No. 629,762. Patented Aug. 1, 1899.

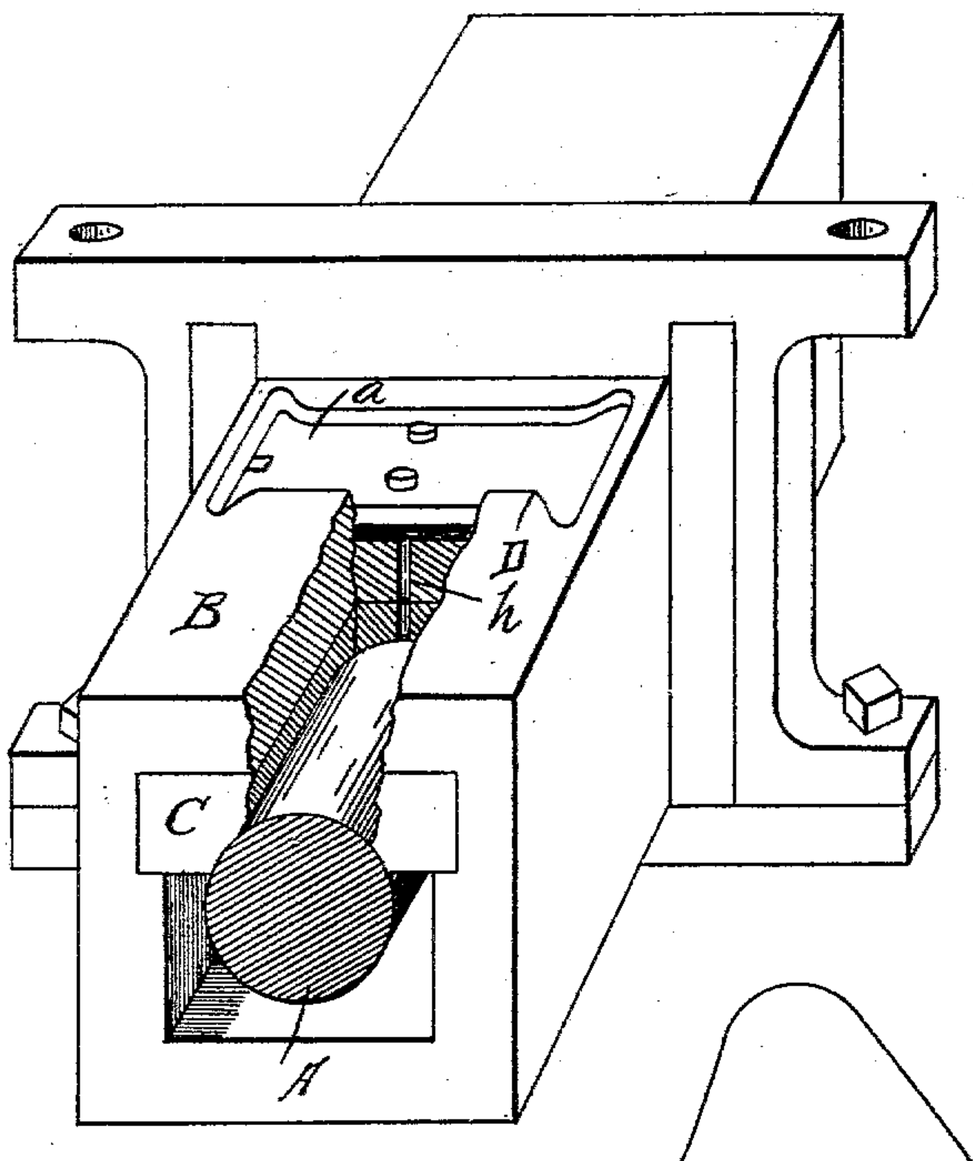
W. P. BENDING.

STRAINING PAD FOR JOURNAL BEARINGS.

(Application filed Feb. 19, 1898.)

(No Model.)

Fig. 1.



