

(No Model.)

3 Sheets—Sheet 1.

J. J. BUSENBENZ.
DUST GUARD FOR JOURNAL BOXES.

No. 504,197.

Patented Aug. 29, 1893.

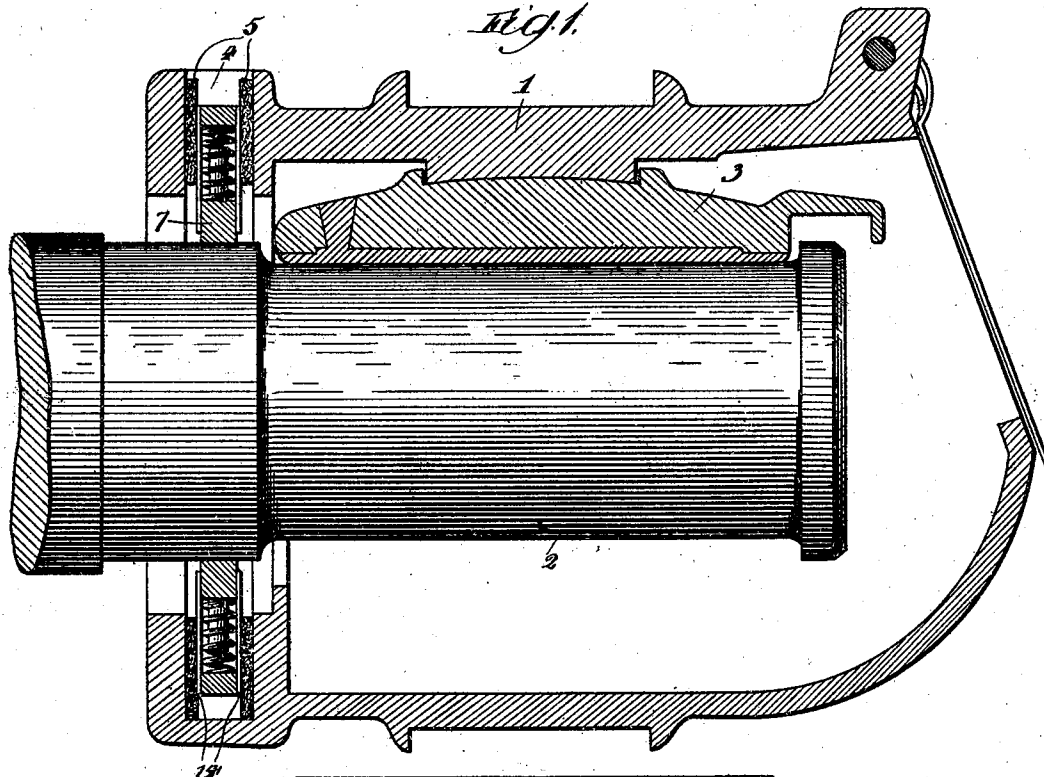
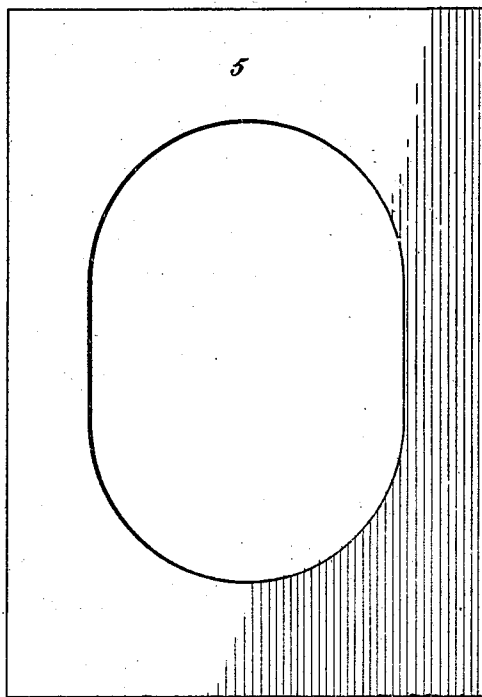


Fig. 2.



Witnesses:

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(No Model.)

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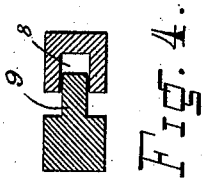


FIG. 4.

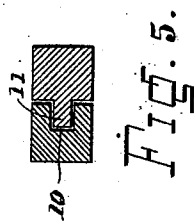


FIG. 5.

