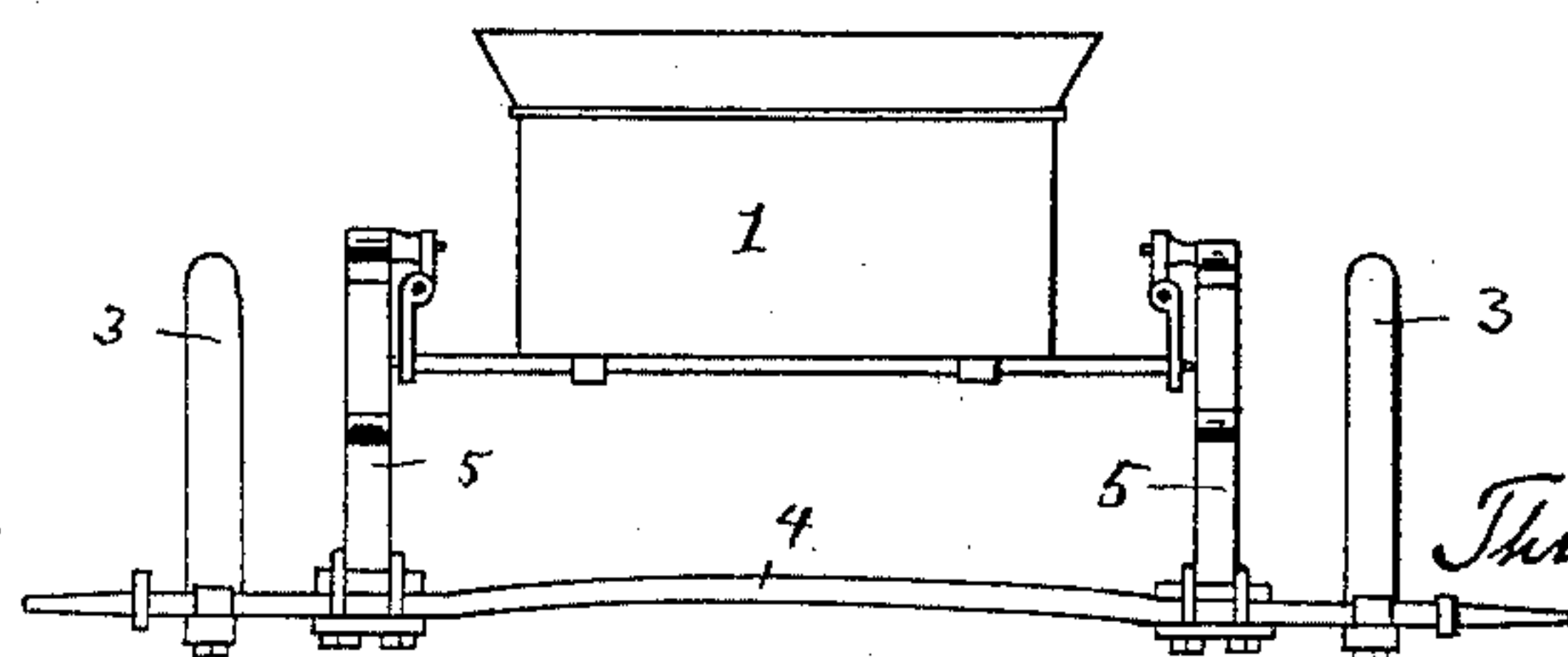
