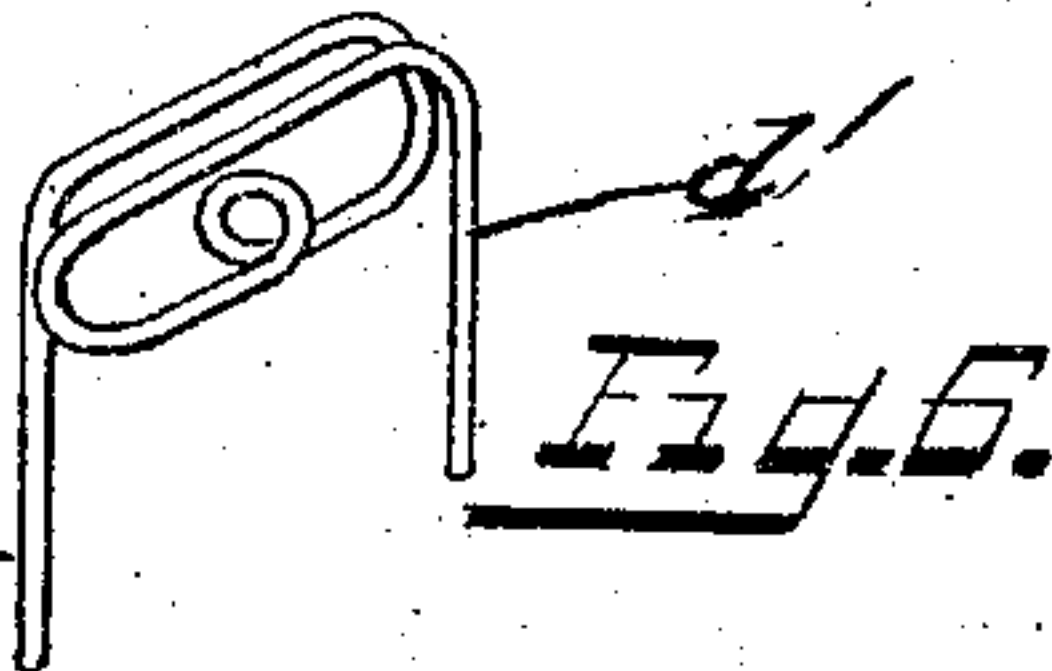
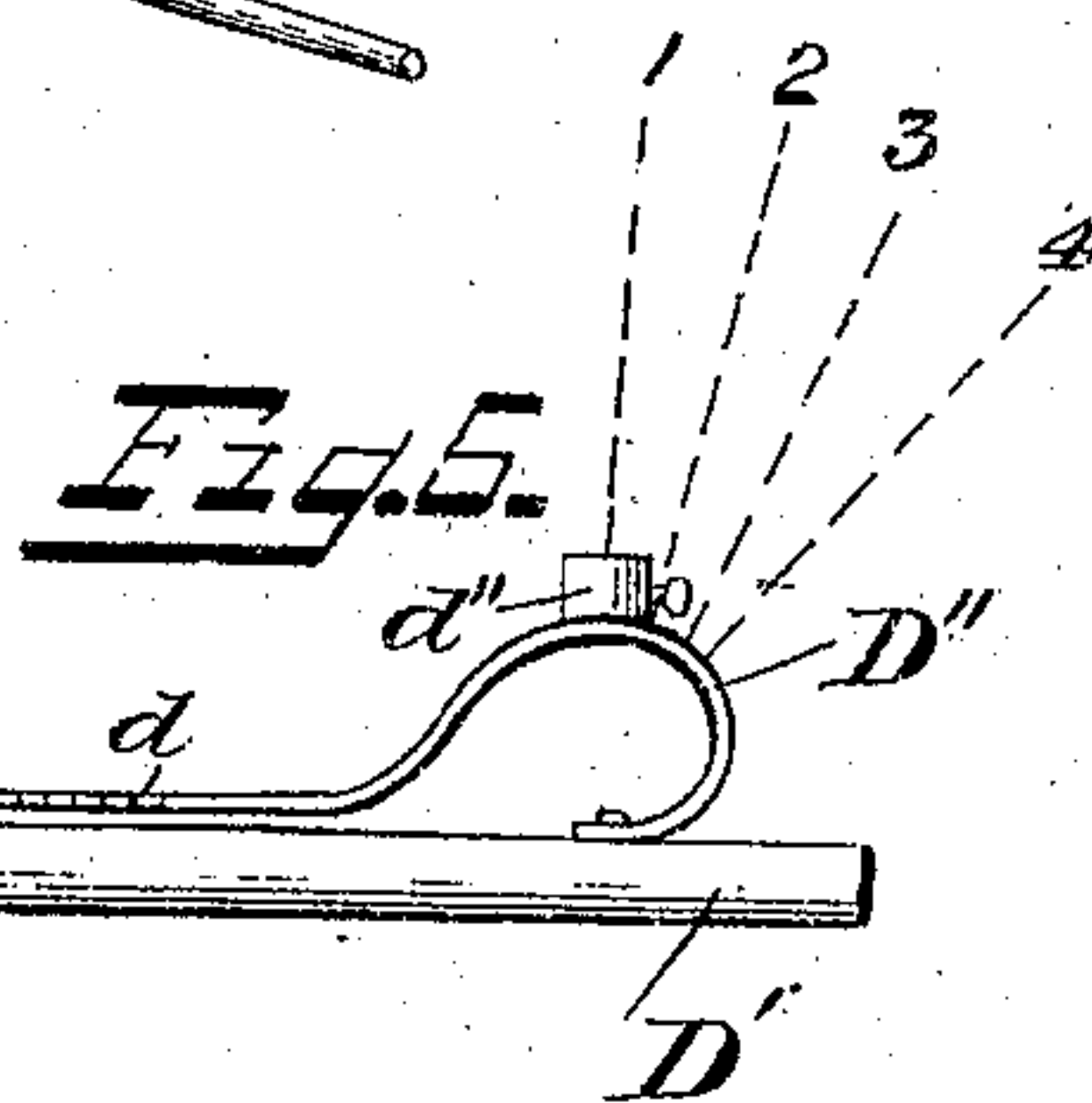
