

G. S. GREENE.
MINE CAR BUMPER.
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1,066,603.

Patented July 8, 1913.

Fig. 1.

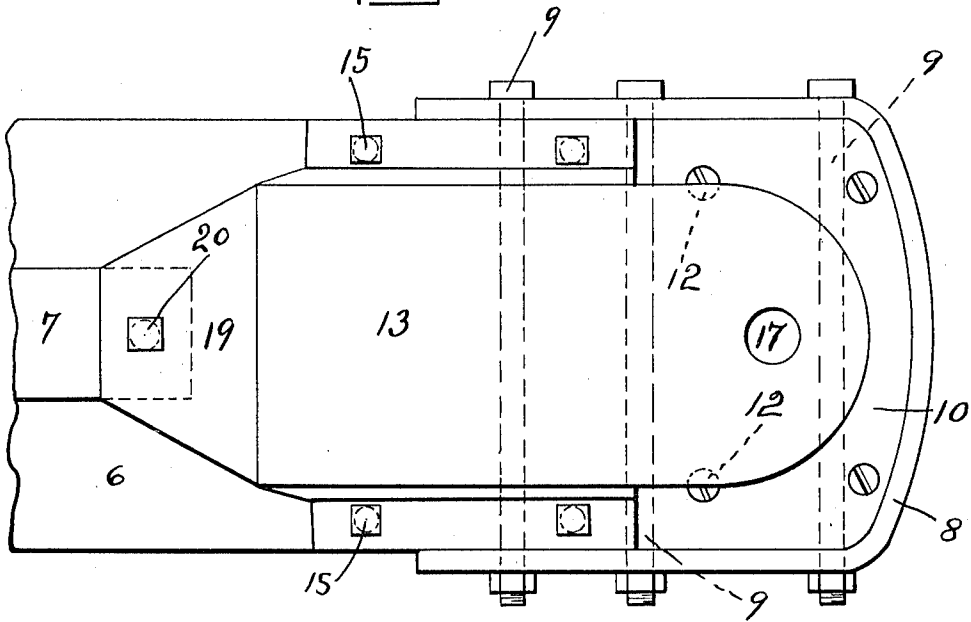


Fig. 2.

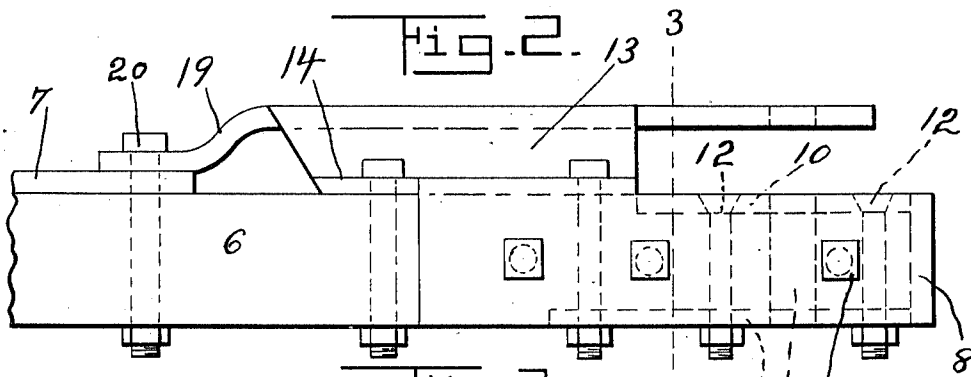
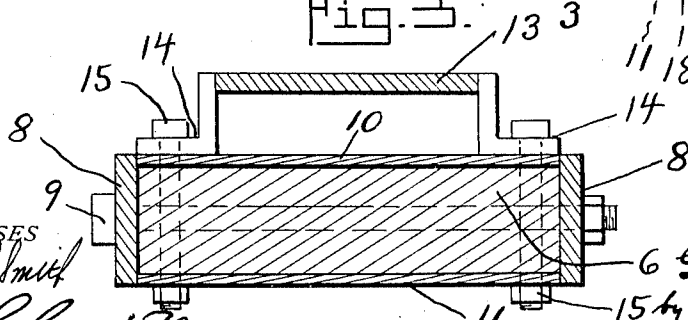


Fig. 3.



