W. H. BOYD.

Cover for Quadrants.

No. 220,269. Patented Oct. 7, 1879.

FIG. 3.

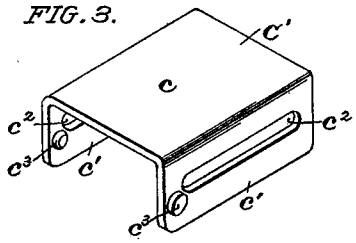
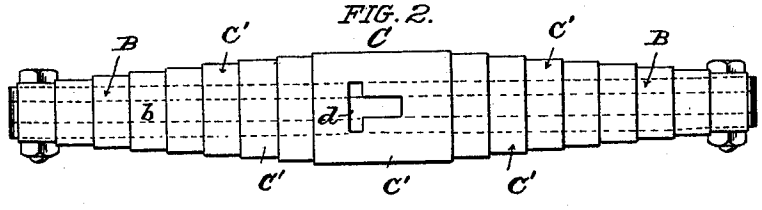


FIG. 1.

FIG. 2.



ATTEST:

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UNITED STATES PATENT OFFICE.

WASHINGTON H. BOYD, OF GODFREY, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JOHN T. GARLAND, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN COVERS FOR QUADRANTS.

Specification forming part of Letters Patent No. **220,269**, dated October 7, 1879; application filed August 23, 1879.

To all whom it may concern:

Be it known that I, WASHINGTON H. BOYD, of Godfrey, Madison county, and State of Illinois, have invented an Improved Cover for Quadrants, of which the following is a specification.

The object of this invention is to keep closed the opening through which the reversing-lever passes, (and yet not interfere with the operation of the said lever,) and which, as is well known, is used in locomotives for reversing the engine, &c. The opening exists in the quadrant, and the lever extends within reach of the engineer in the cab, but the lower end of the said lever extends outside the cab to connect with the link-motion parts. Hence a free communication through the opening in the quadrant exists between the inside of the cab and the outside, which permits dirt, dust, impurities, snow, cold air, &c., to enter the cab, to the annoyance and discomfort of the engineer or operator.

The nature of my invention can therefore be stated to consist in providing a covering or hood, so constructed and arranged that the reversing-lever can be operated in manner usual, and yet further insure at all times a closure of the space or opening referred to.

Of the drawings, Figure 1 is a side elevation of my improvement as applied to the quadrant of a reversing-lever for locomotives. Fig. 2 is a plan view, and Fig. 3 is a perspective view, of one of the sections that compose the covering.

A represents the reversing-lever. B represents the quadrant, having the opening C, through which the lever A passes. The lower part of the lever A passes outside the cab, and all said parts are arranged, connected, and constructed to operate as usual.

My improvement relates to the metallic covering or hood C, which I provide to cover the opening *b*, stated as being in the quadrant. The hood C is composed of the different sections C′, each fitted to lap over the other, so that the sections can be folded together or distended, as shown in Figs. 1, 2. More particularly stated, the construction of each section C′ is as shown in Fig. 3—viz., having the top face *c*, the bent sides c^1, the latter having an elongated slot, c^2, and the rivet at c^3. The top face of each section forms the top closure for the opening in the quadrant. The sides c^1 are bent vertical, to lap over the sides of the quadrant. The slots c^2 permit each section to be folded over each other or be distended, and the rivet c^3 of each section joins in the slot of the neighboring section, all as shown in Figs. 1, 2. Each section C′, thus made, is also, as shown, of proportionate size, to permit them to be folded or spread apart.

Further, the sufficient number of sections C′ will be used, so that in operation the space previously occupied by the folded sections shall be covered by the distended sections.

In Fig. 1, the sections to the left are shown somewhat folded, and the remaining sections to the right distended, the opening in the quadrant remaining closed.

The opposite end or smaller sections C′ are rigidly secured to the bolts or ends of the quadrant in any proper manner. The topmost or largest section has in its top face a slot, *d*, through which the dog (or spring-catch) of the reversing-lever passes to engage the teeth of the quadrant. (See Fig. 2.) Also, the said section is further slotted to suit the shape of that part of the lever that extends over the top of the quadrant. (See Fig. 2.)

d′ is a lug, forming part of one of the topmost sections. Against said lug the hand-lever pushes when operated to the left, (see Fig. 1,) and in order to fold the sections at the left and distend the sections that are on the right of the lever.

In moving the lever to the right, the sections to the right are made to lap one over the other, and the previously folded or lapped sections on the left are distended.

Thus the free operation of the lever can take place, at same time operating the hood or covering, to fold or be distended, and at all times presenting a closed top to the opening in the quadrant, and consequently shutting that part or side of the cab from the outside.

What I claim is—

1. A hood or covering consisting of metallic sections having closed top and vertical sides,

the latter having the elongated slot and rivet-fastening, by means whereof the several sections can be folded or distended, in the manner herein set forth.

2. The hood or covering consisting of the combined sections C′, having the top face *c*, the sides c^1 c^1, the slots c^2, the rivet c^3, said sections being arranged so that the space previously occupied by the folded sections is occupied by the distended sections, as and for the purpose set forth.

3. In combination with the lever A and quadrant B, having opening *b*, the hood or covering C, consisting of the sections C′, made to have the top face *c*, the sides c^1, the slot c^2, and rivet-joint, to operate as and for the purposes set forth.

In testimony of said invention I have hereunto set my hand.

WASHINGTON H. BOYD.

Witnesses:
WILLIAM W. HERTHEL,
JOHN W. HERTHEL.