

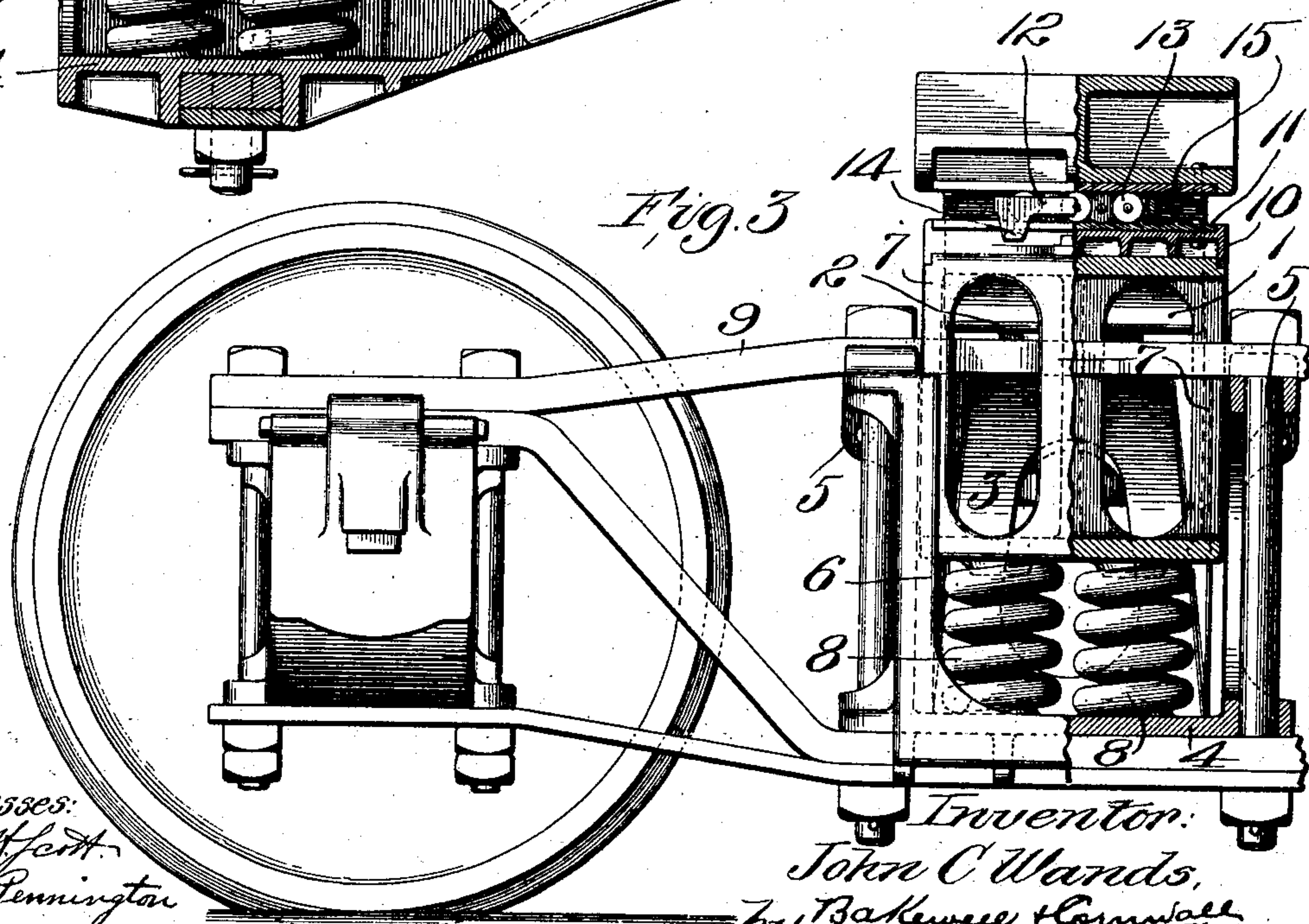
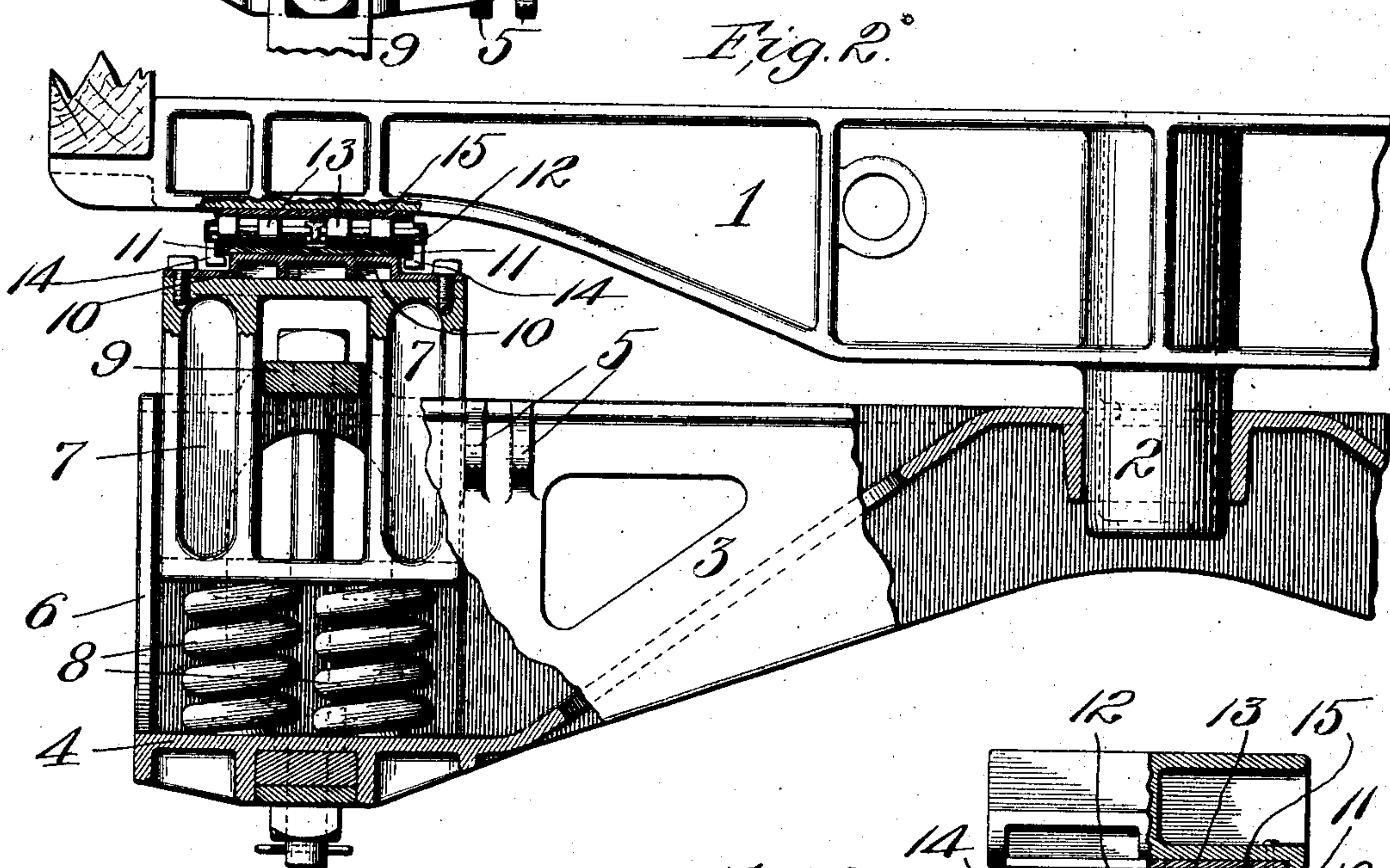
