

E. J. BROOKS.
SEAL.

No. 512,274.

Fig.5.



A diagram of a vertical rod with a horizontal force F applied at a point. A shaded region E is shown above the point of application of the force.

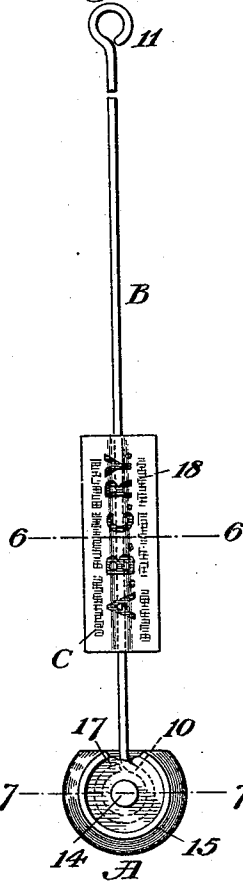


Fig. 9.

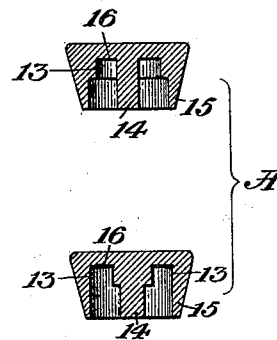


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SEAL.

SPECIFICATION forming part of Letters Patent No. 512,274, dated January 9, 1894.

Application filed June 12, 1893. Serial No. 477,298. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States of America, and a resident of East Orange, in the State of New Jersey, have invented a new and useful Improvement in Seals, of which the following is a specification.

This invention relates primarily to what have heretofore been described as "horse-shoe" seals (United States Patent No. 368,126) and are so known, but may be embodied in part in other seals having compressible rivet-like seal-parts.

The invention consists in a novel provision for preliminarily attaching the seal-part to one end of the flexible shackle by means of a tubular punch. A neat and secure preliminary fastening is thus effected with great rapidity.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of these drawings is a face view of the lead or "seal-part" of a lead-and-wire seal having a seal-tag combined therewith, illustrating the present invention. Fig. 2 represents a section on the line 2—2 Fig. 1, with a subjacent sectional elevation of a tubular punch as herein referred to. Fig. 3 is a face view of the seal-tag blank. Fig. 4 is a section on the line 4—4 Fig. 3. Fig. 5 is a face view of the combined seal and tag. Figs. 6 and 7 are sections on the lines 6—6 and 7—7 Fig. 5. Fig. 8 is a sectional edge view of the combined seal and tag ready for the press; and Fig. 9 is a sectional view of two modified seal-parts.

Like letters and numbers refer to like parts in all the figures.

Said combined seal and tag is composed of a peculiarly constructed compressible seal-part A, of lead or the like, a flexible shackle B of iron wire having loops 10 and 11 at its respective ends, and a seal-tag C of paper or the like, as hereinafter more particularly described.

In carrying this invention into effect, seal-parts A are separately cast in quantity, and provided in the molds with annular shoulders 13 surrounding central rivet-studs 14; said

shoulders being formed on said studs 14 and also on the horse-shoe rims 15 of the seal-parts as in Figs. 1 and 2, or of greater depth on the rims 15 alone or on the studs 14 alone as in Fig. 9. The seal-parts A and shackles B may next be "preliminarily" united, that is to say, united at one end of the shackle in the factory, to facilitate shipping and handling them. This is done, as illustrated by Fig. 2 in connection with Figs. 5, 7 and 8, by placing the loop 10 of the shackle, over the rivet-stud 14, upon the annular floor 16 of the back of the seal-part, and upsetting the shoulder or shoulders 13 upon said loop 10 by means of a tubular punch, which is represented at D in Fig. 2. This forms a second annular floor 17, as in Figs. 5, 7 and 8, in front of which the second loop 11 lies, as in Fig. 8, preparatory to the final fastening operation, when the rivet-stud 14 and rim 15 are upset, and the face of the seal-part is solidified and stamped, in a seal-press, as heretofore.

E and F, Fig. 8, represent a car-door hasp and staple, by way of illustration.

The seal-tag C, or its blank Fig. 3, is cut flat from paper or the like printed and waterproofed in the sheet, and is provided with suitable lettering 18 19 on the two sides of a longitudinal fold-line 20, Fig. 3, for the respective sides of the attached tag, as shown at C in Figs. 5, 6 and 8. The back of each tag blank is next provided with a suitable waterproof cement, fish-glue for example, and the tag is folded and adjusted upon the shackle wire B, with the wire at midwidth between its two thicknesses, as in Fig. 6. All this is done at the factory, as part of the process of making the combined seal and tag, and may be done either before or after the seal-part is united with the shackle-wire as above.

The combined seal and tag is shipped flat as in Fig. 5, and is handled and used in precisely the same manner as a tagless seal, and without any complication of the pressing operation.

The united seal-part A and looped shackle B may be used as a seal without the tag C; and other like modifications will suggest themselves to those skilled in the art.

Having thus described the said improvement, I claim as my invention and desire to patent under this specification—

5 The combination with flexible shackles having looped ends of compressible seal-parts having rivet-studs to enter the loops and annular shoulders surrounding said studs, for preliminarily attaching the seal-part to the

shackle by upsetting said shoulders upon the loop at one end, substantially as hereinbefore specified.

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