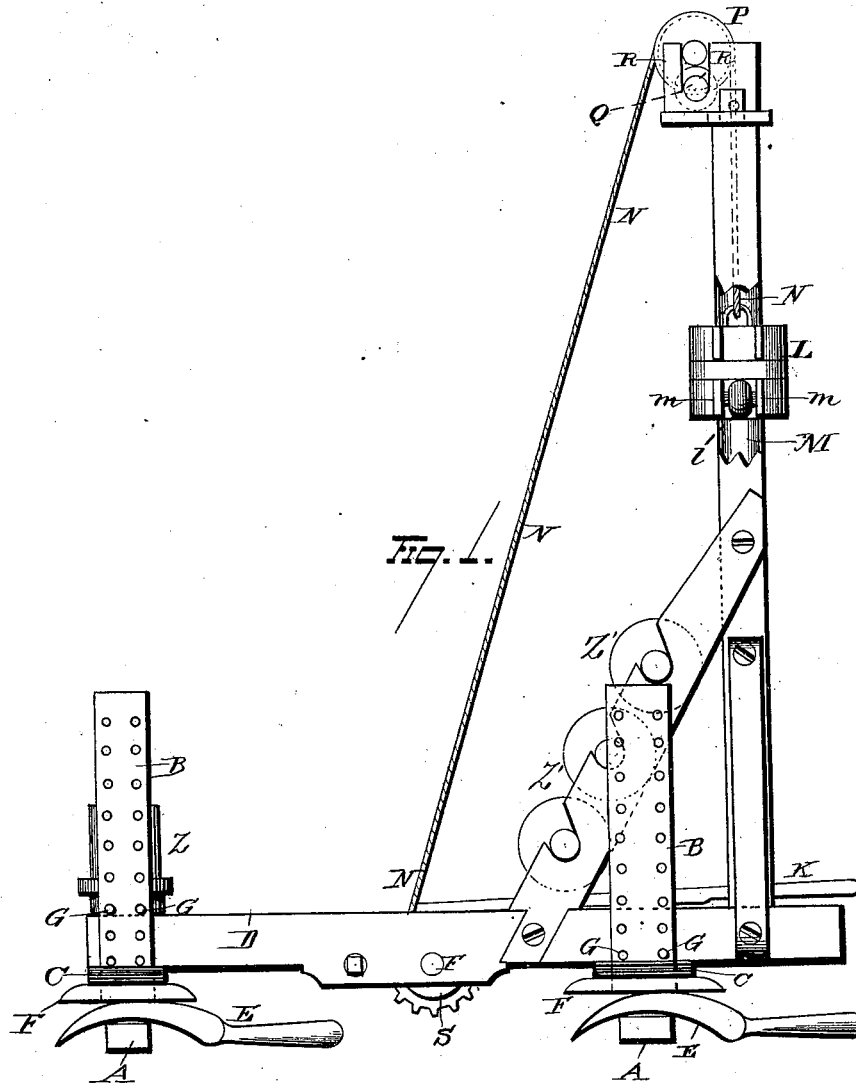


W. A. NEWTON.  
Post-Driver.

No. 215,832.

Patented May 27, 1879.



