

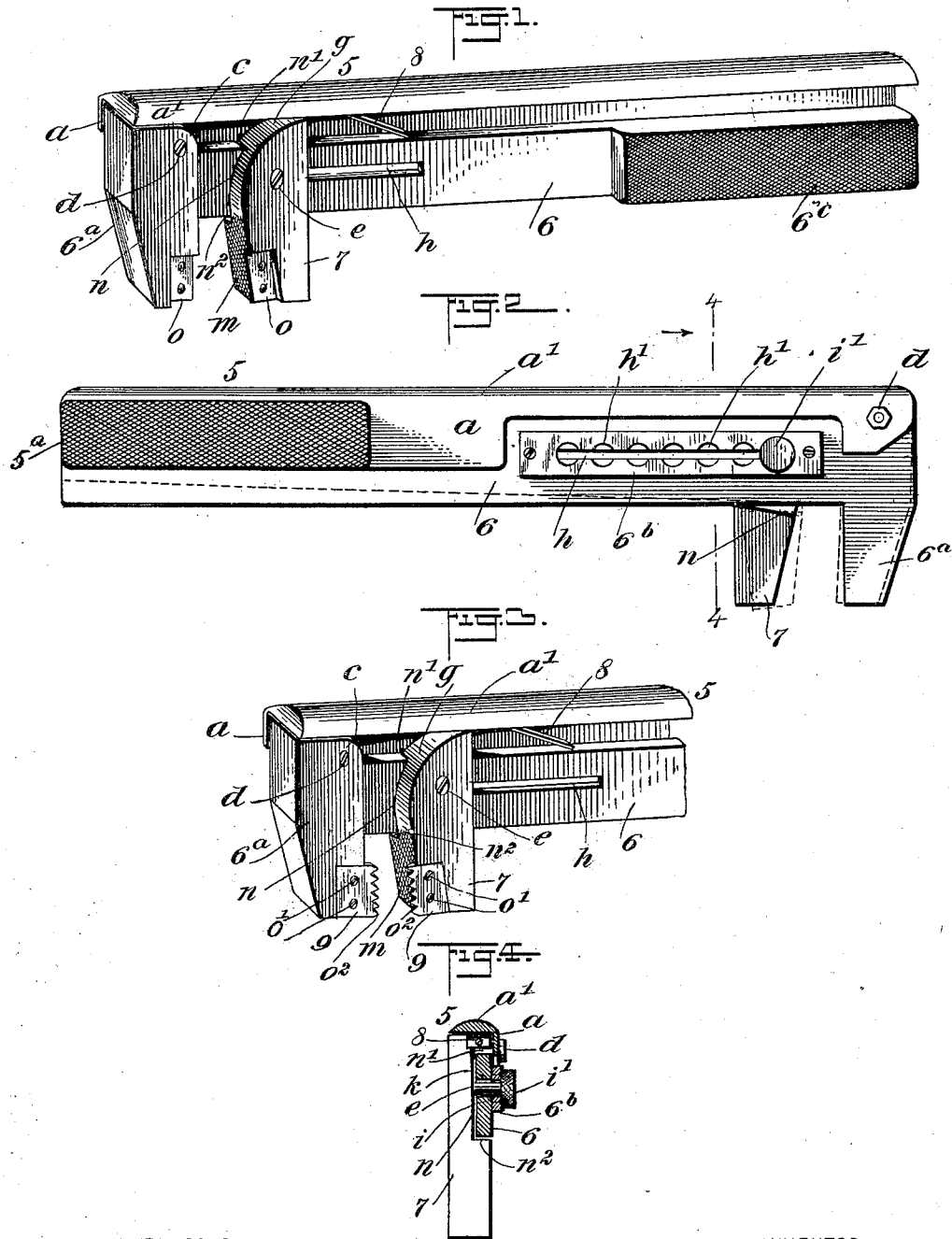
No. 722,012.

PATENTED MAR. 3, 1903.

J. J. GUNTHER. CONVERTIBLE PIPE AND BOLT WRENCH AND CUTTER.

APPLICATION FILED NOV. 7, 1902.

NO MODEL.



WITNESSES:
Julius B. Smith
Wm. Patton

INVENTOR
James J. Gunther
 BY *Munn*
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES J. GUNTHER, OF BOSTON, MASSACHUSETTS.

