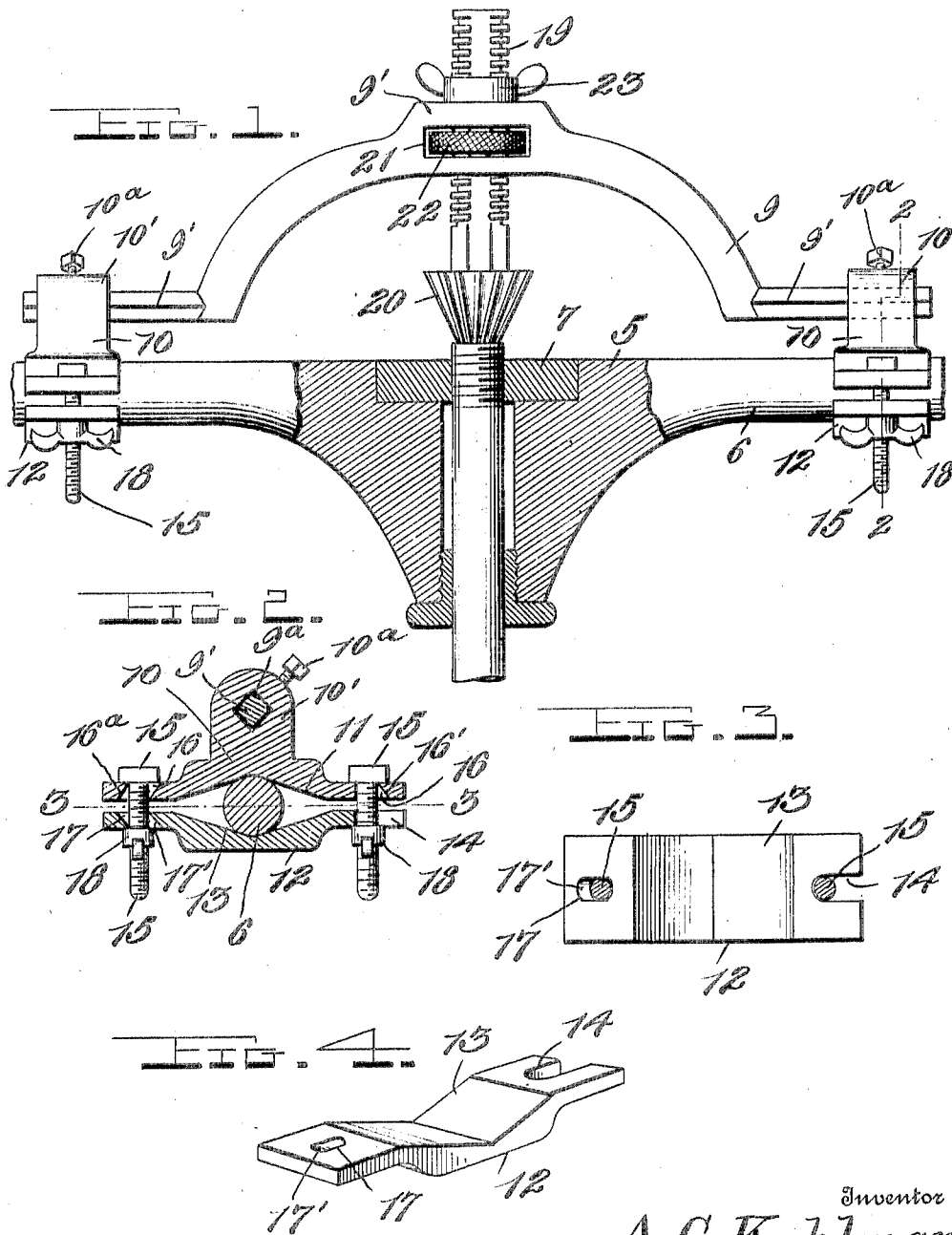


A. G. KUHLMAN.
 REAMER ATTACHMENT FOR DIE STOCKS.
 APPLICATION FILED FEB. 4, 1911.

1,009,672.

Patented Nov. 21, 1911.



Witnesses

Chas. L. Griebauer.
 N. F. McQuay.

Inventor
 A. G. Kuhlman,

By

Watson E. Coleman,
 Attorney

UNITED STATES PATENT OFFICE.

ALBERT G. KUHLMAN, OF YOUNGSTOWN, OHIO.

REAMER ATTACHMENT FOR DIE-STOCKS.

1,009,672.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed February 4, 1911. Serial No. 606,508.

To all whom it may concern:

Be it known that I, ALBERT G. KUHLMAN, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Reamer Attachments for Die-Stocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a reamer attachment for die stocks and has for its primary object to provide simple and efficient means for easily and quickly clamping the attachment upon the die stock to support the reamer in position for engagement with the pipe.

Another object of the invention resides in the provision of an adjustable reamer supporting bar, and means for rigidly securing said bar upon the die stock whereby it may be easily and quickly adjusted or removed.

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

Figure 1 is a side elevation partly in section of my improved reamer attachment showing the same arranged upon a die stock of any approved form; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 2; and Fig. 4 is a detail perspective view of the clamping plate.

Referring in detail to the drawing 5 designates the die stock which may be of any ordinary or approved form and is provided with the usual handle receiving socket portion 6. A die 7 is arranged in the stock 5 in the usual manner and retained in position by means of the plate 8. These parts are all of common form and construction and it will be understood that my improved attachment may be applied to die stocks of other forms than that disclosed in the drawing.

