

(No Model.)

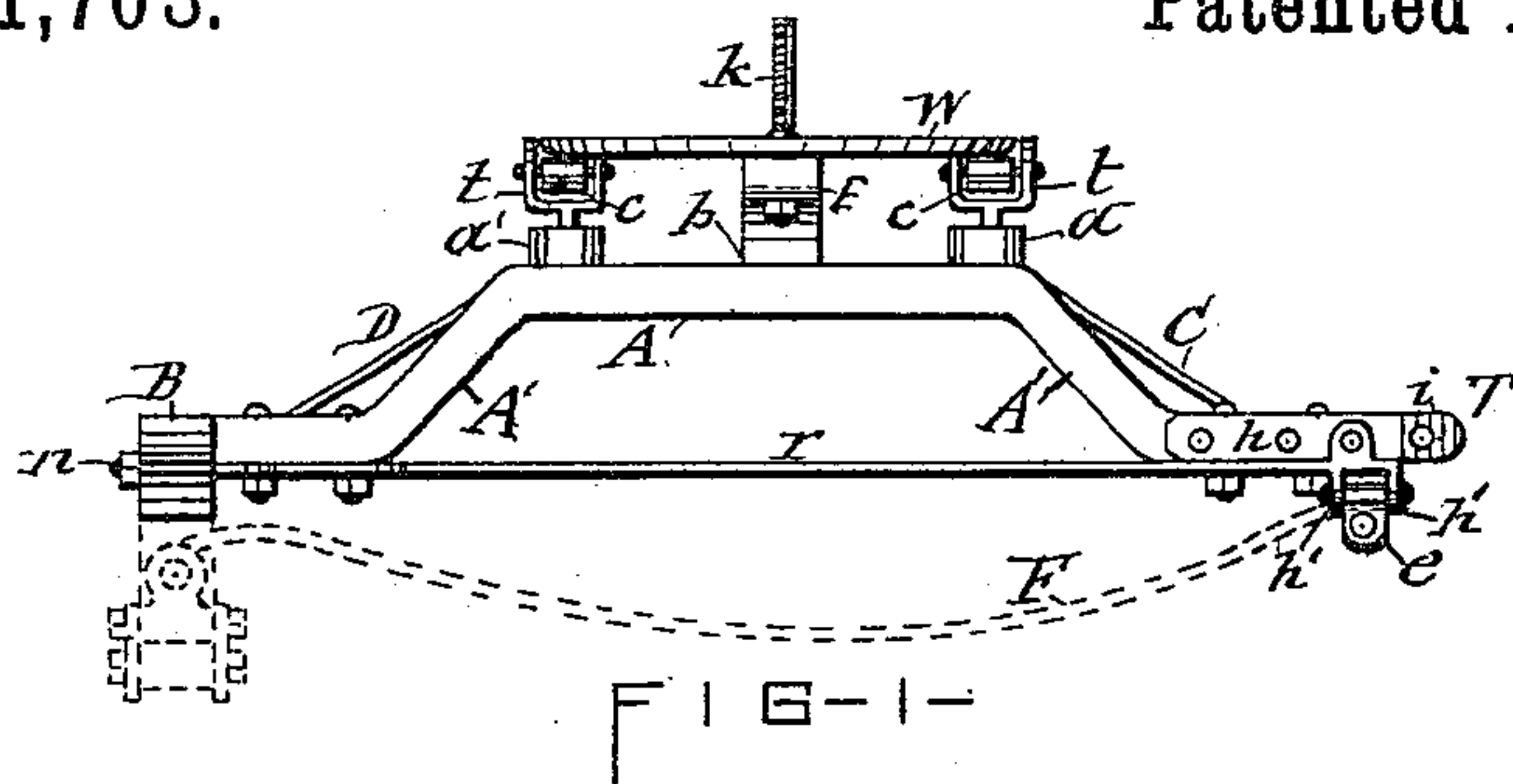
2 Sheets—Sheet 1.

J. H. GROGAN.

PLATFORM SPRING.

No. 271,703.

Patented Feb. 6, 1883.



(No Model.)

