No. 700,610. Patented May 20, 1902.

G. F. BELL.

TEMPER SCREW.

(Application filed June 27, 1901.)

(No Model.)

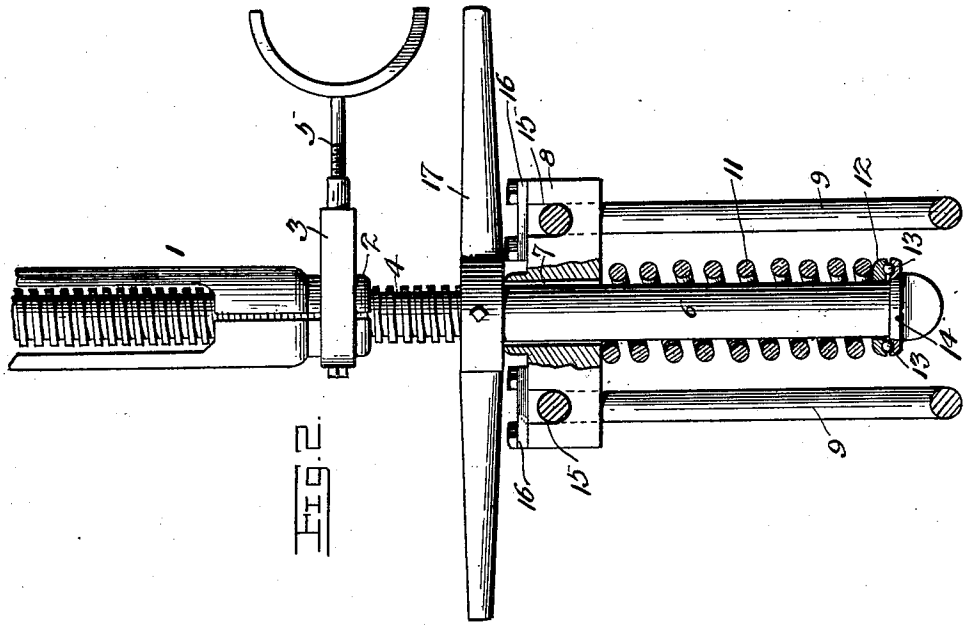


Fig. 2.

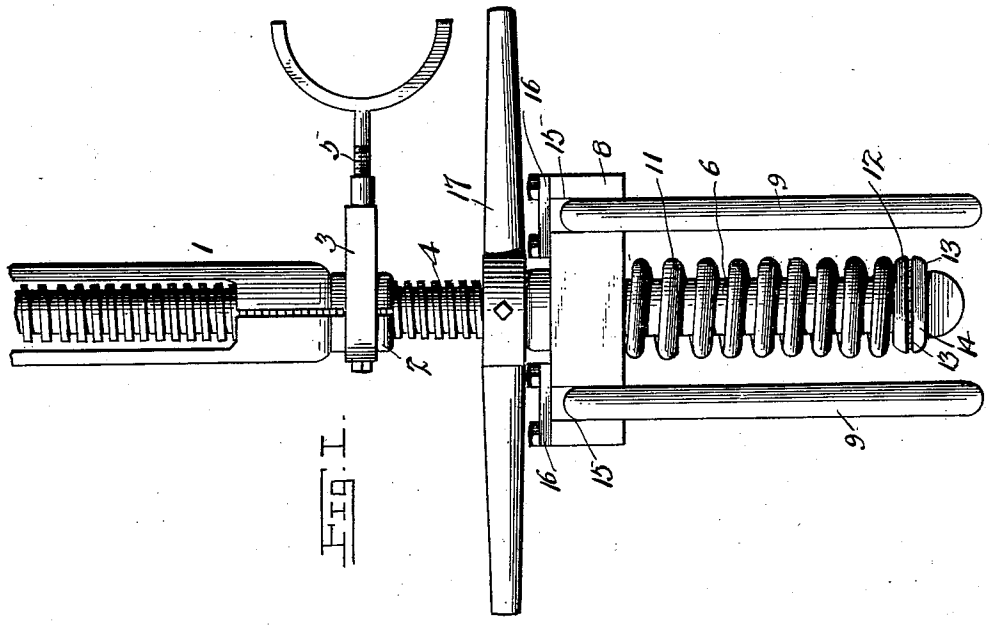


Fig. 1.

