

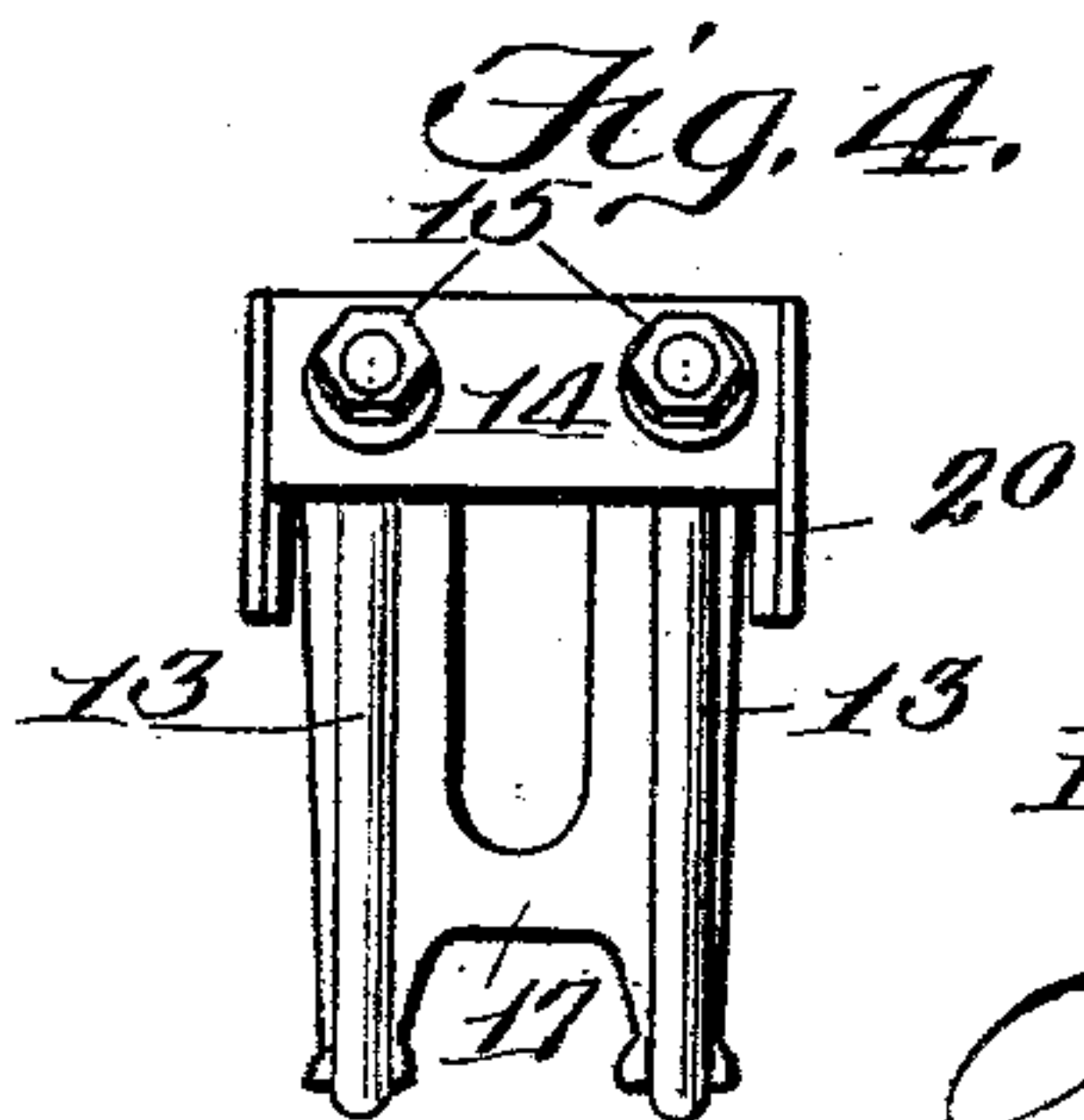
