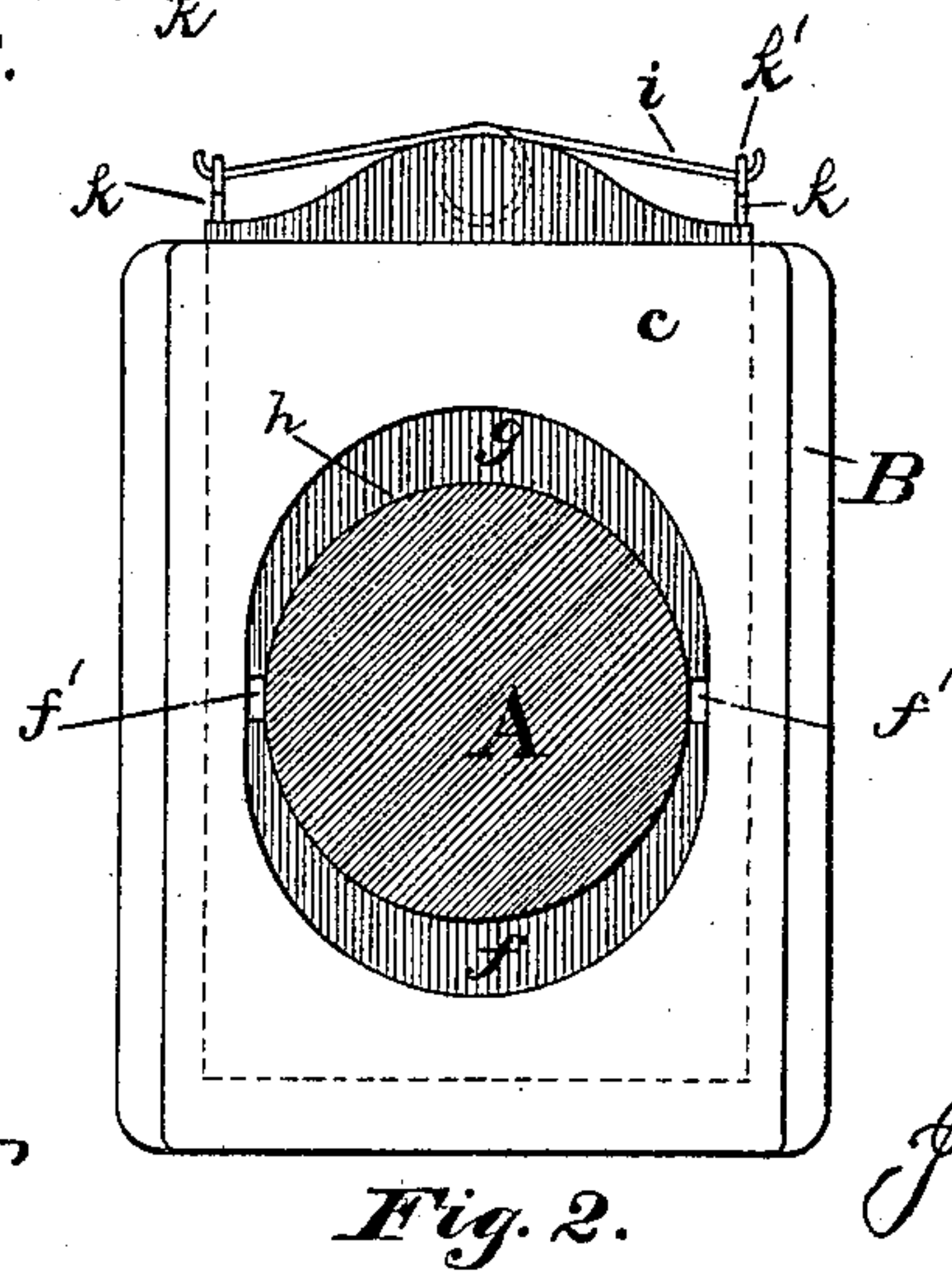
