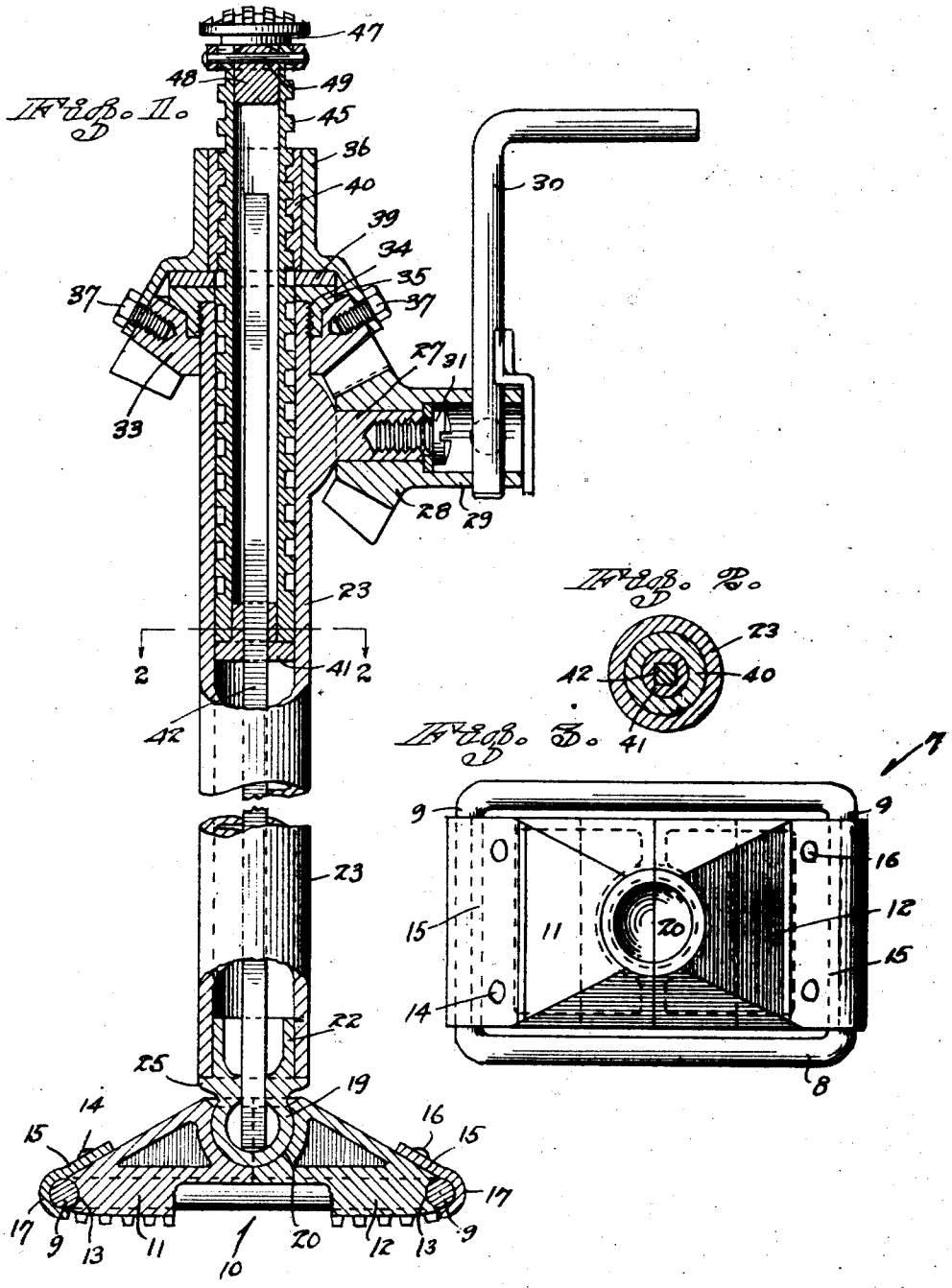
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MACHINE BAR

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MACHINE BAR.

