

No. 765,860.

PATENTED JULY 26, 1904.

J. J. SCHOFIELD.
WAGON BRAKE.

APPLICATION FILED JAN. 20, 1904.

NO MODEL.

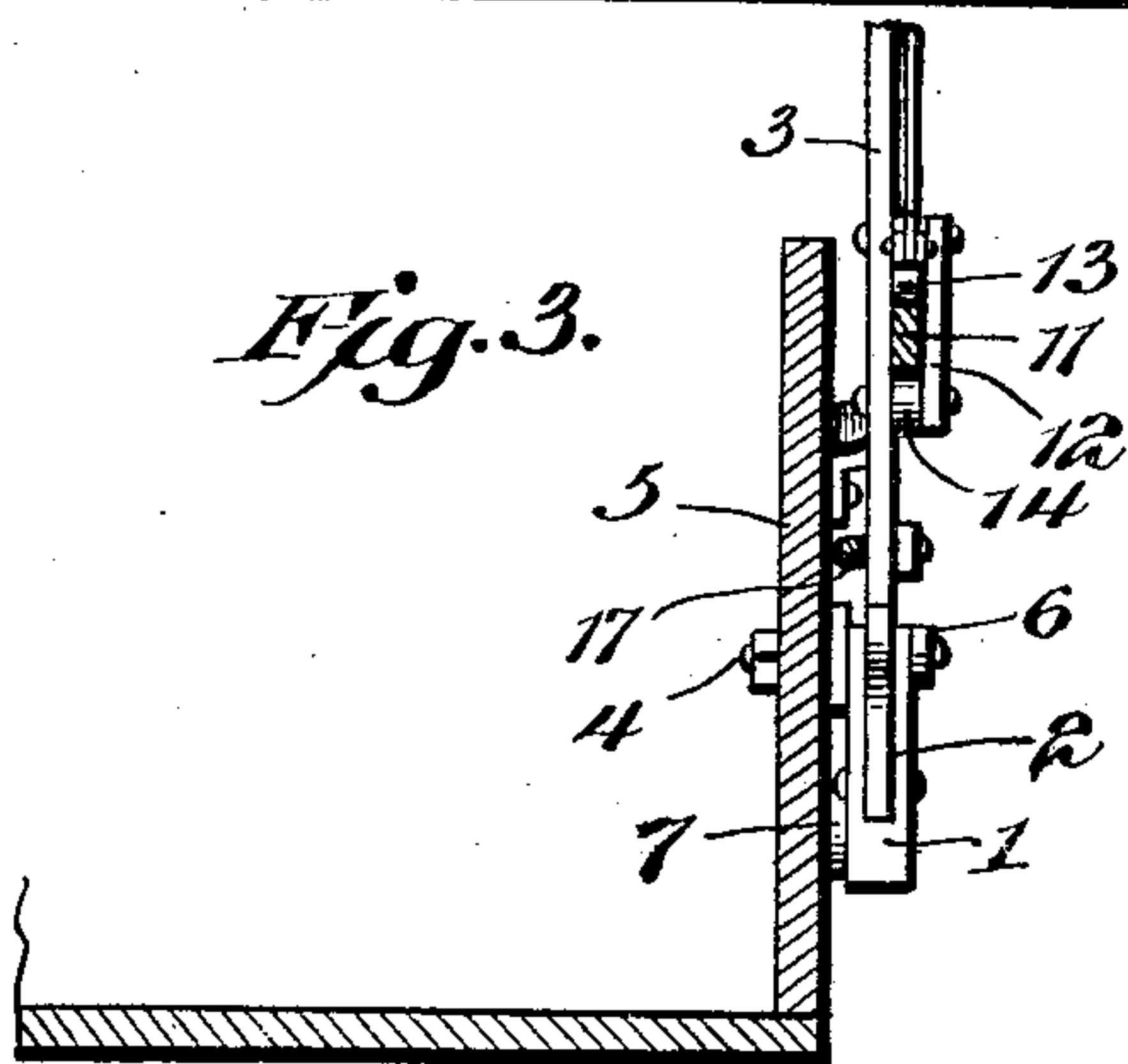
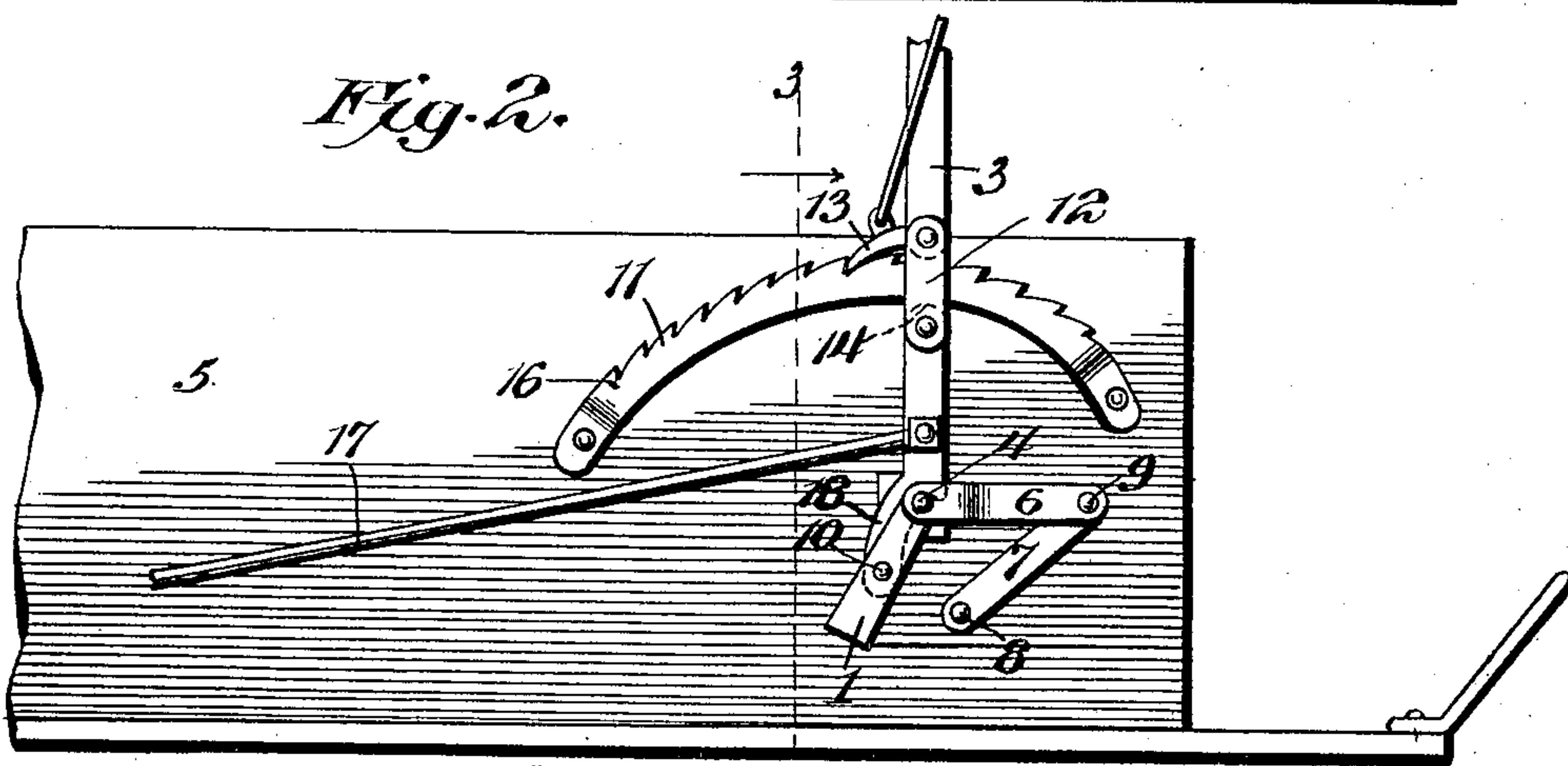
