C. J. CLULEY & J. W. RABY.

TOOL HOLDER.

APPLICATION FILED NOV. 20, 1908.

950,222. Patented Feb. 22, 1910.

2 SHEETS—SHEET 1.

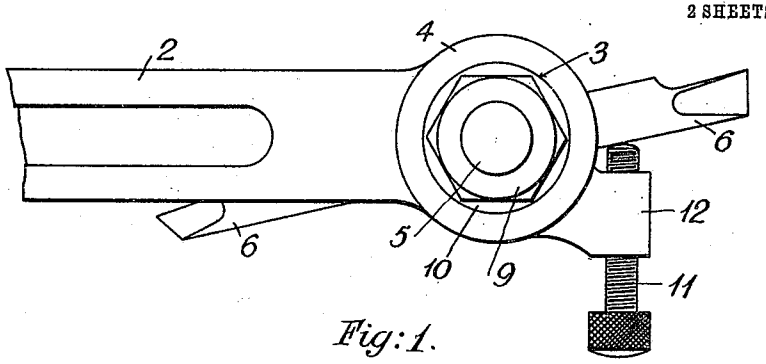

Fig: 1.

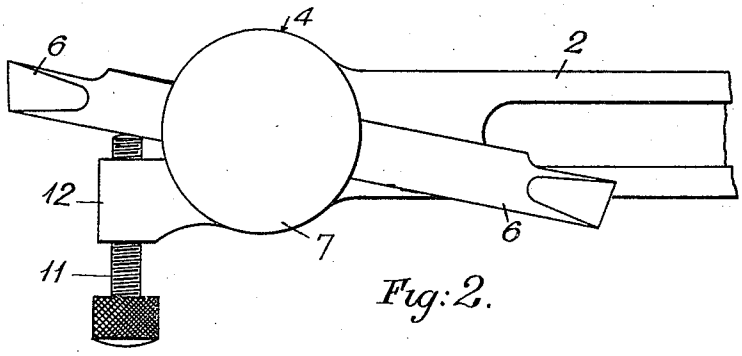

Fig: 2.

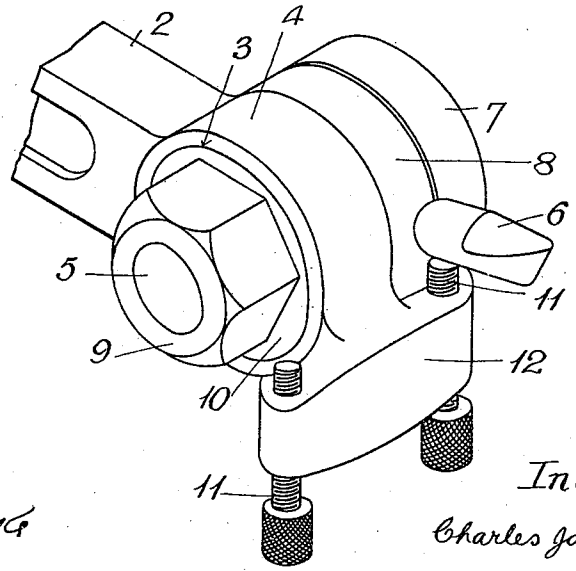

Fig: 3.

Witnesses,
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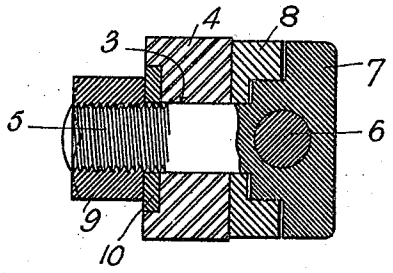

Fig: 4.

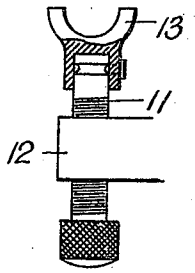

Fig: 5.

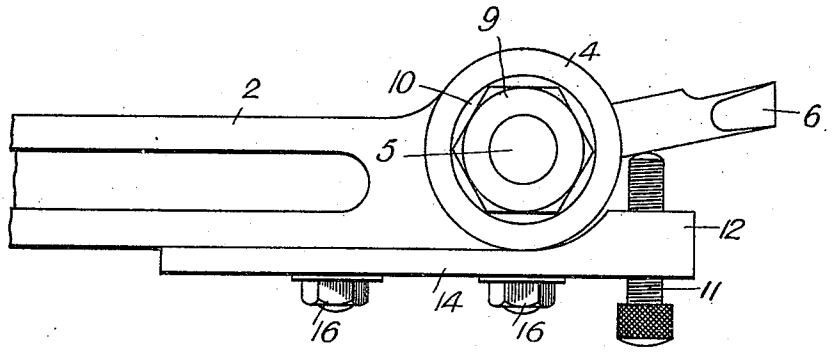

Fig: 6.

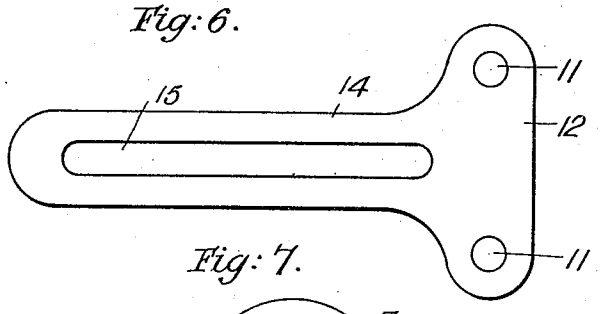

Fig: 7.

