(No Model.)

# A. B. GRISWOLD & J. M. BRADBURY.

## ATTACHMENT FOR JOURNAL BOXES.

No. 349,937. Patented Sept. 28, 1886.

Fig. 1.

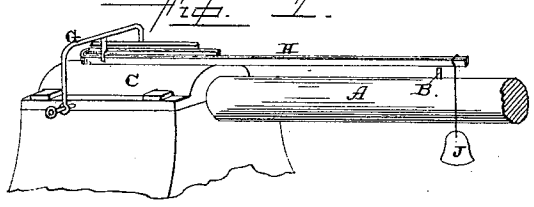



Fig. 2.

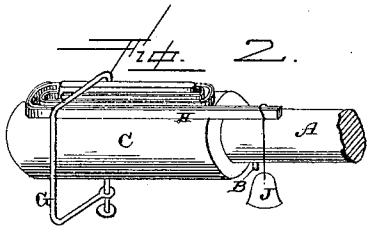



Fig. 3.

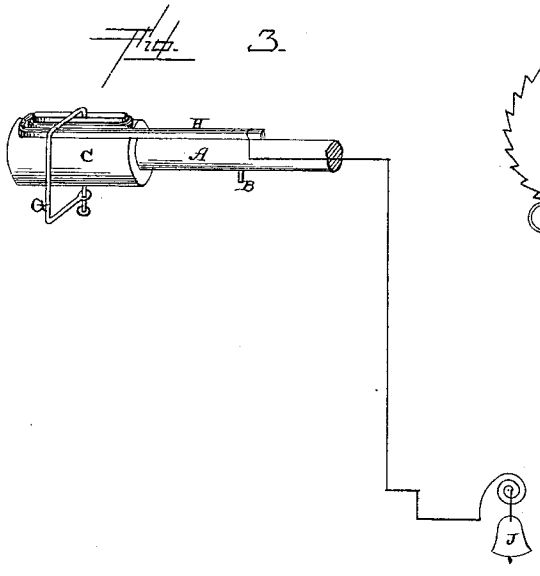
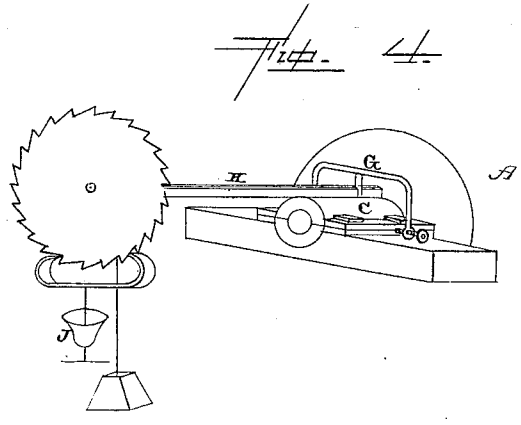



Fig. 4.




Witnesses.
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# UNITED STATES PATENT OFFICE.

ALANSON B. GRISWOLD AND JOHN M. BRADBURY, OF BUNKER HILL, KANS.

## ATTACHMENT FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 349,937, dated September 28, 1886.

Application filed April 15, 1886. Serial No. 198,946. (No model.)

*To all whom it may concern:*

Be it known that we, ALANSON B. GRISWOLD and JOHN M. BRADBURY, of Bunker Hill, in the county of Russell and State of Kansas, have invented certain new and useful Improvements in Attachments for Journal-Boxes; and we do 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 it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in attachments for journal-boxes; and it consists in the combination, with the shaft, which is provided with a suitable projection, and the box in which it is journaled, of a metallic strip which is composed of metals which will expand unequally when heated, and which has a bell, either connected directly or indirectly to it, so as to be rung when the strip is struck by the projection upon the shaft, as will be more fully described hereinafter.

The object of our invention is to attach directly to the bearing of a shaft a metallic strip which is composed of different metals, so that when heated the strip will be caused to expand and assume a curved or bent shape, so as to be struck by a projection upon the shaft, and thus sound an alarm.

Figures 1, 2, 4 are perspectives of slightly-different forms of our invention. Fig. 3 is a side elevation of another form.

A represents an ordinary shaft, which is provided with a projection, B, of any kind, and which may be located any desired distance from the box or journal C, in which the end of the shaft has its bearing. This box C may be of any suitable construction, and may either be made of one uniform size from end to end, or be provided with flanges upon its end. Fastened upon this box, either by means of a clamp, G, or any other device which will answer the purpose, is a metallic strip, H, which is formed of two or more metals which will expand unequally under heat. These metals are secured together so as to form a single strip, and the strip may be perfectly straight; or it may be wrapped one or more times around the oil-hole, as may be preferred. The strip, being in direct contact with the top of the box, becomes heated when the box becomes heated from the want of a lubricant, and then the free end of the strip, under the influence of the heat, curves around toward the projection on the shaft, when it will be struck thereby, and thus sound an alarm. When the projection B is to be placed close to the bearing, as for the want of room, then the strip will be curved or bent so as to extend one or more times around the oil-hole, as shown in Fig. 1, or bent in any other way that may be preferred. This bending of the strip enables a sufficient length to be given to the strip to cause it to have the required amount of movement. Where there is no want of space, the projection B may be placed any desired distance from the box, and then the strip can be made perfectly straight, as shown in Fig. 4. In attaching this strip to the box by means of a clamp, G, or in any other way, the outer free end of the strip is placed at a suitable angle to the shaft, so when the strip becomes heated through the box C its end will curve or bend around toward the shaft, so as to be struck by the projection. In case the strip does not come sufficiently near to the shaft to be struck directly by the projection B, then a suitable projection may be fastened to the strip so that it will project inward toward the shaft, and then this projection on the strip will be struck by the projection B upon the shaft. Connected to the outer end of this strip is a bell or other suitable alarm, J, which, when the strip is struck by the projection B upon the shaft, will cause an alarm to be sounded, so as to give notice that the bearing has become heated from the want of a lubricant. In case it is not desired to attach the bell or alarm directly to the end of the strip, then the end of the strip may be connected by suitable levers and wires to a bell or other alarm, which is placed in some other part of the building.

We do not limit ourselves in the manner of attaching the alarm to the strip, for this may be varied at will.

In Fig. 4 the metallic strip is shown connected to the journal-box by means of a clasp, and having its outer free end catch in one of

the teeth of an escapement-wheel. Should the journal-box heat, the strip will bend, so as to release its end from the wheel, and then the escapement-wheel will be caused to revolve by means of the weight connected to its shaft, and the escapement thus be made to sound an alarm.

Having thus described our invention, we claim—

1. The combination of the metallic strip, formed of metals which expand unequally when heated, with the shaft, the journal box or bearing for the shaft, a projection which is formed upon the shaft, and an alarm, substantially as shown.

2. The combination of the shaft A, provided with a projection, B, the box C, the strip H, formed of metals which expand and contract unequally, a suitable device for connecting the strip to the box, and an alarm which is operated by means of the strip, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALANSON B. GRISWOLD.
JOHN M. BRADBURY.

Witnesses:
HIRAM MCCURELEY,
EUGENE JUNEAU.