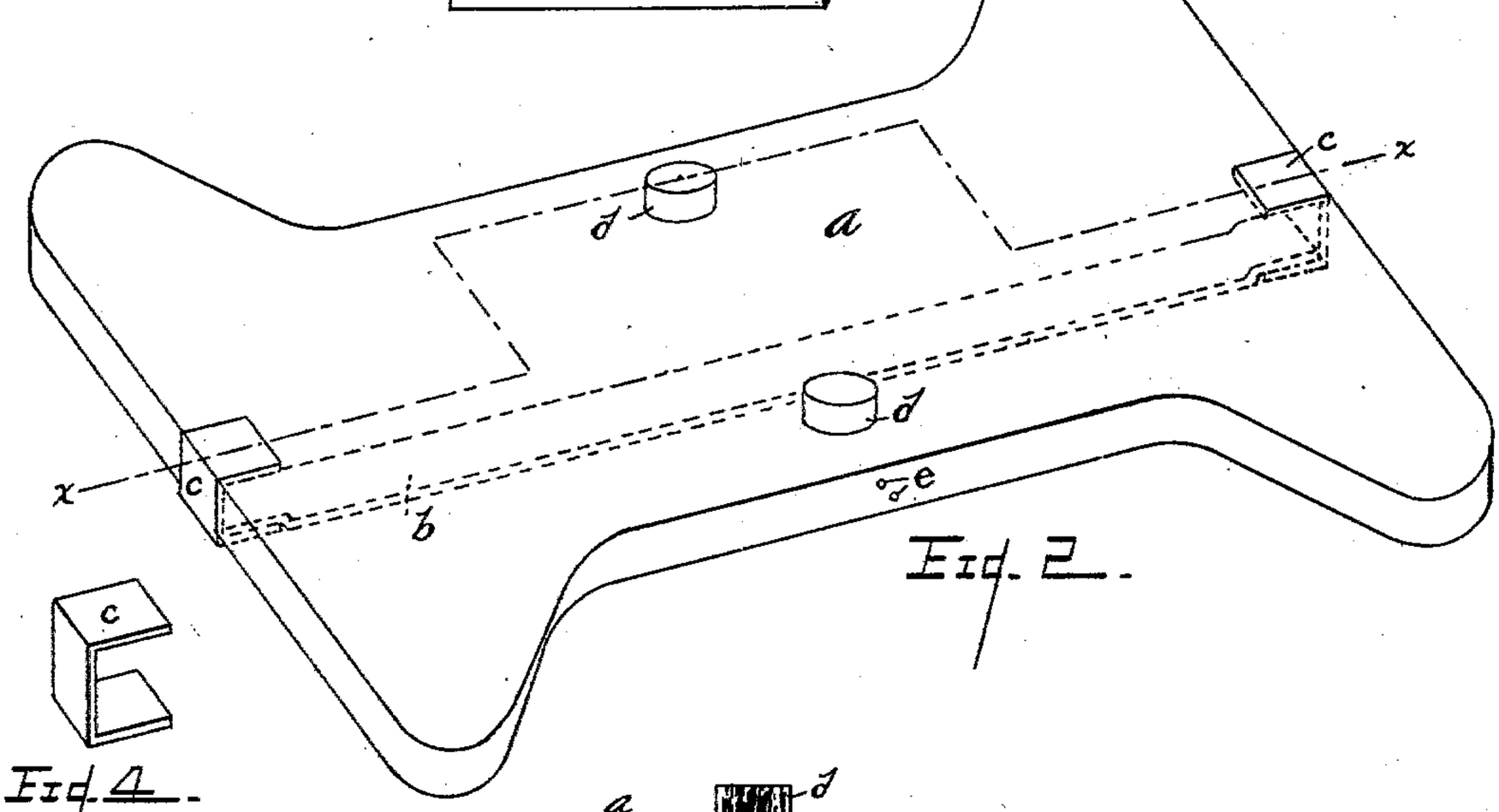


Fig. 2.

Fig. 4.

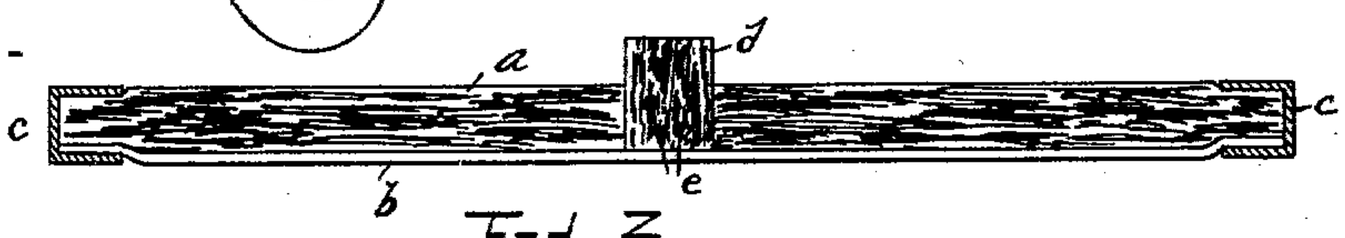


Fig. 3.

WITNESSES

Chas. Hiener

Mary Kott.

INVENTOR

William P. Bending

By Parker & Burton

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM P. BENDING, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO JOHN C. GOODRICH AND EDWARD I. STIMSON, OF DETROIT, MICHIGAN.

STRAINING-PAD FOR JOURNAL-BEARINGS.

SPECIFICATION forming part of Letters Patent No. 629,762, dated August 1, 1899.

