W. P. KRAUSE.

TROLLEY.

APPLICATION FILED NOV. 22, 1919.

1,424,361.

Patented Aug. 1, 1922.

2 SHEETS—SHEET 1.

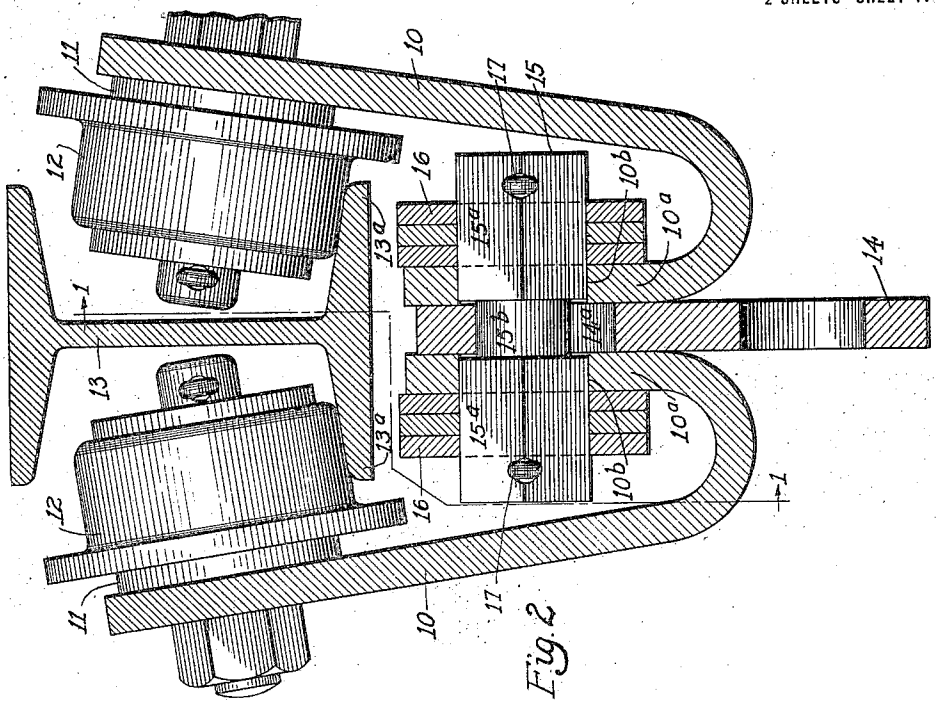


Fig. 2

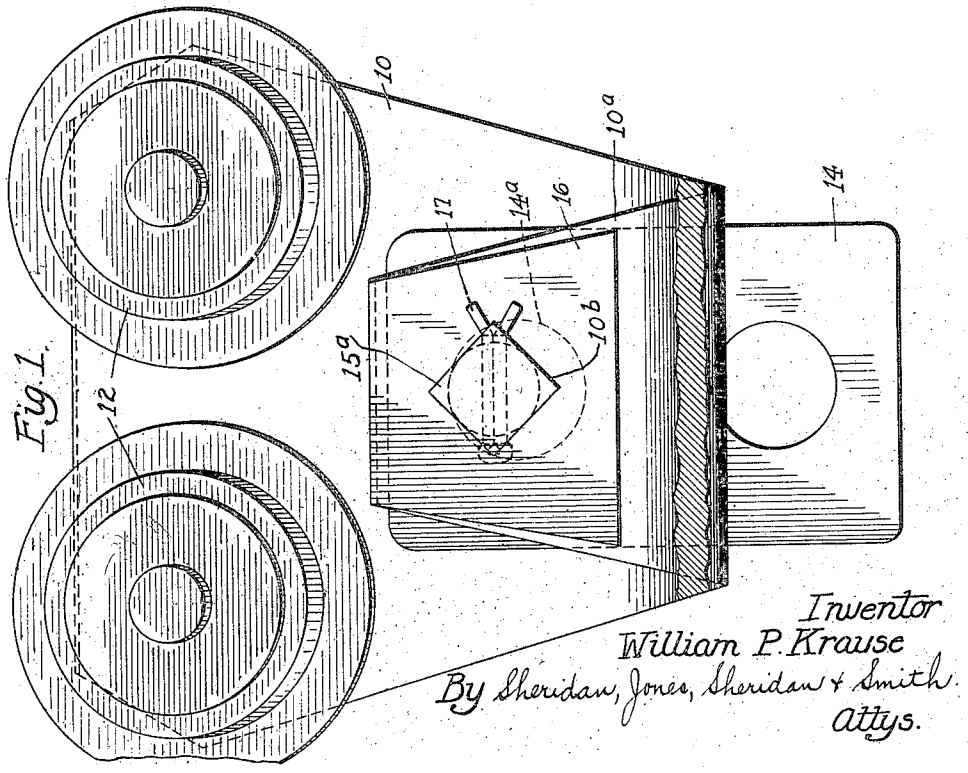


Fig. 1

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2 SHEETS—SHEET 2.

Fig. 3

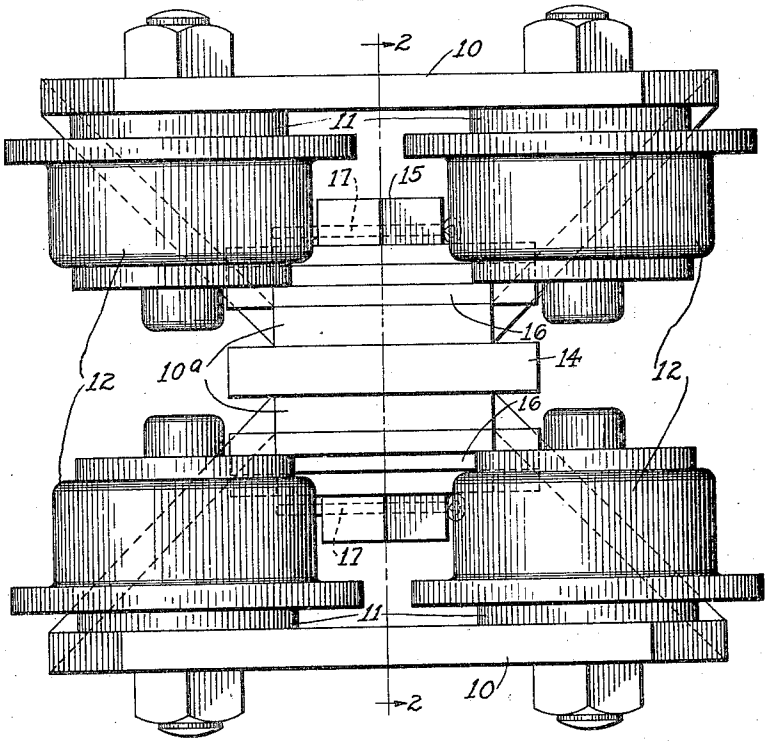
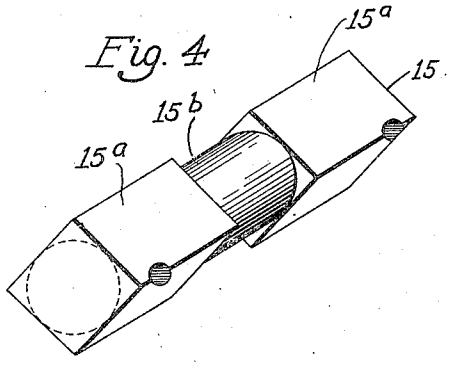


Fig. 4



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UNITED STATES PATENT OFFICE.

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TROLLEY.

1,424,361. Specification of Letters Patent. Patented Aug. 1, 1922.

Application filed November 22, 1919. Serial No. 339,351.

To all whom it may concern:

Be it known that I, WILLIAM P. KRAUSE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trolleys, of which the following is a specification.

This invention relates to improvements in trolleys and has for its object to provide a new and improved trolley especially adapted for use with overhead cranes and the like in which the load depends from the trolley mounted to roll on an I-beam or the like.