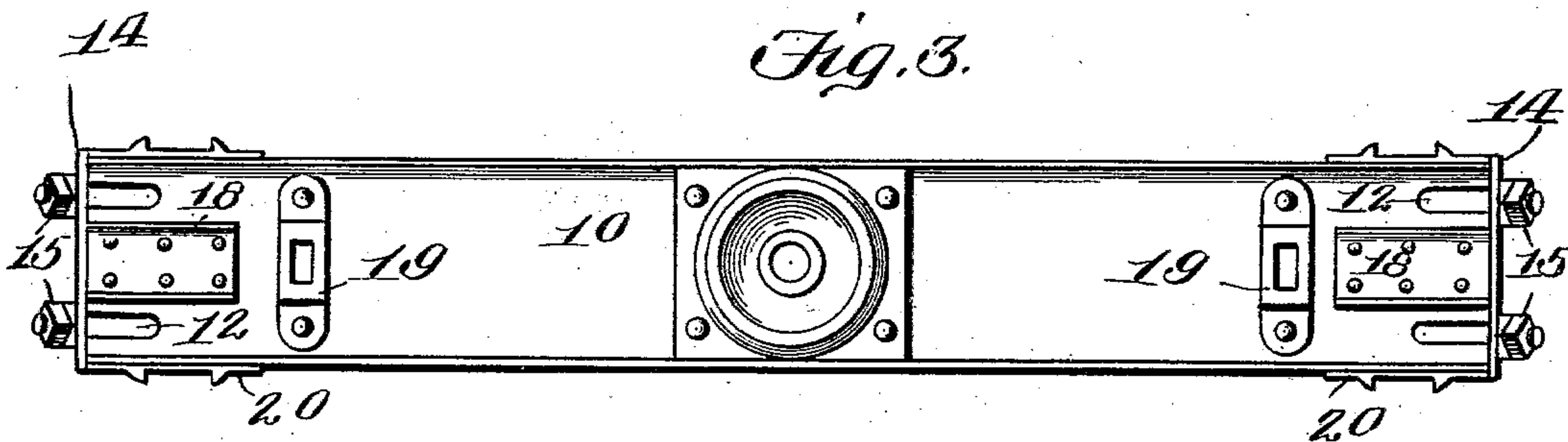
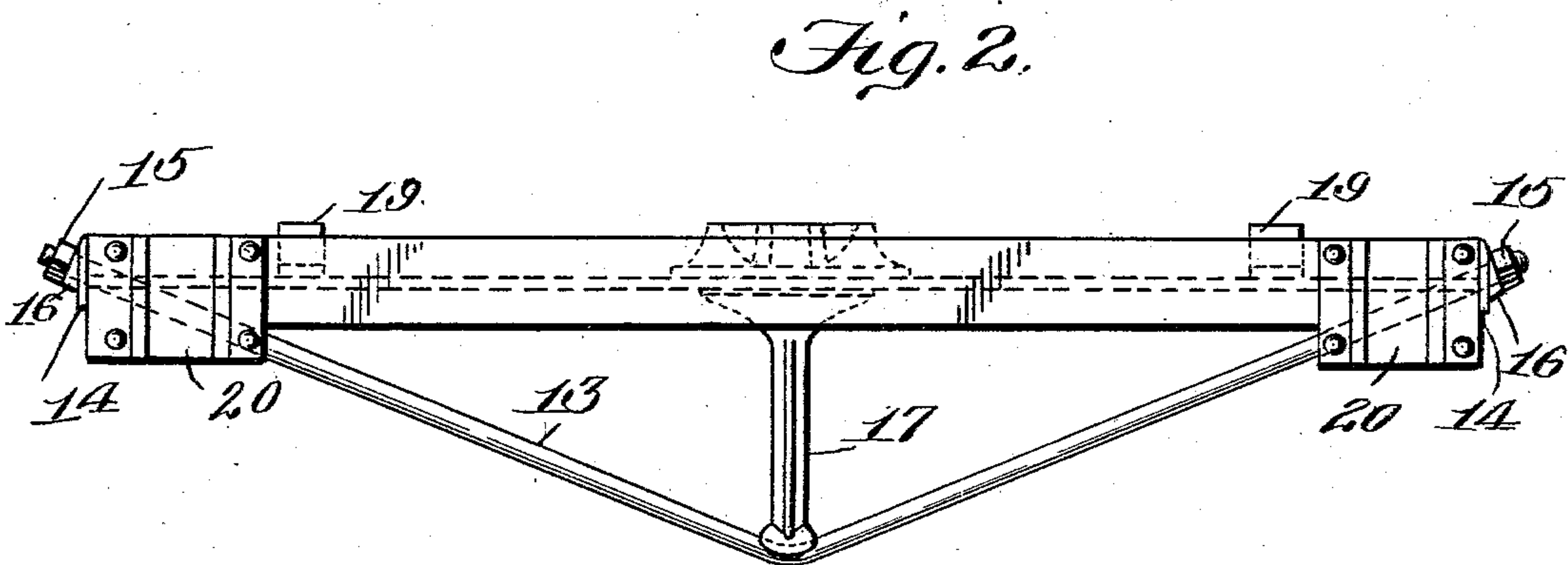
