No. 830,063. PATENTED SEPT. 4, 1906.

J. A. HALEY.

DUST GUARD FOR JOURNAL BOXES OR LUBRICATING RECEPTACLES.

APPLICATION FILED FEB. 23, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

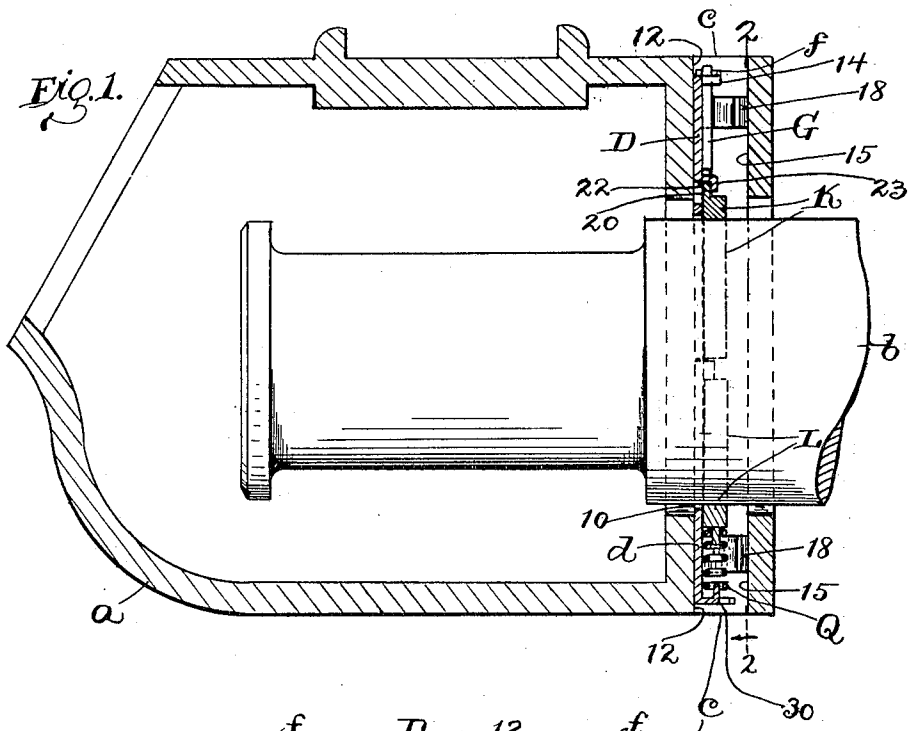
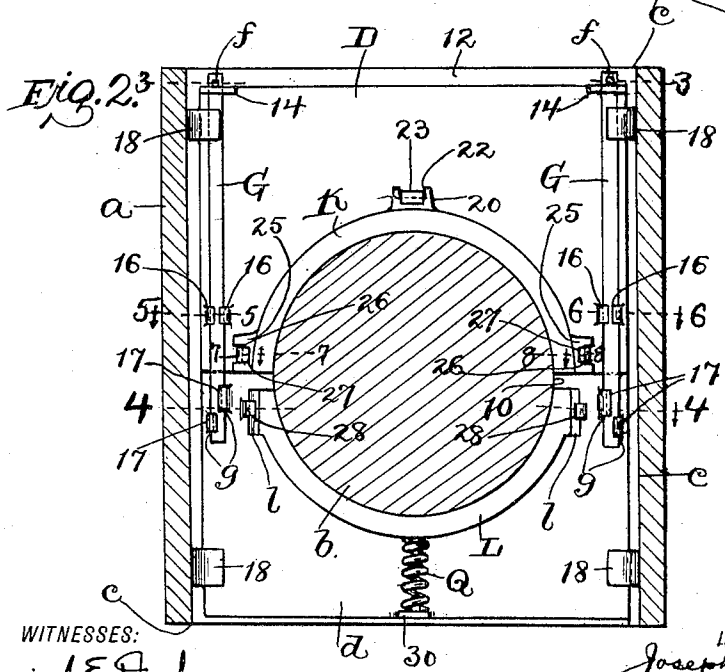


