

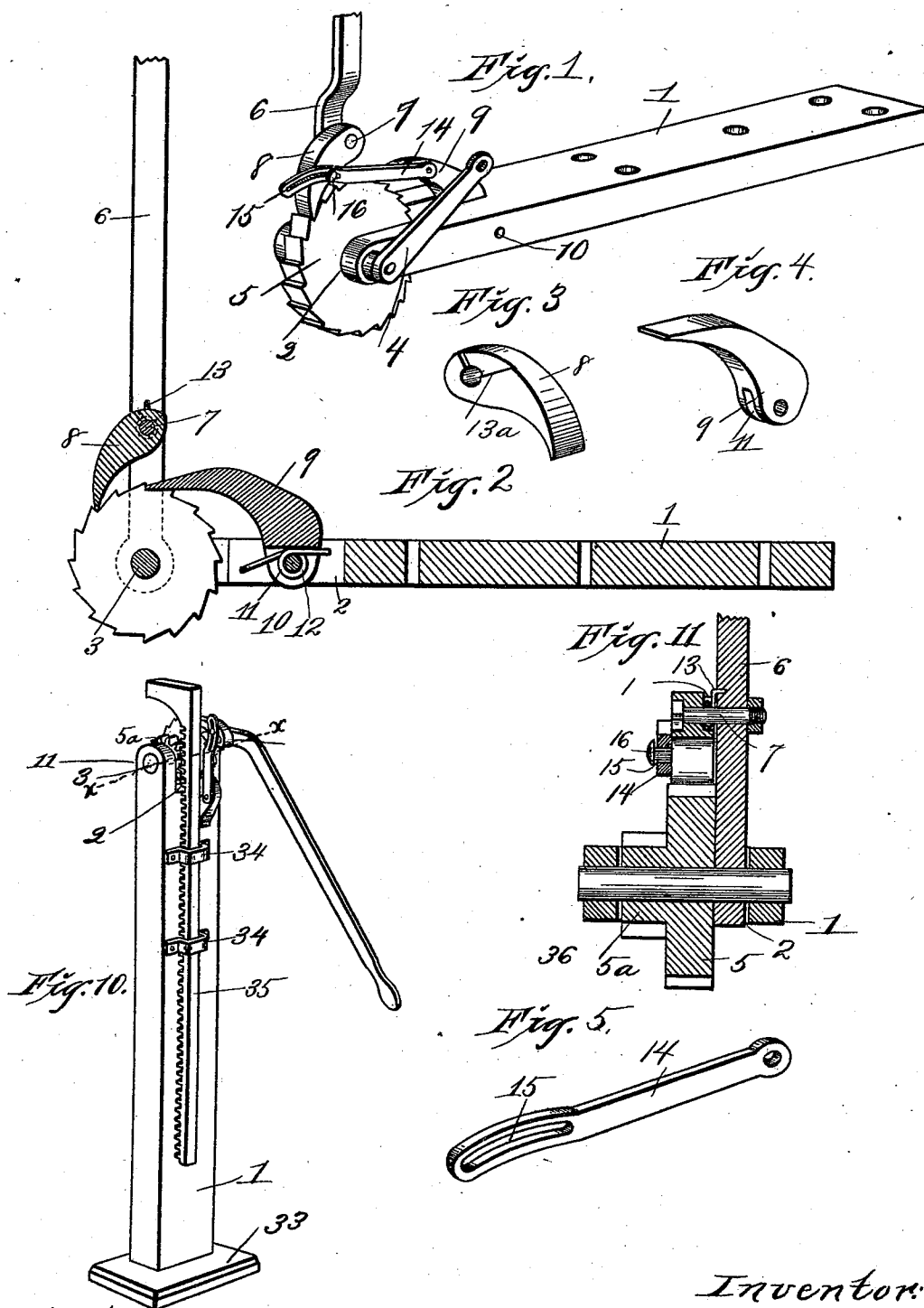
(No Model.)

2 Sheets—Sheet 1.

T. CONWAY.
BRAKE ACTUATING MECHANISM.

No. 517,112.