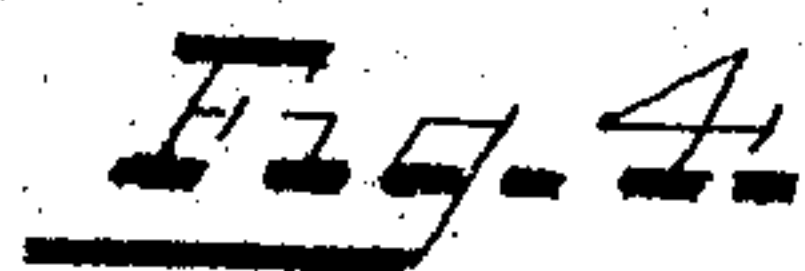
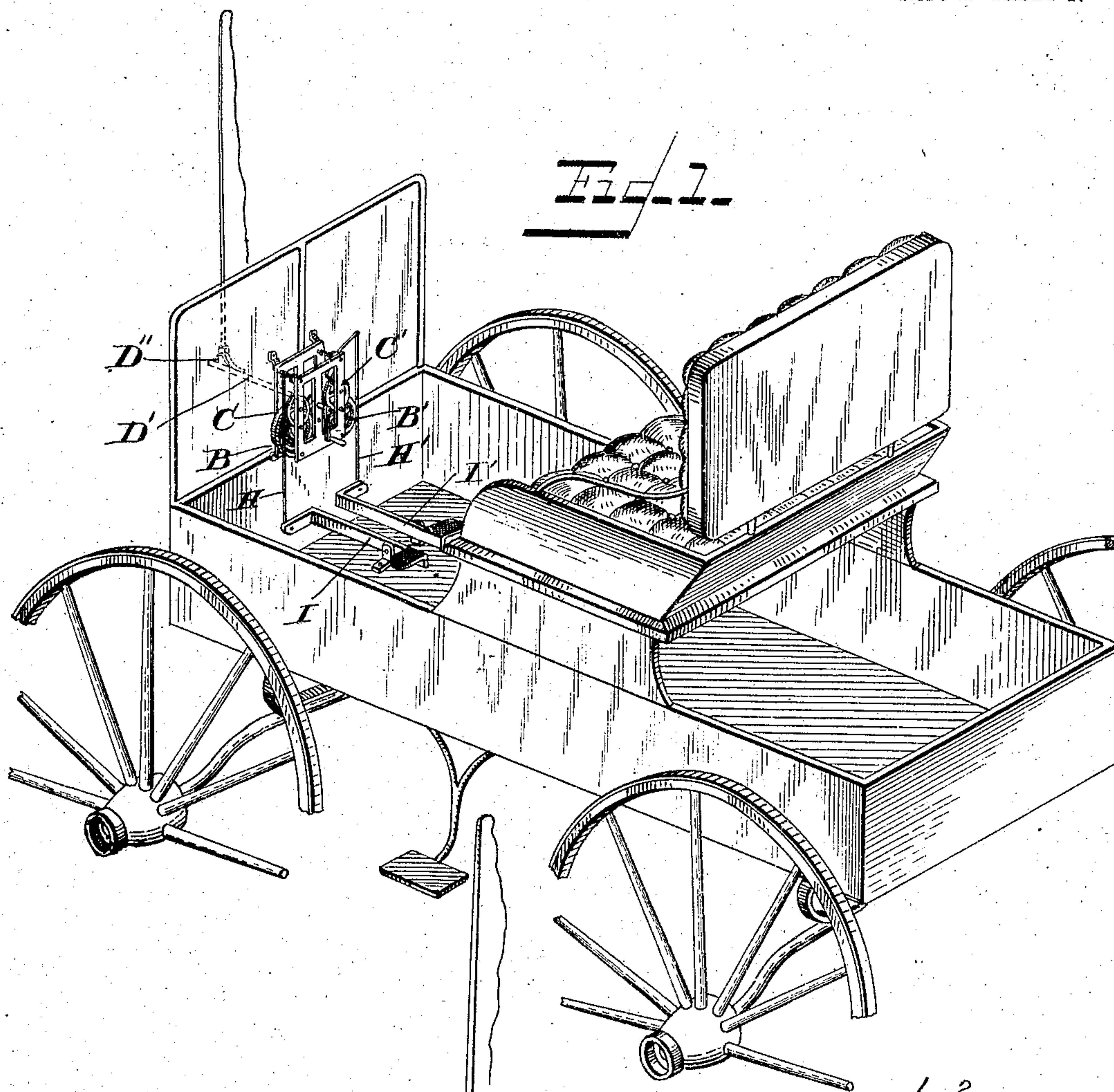


