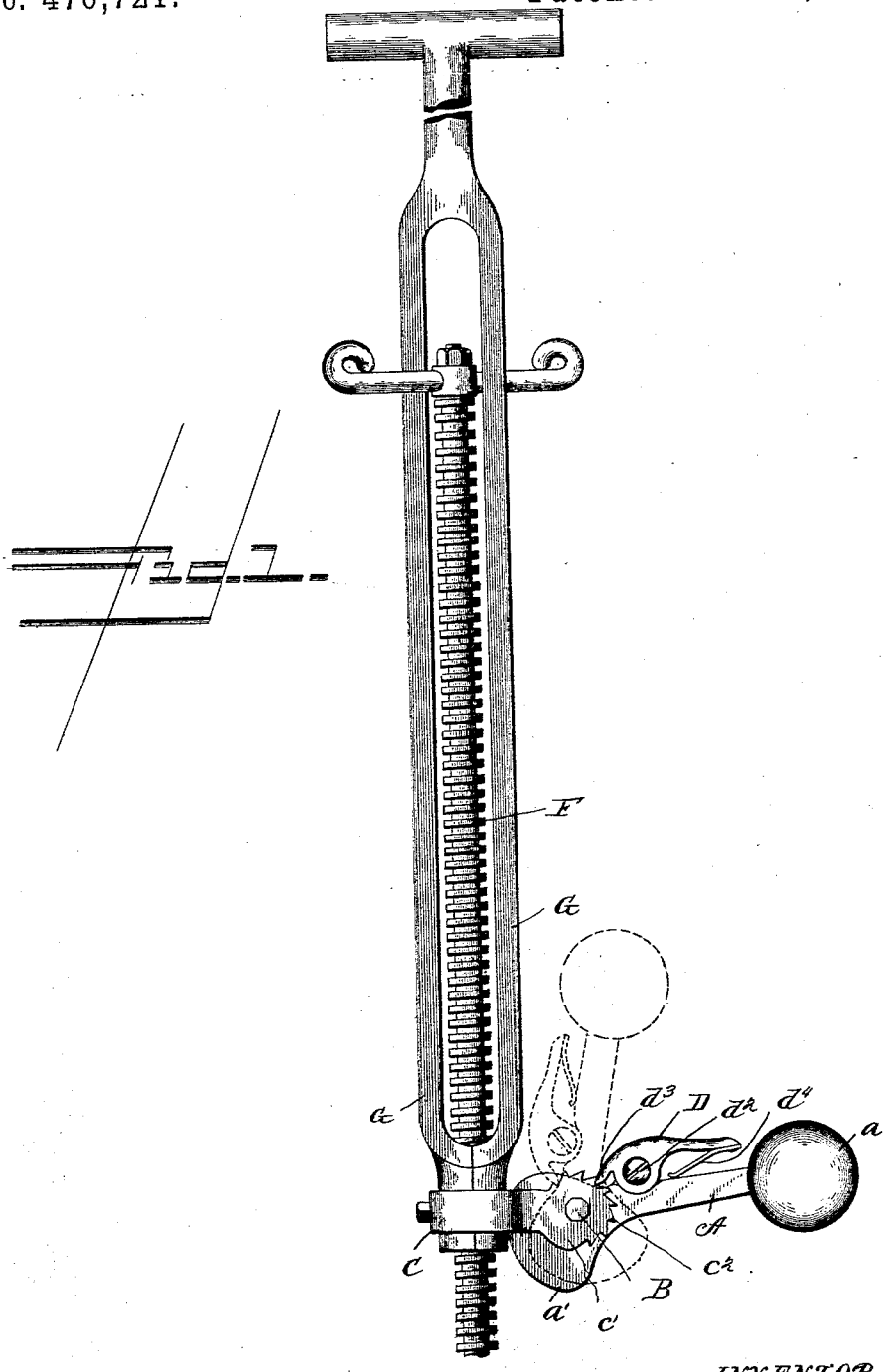
(No Model.) 2 Sheets—Sheet 1.

O. J. BALDWIN.

DEVICE FOR HOLDING AND OPERATING THE JAWS OR ENDS OF THE REINS OF A TEMPER SCREW.

No. 476,721. Patented June 7, 1892.



