

W. T. HARRINGTON.

Axle.

No. 42 911.

Patented May 24. 1864.

Fig. 4.

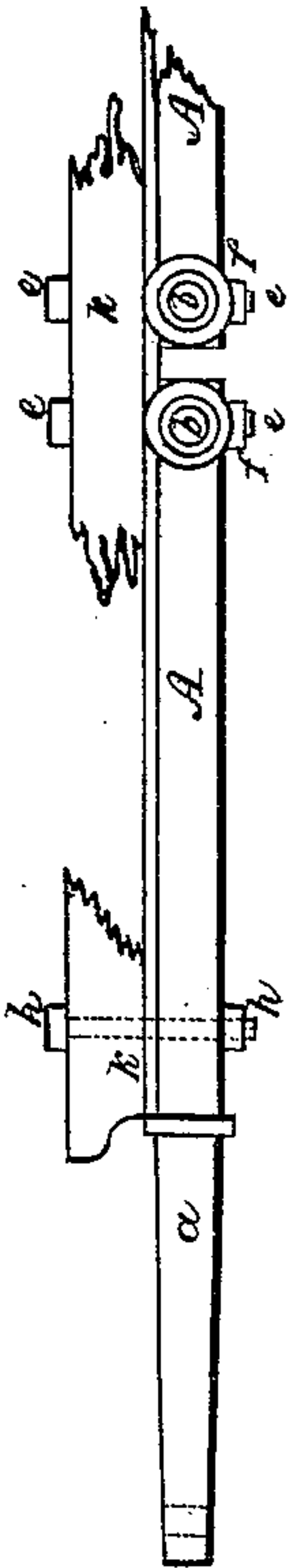


Fig. 2.

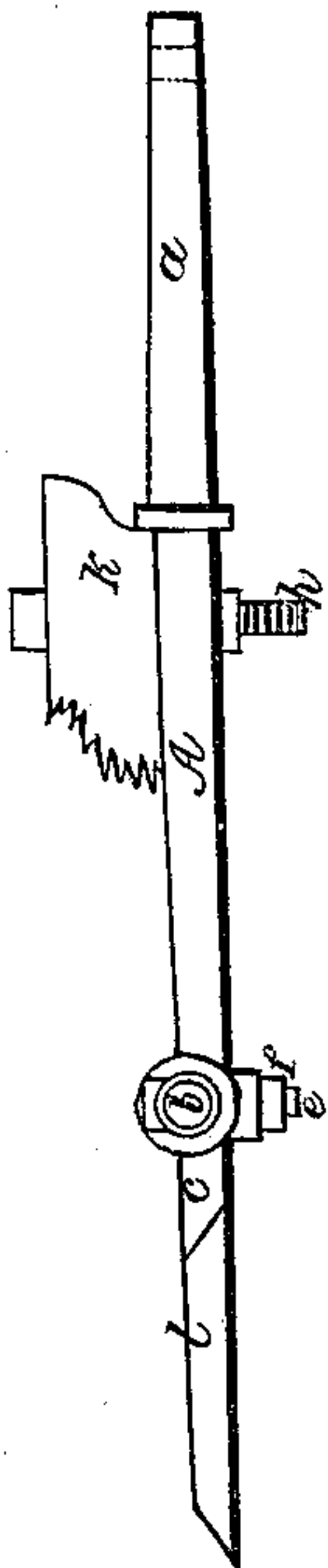


Fig. 3.