The attachment comprises the curved bar 9 having a lateral rectangular arm 9' formed on each of its ends. The plate 10 is provided on one of its faces with a longitudinal recess 11 for engagement upon the cylindrical portion 6 of the die stock 5. A boss or lug 10' is centrally formed upon the plate 10 and is provided with a rectangular open-

ing 9^a to receive the rectangular lateral extending arm 9' of the bar 9. A set screw 10^a has threaded engagement in the lug 10' and is adapted to be adjusted in the triangular contact upon one of the faces of the arm 9' to rigidly secure the same in said lug. A clamping plate 12 which is also provided with a longitudinal recess 13 of similar form to the recess 11 of the plate 10 is adapted to be arranged upon the under side of the tubular portion 6 of the stock. One end of the clamping plate 12 is slotted as indicated at 14 to receive one of the clamping bolts 15 which extends through one of the openings 16 provided in each end of the plate 10 and a similar bolt 15 is also disposed through the opening in the other end of said plate and through an opening 17 provided in the opposite end of the clamping plate 12. Each of the end walls of the opening 17 are beveled or inclined as indicated at 17', said inclined walls extending in parallel planes. The opening 16 in the end of the base plate 10 opposed to the opening 17 of the plate 12 is also provided with inclined end walls 16^a which are disposed at right angles to the inclined walls 17' of the opening 17. The end wall of the opening 16 in the other end of the base plate is also inclined as indicated at 16'. These inclined walls are provided to permit of the free movement of the clamping bolts 15 when they are released. Upon these clamping bolts the wing nuts 18 are threaded for engagement with the under side of the clamping plate 12. When these nuts have been adjusted on the bolts 15 and engaged with the ends of the clamping plate to bind said plate and the plate 10 upon the die stock, the reamer supporting arm or rod 9 will be rigidly held in position.

When it is desired to remove the attachment from the die stock, the wing nut 18 upon the bolt 15 which extends through the slot 14 in the end of the clamping plate is loosened so that said bolt may be swung outwardly, the outwardly inclined walls 16' of the opening in the base plate permitting of this outward movement of the bolt. The plate 12 is then allowed to drop, the bolt 15 which is disposed through the other end thereof swinging in the other of the openings 16 in the base plate, said clamping plate also moving to a position in angular relation to the bolt 15 by reason of the parallel inclined end walls 17' of the opening 17. In this manner

the attachment may be easily and quickly removed or as readily clamped upon the die stock to support the reamer in its operative position.

5 The bar 9 is enlarged intermediate of its ends as indicated at 9' and is provided with a vertical opening therethrough in which the shank 19 of the reaming tool is movably disposed. In the drawing I have shown this
10 tool as being provided with a fluted head 20 which is of conical form for engagement in the end of the pipe which is to be reamed. This reaming operation is well understood in the art, it being rendered necessary by the
15 bur or rough metal edge which remains upon the inner periphery of the pipe when the same is cut. In order to properly adjust the reaming tool in the end of the bar 9, said bar is provided with another opening
20 21 which extends at right angles to the vertical opening therein and receives the adjusting nut 22 which is threaded upon the shank 19. This shank 19 of the reaming tool may be of many different forms, that
25 shown in the drawing being provided with an interrupted thread by forming flattened faces on opposite sides of the shank. It will be readily seen that by turning the nut 22 the tool may be adjusted up or down in the
30 bar 9 to properly position the conical reaming head 20 thereof. The shank 19 is rigidly locked in the bar 9 against longitudinal movement after it has been adjusted, by means of the wing nut 23 which is threaded
35 thereon and bears upon the upper surface of said bar.

From the foregoing it is thought that the construction and operation of my improved attachment will be readily understood without requiring any further description.

40 The device is extremely simple, highly efficient in construction and may be manufactured at a low cost.

By means of the device, the reaming tool
45 may be easily and quickly arranged upon any of the various forms of die stocks, and as readily removed therefrom. When properly arranged on the stock, the clamp will securely and rigidly position the supporting
50 arm so that there will be no liability whatever of its movement by vibration of the parts in the operation of the stock. The bar 9 may also be adjusted longitudinally upon the die stock by simply loosening the
55 set screws 10^a and moving the rectangular arm 9' of said bar through the lugs 10'. The said screws are then again tightened to rigidly hold the bar when the reamer

head has been properly adjusted in the end of the pipe.

60 While I have shown and described the preferred construction and arrangement of the various parts, it will be understood that the device is susceptible of numerous modifications without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described my invention, what is claimed is:

1. The combination with a die stock, of a tool supporting bar, a rectangular arm
70 formed on each end of said bar, clamps for rigidly securing the ends of the bar to the die stock, said clamps each comprising opposed plates provided with longitudinal
75 recesses to receive the stock, means arranged in the ends of said plates for rigidly securing the same thereon, one of said plates being provided with a central lug having a rectangular opening, one of the rectangular
80 ends of the supporting bar being disposed in and movable upon said opening, and the set screws for rigidly securing said bar against longitudinal movement.

2. The combination of a die stock having
85 lateral extensions, of a tool supporting bar having a rectangular arm formed on each end, clamps to adjustably screw the said bar upon the extensions of the die stock, said
90 clamps each comprising similar plates provided in their opposed faces with longitudinal recesses to receive the extensions of the die stock, said plates at one of their ends having pivotally extending angularly
95 disposed openings, a clamping bolt disposed through said openings, the other end of one of the plates having an open ended slot therein and the end of the opposed plate being provided with an opening, one of the
100 under walls of which is inclined, a clamping bolt disposed through said openings and extending through the slot of the other plate, the angular wall of said opening permitting
105 of the lateral movement of said bolt whereby it may be swung out of the slot, the angular arms on the ends of the supporting bar being longitudinally movable with relation to the clamps, and means for rigidly securing said bar against such relative movement.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

ALBERT G. KUHLMAN.

Witnesses:

T. J. THOMAS,
H. J. KUHLMAN.