Patented Mar. 27, 1894.



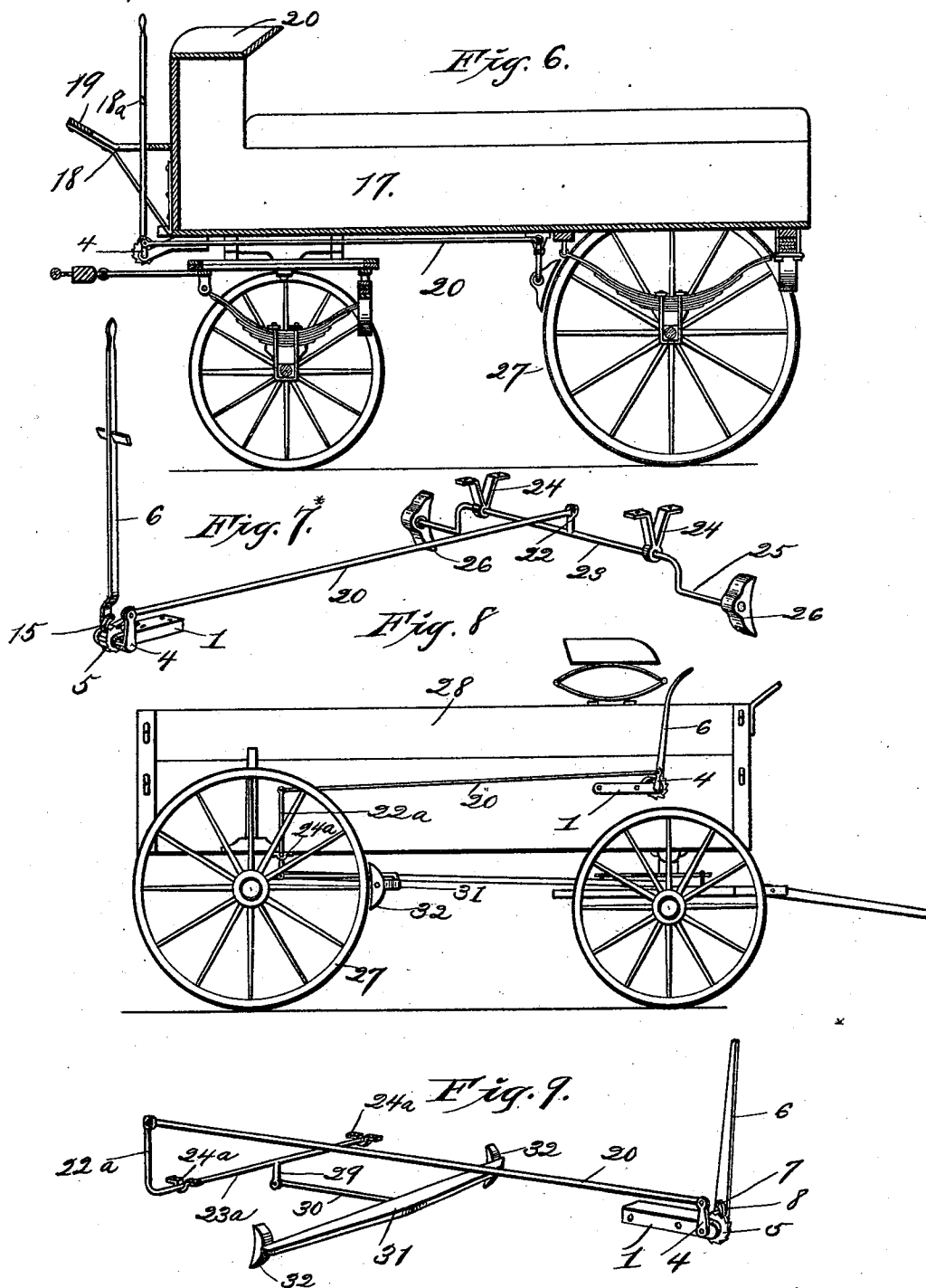
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UNITED STATES PATENT OFFICE.

THOMAS CONWAY, OF KANSAS CITY, MISSOURI.

