To all whom it may concern:

Be it known that I, OLIVER CROSBY, a citizen of the United States, resident of St. Paul, county of Ramsey, State of Minnesota, have invented certain new and useful Improvements in Attachments for Rope-Blocks, of which the following is a specification.

In the manufacture of rope blocks of different sizes, more or less difficulty has been experienced through the wearing of the bearings in the side plates, due to the turning of the sheave axles with the sheaves, and the object of my invention is to provide a means for locking the axles against revolution so that the sheaves will turn independently of the axles instead of with them.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a side view of a rope block with my invention applied thereto.

Fig. 2 is an edge view of the same.

Fig. 3 is a detail view of the locking device.

Fig. 4 is a sectional view of the same.

In the drawing, 2 represents the side plates of the rope block held in parallel relation by pins 3 and reinforced by side bars 4. 5 is a sheave mounted on an axle 6 which projects through holes in the side plates in the bars 4. The ends of the axle project outwardly beyond the bars and have holes therein for cotter pins 7. These pins hold the axle against longitudinal movement, but ordinarily the axle has been free to revolve with the sheave and in doing so wears the bearing in the side plates and bars of the block to such an extent that the axle has an objectionable lost motion or lateral movement in the bearing and interferes with the proper working of the sheave.

To obviate this objection and at the same time not add materially to the expense of construction of the block, I provide a washer 8 fitting the end of the axle and having inwardly turned lips 9 thereon which straddle the bar 4 and bear on the vertical edges thereof and hold the washer against turning. Lugs 10 are formed on the washer with a space 11 between them to receive one end of the cotter pin and a wedge-shaped lug 12 is provided on the opposite side of the washer to enter the space between the diverging ends of the cotter pin after it has been inserted into its socket in the axle. The cotter pin is thereby securely held and through it the axle is locked against revolution, while the sheave may turn freely between the side plates.

In removing the axle, it is only necessary to withdraw the cotter pin on the other side of the block, when the axle may be withdrawn from the side plates. At the lower end of the block is the usual hook 13.

I have shown this invention applied to a single block, but it will be understood it is applicable to double blocks of any type where it is desirable to lock the axle against turning with the sheave.

I claim as my invention:

1. The combination, with a rope block and a sheave axle mounted therein and having a socket and a cotter pin fitting said socket, of a washer interposed between said pin and block and having ribs formed thereon to engage said block and lock said washer against revolution, said washer having lugs spaced apart to receive one end of said cotter pin and also having a wedge-shaped lug formed thereon fitting between the diverging ends of said pin.

2. The combination, with a rope block and a sheave axle mounted therein and having a socket and a cotter pin fitting said socket, of a washer interposed between said pin and block and having means to engage said block and lock said washer against revolution, said washer having means to receive one end of said cotter pin to interlock therewith and also having a lug formed thereon to fit between the diverging ends of said pin.

3. The combination, with a rope block and a sheave axle having a socket mounted therein and a cotter pin fitting said socket, of a washer interposed between said pin and block and having means to engage said block to lock said washer against revolution, said washer also having a lock formed thereon to fit between the diverging ends of said pin for holding said pin and shaft against revolution.

In witness whereof, I have hereunto set my hand this 15th day of April, 1918.

OLIVER CROSBY.

Witnesses:

O. W. MORTON,
E. M. BOEGE.