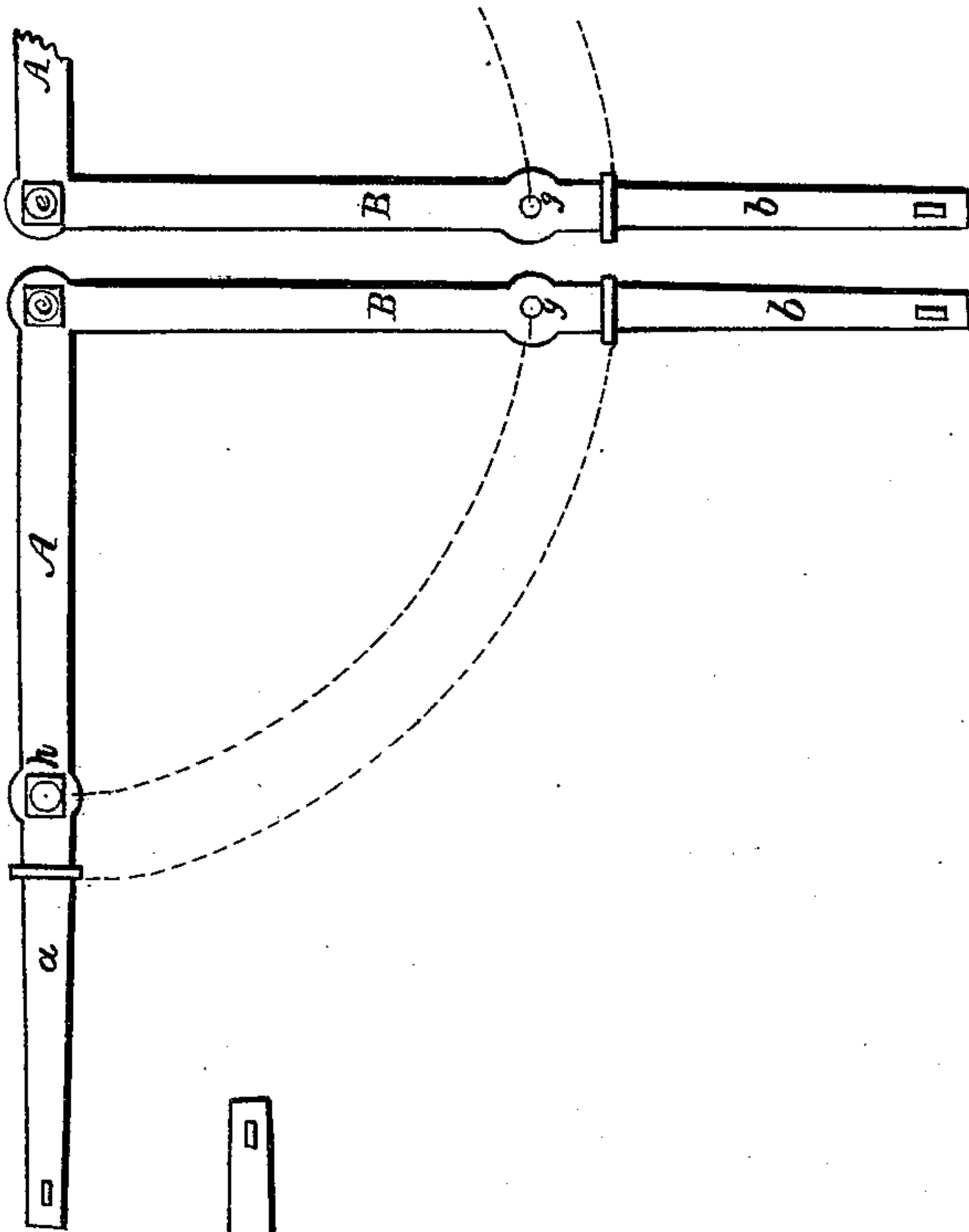