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

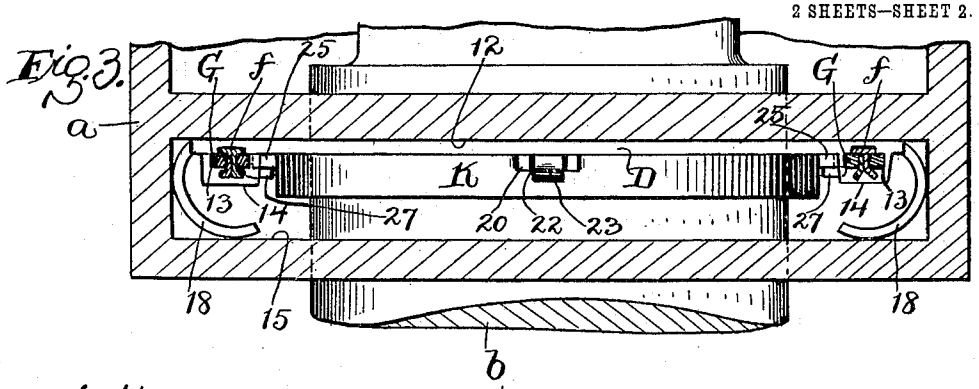


Fig. 4.

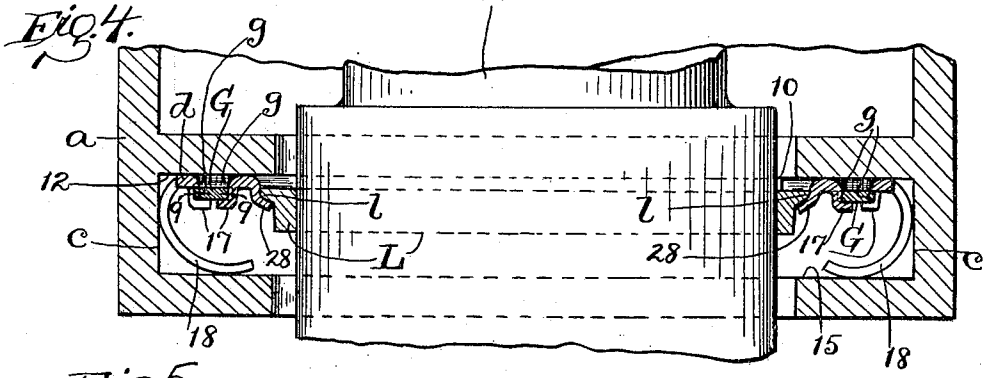


Fig. 5.

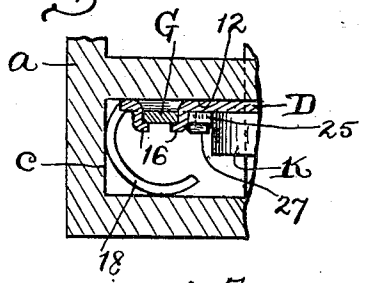


Fig. 6.

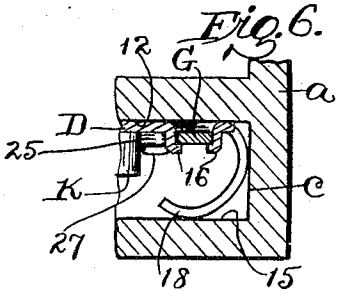


Fig. 7.

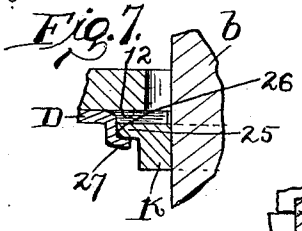


Fig. 8.

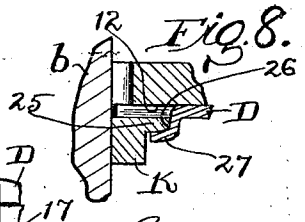
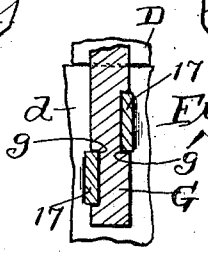


Fig. 9.



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DUST-GUARD FOR JOURNAL-BOXES OR LUBRICATING-RECEPTACLES.

No. 830,063. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed February 23, 1905. Serial No. 246,988.

To all whom it may concern:

Be it known that I, JOSEPH A. HALEY, a citizen of the United States of America, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Dust-Guards for Journal-Boxes or Lubricating-Receptacles; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to improvements in dust-guards for journal-boxes or lubricating-receptacles, and pertains more especially to an improved dust-guard having a body portion composed of two sections movable upwardly and downwardly, respectively, from within the journal box without necessitating the removal of the box from the axle.