Application filed February 19, 1898. Serial No. 670,919. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. BENDING, a citizen of the United States, residing at Cleveland, county of Cuyahoga, State of Ohio, have invented a certain new and useful Improvement in Straining-Pads for Journal-Bearings; and I 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, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to straining-pads for lubricants, and has for its object an improved straining-pad to be employed in the oil-receptacle above the journal-bearings of wheel-journals.

Usually there is above the journal of driving-wheels of locomotives, in the frame in which the brass is set, a cavity that is commonly filled with waste and the waste saturated with oil. The oil, escaping from the waste, runs through holes in the bottom of the cavity and through holes in the brasses to the journal; but this is both wasteful of oil and is not sufficiently perfect in the straining qualities of the mass of waste, and the dust and dirt which gather in the waste are in the course of time carried by the oil to the journal and serve to cut out and injure the journal. In place of the waste I employ a pad of felt that extends over the entire bottom of the cavity, fitting closely against the side walls of it, but which is arranged to be lifted at all times from the bottom wall, so that there is at the mouth of the oil-conducting passages nothing to produce capillary attraction and prevent free ingress of oil into the passages after the oil has once passed through the pad. The felt of which the pad is made is somewhat pervious to oil in any direction, but a strip of it cut of a width of the thickness of the pad is more pervious in the direction that would normally be lengthwise or crosswise of the fabric than it is in the direction directly through the fabric, and in order to utilize this feature I make through the fabric of the felt, which is cut from a piece so that it normally takes that position by which it will be least pervious to oil, several holes which are filled with pieces of the felt arranged so that the oil passes easily through them—that is, the small pieces which are inserted into the holes are arranged to present what were the edges of the piece, one upward and one downward, and the oil readily passes through these pieces and drops onto the bottom of the cavity and into the oil-conducting holes.

In the drawings, Figure 1 shows in perspective a portion of a journal and a portion of the journal-bearing, partly broken away. The cavity for the reception of the pad is shown, and the holes leading from the cavity through the bearing to the journal are shown. Fig. 2 is a perspective of the pad. Fig. 3 is a section along the broken dotted line *x x* of Fig. 2. Fig. 4 is a perspective of the clip *c*.

A indicates the journal; C, the brass block above the journal; B, the bearing in which the brass block is held; D, the cavity in the bearing B, in which is placed the pad *a*. The pad *a* is made of felt and is cut to fit closely in the cavity D. It is, however, cut slightly longer than the cavity, so that when the pad is crowded into the cavity it is bent slightly, so as to buckle upward at the middle, and is nevertheless long enough to extend completely from end to end of the cavity. On the under side of it is a narrow strap *b* of flexible material, the ends of which are secured to the ends of the felt pad, preferably by metallic clips *c c*. The strap *b* serves to hold the pad up from the bottom of the cavity, so that the oil-conducting holes *h* are at all times unobstructed.

Through the pad at or near the middle cross-line are two or more holes, through which are inserted plugs of felting *d d*, and these plugs are cut so that what may be termed the "grain" of the plug part is vertical, whereas the grain of the pad part may run either lengthwise of it or across it from side to side, but does not run through it from face to face. The plugs are preferably secured in place by a stitching of thread or cord *e*. The plugs *d*, cut with the grain, as above described, are much more permeable to the oil than the main part of the pad, and the upper ends of them extend up into the mass of the oil, so that there is what may be termed a "gathering" surface to each plug, and the oil will pass through the plugs and drop from their lower

ends onto the surface of the cavity beneath them.

The strap *b* extends from end to end of the pad, is considerably narrower than the pad, and always holds the central part of the pad away from the bottom of the cavity, so that whatever oil passes through the straining-pad is free at once to run into the oil-passages and to the journal.

What I claim is—

1. A straining-pad for journal-bearings made of felt and provided with holes and plugs of felt arranged in said holes and cut so that the grain of the felt in the plug is at right angles to the main body of the pad, substantially as described.

2. A straining-pad for journal-bearings having in combination a pad of felt cut to conform to the shape of the oil-receptacle, a strap arranged to support the pad away from the bottom of the oil-receptacle and means for securing the strap to the pad, substantially as described.

3. In combination with a felt pad provided with holes plugs of felt arranged in said holes with the grain of the felt of said plugs at right angles to the body of the pad, a strap held to the pad and arranged to raise the plugged part of the pad away from the bottom of the chamber, substantially as described.

4. In a straining-pad for journal-lubricators, the combination of a felt pad and felt plugs more porous than the main body of the pad, and a strap arranged to hold the plugged part of the pad above the bottom of the cavity, substantially as described.

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

WILLIAM P. BENDING.

Witnesses:

CHARLES F. BURTON,

VIRGINIA M. CLOUGH.