

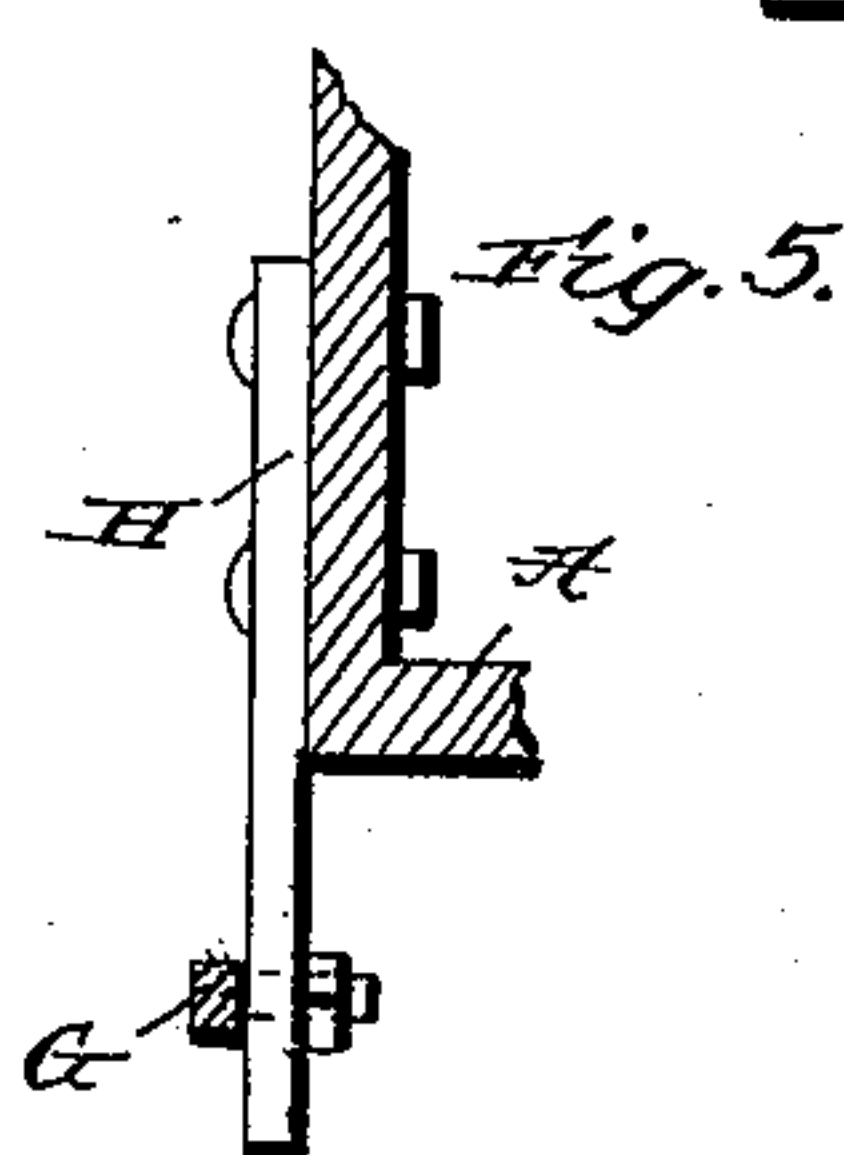