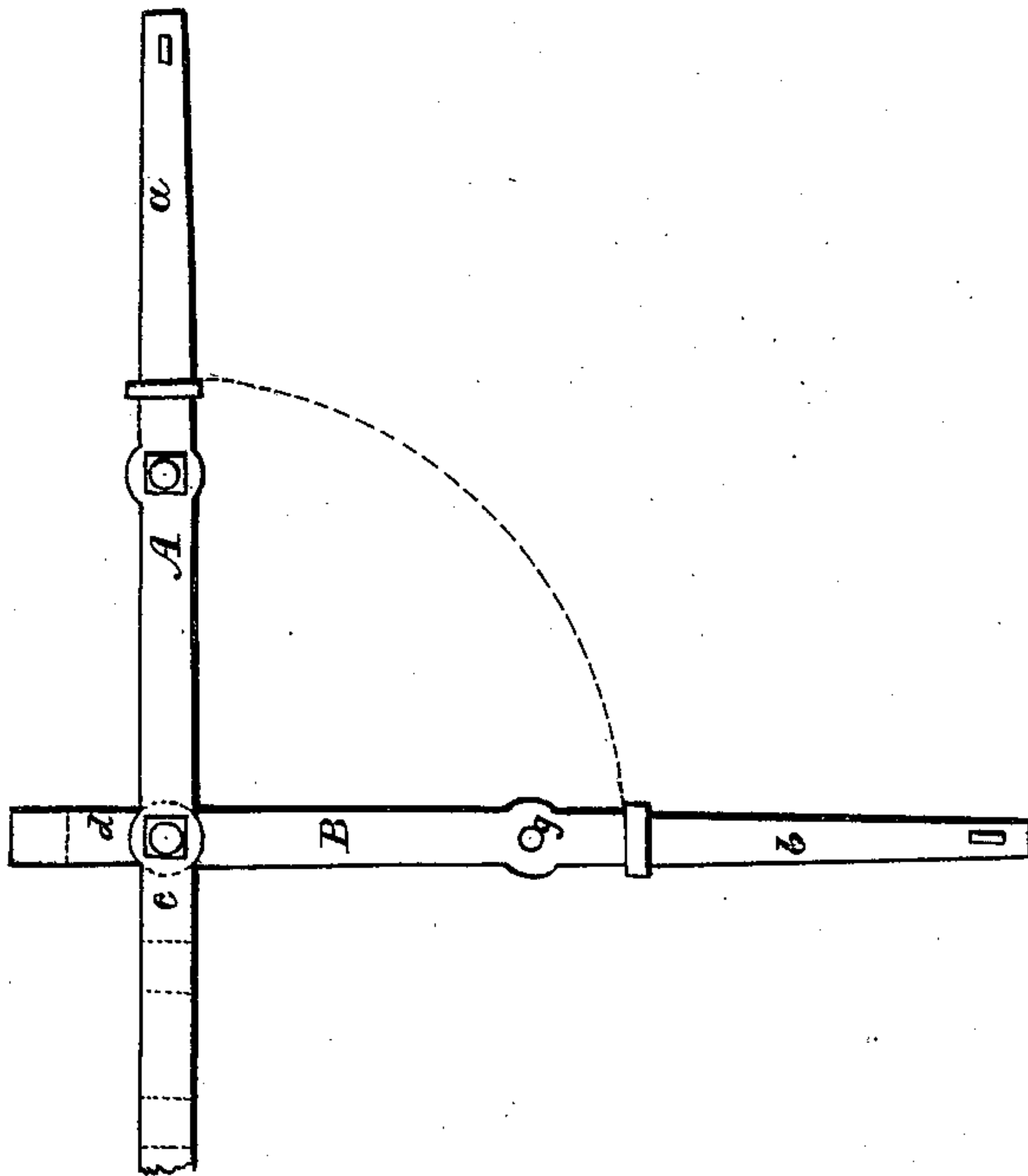


