

(No Model.)

2 Sheets—Sheet 1.

A. N. PENDERGRASS.
WAGON BRAKE.

No. 545,719.

Patented Sept. 3, 1895.

FIG. 1.

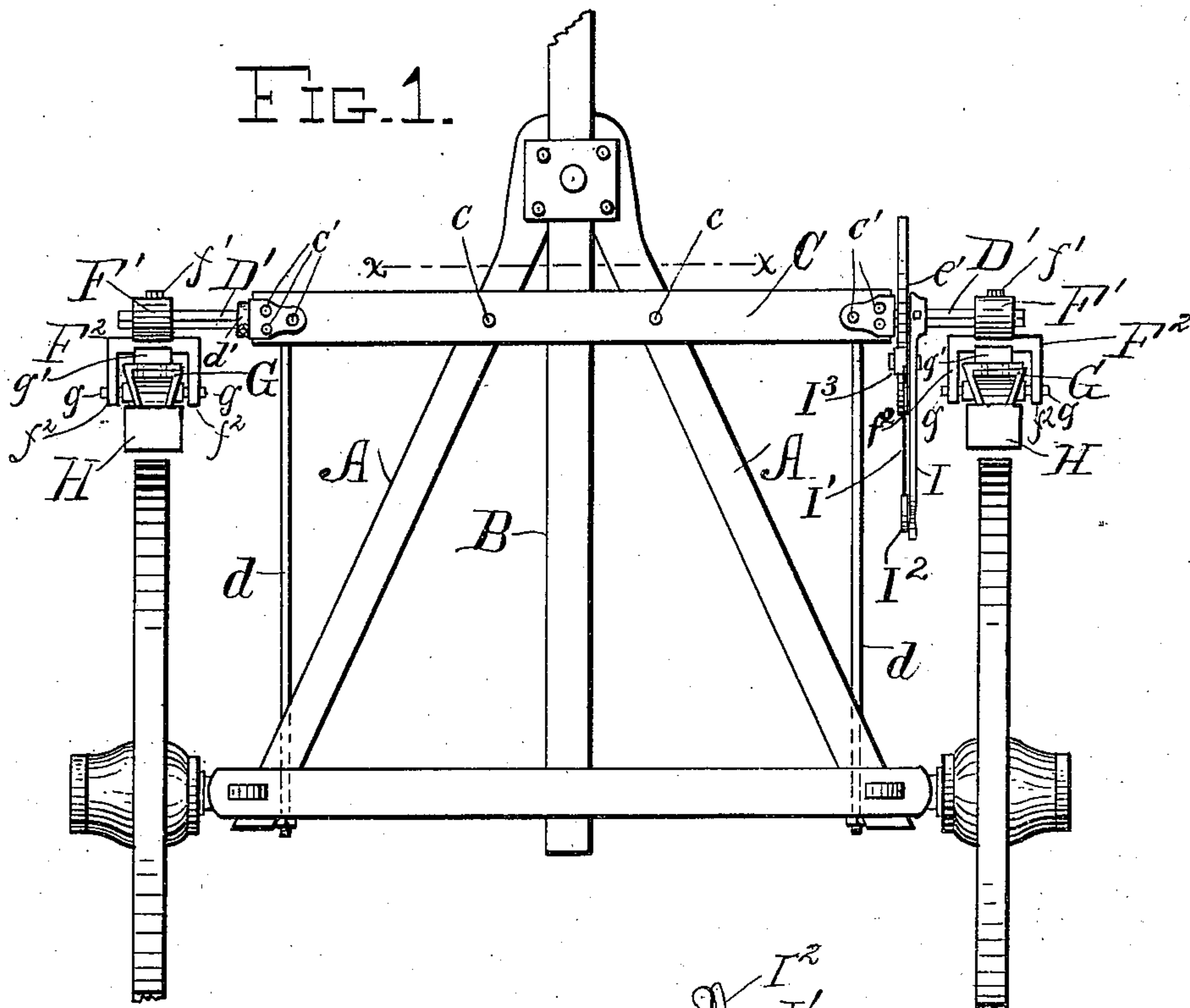
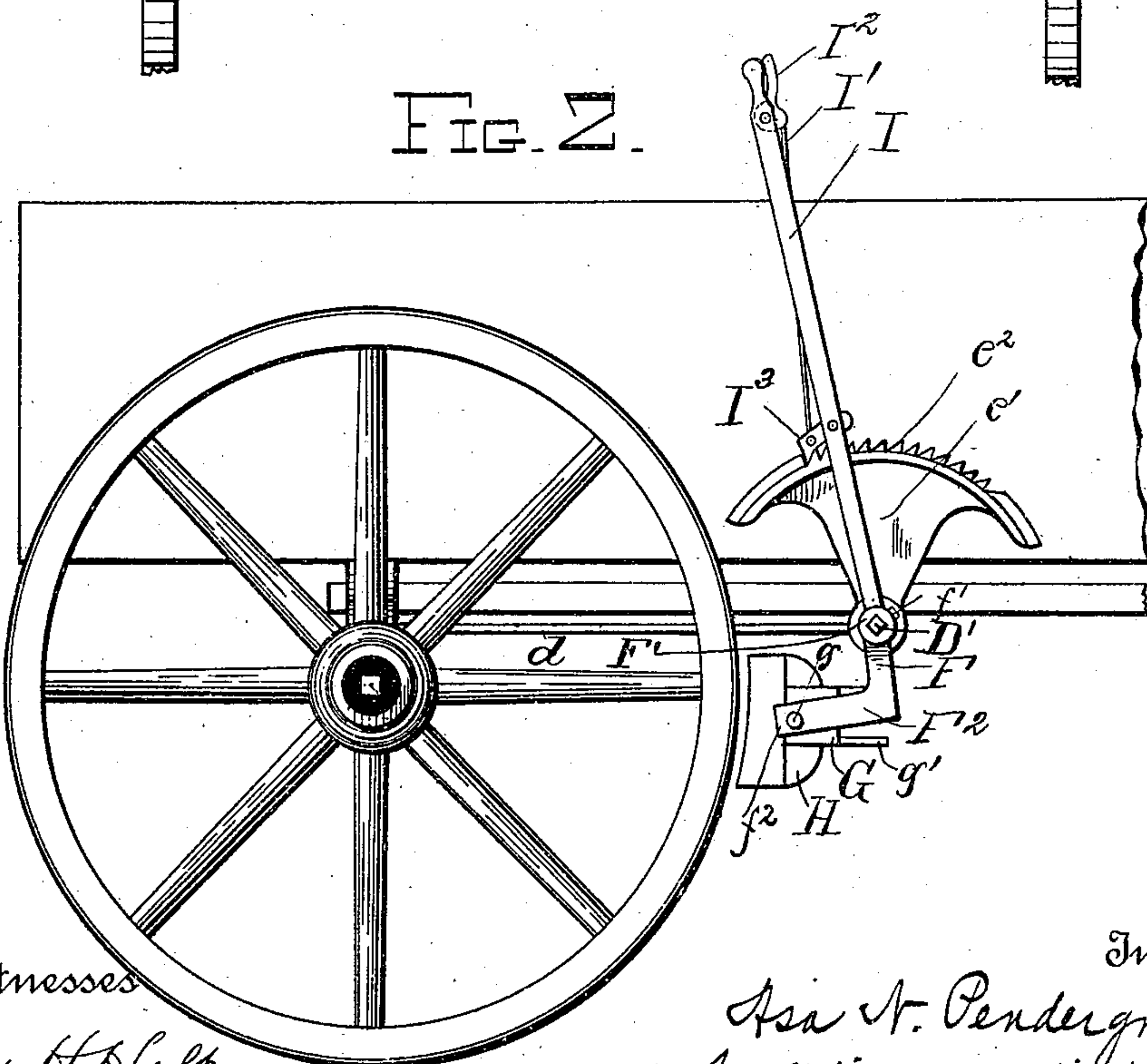


