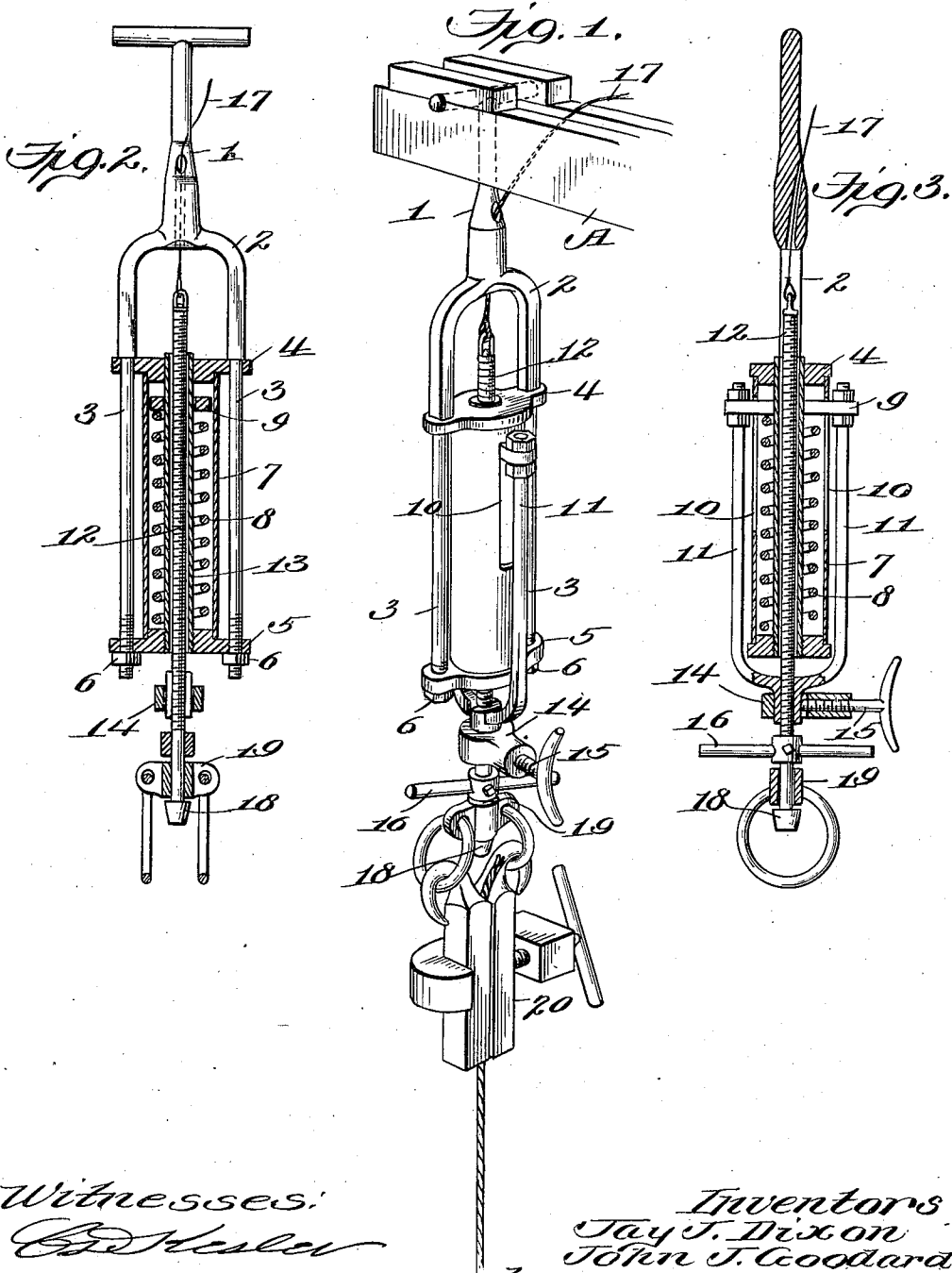


J. J. DIXON & J. J. GOODARD.
 TEMPER SCREW.
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1,012,994.

Patented Dec. 26, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAY J. DIXON AND JOHN J. GOODARD, OF WARREN, PENNSYLVANIA.

TEMPER-SCREW.

1,012,994.

Specification of Letters Patent.

Patented Dec. 26, 1911.

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To all whom it may concern:

Be it known that we, JAY J. DIXON and JOHN J. GOODARD, citizens of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Temper-Screws, of which the following is a specification.

This invention relates to improvements in temper screws of that type wherein a cushioning spring is interposed between the movable parts to provide for the efficient use of a wire cable and to relieve the screw and the engine and its adjuncts from stresses.

The object of the invention is to provide a new organization of related elements which serves more particularly the purposes of compactness and safety.

