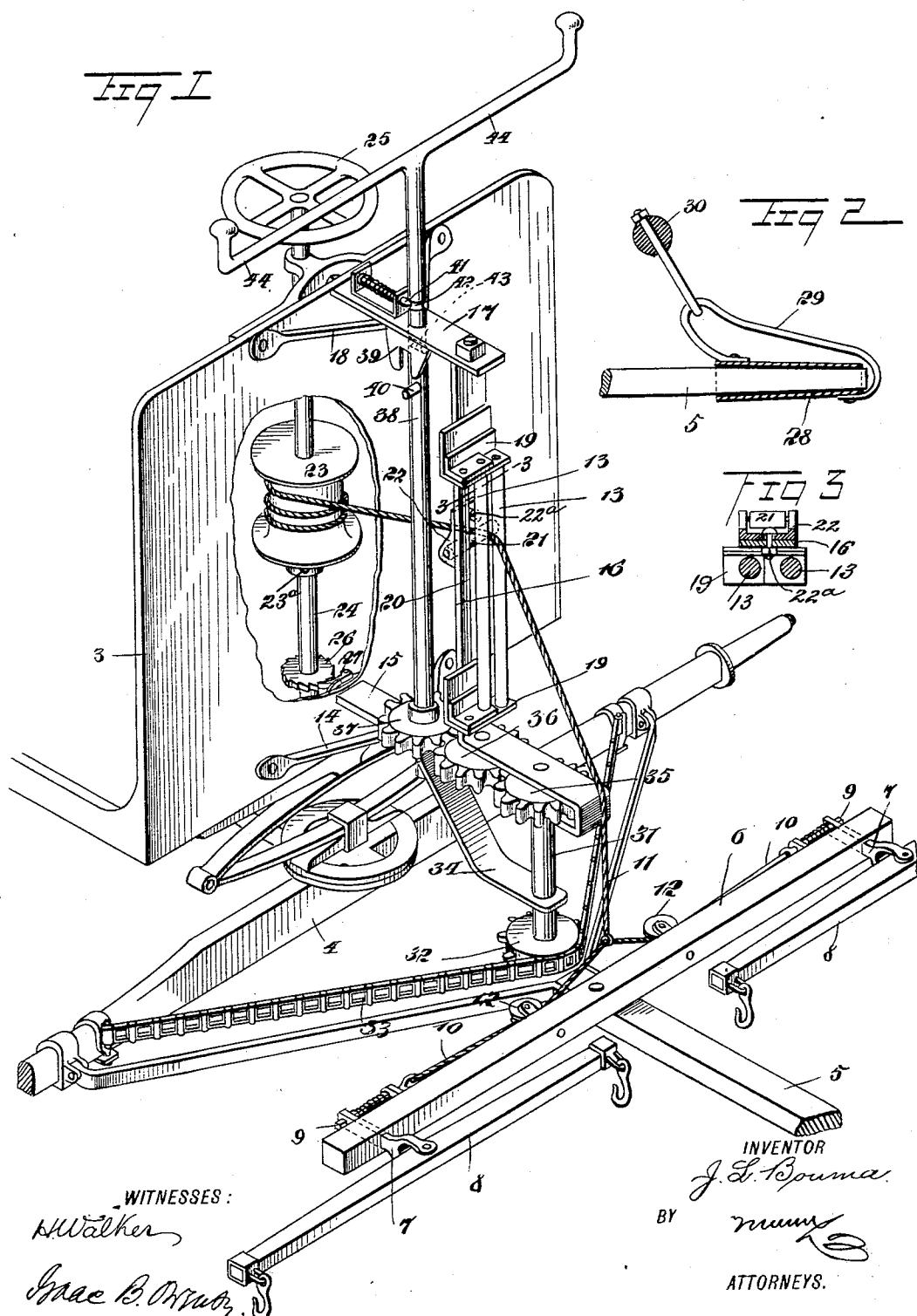


(No Model.)

J. L. BOUMA.
HORSE DETACHER.

No. 587,924.

Patented Aug. 10, 1897.



UNITED STATES PATENT OFFICE.