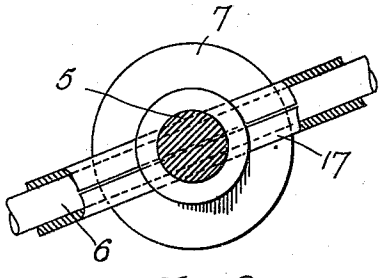

Fig: 8.

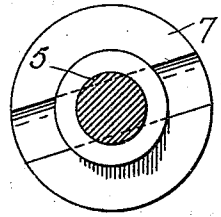

Fig: 9.

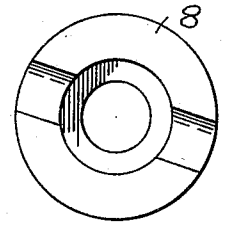

Fig: 10.

WITNESSES

W. P. Burke

N. F. Neuman

INVENTORS

Charles James Cluley

John Williams Raby

BY Thos Wallace White

ATTY.

UNITED STATES PATENT OFFICE.

CHARLES JAMES CLULEY AND JOHN WILLIAMS RABY, OF COVENTRY, ENGLAND.

TOOL-HOLDER.

950,222. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed November 20, 1908. Serial No. 463,683.

To all whom it may concern:

Be it known that we, CHARLES JAMES CLULEY, manufacturer, and JOHN WILLIAMS RABY, works manager, subjects of Great Britain, residing at Coventry, in the county of Warwick, England, have invented new and useful Improvements in Tool-Holders, of which the following is a specification.

This invention has reference to tool holders and more particularly to such as are used in connection with lathes and the like machines.

The invention consists in improved means for providing for the universal adjustment of the tool relatively to the work while in the tool holder, and for the rigid support of the working end of the tool while taking the cut.

In order that the invention may be clearly understood reference is made in describing the same to the accompanying drawings, wherein—

Figures 1 and 2 are right and left hand side views respectively of a tool holder constructed according to this invention. Fig. 3, is a perspective view of the same showing more clearly the screw adjustment devices for the tools. Fig. 4 is a transverse section through the axis of the bolt; Fig. 5 is a detail view of the loose saddle piece on the adjusting screws; Fig. 6 is a side view of the tool holder showing the adjustable form of lug; Fig. 7 is a plan view of the adjustable lug *per se;* Fig. 8 is a cross sectional view through the bolt head showing the use of a split sleeve for tools of small diameter; Figs. 9 and 10 are inside face views of the bolt head and collar respectively.

Like parts are designated by the same reference characters throughout the drawings.

Referring to the drawings, a tool holder constructed according to this invention comprises a socketed metal bar 2 which is preferably of square or rectangular cross section and is adapted to be clamped in the tool box in the well known manner.

The socket 3 is formed in a boss 4 on one end of the bar 2 and carries a transverse bolt 5 having a head 7 whereby the tool 6 is firmly held in position for use. Said tool 6 is of preferably circular cross section and is passed through a correspondingly shaped hole in the bolt head 7 see Fig. 4 between which and a transversely recessed loose collar 8 it is clamped when the bolt 5 is tightened up by a nut 9. Said nut 9 takes a bearing against a washer 10 located in the recessed face of the boss 4.

In order to overcome any tendency of the tool to dither or vibrate while taking a cut and to insure same being perfectly rigid while in use the free working end of the tool is supported from beneath by a vertical screw pin 11 or its equivalent. This pin works in a tapped hole formed in a lug 12 on the front end of the tool holder and may if desired be provided with a loose saddle piece 13, Fig. 5, at its upper end so as to provide a substantial bearing for the tool. In the example shown in the drawings two such pins 11 are shown carried one at each side of the holder in a common lug 12. This is the preferred arrangement and provides for the tool being carried on the right or left side of the holder according to the nature of the work in hand.

By slackening the bolt 5 and raising or lowering the screw pin 11 beneath the tool, a very fine screw adjustment in a vertical plane may be given to the tool without disturbing the position of the tool holder either in the tool box or in relation to the work.

The lug 12 carrying the pins 11 may, if found desirable, be made adjustable relatively to the holder according as the work may or may not necessitate the tool projecting an appreciable distance from the tool holder. For this purpose said lug 12 may be carried by one end of a plate 14 slotted at 15 and adapted to be adjustably secured to the bar 2 by screws 16, see Figs. 6 and 7.

A tool holder of the kind above described may be used to carry tools of many different kinds, only one such holder being necessary for each machine, a split sleeve 17, Fig. 8, being used where the diameter of the tool shank is less than the hole in the bolt head.

What we claim and desire to secure by Letters Patent of the United States, is:—

1. In a tool holder, the combination with a bar having a transversely bored boss at one end, a headed bolt fitting said bore and having a hole drilled transversely through said head to receive the tool and screw threaded at the other end to receive a clamping nut, a diametrically grooved collar located between the head of the bolt and the adjacent face of the boss, between which collar and head the tool is clamped when the nut is tightened up, a lug projecting from the front end of said boss and vertical set

screws working in tapped holes in said lug and adapted to support the working end of the tool while taking the cut and for imparting a screw adjustment thereto in a vertical plane.

2. In a tool holder, the combination with a bar having a transversely bored boss at one end, a headed bolt fitting said bore and having a hole drilled transversely through said head to receive the tool and screw threaded at the other end to receive a clamping nut, a diametrically grooved collar located between the head of the bolt and the adjacent face of the boss between which collar and head the tool is clamped when the nut is tightened up, a lug projecting from the front end of said boss, vertical set screws working in tapped holes in said lug, and loose saddle pieces carried by the upper ends of said screws and adapted to provide a substantial bearing for the tool while taking the cut.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES JAMES CLULEY.
JOHN WILLIAMS RABY.

Witnesses:
JOHN P. NORTON,
T. FLETCHER WILSON.