

No. 685,007.

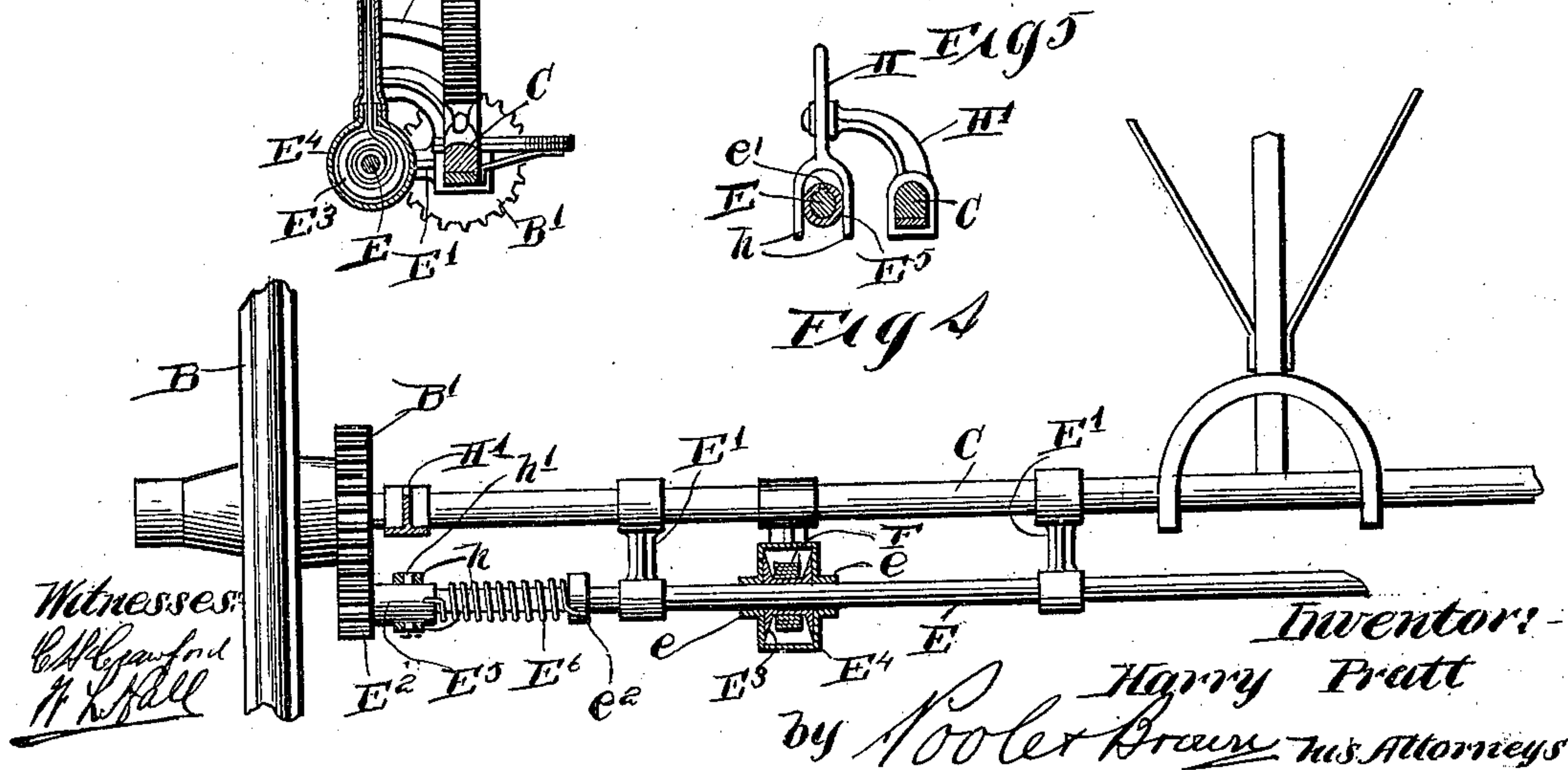
