(No Model.)

H. W. HILL.

SELF OILING JOURNAL BOX.

No. 453,836. Patented June 9, 1891.

Fig 1.

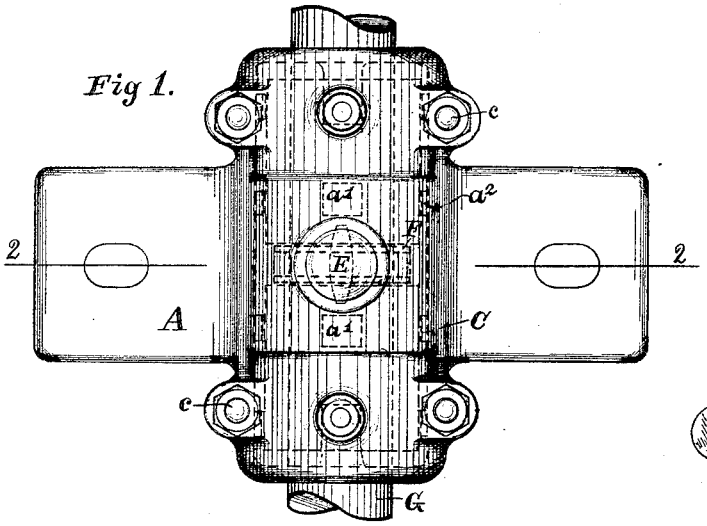

Fig 4.

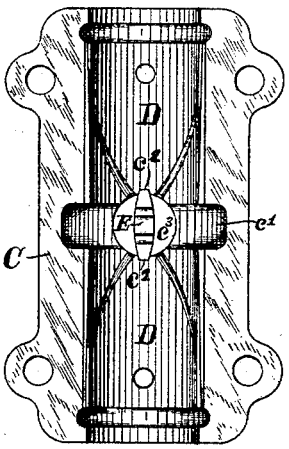

Fig 2.

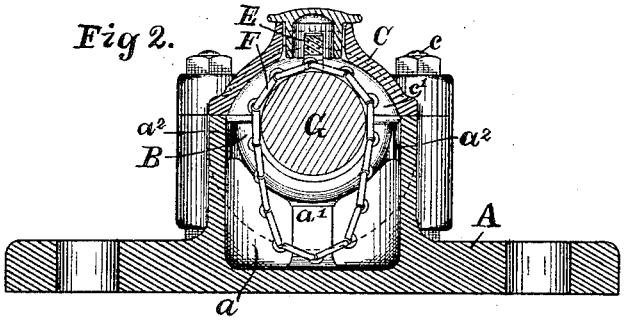

Fig 3.

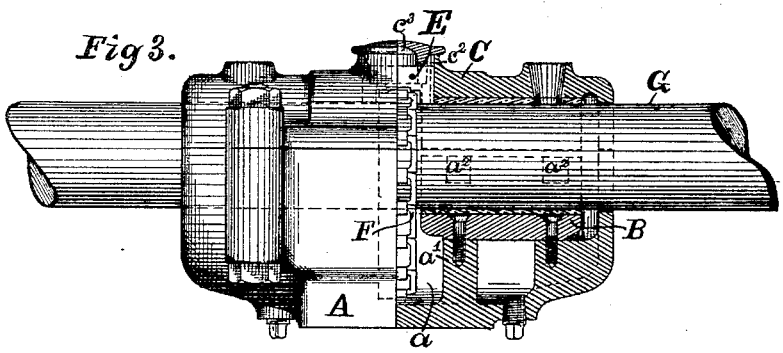

Fig 5.

WITNESSES.

Frank. Miller.

Albert H. Bates.

INVENTOR.

Harry W. Hill

By his attorney

E. L. Thurston

UNITED STATES PATENT OFFICE.

HARRY W. HILL, OF CLEVELAND, OHIO.

SELF-OILING JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 453,836, dated June 9, 1891.

Application filed March 2, 1891. Serial No. 383,345. (No model.)

To all whom it may concern:

Be it known that I, HARRY W. HILL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Self-Oiling Journal-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of my improved journal-box. Fig. 2 is a sectional view on the line 2 2. Fig. 3 is a side elevation, one-half being in longitudinal section. Fig. 4 is an inside view of the cap, and Fig. 5 is a detached view of the wiper.