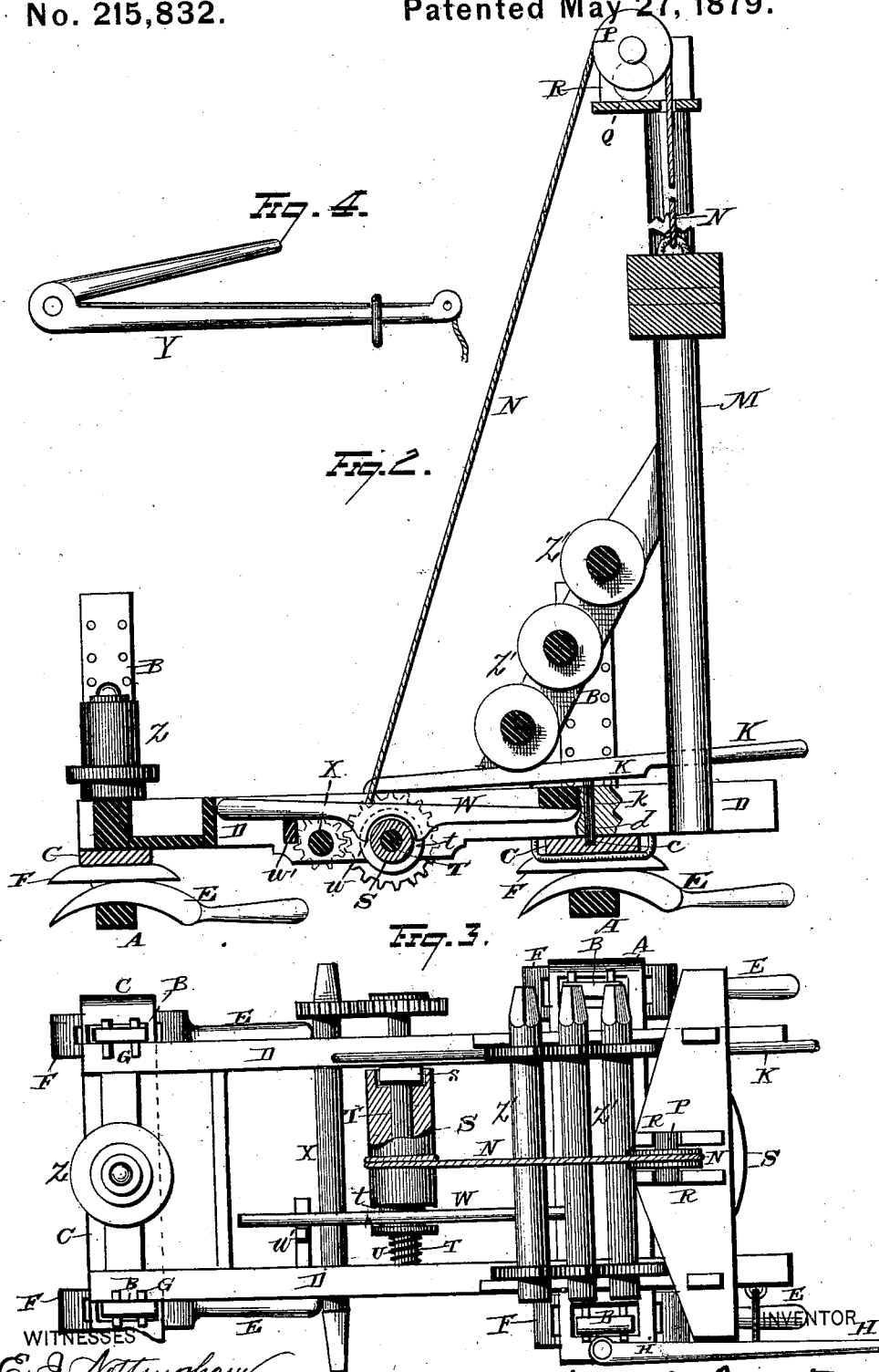
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WITNESSES  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. NEWTON, OF OSAGE TOWNSHIP, BATES COUNTY, MISSOURI.

## IMPROVEMENT IN POST-DRIVERS.

Specification forming part of Letters Patent No. **215,832**, dated May 27, 1879; application filed December 14, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM A. NEWTON, of Osage township, in the county of Bates and State of Missouri, have invented certain new and useful Improvements in Post-Drivers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to a post-driver, more especially adapted for use in building wire fences, the design of the same being to provide improved mechanism whereby the bed-frame of the machine may be maintained level, notwithstanding inequalities of the ground upon which it may be worked, so that said bed-frame may be adjusted conformably to the position required of it, whether the machine be ascending or descending a hill or rise of ground, and also so that it may be moved laterally, as desired, upon its rear loose bolster between perforated uprights, which latter, by means of engaging devices, maintain said bed-frame in place upon said bolster.

In addition to the above, my object is to provide improved construction for the operation of the post-hammer, the entire construction of the machine being such as will best adapt the several working parts thereof to the purposes required of them.

To this end my invention consists, first, in the combination, with a bolster provided with a perforated upright respectively at both extremities and a loose bed-frame fitting thereon, of bolts or equivalent fastening devices adapted to engage with the uprights at any desired point thereof above the bed-frame, whereby the latter is maintained in position; second, in the combination, with a bolster provided with a perforated upright respectively at both extremities and a loose upper bolster upon which the bed-frame rests, of a lever fitting between said upper and lower bolsters and adapted to raise the former to any desired point, together with bolts or equivalent devices engaging with the uprights below said lever, whereby the latter is maintained in proper adjustment; third, in the combination, with a bolster provided with perforated up-

rights respectively at both extremities and a loose upper bolster upon which the bed-frame rests, of a slotted lever and washer which fit over each of said uprights and are adapted to adjust said loose bolster relatively to the lower fixed bolster; fourth, in the combination, with a bolster provided with a perforated upright at each extremity, a loose upper bolster upon which the bed-frame rests, and a hand-lever, of a washer located between the latter and the loose bolster, said lever being formed convex on its upper surface, which engages with the washer, and concave on its under side, which engages with the lower bolster.