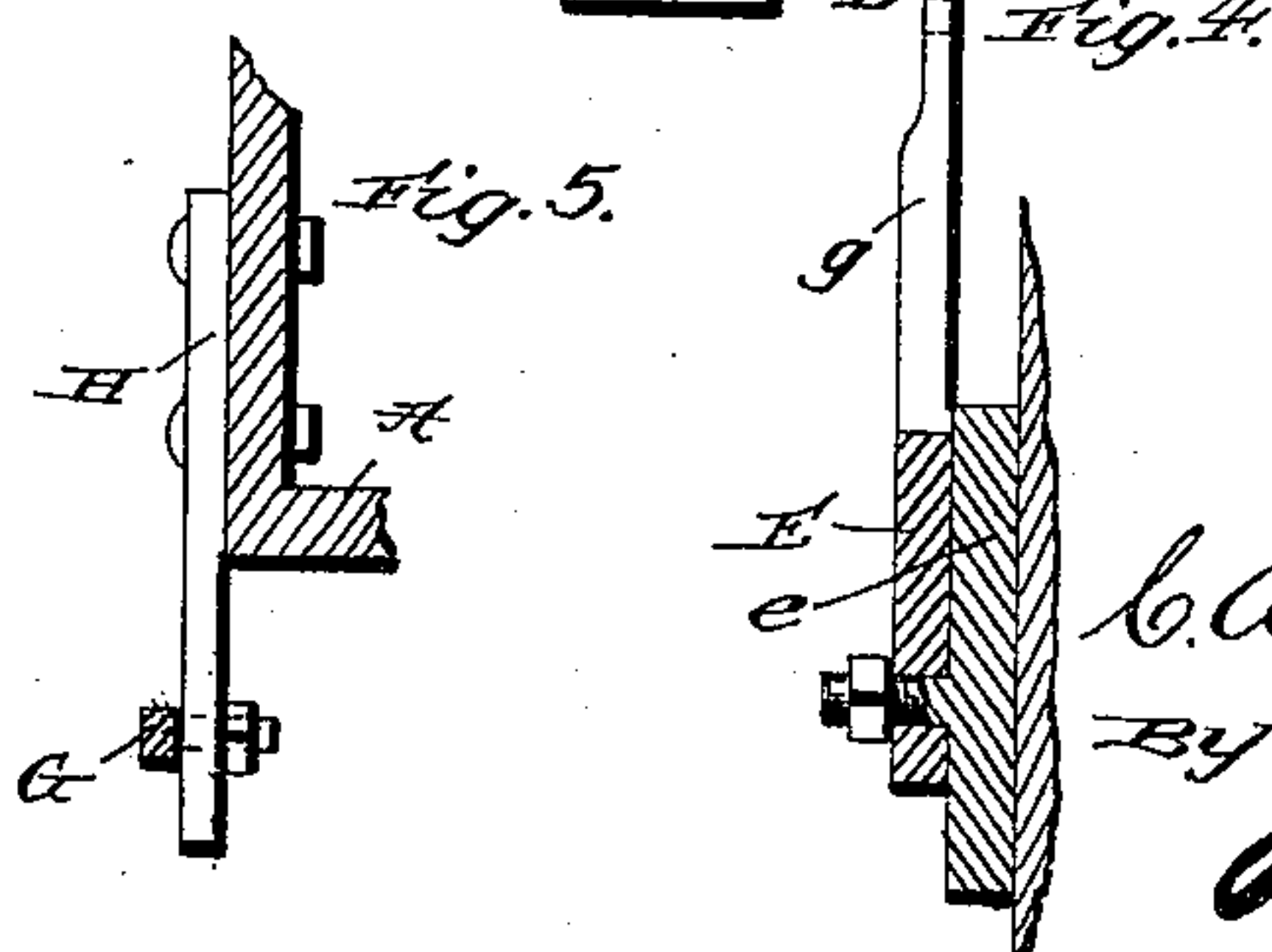
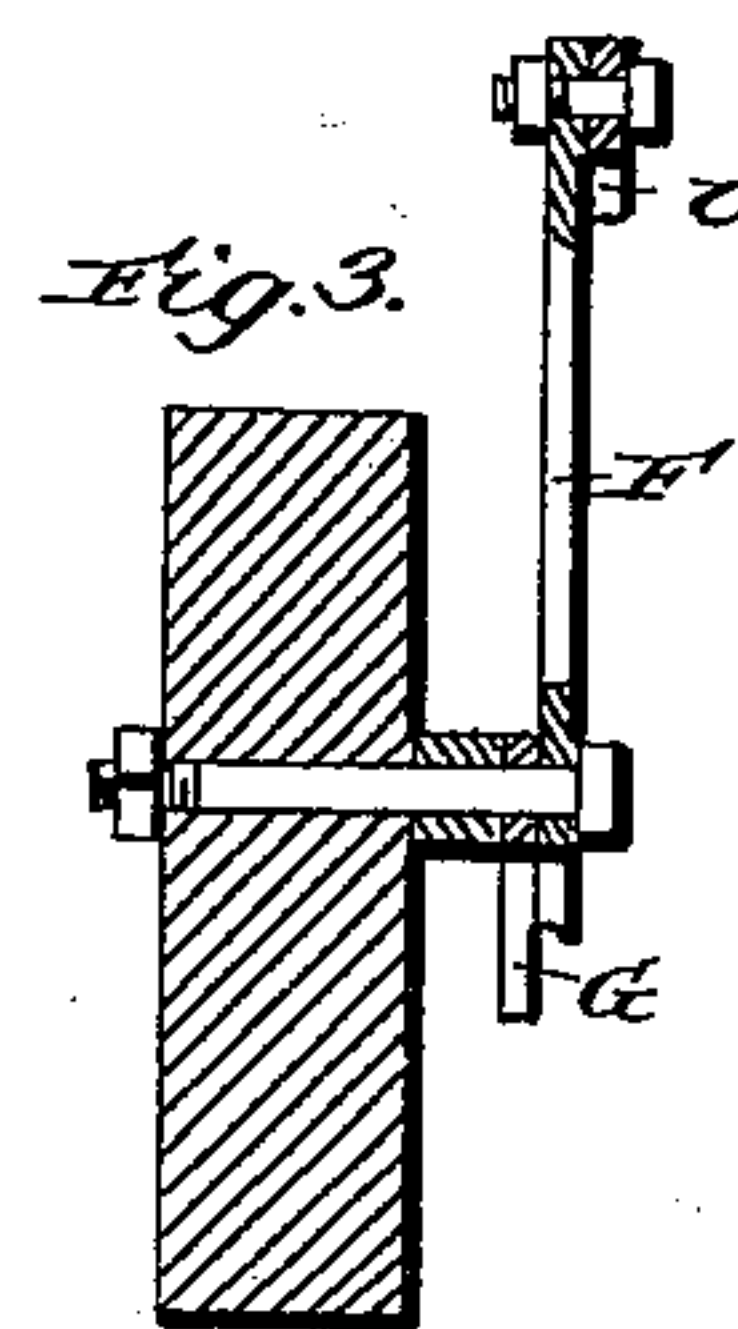
