(No Model.)

# G. AGOBIAN.

## PULLEY BLOCK.

No. 588,309. Patented Aug. 17, 1897.

Fig. 1.

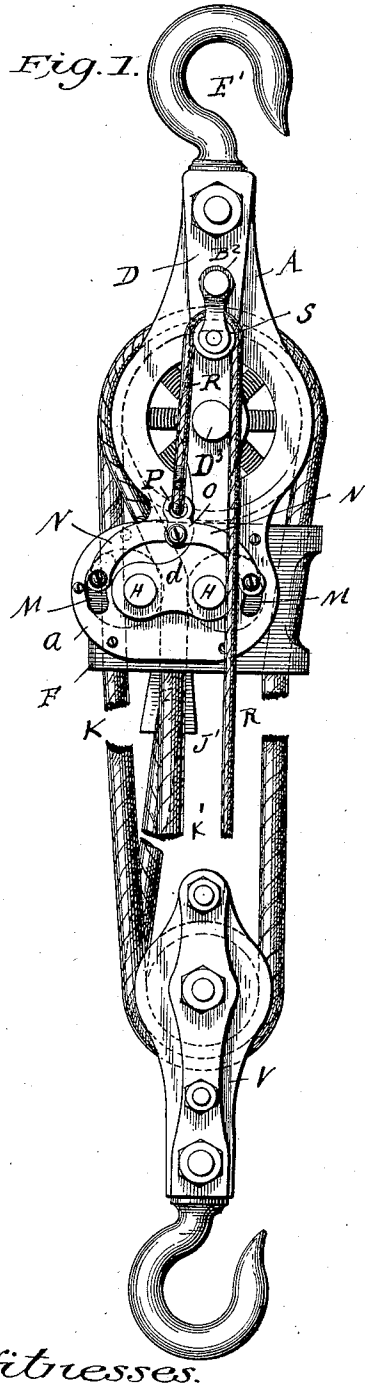



Fig. 2.

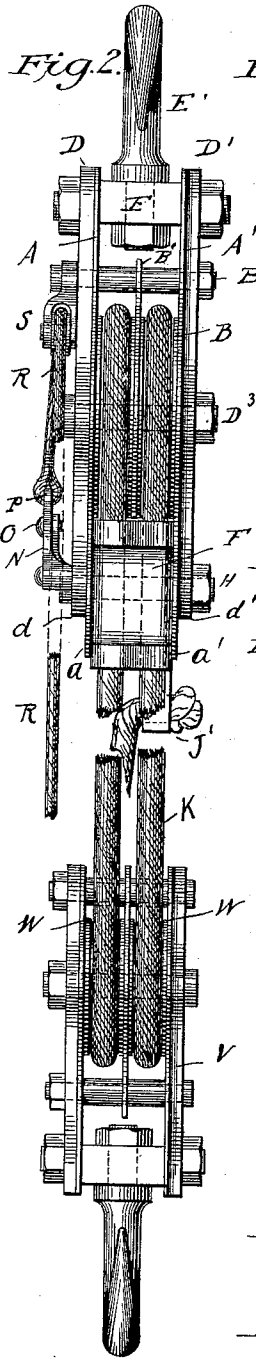



Fig. 3.

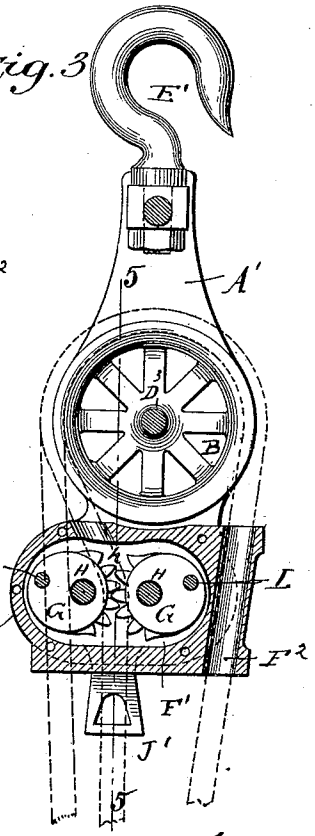
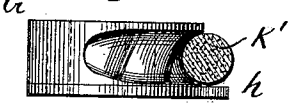



Fig. 4.



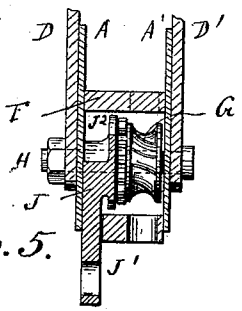




Fig. 5.

Witnesses.

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# UNITED STATES PATENT OFFICE.

GEORGE AGOBIAN, OF NEW YORK, N. Y.

## PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 588,309, dated August 17, 1897.

Application filed November 3, 1896. Serial No. 610,939. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE AGOBIAN, a native of Armenia, Turkey, (having declared my intention of becoming a citizen of the United States and forsworn my allegiance to the Sultan of Turkey,) and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Pulley-Blocks, of which the following is a specification.