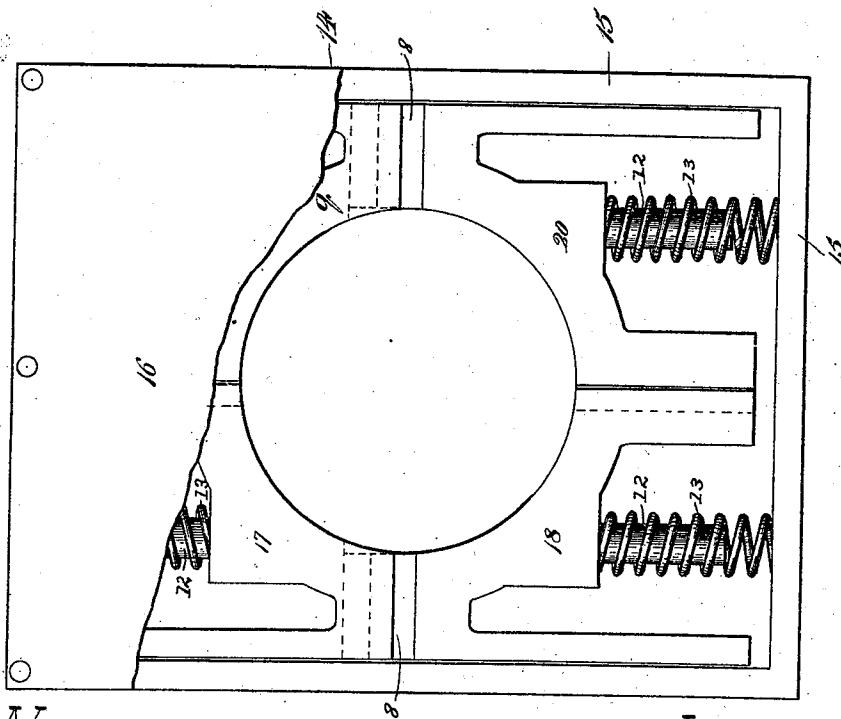


FIG. 3.

WITNESSES:

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INVENTOR:

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By *Dyckman & Dyckman*
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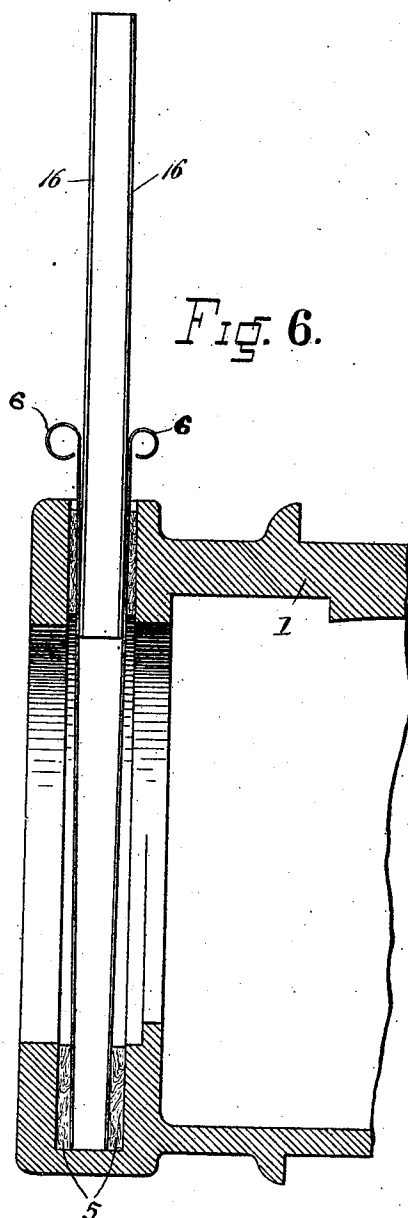
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Patented Aug. 29, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB J. BUSENBENZ, OF ROCK ISLAND, ILLINOIS.

DUST-GUARD FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 504,197, dated August 29, 1893.

Application filed December 8, 1892. Serial No. 454,528. (No model.)

To all whom it may concern:

Be it known that I, JACOB J. BUSENBENZ, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Improvement in Dust-Guards for Journal-Boxes, of which the following is a specification.

My invention relates to a dust guard for a journal box, and is more particularly directed to an improvement in dust guards for the rear of the box where there is usually provided a dust guard slot.

My invention is in the nature of an improvement upon the invention for which I applied for Letters Patent November 8, 1892, Serial No. 451,287.

The object of my invention is to produce a dust guard for the rear of the journal box which shall operate to prevent the access of dust notwithstanding the tendency of the journal to wear upon the walls of the dust guard if in contact therewith.

A further object of my invention is to improve the mode of introducing or applying the dust guard whereby a more efficient protection is obtained without material increase in parts.

A further object of my invention is to improve the method of introducing into the journal box a dust guard involving my improved construction, in this particular presenting an improvement over the method set forth in my above entitled pending application.

To these ends my invention consists primarily in a dust guard for journal boxes comprising a hollow rectangular frame adapted to fit in a proper cavity formed in the journal box, and presenting an opening of a dimension to receive the journal and permit independent movement with relation thereto, said box carrying a facing of felt or other suitable material for the usual purpose.

My invention consists further in a journal box provided toward its inner end with a cavity, the opposite walls of which receive a facing or lining of felt or similar material, within which cavity and between the felt faces of which is introduced a rectangular hollow frame, having a central aperture larger than the diameter of the journal, within which frame are placed opposite spring-controlled engaging rings, which engage the circumfer-

ential surface of the journal, and remain in engagement notwithstanding wear upon them.