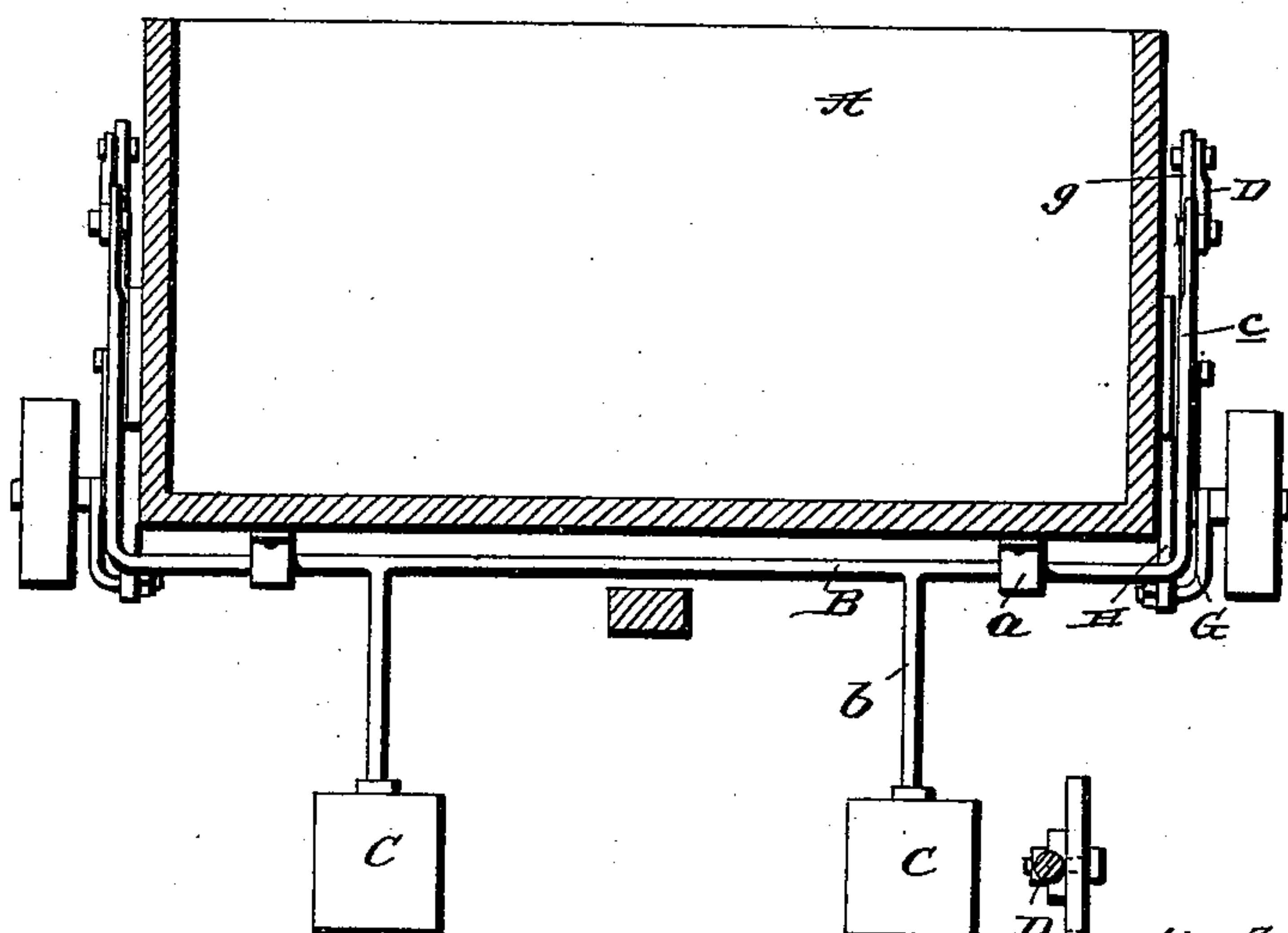