No. 781,460.

PATENTED JAN. 31, 1905.

W. L. RAWLS.
WHIP ACTUATING DEVICE.
APPLICATION FILED NOV. 25, 1904.

2 SHEETS—SHEET 1.



WITNESSES:
Frank L. Ormand
Barker H. Sweet Jr.

INVENTOR
William L. Rawls
BY
E. M. Marble
Attorney

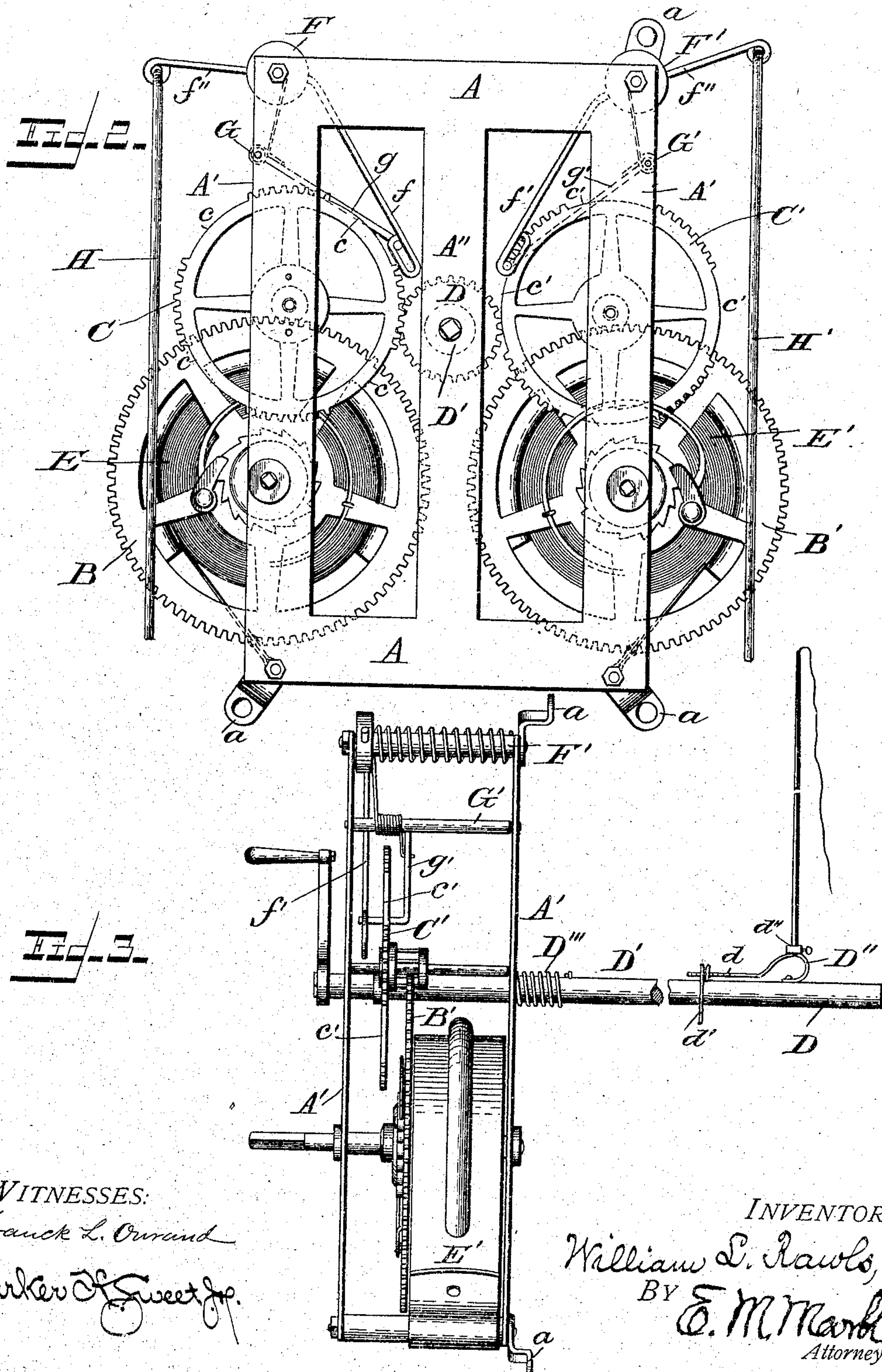
No. 781,460.

PATENTED JAN. 31, 1905.

W. L. RAWLS.
WHIP ACTUATING DEVICE.

APPLICATION FILED NOV. 25, 1904.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

WILLIAM L. RAWLS, OF BELLS, TENNESSEE.

WHIP-ACTUATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 781,460, dated January 31, 1905.

Application filed November 25, 1904. Serial No. 234,311.

To all whom it may concern:

Be it known that I, WILLIAM L. RAWLS, a citizen of the United States, residing at Bells, in the county of Crockett and State of Tennessee, have invented certain new and useful Improvements in Whip-Actuating Devices; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to whip-actuating apparatus; and it consists in the construction and arrangement of the parts, which will be hereinafter more fully described, illustrated in the drawings, and particularly pointed out in the claims.

One of the objects of my invention is to provide a whip-actuating apparatus which can be secured to the dashboard or other suitable part of a movable vehicle in such manner that the ordinary carriage-whip may be securely held in position for immediate application by hand or foot to either horse of a team without interfering with the manipulation of the driving-reins.

