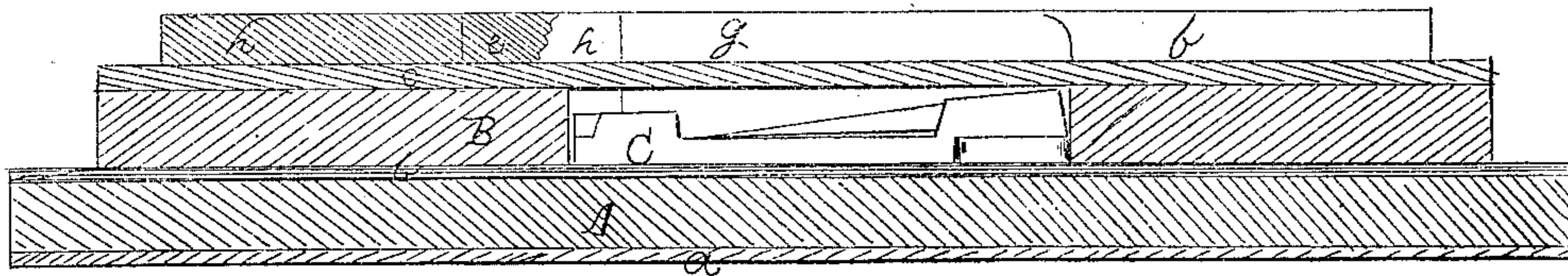


By Donl J. Riker's
J. Hall Dow's Improvement
in Rail Road Frogs.



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Fig 1.

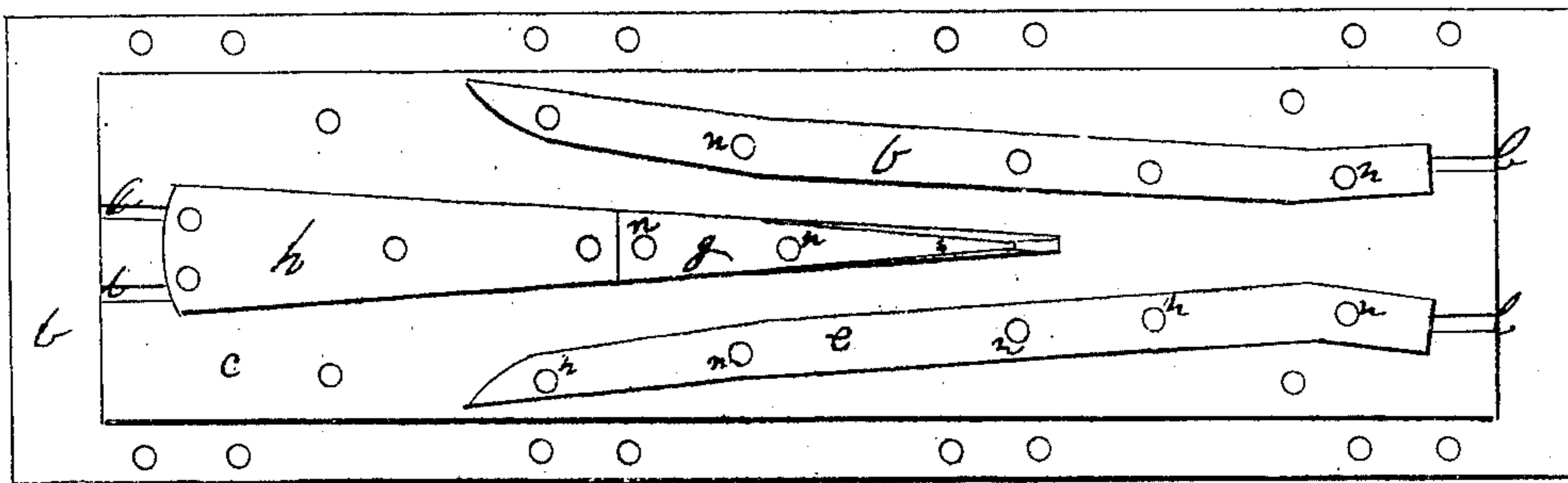


Fig 2.

