

No. 746,092.

PATENTED DEC. 8, 1903.

J. E. JONES.  
MINE CAR FRAME.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.

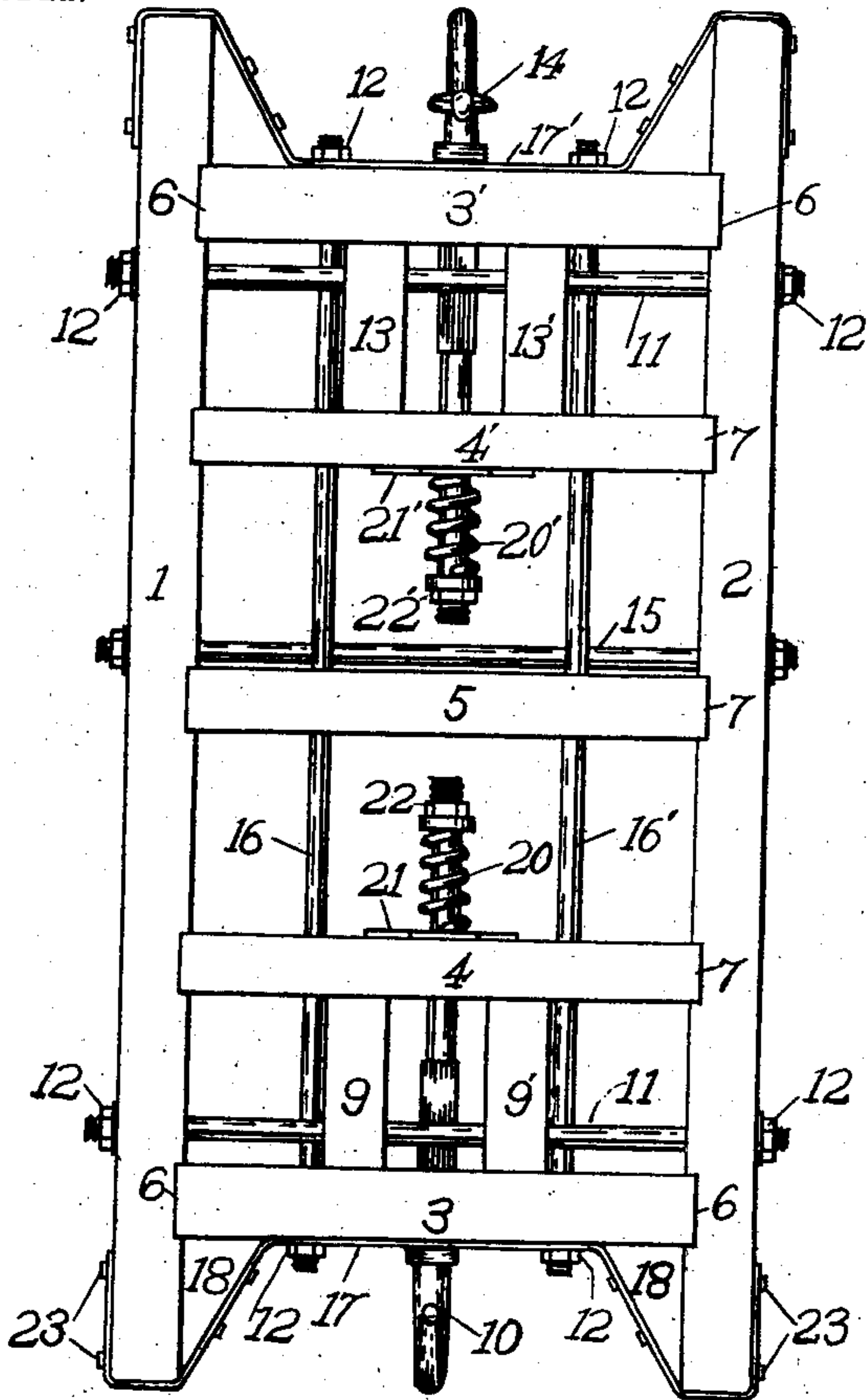


Fig. 1.