A further object of my invention is to provide a whip-actuating apparatus which can be secured to any movable vehicle in such manner that it will be instantly available to the driver by foot or other pressure without loosening the hands or either of them from the reins to incite the team or single animal to the performance of their or its proper work.

To these ends my invention consists of an inclosing frame containing two sets of spring-driven gearings which are adapted to coact with a gearing upon the inner end of a centrally-projecting shaft to impart an oscillating movement to the same either to the right or to the left, and to the outer projecting end of said central shaft is secured the whip-socket, which is capable of ready adjustment to hold the whip at any desired angle, the said central shaft being readily oscillated to either side by means of controlling-levers which automatically start and stop the spring-driven gearing

to impart the desired motion to said shaft and the whip carried thereon.

My invention further consists of the details of construction and general arrangement of parts, as will be hereinafter fully described, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved device as applied in position to the dashboard of a vehicle with its inclosing case removed to readily show its several parts and mode of application. Fig. 2 is a front elevation of the frame, showing the spring-driven gearings and their relation to the gearing of the central shaft. Fig. 3 is an end view of the same. Fig. 4 is a perspective view of the adjustable whip-socket as applied in position to the outer end of the central shaft. Fig. 5 is a side elevation of the same, and Fig. 6 is a detail perspective view of the spring-clamp by which the whip-socket is adjusted in various positions.