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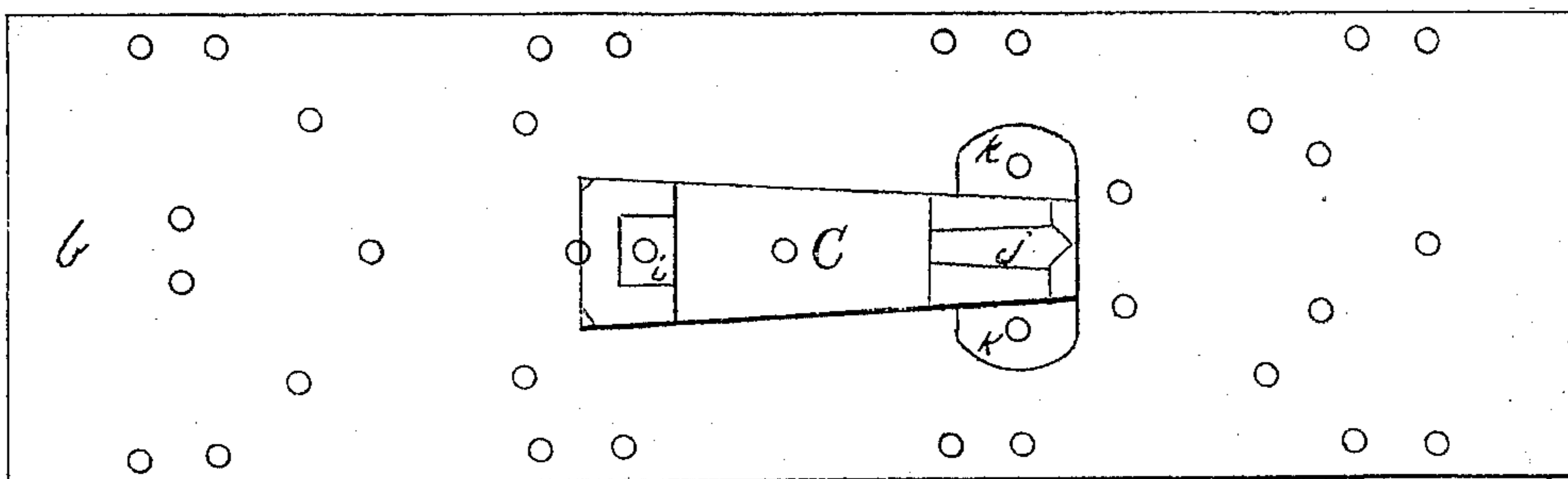


Fig 3.



Fig 4

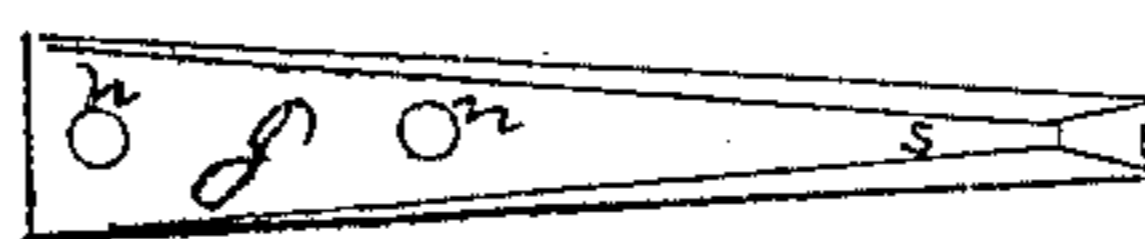


Fig 5

Inventors.
J. Hall Dow
Donl J. Riker

Witnesses
Wm J. Oakley
Wm B. King

United States Patent Office.

J. HALL DOW AND DANIEL J. RIKER, OF CHICAGO, ILLINOIS.

Letters Patent No. 73,959, dated February 4, 1868.

IMPROVED RAILWAY-FROG.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, J. HALL DOW and DANIEL J. RIKER, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Railroad-Frogs; and we do declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view, with a part of B cut away to show the chair C, the greater part of the wing *e* also being cut away.