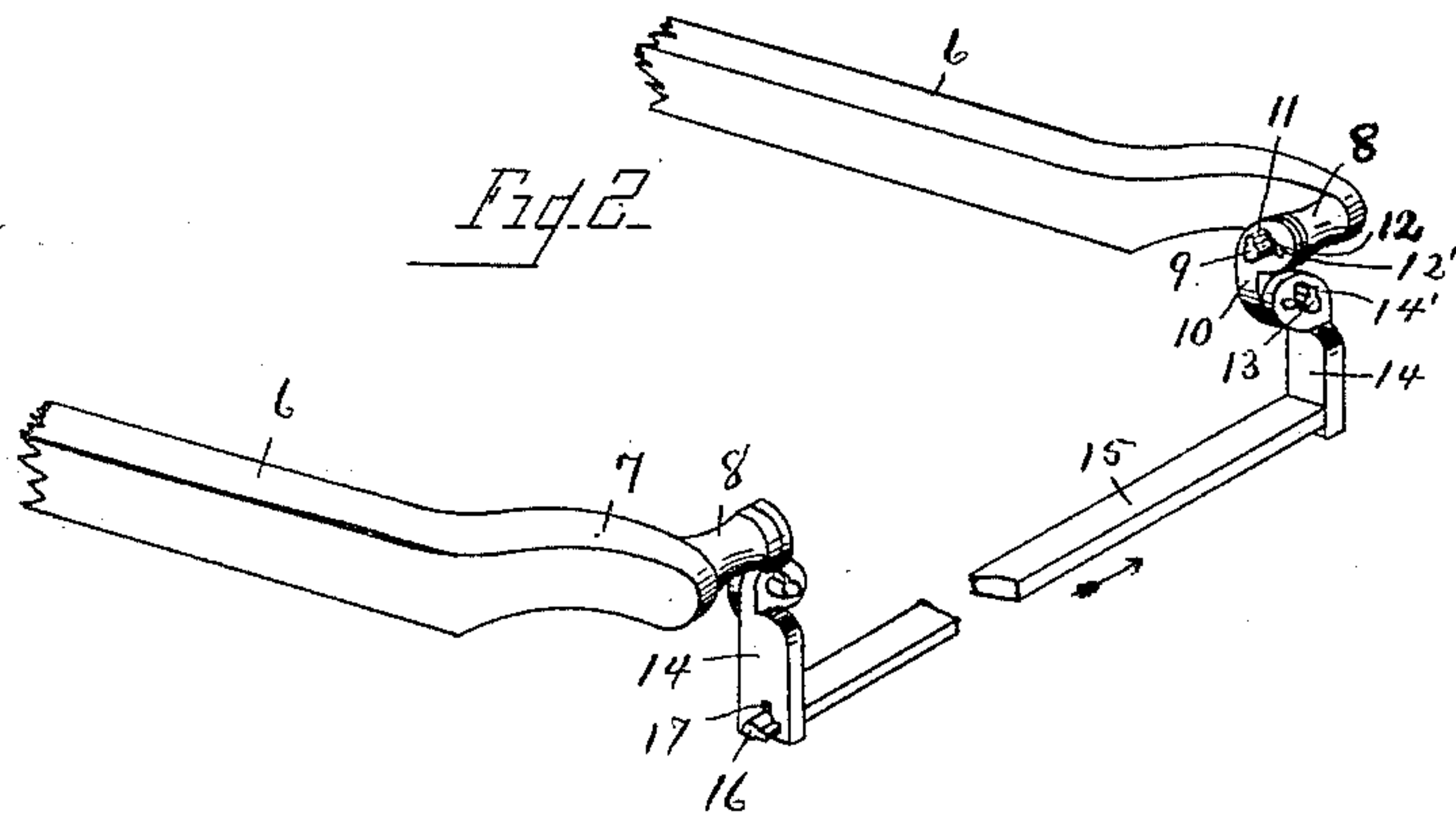