Similar letters of reference occurring on the several figures indicate corresponding parts.

Referring to said drawings, A represents the inclosing frame, within the side bars A' of which are journaled the shafts carrying the gearings B B' and C C', respectively, each set of gears being located diametrically opposite each other, as fully shown in Fig. 2. The larger and lowermost gears B B', one on each side of the inclosing frame A, are each provided with winding-springs E E', respectively, whereby motion is imparted to said gears at the proper time and for the purposes as will be hereinafter more fully referred to. The teeth of these gears B B' engage with pinions secured to the shafts of the upper smaller gears C C', one on each side, to impart motion to the same. Each of these smaller gears C C' have their teeth cut away at regular intervals, forming spaces c c' around the peripheries of the same, as clearly shown in Fig. 2, for the purposes hereinafter referred to. Between these two gears C C' is centrally located a still smaller gear-wheel D, affixed to the inner end of the centrally-projecting whip-shaft D', which is suitably journaled in the central bars A'' of the inclosing frame A, as shown.

Near the upper ends of and between the side bars A' are journaled spring-actuated shafts F F', one on each side of the inclosing frame A, as shown, and located a short distance beneath the same are similarly-journaled smaller spring-actuated shafts G G', which are each provided with a downwardly-projecting arm or rod *g g'*, having their lower ends bent at right angles to engage the spaces *c c'* of the gears C C', the shafts F F' also having downwardly-depending arms or rods *f f'*, the lower ends whereof are bent into the form of a loop to encircle the outer end of the right-angled projections of the rods *g g'*. Upon each shaft F F' is provided an outwardly-projecting rod *f'*, each rod being formed with loops at their extreme outer ends for engagement with similar loops in the tops of vertical rods H H', one on each side of the inclosing frame A, the lower ends of said rods being connected to the outer ends of the arms of the foot-treadles I I', respectively, as fully shown in Fig. 1.

Near the outer end of the centrally-projecting shaft D' is provided an adjustable whip-socket D'', which is composed of a flat steel spring *d*, the forward end of which is bent in the form of a loop and riveted to the shaft, while the rear free end is provided with a series of notches on each side, as fully shown in Fig. 4. A spring clamp or bracket *d'*, (shown in Fig. 6,) formed, preferably, of wire and having a central loop whereby it is riveted to the under side of the shaft D', is provided for engagement with the serrated end of the whip-socket D'' to adjust the whip to the desired angle, the upwardly-projecting spring-arms of said clamp or bracket engaging with one of the series of notches on each side of the free end of said whip-socket, as fully shown in Figs. 4 and 5. It will thus be seen that the free and serrated end of the whip-socket passes between the spring-arms of the clamp or bracket *d'* and is held in position by the series of notches engaging the spring-arms to give the desired angle to the whip, which is accomplished in the following manner: Upon the top of the loop or curved end of the whip-socket D'' is securely attached the whip-holder *d''*, having a set-screw for holding the whip the rein. Now by pressing the loop portion forward, causing the free end of the serrated plate *d* to also move forward between the arms of the clamp *d'*, the whip will assume any of the various angles indicated by dotted lines 1, 2, 3, and 4, (see Fig. 5,) as may be desired. A correspondingly backward movement of the loop of the whip-socket restores the whip back to its vertical angle.

The construction of my invention being as above described, the operation of the same is as follows: The device is preferably attached to the dashboard of the vehicle, in front of the driver, by means of bolts engaging with the lugs *a* on the corners of the inclosing

