No. 692,284. Patented Feb. 4, 1902.

F. B. HARRISON.

DUST GUARD FOR JOURNAL BOXES.

(Application filed May 9, 1901.)

(No Model.)

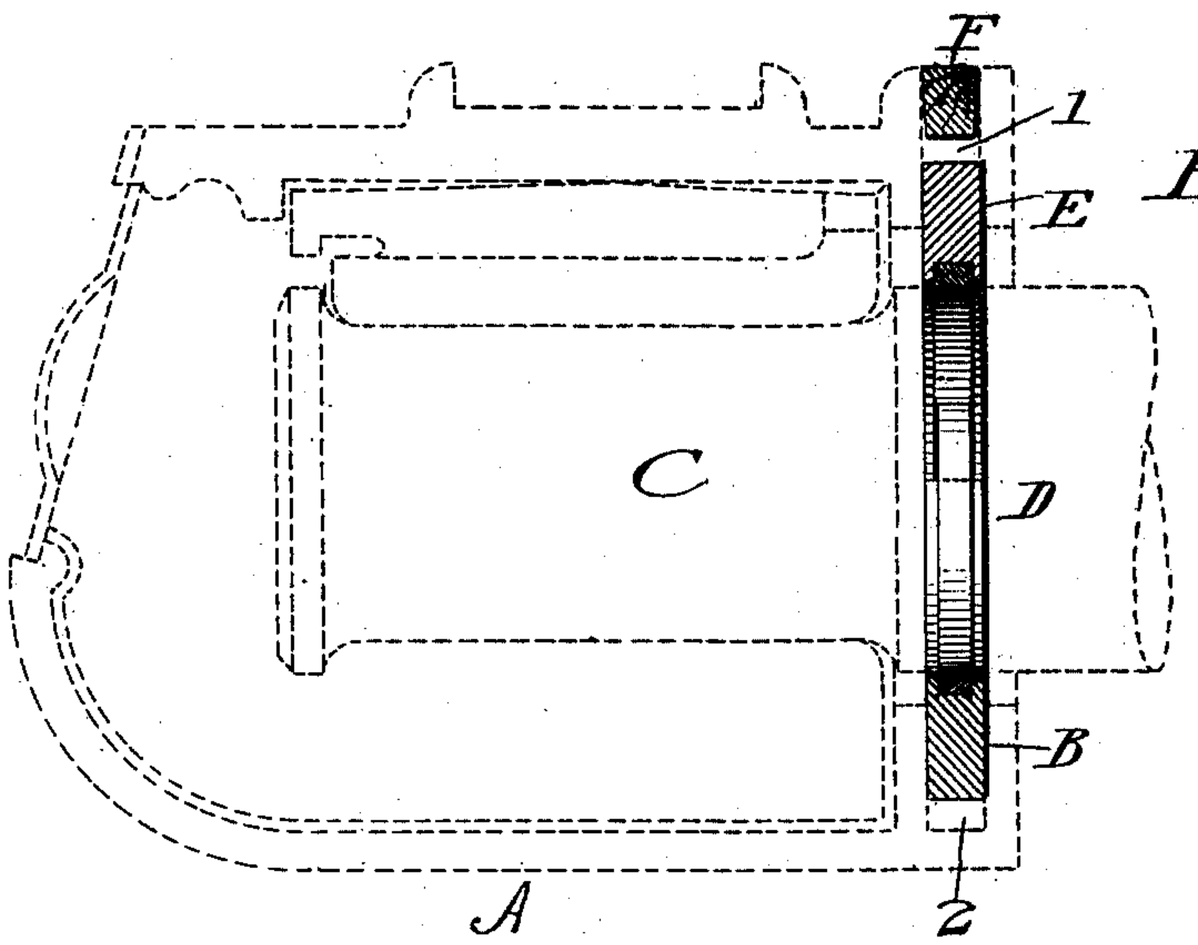

Fig. 1.

Fig. 2.

