

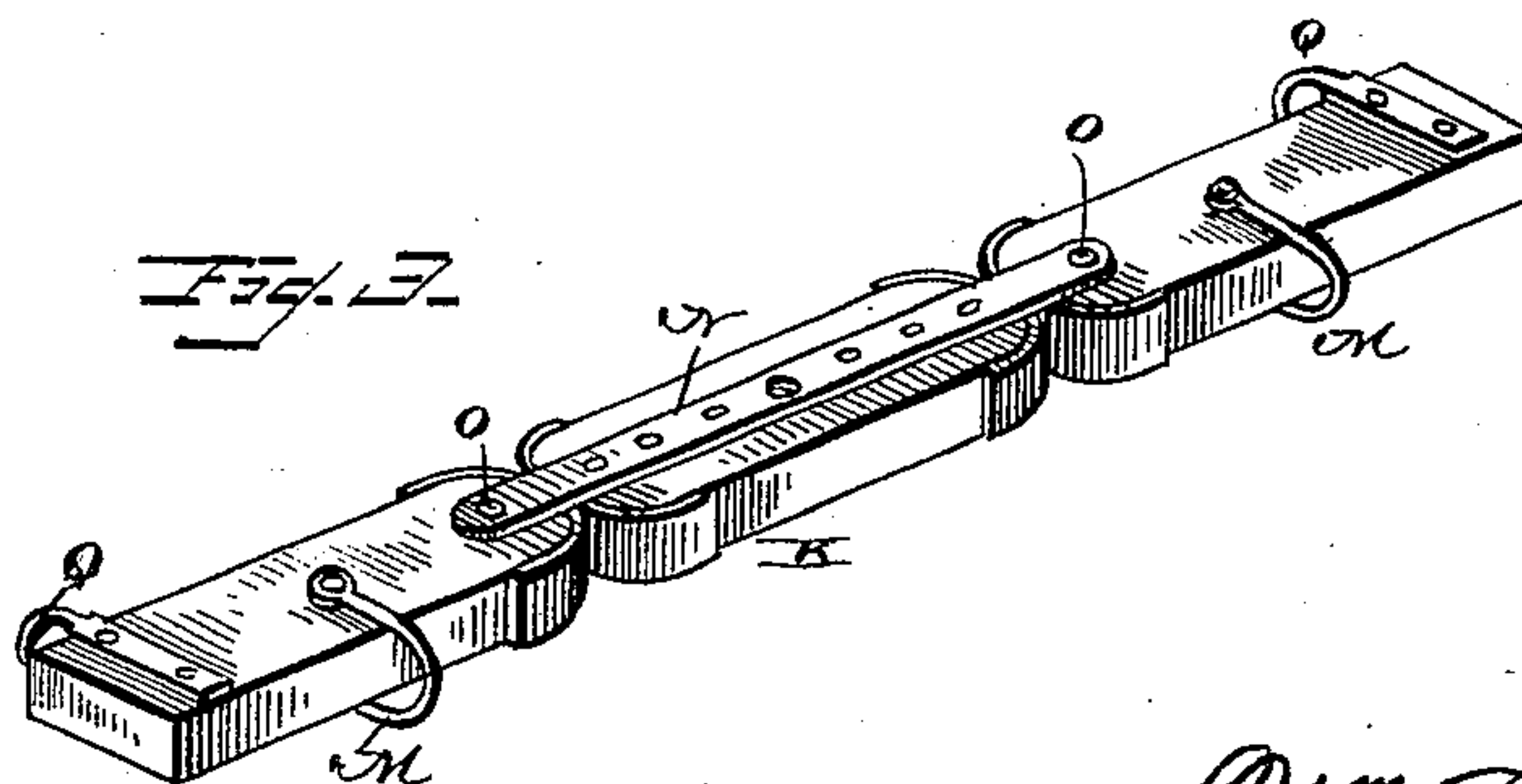
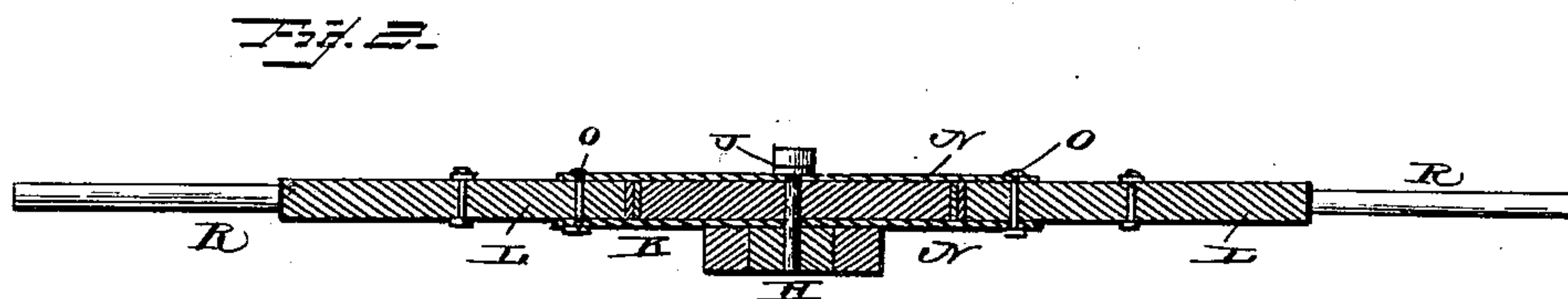