The invention further consists in certain parts and combination of parts, as hereinafter described and claimed.

Referring to the drawings, Figure 1 is a view, in side elevation, of my machine, the same being shown free from a truck and other parts not essential to my invention, in order to more clearly illustrate the latter. Fig. 2 is a view in sectional elevation thereof, with certain portions broken away. Fig. 3 is a plan view, also having certain parts in section to better illustrate the parts. Fig. 4 is a view of the steel clamp, which may be used in the process of stretching the strands of wire on the fence.

The lower or fixed bolsters, A, may be those of an ordinary wagon or truck, and are supported upon a suitable vehicle or wheel device, the same being immaterial to my invention. Each of said bolsters is provided with perforated uprights B, secured, respectively, to opposite extremities thereof. The upper or loose bolsters, C, upon which the bed-frame D rests, are adapted to be raised or lowered by means of hand-levers E, the upper surface of each of which is convex and has bearing against a washer, F, while the under surface is concave and has bearing against the lower bolster.

The loose bolsters, the several hand-levers, and the corresponding washers placed, respectively, between each pair of the former are all formed with slots, through which the perforated uprights pass, and in this manner they fit over and embrace said uprights, so as to be secure in position, while at the same time they are capable of movement, such as is necessary in adjusting the bed-frame.

Bolts, pins, staples, or equivalent fastening devices G are used to maintain the bed-frame in place. When the latter is to be raised the fastening devices are removed from above the same. The hand-levers raise the washers, loose bolster, and bed-frame to the desired height, and then the fastening devices G are connected in engagement with the upright both below the lever and above the bed-frame. Said bed-frame is thus secured in desired adjustment, and prevented from changing its position in movement either up or down.

The construction of the parts is such that the bed-frame can be maintained in constant level position whether the machine be on a side hill, sloping either to the right or the left side thereof, or whether it be ascending a hill or be working upon any kind of unequal ground. So, too, by means of lever mechanism, the rear end of the bed-frame may be moved laterally upon its loose rear bolster within the space formed between the two uprights thereon. Lever H accomplishes this movement by being connected, respectively, with the bed-frame and the loose bolster, while said movement is permitted by raising lever K, which latter is pivoted to the upper surface of one of the sills of the bed-frames. A pin, *k*, passes through vertical slot *d* in said sill, and engages with one of a series of holes, *c*, made in the appropriate bolster.

The hammer L is made in transverse horizontal sections, secured together by bolt-and-nut engagement, so that greater or less weight may be obtained, as desired, by adding or taking away sections.

Angular horizontal arms *m* project from both sides of the hammer, and are adapted to embrace the central longitudinal grooves with which the vertical ways M are formed, said arms having anti-friction rollers *l* journaled therein, and which travel in said grooved ways.

The hammer-rope N passes over grooved pulley P, the journals of which latter have bearing, respectively, upon the smooth peripheries of pulleys Q. Said bearing-pulleys are fitted within vertically-recessed standards R, located, respectively, upon opposite sides of said rope-pulley.

The rope is wound upon drum S, which latter is adapted to be engaged in connection with shaft T, so as to have simultaneous rotary movement therewith, by means of one or more feathers or splines, *s*, which engage with corresponding grooves, said feathers and grooves being formed, respectively, upon either the drum or shaft.

A spiral spring, U, encircles the extremity of said shaft opposite to the end on which said feather-and-groove mechanism is formed, and by end bearing against its contiguous end of the drum maintains the latter in engagement with the shaft. This engagement is broken by means of lever W, formed with a concave portion, *w*, adapted to fit within groove *t*, formed on the drum. A catch, *w'*, serves to secure

said lever in position, when the drum is thereby disengaged from the shaft. Gear-shaft X engages with said drum-shaft, and may be rotated by crank-handles or other suitable means. Any suitable pawl mechanism may be used to hold said gear-shaft or prevent it from retrograde movement.