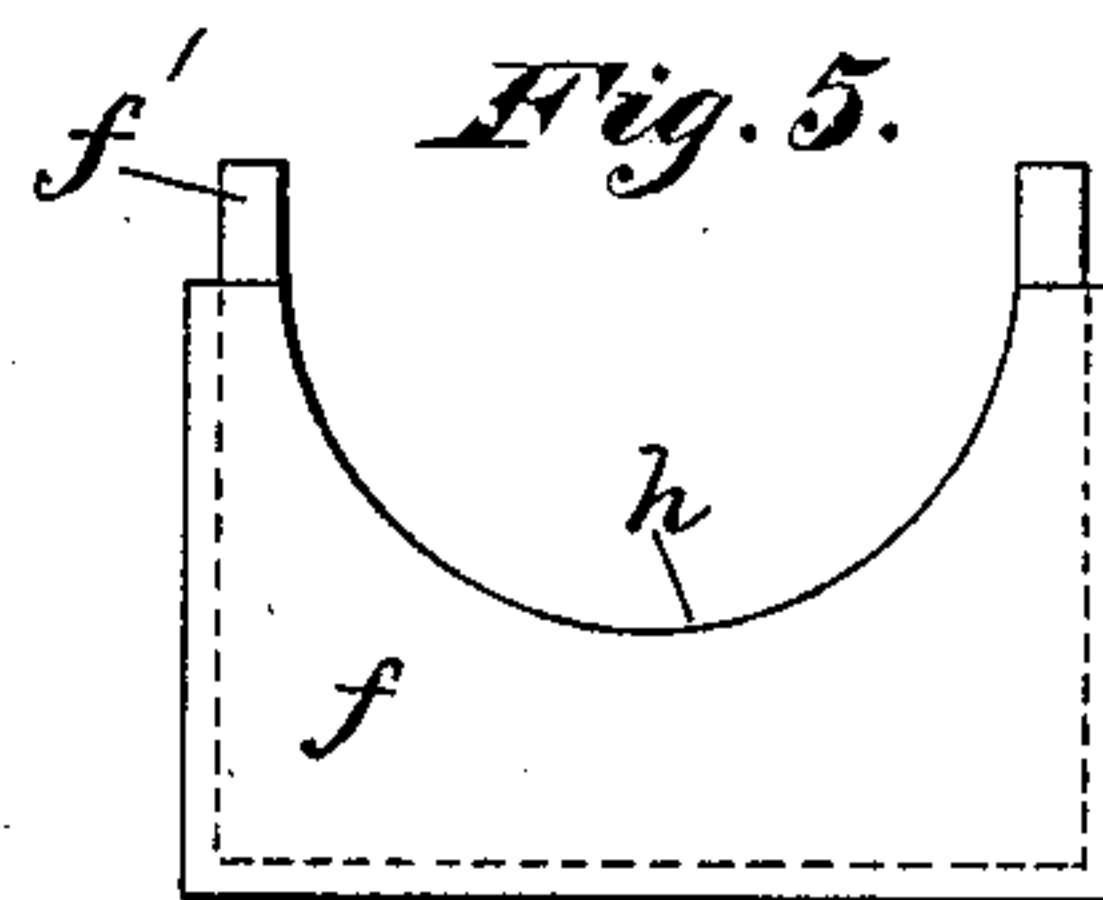
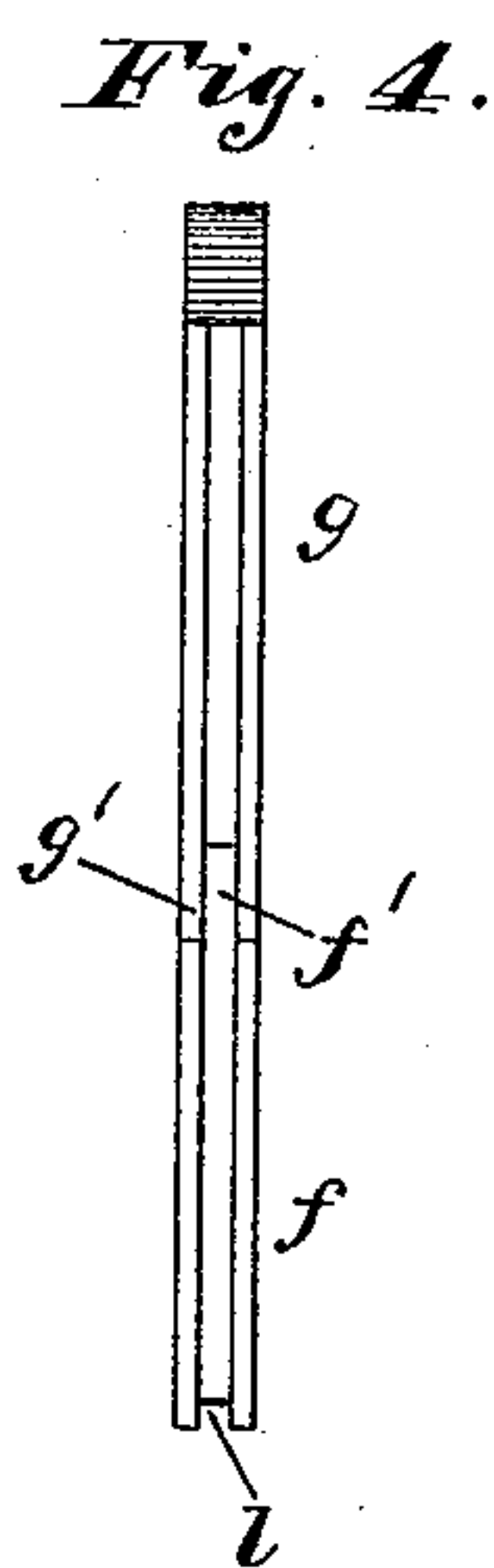