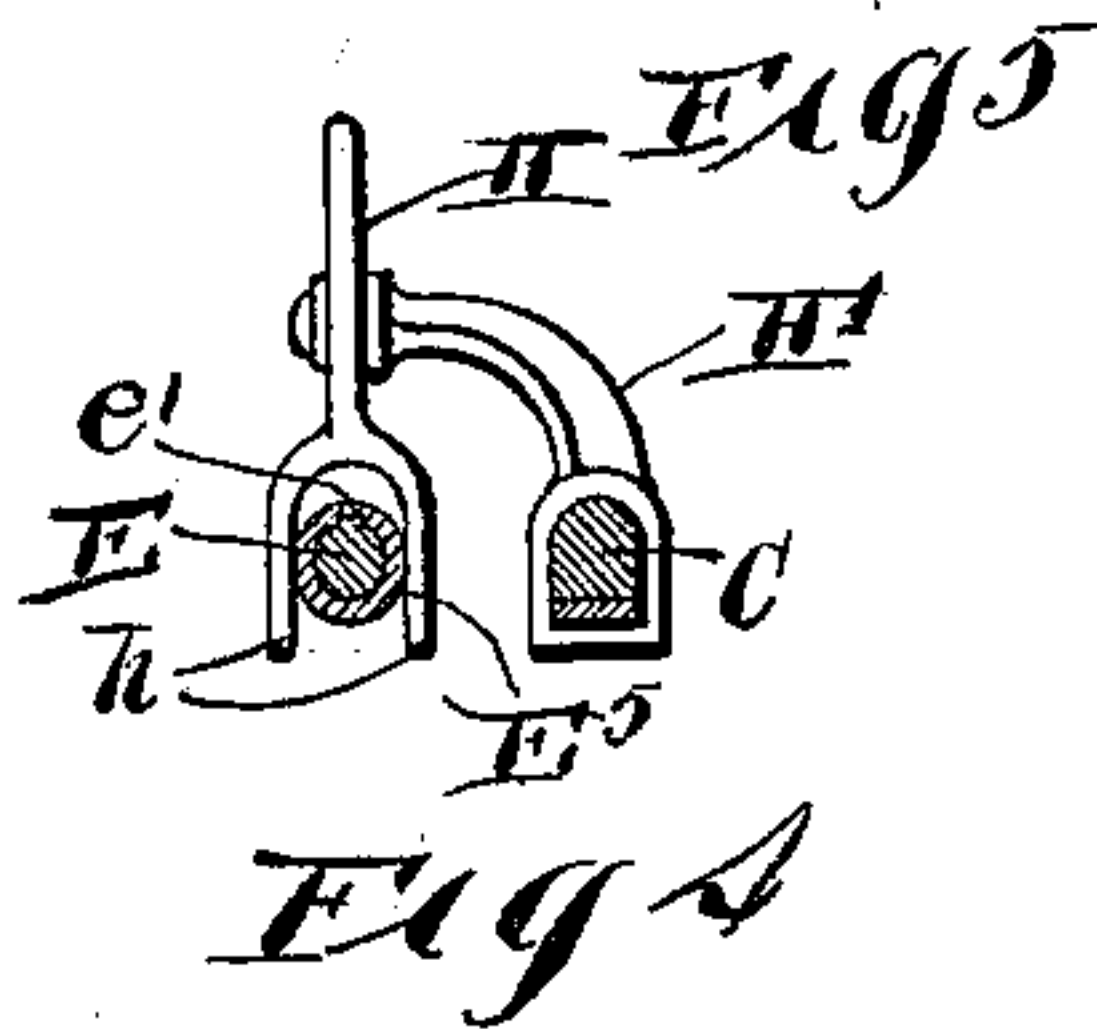