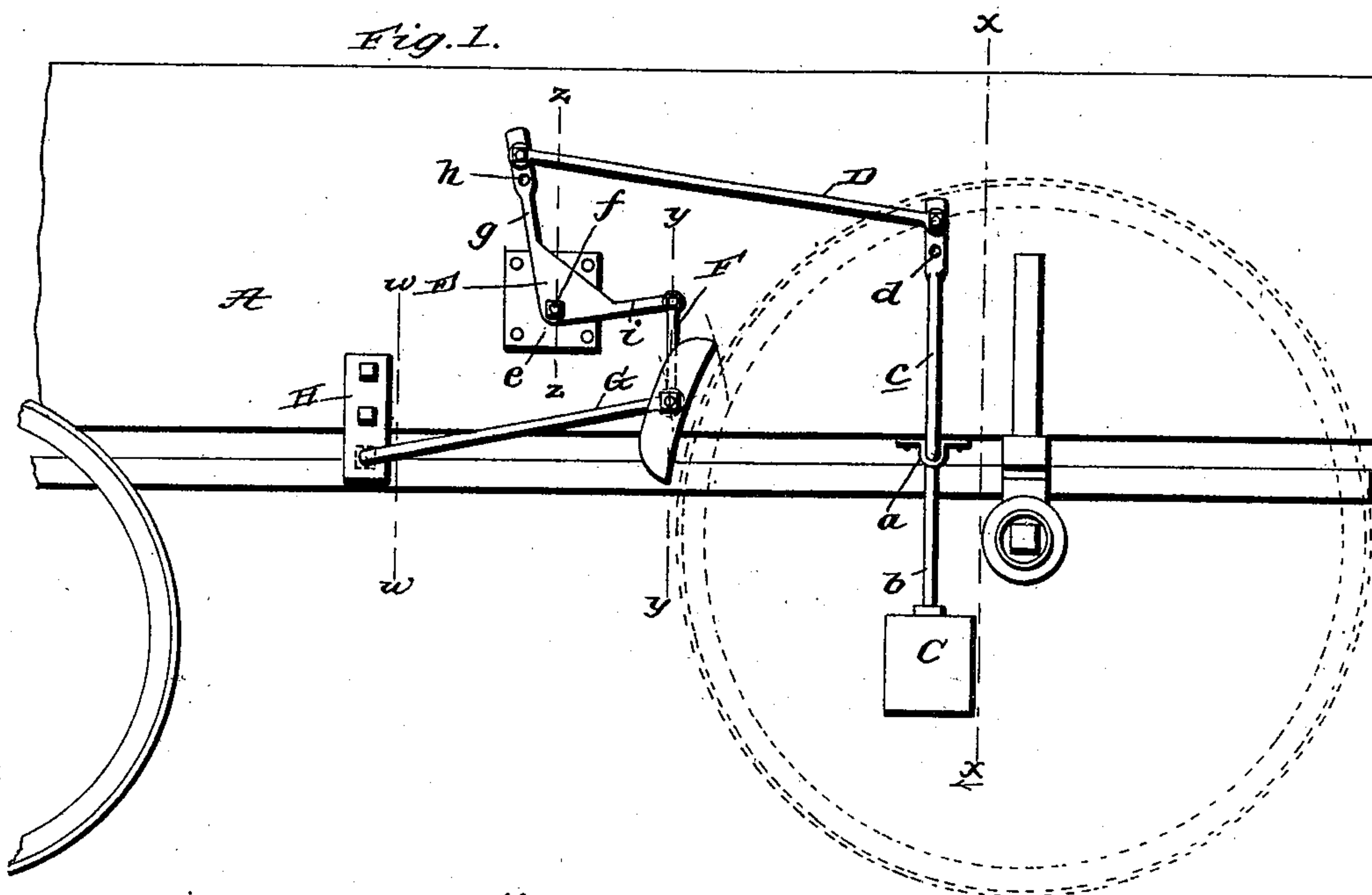
No. 629,646.

