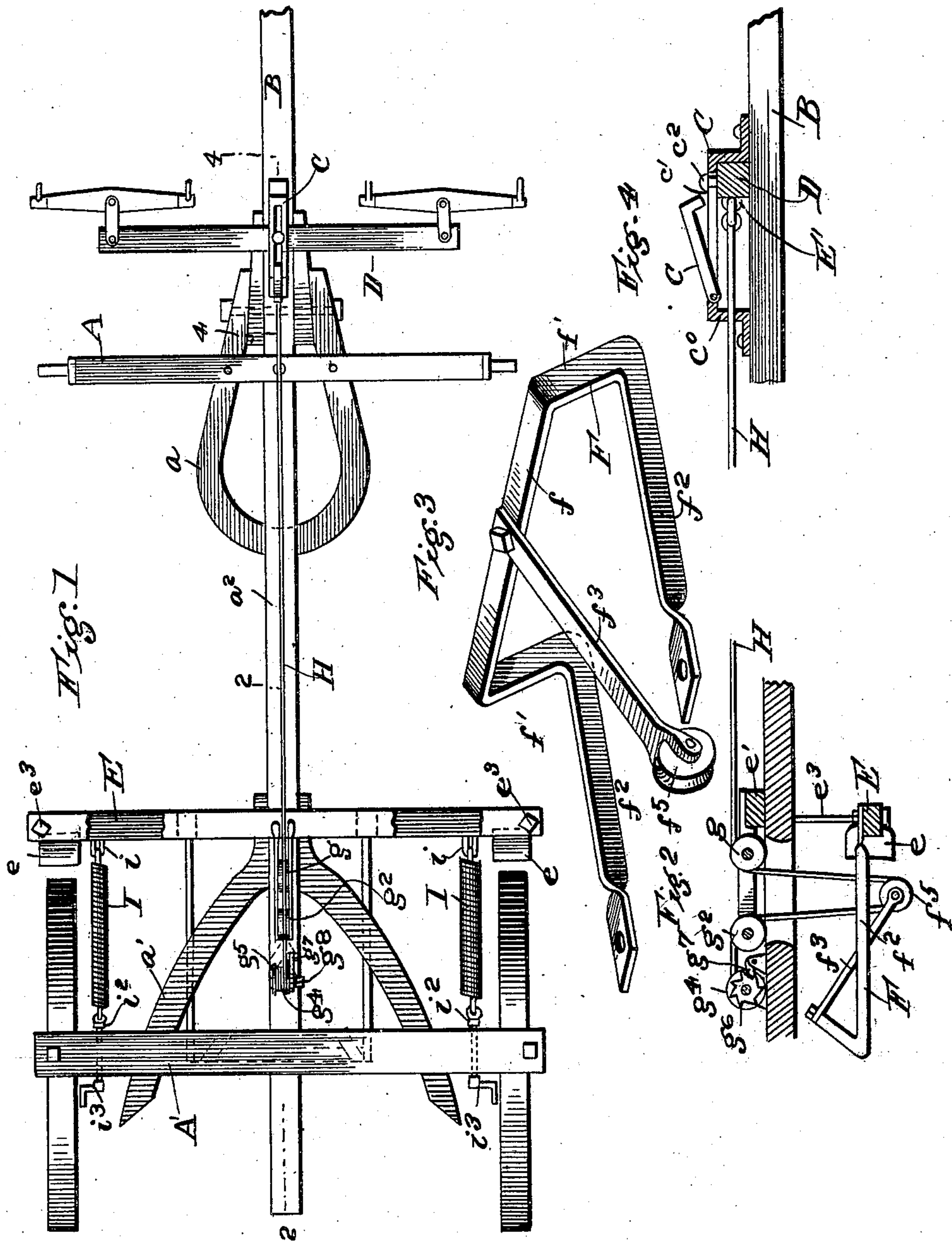


No. 847,132.

PATENTED MAR. 12, 1907.

E. F. VEATCH.  
AUTOMATIC WAGON BRAKE.  
APPLICATION FILED MAR. 24, 1906.



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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC WAGON-BRAKE.

No. 847,132.

Specification of Letters Patent.

Patented March 12, 1907.

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*To all whom it may concern:*

Be it known that I, EVERETT FRANK VEATCH, a citizen of the United States, and a resident of Palco, in the county of Rooks and State of Kansas, have invented certain new and useful Improvements in Automatic Wagon-Brakes, of which the following is a specification.

My invention is an improvement in automatic wagon-brakes, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a plan view of a wagon provided with my improved brake, the bed being removed. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of a part of the brake-operating mechanism. Fig. 4 is a section on the line 4 4 of Fig. 1.

In the practical application of my invention I provide a wagon of ordinary construction, comprising the front and rear axles  $A A'$ , the front and rear hounds  $a a'$ , and the reach  $a^2$ . The tongue  $B$  is connected to the front hounds in the usual manner, and upon the upper surface thereof is arranged a housing  $C$ , in which is mounted a doubletree  $D$ , transversely of the tongue and slidable longitudinally thereon within the housing.

