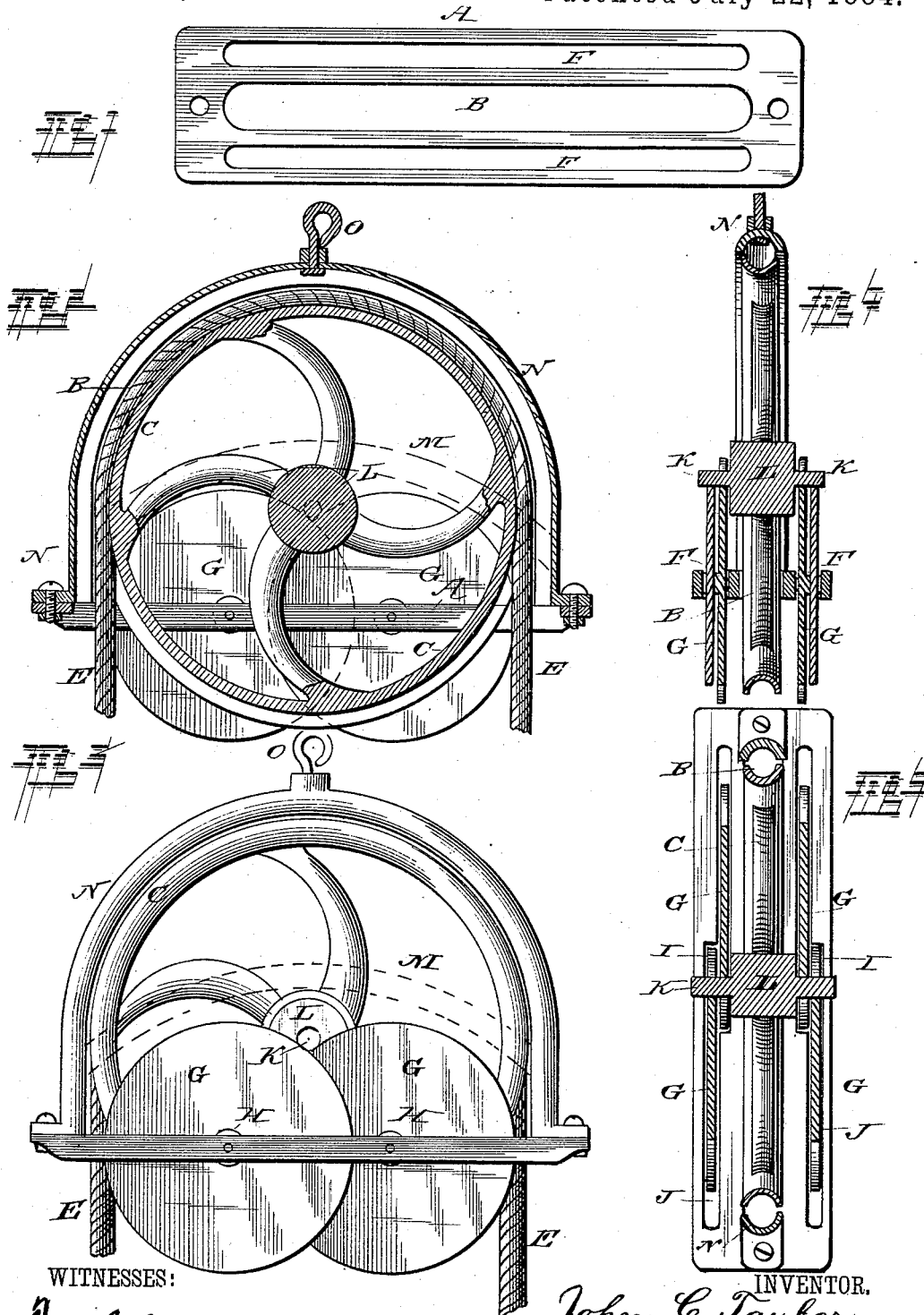


(No Model.)

J. C. TAYLOR.
ANTI FRICTION JOURNAL.

No. 302,445.

Patented July 22, 1884.



WITNESSES:

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JOHN C. TAYLOR, OF LETOT, TEXAS.

ANTI-FRICTION JOURNAL.

SPECIFICATION forming part of Letters Patent No. 302,445, dated July 22, 1884.

Application filed June 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TAYLOR, a citizen of the United States, and a resident of Letot, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Anti-Friction Journals; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of the frame of my improved anti-friction device. Fig. 2 is a longitudinal vertical sectional view of the device complete. Fig. 3 is a side view. Fig. 4 is a vertical transverse sectional view; and Fig. 5 is a horizontal sectional view illustrating a modification in the construction of my invention.