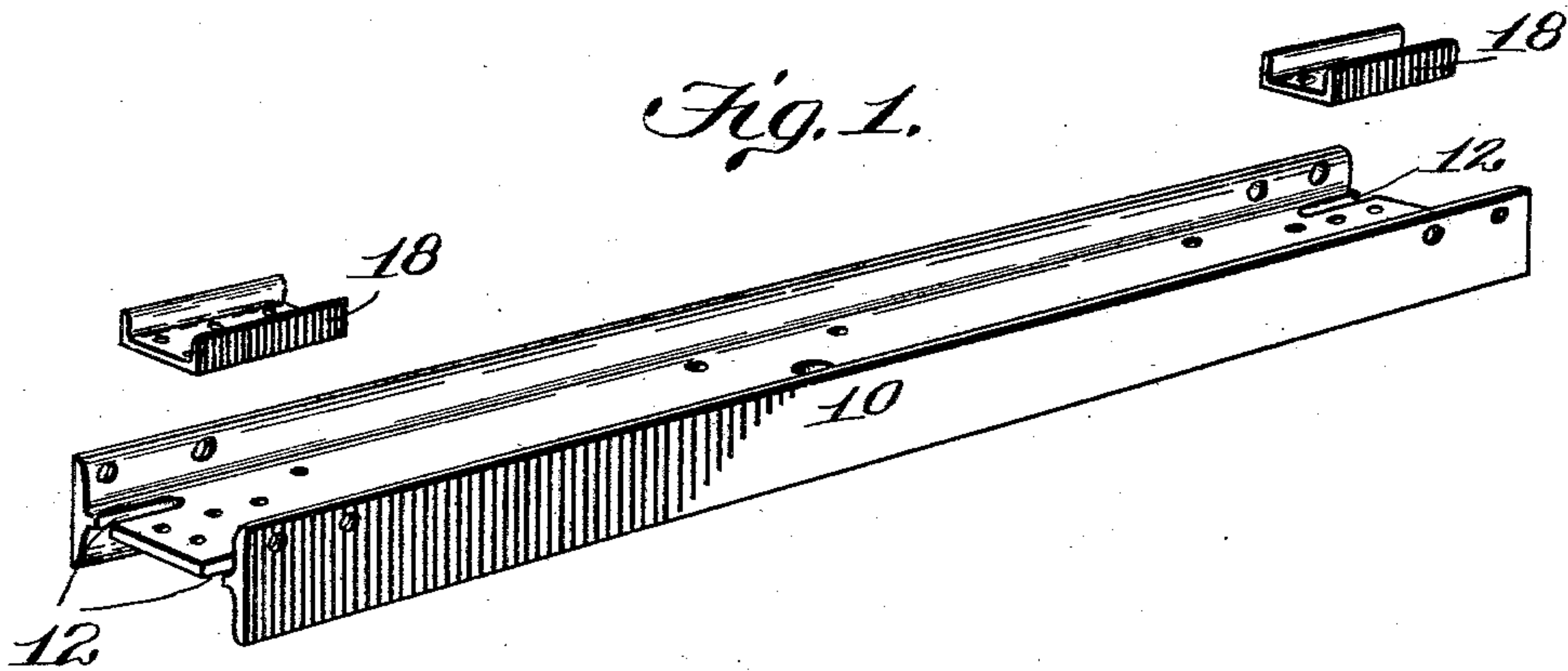
No. 743,756.