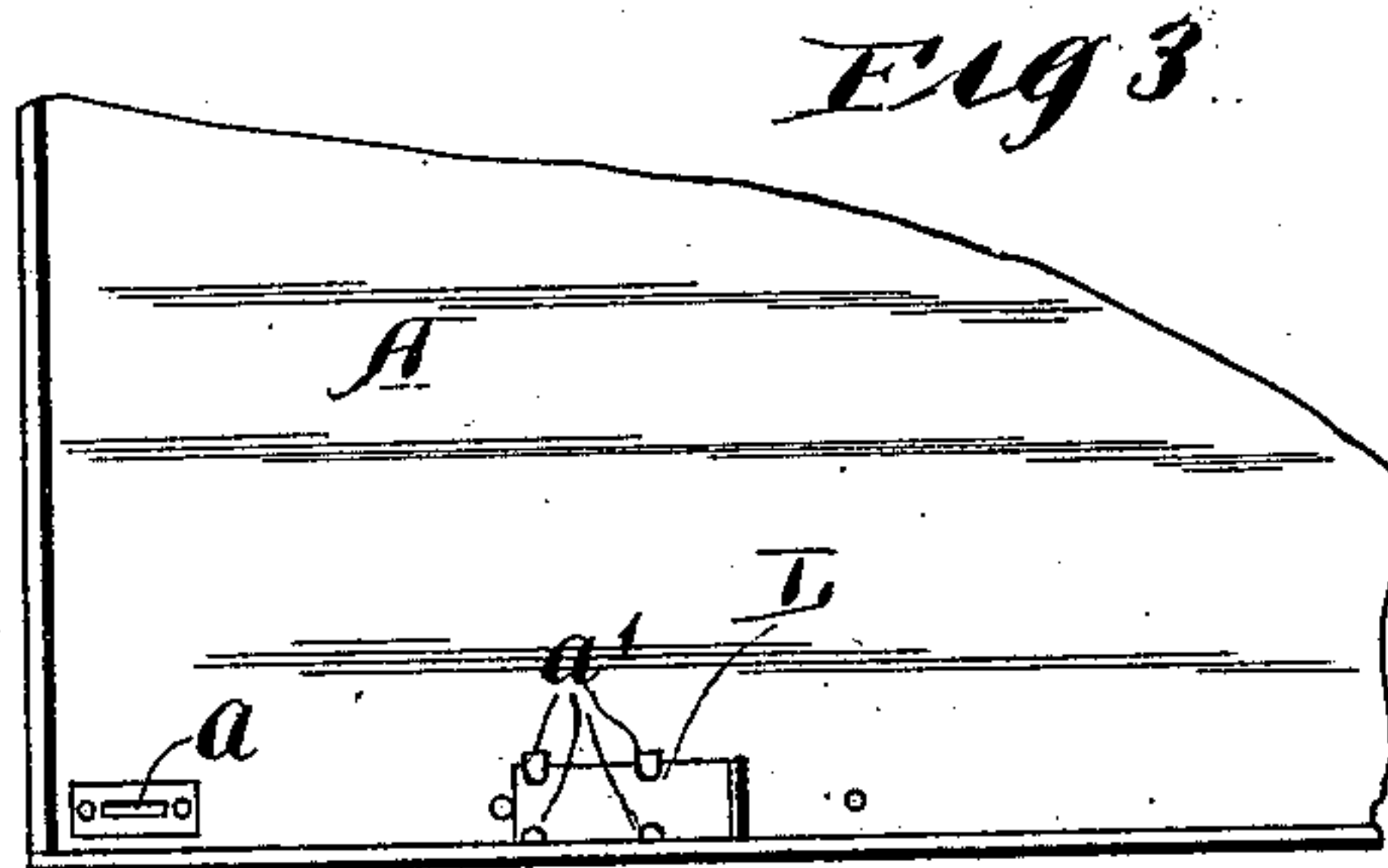