This invention relates to improvements in brakes for rope-pulley blocks; and the object of my invention is to provide a new and improved brake for such blocks which is so constructed as to automatically lock the rope and prevent the load from descending as soon as the pull on the hoisting-rope ceases or decreases and which brake can be opened at any time very readily to permit the load to descend.

In the accompanying drawings, forming a part of this specification and in which like letters of reference indicate like parts in all the views, Figure 1 is a front view of my improved brake-pulley, block, ropes, &c., parts being broken away. Fig. 2 is a side view, parts being broken away. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is an enlarged detail view of one of the clamping-eccentrics and its rope. Fig. 5 is a detail transverse vertical sectional view in the line 5 5 of Fig. 3.

Two sheet-metal plates A A′, having enlargements *a a′* at their lower ends, are placed at opposite sides of sheaves B, mounted to turn on an axle $D^3$, passing through said plates and through two metal bars D D′, resting longitudinally on the outer faces of the plates A A′, said bars D D′ and plates A A′ being connected at their upper ends by a cross-bar E, to which the suspension-hook E′ is attached.

The sheaves B are separated by a plate B′, through which the axle $D^3$ and a cross-bolt $B^2$ pass, which bolt also passes through the plates A A′ and bars D D′.

A wooden or metal block F is placed between the lower ends or enlargements *a a′* of the plates A A′ and is provided with a recess F′, in which two gripping-eccentrics G are mounted loosely on the transverse pins H, passing through the enlargements *a a′* and held by the arms *d d′* at the lower ends of the bars D D′.

At one side of the casing the ends of the pins H are secured in a metal clip J, provided with a downwardly-projecting apertured arm J′, projecting from the bottom of the casing formed for the sheaves, and said clip is provided at its upper end with a fixed plate $J^2$, against which the eccentric-disks G rest.

One end of the hoisting-rope K is knotted or otherwise secured to the arm J′.

The eccentric-pulleys G have the greater parts of the rims grooved, and the bottoms of said grooves are shaped to conform to the twist of the rope, as shown in Fig. 4, so that the rope can rest snugly against said grooved rims, and thus come in close engagement with the same, so as to prevent slipping. The eccentric-disks G also have engaging teeth *h*, so as to compel them to move together. Each eccentric-disk G is provided with a pin L at a point almost diametrically opposite the supporting-pin H, and said pins L pass through segmental slots M in the block F and enlargement *a* of the plate A, and the outer ends of the pins L are pivotally connected to the lower ends of curved links N, the upper ends of which are pivoted to each other at O, one of said links having an eye P, to which is attached one end of a cord R, passing over a pulley S on the bolt $B^2$.

The rope K passes over the sheaves B, through the guide-apertures $F^2$ in the block F, and over sheaves W of a hanging block V.

The operation is as follows: The pull-rope K′ is pulled downward to lift the load, and in passing between the eccentric-disks G swings them from each other, so that said rope can pass freely. As soon as the pull on the said rope ceases the load acts in such a manner as to pull this rope in reverse direction—that is, upward—and as the strands or twists of the rope engage the recessed grooved rims of the disks G it swings the disks down and toward each other—that is, the edges carrying the pins L swing down and toward each other, and thereby the pulling-rope K′ is clamped securely and firmly between the disks, and thus the load is held in the same manner as if there was a downward pull on the rope K′. When the load is to be lowered, the cord R is pulled downward, whereby the disks G are

swung upward and outward, so as to release the rope K′ and permit it to pass upward as the load descends, the disks G being held in this opened position as long as the pull on the cord R is kept up. As soon as this cord R is released the disks automatically grip the rope K′ again, except when it is pulled downward.

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

1. In a pulley, the combination with a block and a sheave therein, of two eccentrically-mounted clamping-disks in the block, which disks have their rims grooved and shaped to fit snugly against and engage the twists of a single run of a rope and clamp the same between them, and means for swinging and holding said disks apart, substantially as herein shown and described.

2. In a pulley, the combination with a block and a sheave therein, of two eccentrically-mounted clamping-disks in said block, which disks have portions of their rims grooved and shaped to fit and engage the twists of the rope and have teeth on their rims, the teeth on the rims engaging each other to compel the two disks to move together, links connected with said disks, a cord attached to said links, and a pulley on the block, over which pulley said cord passes, substantially as herein shown and described.

3. In a pulley, the combination with a block and a sheave therein, of two eccentrically-mounted clamping-disks therein, a clip against which said disks rest and in which the supporting-pins for the disks are mounted, and an arm projecting downward from said clip below the bottom of the block, for attaching a supporting-rope, substantially as herein shown and described.

4. In a pulley, the combination with two plates having enlargements at their lower ends, and bars placed on the outer sides of said plates, of means for holding the bars and plates together to form a casing, sheaves mounted in said casing, clamping-disks mounted between the enlargements at the lower ends of said plates, and means for swinging said disks from each other and holding them apart, substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 29th day of October, 1896.

GEORGE AGOBIAN.

Witnesses:
OSCAR F. GUNZ,
B. DREYFUS.