

(No Model.)

D. BENNETT.  
BUMPER FOR MINE CARS.

No. 496,846.

Patented May 9, 1893.

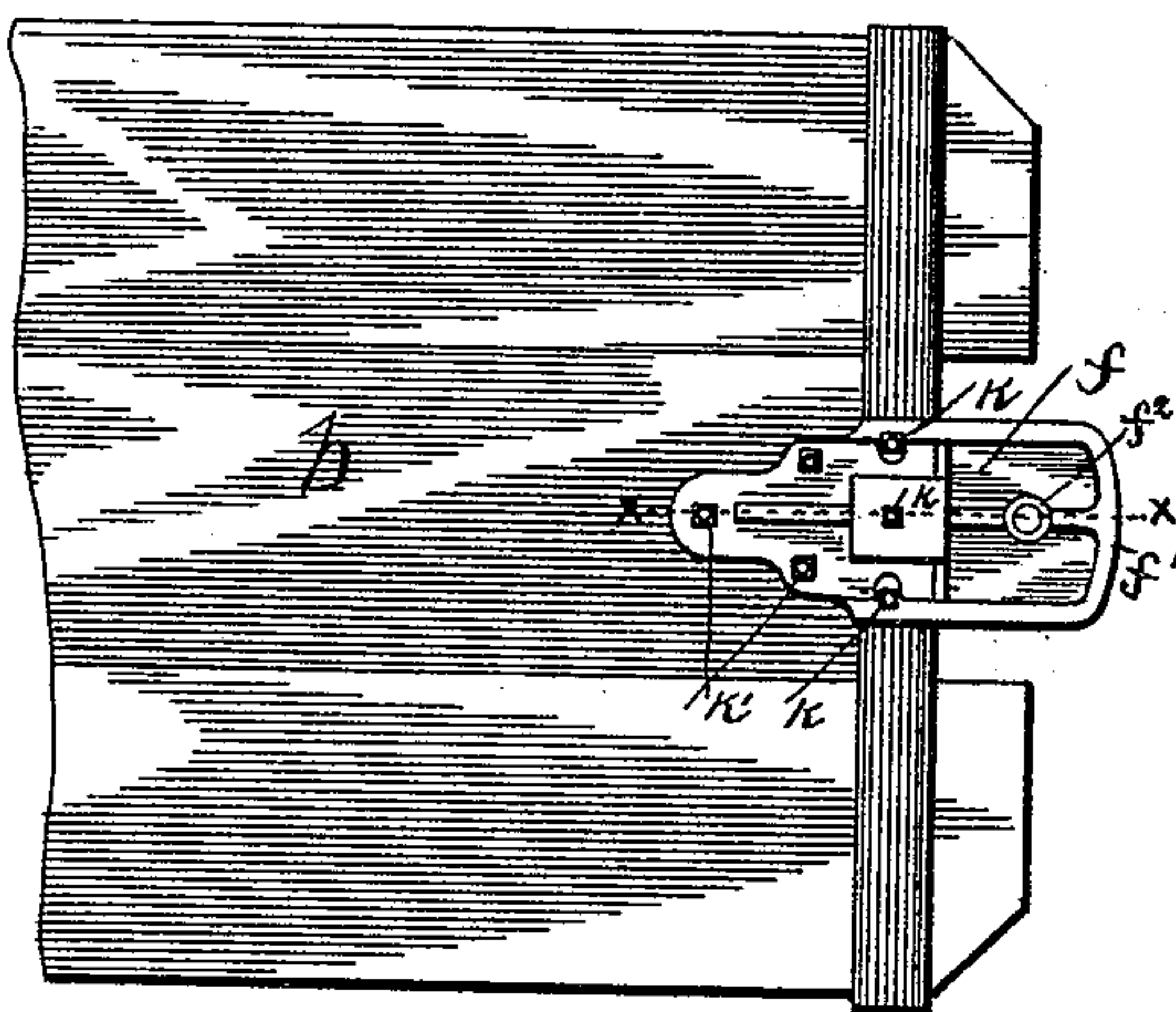
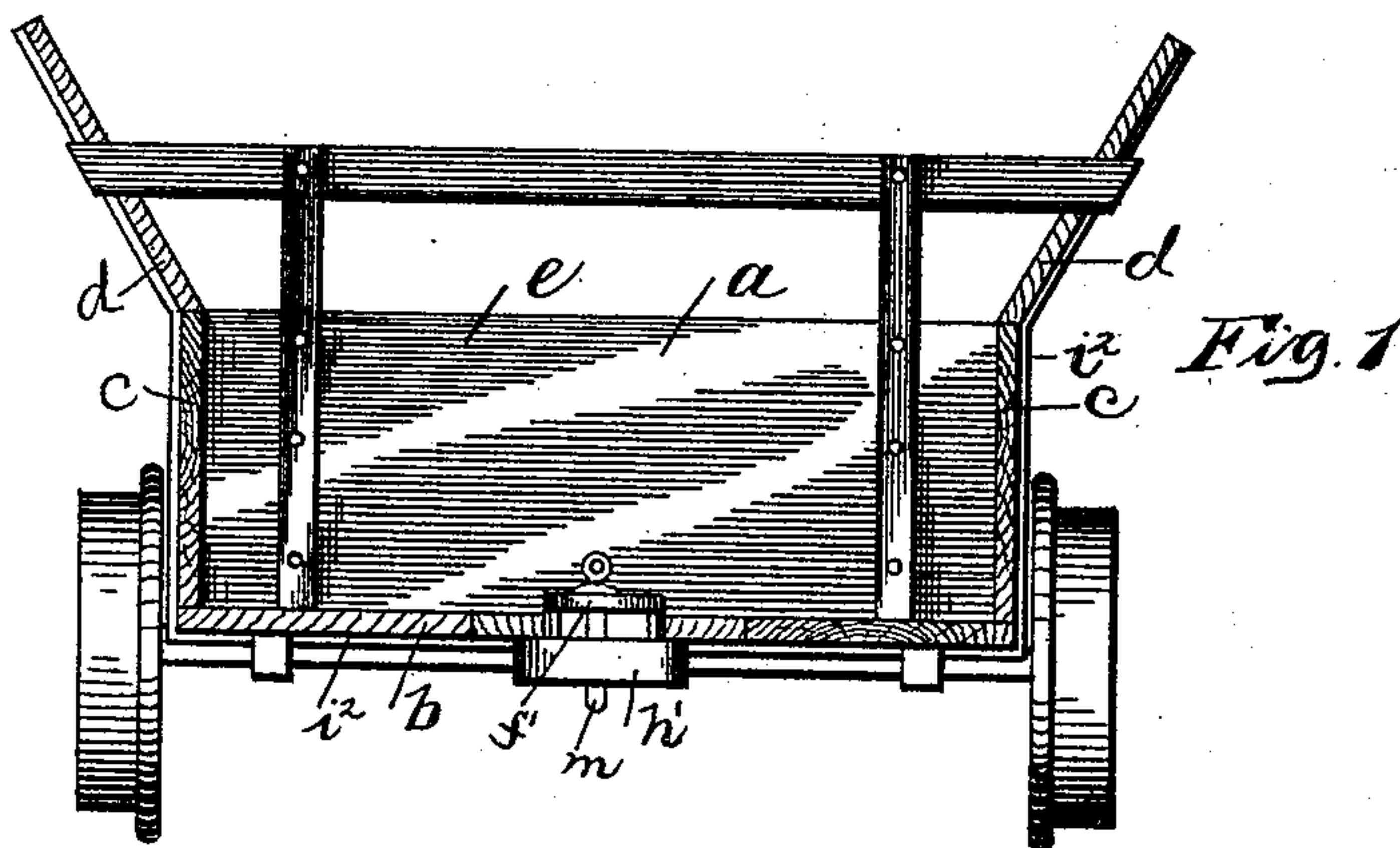


