No. 631,477. Patented Aug. 22, 1899.

H. B. SCHINDLER.

FOUR WHEELED WAGON TRUCK.

(Application filed May 9, 1899.)

(No Model.)

Fig. 1

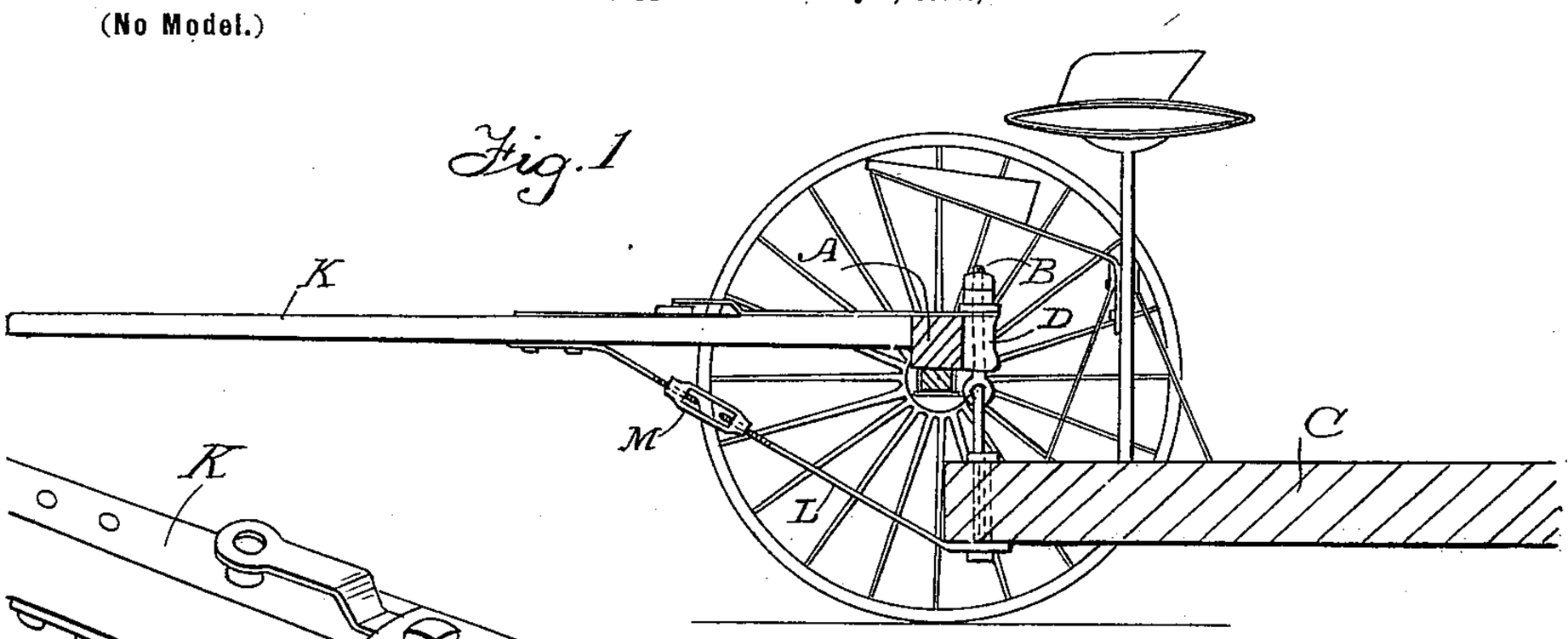

Fig. 2

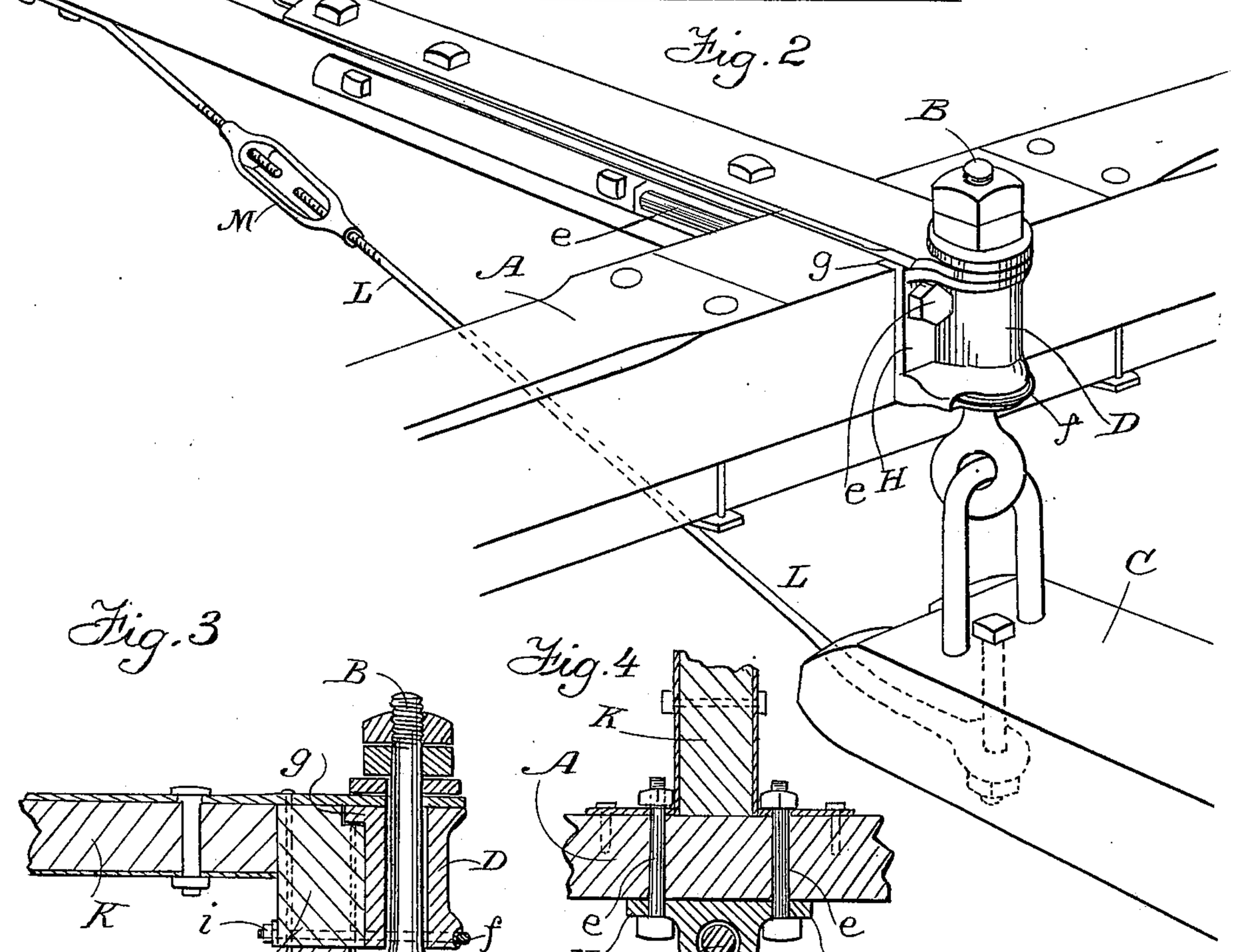

Fig. 3

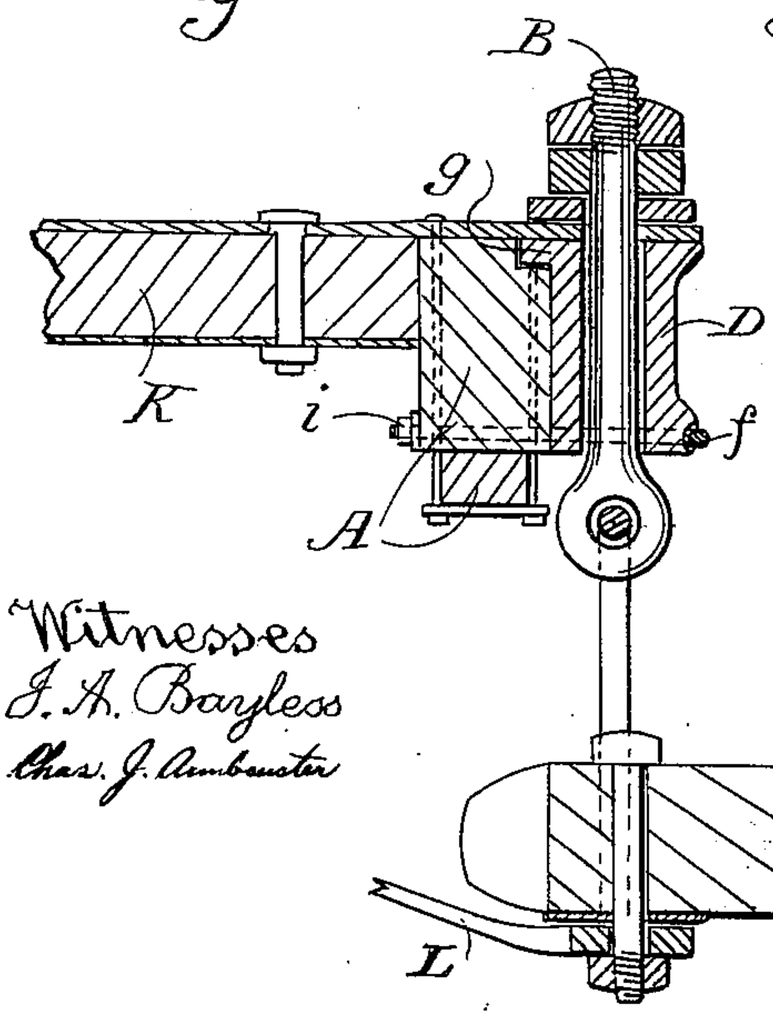

Fig. 4

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY B. SCHINDLER, OF OAKLAND, CALIFORNIA.

FOUR-WHEELED WAGON-TRUCK.

SPECIFICATION forming part of Letters Patent No. 631,477, dated August 22, 1899.

Application filed May 9, 1899. Serial No. 716,159. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. SCHINDLER, a citizen of the United States, residing at Oakland, county of Alameda, State of California, have invented certain new and useful Improvements in Four-Wheeled Wagon-Trucks; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention has reference to that class of heavy four-wheeled wagon-trucks in which the forward end of the platform is suspended below the