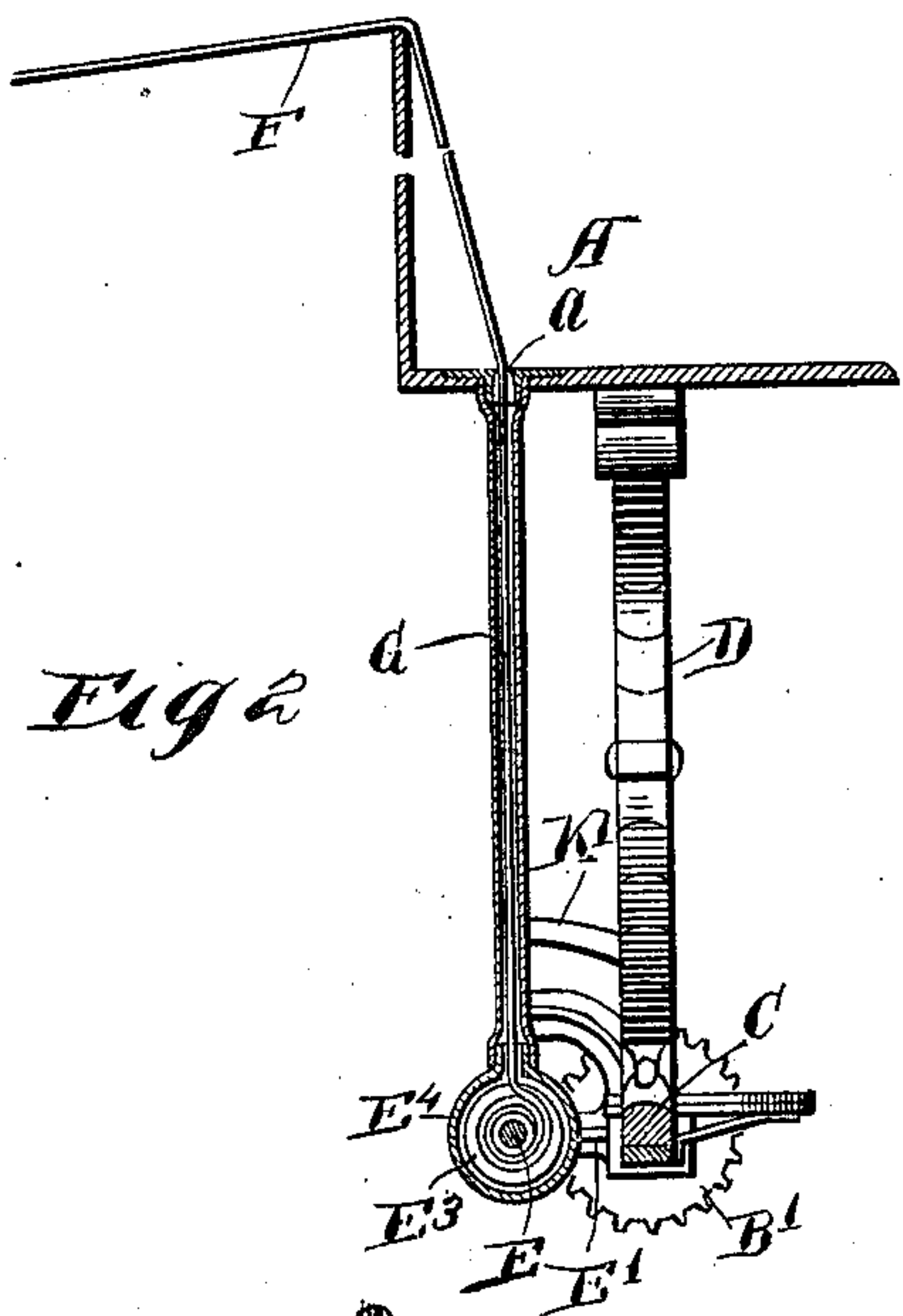