2 Sheets—Sheet 2.

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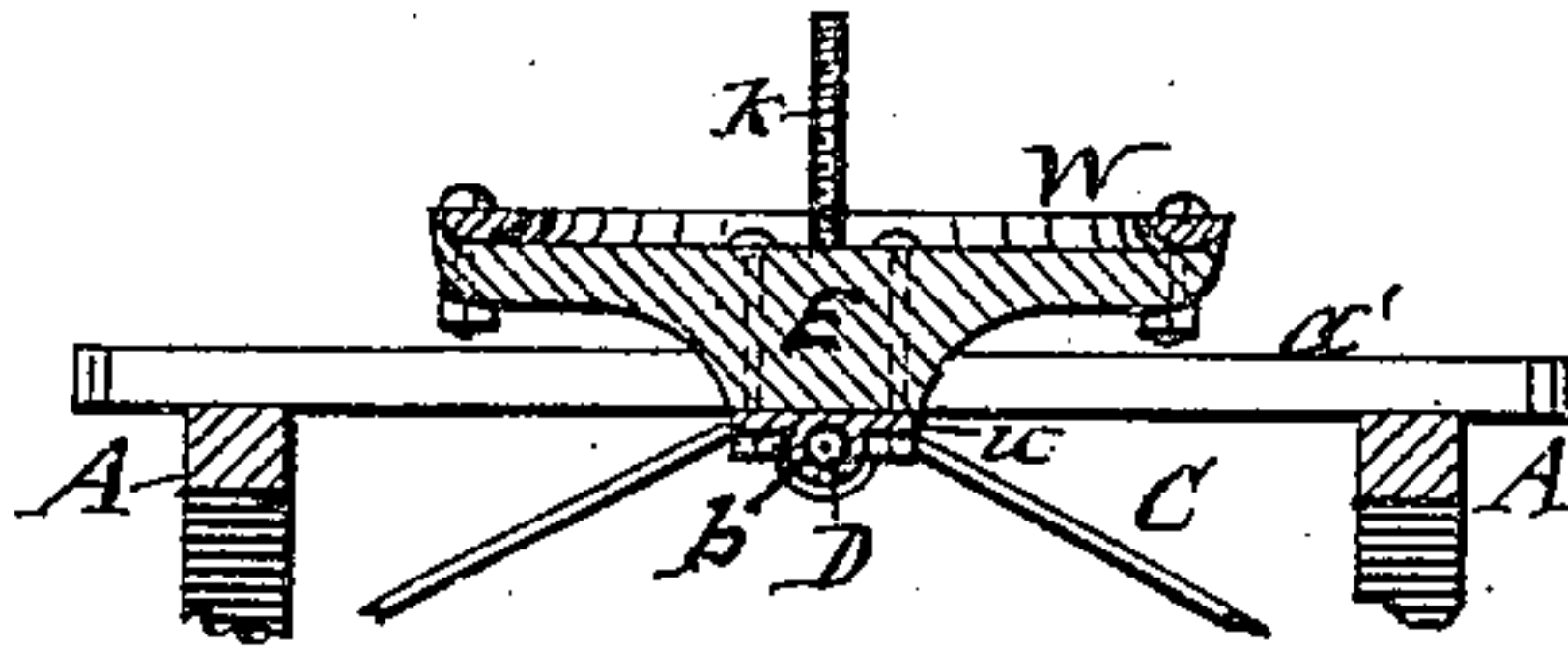