My invention consists further in the general and specific details of construction and arrangement of parts and in the method of introducing the hollow rectangular box into the journal box, all as hereinafter more fully described.

In the drawings—Figure 1 is a longitudinal central section of a journal box showing my invention in use therein. Fig. 2 is an illustrative view in elevation of the felt lining or facing which is used with my invention. Fig. 3 is a view in front elevation partly broken away to show the interior structure of the hollow rectangular box employed with my invention. Figs. 4 and 5 are sectional detail views showing the mode of making the joints between various parts of the structure; and Fig. 6 is a diagrammatic illustration of the mode which I prefer to employ for introducing into the dust guard cavity the hollow rectangular box described.

In these figures, 1 is the journal box provided at its forward end with the usual door, and receiving the journal 2 and brasses 3. At a point in the rear of the journal box a cavity 4 is formed, having the slot-opening usually provided to permit the dust guard to be introduced into the cavity. This cavity and slot are usually supplied in journal boxes, and with my invention do not require to be changed. The walls of the cavity, by reason of the mode of manufacture, are, however, usually rough and uneven, and it is one of the features of my invention that the roughness or unevenness of the walls of the dust guard cavity is compensated for by the method of applying and introducing the dust guard. The dust guard comprises facings or linings 5, preferably of felt, each of which facings is made in the form illustrated in Fig. 2, viz: having a central aperture longer vertically than horizontally, and having a rectangular external outline to cause it to correspond closely with the conformation of the cavity 4. The felt facings 5 are caused to retain their position by the engagement of the internal hollow rectangular box 14, as follows:

A frame 15 made of metal, wood or other suitable material, and having a dimension to said pivot, a carriage C resting on the bed

fit easily within the dust guard cavity between the felt facings thereof, is provided on each face with a plate 16, firmly riveted thereto, said plates with the frame 15 forming the box 14, hereinbefore mentioned. Within the box is introduced the packing 7, in the form of sections 17, 18, 19 and 20, each of which has a sector-arc to constitute a circumferential ring about the journal.

The joints between the various members of the packing are of two descriptions; the joints between the members 17 and 19 and the members 18 and 20 are in the form of a common shallow tongue and groove 11 and 10, as shown in Fig. 5, whereby the vertical motion of either, independent of the other, is possible; while the joint between the members 17 and 18, and 19 and 20, or the members on opposite sides of the horizontal central line is in the form of a deep tongue and groove 9 and 8, to allow movement of one member with relation to the other without danger of complete separation. The purpose of this provision between the members on opposite sides of the horizontal line is to provide for the wear in a vertical direction of the journal upon the packing. Each section of the packing is provided with the outer extending stud 12, encircling which is a spring 13, which bears at one end against the packing and at the other against the frame 15. The packing is cut away as indicated in Fig. 3 to save metal.

To introduce the dust guard involving my structure as herein shown into the journal box, I proceed as follows: Before introducing the journal into the box, there is placed against each wall of the cavity 4 a facing 5 of felt. It will be observed that this facing is of a dimension to extend substantially to the full dimension of the cavity, and at its lower end rests against the lower wall of the cavity. Thereupon is introduced into the casing a pair of plates 6 of thin metal, each of which

may be at its upper end provided with a loop, as shown in Fig. 6, to enable it to be readily withdrawn. The thin metal plates serve to present a smooth wall to the hollow box 14, which is thereupon introduced as indicated in Fig. 6, and when properly inserted the plates 6 are withdrawn. The resilience of the felt causes a tight joint to form between the walls of the cavity and the face plates 16 of the box 14; and the journal being thereupon introduced a close joint is formed between the box and the journal by the spring controlled packing 7. The elongated nature of the aperture in the felt facing and the readiness with which the box 7 may be moved up and down in contact therewith, permits the journal box to be jacked up for the removal of the bearings without difficulty, and this forms an important feature of advantage in my structure.

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

1. The combination with the journal box, having the dust guard cavity 4, of facings of felt or similar material 5, against each wall of the cavity, a box 14 introduced into said cavity between the facings, a packing comprising vertically and longitudinally separated sections having dovetailed joints one section with the other, each controlled by a spring and set within the box, all as set forth.

2. The method of introducing a dust guard into a journal box, which consists in first introducing facings of felt to lie against the walls of the cavity, thereupon introducing temporary plates, and thereupon introducing the packing carrying box between the said plates, and withdrawing the plates, all as set forth.

JACOB J. BUSENBENZ.

In presence of—

HARRY H. CLEAVELAND,
W. H. HAYES.

Correction in Letters Patent No. 504,197.

It is hereby certified that in Letters Patent No. 504,197, granted August 29, 1893, upon the application of Jacob J. Busenbenz, of Rock Island, Illinois, for an improvement in "Dust-Guards for Journal-Boxes," an error appears in the printed specification requiring correction, as follows: In line 104, page 1, the words and letter "said pivot, a carriage C resting on the bed," should be stricken out as they do not form a part of the specification filed by the patentee; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 7th day of November, A. D. 1893.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.