JOUTE L. BOUMA, OF WANARI, SOUTH DAKOTA.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 587,924, dated August 10, 1897.

Application filed January 4, 1897. Serial No. 617,931. (No model.)

To all whom it may concern:

Be it known that I, JOUTE L. BOUMA, of Wanari, in the county of Bonhomme and State of South Dakota, have invented a new and Improved Horse-Detacher, of which the following is a full, clear, and exact description.

The invention comprehends means for detaching runaway horses from their vehicles and for steering the vehicles without the aid of horses should the vehicles run from momentum gathered before the detachment of the horses. I provide, therefore, a drum around which a flexible connection is wound, this connection controlling spring-pressed pins which hold the whiffletrees. I also provide a vertically-standing post having sprocket-and-chain gearing by which movement is transmitted to the front axle of the vehicle and the vehicle thereby steered.

The invention consists in such features of construction and combinations, as will be fully described hereinafter and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my invention, and Fig. 2 is a view showing the means for attaching the neck-yoke to the end of the wagon-pole. Fig. 3 is a detail section on the line 3-3 of Fig. 1.

According to the form of my invention shown in the drawings, the invention is applied to a buggy the body of which has a dashboard 3 and is supported partly on a front axle 4, to which the pole 5 is attached. Connected to the pole 5 is a doubletree 6, the terminals of which are each provided with transverse passages through which bars 7 respectively pass. To the front ends of the bars the singletrees 8 are pivotally connected. The rear ends of the bars are orificed and normally held by spring-pressed pins sliding longitudinally of the doubletree 6 and respectively connected to branches 10 of the wire or other flexible connection 11. The branches 10 respectively pass over pulleys 12, held on the doubletree 6, while the main portion of the flexible connection passes rear-

ward and upward between vertically-extending and parallel guide-bars 13.

Rigidly secured to the lower front portion of the dashboard 3 is a forwardly-projecting brace 14, serving to strengthen a plate 15, which is attached to the dashboard and projects out horizontally and then upwardly and rearwardly parallel with the outwardly-extending portion of the plate. At a point about midway the length of this outwardly-extending portion of the plate the plate 15 extends upward to form a standard 16, the upper end of which is attached to the outer end of the plate 17, projecting outwardly from the upper portion of the dashboard 3 and strengthened by a brace 18 similar to the brace 14.

The guide-bars 13 are held in brackets 19, projecting from the standard 16. The flexible connection 11 after passing between the guide-bars 13 runs through a slot 20, extending longitudinally in the standard 16 and then over a roller 21, journaled in a plate 22, adjustable vertically on the standard 16 by means of a bolt 22^a, operating in the slot 20, as best shown in Fig. 3. From roller 21 the flexible connection 11 passes rearward through an opening in the dashboard 3 and finally around a drum 23, fixed on a vertical shaft 24, revolubly journaled at the rear of the dashboard. The drum 23 is held adjustably on the shaft 24 by means of a set-screw 23^a. The shaft is provided also with a ratchet 26 and pawl 27, both located at its lower portion and serving to prevent the reversal of the shaft until the pawl is purposely released. The normal position of the parts is that shown in the drawings. When the team becomes uncontrollable, the shaft 24 should be turned to draw on the flexible connection 11, retracting the pins 9 and releasing the singletrees 8.

The outer end of the pole 5 has a sleeve 28, freely movable off the end of the pole and carrying a loop 29, to which the neck-yoke 30 is attached. When the team starts from the doubletree 6, the sleeve 28 may be easily slipped from the end of the pole 5 and the detachment of the team will be complete.

Journaled in a plate 34, extending downwardly and forwardly from the inner portion of the plate 15, and in the horizontally-extending portions of the plate 15 is a vertical ex-

