

No. 862,643.

PATENTED AUG. 6, 1907.

C. A. KELLER.
MINE CAR AXLE.
APPLICATION FILED DEC. 14, 1906.

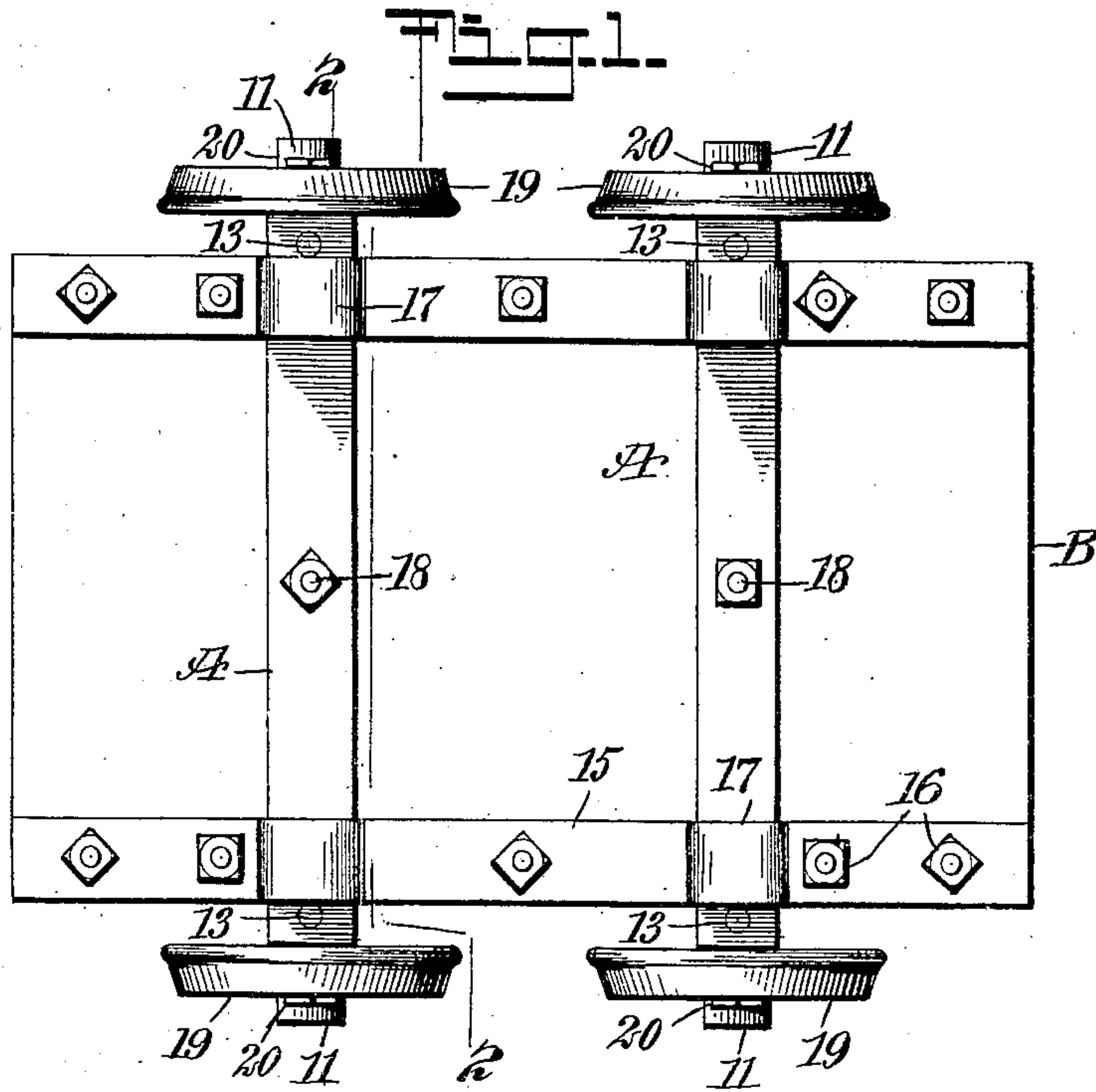


Fig. 2

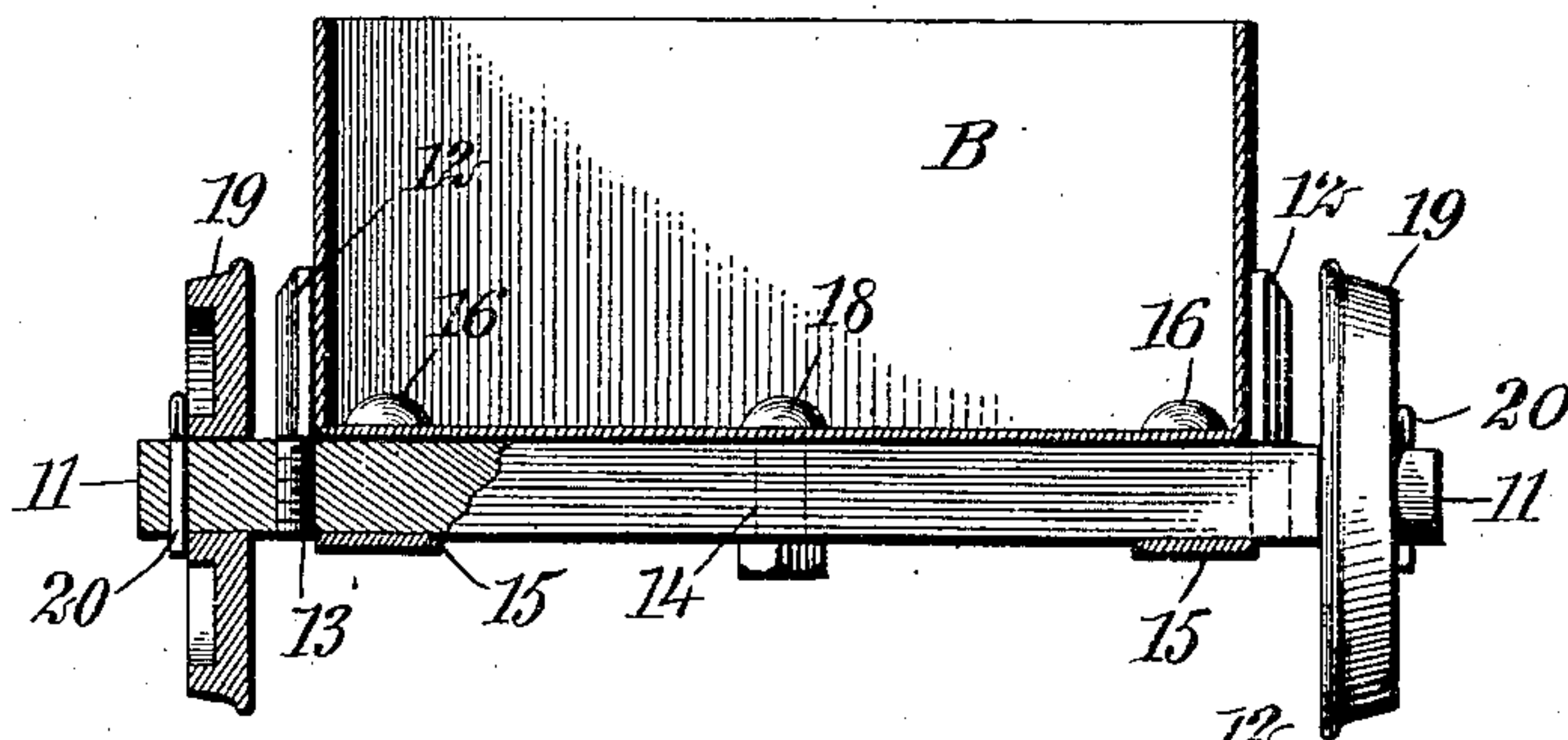
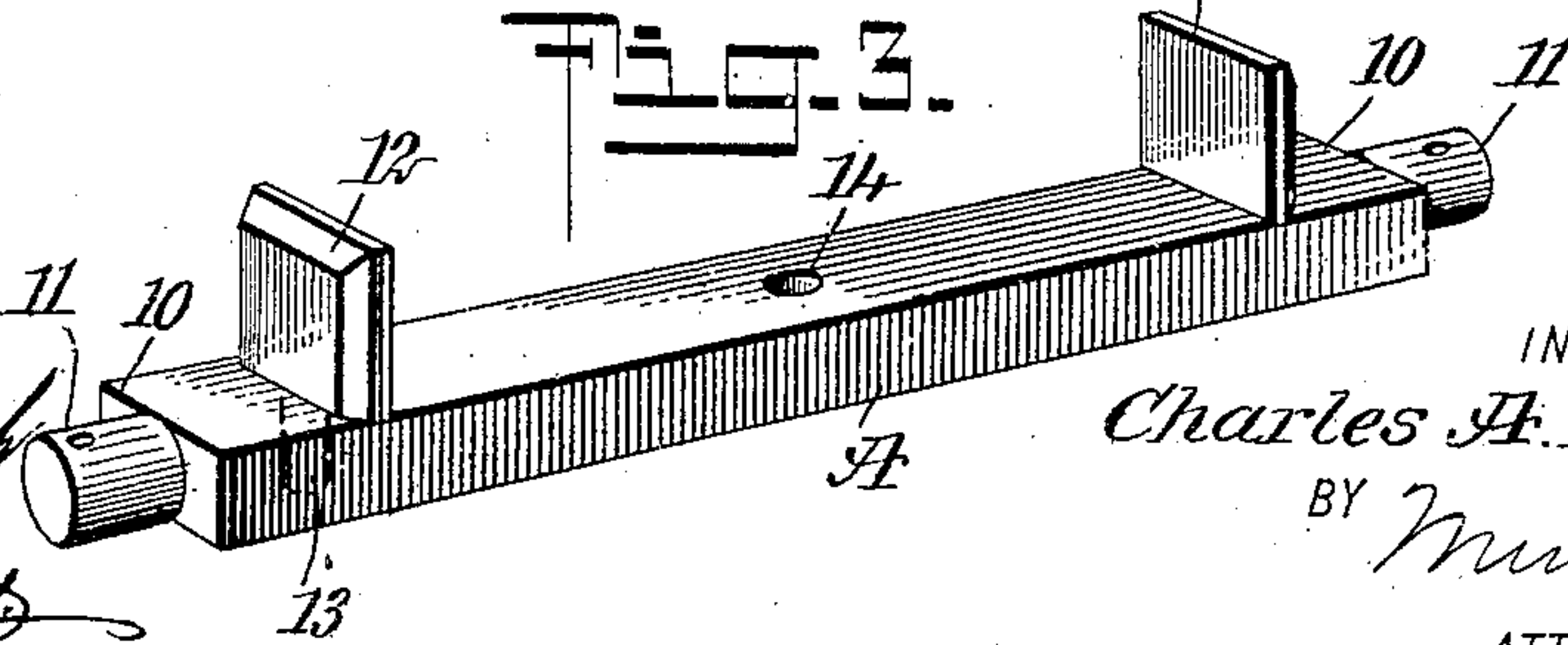