This invention consists in certain meritorious features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, in central longitudinal section, of a journal-box provided with my improved dust-guard which is contained within the inner end of the box and extends around the axle which extends into the box. Fig. 2 is a vertical section on line 2 2, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a top plan in section on line 3 3, Fig. 2. Fig. 4 is a top plan in section on line 4 4, Fig. 2. Fig. 5 is a top plan in section on line 5 5, Fig. 2. Fig. 6 is a top plan in section on line 6 6, Fig. 2. Fig. 7 is a top plan in section on line 7 7, Fig. 2. Fig. 8 is a top plan in section on line 8 8, Fig. 2. Fig. 9 is a top plan in section on line 9 9, Fig. 4. Figs. 3, 4, 5, 6, 7, 8, and 9 are drawn on a larger scale than Figs. 1 and 2.

Referring to Figs. 1, 2, 3, and 4 of the drawings, *a* indicates a journal-box, and *b* an axle which extends into the box in the usual manner. The box is provided within its inner end with a quadrangular chamber *c*, which extends around the axle and is occupied by a correspondingly-shaped dust-guard, which has a body portion comprising, preferably, an upper section D and a lower section *d* and is provided with a centrally-located axle-accommodating circular opening 10, formed one half in the lower portion of the upper section D and the other half in the upper portion of the lower section *d*. The sections D and *d* therefore embrace the upper portion and lower portion, respectively, of the axle *b* and meet each other at their adjacent ends at the sides of the axle centrally between the top and bottom of the axle. The sections D and *d* are preferably each composed of a sheet-metal plate. The forward or outer side wall 12 of the chamber *c* is smooth and the forward or outer side or face of the body portion (sections D and *d*) of the dust-guard is correspondingly smooth, so that when the said body portion is held against the said wall a dust-tight joint is formed between the said wall and the body portion of the dust-guard. The chamber *c* is open at the top to accommodate the introduction thereinto of the upper section D of the body portion of the dust-guard. The chamber *c* is open at the bottom of the journal-box to accommodate the introduction into the said chamber of the lower section *d* of the body portion of the dust-guard. It will be observed, therefore, that the body portion of the dust-guard is assembled relative to the axle by inserting the upper section and lower section, respectively, of the said body portion at the upper end and lower end, respectively, of the chamber *c*. The two sections D and *d* when they have been assembled relative to the axle are detachably secured together. The means preferably employed for separably connecting the sections D and *d* together comprises two upright metal bars G, arranged next to the rear side of the body portion of the dust-guard at opposite sides, respectively, of the axle-accommodating opening 10. The two bars G are arranged vertically and extend through correspondingly-arranged holes 13, (see Fig. 3,) formed in and extending through horizontally-arranged lugs or flanges 14, with which the upper dust-guard section D is provided at its upper end, and cotter-pins *f* extend through the said bars next above the lugs or flanges 14.

The section D is provided a suitable distance above its lower end and adjacent to each bar G with two lugs 16, which project from the said section D at opposite side edges, respectively, of the bar and overlap that side of the said bar which faces the rear wall 15 of the chamber *c*—that is, two lugs 16 are formed upon the section D adjacent each bar G and project from the said section at one side of the bar and form guides for the bar at opposite side edges, respectively, of the bar

and project toward each other at and overlap the opposite side of the bar. The said lugs are instrumental in guiding the said bar during the assemblage of the parts and prevent displacement of the said bar toward the rear side wall 15 of the chamber *c*.

Each bar G is provided near its lower end with two recesses *g*, formed in opposite side edges, respectively, of the bar, which recesses are engaged (see Figs. 2, 4, and 9) by laterally-flexible lugs 17, formed in and projecting rearwardly from the lower section *d* of the body portion of the dust-guard, which lugs also overlap that side of the said bar which faces the rear side wall 15 of the chamber *c*—that is, two lugs 17 are formed upon the section *d* adjacent each bar G and project from the said section at one side of the bar and snugly engage recesses *g* and *g*, formed in opposite side edges, respectively, of the bar and project toward each other at and overlap the opposite side of the bar.

By the construction and assemblage of parts hereinbefore described it will be observed that the bars G are suspended and detachable from the upper end of the upper section D of the body portion of the dust-guard and detachably secured at their lower ends to the lower section *d* of the said body portion. The two sections D and *d* are therefore detachably connected together and obviously are free to be separated from each other by withdrawing the cotter-pins *f* from the bars G.