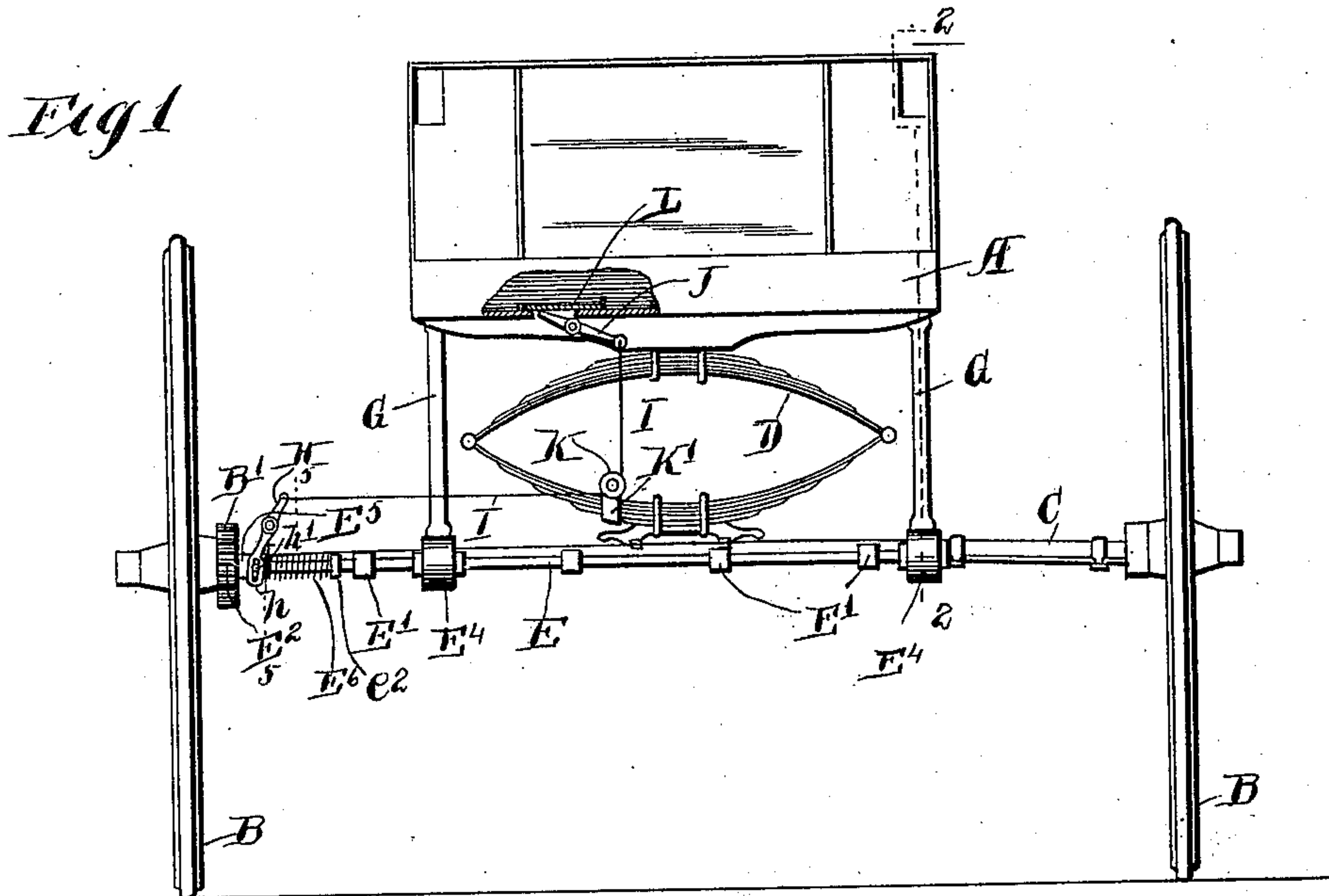
Patented Oct. 22, 1901.