Fig. 2

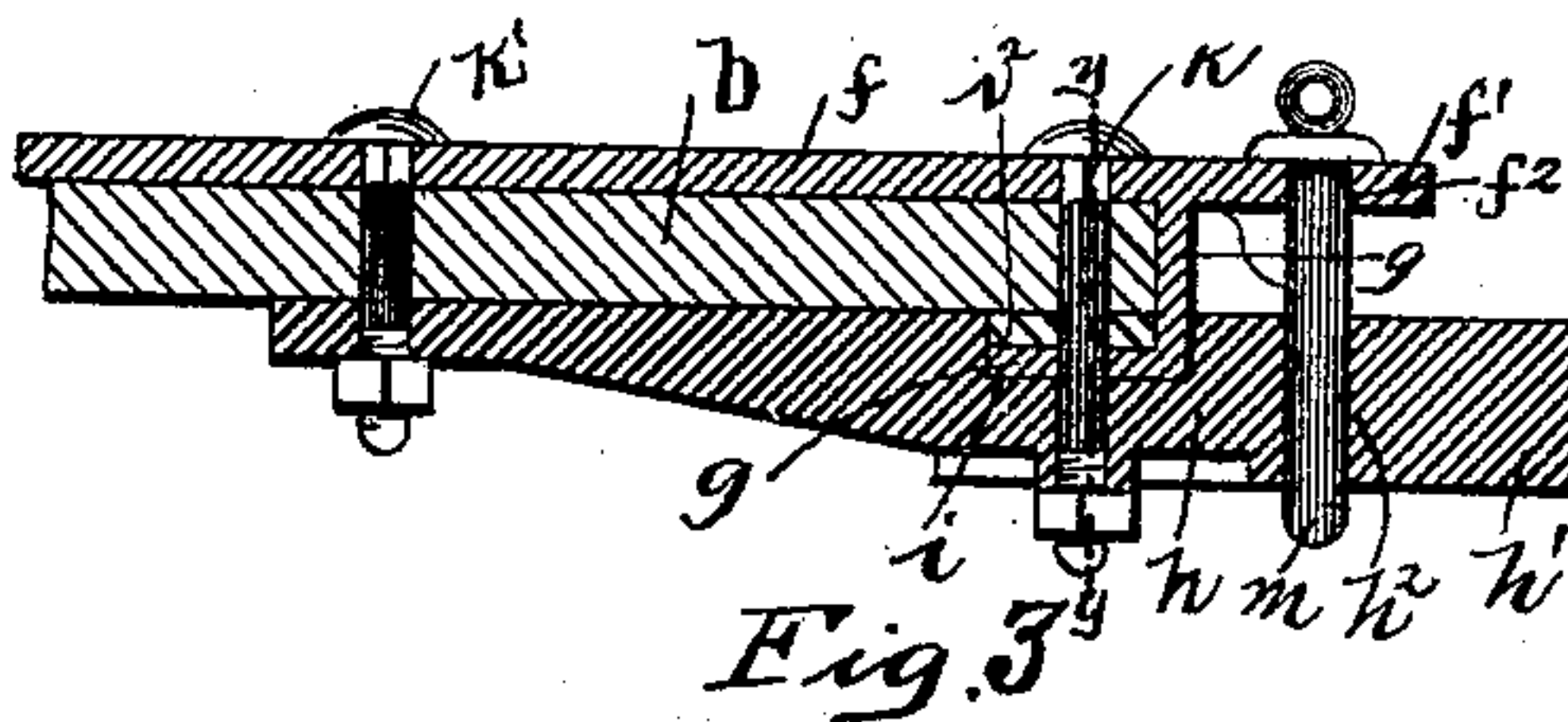


Fig. 3

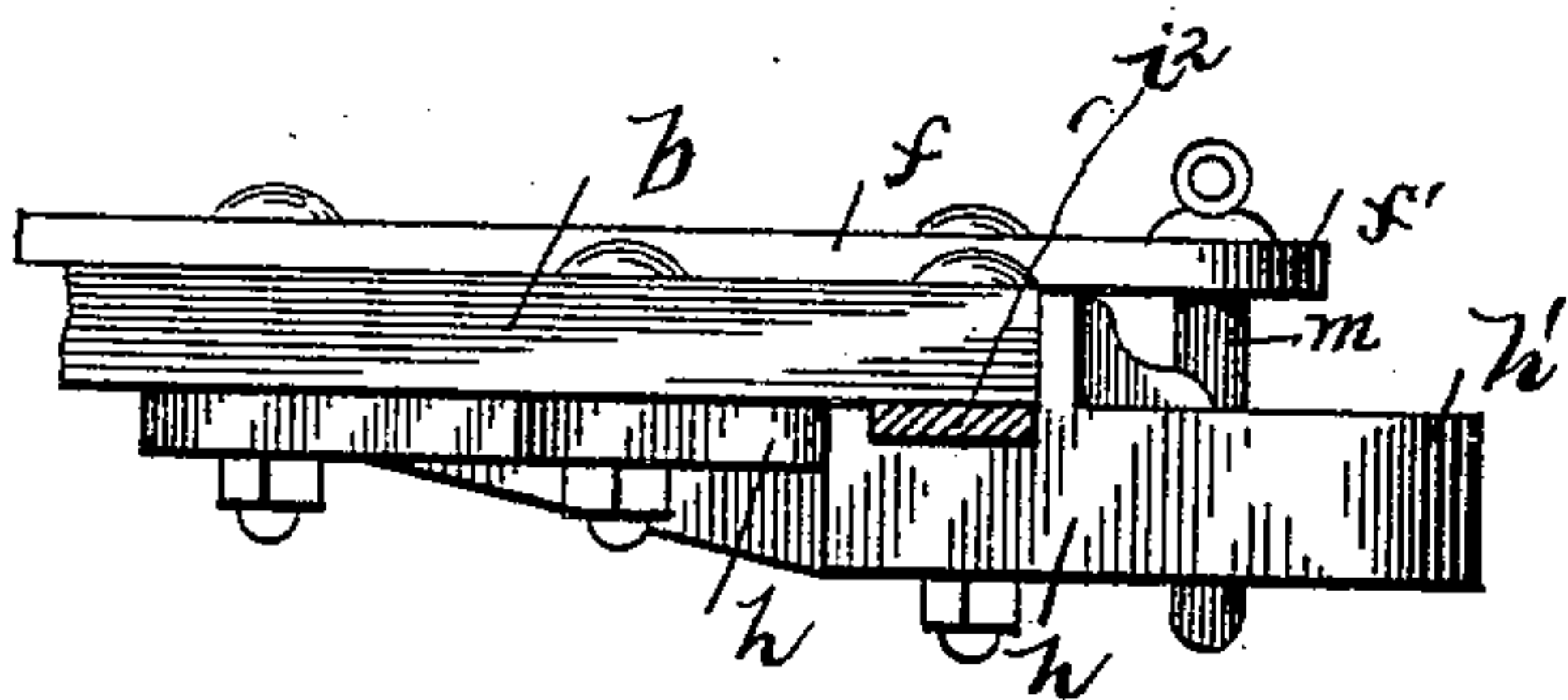


Fig. 4

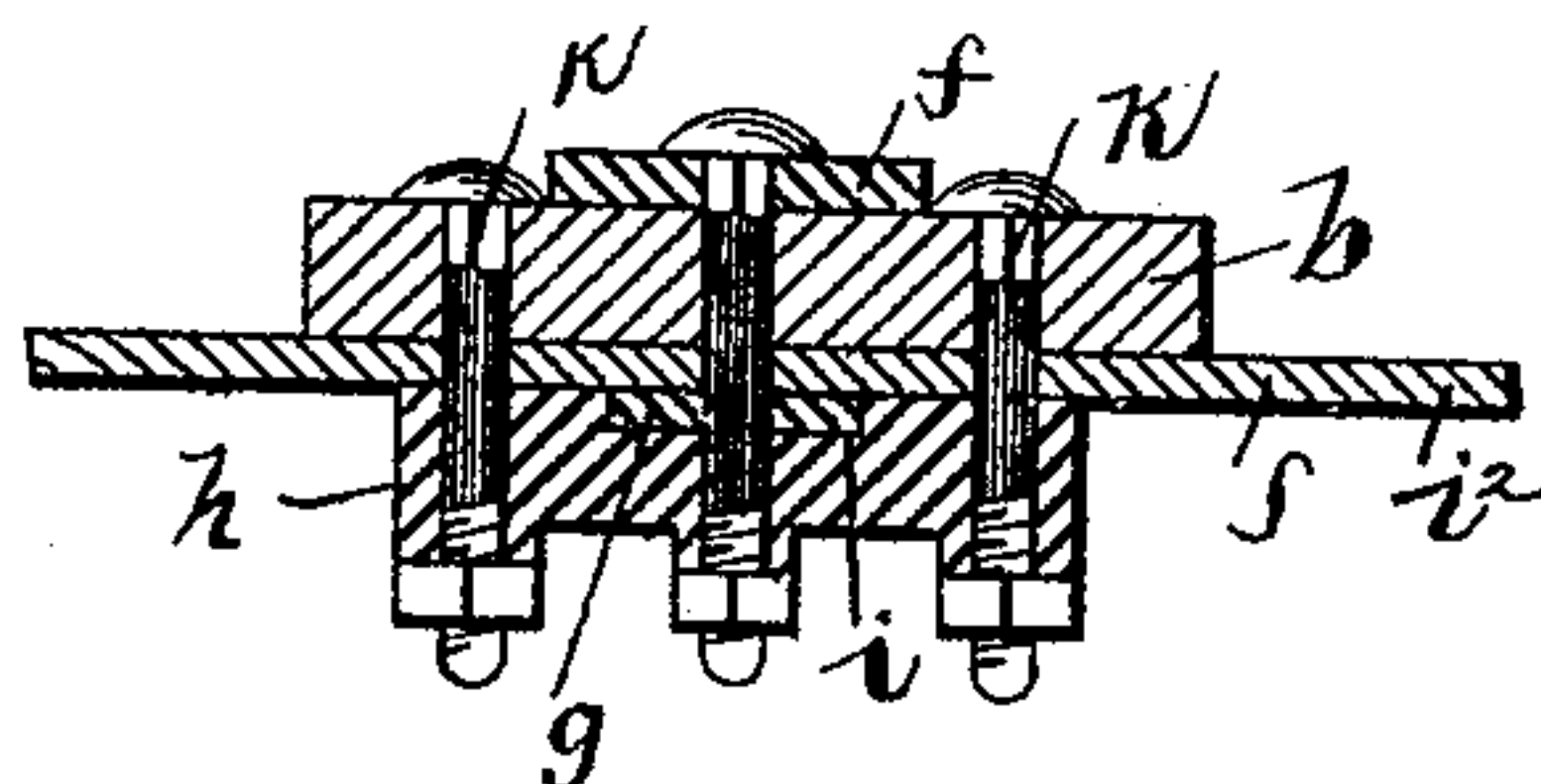


Fig. 5

WITNESSES:

H. B. Bradshaw  
J. H. Travel

INVENTOR

Darius Bennett.  
BY  
Staley and Shepherd  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

DARIUS BENNETT, OF NELSONVILLE, OHIO.

## BUMPER FOR MINE-CARS.

SPECIFICATION forming part of Letters Patent No. 496,846, dated May 9, 1893.

Application filed August 24, 1892. Serial No. 444,006. (No model.)

*To all whom it may concern:*

Be it known that I, DARIUS BENNETT, a citizen of the United States, residing at Nelsonville, in the county of Athens and State of Ohio, have invented a certain new and useful Improvement in Mine-Cars, of which the following is a specification.

My invention relates to mine cars, and has particular relation to the construction and arrangement of the bumpers and draw bars thereof.

The objects of my invention are, to provide cars of this class with an improved form of metallic bumper; to construct the same in a durable and reliable manner; to provide improved means for connecting the draw-bar and bumper; to obviate the necessity of extending the bumper through the length of the car and to produce other improvements which will be more specifically pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a car having my improved bumper and draw-bar thereon. Fig. 2 is a bottom view of one end portion of a car. Fig. 3 is a central longitudinal section on line  $x x$  of Fig. 2 and enlarged therefrom. Fig. 4 is a side elevation of my improved bumper and a portion of the draw-bar and Fig. 5 is a transverse section on line  $y y$  of Fig. 3.