Witnesses
F. E. Allen.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE F. BELL, OF SISTERSVILLE, WEST VIRGINIA.

TEMPER-SCREW.

SPECIFICATION forming part of Letters Patent No. 700,610, dated May 20, 1902.

Application filed June 27, 1901. Serial No. 66,259. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. BELL, a citizen of the United States, residing at Sistersville, in the county of Tyler and State of West Virginia, have invented a new and useful Temper-Screw, of which the following is a specification.

The invention relates to improvements in temper-screws.

The object of the present invention is to provide a simple, inexpensive, and efficient device designed for use on temper-screws when a wire cable is connected with the same and adapted to supply the necessary cushioning effect which is afforded by hemp rope, and thereby prevent the injury which usually results to the temper-screw, clamps, engine, and other parts of the apparatus when a wire cable, which is incapable of stretching, is employed.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is an elevation of the device constructed in accordance with this invention and shown applied to a temper-screw. Fig. 2 is a sectional view of the same. Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a temper-screw frame designed to be constructed and suspended in the ordinary manner and provided at its lower end with the usual bifurcated nut 2, so that when the yoke 3 is taken off the bifurcated nut will spring apart and permit the temper-screw 4 to be moved up or down without turning it. The yoke is provided with a set-screw 5 to tighten it when in place. The temper-screw is provided at its lower end with a shank 6, which passes through a central opening 7 of a cross-head 8, to which links 9 are connected, and the said links 9 are designed to be also connected with a clamp of the ordinary construction for engaging a wire cable. When a hemp rope is connected with the temper-screw, the jars and strains incident to drilling or cleaning a well are taken up and are cushioned by the hemp, which is adapted to stretch, and this stretching action of the hemp rope will relieve and prevent injury to the temper-screw, the clamps, the engine, and other parts of the apparatus. In order to afford the same cushioning action when an inelastic wire cable, which is incapable of stretching, is connected with the temper-screw, a coiled spring 11 is disposed on the shank of the temper-screw and is interposed between the cross-head 8 and a bearing-ring 12, which forms the stop. The bearing-ring 12, which receives the lower end of the coiled spring, is provided in its lower face with an annular groove, forming a ball-race for an annular series of antifriction-balls 13, which are arranged in a corresponding groove of a head 14 of the lower end of the shank. Instead of forming the lower groove in the head of the shank a lower bearing-ring may be provided, or any other construction may be employed for engaging the lower end of the spring. The spring when in use will be partially compressed and will afford the necessary cushioning action to relieve the apparatus of strain, and it may be made of any desired size or strength to secure the necessary cushioning effect.

The links 10 are arranged in recesses 15 of the ends of the cross-heads 8 and are retained in the recesses by means of plates 16, extending across the recesses and secured to the upper face of the cross-head by screws or other suitable fastening devices. The temper-screw is provided above the cross-heads with the usual arms or handles 17, which may be connected with the temper-screw in any suitable manner.

It will be seen that the cushioning device is exceedingly simple and inexpensive in construction, that it is adapted to be readily applied to temper-screws, and that it is capable of supplying the necessary cushioning action when an inelastic wire cable is employed.

What I claim is—

In a device of the class described, the combination of a temper-screw having a threaded upper portion and provided with an extended lower portion forming a smooth shank, the latter being provided at its lower end with a head, the cross-head slidably mounted on the smooth shank of the temper-screw and capable of movement longitudinally thereof, vertical links located at opposite sides of the shank

and supported by the cross-head, and a cushioning-spring located between the links and arranged on the smooth shank and interposed between the head thereof and the said cross-head and yieldingly supporting the latter, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE F. BELL.

Witnesses:
R. L. GREGORY,
R. C. HYATT.