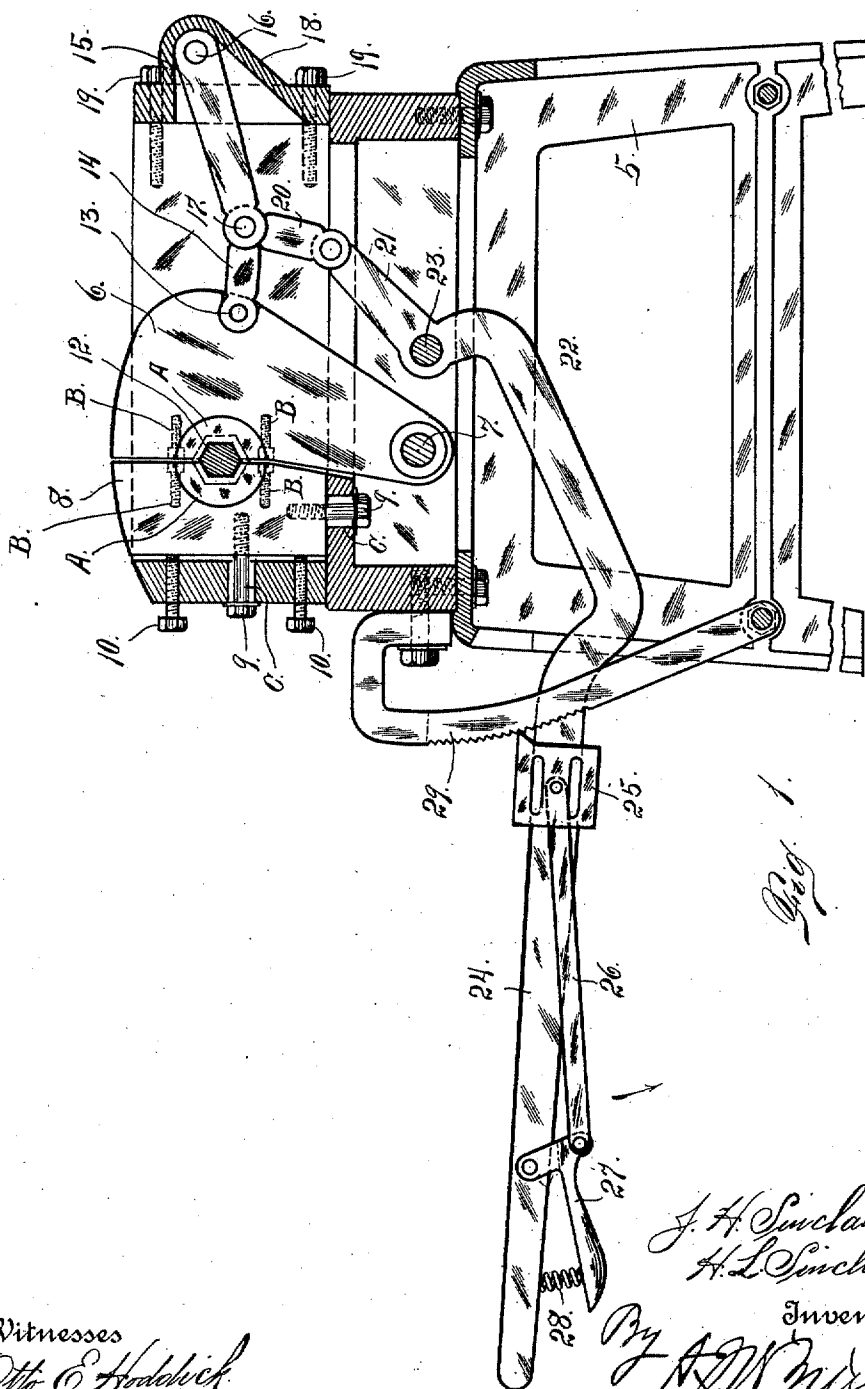


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 MEANS FOR CLAMPING DRILL STEELS.
 APPLICATION FILED JAN. 16, 1907.