front axle; and it relates to the means and devices for connecting and suspending the forward end of the platform from the axle and to the means and connections for sustaining the pole or tongue of the vehicle in the proper horizontal or draft line. In this class of wagon-trucks it has heretofore been the practice to suspend the front end of the platform from an eye on the lower end of a strong bolt which passed up through a hole in the axle and which was secured by nuts screwed on the upper end of the bolt above the axle. This construction greatly weakened the axle, because the bolt-hole removed a large portion of the metal of the axle at the very point where the strain of the load was greatest. In such former trucks also the pole or tongue of the wagon was held and retained in its horizontal or draft position by a counterpoise device consisting of a circular bent rod which was fastened at each end to the upper rear edge of the axle, so that the bent portion of the rod extended in rear of the axle. On this bent or curved rod a trolley-runner was mounted and connected by chains with the front end of the platform, so that the weight of the forward end of the platform counterpoised the weight of the pole and kept its forward end from dropping down and being a constant weight on the horses. The trolley traveling on the circular rod allowed the necessary freedom of the front end of the pole in turning curves; but it was found in practice that the trolley would soon wear away a reduced section of the curved rod where the motion was most frequent, leaving a jog or incline at each end of the worn part, which caused annoyance to the team when the trolley passed beyond the inclined point and started to return by causing a thrashing movement of the tongue that injured the horses. My improvements remedy both of these difficulties and produce a construction that is greatly superior and more economical in every way.