Patented July 25, 1899.

C. A. BECKSTROM.
WAGON BRAKE.

(Application filed Apr. 7, 1899.)

(No Model.)



witnesses:

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UNITED STATES PATENT OFFICE.

CHARLEY ALBERT BECKSTROM, OF SIOUX CITY, IOWA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 629,646, dated July 25, 1899.

Application filed April 7, 1899. Serial No. 712,168. (No model.)

To all whom it may concern:

Be it known that I, CHARLEY ALBERT BECKSTROM, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented new and useful Improvements in Wagon-Brakes, of which the following is a specification.

This invention relates to a wagon-brake; and it contemplates the construction of a brake that will be perfectly automatic both in applying the shoes and releasing the same from the wheels without requiring any care or attention from the driver.

The invention also contemplates a construction which will be cheap and durable, not liable to get out of order, and will afford but little friction, the parts being adjustably connected so as to regulate the movements thereof and the consequent time of applying the shoes to the wheels.

The invention and its many advantages will be more fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a side view of a wagon with parts broken away and my improvements applied, showing the brake-shoes released from the wheels. Fig. 2 is a vertical cross-sectional view taken in the plane indicated by the dotted line *xx* on Fig. 1. Fig. 3 is a similar view taken in the plane indicated by the dotted line *yy* on Fig. 1. Fig. 4 is a sectional view taken in the plane indicated by the dotted line *zz* on Fig. 1, and Fig. 5 is a sectional view taken in the plane indicated by the dotted line *ww* on Fig. 1.

Referring by letter to said drawings, A indicates a wagon-body which may be of the ordinary construction and which forms no part of my invention, being here illustrated for the purpose of showing the application of my improvements thereto. This body is provided on its under side and at a suitable distance in advance of the rear hounds with bearings *a*, in which is journaled a transversely-disposed rock-shaft B, and depending from this rock-shaft is a suitable weight C, there being two weights shown in the present illustration, and in the practical operation of my invention I prefer to use two weights, but do not wish to be understood as limiting myself to the employment of two, as in some cases a single

weight might serve the purpose. The weights which I have shown are carried by depending arms *b*, which should be fixed, made fast to, or formed integral with the rock-shaft B, so as to govern the rocking motion thereof. This rock-shaft is provided at opposite ends with vertically-disposed branches *c*, which may form an integral part of the shank or be fixed thereto in a rectangular manner by any suitable means, so that one arm or branch will rise on each side of the wagon-body, as shown, and the upper ends of these arms or branches should be provided with a plurality of holes *d* or other suitable means for making an adjustable and pivotal connection with a rod D, which rod is in turn connected with a bell-crank or angle lever E.