FIG-3-

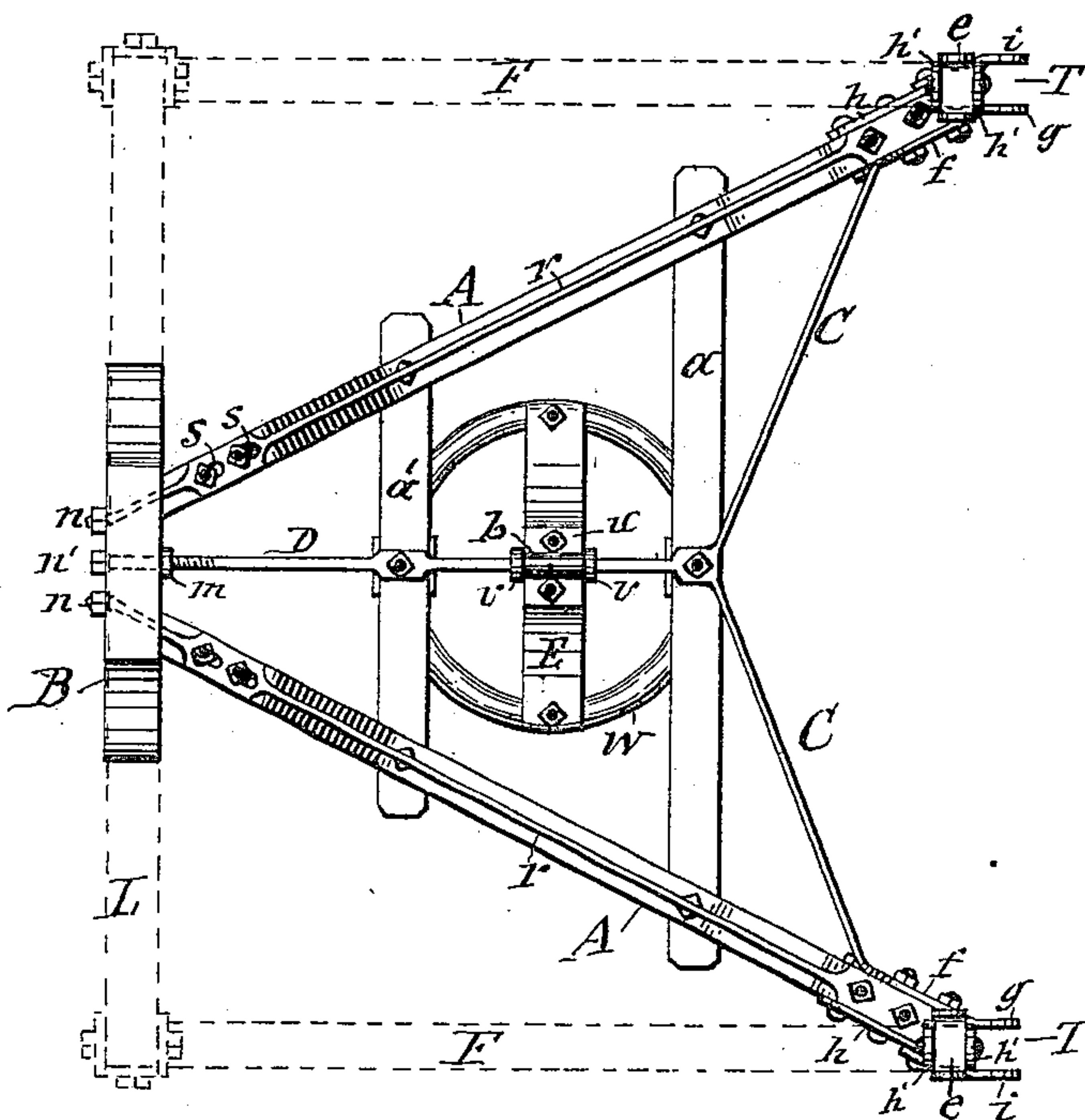


FIG-4-

WITNESSES—
Cm^l C. Raymond.
T. H. Gibbs

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his Atty

UNITED STATES PATENT OFFICE.

JAMES H. GROGAN, OF ROME, NEW YORK.

PLATFORM-SPRING.

SPECIFICATION forming part of Letters Patent No. 271,703, dated February 6, 1883.

Application filed September 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. GROGAN, of Rome, in the county of Oneida, in the State of New York, have invented new and useful Improvements in Platform-Wagon Gear, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention has reference to the forward running-gear of platform-wagons.

The invention consists, first, in a novel construction of the hounds and means for bracing the same, whereby said hounds are brought into a horizontal position under the wagon and are effectually sustained in said position.

The invention also consists in connecting the forward end of the side springs with the hounds by a lateral vibratory hanger, which effectually prevents all torsional strain on the spring and its connections due to the inequality in the rocking movement of the forward end of the hounds and the cross-spring which supports the rear end of the hounds; and the invention furthermore consists in certain peculiarities in the support of the fifth-wheel, and in the connection of the king-bolt with the running-gear, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figures 1 and 2 are side and plan views, respectively, of my invention. Fig. 3 is a transverse section on line *x x* in Fig. 2, and Fig. 4 is an inverted plan view.

Similar letters of reference indicate corresponding parts.

A represents the hounds constructed in the form of trusses—viz., with end portions or end bearings, which are straight and in line with each other, an elevated central portion, which is straight and parallel with the end portions, and inclined bracing intermediate portions, *A'*, uniting said end and central portions, as fully illustrated in Fig. 1 of the drawings, said truss standing perfectly horizontal, and in that respect differing from all other analogous hounds. The aforesaid hounds are arranged in the usual manner—i. e., arranged convergent rearward, and firmly secured to the so-called “spring-bar” B, which rests on the cross-spring L, the whole being supported by the side springs, F,

which ride on the axle, and are connected at their two extremities, respectively, with the ends of the cross-spring L and with the forward ends of the hounds.

