

N. A. JENNET.
 DRILL PRESS.
 APPLICATION FILED JAN. 25, 1911.

1,000,604.

Patented Aug. 15, 1911.

Fig. 1

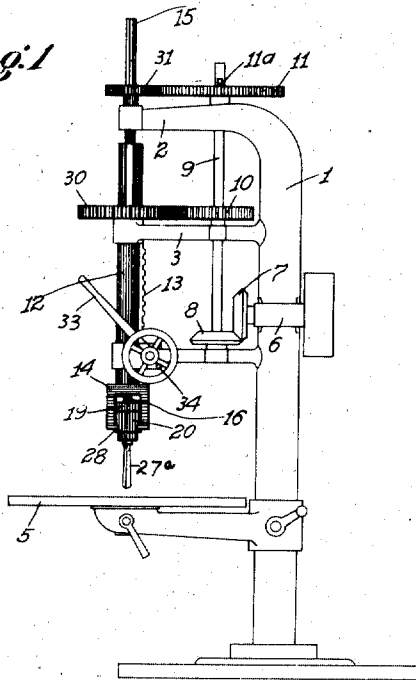


Fig. 4

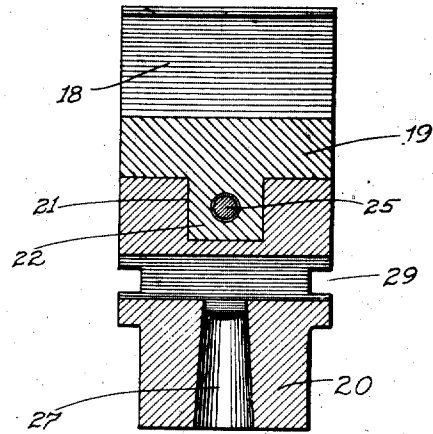


Fig. 5

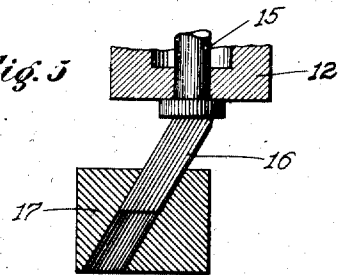


Fig. 2

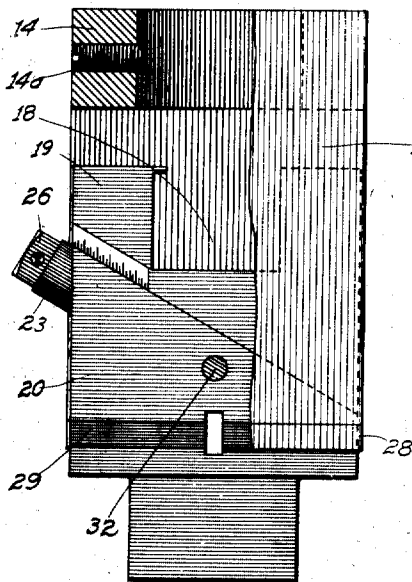


Fig. 6

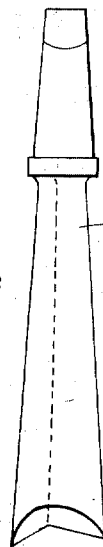
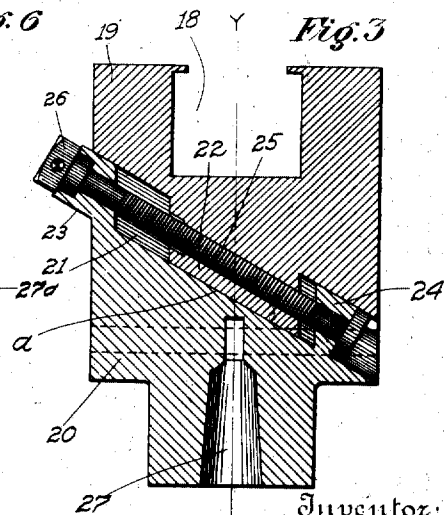


Fig. 3



Witnesses

Frank H. Carter
 J. H. Delator

Inventor

N. A. Jennet
 C. W. Delator
 Attorney

UNITED STATES PATENT OFFICE.

NEWEL A. JENNET, OF COALINGA, CALIFORNIA.

DRILL-PRESS.

1,000,604.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed January 25, 1911. Serial No. 604,570.

To all whom it may concern:

Be it known that I, NEWEL A. JENNET, a citizen of the United States, residing at Coalinga, in the county of Fresno, State of California, have invented certain new and useful Improvements in Drill-Presses; and I do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in drills and drill presses of all kinds, the object of the invention being to produce a drill press which will bore or drill a square hole.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects, I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings, similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a side elevation of my complete improved drill press. Fig. 2 is a side view partly in section of the drill chuck. Fig. 3 is a sectional view of the lower portions of the drill chuck. Fig. 4 is a sectional view taken on line *y-y* of Fig. 3. Fig. 5 is a sectional view showing an eccentric mechanism. Fig. 6 is a side view of the drill.