CONVERTIBLE PIPE AND BOLT WRENCH AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 722,012, dated March 3, 1903.

Application filed November 7, 1902. Serial No. 130,424. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. GUNTHER, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Convertible Pipe and Bolt Wrench and Cutter, of which the following is a full, clear, and exact description.

This invention has for its object to provide a wrench of the pivoted-jaw and cutter type with novel features of construction that adapt the implement for very effective service either as a pipe and bolt wrench or as a tool for cutting off cylindrical pipes or bolts and afford the wrench a considerable range of adjustment between its jaws.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view showing one side of the wrench, the cutting attachment being removed. Fig. 2 is a view of the opposite side of the wrench. Fig. 3 is a perspective view showing one side and end of the wrench and the cutting device attached to the jaws of the wrench, and Fig. 4 is a transverse sectional view substantially on the line 4-4 in Fig. 2.

The handle-bar of the wrench consists of two members, one member being longitudinally adjustable and rockable on the other, these parts being respectively designated by the numerals 5 and 6. The handle-bar member 5 is of a length that adapts it to serve as an effective lever and consists of a flat side plate *a* and an integral top plate *a'*, projected laterally from the upper edge of the side plate at a right angle thereto. The handle-bar member 6 equals in length that of the member 5 and consists of a metallic strip level on one side, which contacts with the inner side of the plate *a* on the handle-bar member 5, the edges of the strip 6 preferably being parallel with each other. On one end of the handle-bar member 6 a block 6^a is formed or secured and is shaped in the usual way to

provide a fixed jaw, having its working face disposed at a right angle to the edges of said bar portion 6. The upper inner corner of the jaw 6^a is rounded, as at *c* in Figs. 1 and 3, and the jaw 6^a is pivoted, as at *d*, upon the depending flange-like side plate *a* on the handle-bar member 5.

As shown, the width of the handle-bar member 6 and the point of pivoted engagement of the jaw 6^a on the portion *a* is such as affords a suitable space between one edge of the bar member 6 and the overhanging top plate *a'* of the handle-bar member 5. A movable jaw 7 is held to rock on the handle-bar member 6 by the headed pivot-bolt *e*, inserted through a perforation formed in said jaw near the radial center of the curve defining the convex portion *g* of said jaw, and thence passes through the member 6 and also through a thickening plate-like projection 6^b, which may be integral with said member 6 or be secured thereon at the side thereof opposite that loosely engaged by the jaw 7. The pivot-bolt *e* is adapted to slide in a slot *h*, formed longitudinally in the handle-bar member 6, and is threaded on the end which projects through the thickening plate or projection 6^b for the reception of the barrel-nut *i*. In the plate-like projection 6^b a series of spaced circular openings *h'* is formed opposite the slot *h*, and either of said openings may be engaged by the cylindrical body of the barrel-nut *i*, said nut having a milled head *i'*, that projects from the plate-like projection 6^b sufficiently to permit convenient manipulation of the nut. On the top of the rockable jaw 7 one end of a curved plate-spring 8 is secured, which bears at its free end on the edge of the handle-bar member 6 adjacent to the lower surface of the top plate *a* on the handle-bar member 5.

Upon the outer sides of the lever members 5 and 6, near their ends that are to be grasped in the use of the wrench, said end portions are thickened respectively at 5^a and 6^a, and the outer faces of these thickened parts are roughened, preferably as indicated in Figs. 1 and 2. The working face of the jaw 7 opposite the working face of the fixed jaw 6^a is roughened, as indicated at *m* in Figs. 1 and 3, and, as shown, said face is inclined away from the fixed jaw toward the lower end of

the same, thus providing normally a gap or opening between the jaws, which facilitates the engagement of the wrench-jaws with a cylindrical pipe or bolt body, this adjustment being enforced by the spring 8. This jaw 7 is recessed at n on the side that contacts with the handle-bar member 6, said recess having such increased width as compared with the width of the member 6 as will permit the jaws to rock a proper degree on said member, limited by the impinge of the walls n' and n'' , that define the width of the recess upon corresponding edges of the handle-bar member 6. In use the movable jaw 7 is set at such a distance from the fixed jaw 6^a as will permit the free application of the wrench-jaws to a pipe or bolt body, which is obviously effected by causing the bolt e to pass through an appropriate opening h' and then screwing the barrel-nut i thereon.