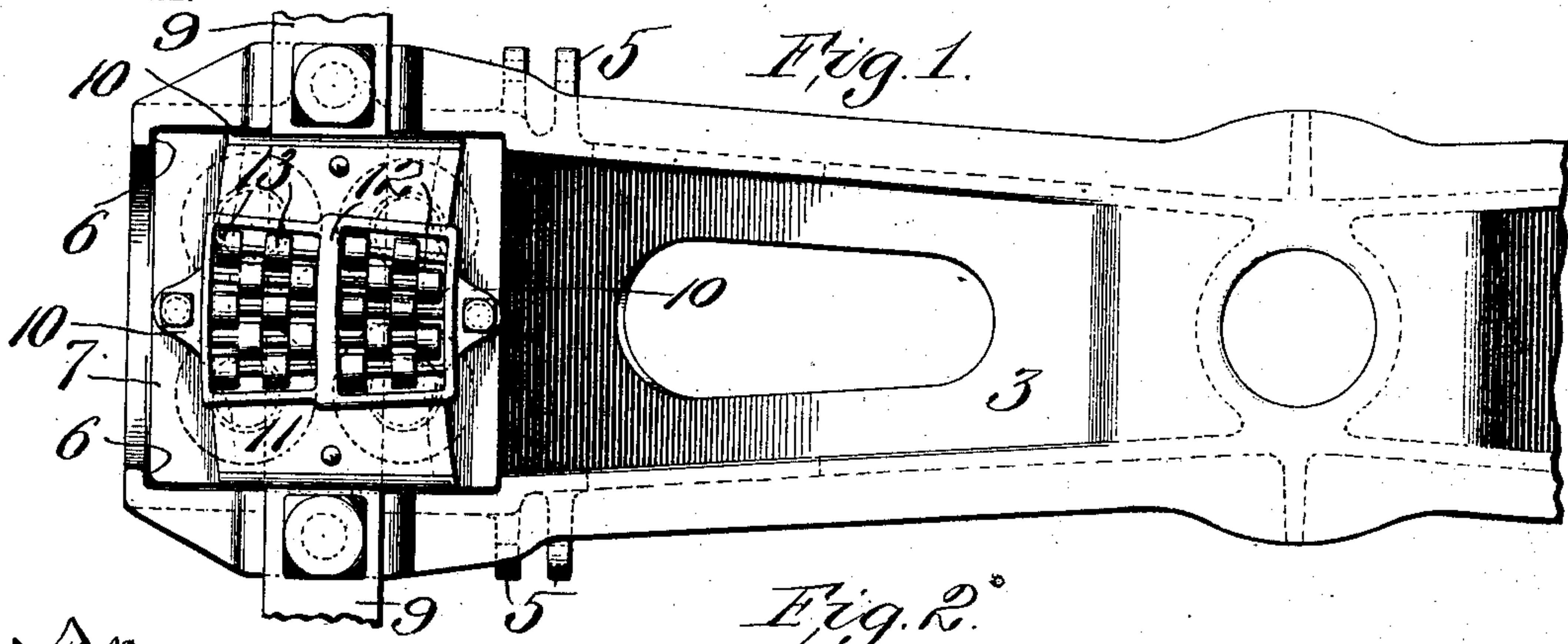
No. 753,767.