WITNESSES
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(No Model.) 2 Sheets—Sheet 2.

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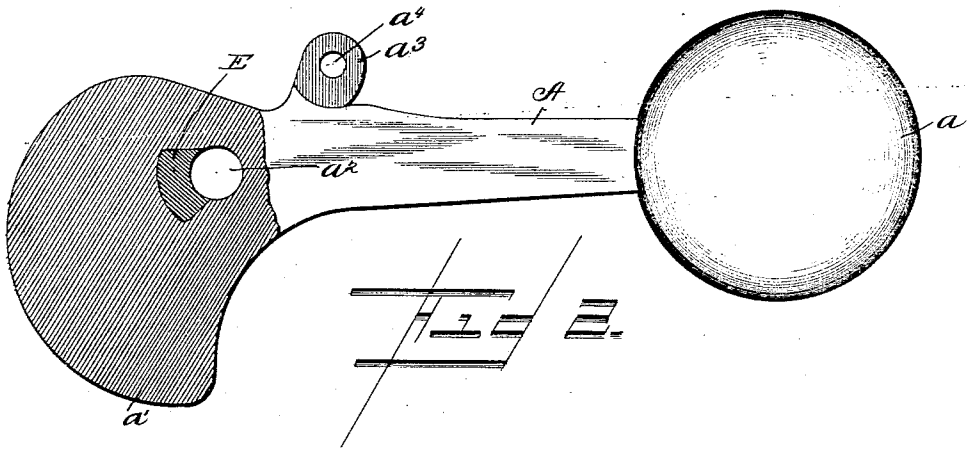

Fig. 2.

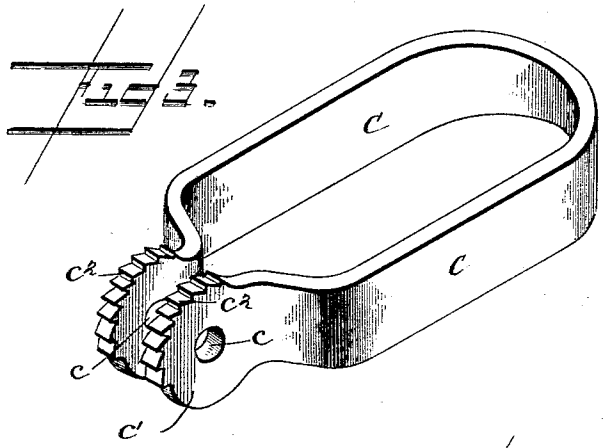

Fig. 3.

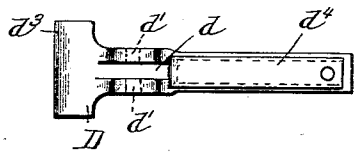

Fig. 4.

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UNITED STATES PATENT OFFICE.

OZRO J. BALDWIN, OF YOUNGSVILLE, ASSIGNOR OF ONE-HALF TO WILLIAM A. LOUDEN AND GEORGE W. LOUDEN, OF ALLEGHENY, PENNSYLVANIA.

DEVICE FOR HOLDING AND OPERATING THE JAWS OR ENDS OF THE REINS OF A TEMPER-SCREW.

SPECIFICATION forming part of Letters Patent No. 476,721, dated June 7, 1892.

Application filed March 12, 1892. Serial No. 424,664. (No model.)

To all whom it may concern:

Be it known that I, OZRO J. BALDWIN, a citizen of the United States, residing at Youngsville, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in a Device for Holding and Operating the Jaws or the Ends of the Reins of a Temper-Screw; and I do hereby 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.

My invention relates to a device or mechanism for operating and holding in their normal position the lower end or jaws of the reins of a temper-screw, which is now universally used in drilling or boring oil or gas wells; and its object is to provide a device which is very simple in construction, effective, and practical in operation, thereby enabling the operator to perform almost instantaneously what under the present means now employed for such purposes would require at least four times as long. I attain this object by a certain construction, combination, and arrangement of parts fully described in this specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my invention attached to the temper-screw and in a position for use. Fig. 2 is a side view, partly in section, of the lever which is located in the jaws of the collar or yoke of my device. Fig. 3 is a detailed perspective view of said yoke or collar. Fig. 4 is a bottom view of the pawl or ratchet.