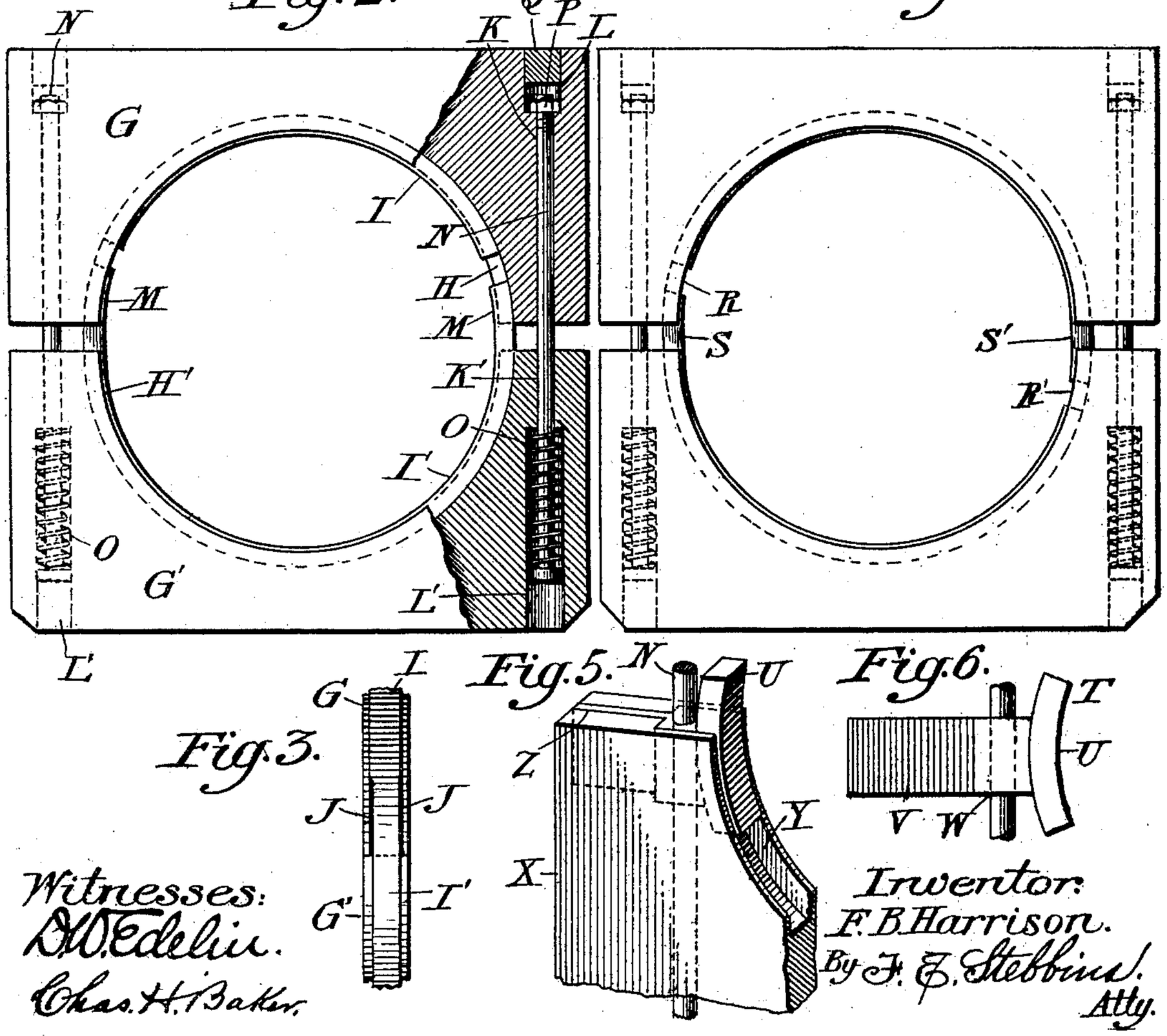

Fig. 4.

Fig. 3.

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

FRANK B. HARRISON, OF TOLEDO, OHIO.

DUST-GUARD FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 692,284, dated February 4, 1902.

Application filed May 9, 1901. Serial No. 59,429. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. HARRISON, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented new and useful Improvements in Dust-Guards for Journal-Boxes, of which the following is a specification.

The object of this invention is the production of a dust-guard for journal-boxes which shall in particular embrace improvements upon the dust-guard patented to me January 26, 1892, No. 467,719, and which shall correct numerous relative imperfections of construction appertaining thereunto, although said improvements or certain of them may be embodied in other and analogous types or species of dust-guards.

My invention consists in forming chambers within one or both of the sections of the frame of the guard and locating the springs which hold the sections together within said chambers, so that there shall not be any projections outside the frame or sections and whereby the springs will be protected from dust and dirt, which might interfere with their action.

Further, it consists in arranging the extended ends of the packing relative to the grooves in such a manner as to prevent any binding and to insure a close joint under all conditions.

Finally, it consists in certain novelties of construction and combinations of parts hereinafter set forth and claimed.