The sections D and *d* are each provided with two springs 18, which project from opposite side edges, respectively, of the respective sections and curve toward and into contact with the rear wall 15 of the chamber *c*. The springs 18 are held under tension by the said wall 15 and act to retain the connected sections of the body portion of the dust-guard in engagement with the wall 12. The springs 18 operate, therefore, to maintain the dust-guard in contact with the forward wall 12 of the chamber *c*. The opposing surfaces of the body portion of the dust-guard and the wall 12 are smooth, and consequently the holding of the sections D and *d* in contact with the said wall insures the maintenance of a dust-tight joint between the said wall and the body portion of the dust-guard. The upper section D of the body portion of the dust-guard is provided at its rear side with an annular metal section or bearing-piece K, extending circumferentially of the upper portion of the opening 10 and affording bearing to the upper portion of the axle *b*. The bearing-piece K is detachably secured to the section D, and preferably the said member K is provided at the top and centrally with an upwardly-projecting lug 20, which is provided with a slot or recess 22, engaged, as shown in Figs. 1, 2, and 3, by a flexible lip 23, formed on the section D. The lip 23 projects from the section D at one side of the lug 20 through the recess 22 of the said lug and overlaps the opposite side of the said lug.

The bearing-piece K (see Figs. 2, 7, and 8) is provided also with two laterally and outwardly projecting lugs 25, arranged at opposite ends, respectively, of the said bearing-piece. Each lug 25 is provided centrally with a slot or recess 26, which is engaged by a laterally-flexible lip 27, formed on the section D. The lip 27 projects from the section D at one side of the lug 25 of the bearing-piece K through the recess 26 of the said lug and overlaps the opposite side of the said lug. The bearing-piece K can therefore be readily detached by bending the lugs 25 to render the said bearing-piece free to be removed.

An annular bearing-affording jaw L (see Figs. 1, 2, and 4) embraces the lower portion of the axle *b* and is shiftable vertically. The jaw L extends circumferentially of the lower portion of the axle-accommodating opening 10 and overlaps the rear side of the section *d* along the said opening. The jaw L is provided with two vertical side edges *l*, formed at the opposite ends, respectively, of the jaw, which edges are overlapped by guide-forming lugs 28, formed on and projecting from the lower section *d* of the body portion of the dust-guard. The lugs 28 and edges *l* are instrumental in guiding the jaw L, which is held in contact with the axle by a suitably-applied spiral spring Q, arranged centrally between the ends of and below the jaw and confined between the jaw and a lug 30, formed on and projecting rearwardly from the lower end of the section *d*. It will be observed, therefore, that the spring Q operates not only to retain the jaw L in contact with the axle, but acts also to depress the dust-guard and take up wear between the bearing-piece K and the axle.

What I claim is—

1. A dust-guard of the character indicated having a body portion which comprises an upper metal section and a lower metal section and provided with an axle-accommodating opening formed in the adjacent portions of the said sections; there being springs formed on the side edges of the said sections and arranged at the rear sides of the said sections; and two bars suspended from and at the rear side of the upper section at opposite sides respectively of the axle-accommodating opening and overlapping the rear side of the lower section, said bars being detachable from the upper section and having recesses formed in their side edges between the lower ends of the bars and the upper end of the lower section, and the latter having lips engaging the aforesaid recesses and overlapping the rear sides of the bars.

2. A dust-guard of the character indicated having a body portion which comprises an upper section and a lower section suspended

from but rigidly held to the upper section and detachable from the latter, with the said sections provided with an axle-accommodating opening formed in the adjacent portions of the said sections, and springs projecting from the side edges of and formed on and integral with the said sections, said springs being arranged at the rear sides of the said sections.

3. A dust-guard of the character indicated having a body portion which comprises an upper section and a lower section and provided with an axle-accommodating opening formed in the adjacent portions of the said sections, and means instrumental in rigidly holding both sections together and comprising two bars detachably connected to the upper section at opposite sides respectively of the axle-accommodating opening and overlapping and rigidly attached to the lower section.

4. A dust-guard of the character indicated having a body portion which comprises an upper section and a lower section and provided with an axle-accommodating opening formed in the adjacent portions of the said sections; and two bars suspended from and at the rear sides of the upper section at opposite sides respectively of the axle-accommodating opening and overlapping the rear side of the lower section, said bars being detachable from the upper section and having slots or recesses formed in their side edges between the lower ends of the bars and the upper end of the lower section, and the lower section having lips engaging the aforesaid slots or recesses.

5. A dust-guard of the character indicated having a body portion comprising an upper metal section and a lower metal section, with the upper section provided at the upper end with laterally-projecting lugs or members; bars extending vertically through the said lugs or projecting members and overlapping the lower section and provided each at the adjacent side of the lower section with two recesses formed in opposite side edges respectively of the respective bar; and cotter-pins extending through the bars next above the aforesaid lugs or projecting members; there being lugs formed on the upper section at both side edges of the bars and arranged to prevent displacement of the bars laterally from the upper section, and there being lips formed on the lower section and engaging the aforesaid recesses.