FIG. 2.



Witnesses

Jno. H. Holt,
 Maurice J. Dierckx

Inventor

Asa N. Pendergrass,
by Whitman & Wilkinson,
Attorneys.

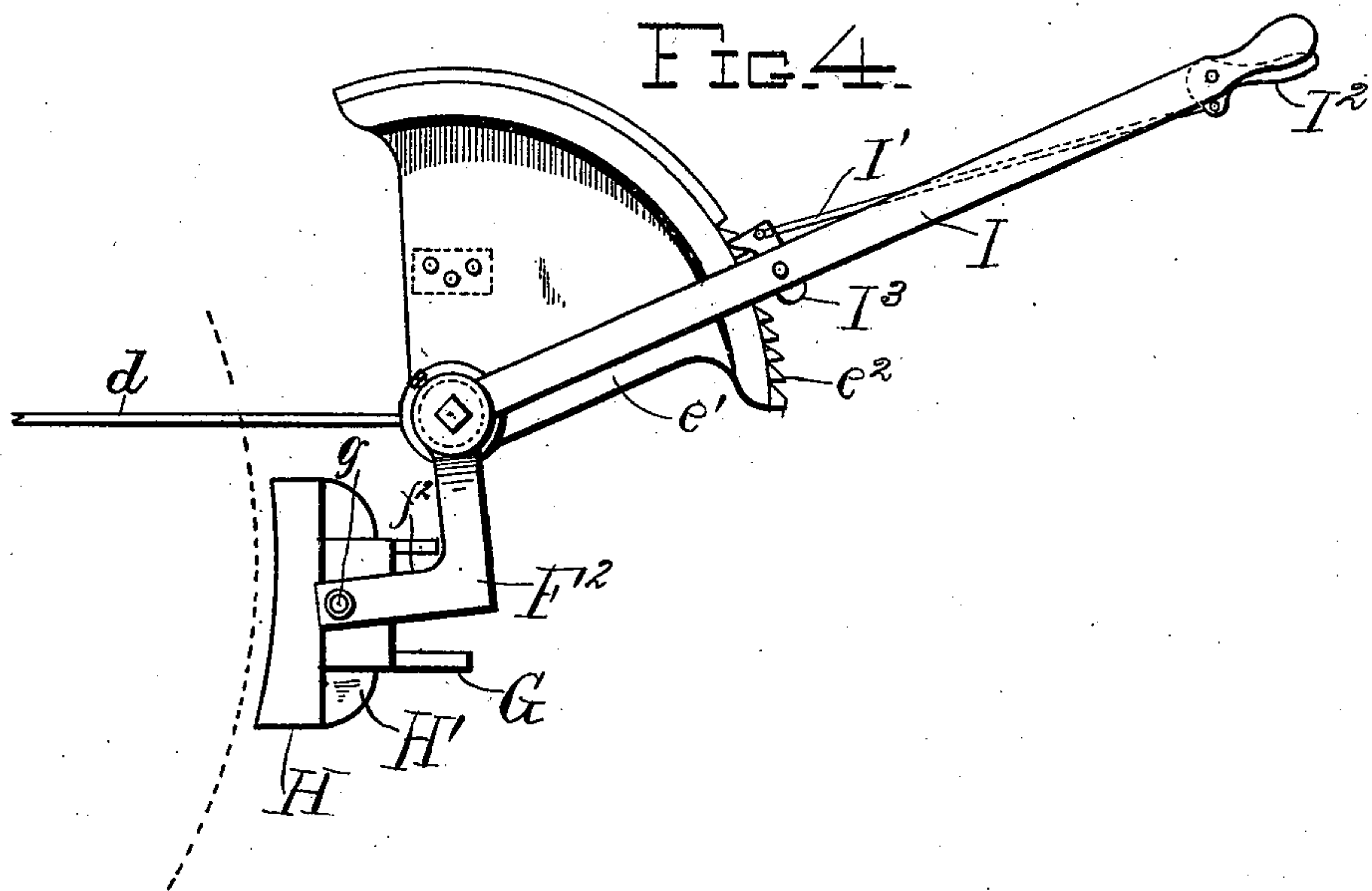
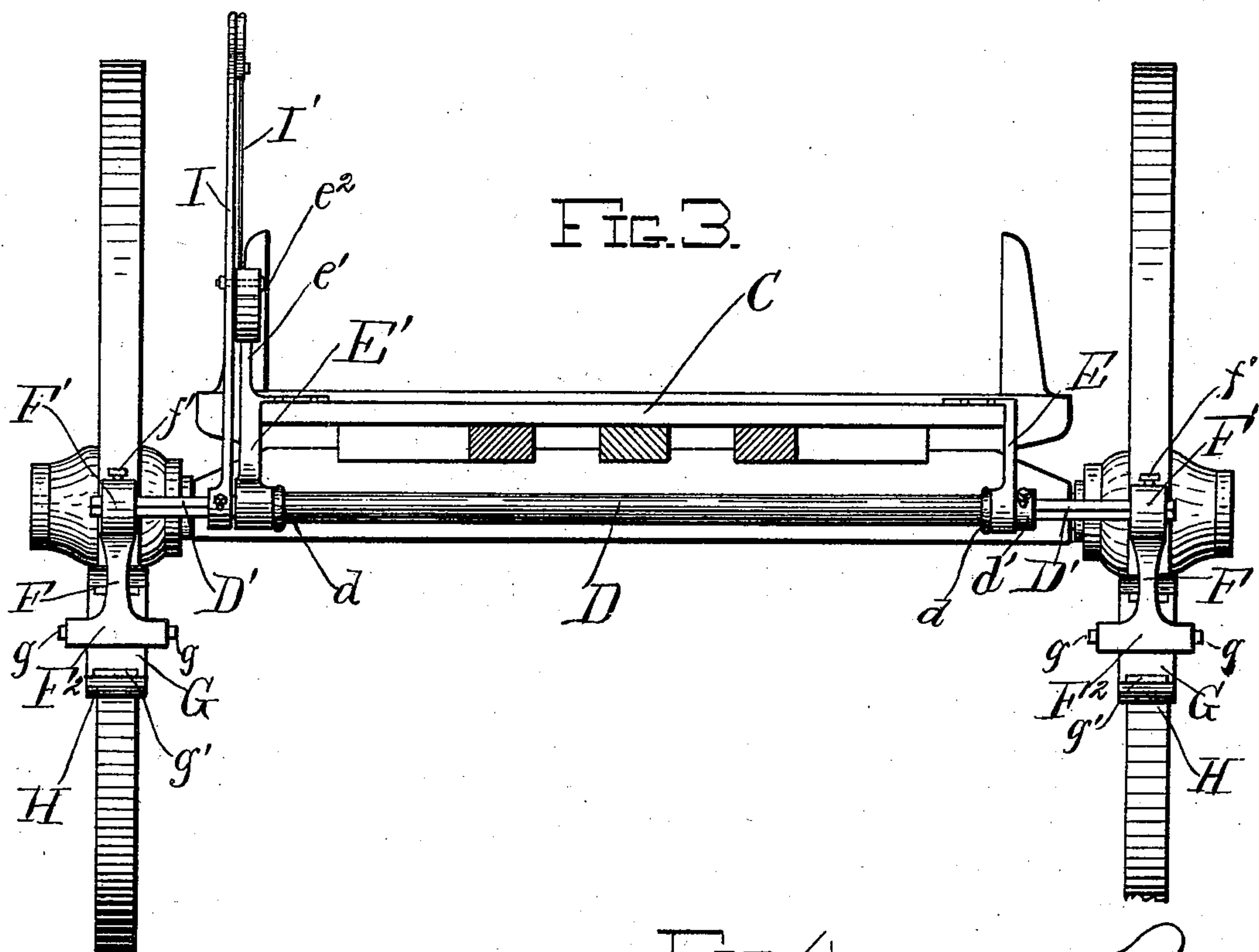
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Maurice J. S. S. S.