An embodiment of the invention is shown in the accompanying drawings wherein—

Figure 1 is a perspective view of the temper screw and its adjuncts; Fig. 2 is a vertical sectional view of the temper screw; and Fig. 3 is a vertical sectional view of the temper screw in a plane at right angles to the plane of Fig. 2.

Similar characters of reference designate corresponding parts throughout the several views.

The walking beam is shown at A and has its end slotted as usual to receive the T-shaped hanger 1 of the temper screw. Said hanger is provided at the upper end of the rein yoke 2. The reins 3 of said yoke extend through upper and lower cross plates 4 and 5 respectively, the plate 4 being held against shoulders provided on said reins and the plate 5 being held against nuts, as 6, which are provided at the lower ends of the reins. The proper relation of the plates 4 and 5 is maintained by a sleeve 7 which incloses a cushioning spring 8. The latter is interposed between the plate 5 and a cross head 9, the end lugs of which extend through longitudinal slots 10 which are arranged at opposite sides of the sleeve 7. The end lugs of the cross head 9 are connected on the respective sections 11 of the yoke with which the temper screw *per se* is directly associated. The temper screw is indicated by the numeral 12 and extends through a sleeve 13 which is arranged coaxially within the sleeve 7 and is surrounded by the spring 8. The lower ends of the sections 11 are formed with opposed

threaded lugs, which in conjunction constitute a threaded collar to engage the lower end of the temper screw 12 and which are held in such engagement by a clamping collar 14 and a set screw 15. The screw 12 carries at its lower end arms 16 by which said screw may be conveniently rotated to cause a downward feed thereof and said screw at its upper end is connected to a wire, as 17, which passes through an opening in the upper end of the yoke 2 and by means of which the screw may be raised when the sections 11 are sprung apart for the purpose. The extreme lower end of the temper screw is formed as a head 18 which serves as a swivel bearing for a hanger 19 by which the clamp for the wire cable is supported. Obviously, if desired, a rope may be employed instead of a cable without involving any change whatever in the construction above-described.

It will be apparent that the yoke 2 and the yoke sections 11 constitute a temper screw frame, and that their relative movements are efficiently cushioned by the spring 8 which, it will be noted, is arranged between the reins 3. The sleeve 7 is held in proper relation by the heads 4 and 5 and serves, in case of the breakage of the spring or of any of the inclosed parts, to prevent the broken parts from flying or falling, for which reason the arrangement is safe, not only in that it avoids the liability of personal injury but as well prevents broken parts from falling into the well and interfering with the action of the devices which are carried by the wire cable. The adjustment of the temper screw is effected in the same convenient manner as heretofore, but the cushioning spring has a better arrangement than in previous constructions, since it is disposed between the reins and within the temper screw frame. The advantages of the cushioning spring are that it protects the temper screw and its adjuncts, the engine and the reels or drums operated thereby from the effects of stresses and in certain operations materially assists the engine in its work.

What is claimed is:

1. In a temper screw construction, in combination, a frame comprising a rein yoke, cross plates through which the reins of said yoke extend, a sleeve fitted between the cross plates, an expansive coil spring arranged within the sleeve, the latter having

longitudinal slots at opposite sides thereof, a cross head arranged within the sleeve and having end lugs which project through the slots, the cross head resting upon the spring, yoke sections secured respectively to said end lugs and having their lower ends formed to constitute a collar, a clamping device for maintaining the proper relation of the yoke sections, and a temper screw arranged coaxially within the sleeve and having its lower end engaged by the collar provided by the yoke sections.

2. In a temper screw construction, in combination, a frame comprising a rein yoke, cross plates through which the reins of said yoke extend, a sleeve fitted between the cross plates, an expansive coil spring arranged within the sleeve, the latter having longitudinal slots at opposite sides thereof, a cross head arranged within the sleeve and having end lugs which project through the slots, the cross head resting upon the spring, yoke sections secured respectively to said end lugs and having their lower ends formed to constitute a collar, a clamping device for maintaining the proper relation of the yoke sec-

tions, a second sleeve arranged coaxially within the spring, and a temper screw which extends through the second sleeve and which has its lower end engaged by the collar provided by the yoke sections.

3. In a temper screw construction, in combination, a rein yoke having depending reins, a cross plate associated with the reins, an expansive coil spring supported on the cross plate, a cross head supported on the spring, yoke sections associated with the ends of the cross head and having their lower ends formed to constitute a collar, a clamping device for maintaining the proper relation of the yoke sections, and a temper screw disposed within the spring and having its lower end engaged by the collar provided by the yoke sections.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JAY J. DIXON.
JOHN J. GOODARD.

Witnesses:

EARLE MACDONALD,
FLORA M. BLAIR.