A block  $c$  is pivotally mounted at that end of the housing nearest the wagon, in an opening  $c'$  in the upper face of the housing, and is of sufficient length to drop in behind the doubletree when the same is at the forward end of the housing. A pin  $c^2$  in the doubletree engages slots in the housing and in the tongue and is provided with a wide head engaging the upper surface of the housing to retain the doubletree in proper relation to the frame. When the block  $c$  is elevated, the doubletree is free to move backward or forward in the housing. A brake-beam  $E$ , provided at either end with a brake-shoe  $e$ , is arranged adjacent to the rear axle and is supported from a bar  $e'$ , slidable upon the coupling-pole and the rear hounds, the brake-beam and the bar being connected by rods  $e^3$ .

An operating mechanism  $F$  is provided for the brake-beam of the shape shown in Fig. 3 and comprises a horizontal transverse portion  $f$ , having at either end thereof substantially vertical portions  $f'$ , provided with forwardly-extending arms  $f^2$ , connected to the

brake-beam. A forwardly and downwardly projecting tongue  $f^3$  is connected to the central transverse horizontal portion and is provided at its free end with a pulley  $f^5$  for receiving the cable  $H$ . The cable  $H$  is secured to an eye  $E'$ , attached to the doubletree  $D$ , and extends backwardly through a circular opening  $c^0$  in the housing, over a pulley  $g$ , arranged at the front end of the vertical slot in the reach  $a^2$ , around the pulley  $f^5$ , and over a pulley  $g^2$ , arranged at the rear end of the slot in the reach, and to a roller  $g^4$ , journaled in the bracket  $g^5$  on the reach. The shaft of the roller  $g^4$  is provided on one end with a ratchet-wheel  $g^6$ , engaged by a pawl  $g^7$ , pivoted to the bracket, and has its outer end squared, as at  $g^8$ , for the application of a wrench whereby to take up the cable to compensate for stretching of the same. Springs  $I$  are secured to clevises  $i$  at each end of the brake-beam and are connected with screw-threaded rods  $i^2$ , engaging screw-threaded openings in the rear axle, and provided with cranks  $i^3$  for manipulating the rod.

The operation of my improved brake is entirely automatic. When traction is exerted upon the doubletree, the cable is drawn forward, drawing upward the operating mechanism  $F$  and releasing the brake from the wheel. When the wagon starts down an incline and traction upon the doubletree is relaxed, the springs draw the brake-beam backwardly and force the brake into contact with the wheels. In backing, the block  $c$  is dropped into the housing behind the doubletree, thus retaining the doubletree in its forward position and with the brake relaxed. By means of the screw-threaded rods the strength of the spring may be regulated to any desired degree of braking force.

The brake may be easily applied to an ordinary wagon and may be used with or without the bed, being equally efficient in both cases. It is simple in construction and entirely automatic in action and is not liable to get out of order easily. Since considerable strain is brought to bear on no part, the danger of breakage is reduced to a minimum.

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

1. In an automatic wagon-brake, the combination with the front and rear axles, and



the wheels thereon, of the reach connecting the axles and provided at approximately its center with a longitudinal vertical opening having pulleys journaled at each end, a transverse bar resting on the reach, a brake-beam depending from the bar and below the reach, brake-shoes on the end of the brake-beam, springs for normally retaining the shoes in contact with the peripheral surface of the rear wheels, a frame comprising a cross-bar having its ends turned downwardly and forwardly and secured to the ends of the brake-beam, and an arm connected centrally to the bar and extending forwardly therefrom, the free end of said arm being provided with a pulley, a tongue, a doubletree slidably mounted on the tongue, a roller journaled on the reach at the rear of the opening, and a flexible connection extending from the roller to the doubletrees, said connection being passed through the opening in the reach and over the pulley in the free end of the arm.

2. In an automatic wagon-brake, the combination with the front and rear axles, of a reach connecting the axles, a tongue connected to the front axle, a normally operative braking mechanism, an arm connected by one end to the braking mechanism and having in its free end a pulley, a roller journaled on the reach, pawl-and-ratchet mechanism connected with the roller, and a flexible connection secured to the roller, and extending to the doubletree, said connection being formed into an open loop passing downwardly and encircling the pulley of the arm.

3. In an automatic wagon-brake, the combination with the front and rear axle, of the reach connecting the same, a tongue connected to the front axle, a doubletree slidably mounted on the tongue, a normally operative

braking mechanism, a flexible connection between the doubletree and the braking mechanism whereby to release the same, and means for adjusting the length of the flexible connection comprising a roller to which one end of said connection is secured to wind thereon, and pawl-and-ratchet mechanism connected with the roller.

4. In an automatic wagon-brake, the combination with the front and rear axles, of the reach connecting the axles and having a longitudinal vertical opening therethrough provided at each end with pulleys, a tongue connected to the front axle, a doubletree slidably mounted on the tongue, normally operative braking mechanism, an arm connected by one end to the braking mechanism and having in the free end a pulley, and a cable connected with the reach and the doubletree, said cable being looped through the opening in the reach and over the pulley of the arm, whereby traction upon the doubletree will release the braking mechanism.

5. In an automatic wagon-brake, the combination with the front and rear axle, of a reach having a vertical opening therethrough, a tongue, a doubletree slidably mounted thereon, normally operative braking mechanism and a cable connected with the reach at the rear of the opening and extending to the doubletree, a loop of said cable passing through the opening in the reach and connected to the braking mechanism whereby traction upon the doubletree may release said mechanism.

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Witnesses:

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