BRAKE-ACTUATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 517,112, dated March 27, 1894.

Application filed May 12, 1893. Serial No. 473,953. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CONWAY, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Actuating Mechanism for Vehicle-Brakes and Lifting-Jacks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in mechanism, which may be used in connection with and to actuate wagon-brakes, and may also be used in connection with and to actuate a bar for lifting purposes; and the objects of my invention are to produce mechanism of the character referred to, which is positive and direct in action, and which is simple, strong, durable and inexpensive of construction.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as will be hereinafter fully described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, represents a perspective view of an actuating mechanism, constructed in accordance with my invention. Fig. 2, is a vertical central sectional view of the actuating-mechanism. Fig. 3, represents a detail perspective view of the actuating-pawl of the mechanism. Fig. 4, represents a detail perspective view of the locking-pawl of the mechanism. Fig. 5, represents a detail perspective view of the slotted link-bar which connects the actuating and locking-pawls. Fig. 6, represents a vertical longitudinal sectional view of a wagon, and showing my improved actuating-mechanism connected up to the brake-mechanism thereof, in operative position. Fig. 7, represents a perspective view of the actuating mechanism and brake-mechanism detached from the wagon. Fig. 8, represents a side elevation of a different form of wagon, and showing my improved actuating-mechanism connected up to the brake mechanism thereof, in operative position. Fig. 9, represents a perspective view of the actuating mechanism and the brake-mechanism of the wagon shown in Fig. 8, detached. Fig. 10,

represents a perspective view of a standard and a vertical bar supported thereby, and showing my improved mechanism in position to raise or lift said bar. Fig. 11, is a horizontal sectional view, taken on the line $x-x$ of Fig. 10.

In the drawings, 1 designates a rectangular bar or plate which is formed at one end with a bifurcation 2, and journaled in the end of the bar or plate 1, and extending transversely of the outer end of the bifurcation 2, is the shaft 3. At one end this shaft is provided or formed with a rock-arm 4, and keyed or otherwise rigidly mounted upon the shaft 3 is a ratchet-wheel 5, said ratchet-wheel occupying the bifurcation of the bar or plate 1.

Loosely secured at one end, upon the opposite end of the shaft 3, is a lever 6, and pivotally carried upon the pin 7 of said lever is a pawl 8, the free end of said pawl engaging the ratchet-wheel 5.

Located in the inner end of the bifurcation 2 of the bar or plate 1, and pivotally mounted upon the cross-pin or rod 10, is the locking-pawl 9, the forward or free end of which engages the ratchet-wheel 5. This locking-pawl is bifurcated at its pivoted end at 11, and a spring 12, encircling the pivot pin or rod, has one end secured to the bar or plate 1, and the other end bearing against the locking-pawl 9; the tendency of said spring being to hold the locking-pawl into engagement with the ratchet-wheel 5. Pivotaly secured to one side and near the forward or free end of the locking-pawl 9, is the rear end of a connecting link-bar 14, the opposite end of which is formed with a curved slot 15; said slot extending approximately concentric to the axis of the shaft 3, and being engaged by the pin 16 carried by the actuating-pawl 8, and near its forward end. This pin 16, normally occupies the rear end of the slot 15, so that as the lever 6 is moved forward, the pin 16 is allowed to move to the front end of said slot. The actuating-pawl 8 is held from displacement from the ratchet-wheel 5, by the spring 13; said spring encircling the pivot 7, and having one end secured to the lever 6, and the opposite end bearing against the shoulder 13^a, formed in the adjacent side of the actuating-pawl.