To avoid wear on the body, a friction-plate *e* may be secured to the outer side of the side walls, and the bell-crank or angle levers E are pivoted to said plates at the angle, as shown at *f*; but these plates are not absolutely necessary, being intended to simply prevent undue wear. The upper branch *g* of the bell-crank or angle lever E may also be provided with a plurality of holes *h* or other suitable means whereby the forward end of the rod D may be adjustably connected therewith by means of a pin or bolt and nut. The other or rearwardly-extending branch *i* of this angle-lever has pivotally connected to it one end of a rod F, which is in turn connected with the brake-shoe, (there being one on each side of the body,) and this shoe, and consequently the rod F, are connected with the rear end of a rod or bar G. This rod or bar G has its rear end normally above the horizontal plane, and its forward or opposite end is pivoted in a plate H or other suitable bearing secured to the wagon-body.

The brake-shoes may be of the form and material usually employed, and by reason of the parts of the brake being adjustably connected said shoes may be normally held at any desired distance with respect to the periphery of the wheels to which they are to be applied.

My improvements are shown in position with the wagon as though it were on a level road, the weights seeking a level and holding the lateral arms or branches of the rock-shaft vertically, which of course will disengage the

shoes from the wheels. Should the rear of the body be raised, such as in descending a hill, the weights will swing forward, thereby throwing the arms of the crank-shaft rearwardly or in an opposite direction. This movement, through the medium of the connecting-rods D, will draw rearwardly the branches *g* of the angle-levers E and force downwardly the branches *i* of said levers, which will in turn impart a downward movement to the rear ends of the rods G, and such rods not being allowed to move forwardly in the bearings at their forward ends will force the shoes rearwardly in their downward movements and against the wheels. The force and rapidity with which the brakes or the shoes thereof will be applied will depend upon the extent of the incline of the surface over which the vehicle is traveling. As the vehicle again comes to the level the weights will of course remove the shoes from the wheels.

While I have described the arms of the rock-shaft and also one branch of each angle-lever as provided with a plurality of holes, yet it may not be necessary in some cases to have the holes, as other means might be employed for the adjustable connection of the parts.

While I have shown and described the rock-shaft B as supported in bearings on the under side of the body, yet I do not wish to be understood as limiting myself to this manner of support, as the rock-shaft may in some cases be journaled on the running-gear, and, in fact, all of the parts may be sustained on the running-gear without departing from the scope of my invention.

Having thus described my invention, what I claim is—

1. In a wagon-brake, the combination of a wagon-body, an angle-lever pivoted on the body, a brake-shoe loosely connected with one

arm of said angle-lever, and a rod connecting said shoe with the body, whereby, when the lever is rocked to carry the shoe downward, said shoe will be moved rearward, substantially as specified.

2. The combination with a wagon-body; of a weighted rock-shaft having an arm disposed at or approximately at right angles thereto and journaled in said body, a brake-shoe, and connections between the shoe and the arm of the rock-shaft for raising and lowering the shoe, and suitable means for keeping the shoe rearwardly while being lowered.

3. The combination with a wagon-body; of the rock-shaft having arms at opposite ends thereof and journaled in suitable bearings on the body, and also having weighted arms, the angle-levers pivoted to the body, the rods connecting one branch of said lever with the arms of the rock-shaft, the brake-shoes, rods connecting the other end of said angle-levers with the shoes, and the rods connecting the body with said shoes, substantially as specified.

4. The combination with a wagon-body; of a brake-shoe, the rods connecting the body with said shoe and arranged with their rear ends elevated, a weighted rock-shaft and suitable connections between said shaft and the rods connecting the shoes with the body so that the movement of the rock-shaft in one direction will disengage the shoes from the wheels, and movement in the opposite direction will apply the shoes to the wheels, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLEY ALBERT BECKSTROM.

Witnesses:

JOHN G. ANDERSON,
ANDREW ISAACSON.