Inventor
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Attorneys.

UNITED STATES PATENT OFFICE.

ASA N. PENDERGRASS, OF CLEVELAND, TENNESSEE.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 545,719, dated September 3, 1895.

Application filed June 22, 1895. Serial No. 553,681. (No model.)

To all whom it may concern:

Be it known that I, ASA N. PENDERGRASS, a citizen of the United States, residing at Cleveland, in the county of Bradley and State of Tennessee, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in wagon-brakes; and it consists of the novel parts and combinations of parts hereinafter described and claimed.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 is a top plan view of a portion of the running-gear of a farm-wagon, showing my improved brake in position thereon. Fig. 2 is a side elevation of the rear portion of a farm-wagon provided with my improved brake. Fig. 3 is a front elevation, partly in section, of the rear part of the running-gear of the wagon shown in Fig. 1, slightly enlarged, and the hounds and coupling-pole being cut away along the line *xx* of said figure and showing my improved brake. Fig. 4 is an enlarged detail view showing in side elevation a modification of the segmental rack shown in Fig. 2.

A represents the hounds of the wagon, and B represents the coupling-pole. These parts may be made of any well-known or suitable construction, and as these, as well as the remainder of the running-gear of the wagon, form no part of my invention, they need not be herein described.

C represents the brake-support, which is made preferably of wood on account of lightness, but may be made of metal, if desired. This brake-support is bolted to the hounds of the wagon by means of bolts *c c*, as shown in Fig. 1.

In Fig. 3 D represents the brake-shaft, which is supported beneath the hounds of the wagon by means of the brake-hangers E and E', which are bolted at *c' c'* to the ends of the brake-support C. The lower end of each of these brake-hangers is enlarged and provided

with a circular opening to receive the brake-shaft and form a journal-bearing therefor. The central portion of the brake-shaft is rounded as far out toward each end as the outer sides of the brake-hangers, and a stop *d'* is provided upon said brake-shaft just outside of the hanger E, which stop bears against the said hanger and thus prevents the brake-shaft from slipping inward from that side. The hand-lever for operating the brake being clamped upon the opposite end of the brake-shaft in a similar position relative to the hanger E', serves as a stop for that side, as will be seen in Fig. 3.

The portion of the brake-shaft from the brake-hangers out to each end of the shaft is squared, as at D', to receive the rub block hangers F. These rub block hangers F are provided with an enlarged upper end F', having a squared opening therethrough to fit on the squared end of the brake-shaft, and may be adjusted at any desired position upon the squared portion D' by means of a set-screw *f'*. By this means the rub block hangers may be adjusted to suit the varying width of the tread of the wagon to which it is originally attached, or to suit the width of the tread of any other wagon to which it may be desired to apply the brake.

The lower end F² of the rub-block hangers is provided with a pair of forked arms *ff*², in which the rub-block holders G are pivotally supported by means of outwardly-projecting studs or journals *g*. These rub-block holders are made in two sections and bolted together, so that they may be readily removed when desired.

Stops G' are provided upon the upper and lower sides of the rub-block holders to prevent the block from swinging over in its holder.

The rub-blocks H are provided with a dove-tailed portion H' to fit in the holders G, which are correspondingly made, so that the pressure of the wheel downward upon the block will tend to push the block more tightly into its seat in the holder. This block may be made of hard wood, rubber, iron, or any other suitable material desired. The length of the rub-block hangers should be sufficient to allow the blocks to be swung entirely clear of the wheel when the brake-shaft is turned

backward and to cause the blocks to bear firmly against the wheel when the brake-shaft is turned forward.

For operating the brake I provide a hand-lever I, which is provided at its lower end with an enlarged portion having a squared hole therethrough, which fits upon the squared end D' of the brake-shaft D, as seen to the left in Fig. 3, where it is adjustably held by means of a set-screw i.

The brake-hanger E' is made heavier than the hanger E and is provided with a web e', the upper part of which carries the segmental rack e², the teeth of which engage the pawl I³, operated by the rod I' and bell-crank lever I² on the hand-lever I. This segmental rack may be made solid with the brake-hanger E', as described, or it may be made separate and bolted thereto in any convenient way. When the lever I is pushed forward, it turns the brake-shaft in that direction, which in turn throws the rub-block hangers backward, carrying with them the rub-block holders, and the rub-blocks will be pressed firmly against the tire of the revolving wheel.