After placing the wrench loosely over the pipe or bolt that is to be turned in either direction the operator grasps the two handle-bar members 5 6 firmly at and near their ends farthest from the jaws, which will rock the handle-bar member 6 toward the portion a of the member 5 against the stress of the spring 8 and cause the jaw 7 to rock at its free end toward the like end on the jaw 6^a, which will adapt said jaws to forcibly grip the objects upon which they are applied. As the jaw 7 may be set at a desired distance from the fixed jaw 6^a by the means described, it will be seen that a considerable range of adjustment is afforded. Upon like sides of the wrench-jaws 6^a 7 recesses o are formed, these recesses having equal depth and flat bottoms, their defining-walls being preferably joined at a right angle to each other, as represented in Fig. 1. Two similar plate-metal cutters 9 are provided, having a marginal shape that adapts them to seat in the recesses o and be therein secured by screws o' or equivalent means. On the cutting edges o'' of the cutters 9 teeth may be formed, as shown, or these projecting edges may be rendered sharp without serrations, if preferred.

When the implement has been provided with the cutters 9 and it is to be employed as a pipe or bolt cutting tool, the jaw 7 is adjusted, as hereinbefore explained, so as to adapt the wrench-jaws to loosely receive a pipe or bolt body between the cutters 9 before gripping pressure is applied to the handle-bar members 5 6. The operator now grasps the handle members 5 6 so as to effect a forcible impinge of the cutters 9 upon the pipe or bolt to be bisected, and at the same time the implement is turned around the pipe or bolt body, which will obviously cause a channel to be cut therein, a continuation of the operation finally cutting the material operated upon into two pieces.

When the implement is to be used as a wrench, the cutters 9 should be detached, which will render the tool available for grip-

ping and turning a pipe-bolt body that is cylindrical, or the jaws will also embrace an angular head or nut to turn the same, if this is desired.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A wrench comprising a two-part handle-bar, the members of which are pivoted together near one end thereof, a fixed jaw on the end of one of said members, a jaw held to rock on said member and longitudinally adjustable thereon, and means for rocking the adjustable jaw toward the fixed jaw when the two handle-bar members are gripped at their free ends.

2. A wrench comprising a two-part handle-bar, the members thereof being pivoted together near one end, one member having a laterally-projecting top portion below which the other handle-bar member rocks, a fixed jaw on one of said members, a rockable and longitudinally-adjustable jaw on said member, a spring on the adjustable jaw, normally diverging the working faces of the jaws, and means adapted to rock the adjustable jaw toward the fixed jaw when the free ends of the handle-bar members are rocked toward each other.

3. A wrench comprising a two-part handle-bar, the members of which are pivoted together near one end, one of said members having a laterally-projecting top portion below which the other handle-bar member rocks, a fixed jaw on the end of the rockable member near the pivot, a loose jaw having an inclined working face and pivoted on the rockable handle-bar member, said pivot being adjustably held in a longitudinal slot formed in the rockable handle-bar member and engaging a depending flange on the other handle-bar member, the rockable and longitudinally-adjustable jaw having an inclined working face, and a plate-spring projecting from the adjustable jaw, which presses on the laterally-projecting top portion of the other handle-bar member, normally diverging the free ends of the handle-bar members.

4. In a wrench of the character described, the combination with a handle-bar member having a laterally-projected top piece, a handle-bar member pivoted near one end on the depending portion of the other member, a fixed jaw on the pivoted handle-bar member, said pivoted member having a longitudinal slot, a plate on this member having a series of spaced openings therein which register with the slot, a loose jaw, a pivot-bolt for said jaw, passing laterally through it and through the slot and through a selected opening in the plate attachment, a barrel-nut passing into said opening and screwing upon the end of the bolt, and a plate-spring on the loose jaw, pressing between the top edge of the pivoted handle-bar member and the top piece on the other handle-bar member.

5 5. A convertible wrench and cutter, comprising a handle-bar formed of two members pivoted together near one end, a fixed jaw on one handle-bar member, a loose jaw having
10 an inclined working face and held to rock on the said handle-bar member, the pivot of said jaw being adjustable along a longitudinal slot in the bar member with which said jaw engages, and two cutters removably secured on the respective jaws of the wrench so

as to project their cutting edges beyond the working faces of the jaws.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES J. GUNTHER.

Witnesses:

GUSTAVE KARCHER,
GUSTAV RULLMAN.