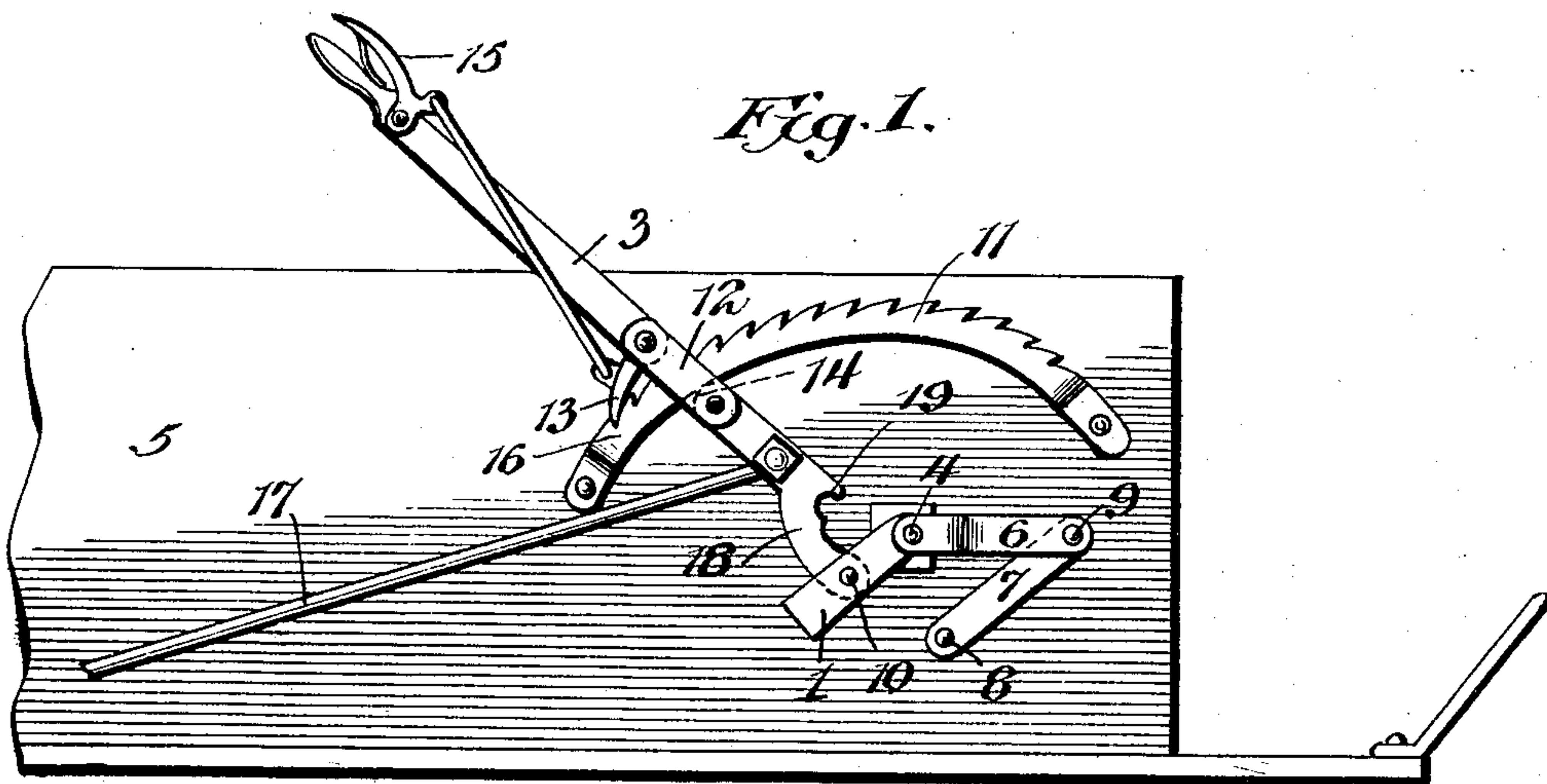
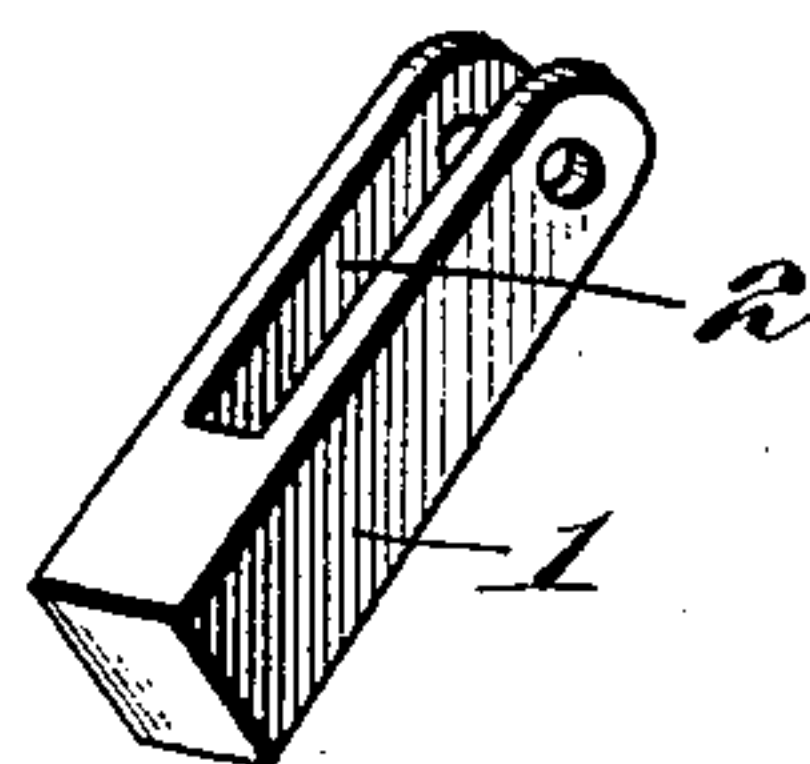