The connection of the forward end of the side springs I form of a hanger, *e*, hinged on ears *h' h'*, attached to the under side of the hounds, said ears standing at right angles to the line of the side spring, so as to hold the hinge-pin in range with said spring, and thus allow the hanger to swing laterally. The forward end of the side spring is thus relieved of the torsional strain incident to a rigid attachment of one end of the spring and a yielding support of the opposite end of the same. The side springs, in this case resting at one end on the yielding end of the cross-spring, are subjected to a twisting action, owing to the deflection of said cross-spring; and said twisting action would produce a torsional strain on the side spring were it not for the laterally-swinging hinge-connection of the hanger, with which the forward end of the side spring is connected.

The forward end of the hounds A is provided with a thill-coupling, T, formed of a prolonged bearing, *f*, or extension of the end of the brace C, hereinafter described, which bearing is applied to the inner side of the hounds, and terminates with an ear, *g*.

An elongated plate, *h*, is applied to the outer side of the hounds, and is provided with an ear, *i*, said ears *g* and *i* being provided with a bolt-hole for the reception of the bolt which attaches the thill.

The brace-extension *f* and plate *h* are rigidly secured to the hound A by bolts passing through said parts, as shown.

The hounds A are arched or bent to form an elevated central portion, upon which rest and are firmly attached equidistantly from the center of the fifth wheel two cross plates or bars, *a a'*, tying the said portion of the two hounds and bracing them laterally. Said arched hounds I brace longitudinally by a tie-rod or straining-rod, *r*, firmly secured to the two extremities of the hounds and extended in a direct line from end to end of the same, thus forming the chord of a truss.

The rear end of the straining-rod *r* is extended through the spring-bar B, and is provided

on its extremity with an adjusting-nut, *n*, by means of which said rod can be tightened to sustain the hounds in its arched form.

In order to admit of the aforesaid adjustment, I provide the end of the rod *r*, adjacent to the spring-bar *B'*, with slots or elongated openings *s s*, for the reception of the bolts which fasten said rod to the hounds.

C is the lateral and central stay rod or brace, made *V* shape, and having the end extension, *f*, bolted to the inner side of the hounds in the manner hereinbefore described. The central portion of the brace *C* rises to the under side of the forward cross-plate, *a*, where it is firmly united with the longitudinal central stay-rod, *D*, which is extended rearward, and passes through the spring-bar *B*, and is provided at the front of said bar with a jam-nut, *m*, and at the rear of the bar with an adjusting-nut, *n'*, by means of which the combined braces *C* and *D* can be adjusted to properly resist the lateral strain of the hounds and the vertical strain on the center of the cross-plates, said braces *C* and *D* being formed in one piece and attached to the under side of the center of the cross-plates *a a'* by means of the brackets *t*, which are mounted on top of the cross-plates and have a screw-threaded stud passing through said plate and through the brace *D*, and are provided with a tightening-nut on their end.

On the brace *D*, midway between the cross-plates *a a'*, rides the fifth-wheel support *E*, consisting of a short cross-bar mounted on said brace by a rocker-bearing, *b*, which allows the support *E* to oscillate laterally or at right angles to said brace, the fifth-wheel being rigidly attached to the extremities of the cross-bar *E*.

The aforesaid connection between the support *E* and brace *D*, I form of a plate, *u*, bolted to the under side of said support, and having projecting from it the king-bolt *K*, which

projects through the support *E'*, as shown in Figs. 1 and 3 of the drawings.

The under side of the plate *u* is provided with a sleeve, which encompasses the brace *D*, and is confined between two collars, *v v*, fixed to the brace at opposite ends of the said sleeve.

The lower section of the fifth-wheel *W* is fixed to the support *E* at two diametrically opposite points, and is supported between said points by rollers *c*, journaled on the brackets *t*, as best seen in Fig. 1 of the drawings.

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

1. The combination, with the hounds formed with an elevated central portion, cross-bars *a a'*, and central stay, *D*, of the cross-bar *E*, mounted on the stay *D*, with a rocker-bearing, *b*, the fifth-wheel attached to the extremities of the bar *E*, and the rollers *c c*, mounted on the cross-bars *a a'*, substantially in the manner described and shown.

2. The combination of the hounds *A*, arched as shown, the cross-bars *a a'*, mounted on top of the hounds equidistant from the center of the fifth-wheel, and the straining-rod *r*, extended straight from end to end of and in range with the hounds, substantially in the manner shown.

3. The combination, with the side spring, *F*, and hounds *A*, of the hanger *e*, connected with the hounds by a laterally-swinging joint, substantially as described and shown, for the purpose specified.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Oneida, in the State of New York, this 7th day of September, 1882.

JAMES H. GROGAN. [L. S.]

Witnesses:

C. H. DUELL,

FREDERICK H. GIBBS.