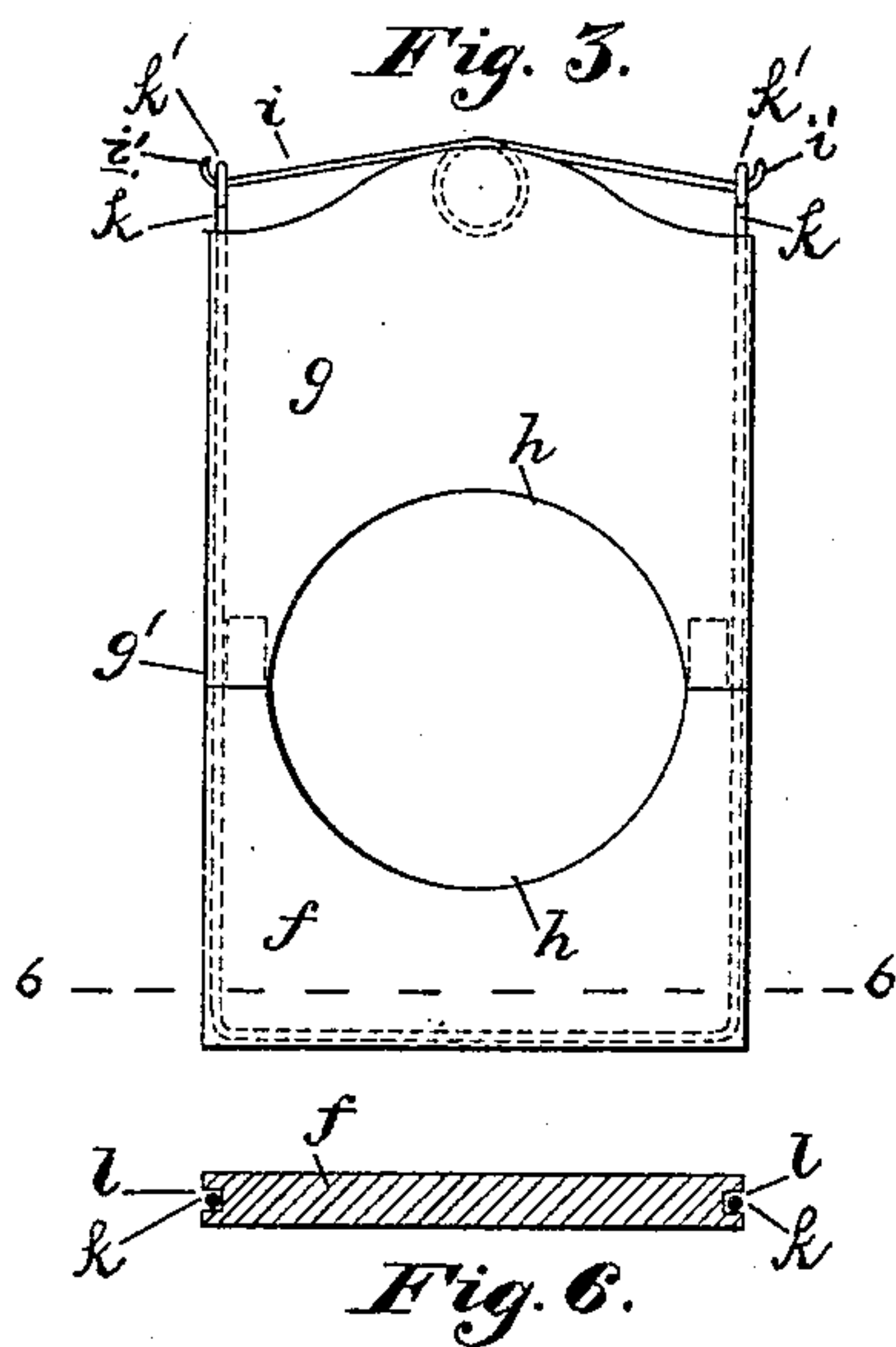