The principal object of my invention is to provide a device of the class described in which integral side plates are used eliminating the articulated construction in present day use in which spacers, riveted or otherwise secured to the side plates, extend inwardly thereof and provide a mounting for the load regulating shaft. In my construction I utilize simply side plates, the ends of which are bent to bring them adjacent and in substantial parallelism, such ends furnishing the mounting for the load shaft from which depends the load link. This construction is superior in strength and much less expensive to manufacture than is the present day construction. At the same time it provides for ready adjustment for use on varying sizes of supporting beams.

These and other objects will be more fully described as set forth in the following specification and shown in the accompanying drawing in which

Figure 1 is a vertical section along the line 1—1 of Fig. 2.

Fig. 2 is a vertical transverse section through my device.

Fig. 3 is a plan view of the same.

Fig. 4 is a perspective of the load shaft.

Like numerals refer to like elements throughout the drawings, in which 10—10 designate the side plates converging toward their bottom portion and provided with suitable supports generally indicated by 11 at their upper portions, the wheels 12—12 being rotatably mounted upon said supports, the convergence of the plates 10—10 insuring inclined axes for the wheels 12—12 to accommodate the inclination of the bottom flanges 13^a of the I-beam 13 upon which the wheels roll, as shown in Fig. 2, for example.

The lower ends of the plates 10—10 are bent inwardly and upwardly, the end portions being designated by numerals 10^a. These end portions are apertured, as indicated by numerals 10^b, these apertures, in the form shown, being non-circular for a purpose to be described below. The ends 10^a, when assembled, lie substantially adjacent and in substantial parallelism sufficient of a gap being provided to accommodate the thickness of the load link 14 and to permit free rotation of the latter between the side plates.

A load shaft 14 is provided having non-circular portions 15^a and an intermediate cylindrical portion 15^b. The non-circular portions 15^a extend through the apertures 10^b of the side plates 10, (see Fig. 2), and the load link 14 is provided with the aperture 14^a mounted upon the portion 15^b of the load shaft, the cylindrical portion permitting rotation of the load link 14 under the movement of a load supported therefrom.

The load shaft 15 is provided of such length as to project on either side of the ends 10^a and spacing washers 16 are mounted on the portions 15^a of the load shaft 15, such washers being secured against accidental displacement by cotter pins 17, or the like, the latter also serving to prevent displacement of the load shaft 15.

When it is desired to use the trolley upon an I-beam of greater size than that shown, for example, the washers 16 may be arranged and any desired number thereof located on the load link side of the upturned ends 10^a, as will be obvious, thereby spacing said side plates 10 and the wheels 12 farther apart to accommodate the greater width of the flange 13^a.

By the construction of side plates shown I obtain greater strength and eliminate the articulated construction in present day use. Furthermore, the stress upon the load shaft 15 is greatly reduced in that the distance from the center of load to the centers of support is less. In addition a substantially smooth exterior is provided for the side plates 10 and the expense of manufacture is greatly reduced.

It will be obvious that my invention is susceptible of modification and improvement and I do not wish to be restricted to the form shown and described save as defined in the appended claims.

What I claim is:—

1. A trolley comprising side plates having

their ends bent upwardly and inwardly and provided with non-circular apertures, a load shaft having non-circular portions extending through said apertures, a cylindrical portion intermediate said non-circular portions and removable spacing members carried by said load shaft intermediate said side plates to permit adjustment thereof longitudinally of said shaft.

2. A trolley comprising side plates having their ends bent upwardly and inwardly, a load shaft extending through said ends, and a plurality of spacing washers mounted on said shaft intermediate said side plates, said washers being removable to permit the adjustment of said side plates longitudinally on said shaft.

3. A trolley comprising side plates having their ends bent inwardly and upwardly, a load shaft extending through said ends, the ends of said shaft terminating in the spaces between said side plates and the upturned ends thereof, and spacing washers mounted on said shaft.

4. A trolley comprising side plates having their ends bent upwardly and inwardly and provided with non-circular apertures, a load shaft terminating intermediate said side plates and having non-circular portions extending through said apertures, a cylindrical portion intermediate said non-circular portions, a load link rotatably mounted upon said cylindrical portions between said plates, and spacing members carried by said load shaft to permit the adjustment of said side plates thereon.

In testimony whereof, I have subscribed my name.

WILLIAM P. KRAUSE.