PATENTED MAR. 1, 1904.

J. C. WANDS.
ROLLER SIDE BEARING TRUCK.

APPLICATION FILED NOV. 28, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

ROLLER SIDE-BEARING TRUCK.

SPECIFICATION forming part of Letters Patent No. 753,767, dated March 1, 1904.

Application filed November 28, 1903. Serial No. 183,027. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Roller Side-Bearing Trucks, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved roller side-bearing truck. Fig. 2 is a vertical sectional view showing the bearing-truck mounted on its support, and Fig. 3 is a side elevational view, partly in section.

This invention relates to a new and useful improvement in roller side-bearing trucks designed particularly for use in connection with railway rolling-stock, the object being to construct the bearing-truck so that it forms a yielding support for the body of the car, between which bearing-truck and car-body are interposed a nest of rollers which are preferably free to move in an arc of a circle described from the pivot-point of the truck.

My invention consists in the construction, arrangement, and combination of the several parts, all as hereinafter described and afterward pointed out in the claims.

In the drawings, 1 indicates the body-bolster upon which the body of the car is mounted, from the center of which depends a pivot lug or boss 2. It will be observed that I do not use center bearings, as the car is supported at its four corners by the side bearings and not at a central point with respect to the bolsters.

3 indicates a truck bolster or transom which consists of vertical side walls flanged outwardly at their upper edges and provided with inclined cross-webs in the form of an arch, from the crown of which depend flanges forming an opening for the reception of the pivot-boss 2. The lower extremities of the arched web extend horizontally to form spring-seats 4, which are reinforced by strengthening-webs, providing seats for the lower arch and tie bars. Lugs 5 are also cast integral with

the side walls of this transom, to which the brake-hangers are connected.