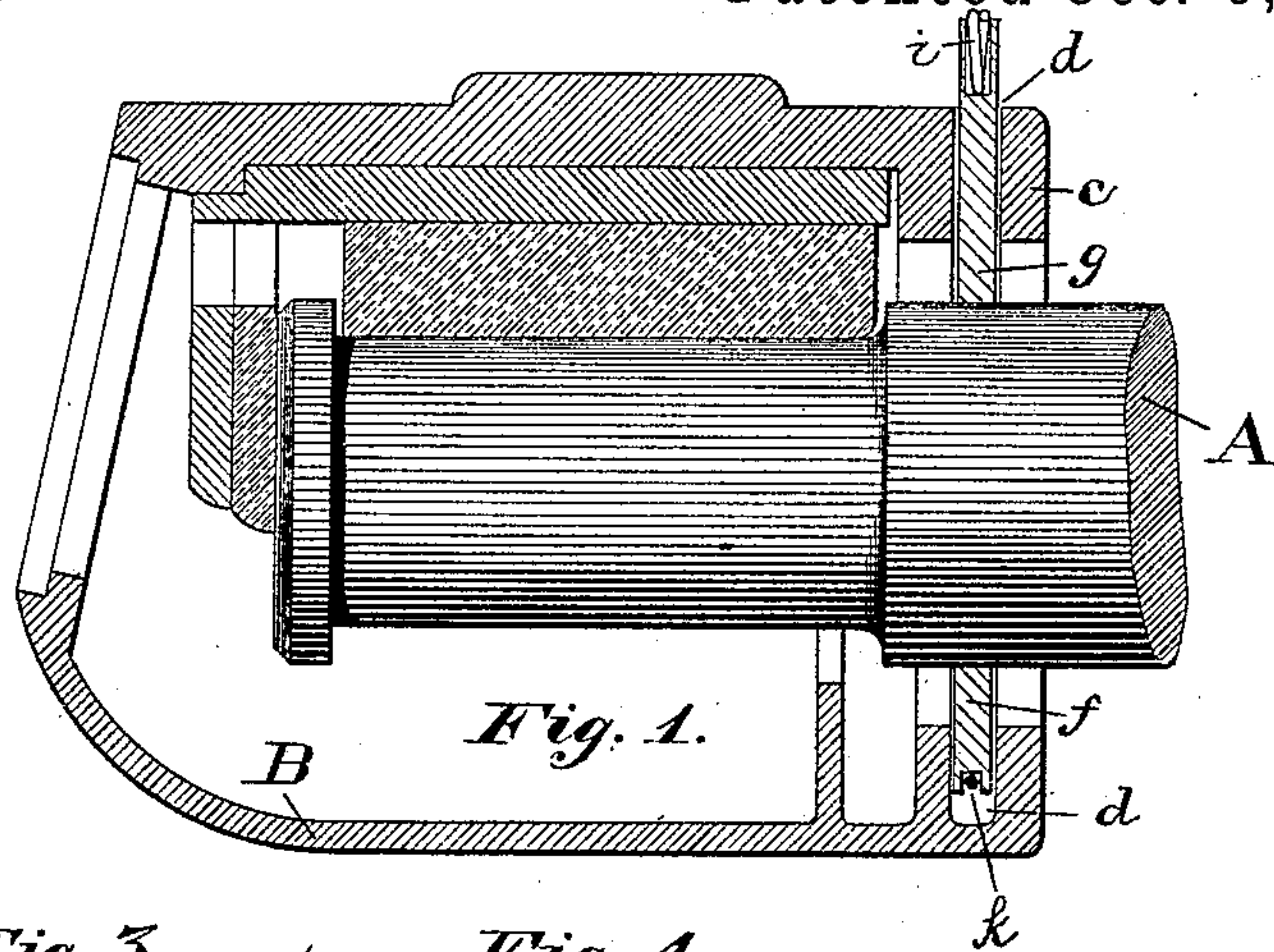