The accompanying drawings illustrate one example of the frame of the dust-guard proper and three examples of the arrangement of the packing, the same being physical embodiments of my improvements constructed according to the best modes I have so far devised for the application of the principles.

Figure 1 shows in dotted lines a journal-box with my improved guard located within the dust-guard chamber and shown in full lines. Fig. 2 illustrates the dust-guard as a whole with the sections of the frame slightly separated and parts broken away to show the internal construction. Fig. 3 illustrates a detail of the packing and groove. Fig. 4 shows a modified arrangement of the extended ends of the packing-strip. Figs. 5 and 6 show a third form of means for closing the space between the sections of the frame.

Referring to Figs. 1, 2, and 3, the letter A designates the journal-box; B, the dust-guard chamber; C, the axle-journal; D, the dust-guard bearing of the axle; E, the dust-guard as a whole, located within and frictionally engaging the walls of the dust-guard chamber; F, a wedge closing the opening to the dust-guard chamber; G, the upper section of the dust-guard frame, the said frame being divided on a horizontal line into two parts; H, a semicircular groove; I, a packing of leather or other suitable material immovably fixed within the groove and slightly projecting therefrom; K, perpendicular holes through the section each side of the opening for the axle; L, enlarged portions of the holes, forming chambers; G′, the lower section of the frame; H′, a semicircular groove; I′, packing fixed immovably within the groove and projecting therefrom; M, the extended ends of the packing I′, which serve to close the spaces between the two sections of the frame when the two parts are slightly separated; J, open spaces each side of the ends M and within the groove of the upper section of the frame, whereby the said ends can easily move within the groove without binding or becoming distorted; K′, perpendicular holes or perforations in line with the holes through the upper sections of the frame; L′, enlarged portions of the holes, forming chambers; N, two headed bolts located within the perforations and chambers; O, spiral springs located within the chambers of the lower section, surrounding the bolts, and each bearing at one end against a bolt-head and at the other end against the bottom wall of a chamber, as shown; P, nuts on the bolts, and Q plugs closing the opening to the chambers in the top section.

Referring to Fig. 4, the letters S S′ designate the projecting ends of the packings of the upper and lower sections of the frame. In this example one end of the packing in the upper groove projects downwardly into the groove of the lower section, and one end of the packing in the lower groove extends upwardly into the groove in the upper section, the object being to close the space between the sections when slightly separated, as in the first example.

In Figs. 5 and 6 a third method of closing

the spaces between the upper and lower sections is illustrated. The letter T designates a shoe; U, a packing; V, a tongue; X, the lower section of the frame; Y, a groove for the packing; Z, a groove within the frame for the tongue, and N is a section of a bolt.

The method of assembling the several parts in each of the three examples and the adjusting of the frame within the chamber of the journal-box is obvious from the drawings and need not be set forth.

From the foregoing it becomes clear that I have produced a dust-guard which fulfils all the conditions set forth as the object and end of my invention. The springs being located within the chambers are protected from dust and dirt, and their action is not interfered with in any way. There are no projections of springs or bolts outside the sections of the frame which would prevent the free movement of the guard within the chamber of the journal-box. When the wedge F is inserted, spaces 1 and 2 are left above and below the box by reason of the compact construction of the frame, and the relative arrangement of the packing-strips and grooves insures free movement and the permanent closing of the spaces between the sections.

While I have specifically illustrated only three examples of the physical embodiment of my invention, I do not thereby intend to exclude other examples from the scope thereof which involve merely colorable alterations and modifications or changes in location, as the entire invention or segregable parts may be appropriated and embodied in such a way as not to constitute a substantial departure.

What I claim as new, and desire to secure by Letters Patent, is—

1. A dust-guard frame made in two sections; each section having holes, K and K′, and one of said holes being increased in diameter to form a chamber for the reception of a spring; rods located in the holes, K K′; springs located in the chambers and surrounding the bolts and each spring bearing at one end against the bottom of a chamber and at the other end against a bolt head or nut; and means for regulating the compression of the springs.

2. A dust-guard frame made in two sections and each section cut away or fashioned to embrace the dust-guard bearing of an axle; one of said sections having a hole, K, and the other section a hole, K′, and a chamber, L′; a rod in holes, K K′, and a spring, O, within the chamber and surrounding the bolt; and means located at the opposite side of the opening for the journal which unite the sections and hold them in alinement.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK B. HARRISON.

Witnesses:

F. C. HARRISON,

F. M. DOTSON.