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 765,860, dated July 26, 1904.

Application filed January 20, 1904. Serial No. 189,820. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. SCHOFIELD, a citizen of the United States, residing at Martinsville, in the county of Morgan and State of Indiana, have invented a new and useful Wagon-Brake, of which the following is a specification.

The invention relates to improvements in wagon-brakes.

The object of the present invention is to improve the construction of wagon-brakes and to provide a simple, inexpensive, and efficient one capable of enabling the brake-shoes to be readily carried clear of the wheels and adapted as the brake-shoes engage the wheels to change automatically the fulcrum of the operating-lever, whereby great power may be brought to bear in operating the brake.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a portion of a wagon-body provided with brake-operating mechanism constructed in accordance with this invention and illustrating the arrangement of the parts when the brake-shoes are off the wheels. Fig. 2 is a side elevation, partly in section, illustrating the arrangement of the parts when the brake-shoes are in engagement with the wheels. Fig. 3 is a sectional view taken substantially on the line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the oscillatory link.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an oscillatory support consisting of a link having a longitudinal opening 2 for the reception of the lower end of an operating-lever 3, and the said link is pivotally connected at its upper end by a pin 4 and is

mounted on a wagon body or box 5 at the front portion thereof, as indicated in Figs. 1 and 2. The outer end of the pivot-pin 4 is supported by a brace 6, arranged horizontally and secured at its outer or front end to the wagon body or box. The latter is reinforced by an inclined bar or piece 7, secured at its lower end to the body by a fastening device 8 and at its upper end by the fastening device 9 of the front end of the brace.

The lower end of the operating-lever is connected by a pivot 10 with the link 1, and it has a guide-opening for the reception of a curved ratchet 11, the guide-opening being formed by a plate 12, spaced from the operating-lever at an intermediate point on the same and connected with the said lever by upper and lower fastening devices. The dog or pawl 13 is mounted on the upper fastening device and an antifriction-roller 14 is arranged on the lower fastening device and is adapted to engage the lower edge of the curved ratchet-piece 11. The pawl or dog is spring-actuated and is operated by a latch-lever 15 in the ordinary manner.