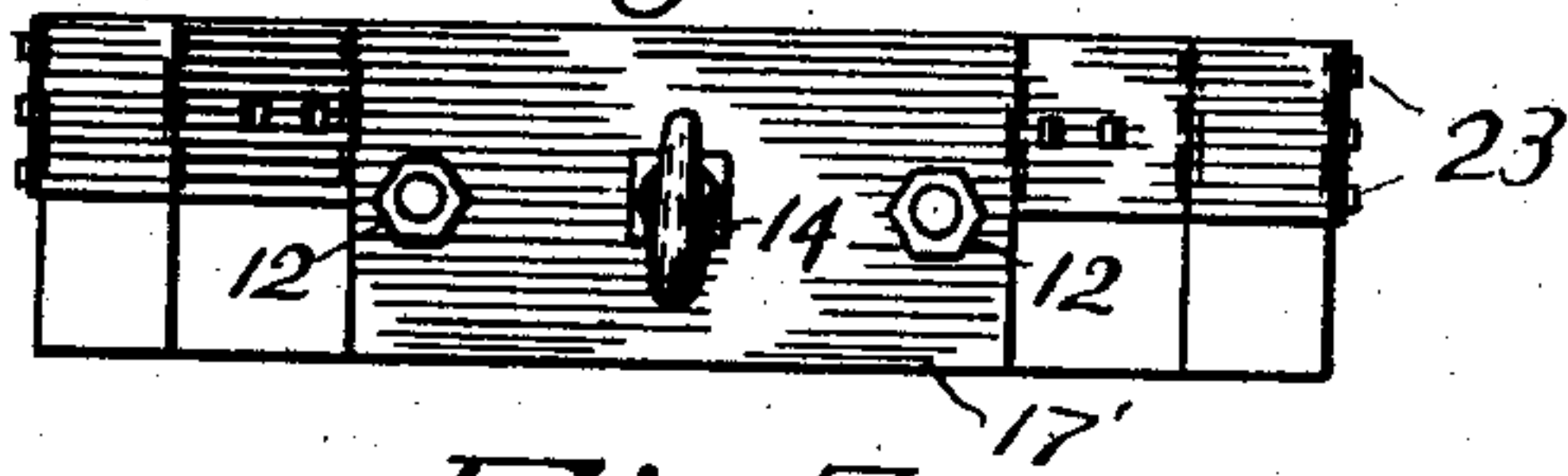


Fig. 3.

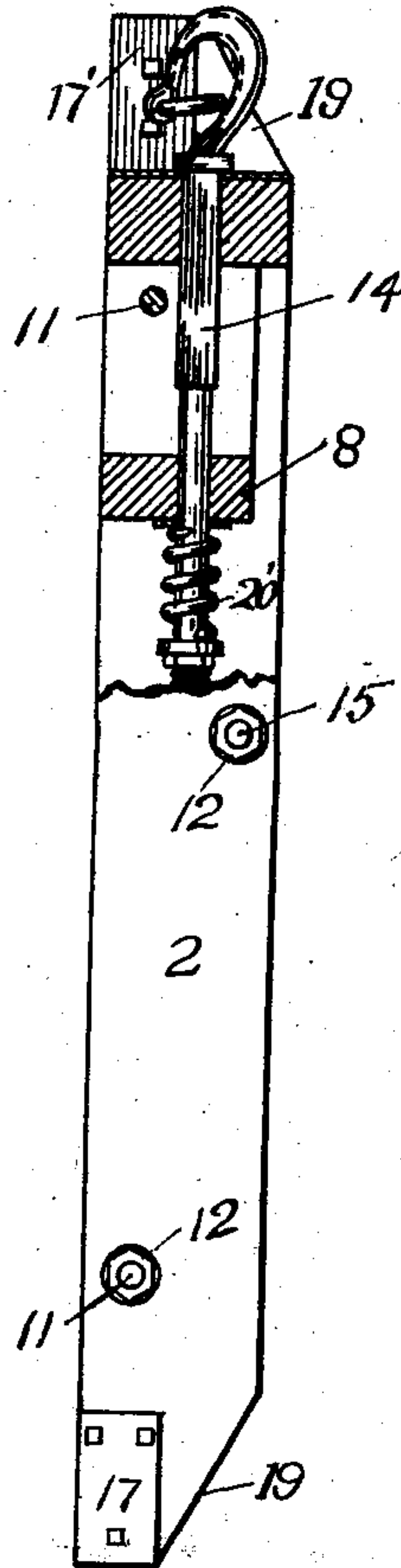


Fig. 2.

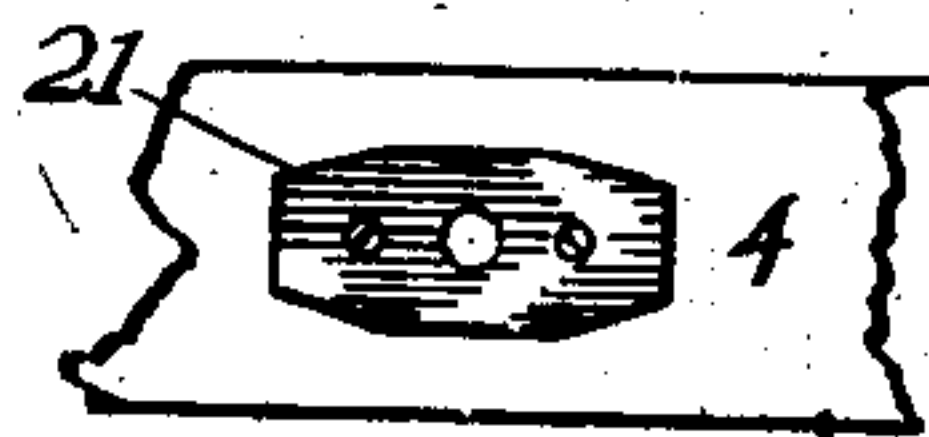


Fig. 4.