Similar letters refer to similar parts throughout the several views.

$a$  represents the car, of which  $b$  is the bottom or floor thereof,  $c$  are the vertical sides which rise from said floor,  $d$  are the inclined side extensions or side-boards and  $e$  are the end pieces.

$f$  represents the draw-bar body or plate which extends throughout the length of the car and is bolted or otherwise secured upon the upper surface of the central surface of the flooring  $b$ . As shown in the drawings, the heads or outer ends of the draw-bar plate  $f$  projects outward past the end of the central board of the car bottom, forming a tongue or extension indicated at  $f'$  within which is formed in the usual manner, a vertical coupling pin opening  $f^2$ . At each end of said central floor board extends downwardly from the

bar  $f$  with which it is formed, the vertical portion of a hook-shaped or reversed L-shaped arm  $g$ , the lower rearwardly extending and horizontal portion of which is parallel with and a short distance beneath the outer end portion of said central floor board.

$h$  represents the body of one of my improved metallic bumpers, the slightly rounded head or outer end  $h'$  of which projects beyond and in parallel alignment with the draw-bar tongue  $f'$  at a distance beneath the latter, said bumper head being provided with a coupling pin head  $h^2$  in vertical alignment with the pin-hole  $f^2$ . The body or inner end portion of each of the bumpers is supported against the under side of the central portion of the car bottom, being of such length as to insure a firm bearing against the latter. This bumper body is provided at the desired point on its upper side with a transverse recess or channel indicated at  $i$  which is adapted to receive as shown, the lower portion of the L-shaped arm  $g$  of the draw-bar and form a seat therefor.

$i^2$  represents one of the car binding strips or plates which extends beneath the car body between the bottom of the latter and the horizontal portion of the L-shaped arm  $g$ . This binder  $i^2$  has its outer end portions extending upwardly in the usual manner and secured to the outer sides of the car.

The bumper body  $h$ , horizontal portion of the L-shaped arm  $g$ , the floor  $d$  and draw-bar body  $f$  are connected as shown in the drawings, by vertical bolts indicated at  $K$ , while bolts  $k'$  may be employed at various points to connect the bumper body with the framework of the car.

$m$  represents one of the coupling pins which is of the usual form and which is adapted as shown in the drawings, to find a seat within the pin-holes  $h^2$  and  $f^2$  of the bumper and draw-bar.

From the construction herein shown and described, it will be seen, that in place of the wooden bumper commonly in use in cars of this class, I have provided a metallic bumper which will be strong and durable and which is so connected with the car as to prevent any injurious effects to the latter which might be caused by the shock or jar to the bumper.



Owing to the fact that the draw-bar arms *g* are embedded or seated within the bumper body, it will be seen that the latter is afforded a shoulder bearing in the direction of the strain or shock which may be imparted thereto and that any wearing or shearing action on the bolts is obviated.

It is evident that by my improved construction, cars of this class may be equipped with bumpers capable of resisting great shock and which will outlast the ordinary wooden bumpers.

My improved bumpers and draw-bars may be produced at a reasonable cost of manufacture and may be connected with any of the ordinary forms of mine cars.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

20 1. In a mine car, the combination with the frame-work thereof, of metallic bumpers *h* secured to and projecting from each end of

the car-body, transverse recess *i* on said bumper body and binder plates *i*<sup>2</sup> embracing the sides and bottom of said car and passing through said recess, substantially as and for the purpose specified. 25

2. In a mine car, the combination with the car frame, draw-bar *f* projecting from the ends thereof and L-shaped arms depending from said draw bar and extending beneath the car ends as described, of metallic bumpers *h* secured to the under sides of and projecting from the ends of said frame-work, transverse recess *i* within said bumper, adapted to receive the horizontal portions of said arms *g* and bolts uniting said bumpers and draw-bar through said arm *g* and the car bottom, substantially as and for the purpose specified. 35

DARIUS BENNETT.

In presence of—

WILLIAM H. MCCONNELL,  
W. C. HICKMAN.