The advantage of this peculiar construction of shaft-and-drum mechanism is, that thereby the hammer-rope is prevented from running off too much slack when the hammer is lowered. Said hammer can be dropped from any desired height, and the little friction exerted by the spring and lever upon the rotating drum prevents the latter from unrolling too much, and thus causing undue trouble of re-winding the rope on the drum.

The construction thus far pertains to such parts as are brought into use in driving posts for a fence, and the same constitutes my invention; but certain other parts adapted for use in stretching the wire upon the posts will now be described, in order to explain their appearance in the drawings. It will be understood, however, that I do not herein claim said parts used in stretching the wire, but reserve the right to claim the same in a future application for separate patent thereon.

The manner of this latter operation is as follows: After the posts for a string of fence are driven, and the same are ready for the wire to be connected therewith, rope N is loosened from the hammer, thus permitting the latter to drop from the machine. The free end of said rope is drawn out of the pulley P and extended in horizontal line from drum S, to which it still remains secured rearward of the wagon. Clamp Y is then connected to said free end of the rope. A coil of wire is put upon the vertical spool Z, located on the front portion of the wagon, and its end fastened to one of the horizontal rolls Z', located at the rear portion of the wagon. The crank of drum S is then removed from the latter and put upon the journal of said roll. By operating said crank the wire is unwound from its coil and rewound upon the horizontal roll. In placing fresh coils upon the rotating spool, as may be necessary, in order to wind a sufficient quantity of wire upon the roll, the ends of the different coils are duly spliced together. This process is repeated for the two remaining rolls, or for as many rolls as there are to be wires to the fence.

The wagon is driven to the place where the wire is to be first connected to the fence. The ends of the several wires are, respectively, secured to the first post in due position, and then the wagon is driven alongside the row of posts, thus causing the wire to be unwound from the rolls for any certain distance—for instance, one hundred feet. The wagon is then stopped, and clamp Y is engaged with one of the wires at suitable point of the latter. By rotating drum S, by means of its crank, any desired strain is imposed upon said wire, and when the latter is stretched to its due tension

it is then fastened at a suitable point to one of the posts by staples or otherwise.

The above operation is repeated in instance of each of the several wires, after which the wagon is driven for another distance or section, and the wires for the latter tightened and secured to the posts as above until the whole string of fence is duly made.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a bolster provided with a perforated upright at each end and a loose bed-frame fitting thereon, of bolts or equivalent fastening devices adapted to engage with the uprights at any desired point thereof above the bed-frame, whereby the latter is maintained in position, substantially as set forth.

2. The combination, with a bolster provided with a perforated upright at each end and a loose upper bolster upon which the bed-frame rests, of a lever fitting between said upper and lower bolsters and adapted to raise the former to any desired point, together with bolts or equivalent devices engaging with the uprights below said lever, whereby the latter is maintained in proper adjustment, substantially as set forth.

3. The combination, with a bolster provided with perforated uprights at each end and a loose upper bolster upon which the bed-frame rests, of a slotted lever and washer which fit over each of said uprights and are adapted to adjust said loose bolster relative to the lower fixed bolster, substantially as set forth.

4. The combination, with a bolster provided with a perforated upright at each extremity, a loose upper bolster upon which the bed-frame rests, and a hand-lever, of a washer located between the latter and the loose bolster, said lever being formed convex on its

upper surface, which engages with the washer, and concave on its under side, which engages with the lower bolster, substantially as set forth.

5. The combination, with vertical ways, having central longitudinal grooves formed therein, of a hammer provided with angular horizontal arms projecting from both sides thereof and adapted to embrace the grooved ways, said arms having rollers journaled therein which travel in said ways, substantially as set forth.

6. The combination, with the longitudinal grooved ways, and the hammer formed with lateral arms embracing the same and provided with rollers which travel in said ways, of the hammer-rope, the pulley over which the latter passes, and the rollers upon which the journals of the pulleys have bearing, said rollers working in vertically-recessed standards in which they respectively fit, substantially as set forth.

7. The combination, with the rotating shaft T and the independent drum S, having feather-and-groove engagement therewith at one extremity, of the spiral spring U, encircling the opposite extremity of said shaft, and compressed between said drum and the bed-frame, together with the lever W, formed with the central concave portion, *w*, fitting in the transverse annular groove *t* made in the same end of the drum, and the catch *w'*, which secures said lever in position, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of December, 1878.

WILLIAM A. NEWTON.

Witnesses:

THOS. H. CRAIG,  
GEORGE KALER.