Witnesses

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## UNITED STATES PATENT OFFICE.

JAMES E. JONES, OF SCRANTON, PENNSYLVANIA.

## MINE-CAR FRAME.

SPECIFICATION forming part of Letters Patent No. 746,092, dated December 8, 1903.

Application filed September 12, 1903. Serial No. 172,905. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES E. JONES, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Mine-Car Frames, of which the following is a specification.

This invention relates to the frames of cars, such as are in use about mining and excavating operations; and the objects of the invention are to improve the draw-head attachments to such cars, to economize in the material used in the construction thereof, to simplify and strengthen such car-frames generally.

To these ends the invention consists of the arrangement, construction, and combination of parts, as are herein specified, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 shows a top plan view of that part of the mine-car frame which embodies my invention. Fig. 2 is an edge view of the same with parts broken away to more particularly show the details. Fig. 3 is a front end view of the frame shown in Fig. 1. Fig. 4 is a detail view showing the plate on which rests the end of the spring of one of the draw-heads.

Similar characters of reference denote like and corresponding parts throughout the several views.

In the drawings, 1 and 2 denote longitudinal timbers used in constructing a mine-car frame embodying my invention. The timbers 1 and 2 are connected by cross-timbers 3 3', 4 4', and 5. The ends of 3 3' are cut into countersunk notches 6 6, &c., which run laterally across the inner sides of the timbers 1 and 2, respectively. The ends of the timbers 4 4' and 5 likewise set into mortises 7 7, &c., which run only partially across the timbers 1 and 2, so that the ends of the said cross-timbers are supported by a flange 8 on the timbers 1 and 2, respectively. Arranged parallel with the main timbers 1 and 2 and between the cross-timbers 3 and 4 are short struts 9 and 9', between which is disposed the draw-head 10. The struts 9 and 9' are secured into position by the cross-rod 11, which rod also passes through the timbers 1 and 2, which is used for drawing the framework together by means of nuts 12 12. Similar struts 13 13'

are arranged between the timbers 3' and 4', and disposed between them is the draw-head 14. The said struts 13 13' are held by the cross-rod 11', secured in a similar manner as rod 11. Other cross-rods, as 15, may serve to make the frame more staunch. Disposed against the outer sides of the struts 9 9' and 13 13' are longitudinal rods 16 16', which pass through all the cross-timbers of the frame and also through end plates 17 and 17', the ends of said rods being secured by nuts 12 12, &c. From an underside corner of the longitudinal timbers 1 and 2 a triangular piece 18 18, &c., is sawed off on the line 19 19, &c. One of these pieces is placed at each exterior corner of the frame in such a manner that the hypotenuse thereof is faced with a section of the end plates 17 17' when the same are bent and bolted into the positions as shown in the drawings. The draw-heads 10 and 14, respectively, have each a shaft extending through holes in the cross-timbers 3 4 and 3' 4', respectively, on the inner end of which shafts are arranged coiled springs 20 20', respectively, arranged to rest against shield-plates 21 21', respectively, which are secured to the timbers 4 4', respectively, the said springs being capable of adjustment by means of screw-threaded nuts 22 22', respectively.

In using the car-frame thus described it should be noted that pressure of the draw-head being first exerted on the cross-timbers 4 4' is transmitted through the struts 9 9' and 13 13' to the cross-timbers 3 3', which in their turn are sustained by the longitudinal rods 16 16', running the entire length of the frame and having their ends secured by the end plates 17 17', the recurved ends of which extend around the ends of the timbers 1 and 2, respectively, and are bolted thereto by means of lag-screws 23 23, &c., thus affording unusual rigidity in the framework, which is of comparatively simple construction, to produce the results obtained.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described mine-car frame, comprising a pair of longitudinal timbers; two pairs of cross-timbers joining said longitudinal timbers, and each pair of said cross-timbers separated by a pair of struts; draw-heads



disposed between the struts of each pair; end plates through which said draw-heads extend, and the ends of said end plates recurved over and secured to the ends of the longitudinal timbers aforesaid together with cross-bolts holding the framework together; longitudinal bolts extending through the end plates aforesaid, parallel with the draw-heads and longitudinal timbers, aforesaid, substantially as specified.

2. In a mine-car frame the combination of a pair of longitudinal side timbers joined with a pair of cross-timbers at each end, an end plate facing the outer end timber on each end, and the ends of each of said plates being re-

curved and encompassing the ends of the longitudinal timbers aforesaid, longitudinal rods extending through the frame and through the end plates aforesaid, together with a draw-head extending through each end pair of cross-timbers aforesaid, and a pair of struts separating each of said pairs of cross-timbers, and one of the draw-heads disposed between each pair of struts, substantially as specified.

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

JAMES E. JONES.

Witnesses:

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