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UNITED STATES PATENT OFFICE.

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MINE-CAR BUMPER.

1,066,603.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE S. GREENE, a citizen of the United States, residing at St. Clairsville, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Mine-Car Bumpers, of which the following is a specification.

This invention relates to mine cars, and particularly to the bumpers and draw-bars thereof.

The object of the invention is to provide such cars with an improved form of bumper, which will avoid the mutilation or breakage of the coupling link or of the parts of the draw head, and which can be repaired or renewed at a low cost and in a convenient manner.

The ordinary type of draw-bar is objectionable and gives considerable trouble by reason of breakage of the draw-bar or link when the cars come together with a shock.

By means of my improvement the draw head is protected, and a space is provided so that the link will not receive the impact of cars bumping together.

The invention can be easily applied to the ordinary type of mine car without particular modification thereof. It comprises a new form and construction of the bumper head as will more fully appear from the following description and the accompanying drawings.

In the drawings, Figure 1 is a plan view of the bumper. Fig. 2 is a side elevation. Fig. 3 is a section on the line 3—3 of Fig. 2.

Referring specifically to the drawings, 6 indicates the main or middle sill of the car which is extended beyond the end thereof as usual, and 7 is the metal draw bar or plate which extends throughout the length of the car, and is suitably fastened to the middle beam or floor, and terminates short of the end thereof, as shown.

The end of the sill is provided with a metal binder 8 which is bent or fitted around the sides and front of the sill, as shown in Fig. 1 and this binder is fastened to the sill by transverse bolts 9 extending through the sill. This protects the end of the sill and forms the bumper which contacts with the similar bumper of an adjacent car when the cars come together.

The upper surface of the sill, at the end thereof, is provided with a top plate 10, and

the lower surface is provided with a bottom plate 11, these plates being made of metal, and being the same shape, in plan, as the end of the sill, and they are set in recesses made in the sill so that they are flush with the top and bottom surfaces of the sill respectively and with the edges of the binder 8. They serve to support the binder and to strengthen the sill, and the upper plate forms a surface on which the link rests when the cars are coupled. These top and bottom plates are secured to the sill by countersunk bolts 12.

An arched draw plate 13 is mounted on top of the sill, the edges of said plate being angular and bent or set down to form flanges 14 at opposite sides, these flanges resting on top of the sill where they are secured by vertical bolts 15 extending through the sill. The plate forms an arched passage or recess 16 thereunder, of sufficient height to permit a link to pass back into the recess and under the plate, so that the link will not be jammed against the draw head, as in the old construction. The front end of the draw plate 13 does not extend out as far as the end of the sill 6, and consequently cannot receive the bumping impact of cars. Said end is provided with a hole 17, in line with the hole 18 in the sill, to receive the ordinary coupling pin. The rear end of the arched plate 13 is bent down as indicated at 19 and is attached by bolts 20 to the draw plate 7 and the sill 6.

The pulling strain on the car is thus mainly communicated through the plate 13 to the draw-bar 7 and the middle sill.

When the coupling link enters the space between the front end of the draw plate 13 and the plate 10 it may pass or work back into the recess 16, and so be relieved of any impact incident to operation of the cars. In the event of breakage of any of the metal parts they can be easily replaced. This is particularly advantageous with respect to the draw plate 13, which some times breaks. To replace it, it is only necessary to take off the old plate by removing the bolts 15 and 20, and put a new one on, and this can be done without renewing the other parts of the bumper head, and is superior to the old form in which the draw plate was integral with the bumper or was welded to the draw-bar 7, requiring either a new bumper head or the welding of a new draw plate to the

end of the draw-bar, as well as putting the car out of use for a considerable period of time.

I claim:

- 5 The combination with a sill provided at its end with a top plate, and a draw-bar mounted on top of the sill, of a draw plate having a hole for the coupling pin, said
10 draw plate being arched transversely to the sill and bolted at its side edges to the sill,

and bolted at its rear end to the draw-bar, whereby the draw plate may be removed without removal of the top plate or the draw-bar.

In testimony whereof, I affix my signature 15
in presence of two witnesses.

GEORGE S. GREENE.

Witnesses:

S. E. LEWIS,

S. M. GELLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."