Referring now to Figs. 6 and 7, a delivery

wagon 17 is shown; said delivery wagon being formed with a longitudinal slot 18 in the foot-board 19, through which the upper end of the lever 6 of the actuating-mechanism projects; the bar or plate 1 being bolted or otherwise secured to the under side of the wagon-body, near its front end. The lever 6 is provided with a projection 18^a, adapted to be engaged by the foot of the operator, if desired. A link-rod 20, extends longitudinally of the under side of the wagon-body, and has its opposite ends pivotally connected to the rock-arm 4, of the shaft 3, and the upwardly projecting arm 22, of the rock-shaft 23; said rock-shaft being arranged horizontally and transversely of the wagon-body, and journaled in the hangers 24, pendent from the under side of the wagon-body. The shaft 23 is cranked at each end at 25, and carries at each end a brake-shoe 26; said brake-shoes being adapted, when the lever 6, is thrown forward to contact with the peripheries of the rear wheels 27, as hereinafter referred to in the operation of the device.

Referring now to the construction shown in Figs. 8 and 9, 28 designates a farm-wagon, and secured to the right-hand side thereof and near its forward end, is the actuating-mechanism described, the lever 6 in this instance having its upper end bent forwardly to form a hand-hold. The longitudinally extending link-rod 20, is pivotally connected at its opposite ends to the rock-arm 4, and to the upwardly extending arm 22^a, of a rock-shaft 23^a, journaled transversely of and to the under side of the body of the wagon, in bearings 24^a. The rock-shaft 23^a, is also provided at its middle with the depending arm 29, which is pivotally connected to the rear end of the rod 30, which carries the brake-beam 31 at its forward end. This brake-beam extends transversely of the wagon and forward of the rear wheels 27, and is adapted when the lever 6 is operated to hold the brake-shoes carried thereby into contact with the peripheries of the said wheels.

Referring now to the construction disclosed in Figs. 10 and 11, 33 designates a base board or plate, upon which the squared end of the bar or plate 1 is rigidly secured, so that said bar or plate shall occupy a vertical position. Secured to operate vertically against one side of this bar or plate in the guide and retaining clips or brackets 34, is a rack-bar 35; said bar being arranged opposite the bifurcation 2 in the upper end of the bar or plate 1, and so that the teeth thereof shall project inwardly. When using the actuating-mechanism with this lift-bar 35, the rock-arm 4 is dispensed with, and a gear-pinion 5^a, is secured to or formed integral with the ratchet-wheel 5: the opposite ends of the shaft 3, are

then journaled in the upper ends of the bar or plate 1 as before described, and the lever 6, is also preferably bent to extend downwardly as shown, so as to be more conveniently handled.

In its application to a wagon, the operation of the device is as follows: The lever 6 may be moved or thrown forward by hand or foot, and this causes the actuating-pawl to rotate the ratchet-wheel 5, and move the rock-arm forwardly and at the same time the rock-arm pulling upon the link-rod 20, operates the rock-shaft and applies the brake-shoes to the wheels. As this movement takes place, the spring-actuated locking-pawl slips over the teeth of the ratchet-wheel, and when the limit of the movement of the wheel 5 is reached, the pawl prevents its backward rotation, and holds the brake-shoes firmly in contact with the wheels. When desiring to release the brake, the lever is thrown rearwardly, and the pin 16, coming in contact with the rear end of the slot 15, forces or moves the locking-pawl from engagement with the ratchet-wheel 5, and allows the brake-mechanism to resume its normal and unlocked position. With the lifting-mechanism shown in Figs. 10 and 11, the operation is practically the same. It is designed, as shown in this connection, that the lift shall be obtained by raising the lever, so that the device may be placed beneath a wagon and the power applied to the lever with better effect and more conveniently to the operator.

From the above description it will be seen that I have produced a mechanism for the purposes intended, which is simple, strong, durable and comparatively inexpensive of construction, and which is positive and reliable in action.

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

An actuating-mechanism, comprising a bar or plate, a shaft revolubly carried by said bar or plate, a ratchet-wheel mounted upon said shaft, and a spring-actuated locking pawl pivotally carried by the bar or plate, and engaging the ratchet-wheel, a lever mounted loosely upon the shaft, and a spring-actuated pawl carried by said lever and engaging the ratchet-wheel, and having a pin, and a slotted link-bar pivotally carried by the locking-pawl, and the slot of said bar engaging the pin of the actuating pawl, substantially as set forth.

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

THOMAS CONWAY.

Witnesses:

G. Y. THORPE,
M. P. SMITH.