tending rotary shaft 31, whereon is fixed a sprocket-wheel 32. A sprocket-chain 33 meshes with the wheel 32 and has its terminals respectively attached to the outer portions of the front axle 4. Fixed to the shaft 31 is a pinion 35, located between the horizontal portions of the plate 15 and meshing with a similar gear 36, journaled between said portions of the plate 15. The gear 36 in turn meshes with and transmits movement to a gear 37, fixed to the lower end of a shaft 38, journaled in the outwardly-extended portion of the plate 15 and also in the plate 17. The shaft 38 is both slidable and revoluble in its bearings. Fixed to and depending from the right-hand side of the plate 17 is a plate 39, having a notch designed to receive a pin 40, projecting from the shaft 38. When the parts are operatively adjusted, the gear 37 meshes with the gear 36, and the pin 40 is below the plate 39. When it is desired that the shaft 38 be inoperative, said shaft is raised so that the pin 40 will be locked in the notch in the plate 39. A spring-pressed pin 41, operating in an annular groove 42 of the shaft 38, holds the shaft in the position shown in the drawings. When the shaft is raised, the pin 41 enters an opening 43 (shown by dotted lines in Fig. 1) and thereby serves to hold the shaft 38 in a raised position. The upper end of the shaft 38 has handles 44, whereby it may be turned.

When the team has been detached, and should the vehicle run from its momentum, it will be seen that by operating the shaft 38 through the medium of the handles thereof the vehicle may be readily controlled. When the horses are attached and no runaway is expected, the shaft 38 may be raised and held by the pin 41 entering the opening 43. Should a runaway occur, the shaft 24 should be operated to release the singletree 8. Then if the vehicle does not stop it may be properly guided by pushing downward the shaft 38 and transmitting controlling movement to the axle 4.

When the horses are detached, the pole 5 may be raised by the drum 23 and flexible connection 11.

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

1. The combination with a vehicle having a pole and a doubletree carried thereon, of a singletree, a bar attached to the singletree and movable in an opening in the doubletree, a spring-pressed pin carried by the doubletree and normally holding the bar, a flexible connection attached to the spring-pressed pin, a standard held rigidly on the vehicle, two parallel guide-bars mounted vertically on the standard and between which the flexible connection passes, a horizontal roller over which the flexible connection is passed, a plate carrying the roller and adjustable vertically on the standard, and a drum carried

by the vehicle and around which the flexible connection is wound, substantially as described.

2. The combination of a whiffletree, a spring-pressed pin holding the whiffletree, a flexible connection attached to the spring-pressed pin, two parallel guide-bars between which the flexible connection is passed, a roller mounted transversely to the guide-bars and over which the flexible connection is passed, means for holding and adjusting the roller longitudinally with the guide-bars, and a drum around which the flexible connection is wound, substantially as described.

3. The combination of a whiffletree, a spring-pressed pin holding the whiffletree, a flexible connection attached to the pin, a standard, two guide-bars held parallel with the standard and between which the flexible connection is passed, a plate adjustable vertically on the standard, a roller held by the plate and transversely with reference to the guide-bars, a shaft, and a drum fixed to the shaft and around which the flexible connection is wound, substantially as described.

4. The combination with a vehicle-body and a front axle pivoted thereon, of a rotary shaft, a sprocket-wheel fixed to the shaft, a sprocket-chain connected to the axle and coacting with the sprocket-wheel, a revoluble and vertically-extending shaft, gearing connecting the two shafts, and a spring-pressed pin capable of holding the shaft in two longitudinal positions, the shaft being slidable to engage and disengage the gearing, substantially as described.

5. The combination with a vehicle having a body portion and a pivoted axle, of a rotary shaft, a sprocket-wheel fixed on the shaft, a sprocket-chain connected to the axle and to the sprocket-wheel, a second rotary shaft, and gearing connecting the two shafts, substantially as described.

6. The combination of a gear-wheel, a revoluble and slidable shaft provided with an annular groove and with an opening, a gear-wheel fixed to the shaft and meshing with the first-named gear-wheel, and a spring-pressed pin capable of bearing on the annular groove or of engaging the opening of the shaft, substantially as described.

7. The combination of a rotary and slidable shaft, gearing in connection with the shaft, a pin projecting from the shaft, a notched plate with which the pin may engage when the shaft slides, and a spring-pressed pin engaging the shaft, the shaft having an annular groove and an opening and the pin being capable of extending into the groove and into the opening to hold the shaft in either of two positions, substantially as described.

JOUTE L. BOUMA.

Witnesses:

FEDDE HORNSTRER,
ED. L. CULVER.