6. A dust-guard of the character indicated having a body portion comprising an upper metal section and a lower metal section; bars suspended from the upper section and overlapping the lower section and provided each at the adjacent side of the lower section with two recesses formed in opposite side edges respectively of the respective bar; there being lugs formed on the upper section at both side edges of the bars and overlapping the rear side of the bars, and there being lips formed on the lower section and engaging the aforesaid recesses.

7. A dust-guard of the character indicated having a body portion comprising an upper section and a lower metal section; bars suspended from the upper section and overlapping the lower section and provided each at the adjacent side of the lower section with a slot or recess, and there being lips formed on the lower section and engaging the slots or recesses in the bars.

8. A dust-guard of the character indicated having a body portion provided centrally with a circular opening and comprising an upper section and a lower section, with the said opening formed one half in one section and the other half in the other section; means for separately attaching both sections together; and a semi-annular bearing-piece extending circumferentially of the upper half of the aforesaid opening at the rear side of the upper section and provided with an upwardly-projecting lug at the top and having two laterally and outwardly projecting lugs arranged at opposite ends respectively of the said bearing-piece, said lugs being slotted or recessed centrally, there being lips formed on and projecting from the upper section through the slots or recesses in the lugs and bent over the rear sides of the lugs.

9. A dust-guard of the character indicated having a body portion provided centrally with a circular opening; and a semi-annular bearing-piece extending circumferentially of the upper half of the said opening at one side of the body portion of the dust-guard and provided with slotted or recessed lugs, there being lips formed on and projecting from the body portion of the dust-guard and projecting from the said body portion at one side of the lugs through the slots or recesses in the lugs and overlapping the lugs at their opposite side.

10. A dust-guard of the character indicated having a body portion provided centrally with a circular opening; and a semi-annular bearing-piece extending circumferentially of the upper half of the said opening at one side of the body portion of the dust-guard and provided with an upwardly-projecting lug at the top and having two laterally and outwardly projecting lugs arranged at opposite ends respectively of the said bearing-piece, said lugs being slotted or recessed centrally, there being lips formed on and projecting from the body portion of the dust-guard and engaging the slots or recesses in the aforesaid lugs.

11. A dust-guard of the character indi-

cated having a body portion provided centrally with a circular opening and comprising upper and lower sections held together, with the said opening formed one half in one section and the other half in the other section; a semi-annular bearing-affording jaw extending circumferentially of the lower half of the aforesaid opening at one side of the lower section, said jaw having two vertically-arranged external side edges formed upon opposite ends respectively of the jaw, there being a lug formed upon the lower section of the body portion of the dust-guard centrally below the jaw; and a spiral spring confined between the said lug and the jaw, there being lugs formed on the lower section of the body portion of the dust-guard and engaging the aforesaid edges of the jaw.

12. A dust-guard of the character indicated having a body portion provided centrally with a circular opening; a semi-annular bearing-affording jaw extending circumferentially of the lower half of the aforesaid opening and overlapping the rear side of the body portion of the dust-guard along the said opening, said jaw having two vertically-arranged external side edges formed upon opposite ends respectively of the jaw; there being a lug formed upon the body portion of the dust-guard centrally below the jaw; and a spiral spring confined between the said lug and the jaw, there being lugs formed on the body portion of the dust-guard and engaging the aforesaid edges of the jaw.

13. The combination, with a journal-box, and the axle extending into the box, the box being provided, in its inner end, with a dust-guard-receiving chamber extending around the axle, which chamber is open at the top and bottom, of a dust-guard contained within the said chamber and having a body portion comprising an upper section and a lower section separably secured together and removable when detached from each other upwardly and downwardly respectively from the chamber; springs formed on the side edges of the aforesaid sections and held under tension by the rear wall of the chamber and thereby caused to be instrumental in retaining the body portion of the dust-guard in contact with the forward wall of the chamber; a jaw embracing and conforming to the lower portion of the axle and shiftable vertically; means for guiding the said jaw, and means supported from the lower section of the body portion of the dust-guard and acting to retain the jaw in contact with the axle.

In testimony whereof I sign the foregoing specification in the presence of two witnesses.

JOSEPH A. HALEY.

Witnesses:
C. H. DORER,
B. C. BROWN.