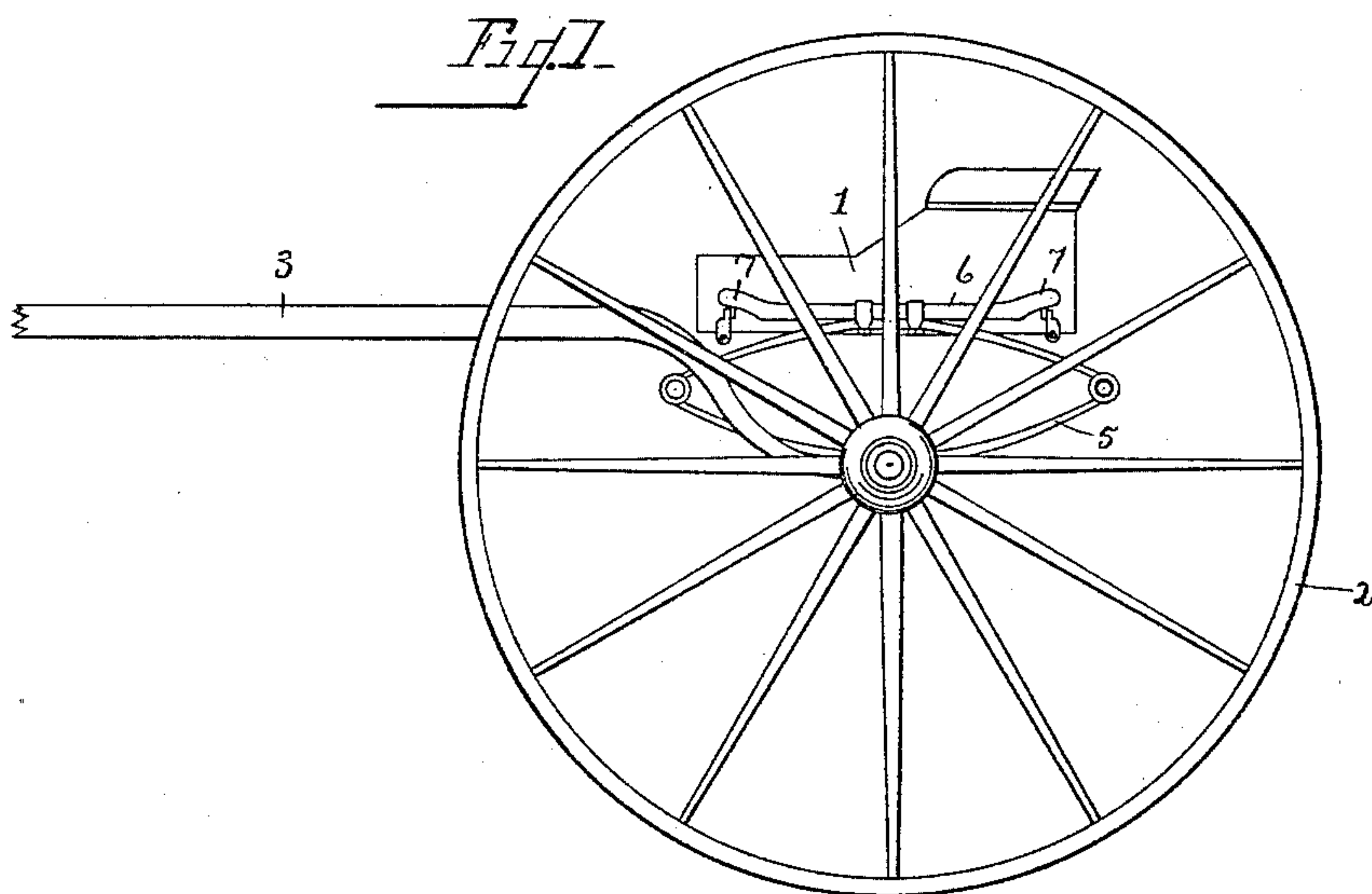


