions inwardly of said bore; a pair of workpiece support rollers; means mounting said rollers within the body in diametrically opposed relation to said cutter member and having peripheral portions with said mounting means being slidable within the body to position said peripheral portions of the rollers within said bore; an adjusting screw, screw-threadedly disposed in the body having an end engageable with said roller mounting means selectively to position the peripheries of the rollers inwardly of said bored against said workpiece to engage the same with the cutter member and having an opposite actuating end; and a work tool control member having a ratcheting forked portion providing a pair of arcuate curved legs with one of said legs including latch means to permit transverse mounting of said forked portion about said body in partially circumscribing relation for rotating the body about said workpiece in one direction of manipulation and ratcheting said control member relative to the body in the opposite direction of manipulation, said control member including an off-set elongated axially positionable handle having a drive head selectively registrable with said actuating end of the adjusting screw during manipulation of said control member in either direction and being releasably engageable with said actuating end of the adjusting screw in said registered position.

4. A work tool comprising a body having a bore therethrough and being diametrically split and engaged hinged halves moveable between an open position transversely to receive a workpiece into said bored and providing a latch to constrain said body in closed circumscribing position
about the workpiece, said body including a notched opening communicating with said bore; a rotatable cutter member; a toothed mounting member releasably adjustably disposed within said notched opening of the body mounting said cutter member within the body in a plurality of positions with the cutter member inwardly extended into said bore; a pair of workpiece support rollers; means mounting said rollers within the body in diametrically opposed relation to said cutter member and having peripheral portions with said mounting means being slidably within the body to position said peripheral portions of the rollers within said bore; an adjusting screw, screw threadably disposed in the body having an end engageable with said mounting means selectively to position the peripheries of the rollers inwardly of said bore against said workpiece to engage the same with the cutter member and having an opposite actuating end; and a work tool control member having a ratcheting forked portion providing a pair of arcutely curved legs with one of said legs including latch means to permit transverse mounting of said forked portion about said body in partially circumscribing relation for rotating the body about said workpiece in one direction of manipulation and ratcheting said control member relative to the body in the opposite direction of manipulation, said control member including an off-set elongated axially positionable handle having a drive head selectively registrable with said actuating end of the adjusting screw during manipulation of said control member in either direction and being releasably engageable with said actuating end of the adjusting screw in said registered position.

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