984,039.

Patented Feb. 14, 1911

2 SHEETS—SHEET 1.



Witnesses
Otto E. Haddick
Dennis Nelson

J. H. Sinclair
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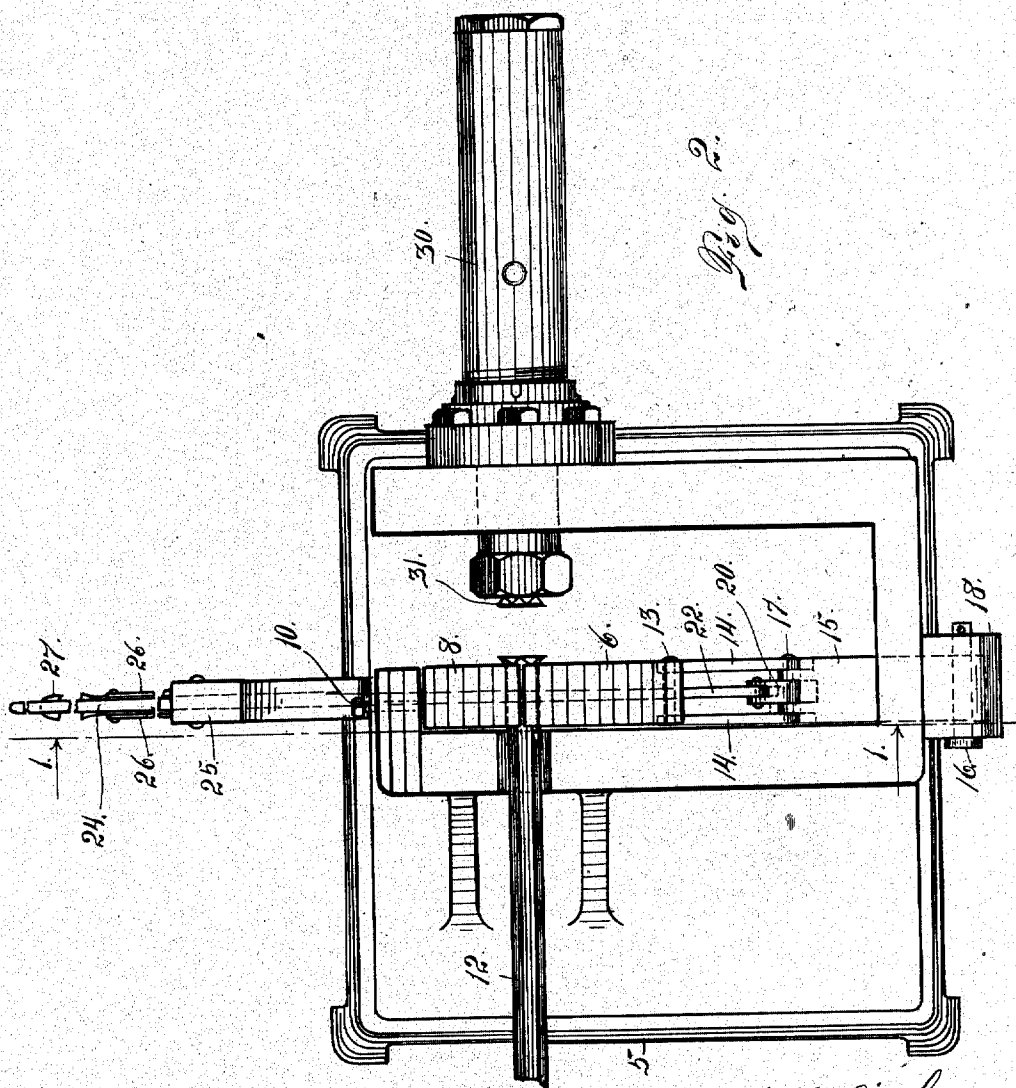
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 Attorney

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UNITED STATES PATENT OFFICE.

JAMES H. SINCLAIR AND HARRY L. SINCLAIR, OF DENVER, COLORADO.