frame A, which is adapted to be covered and protected by a suitable case or hood, (not shown,) while the arms I I' of the foot-treadles are pivoted to lugs secured to the floor of the vehicle, as shown in Fig. 1, and through the rods H H' operate to actuate the whip in the following manner: When the device is in its normal position, or in a state of rest, the teeth of the small gear D on the inner end of whip-actuating shaft D' engage with the spaces *c c'* on the gears C C', and the right-angled bent ends of the trip-rods *g g'* also rest in these spaces *c c'* to keep said gears from revolving. The motive springs E E' upon the lower gears B B' being first wound up, the device is then ready for operation. When it is desired to actuate the whip to the left-hand side, as in the present instance shown in Fig. 2, the treadle on that side is operated to draw down the rod H, and it in its turn pulls down the arm *f''* on shaft F, causing the rod *f*, whose looped end encircles the trip-rod *g*, to lift the bent end of the same from engagement with the space *c* in the gear C, permitting said gear to revolve and engage with the teeth of the gear D on the central shaft D' to oscillate said shaft a predetermined distance to the left, and thus actuate or give the whip a quick stroke to the left. The gear C moves around until another space *c* intervenes and into which the bent end of the trip-rod *g*, actuated by the spring on its shaft G, immediately engages to bring said gear to a state of rest, while the spring D'', engaging the central bar A'' of the inclosing frame A and the shaft D', restores said shaft and the whip carried thereon to their normal positions ready for another movement either to the left or to the right. It must be kept in mind that the spaces *c c'* on side gearings C C' remain opposite the gear D on shaft D' when the device is at rest, and the function of the trip-rods *g g'* is to hold them in such position until the trip-rods *g g'* on either side are operated to manipulate the said gears to oscillate the central shaft D' and the whip carried thereon to either the right or left hand side, and thus strike either horse of the team, as may be found necessary. The length of the stroke of the whip may be regulated by increasing or decreasing the number of teeth on the gears C C' between the spaces *c c'* on their peripheries or increasing or decreasing the number of teeth on the gear D on shaft D'. For instance, we will assume that the gear D on shaft D' has thirty-two teeth and that there are eight teeth in each group on side gears C C', so that in the operation of the gears the number of teeth mentioned would carry the shaft one-fourth revolution around before stopping at the next space *c* or *c'* on the gears C C' and restoring the shaft D' to its normal position. By having only twenty-four teeth on the gear D its shaft D' would be carried one-third revolution around, and

so on, according to the number of teeth employed. The operation of the whip to the right, or in a direction opposite to that above described, is accomplished in substantially the same manner by depressing the foot-treadle at the right, thus operating the trip-rod on that side of the mechanism and actuating the gears on that side to impart motion to the central shaft and the whip carried thereon.

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

1. The combination with a movable vehicle, of a whip-actuating device, a whip adjustably supported thereon and means for operating the same, substantially as described.

2. The combination with a movable vehicle, of a whip-actuating apparatus comprising an inclosing frame carrying spring-driven gearings adapted to coast with a gearing upon the whip-actuating shaft to impart motion to the whip carried thereby, either to the right or to the left, substantially as described.

3. The combination with a movable vehicle of a whip-actuating apparatus comprising a whip-actuating shaft carrying the whip adjustably supported thereon, and mechanism for actuating said shaft, substantially as described.

4. In a whip-actuating apparatus, the combination with an inclosing frame adapted to be secured to a vehicle, of two sets of spring-driven gearings which are adapted to coast with a gearing upon a whip-actuating shaft to impart motion to the same, either to the left or to the right; said gearings being controlled by levers adapted to be operated by hand or foot, substantially as described.

5. In a whip-actuating apparatus, the combination with an inclosing frame adapted to

be secured to the body of a vehicle, of two sets of spring-driven gearings, arranged opposite to each other in said inclosing frame, and whereby motion is imparted to companion-gears having alternating series of teeth, groups, and vacant spaces between the same; said gears coasting with a central gear upon the whip-actuating shaft to impart motion to the same and said gears being operated and controlled by trip-rods connecting with levers to be operated by foot-pressure, substantially as described.

6. In a whip-actuating apparatus, the combination with an inclosing frame adapted to be secured to the body of a vehicle, of two sets of spring-driven gearings B, B' coasting with mutilated gears C, C' to impart motion to the central gear D of the whip-actuating shaft D', when the trip-rods g, g' are released from engagement with the spaces c, c' of the mutilated gears C, C', respectively, through the medium of connecting-levers operated by foot-pressure, substantially as described.

7. In a whip-actuating apparatus, the combination with an inclosing frame A, provided with two sets of spring-driven gearings B, B', central gear D upon the whip-actuating shaft D', and the mutilated gearings C, C', of the trip-rods g, g' on spring-actuated shafts G, G' and rods f, f' on shafts F, F' connecting with rods H, H' and levers I, I' of a foot-treadle, substantially as and for the purposes described.

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

WILLIAM L. RAWLS.

Witnesses:

W. R. CRICHLAW,
J. E. JEEKS.