(No Model.)

J. STIER.
DUST GUARD FOR CAR AXLE BOXES.

No. 390,991.

Patented Oct. 9, 1888.



WITNESSES:

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DUST-GUARD FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 390,991, dated October 9, 1888.

Application filed June 8, 1888. Serial No. 276,503. (No model.)

To all whom it may concern:

Be it known that I, JOSEPHUS STIER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Dust-Guards for Car-Axle Boxes, of which the following is a specification.

My invention relates to an improved dust-guard for car-axle boxes. The object is to provide a simple dust-excluder for the rear side of the box.

In the drawings herewith, Figure 1 is a view of the end of a car-axle and a longitudinal section of the axle-box. Fig. 2 is an elevation showing the rear side of the box, the axle, and the dust-guard. Fig. 3 is a view of the dust-guard separate. Fig. 4 is an edge view of the same. Fig. 5 is a view of one section of the guard. Fig. 6 is a cross-section of the same.

The letter A designates the axle, and B the box. At the rear end, *c*, the box has a groove, *d*, which in the present instance opens at the top, and the dust-guard occupies this groove.

The improved dust-guard is divided in two parts, *f g*, which at the point of joinder have a half-circular notch, *h*, (see Fig. 5,) to form, when the two parts are joined, a hole for the axle, (see Fig. 3,) and each side of the notch *h* is provided with a tongue-and-groove connection, *f' g'*. This connection allows the two parts to have a limited movement to and from each other without thereby exposing an opening at each side of the said axle-hole. The two part dust-guard surrounds the axle.

When the dust-guard is first placed on the axle, the tongue-and-groove connections are partly drawn out, and when by the turning of the axle the half-circular notch *h* wears or enlarges the two parts gradually close together, and the partly-drawn-out tongues *f'* will enter farther in the grooves *g'*. A spring, *i*, provided with a central coil and having hooks *i'* at its ends, extends across the edge of one part, *g*, of the guard, with the coil of the spring connected to a groove in said part *g*, and wires *k*, with eyes *k'*, attached to the other part of the guard, extend to and connect with the ends of the

said spring. Thus the spring *i* and the wires *k* form an elastic connection, which binds the two parts of the guard around the axle, and the guard, thus kept in place, excludes the dust from the box. The wires *k* may be attached in any suitable way.

My invention includes a groove, *l*, on the edges of the guard, and the construction shown for the wire *k*, whereby it forms a yoke and occupies the groove *l*. The wire yoke *k* extends across the bottom and up each side. (See Figs. 1 and 3.) At the top each end of the wire has a loop or eye, *k'*, which connects with the said spring *i*, extending across the outer edge of one part, *g*. The wire *k*, surrounding three sides of the guard, serves as a yoke to bind the two parts of the dust-guard together, and the spring *i*, by drawing on the wire yoke, keeps the said two parts close about the axle and constantly takes up the wear. Thus the dust-guard, as here described, is effectual to exclude dust, and also to confine the lubricator within the box.

The dust-board has sufficient movement up and down, and also sidewise, in the groove *d* to allow it to give to the play of the axle.

It is obvious that a dust-guard having these features may enter and occupy a groove, *d*, in the axle-box, which enters at the top, as here shown, or a groove which enters at the vertical sides.

Having described my invention, I claim—

The combination, with the axle-box having groove *d*, the axle A, and the tongue-and-grooved dust-board consisting of the parts *f g*, provided with edge grooves, *l*, of the yoke connecting said grooves *l*, and having at its upper ends eyes *k'*, and the spring *i*, having a central coil connected in a groove in the top portion of the part *g*, and provided with hooks *i'* to connect with the eyes *k'* of said yoke, substantially as specified.

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

JOSEPHUS STIER.

Witnesses:

JOHN E. MORRIS,
JNO. T. MADDOX.