H. PRATT.

DEVICE FOR STOPPING RUNAWAY HORSES.

(Application filed July 17, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

HARRY PRATT, OF KENILWORTH, ILLINOIS.

DEVICE FOR STOPPING RUNAWAY HORSES.

SPECIFICATION forming part of Letters Patent No. 685,007, dated October 22, 1901.

Application filed July 17, 1901. Serial No. 68,589. (No model.)

To all whom it may concern:

Be it known that I, HARRY PRATT, of Kenilworth, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Devices for Stopping Runaway Horses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in devices for stopping runaway horses of that general class embracing a rotative shaft journaled in suitable bearings on the vehicle and adapted to be operatively connected with one of the vehicle-wheels, said shaft being adapted for attachment thereto of the driving-lines or of independent straps which are attached at their forward ends to the bit of the horse, whereby when said shaft is rotated a backward pull is exerted on said lines or straps in a manner to arrest the horse.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a front view of a vehicle equipped with a device of the character mentioned embodying my improvements, a portion of the body of the vehicle being broken away. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a plan view of the front part of the floor of the vehicle-body. Fig. 4 is an enlarged detail illustrating the shaft to which the lines or straps are attached and illustrating also the means for rotating the same from one of the vehicle-wheels. Fig. 5 is a vertical section on line 5 5 of Fig. 1.

As shown in the drawings, A designates the vehicle-body; B B, the front wheels of the vehicle; C, the front axle, on which said wheels are mounted, and D the front spring, by which the vehicle-body is supported on said axle.

E designates a rotative shaft arranged parallel with and in front of the axle C. Said shaft is journaled in the forward ends of bearing-brackets E', extending forwardly from the axle C. Said rotative shaft E is provided at one end thereof with a gear-pinion E², which meshes with a gear-wheel B', carried by one

of the front wheels B. Said shaft is also provided with two spools E³, which are non-rotatively fixed on the shaft and on which are adapted to be wound the driving-lines F or independent straps extending backwardly from the bit of the horse, it being understood that the rearward pull by which the horse is checked or arrested may be exerted through the usual driving-lines or independent straps provided for this purpose. Said lines or straps pass backwardly over the dashboard of the vehicle-body and are directed to the winding-spools E³ through vertically-arranged flexible and elastic tubes G, which depend from the vehicle-body, one on each side thereof, as clearly shown in Fig. 1, the bottom of the vehicle-body being provided in line with said tubes with openings a, Fig. 3, through which the lines or straps pass. Said tubes are made flexible to permit the axle C to turn freely on its central pivot and to assume different angular positions with relation to the body of the buggy and also to permit the body of the buggy to descend under the weight of a load without interfering with the operation of the device. Preferably the spools E³ are inclosed by casings E⁴, which are provided at their ends with bearing-bosses e, which fit the shaft in a manner to hold the same in proper position on the shaft. Said casings E⁴ fit loosely on the shaft, so that said shaft turns in the bearing-bosses e thereof.

The shaft E is adapted to be normally disconnected from its driving gear-wheel B', so that in the ordinary use of the buggy the device is out of operation. Means are provided for operatively connecting said shaft with its driving-wheel B' when it is desired to bring the device into use, the means herein shown for this purpose being made as follows: Said gear-pinion E² is non-rotatively affixed on the shaft E, but is connected therewith in such manner as to slide endwise of the shaft. For this purpose said shaft is provided with a spline or key e', which fits within and has sliding engagement with a groove in the hub E⁵ of the gear-pinion in the manner shown in Fig. 5. Said pinion E² is placed under the influence of a spiral contractible spring E⁶, which surrounds the shaft E and is attached at one end to the hub E⁵ and at its other end to a fixed collar e² on the shaft. The spring

E^6 tends to hold the pinion E^2 normally out of engagement with the gear-wheel B' on the wheel B , and said spring is placed under tension when the pinion is engaged with the gear-wheel.

Means are provided for moving the gear-pinion E^2 longitudinally of the shaft into mesh with the gear-wheel B' when it is desired to set the device in position to stop a runaway horse.