PATENTED NOV. 10, 1903.

E. W. SAMEN.
CAR TRUCK.

APPLICATION FILED SEPT. 11, 1902.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD W. SAMEN, OF LASALLE, ILLINOIS.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 743,756, dated November 10, 1903.

Application filed September 11, 1902. Serial No. 123,016. (No model.)

To all whom it may concern:

Be it known that I, EDWARD W. SAMEN, a citizen of the United States, residing at Lasalle, in the county of Lasalle and State of Illinois, have invented new and useful Improvements in Car-Trucks, of which the following is a specification.

This invention relates to car-trucks.

The improved car-truck includes in its construction a bolster comprising a compression member having slots in its opposite ends, an arched tension member, the ends of which extend through said slots, face-plates fitting against the ends of the compression member and perforated to receive said tension member, and means for holding the parts in assembled relation. In the present case the compression member consists of an I-section or ordinary I-beam, the web of which is horizontally disposed and the advantages of employing which will hereinafter appear, and the tension member consists of a pair of rods arched centrally and disposed in parallelism, and a central support is situated between and coöperates with the compression and tension members, respectively. A bolster constructed as set forth is thoroughly strong and serviceable and is capable of properly resisting the various shocks and strains to which it is subjected in practice.

Other objects and advantages of the invention will be set forth at length in the following description, while the novelty thereof will constitute the basis of the claims succeeding such description.

The invention is clearly illustrated in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of the compression member of the bolster. Fig. 2 is a side elevation of said bolster, and Figs. 3 and 4 are plan and end views of the same.

Like characters refer to like parts in all the figures.

The bolster includes in its construction a compression member 10, which is shown as consisting of an I-beam of proper length. The web or body of the I-shaped compression member 10 is horizontally disposed. By employing an I-beam as a compression member for the bolster the necessary horizontal and vertical stiffness of the same are secured with-

out depending upon riveted-up sections to secure these results. A common failure of the ordinary iron or steel bolsters is that the bolster gives way or breaks or bends in a horizontal plane, due to the starting or stopping of the truck, by violently kicking one car against another, and those bolsters which are strong enough to resist these strains generally are of the riveted-up class, and they are objectionable, as the rivets shear or are loosened up. Other bolsters having channel-beams while strong enough in a horizontal plane are weak at the side bearings, as in some cases the car is loaded to one side of the center plate and the truck-bolster carries most of the load on the side bearing under that side of the car, or in rounding a curve at a high speed the weight of body and load is mostly carried on the two outside side bearings. The opposite ends of the compression member 10 are slotted, as at 12, the slots having open outer ends coincident with the opposite edges of said compression member, and these slots are adapted to receive the opposite ends of the truss-rods 13, arranged in parallelism below the compression member 10 and inversely arched, said truss-rods 13 constituting the tension member of the bolster. Face-plates, as 14, fit against the opposite ends of the compression member 10, and the upper faces of the same are flush with each other, and said face-plates are perforated to receive the enlarged threaded ends of the truss-rods 13. Said threaded ends of the truss-rods receive nuts 15, by which the parts may be held assembled and which are adapted to bind against upwardly and inclined faces of bosses 16 on said face-plates surrounding the perforations thereof.

A central support or king-post, as 17, is suitably attached to and depends from the compression member 10 substantially centrally thereof, it having seats in its lower end to receive the truss-rods, and it serves to carry the load from the compression member, as is usual in this class of devices.

I secure to the opposite ends of the web of the compression member and upon the upper side thereof reinforcing members 18, suitably secured in place and which may consist of channels or angles secured together to give the desired channel form and which

strengthen the compression member at its opposite ends. The outer ends of the compression member and reinforcing members 18 are flush with each other, so as to obtain a greater surface against which the face-plates 14 bear.

By slotting the web for the truss-rods in the manner indicated the center of gravity of the compression and tension members is brought as near as possible over the center of load reaction, which is the center of spring-seats, thereby making it possible to use a lighter section of I-beam than if the center of gravity of rods and beam intersect several inches beyond the center of spring-seats, as they would in case the slots were not present.

The side bearings are denoted by 19, and they are secured upon the upper side of the web of the compression member near the opposite ends thereof, as is customary.

The flanges of the compression member are provided upon their outer sides and at their opposite ends with the usual slide or guide plates 20.

The invention is not limited to the exact construction hereinbefore described, for many variations may be adopted within the scope of my claims.

Having described the invention, what I claim is—

1. In a car-truck, a bolster comprising an I-shaped compression member having slots in the opposite ends of its web, an arched tension member, the ends of which extend

through said slots, face-plates fitting against the ends of said compression member and perforated to receive said tension member, means for holding the parts in assembled relation, and a support between the compression and tension members.

2. In a car-truck, a bolster comprising an I-shaped compression member having slots in the opposite ends of its web, an arched tension member, the ends of which extend through said slots, face-plates fitting against the ends of said compression member and perforated to receive said tension member, means for holding the parts in assembled relation, a support between the compression and tension members, and reinforcing-plates secured to the web of the compression member and the said face-plates being adapted to abut against said reinforcing-plates.

3. In a car-truck, a bolster comprising an I-shaped compression member having slots in the opposite ends of its web, a tension member the ends of which extend through said slots, means independent of the web for holding the tension member in said slots, and a support between the compression and tension members.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD W. SAMEN.

Witnesses:

J. E. COLEMAN,
RICHARD YOUNG.