(No Model.)

T. C. MUNZ.  
ROAD CART.

No. 442,384.

Patented Dec. 9, 1890.



WITNESSES

Carroll J. Webster

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# UNITED STATES PATENT OFFICE.

THEODORE C. MUNZ, OF TOLEDO, OHIO.

## ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 442,384, dated December 9, 1890.

Application filed August 11, 1890. Serial No. 361,696. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE C. MUNZ, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful  
5 Improvements in Road-Carts; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it ap-  
10 pertain to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

This invention relates to road-carts.

The object of the invention is to produce a  
15 road-cart having the body so supported upon the springs that all horse motion or side motion will be taken up, thus providing an easy-riding vehicle.

A further object is to produce a road-cart  
20 which shall be simple of construction, efficient and durable in use, and comparatively inexpensive of production.

With these objects in view the invention consists in providing a road-cart having side  
25 bars adapted to be secured to the springs, and transverse supports having a swinging connection with the said bars and adapted to support the body.

The invention further consists in providing  
30 means for holding the different parts of the device intact without the use of bolts or nuts for that purpose.

The invention further consists in the various novel details of construction of a road-  
35 cart, as will be hereinafter fully described in the specification, illustrated in the drawings, and more particularly pointed out in the claims.

In the accompanying drawings, forming  
40 part of this specification, and in which like numerals of reference indicate corresponding parts, I have illustrated one form of road-cart and parts of the same embodying the essential features of my invention, although the  
45 same may be carried into effect in other ways without in the least departing from the spirit thereof, and in these drawings—

Figure 1 is a side elevation of a road-cart provided with my improved body-support.  
50 Fig. 2 is a perspective view of a portion of the body-support; and Fig. 3 is a rear elevation of the cart, the wheels being removed,

showing the connection between the body of the cart and my improved body-support.

Referring to the drawings, 1 designates the  
55 body of the road-cart; 2, the wheels; 3, the thills, and 4 the axle. As these parts may be of any approved construction, a detailed description of them is not deemed necessary.

Mounted upon the axle and secured in the  
60 ordinary manner are the body-springs 5, which may be of any desired configuration, but preferably elliptical, as shown. Upon each of the springs is secured a side bar 6, which may be of any desired length—that is, longer or short-  
65 er than the body 1—and are provided at each end with an upwardly-curved portion 7, from which project inwardly-extending lugs or projections 8. The free end of each of these  
70 lugs is reduced, as shown at 9, forming a bearing for a link 10. The bearing is formed with a spline 11, and the link with a key-hole opening 12, which is so arranged with relation to the spline that when in its normal position  
75 the groove 12' will be at an angle to the said spline. The free end of each of the links is also provided with a splined stud or projection 13, extending at right angles to the pro-  
80 jections on the side bars. Each of these projections is engaged by a link 14, provided with a key-hole opening 14', arranged in the same relation to the said projections as those car-  
ried by the links 10. The lower or free ends  
85 of the links 14 are engaged by transverse rods or supports 15, which are held in place within the said links in the same manner as  
the other parts of the device are held to-  
90 gether—namely, by means of splined projections 16 engaging key-hole openings 17.

All of the parts just described are to be  
95 constructed of a suitable material, and may, if desired, be ornamented in any manner to produce a neat and finished appearance.

In carrying my invention into effect the side  
bars are first secured to the side springs, and  
95 the other parts of the device, consisting of the links 10 and 14 and the supports 15, are placed in position. The body is then placed upon the said supports and is firmly secured thereon by any suitable means. When the  
100 vehicle is in use and the horse is traveling, the motion therefrom will be transmitted from the thills to the axle, and from the axle, through the medium of the springs 5, to the body, which



latter adjusts itself to the motion through the medium of the links 10, while any lateral motion is taken up by the links 14, the direction of movement of which is indicated by an arrow extending parallel to one of the transverse bars 16. By this construction of body-support all horse and side motion will be overcome and the cart will ride as smoothly and easily as an ordinary four-wheeled vehicle. Another great advantage claimed is the peculiar manner of holding the parts together by means of the splined projection, which construction does away entirely with the use of any nuts or bolts, thereby not only cheapening the production of the device, but also preventing the possibility of the parts becoming loosened or separated from constant use. I do not limit this manner of holding intact the body-supporting mechanism of road-carts alone, but may employ it on any class of vehicles where its use may be desirable or expedient.

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

1. In a road-cart, the combination, with the

body-springs, of side bars carried thereby, a series of jointed links carried by each of the said bars, the direction of movement of one series of which is parallel to the side bars and of the other series at an angle to the said bars, and transverse supports carried by the latter series of links.

2. In a road-cart, the combination, with the body-spring, of side bars carried thereby, having inwardly-extending lugs provided with splined bearings, links having key-hole openings adapted to engage the said bearings and carrying splined bearings similar to those on the lugs, links engaging the latter bearings and having their lower ends provided with key-hole openings, and transverse supports having splined bearings adapted to engage the said openings.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

THEODORE C. MUNZ.

Witnesses:

CARROLL J. WEBSTER,  
WILLIAM WEBSTER.