MEANS FOR CLAMPING DRILL-STEELS.

984,039.

Specification of Letters Patent.

Patented Feb. 14, 1911.

Application filed January 16, 1907. Serial No. 352,665.

To all whom it may concern:

Be it known that we, JAMES H. SINCLAIR and HARRY L. SINCLAIR, both citizens of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Means for Clamping Drill-Steels; and we do declare the following to be a full, clear, and exact description of the invention, 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 letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in clamping apparatus, being more especially intended for use in holding drill steels during the sharpening operation, when the sharpening means employed consists of a dolly acted on by a power hammer of the character set forth in our simultaneously pending application.

The invention will now be described in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a view of our improved device partly in section taken on the line 1—1 Fig. 2, viewed in the direction of the arrow. Fig. 2 is a top plan view showing the clamp in connection with the drill sharpening means.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a suitable stationary support upon which is mounted a jaw 6 pivoted at 7. This movable jaw co-operates with an adjustable jaw 8. This latter jaw is fixedly connected with the frame by means of bolts 9. Before tightening these bolts the jaw 8 may be adjusted on the frame by means of bolts 10. These jaws have recesses in their operating faces, provided with bushing members A adapted to fit the drill steel 12, the said bushing members being held in place by stud bolts B whose heads are countersunk and engage notches formed in the bushing members and open at the top and bottom, each notch being of a size to receive only a portion of its corresponding bolt head. Connected with the movable jaw 6 by a pivoted pin 13, are two links 14 forming a toggle member co-operating with a member 15 with which the links 14 are pivotally connected. The link

15 is pivotally connected with the frame at its outer extremity by a pin 16, the frame being provided with a housing 18 secured to the body of the frame by bolts 19, which housing forms a bearing with the outer extremity of the link 15 whereby the pin 16 is relieved of strain when the clamping mechanism is in use. The toggle member composed of two links 14 and a member 15 is connected with the upper extremity of the depending link 20 by a pivot pin 17 which also forms the means for connecting the co-operating toggle members with each other.

The lower extremity of the link 20 is connected with the short arm 21 of a lever 22 having a fulcrum 23. The long arm 24 of this lever extends outwardly beyond the frame and is provided with a pawl or catch 25 which is slidably mounted thereon and actuated by a link 26 connected with a handle 27 acted on by a spring 28. The catch 25 is adapted to engage a notched bar 29 mounted on the frame, whereby the lever and its connections are retained in any desired position of adjustment. Any suitable retaining means may be employed for this purpose.

The bolts 9 pass through enlarged or elongated openings C formed on the frame, thus permitting both horizontal and vertical adjustment of the jaw 8 within reasonable limits. After the jaw has been properly adjusted the tightening of these bolts will maintain it securely in the adjusted position.

When the device is in use for holding a drill bit in position for sharpening purposes, a motive fluid cylinder (see Fig. 2) may be mounted on the frame and containing a reciprocating hammer (not shown) for actuating the dolly 31 which acts on the operating face of the drill bit which protrudes from the clamping jaws as shown. After the drill bit is placed in position, the long arm of the lever is moved downwardly as indicated by the arrow in Fig. 1, until the drill bit is locked securely in place between the jaws 6 and 8. The catch, dog or pawl 25 engaging the ratchet bar 29 will then hold the parts in the adjusted position as heretofore explained until the sharpening operation is complete.

Having thus described our invention, what we claim is:

A clamping mechanism, the combination with a suitable frame, of coöperating jaws,

one of the said jaws being fixedly mounted
on the frame and the other pivotally con-
nected at one end therewith, means for ad-
justing the fixedly mounted jaw comprising
5 set bolts extending through the frame and
engaging the jaw, and locking bolts con-
nected with the jaw and extending through
the frame to permit a limited degree of both
horizontal and vertical movement, and
10 means connected with the pivotally mounted

jaw for operating the same, substantially as
described.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

JAMES H. SINCLAIR.
HARRY L. SINCLAIR.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.