The object of my invention is to provide an efficient self-oiling journal-box; and it consists in the construction and combination of the parts hereinafter described, and pointed out in the claims.

Referring now to the parts by letters, A represents the base, which is hollowed out, thereby forming an oil-chamber *a*. Projecting from the bottom of the oil-chamber *a* are the studs a' a', and from the side walls of the oil-chamber are the lugs a^2 a^2. Two pillows or brasses B B are supported on the studs a' a', and their sides rest against the lugs a^2 a^2, whereby spaces or passages are left between the side walls of the oil-chamber and the pillows B B. The top edges of the pillows are below the meeting edges of the base and the cap C. The oil which flows from the shaft out over the top edges of the pillows will not be forced outside of the box between the meeting edges of the base and cap, but, on the contrary, will flow downward between the pillows and side walls of the chamber into the main body of oil in said chamber. The proximate ends of the pillows B B are separated, as shown, and for the purpose hereinafter described.

C represents the cap, which is secured to the base by the bolts *c c* or other equivalent means. The cap is provided with a transverse groove c'. Two brasses D D, made preferably of Babbitt metal, are secured in said cap and their proximate ends extend to the edges of the groove c', as shown. The groove in the cap C, together with the space between the pillows B B, forms an annular space around the shaft, within which the chain belt F moves. The cap C has an orifice c^3 directly above this annular space and the sides of the orifice are provided with the vertical grooves c^2 c^2. A block E, preferably made of Babbitt metal, is held in said grooves c^2 c^2 and its lower edge rests upon the shaft G. The lower edge of the block E (which I term the "wiper") is notched above the chain belt F, whereby said wiper does not interfere with the movement of said chain belt.

The chain belt F is looped loosely around the shaft G and hangs down into the oil in the oil-chamber *a*.

The brasses D D in the cap C each contain two grooves, one of which begins on one side and the other on the other side of the wiper E, and said grooves extend diagonally in opposite directions.

The end walls of the casing formed by the base A and cap C, surround the shaft as closely as practicable without actual contact. The brasses B B and D D do not extend to said end walls, whereby at each end an annular groove is formed, down which the oil may run into the oil-chamber.

In operation, the shaft in revolving carries with it the chain belt F, and this belt lifts the oil from the oil-chamber and deposits it on the shaft. The wiper E, resting on the shaft, causes a considerable accumulation of oil in front of itself, and this oil, seeking an avenue of escape, passes into the diagonal grooves, which begin on the same side of the wiper. From these grooves the oil is distributed evenly over the shaft, thus keeping it constantly and thoroughly lubricated.

I find in examining the operation of the mechanism above described that comparatively very little of the oil flows into the diagonal grooves, which begin on the opposite side of the wiper, the reason being, as I believe, that since there is nothing which, like the wiper E, causes an accumulation of oil at the entrance to said grooves, the oil is carried on the shaft in the annular space above referred to.

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

1. The combination of the base A, contain-

ing an oil-chamber, the studs a' a' and lugs a^2 a^2, and two separated pillows supported on said studs and in contact with said lugs, with a transversely-grooved cap C, having the grooved brasses D D secured therein, a chain belt F, hanging loosely from said shaft down into the oil-chamber, and a wiper E, having a notched lower edge which rests upon said shaft, substantially as and for the purpose specified.

2. The combination of the base A, containing an oil-chamber, the studs a' a' and lugs a^2 a^2, and two separated pillows supported on said studs and in contact with said lugs, the upper edges of said pillows being below the meeting edges of the base and cap, with a cap C, having a transverse groove and a vertical opening above said groove, the wall of said opening having the vertical grooves c c, a wiper fitted in said grooves c c, having a notched lower edge which rests upon the shaft, two grooved brasses secured in said cap, one on each side of said transverse groove, and a chain belt hanging loosely from said shaft down into the oil-chamber, substantially as and for the purpose specified.

HARRY W. HILL.

Witnesses:
ALBERT H. BATES,
E. L. THURSTON.