Referring now more particularly to the characters of reference on the drawings, 1 designates the main frame of the drill press having three inwardly projecting arms 2, 3 and 4 respectively, and the usual work support or platform 5.

6 designates the usual driving shaft connected by gears 7 and 8 to the driven shaft 9 carrying a pinion wheel 10 and a pinion wheel 11 spaced apart. Journaled in the outer end of the arms 3 and 4 is a sleeve 12 carrying a rack 13 there being a slotted box 14 secured on the lower end of said sleeve 12 by means of a set screw 14^a.

15 is a drill shaft which is journaled in the arm 2 and also in each end of the sleeve

12 and projects downwardly through such sleeve 12 in a central manner and having a bent eccentric arm 16 on its lower end on which is vertically movable a square block 17 normally resting and held in a slot 18 of the drill chuck. This drill chuck is formed of two members 19 and 20 joined together in the following manner, viz: Each of said blocks is cut in an oblique line or angle as at "a" the member 20 having a groove 21 in side of the line "a" and the member 19 having a tongue 22 slidable into said groove. Said member 20 has shoulders 23 and 24 projecting in the said groove through which shoulders and through which member 22 is a threaded pin 25 having a square head 26, said pin 25 being suitably journaled in the said shoulders 23 and 24. In the bottom of the member 20 is a drill recess 27 receiving the drill 27^a. The member 19-20 is slidable in a slotted box 14 and is held in position therein by means of guides 28 on the member 14 movable in slots 29 in the member 20.

On the sleeve 12 is a pinion 30 intermeshing with the pinion wheel 10 said pinion 30 being keyed to slide vertically on said sleeve 12. Similarly on the shaft 15 is a pinion 31 adapted to engage the pinion 11 said pinion 31 being keyed to slide vertically on the shaft 15. The pinion mechanism is so proportioned that the shaft 15 will be driven five times or five revolutions to one revolution of the sleeve 12 and the structure described will drive the sleeve 12 around in a circular motion whereby the eccentric 16 and its block 17 moving in the slot 18 will drive the member 19-20 back and forth through the slotted block 14 thus causing the drill 27^a to drill a hole square since the round tendency given by the motion of the sleeve 12 will be counteracted by the square back and forth motion of the member 19-20 which will drive the drill to a corner and back four times to each complete revolution.

If it is desired to drill a round hole, the pinion 11 may be lifted clear of its key 12 and turned to rest on top of said key which will clear it from engagement with the pinion 31 and then the shaft 15 may be fixed stationary with respect to the sleeve 12 by means of a pin 32 projecting through the box 14 and chuck 20 and then the two members 15 and 12 will move in a direct circular motion permitting the drill 27^a to drill

a round hole, the pins 32 being so positioned as to bring the drill recess 27 in a direct line with the drill shaft 15. To raise or lower the drill during operation, a lever 5 33 is operated to turn a gear 34 working on the rack 13 which raises the sleeve 12 and incidentally the other press up or down as may be desired.

10 In order to change the stroke of the drill of the pin 25 may be operated to turn around whereby the member 19 will be moved up or down on the member 20 thus making the operation of the movement of 15 the member 19—20 in the member 14, greater or less as is desired; which, of course, increases or decreases the size of the hole. With this upward or downward movement of the member 19, the member 20 17 is moved up or down on the member 16 permitting said adjustment.

The drill 27^a is specially constructed to perform the operation of drilling a square hole. It has three square sides and is cut 25 off at the bottom in a beveled manner giving a cutting edge to but two sides as shown in Fig. 7. To drill a round hole this drill 27^a would be supplanted by an ordinary twisted drill.

30 From the foregoing description, it will readily be seen that I have produced a drill which will drill a square hole; hence, I have substantially fulfilled the objects of the invention as set forth herein.

35 While this specification sets forth in detail the present and preferred construction of the device, still in practice such devia-

tions from such detail may be resorted to as do not form a departure from the spirit of the invention.

40 Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A drill press comprising a rotating sleeve, a rotating shaft within said sleeve, 45 a slotted box on said sleeve a drill chuck movable in said box, and an eccentric connection between said drill chuck and said rotating shaft.

2. A drill press comprising a rotating sleeve, a rotating shaft within said sleeve, a 50 slotted box in the end of said sleeve, a drill chuck movable in said slotted box and having a slot in its upper end and a block movable in said slot, said block being connected 55 in an eccentric manner with said rotating shaft as described.

3. A drill press comprising a rotating sleeve, a rotating shaft within said sleeve, a 60 slotted box on said sleeve, a drill chuck movable in said slotted box, such drill chuck comprising two members impinging one 65 upon the other in an oblique manner, means for moving said blocks in opposite directions with respect to each other and an eccentric means connecting said chuck with said rotating shaft as described.

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

NEWEL A. JENNET.

Witnesses:

J. B. WEBSTER,
FRANK H. CARTER.