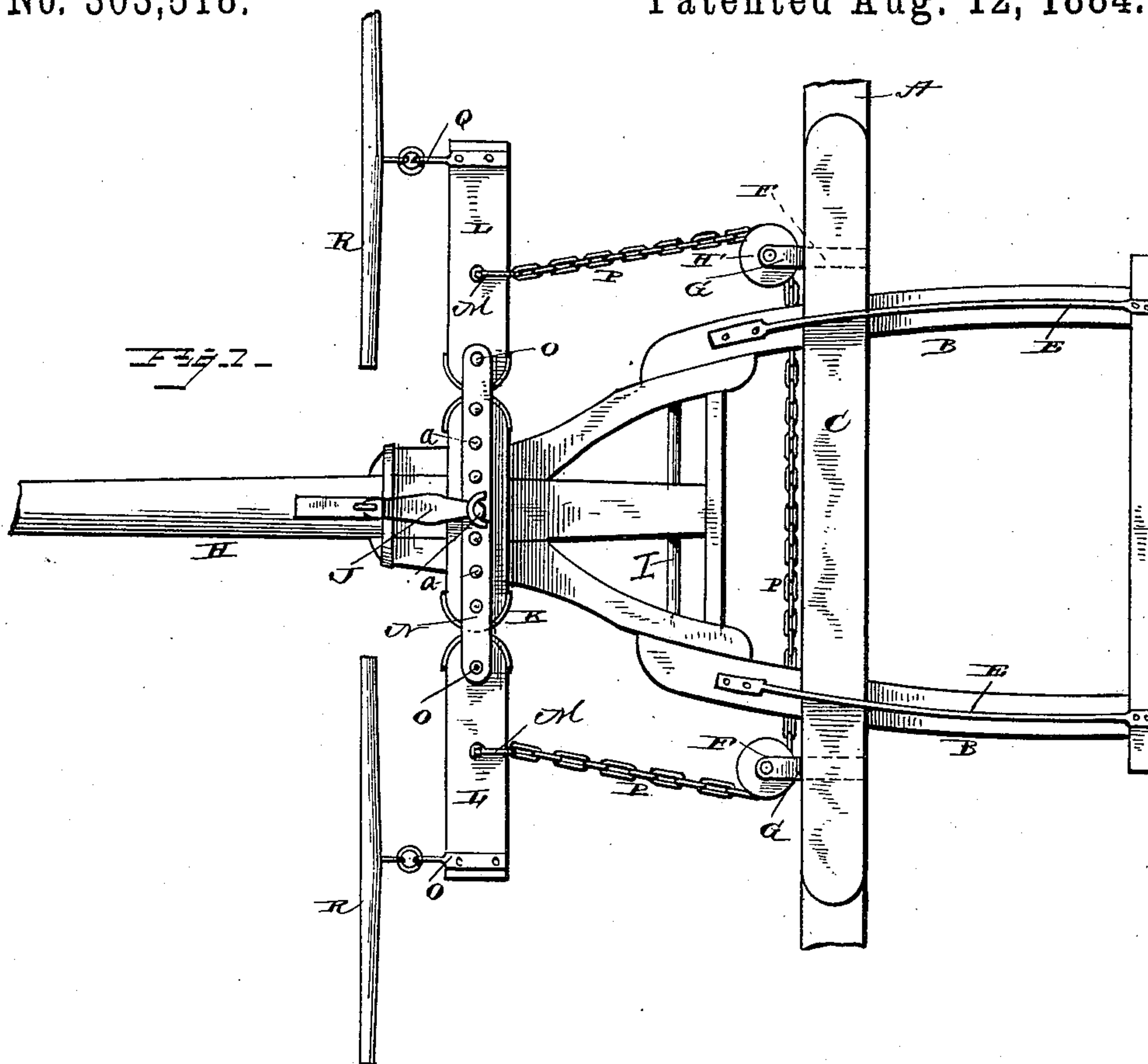
(No Model.)

