(No Model.)

A. R. CLARK.

LUMBER BINDER.

No. 357,818. Patented Feb. 15, 1887.

Fig. 1.

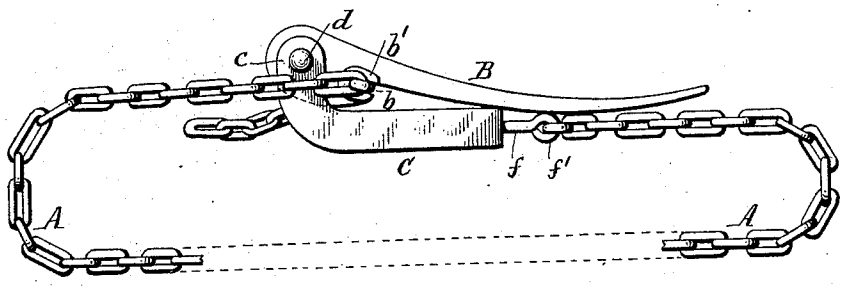


Fig. 2.

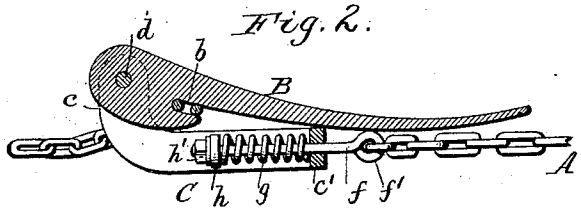


Fig. 3.

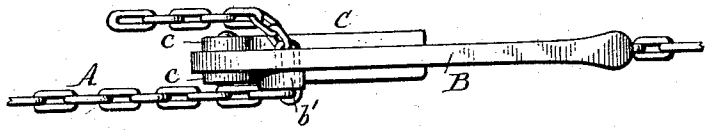


Fig. 4.

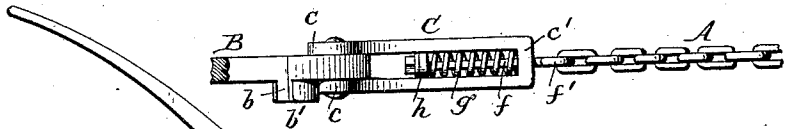
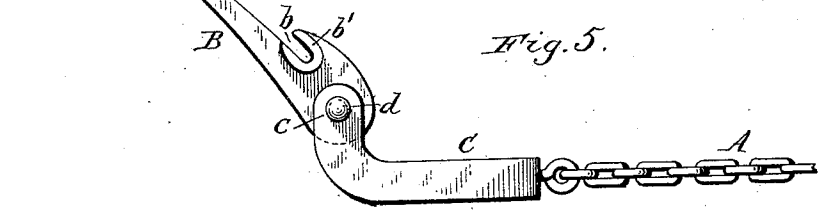


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

A. RALPH CLARK, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO WILLIAM BAYNES, OF SAME PLACE.

LUMBER-BINDER.

SPECIFICATION forming part of Letters Patent No. 357,818, dated February 15, 1887.

Application filed August 25, 1886. Serial No. 211,865. (No model.)

To all whom it may concern:

Be it known that I, A. RALPH CLARK, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Lumber-Binders, of which the following is a specification.

This invention relates to an improvement in the levers which are employed for tightening the binding-chains by which lumber, &c., is fastened upon wagons and other vehicles during transportation; and it has for its object to provide the binding-chain with a simple and efficient tightening-lever, whereby the chain can be readily drawn taut and the load securely held in place upon the wagon.

My invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved tightening-lever, showing the binding-chain tightened. Fig. 2 is a vertical longitudinal section of the tightening-lever. Fig. 3 is a top plan view thereof. Fig. 4 is a fragmentary top plan view of the tightening-lever, showing the ends of the binding-chain disconnected. Fig. 5 is a side elevation thereof.

Like letters of reference refer to like parts in the several figures.

A represents the binding-chain, which may be of any ordinary construction, and which encircles the body of the wagon and the load of lumber or other material placed upon the same.

B represents the tightening-lever, which is pivoted to a bifurcated or U-shaped frame, C, secured to one end of the binding-chain A. The ends of the jaws of the bifurcated frame C are bent upwardly to form ears *c*, between which the tightening-lever B is pivoted by a pin or rivet, *d*. The lever B is provided with a transverse notch or recess, *b*, which is adapted to receive one of the links of the free end of the binding-chain. The recess *b* is formed on the under side of the lever B, or the side facing the frame C. When the lever is swung backwardly away from the frame C, as represented in Fig. 5, one of the links of the free end of the chain can be engaged in the recess *b* upon passing the chain across the lever B. When the lever has been swung forwardly on its pivot *d*, so that the chain is tightened, as shown in Fig. 1, the recess *b* will lie below the plane of the pivot *d*, and the strain on the chain will hold the lever in this position and firmly lock the same.

The lever B is provided with a lug or enlargement, *b'*, which surrounds the recess *b*, and projects laterally a sufficient distance to enable the binding-chain to clear the adjacent portion of the frame C, as represented in Fig. 3, thereby preventing the chain from binding against the frame in tightening the chain.

The cross-bar *c'*, which connects the outer ends of the two jaws of the frame C, is provided with a central opening, through which passes a bolt, *f*. The latter is provided at its outer end with an eye, *f'*, whereby it is secured to the end of the binding-chain. The inner end of the bolt *f* is arranged between the jaws of the frame C, and is surrounded by a spiral spring, *g*. The latter bears with one end against the cross-bar *c'*, and with its opposite end against a washer, *h*, secured to the inner end of the bolt *f* by a screw-nut, *h'*. The spring *g* forms an elastic connection between the binding-chain and the frame C, and the spring is compressed when the lever is locked, as shown in Fig. 1. When the chain is tightened around the load, the spring *g* will take up any slack of the chain which may be caused by the jolting of the vehicle in transporting the load.

When it is desired to tighten the chain, the lever B is swung backwardly away from the frame C, as represented in Fig. 5, and the chain is drawn as tightly as possible by hand around the load of lumber or other material and the free end of the chain engaged in the recess of the lever. The latter is then swung forwardly on its pivot *d* until the recess *b* of the lever has passed beyond the plane of the pivot, and the free end of the lever rests upon the frame C, as shown in Figs. 1 and 2. The recess *b* of the lever having passed below the plane of the pivot *d*, the chain will tend to draw the lever downwardly and hold the lever firmly in a locked position.

I claim as my invention—

1. The combination, with the binding-chain

provided at one end with a frame, C, of a tightening-lever, B, pivoted to said frame and provided with a transverse recess, *b*, and a lug or enlargement, *b'*, projecting laterally from the lever and forming a lateral continuation of said recess, whereby the taut portion of the chain is carried clear of the frame C, substantially as set forth.

2. The combination, with the binding-chain and the bifurcated frame C, of a bolt, *f*, attached to one end of the binding-chain, and extending into the frame C, a spring, *g*, surrounding the bolt *f* within the frame C, and adapted to be compressed when the binding-chain is tightened, and a tightening-lever, B, pivoted to the frame C and provided with a transverse recess, *b*, for attachment to the opposite end of the binding-chain, substantially as set forth.

Witness my hand this 17th day of August, 1886.

A. RALPH CLARK.

Witnesses:
JNO. J. BONNER,
CARL F. GEYER.