Fig. 3



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CHARLES A. KELLER, OF ROSEDALE, INDIANA.

MINE-CAR AXLE.

No. 862,643.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed December 14, 1906. Serial No. 347,827.

To all whom it may concern:

Be it known that I, CHARLES A. KELLER, a citizen of the United States, and a resident of Rosedale, in the county of Park and State of Indiana, have invented a new and Improved Mine-Car Axle, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a durable and simple form of axle especially adapted for application to mine and similar cars, the construction of the axle being such that the wheels may freely revolve without rubbing against the sides of the body of the car even under the roughest conditions of use, and so that the body of the car will be prevented from shifting on the axle.

Another purpose is to provide convenient and simple means for applying and holding the axles in place, and to so construct the axles that they may be readily and quickly dismembered and closely packed for transportation and storage.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a bottom plan view of a car and the improved axles applied thereto; Fig. 2 is a section taken substantially on the line 2—2 of Fig. 1; and Fig. 3 is a perspective view of one of the axles.

The axle and parts carried thereby are constructed of metal, and the body of an axle may be of any desired length and is rectangular in cross section, having its ends 10 straight and square; and from the central portion of each end 10 of the body of an axle A a trunnion 11 extends outward, the trunnions being circular in cross section and integral with the body of the axle.

Adjacent to each end of the body portion of the axle A a plate 12 extends upward from the upper face of the axle. These plates may be of any desired height, and are of a width equal to that of the axle, the inner faces of the plates being flat or straight, and their outer faces may be given any desired formation.

Each plate 12 is removably attached to the body of an axle A, preferably through the medium of threaded shanks 13, which are integral with the lower edges of the plates and are made to enter similarly threaded apertures in the axle as is shown in Fig. 2. The body portion of each axle A is further provided with a central opening 14, extending through from top to bottom.

The body B of the car is also made of metal, and the said body is provided on its under face at each side with a metal strap 15, extending preferably from end to end, the straps being secured to the body of the car by bolts 16 or their equivalents, and each strap 15 is provided at each side of its center with a stirrup or loop formation 17, adapted to neatly receive the end portion of an axle, and in this manner the axles are held in close engagement with the bottom of the car and are readily slipped in position; but the body B of the car is rigidly secured to the axle by bolts 18 or their equivalents passed through the bottom of the car body and the central openings 14 in the axles.

The wheels 19 are of any approved type and turn freely on the trunnions 11, their inner or flat faces being adjacent to the flat end portions 10 of the body of the axles A. Under this construction the wheels are held straight and have little friction, thus lessening the draft of the car, and if a lubricating material is applied to the end portions of the body of the axles the friction can be reduced to a minimum. The wheels 19 are held in position by cotter pins 20 or like devices. The plates 12 when the body of the car is placed in position on the axle are in close engagement with the outer side faces of the said body.

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

1. The combination, with the body of a car, and straps secured to the bottom of said body, said straps having opposing stirrups formed therein, of axles passed through the opposing stirrups, said axles being polygonal in cross section and provided with projecting trunnions at the ends thereof, the shoulder formed between the trunnion and the axle end being squared to form an abutting surface for the wheel, and plates corresponding in width to the upper surface of the axle, arranged transversely near each end thereof, said plates having a threaded pin engaging an opening in the upper surface of the axle.

2. A car axle polygonal in cross section, and provided with projecting trunnions at the ends thereof, the shoulder formed between the trunnion and the axle end being squared to form an abutting surface for the wheel, and plates corresponding in width to the upper surface of the axle, arranged transversely near each end thereof, said plates having a threaded pin engaging an opening in the upper surface of the axle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES A. KELLER.

Witnesses:

JOHN M. GILLIGAN,
JAMES D. BULLOCK.