W. B. HUBBARD.

DRAFT EQUALIZER.

No. 303,518.

Patented Aug. 12, 1884.



WITNESSES
F. L. Ourand
E. G. Siggere.

W. B. Hubbard,
INVENTOR
by C. A. Mott
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM BRANSON HUBBARD, OF GREENVILLE, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 303,518, dated August 12, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern.

Be it known that I, WILLIAM B. HUBBARD, a citizen of the United States, residing at Greenville, in the county of Bond and State of Illinois, have invented a new and useful Draft-Equalizer, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to draft-equalizers, and is an improvement on Letters Patent No. 295,174, granted to me March 18, 1884.

The object of the present invention is to simplify and cheapen the construction by providing a straight joint to connect the poles to the double-tree, the latter being jointed on each side of the tongue, and the poles and double-tree being of equal length, so that the horses will have a lifting-power directly on the axle.

With these and other objects in view the said invention consists in certain details of construction and combination of parts, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved draft-equalizer. Fig. 2 is a transverse section through the double-tree and poles. Fig. 3 is a detail perspective view of the double-tree and poles detached.

Like letters of reference are used to indicate corresponding parts in the several figures.

Referring to the drawings, A designates the front axle, having the hounds B secured thereto, the bolster C being connected to the hounds. Bails or yokes E extend from the front to the rear end of the hounds at the top, on each side, said bails or yokes passing over the bolster. The tongue H is secured to the front ends of the hounds B by a bolt, I, and extends forward in the usual manner, the whiffletree-iron J being attached to the tongue and provided with a bolt pivoting the double-tree K to the tongue.

F designates clips or bands secured to the axle on each side, and provided with U-shaped extensions G, between which are pivoted pulleys or rollers H', a chain, P, passing around the pulleys and secured at its ends to poles L by means of bails M. The double-tree K has

its ends rounded and provided with wear-plates, plates N being secured to the upper and lower faces of the double-tree and extending outward, bolts O connecting the plates to the ends of the poles L, the latter being arranged on a line with the double-tree. As seen, the inner ends of the poles are rounded, and also provided with wear-plates, so as to allow the poles to pass freely over the rounded ends of the double-tree, and thus there will be no danger of the parts being strained or displaced while in use. To the outer ends of the poles are attached clevises Q, the whiffletrees R being detachably secured to the clevises in any suitable manner. The plates N are provided with a series of holes, a, through any one of which the pivot-bolt of the double-tree may be passed, so as to change the fulcrum of the same, and thus allow a weak horse to have the advantage of a strong horse.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the annexed drawings. The horses are attached to the whiffletrees in the usual manner, and in drawing the vehicle the draft comes on the poles, which, being on a line with the double-tree and jointed thereto, causes them to yield and draw the chain through the pulleys or rollers H', so as to equalize the draft of the vehicle. By means of the straight-joint connection of the poles to the double-tree and the attachment of the poles to the axle by means of the chains, the draft of the vehicle is down under the hounds and directly on the axle, and thus I provide a lifting-power in place of the usual downward pull. By attaching the poles to the double-tree and arranging the same on a line therewith, the draft of the vehicle is from both sides, and since the poles and double-tree are of the same length, the parts will yield readily, thereby causing the vehicle to run with greater ease.

My improved draft-equalizer will prevent the sudden hard jerks from coming on the horse's shoulders, and obviate the vibration and strain on the tongue, and places it on the axle, which is well suited to withstand the strain.

My improved draft-equalizer will cause the

horses to draw equally and steadily, and provide a rolling movement in place of a dead weight in drawing the vehicle.

In order to define more clearly the nature and advantages of my invention, I would have it understood that I claim nothing shown in my aforesaid patent, but limit myself to the straight-joint connection of the poles to the double-tree in the manner shown and described, so that the poles will act readily under the movements of the horses.

Having described my invention, I claim--

1. In a draft-equalizer, the combination, with the front axle having pulleys attached thereto, of the double-tree secured to the tongue, poles arranged on a line with the double-tree and connected thereto by a straight joint, whiffletrees secured to the outer ends of the poles, and a chain passing around the pulleys and connected at its ends to the poles, as set forth.

2. The combination, with the front axle having pulleys or rollers attached thereto, of a chain passing through the rollers or pulleys, a double-tree secured to the tongue, plates se-

cured to the upper and lower faces of the double-tree, poles having their inner ends jointed by the plates, and whiffletrees secured to the outer ends of the poles, said poles being of the same length as the double-tree, and the ends of the chain being connected to the poles, as set forth.

3. In a draft-equalizer, the combination, with the front axle having pulleys or rollers attached thereto by means of clips or bands, of a chain passing through the rollers or pulleys, a double-tree secured to the tongue, and having the outer ends rounded, plates secured to the upper and lower face of the double-tree, and poles having their inner ends rounded and jointed in the ends of the plates, the ends of the chain being connected to the poles and the latter being arranged on a line with the double-tree, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM BRANSON HUBBARD.

Witnesses:

WILLIAM BOLL,
J. M. MINOR.