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This invention relates to an extension machine bar and self-acting base clamp which may be employed as a mining column for supporting rock drills.

An object of my invention is the provision of an efficient device of the character described.

With the foregoing object in view, together with such other objects and advantages as may subsequently appear, this invention resides in the construction and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which

Figure 1 is an elevational view partly in section and partly broken away of my device;

Figure 2 is a horizontal section taken on line 2—2 of Figure 1, and

Figure 3 is a plan view of the base clamp shown in Figure 1.

Referring to the drawings for a more detailed description thereof, the base 7 comprises a round bar 8 of rectangular form, the ends of which are designated by the numerals 9. The base also comprises a body portion 10 of two parts or jaws 11 and 12 which are similar to each other and are provided at their sides with arcuate grooves 13 which receive the sides 9 of the rectangle 8. The parts 11 and 12 of the body 10 of the base are not secured together, but co-act with each other and with the bar 8 to function as an integral clamping base for the remainder of the structure hereinafter described. The parts 11 and 12 of the base are provided with members 15 which are secured to them by fastening means 16. The members 15 have arcuate lower portions 17 which fit partly around the outsides of the ends 9 of the bar 8. The parts 11 and 12 of the base are thereby hinged to the ends 9, whereby they may be opened up to receive a ball 19. After the introduction of the ball 19 between the open jaws 11 and 12, these parts may be closed down and then hold the ball in a corresponding socket 20, shown in Figure 3, which socket is formed by both parts 11 and 12. The jaws 11 and 12, however, do not meet when they are in clamping or closed position, whereby their clamping action becomes greater the greater the force exerted upon them. The ball 19 is integral with a member 22 which fits into a hollow column 23, the latter being supported on a shoulder 25 formed adjacent the member 22.

The device is provided with a lateral extension 27, which carries a rotatable beveled gear 28. A hollow extension 29 projects from the beveled gear 28 and carries a crank 30 for rotating the gear 28 which is secured to the extension 27 by means of a screw 31. The beveled gear 28 engages the rotatable gear 33 which encloses the standard 23 and which is held in position by a member 34 screwed to the standard as indicated at 35. The gear 33 encircles an upwardly extending sleeve 36 secured thereto by means of bolts 37. A thrust washer 39 is placed on top of the member 34 and contacts with the sleeve 36. The sleeve 36 is secured to an inner hollow threaded member 40 which threadedly engages a hollow screw 45. The hollow screw 45 is plugged at its lower end by a member 41 having a square aperture therein, through which passes a square elongated key 42; this bar extends downwardly and passes through a square aperture in the member 25 and down into the hollow ball 19. The hollow screw 45 is provided at its top with a thrust point cap 47 having a shank 48 which fits into the hollow screw 45 and is secured thereto by means of a fastener 49.

In the operation of the device the rotation of the crank 30 turns the beveled gear 28 which is effective to turn the beveled gear 33 and therefore to turn also the sleeve 36 secured to the gear 33. The rotation of the sleeve 36 and the member 40 which is integral therewith, raises or lowers the hollow screw according to the direction of turning of the crank 30.

It will be seen that the hollow ball 19 fits into a socket so that the device is swivelly connected to the base, whereby it may accommodate itself to any required position. It will also be appreciated that the key 42 functions to hold the hollow screw 45 from rotating, so that the screw will be raised or lowered.

While I have described one embodiment of my invention, modifications thereof may be readily devised without departing from the spirit of my invention, and it is to be understood that such modifications come within the scope of the appended claims.

I claim:

1. In a device of the character described,

an element terminating in a ball and a socket member adapted to receive the ball, the socket member being split to provide co-operating sections, and the latter being hinged to be closed by the insertion of the ball, and to be opened by the withdrawal of the ball.

2. In a device of the character described, a hollow column terminating in a ball, a threaded member movable in the column, means engaging the threaded member for imparting motion to the same, and a bar held in the ball against rotation and slidably engaging the threaded member for preventing rotation thereof.

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