

No. 647,760.

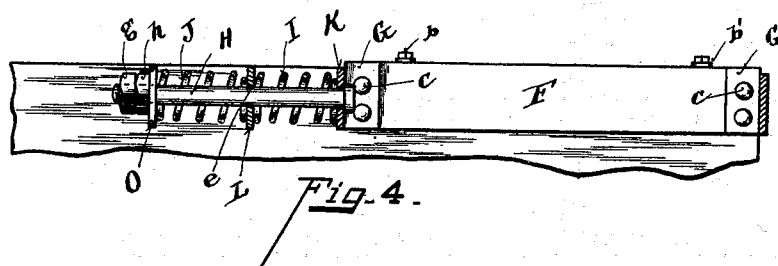
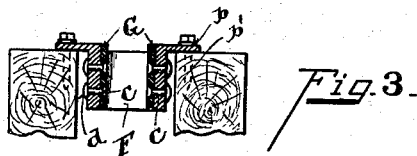
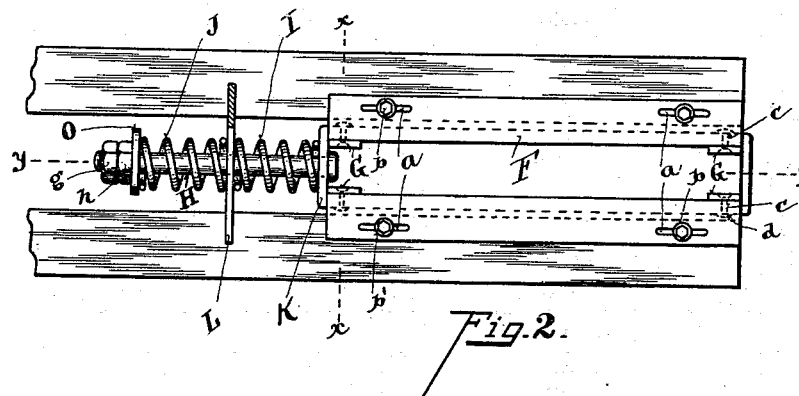
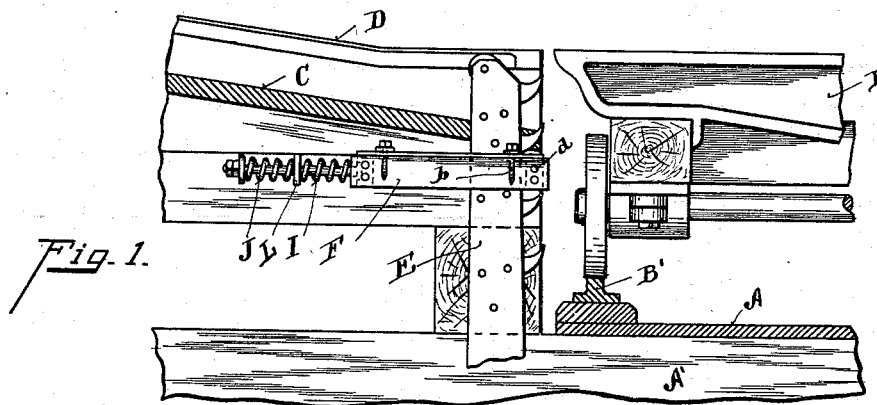
Patented Apr. 17, 1900.

J. N. QUINN.

CUSHION DEVICE FOR LOG TURNERS.

(Application filed Feb. 2, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

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CUSHION DEVICE FOR LOG-TURNERS.

SPECIFICATION forming part of Letters Patent No. 647,760, dated April 17, 1900.

Application filed February 2, 1900. Serial No. 3,668. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. QUINN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cushion Devices for Log-Turners, of which the following is a specification.

My invention relates to that class of log-turning devices in which the toothed bar or nigger-bar is operated by power to turn the log.

The object of my invention is to provide a cushion-stop for each fore-and-aft motion of the nigger-bar which will be effective, strong, and durable and of simple and cheap construction.

The features of my invention will be more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my improvement mounted upon a log-deck, shown in section, and log carriage and track. Fig. 2 is a top plan view of the cushion-stop. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is a vertical section on line *y y*, Fig. 2.

A represents the floor of the mill, mounted on sleepers A'. B represents the carriage, and B' the carriage-track. C represents the log-deck, and D the logway. E represents the toothed or nigger bar. These parts may be of any ordinary construction and arrangement.