10 The means herein shown for this purpose are made as follows: H designates a vertically oscillatory lever which is pivoted between its ends to a forwardly and upwardly projecting bracket H' , attached to the axle C . Said lever

15 is bifurcated at its lower end, the arms h thereof passing on opposite sides of the hub E^5 of the gear-pinion E^2 and being pivoted to oppositely-extending studs or pins h' on said hub. I designates a cord or cable which is

20 attached at one end to the upper end of said lever H and at its other end to a vertically oscillatory lever J , which is pivoted between its ends to the frame of the body A in the manner shown in Fig. 1. The cord or cable

25 I passes, between said levers H and J , about a guide-pulley K , which is journaled at the outer end of a bracket K' , attached to the lower part of the spring D and extending forwardly therefrom in the manner shown in

30 Figs. 1 and 2. The end of the lever J remote from the end to which the cord or cable I is attached is adapted to project upwardly through an opening in the bottom of the vehicle-body when said lever is swung on its

35 pivot in a manner to release the tension on the cable I , and thereby permit the spring E^6 to throw the gear-pinion E^2 out of engagement with the gear-wheel B' . In other words, in the inoperative position of the parts said lever

40 J projects upwardly through the opening in the bottom of the vehicle-body and is in position to be engaged by the foot of a person seated in the vehicle to throw the same into its operative position. The device is adapted

45 to be locked in its operative position by means of a sliding plate L , (shown in Figs. 1 and 3,) which fits over and closes the opening in the bottom of the vehicle-body. The plate is held or confined by means of lugs a' , Fig. 3,

50 attached to the bottom of the vehicle-body and bent or folded over the side margins of the plate. Said plate when closed prevents the free end of the lever J from passing upwardly or projecting through said opening, and therefore holds said lever in position to

55 lock the gear-pinion E^2 through the cord or cable I and lever H in engagement with the gear-wheel B' . Said parts will remain in the positions mentioned and illustrated in Fig. 1

60 until intentionally released by sliding the plate L from over the opening in the vehicle-body. When said plate is slid backwardly, the spring E^6 moves the gear-pinion E^2 out of engagement with the gear-wheel B' , the upper

65 end of the lever H by this movement swinging outwardly and through the cord swinging the lever J to a vertical position,

with the upper end thereof projecting through the opening in the vehicle-body.

The operation of the device is as follows: 70 When the device is to be set in position for operation, the lever J is swung downwardly into the position shown in Fig. 1, and the plate L is slid over the opening in the bottom of the vehicle-body and prevents the upper end 75 of the lever from rising. These movements of the lever and plate may be effected by the foot of the person occupying the vehicle. Said lever J acts through the cord I to throw the lower end of the lever H and the gear- 80 pinion E^2 outwardly to engage the latter with the gear-wheel B' . The parts are now in position to rotate the shaft E rearwardly when the vehicle is moved forwardly, and when this occurs the lines or straps F , which have been 85 previously attached to the spools E^3 , are wound upon said spools and exert a rearward pull on the lines or straps in a manner to check the horse. When the parts are to be thrown out of use the plate L is slid backwardly to 90 permit the lever J to be swung into its vertical position, the spring E^6 causing the parts to resume their inoperative positions.

It is obvious that changes in the details of construction may be made without departing 95 from the spirit of my invention, and I do not wish to be restricted to such details except as hereinafter made the subject of specific claims. For instance, the shaft E may be placed at the rear of the axle and the guide- 100 tubes G in rear of the springs without altering the operation of the device.

I claim as my invention—

1. A device for the purpose stated comprising, in combination with a vehicle, a shaft 105 journaled in bearings attached to the axle of said vehicle, mechanism for imparting rotation to said shaft from one of the vehicle-wheels, said shaft being normally disconnected from said wheel, means for operatively connecting the shaft with the wheel comprising 110 a lever pivotally mounted on the vehicle-body, one end of which is adapted to project through an opening in said body, a sliding plate adapted to cover said opening, said plate, when in 115 its open position, permitting the lever to project through said opening into the vehicle-body and when closed engaging the end of said lever in a manner to depress the same and therethrough to operatively connect the 120 shaft with said vehicle-wheel and means for attaching the lines or straps to said shaft.