6 indicates shoulders formed on the inner faces of the side walls, between which are arranged side bearings 7, said side bearings being guided vertically and held in position against displacement by said shoulders. These side bearings are supported upon springs 8, which are arranged upon the spring-seats in a manner similar to the location and arrangement of the ordinary bolster-springs. The vertically-movable and yieldingly-supported side bearing 7, before referred to, is preferably in the form of a hollow cube, the bottom wall being provided with centering-lugs for the supporting-spring and the top wall being designed to receive the track-support of the anti-friction-rollers. Through this hollow cube the top arch-bar 9 is arranged, so that the side bearing is permitted to have free vertical movement; but in the event that the car is derailed and turned over the side bearing 7 cannot leave the truck.

10 indicates a track-support arranged on top of the side bearing, upon which is preferably riveted a hardened-steel track-plate 11, whose edges overlap the track-support.

12 indicates a frame in which are arranged rollers 13, said frame having retaining-lugs 14 depending from its sides, which extend under the overhanging edges of the track-plate and in this manner serve to guide the frame in its movement. The rollers 13 are loosely dropped in sockets opening through the under side of the frame, and in this manner there is no strain on the frame, the depending guide-lugs merely serving to arrest the frame at its extremities of movement and to prevent displacement in the event of derailment.

The body-bolster 1 is sufficiently wide to take in the anti-friction devices and at its points of contact therewith is provided with steel track-plates 15 for well-understood purposes.

The operation of the device is obvious. The weight of the car is supported by the vertically-yielding side bearing 7, arranged at the four corners of the car, and interposed between these side bearings and the body-bol-

sters are the antifriction devices, shown in this case as rollers, although it is obvious that balls or other antifriction devices could be used. The pivot-boss 2 permits the truck to
5 swing and accommodate itself to curves, the antifriction devices rolling along the track-plates to accommodate such movement with the least amount of friction. I prefer not to use any centering-springs for the antifriction
10 devices, as the movement of the truck is comparatively small, at the point of the antifriction devices about three inches, and as the antifriction devices cover considerable area of the track-plates it will be observed that there
15 is no necessity for centering the antifriction devices after displacement. In fact, the weight of the car-body forcing the track-plates in constant engagement with the antifriction devices will force said devices to return. The anti-
20 friction devices are in vertical alinement with the arch-bars of the truck, and this is an important feature of my invention, as the load of the car-body is thus transmitted to the truck directly in line with the arch-bars.

25 I am aware that minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from
30 the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

35 1. The combination with a transom having vertical guideways, of a side bearing mounted in said guideways, antifriction devices carried by said side bearing, and an arch-bar passing through an opening in said side bearing; substantially as described.

40 2. The combination with a transom, of top and bottom arch-bars, a side bearing yield-

ingly mounted in said transom, and antifriction devices carried by said side bearing and movable across the upper face thereof, said antifriction devices being in vertical aline- 45 ment with the arch-bars; substantially as described.

3. The combination with a transom, of top and bottom arch-bars, a side bearing vertically guided by said transom, springs for sup- 50 porting said side bearing, the top arch-bar passing through an opening in said side bearing, and antifriction devices carried by the side bearing and in vertical alinement with said arch-bar; substantially as described. 55

4. In a side bearing, the combination with a yieldingly-supported block having an opening for receiving the top arch-bar, of a track-support, a track arranged in vertical aline- 60 ment with said opening and overhanging the edges of said support, a frame having depending lugs hooking under the edges of said track, and antifriction devices also in vertical alinement with said opening, spaced apart by said frame; substantially as described. 65

5. The combination with a transom, of top and bottom arch-bars, a yielding block guided vertically by said transom, springs for sup- 70 porting said block in position, antifriction devices carried by said block and in vertical alinement with the arch-bars, a body-bolster having a pivotal connection with the transom, said body-bolster engaging the antifriction devices at a point in vertical alinement with the arch-bars; substantially as described. 75

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 25th day of November, 1903.

JOHN C. WANDS.

Witnesses:

GEORGE BAKEWELL,
RALPH KALISH.