It consists of the means and devices hereinafter described, and illustrated in the drawings.

In the drawings, Figure 1 is a longitudinal vertical section of the front-axle pole and forward end of the platform. Fig. 2 is a perspective of the same. Fig. 3 is an enlarged longitudinal vertical section through the axle and king-pin box, and Fig. 4 is a horizontal section taken through the axle and king-bolt box.

Let A represent the front axle of a four-wheeled wagon-truck. Instead of passing the king-bolt B, which carries the forward end of the platform C, down through the axle I construct a box D as a separate casting and secure it by bolts *e* and a staple-clamp *f* to the rear side of the axle, opposite its middle, and pass the king-bolt down through this box. The king-bolt B is not different from the king-bolt heretofore used, only it passes down through the box D instead of through the axle.

The box or casting D is cast with a rectangular lug *g* on its upper rim next to the rear face of the axle, and this lug enters and fits into a dowel or corresponding groove or channel in the upper rear edge of the axle, as shown at Fig. 3. I also construct it with side wings H in order to more conveniently bolt it to the axle. The staple bolt or clamp *f* passes around the lower end of the box or casting and then through holes in the axle on each side and is secured by nuts *i* on the front of the axle. The front end of the wagon-platform is then suspended from the lower end of the king-bolt B in the usual way. It is apparent that the box or casting might be secured to the front side of the axle; but I prefer to secure it to the rear side, because I secure another advantage, hereinafter named, by attaching it at that point. By this means I avoid weakening the axle by drilling a bolt-

hole through its middle and get the point of draft in rear of the axle, which allows more freedom in turning the front wheels.

The tongue or pole K is rigidly attached to the axle, so that as its forward end rises or falls the axle must turn as its central point. By suspending the forward end of the platform from the casting D at the rear side of the axle I secure a greater leverage for the weight of the suspended platform to aid in counterbalancing the pole; but in order to insure the horizontal position of the pole I employ a brace-rod L, one end of which is secured to the under side of the pole at a short distance in front of the axle, while the opposite or rear end is attached to the forward suspended end of the truck-platform. A turnbuckle M is introduced in the length of this brace-rod, by means of which it can be lengthened or shortened to regulate the height of the pole. This supporting-rod permits the pole to swing from side to side without jolt or jar and at the same time keeps it in a position to relieve the horses from its weight. I thus provide a better, more substantial, and more durable construction that will increase the efficiency and easy action of the truck.

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

1. In a four-wheeled wagon-truck, a box or casting adapted to be secured to the middle of the forward axle; a lug or flange on the upper end of the casting adapted to fit in a rabbet or groove in the upper edge of the axle; side wings on the casting provided with one or more bolt-holes; a king-bolt passing through a vertical hole in the body of the box or casting, and means for suspending the forward end of the truck from the lower end of the king-bolt, substantially as described.

2. In a four-wheeled wagon-truck, a box or casting adapted to be secured to the middle of the forward axle; a rectangular lug or flange on the upper end of the casting adapted to fit in a rabbet or groove in the upper edge of the axle; side wings on the casting provided with one or more bolt-holes; a staple fitting in a groove around the lower end of the casting, and passing through the axle and secured by nuts on the opposite side of the axle; a king-bolt passing through a vertical hole in the body of the box or casting, and means for suspending the forward end of the truck-platform from the lower end of the king-bolt, substantially as described.

In testimony whereof I have hereunto signed my name, in the presence of two witnesses, this 3d day of April, A. D. 1899.

HENRY B. SCHINDLER.

Witnesses:
WM. H. THOMPSON,
W. F. RUSSELL.