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM T. HARRINGTON, OF ROXBURY, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND BENJAMIN F. ANTHONY, OF SAME PLACE.

IMPROVEMENT IN CARRIAGE-AXLES.

Specification forming part of Letters Patent No. 42,911, dated May 24, 1864.

To all whom it may concern:

Be it known that I, WILLIAM T. HARRINGTON, a resident of Roxbury, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Wheel-Carriages or in the Axles Thereof; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a top view, and Fig. 2 a front elevation, of my invention. Fig. 3 is a top view, and Fig. 4 an elevation, of it in a somewhat modified form.

My said invention is intended principally for gun-carriages and army-wagons, although it is equally applicable to various other wheel-carriages, the purpose of the invention being to render the axle serviceable in case of breakage of one of its journals. It is frequently the case that the journal of an axle becomes broken off close to its shoulder. This may happen during a battle, and be produced by a cannon-shot or other cause, or it may occur under other circumstances, when, were it not for my improvement, the carriage would be rendered wholly unserviceable for a time, and probably in consequence thereof have to be abandoned to an enemy. With my invention should such an accident occur a few moments would suffice to restore the carriage or the axle thereof to a working condition.

The nature of my said invention consists in an axle made with an extra arm and journal, so combined with the primary journal, and both connected with the carriage, that either journal may be turned around on a center-pin into a position to receive the wheel; and, furthermore, as auxiliary to my invention, I make the double axle with scarfed projections to operate with a support-piece to sustain the axle at or near its center-pin, and so as to remove the strain of the weight, or that of the weight and the load of the carriage, from the said center-pin.

In Figs. 1 and 2, I have represented the double axle as composed of two arms, A B, arranged at a right angle to one another, each of these arms being provided with a separate journal, *a* or *b*, for receiving a wheel. The

double axle also is shown in such figures as being formed or provided with scarfed projections *c d*, extending from it, each of the said projections being in line with one of the arms, and projected from the common junction of the two, as shown in Fig. 1.

The double axle so made, when in use is to be arranged underneath a carriage-body, and is to be connected therewith by a vertical pin or bolt, *e*, going through the axle at or near the junction of the two arms, the pin having a screw and nut, *f*, which serves to keep the axle upon the pin. Each arm of the axle is to have a hole, *g*, made through it near its journal, such hole being to receive a screw-bolt, *h*, for the purpose of confining the arm to the carriage-body in manner as shown in Fig. 2, wherein *k* denotes a part of the said body. In case of the axle being made with the scarfed projection *c d*, the carriage-body should have a counter-scarfed support-piece, *l*, (see Fig. 2,) fastened to it between the two double axles. It overlaps one of the projections of each double axle, and serves to support the axle and remove from its center pin or bolt *e* the strain of the weight of the carriage or of the same and its load.

Fig. 3 represents the arrangement of a pair of the double axles, and shows them as made without the scarfed projections. In case of breakage of one of the journals of one of the double axles, the axle may be turned around on its center-pin *e*, so as to bring the other journal into the place of the broken one, in which case the latter will be turned entirely underneath the carriage body, instead of projecting laterally from it. There are to be a pair of the double axles to each pair of the wheels of a carriage. For artillery and most other carriages the extra arm and journal of the double axle will not be materially, if any, in the way of the other working parts of the carriage. Although it is customary for artilleryists to carry with them on their caissons or ammunition-wagons an extra wheel to be used in case of breakage of a wheel of the carriage or a gun, no provision seems to have been made for any ready substitute for a broken axle or journal of an axle. My invention supplies this want.

I do not claim a splicing-bar with a journal and clasp devices as made and applied to an axle as represented in the Patent No. 34,189, as my invention contemplates an entirely different arrangement, and application of an auxiliary arm and journal with respect to an axle. With my invention the auxiliary arm and journal revolve in the same plane with the main journal, and, therefore, when used in lieu thereof do not elevate the carriage-body on one side more than on the opposite side, and besides these are other advantages which my invention possesses over a mere splicing-

bar provided with a journal, and devices for connecting it to the side of an axle.

I claim—

The improved axle as made with the extra journal or extra arm, and journal arranged with the primary journal, and to operate or revolve on a center-pin, in manner and under circumstances substantially as described.

WILLIAM T. HARRINGTON.

Witnesses:

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