2. A device for the purpose stated comprising, in combination with a vehicle, a shaft 125 journaled in bearings attached to the front axle of said vehicle, a gear-pinion on the shaft, a gear-wheel on one of the vehicle-wheels intermeshing with said pinion, said pinion being non-rotative, but endwise movable, on the shaft, a spring which normally holds the pin- 130 ion out of engagement with the gear-wheel, and means for moving said pinion into intermeshing engagement with said gear-wheel against the action of said spring, comprising

a lever pivotally mounted on the front end of the vehicle-body, one end of which is adapted to project through an opening in the body and the other end of which is operatively connected with said pinion, a sliding plate adapted to cover said opening, said plate, when in its open position, permitting the lever to project through the opening into the vehicle-body and when closed engaging the end of the lever in a manner to depress the same, and through the connections described to hold said gear-wheel and pinion in intermeshing engagement, and means for attaching the lines or straps to said shaft.

3. A device for the purpose stated comprising, in combination with a vehicle-body, a shaft journaled in bearings attached to the front axle of the vehicle, a gear-pinion on the shaft, a gear-wheel on one of the vehicle-wheels, a spring which normally holds the pinion out of engagement with the gear-wheel, and means for moving said pinion into intermeshing engagement with said gear-wheel against the action of said spring comprising a cord or cable operatively connected at its outer end with mechanism for actuating said gear-pinion, said cable extending inwardly along the axle to a point near the vertical axis on which it turns and then upward to the vehicle-body, a guide-pulley for said cord carried by said front axle, an actuating-lever pivoted to the front of the vehicle-body and connected with the upper end of said cable, and means for attaching the lines or straps to said shaft.

4. A device for the purpose stated comprising, in combination with a vehicle-body, a shaft journaled in bearings attached to the axle of the vehicle, a gear-pinion on the shaft, a gear-wheel on one of the vehicle-wheels intermeshing with said pinion, said pinion being non-rotative, but endwise movable, on the shaft, a spring which normally holds the pinion out of engagement with the gear-wheel, means for moving said pinion into intermeshing engagement with said gear-wheel against the action of said spring comprising a vertically oscillatory lever on the vehicle-body, one end of which projects through an opening in the body and the other end of which is operatively connected with said pinion, a sliding plate adapted to cover said opening to prevent the free end of said lever projecting therethrough, two spools non-rotatively

fixed on the shaft on which the lines or straps are adapted to be wound, and flexible guide-tubes depending from the vehicle-body and communicating with openings in the bottom of said body, the lower ends of said tubes terminating adjacent to said spools for guiding the lines to the spools.

5. A device for the purpose stated comprising, in combination with a vehicle, a shaft journaled in bearings attached to the vehicle-axle, a gear-pinion on the shaft, a gear-pinion on one of the vehicle-wheels intermeshing with said pinion, said pinion being non-rotative, but endwise movable, on the shaft, a spring which normally holds the pinion out of engagement with the gear-wheel, means for moving said pinion into intermeshing engagement with the gear-wheel against the action of said spring, comprising a vertically oscillatory lever on the vehicle-body, one end of which projects through an opening in the body and the other end of which is operatively connected with said pinion, a sliding plate adapted to cover said opening and to prevent the free end of said lever projecting therethrough, two spools non-rotatively fixed on said shaft on which spools the lines or straps are adapted to be wound, casings surrounding said spools in which said shaft rotates, and two flexible guide-tubes depending from said vehicle-body, said guide-tubes being connected at their lower ends with said casings and communicating at their upper ends with openings at the bottom of the vehicle-body.

6. A device for the purpose stated comprising, in combination with a vehicle, a shaft journaled in bearings attached to the vehicle-axle and adapted to be operatively connected with one of the vehicle-wheels to be rotated thereby, means for attaching the lines or straps to said axle, and two flexible guide-tubes depending from the vehicle-body to guide the lines to said axle, said tubes communicating at their upper ends with openings in the bottom of the vehicle-body.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 15th day of July, A. D. 1901.

HARRY PRATT.

Witnesses:

MARY E. PRATT,
WILLIAM L. HALL.