For strengthening the brake and preventing the strain on the brake-hangers from causing injury thereto I provide stay-rods d, which encircle the brake-shaft D at their forward ends just inside of the brake-hangers, and at their rear ends they pass through the rear axle of the wagon and are secured by means of suitable nuts. These stay-rods will take up the greater portion if not all of the strain, which would otherwise be on the brake-hangers when the brake is applied.

Fig. 4 shows a modification of the brake-operating mechanism, in which the segmental rack is turned forward and the hand-lever I has been put on the brake-shaft in such a position that it may be operated from a point nearer the front of the wagon or from the ground, as will be evident.

When it is desired to get the brake-lever out of the way for the purposes of removing the body of the wagon or for loading or any other similar reason, the pawl carried by this lever may be disengaged from the segmental rack and the lever may then be readily thrown backward, when it will fall between the rear standard and wheel of the wagon and be entirely out of the way.

It will be seen that many modifications of my invention might be made which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a wagon brake of the character described, the combination with a support therefor removably bolted upon the rear hounds of the wagon, and brake shaft hangers rigidly mounted upon the ends of said support; of a brake shaft pivotally mounted in said hangers beneath said hounds, stops on said brake shaft abutting against said hangers, and

squared portions on the ends of said brake shaft; rub block hangers keyed upon said squared portions of said brake shaft and adjustable laterally thereon; rub blocks pivotally mounted in the lower end of said rub block hangers; and a hand lever rigidly mounted upon one of said squared portions of the said brake shaft, substantially as and for the purposes described.

2. In a wagon brake of the character described, the combination with a support therefor removably bolted upon the rear hounds of the wagon, and brake shaft hangers rigidly mounted upon the ends of said support; of a brake shaft pivotally mounted in said hangers beneath said hounds, stops on said brake shaft; stay rods connecting said brake shaft with the rear axle; squared portions on the outer ends of said brake shaft; rub block hangers keyed upon said squared portions of said brake shaft and adjustable laterally thereon; and provided with forked arms at their lower ends; rub block holders pivotally mounted in said hangers between said forked arms, and rub blocks carried thereby; a hand lever adjustably mounted upon one of said squared portions of said brake shaft, and means for locking the said lever when thrown forward, substantially as and for the purposes described.

3. In a wagon brake of the character described, the combination with a support therefor removably bolted upon the rear hounds of the wagon, and brake shaft hangers rigidly mounted upon the ends of said support; of a brake shaft pivotally mounted in said hangers beneath said hounds, stay rods connecting said brake shaft with the rear axle; stops on said brake shaft outside said hangers, and squared portions on the outer ends of said brake shaft; rub block hangers keyed upon said squared portions of said brake shaft and adjustable laterally thereon, and provided with forked arms at their lower ends; rub block holders composed of two sections bolted together pivotally mounted in said hangers between said forked arms; rub blocks carried by said holders; a hand lever adjustably mounted upon one of said squared portions of the said brake shaft, and a hand operated pawl carried thereby; and a segmental rack carried by one of said brake shaft hangers, for locking said lever in the forward position, substantially as and for the purposes described.

4. In a wagon brake of the character described, the combination with a support therefor removably bolted upon the rear hounds of the wagon, and brake shaft hangers rigidly mounted upon the ends of said support; of a brake shaft pivotally mounted in said hangers beneath said hounds, stay rods connecting said brake shaft with the rear axle; stops on said brake shaft outside said hangers, and squared portions on the outer ends of said brake shaft; rub block hangers keyed upon said squared portions of said brake shaft and

adjustable laterally thereon, and provided
with forked arms at their lower ends; rub
block holders composed of two sections
bolted together pivotally mounted in said
5 hangers between said forked arms; stops on
said holders for limiting the pivotal move-
ment thereof; rub blocks carried by said
holders; a hand lever adjustably mounted
upon one of said squared portions of the said
10 brake shaft, and a hand operated pawl car-
ried thereby; and a segmental rack carried by

one of said brake shaft hangers by means of
which the said hand lever may be locked
when thrown forward, substantially as and
for the purposes described.

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In testimony whereof I affix my signature
in presence of two witnesses.

ASA N. PENDERGRASS.

Witnesses:

WM. MINNIS,
T. L. ROGERS.