Referring to the drawings, the letter A designates the lever employed in the operation of my invention, which is constructed with a solid round ball a upon one end and an eccentric or cam a' upon the other. This lever has bearings c in the jaws c' of the yoke or collar C and is mounted upon a journal-bolt B, which is located in the orifice a^2 in the throat of the aforesaid cam or eccentric. Said journal-bolt has bearings c in the jaws c' of the yoke C. The ball a performs a twofold function: first, it answers the purpose of a desirable grip for the hand in operating my invention; second, it acts as a weight, and as the ratchet D is pivoted upon the lug a^3 upon the top of the lever A it will be readily seen that the weight of said ball will always cause the ratchet to become rigidly engaged at each step in the process of operation, thereby preventing the same from slipping. The purpose of the cam or eccentric a' is to regulate the degree of pressure upon the end of the jaws of the temper-screw, whereby the same are rigidly held in their normal position. It will readily be observed in Fig. 2 that there is located in the orifice a^2 in said lever a padding, or, more properly speaking, a piece of elastic block E, the function of which is to impart elasticity to the lever when in operation.

C represents the collar or yoke of my device, which fits around the end or jaws of the reins G of the temper-screw F. This collar is constructed so as to be adapted to fit over the end of said reins and is provided with two jaws c', which are circular in construction and have the notches c^2 upon the outer edges of the same. In each of said jaws there is an orifice c, in which is located the journal-bolt B. These notches engage the end of the pawl D.

The pawl D is provided upon its under side with a slot d, which is adapted to fit over the lug a^3, which has an orifice a^4 upon the top of the lever A. In the sides of this pawl (the lower edges of which are circular) adjacent the slot d there are two holes d', through which is placed the pivot or screw bolt d^2, which fastens said pawl to the lever A. One end d^3 of this pawl is made to engage the notches c^2 upon the jaws of the collar C. Upon the lower side of the other end of this pawl there is provided a spring d^4, which extends forward and down and rests upon the back of the lever A. This spring holds said pawl in its normal position.

The operation of my invention is as follows: When the temper-screw is run out and the driller wishes to elevate the same to the top of the reins of the temper-screw before running another bit, he will simply take hold of the ball upon the end of the lever A and push said ball or lever to the point indicated by dotted lines in Fig. 1. When this is done, the end or jaws of the temper-screw will open sufficiently far to enable him to raise the temper-screw to the desired point, or rather to the top of the reins. This being done, he

again takes hold of said ball and pulls the same down, as illustrated in Fig. 1, which closes the end or jaws of the temper-screw tightly around the screw when the ratchet or pawl engages the notches in the end of the collar, thereby rigidly and securely holding the same in their normal position, and the driller is again ready for operation.

As it is apparent that my invention is capable of various modifications, I do not wish to limit myself to any specific construction, and as I have thoroughly tested the same and know by experience that my invention is very useful and practical in operation I deem it useless to further enlarge upon its merits.

It is well that I should mention the fact that the mode now commonly used for operating and holding the temper-screw consists simply of a hand or thumb screw which is very ineffective and tedious in operation.

What I claim is—

1. In a device for operating and holding the jaws or the ends of the reins of a temper-screw, the combination of a lever having upon one end a solid ball and upon the other end a cam or eccentric, said lever being mounted upon a journal-bolt having bearing c^3 in the jaws of a yoke, the yoke fitting around the end or jaws of the reins of the temper-screw and provided with two jaws having the notches c^2, in which is located the aforesaid lever, the journal-bolt upon which said lever is mounted, and the pawl or ratchet located and mounted upon the lug a^3 of said lever, all substantially as described, and for the purpose set forth.

2. The combination of the lever A with the ends of the reins of a temper-screw, said lever being mounted upon a journal-bolt having bearings c in the ends of a yoke C, the yoke C, located upon the end or the jaws of the reins of the temper-screw and provided with the circular ends having notches c^2, in between which ends is located the aforesaid lever, the journal-bolt, upon which the lever A is mounted, the pawl mounted upon the lug a^3 of the lever A, and the elastic block located in the orifice a^2 of the lever A, all substantially as described, and for the purpose set forth.

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

OZRO J. BALDWIN.

Witnesses:
G. W. BALLOCH,
EUGENE K. STEWART, Jr.