Figure 2 is a top view.

Figure 3 is a top view of the chair C, resting on the plate *b*.

Figure 4 is a side view of the point *g*, also showing the end.

Figure 5 is a top view of the point *g*.

Like letters refer to the same parts in all the figures.

In railroad-frogs now in use the wings and point, when worn upon the upper side, have to be replaced by new ones, at considerable expense. The object of our invention is to construct a railroad-frog in such a manner that, when the wings and point are worn upon one side, they can be reversed, presenting an unworn surface equal to the first. We accomplish this object by making a point of peculiar form, which rests in a chair, provided for the purpose, and by bevelling both edges of the wings.

To enable others skilled in the art to make and use our invention, we proceed to describe its construction and operation.

The principal parts of the frog, except the wings and point, are constructed like those of the frog known as the Mansfield frog. The lower plate *a* is of boiler-plate, three-sixteenths of an inch thick, and of usual length and width. On this iron plate is placed an oak plank, A, two inches thick. On this is an iron plate, *b*, one-quarter of an inch thick. Both of these plates may be fastened to the plank by means of spikes, or in any other suitable manner. On the plate *b* is another plank, of oak, not quite as long nor quite as wide as the other. This plank is one and three-quarters inch thick. On this plank is an iron plate, *c*, one-quarter of an inch thick, or thicker, if desired. The heel *h* is of wrought iron, of the usual size.

The point *g*, I construct in a peculiar manner, bevelling both the upper and lower edges, so that they are alike, as shown in figs. 4 and 5. This point rests in and upon the chair C, which has a recess, *i*, at one end, to receive the larger end of the point *g*. The other end of the chair is provided with a bevelled groove, to receive the smaller end of the point *g*. The groove is of such size and form that the bevelled edges, *r*, of the point touch the sides of the groove, and prevent the surface, *s*, of the point from hitting the bottom of the groove, so that, in use, no pressure can come upon the lower surface, *s*, of the point, and this under surface cannot become bruised or abraded, there being always a little space between this part of the point and the chair; and since the smaller end of the point does not rest upon the chair, the upper and lower surfaces of the point should be made slightly tapering, so that the upper surface, when in use, will be on the same level as the rail. The chair is secured to the plate *b* by means of bolts or spikes at *k*, and elsewhere, as indicated. The plank B must have an opening fitting the chair C.

The wings *e* and *f* are constructed in the usual form, except that I bevel both the upper and lower inner edges, instead of the upper one only, as is customary. The holes *n*, designed to receive the bolts, in the wings *e f* and point *h*, may be countersunk on the under sides, as well as on the upper, when these parts are made, or they can be made in the usual manner, and can be countersunk when these parts are to be reversed. *l l* are openings for the rails, of the ordinary form.

The chair is made of cast iron. The point *h* and wings *e* and *f* are made of steel. The several parts of the frog are to be firmly fastened together, by means of bolts or otherwise, in the usual manner.

In use, when the wings *e f* and the point *h* are so worn as to be unfit for use, the bolts can be taken out, and these parts can be turned over *e*, taking the place of *f*, and *f* the place of *e*, presenting for use unworn surfaces; and, in this way, these parts can be used twice as long as with the ordinary method of making frogs.

Since the point *g* is supported on the bevelled edges *r*, and not on the surface *s*, it is obvious that, when reversed, the position of the upper surface will not be affected by the first wear of the point.

The heel *h* may be made in part or wholly of steel.

The bolts which are used for holding the other parts of the frog together may (a part of them) pass through the chair, and no separate bolts will be required to hold the chair in place.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The chair *C*, constructed substantially as and for the purpose specified.
2. The point *g*, having its upper and lower edges bevelled, in combination with the chair *C*, constructed substantially as and for the purposes specified.
3. The wings *e f*, when provided with two bevelled edges, in combination with the point *g* and chair *C*, all constructed and arranged substantially as and for the purposes specified.

J. HALL DOW,
DANL. J. RIKER.

Witnesses:

WM. J. OAKES,
WM. B. KING.