The same letters refer to the same parts in all the figures.

This invention relates to anti-friction devices adapted especially for hoisting-pulleys; and it has for its object to provide a device in which the shaft or axis of the main hoisting-pulley shall be supported or mounted upon the peripheries of wheels of a considerable diameter as compared with that of the hoisting-pulley, whereby the friction may be lessened to the greatest possible extent.

The invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, A designates a horizontal frame of suitable construction, having a central longitudinal opening, B, to receive the main pulley-wheel C, which is provided with a circumferential groove, B, to accommodate the hoisting rope or chain E. The sides of the frame are provided with slots F F parallel to the central slot, B, and provided with bearings for the supporting-wheels G G, of which two are arranged in each of the slots F, the inner ends of the said supporting-wheels overlapping each other, as clearly shown in the several figures of the drawings. This may be accomplished either in the manner shown in

Fig. 3 of the drawings, by reference to which it will be seen that one side of each of the said supporting-wheels is provided with a projecting box or hub, H, bearing against opposite sides of the frame-slots F, so as to keep the adjoining or overlapping ends of the supporting-wheels such a distance apart that they may revolve without touching or bearing against each other; or it may sometimes be found preferable to employ the modified construction, clearly illustrated in Fig. 5, by reference to which it will be seen that the slots F are constructed with a broad central portion, I, having narrow extensions J, forming continuations of the said broad central slot, and extending from diagonally-opposite corners of the latter. By this arrangement it will be clearly seen that the supporting-wheels may be mounted in such a manner as to revolve freely and without danger of coming in contact with each other. The main pulley-wheel C is provided with a central shaft, K, extending from both sides of its hub L, and forming journals that rest upon the upper adjoining sides of the supporting-wheels G at each side of the frame. Braces M (shown in dotted lines in several figures of the drawings) may be employed in order to prevent any possibility of displacement of the pulley-wheel. The frame is also provided with an arched brace, N, extending over the pulley-wheel and serving to prevent the hoisting rope or chain from slipping off the same. A suspending-hook, O, may be suitably attached to the arched brace.

The operation and advantages of this invention will be readily understood. The bearings for the hoisting-wheel are formed by the four supporting-wheels G G, which, being of a considerable diameter, will permit the said hoisting-wheel to revolve with the least amount of friction. Displacement of the hoisting-wheel is practically impossible, even if the use of the brace M should be dispensed with, because the entire weight of the hoisting-wheel and the load carried by the same is supported upon the bearings formed by the intersecting edges of the supporting-wheels.

I wish to have it understood that I do not limit myself to the precise construction and arrangement of parts herein shown and de-

scribed, inasmuch as numerous modifications might be resorted to without departing from the spirit of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In anti-friction devices, the combination, with a frame, of two pairs or sets of supporting-wheels mounted in the said frame, and having intersecting or overlapping edges, forming bearings for the shaft of a pulley or hoisting-wheel, substantially as set forth.

2. In an anti-friction device, the combination, with a slotted frame, of the supporting-wheels mounted in the same in such a manner as to overlap each other, as described, the said supporting-wheels being provided with hubs or bosses projecting on one side so as to keep the said wheels properly spaced, substantially as set forth.

3. In an anti-friction device, the combination, with a frame having a central longitudinal slot and side slots parallel to the same, of supporting-wheels journaled in the said side slots, and having overlapping edges, and forming bearings for the shaft of a hoisting wheel or pulley revolving in the center slot of the frame, substantially as set forth.

4. The combination of a longitudinally-slotted frame having an arched brace or guard with the supporting-pulleys journaled in the sides of the said frame, and having overlapping edges, and a hoisting wheel or pulley

journaled centrally in the frame, and having a shank or axle revolving upon the upper overlapping edges of the supporting-wheels, substantially as set forth. 35

5. In an anti-friction device in which the bearings are formed by the upper overlapping edges of two sets of supporting-wheels, suitable devices, substantially as herein described, for keeping the said supporting-wheels of each set a suitable distance apart, so as to prevent any possibility of frictional contact between the same, as and for the purpose set forth. 40 45

6. The herein-described improved anti-friction device, comprising a horizontal frame having longitudinal parallel slots, supporting-wheels mounted in the side slots, and having overlapping edges, a hoisting wheel or pulley having a central shaft, whereby it is mounted upon the upper edges of the said supporting-wheels, an arched brace or guard connected to the ends of the frame and covering the hoisting-wheel, and guards or braces so arranged as to prevent the axle of the hoisting-wheel from being displaced from its bearings, substantially as and for the purpose set forth. 50 55

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses. 60

JOHN C. TAYLOR.

Witnesses:

V. B. SHUMAKER,
J. T. WILLIAMS.