F represents my cushion stop device. This cushion device consists of three parts—chiefly, an open hollow frame made integral and forming the guideway for the toothed bar; second, removable stops connected at the ends of the guideway, and, third, the spring cushioning device, with proper means to sustain and form the seats of the springs. In order to dispense as far as possible with nuts which receive shocks, and consequently are liable to wear and get loose, I mount this frame on the log-deck and provide the following means for allowing said frame to reciprocate as the preferable mode of construction:

a represents slots pierced through the horizontal flanges of the frame F. *b* represents lag-screws with an enlarged head or washer *b'*, which spans the slot *a* and holds the frame

from rising. These parts do not receive the thrust of the fore-and-aft movement and are simply employed to hold the frame down and to guide it in its longitudinal travel, preventing lateral movement. These holding-down and guiding devices may be of any common form of construction.

G represents detachable stops secured to the sides and ends within the guideway, as shown in plan view, Fig. 2. These are required to be renewed from time to time and at the same time they must be held very rigidly in position, as they receive the full force of the blow of the toothed bar. To accomplish this, I preferably employ rivets *c*, the heads of which lie in countersunk holes formed through the stops. *d* represents a head which is formed by upsetting the end of the rivet. When it is desired to renew these stops, the frame is removed from the log-deck, the heads of the rivets are cut off with a cold-chisel, and the stops and rivets renewed.

The cushioning device consists of two springs I J, which are sustained in position by the rod H, attached to and suspended by the frame-head K at one end and by the spring-stop seat-plate L. This stop seat-plate is anchored within gains cut in the log-deck, as shown in Fig. 2. These gains are made deep—the full depth of the plate—so that they may firmly withstand the shocks they receive by the blows of the toothed bar. *e* represents an orifice pierced through this plate to receive and sustain the rod H at its central position. The plate L and the head K form the sustaining elements of the rod H.

I J represent coil-springs. Spring I seats against head K at one end and against the stop-plate L at the other end. One end of spring J seats against the stop-plate L and the other end against a washer-plate O, suspended upon rod H.

g h represent lock or jam nuts.

It will be observed that the springs I J lie in a central plane to the center of a toothed bar and the center of the reciprocating frame, thereby avoiding all tendency of lateral movement from side or partially-side strokes. It will also be observed that the stop-plate L serves as the stop to cushion the blow through the springs by the reciprocation of the stop-

frame in the fore-and-after motion. Thus spring J receives the thrust of the forward movement of the toothed bar and plate L cushions the blow. Spring I receives the shock of the aft motion of the toothed bar and plate L cushions the blow through the spring. Thus two independent springs, both lying in the same plane, form the cushioning devices of my improvement. It will also be observed that the stop-plate L does not directly receive the blow of the toothed bar, but the blows are received on the firmly-anchored stops G, which are firmly anchored to the reciprocating frame and adapted to be renewed from time to time, as occasion requires.

Having described my invention, what I claim is—

1. A cushion-stop for a toothed bar composed of an integral hollow frame having stops rigidly connected at the sides and ends within the guideway, tandem springs suspended by a rod connected to the head of said frame at one end and having a sliding bearing in the intermediate cushion-plate rigidly supported between and forming a seat for said springs.

2. In a spring cushion device, in combination with a reciprocating hollow frame forming a guideway for the toothed bar and stops at each end of the guideway, the cushion-plate L firmly anchored and forming a support and seat for tandem of springs located at each side thereof, supported by a rod connected to said frame and having a sliding

bearing in said plate, substantially as specified.

3. In a cushioning device for a toothed bar, the combination with the log-deck of a reciprocating hollow frame vertically supported thereon, means for guiding said frame in its reciprocating movement and tandem of spring-stop devices located in a longitudinal central plane to the center of said frame and seating and stopping devices for cushioning the spring movement, substantially as specified.

4. A cushioning device for a toothed bar consisting of a longitudinal reciprocating frame mounted upon a log-deck and having a guideway for the toothed bar, stop devices at each end of the guideway and tandem of spring-cushioning devices lying in the same longitudinal plane secured to the frame and log-deck, said springs being adapted to cushion the alternate blows of the toothed bar, substantially as specified.

5. A cushion-stop for nigger-bars consisting of a single floor-plate movable longitudinally on the framework in the direction of strain, a central guideway for the nigger or toothed bar in said plate, and a centrally-disposed cushioning device located at one end of the plate, substantially as specified.

In testimony whereof I have hereunto set my hand.

JOHN N. QUINN.

Witnesses:

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