The curved ratchet-piece consists of a bar having its ends angularly bent and secured to the wagon body or box in the ordinary manner, and this ratchet-bar operates also as a guide, its rear portion 16 being arranged eccentrically of the pivot 4 of the link, whereby the link and the lever are carried rearwardly to the position shown in Fig. 1. By this construction the movement of the operating-lever is materially increased and the said operating-lever is adapted to carry the brake-shoes (not shown) quickly into and out of engagement with the wheels. The forward movement of the operating-lever from the rearmost position shown in Fig. 1 to a substantially vertical position, as illustrated in Fig. 2, carries the brake-shoes into engagement with the wheels. This movement is effected in a rapid manner by reason of the forward movement of both the link and the operating-lever, the link operating to gradually advance the fulcrum-point of the lever. The operating-lever is then engaged with the pivot 4 of the upper end of the link, which acts as a fulcrum for the operating-lever in the further movement

thereof, thereby greatly reducing the distance between the fulcrum of the lever and the point of attachment of the connecting-rod 17. In this further movement of the lever 5 the link swings with the same, and owing to the short lower arm of the operating-lever the brake may be conveniently applied, it being capable of effectually locking the hind wheels. The increased movement of the lever 10 in swinging the same from the perpendicular position to the rearwardly-inclined position illustrated in Fig. 1 enables the brake-shoes to be carried entirely clear of the wheels to prevent mud from accumulating on the shoes and to avoid scraping the wheels. The 15 lower portion 18 of the operating-lever is curved or rearwardly offset and an open bearing or recess 19 is provided at the upper end of the curved portion for the reception of the 20 fixed fulcrum or pivot 4.

Any suitable means may be employed for connecting the brake-shoes with rod 17, and as such mechanism does not form a part of the present invention illustration thereof is 25 deemed unnecessary.

In applying the brake the roller engages the lower edge of the curved guide and ratchet-bar and forces the link forward, whereby the 30 fulcrum of the lever is advanced with the forward movement of the same.

While stated to be employed in connection with a wagon-brake, it is obvious that the improved brake-lever can be used in other relations, and I wish it to be understood that my 35 invention comprehends other applications of the invention.

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

40 1. In a wagon-brake, the combination of an operating-lever, means connected with the lever for actuating brake-shoes, a movable support having the lever fulcrumed on it and adapted to gradually advance the fulcrum- 45 point, and means for locking the lever in its adjustment, substantially as described.

2. In a wagon-brake, the combination of an operating-lever designed to be connected with brake-shoes, and a movable support hav- 50 ing said lever fulcrumed on it and adapted to gradually advance the fulcrum-point, said support being also provided with a fixed fulcrum arranged in the path of and adapted to receive the operating-lever to increase the leverage, substantially as described. 55

3. In a wagon-brake, the combination of an operating-lever, and a pivoted support having the lever fulcrumed on it and adapted to gradually advance the fulcrum, the pivot of 60 the support being arranged in the path of the operating-lever to form a fulcrum for the same, substantially as described.

4. In a wagon-brake, the combination of

an operating-lever, a movable support having the lever fulcrumed on it, and an eccentric- 65 ally-arranged guide receiving the lever and adapted to cause the support to gradually advance the fulcrum-point of the lever, substantially as described.

5. In a wagon-brake, the combination of 70 an operating-lever, a movable support having the lever fulcrumed on it and arranged to gradually advance the fulcrum-point, a combined guide and ratchet receiving the lever, and having an eccentrically-arranged portion 75 adapted to cause the support to move backward and forward with the lever, and means carried by the lever for engaging the combined guide and ratchet, substantially as described.

6. In a wagon-brake, the combination of 80 an operating-lever having a guide-opening and provided at the bottom thereof with an antifriction device, said lever being also provided at the top of the opening with a pawl or dog, a combined guide and ratchet arranged 85 in the guide-opening of the lever, and a movable support having the lever fulcrumed on it, substantially as described.

7. In a wagon-brake, the combination of a 90 combined guide and ratchet having an eccentrically-arranged portion, a lever movable on the combined guide and ratchet and provided with means for engaging the same, and a piv- 95 oted link having the lever fulcrumed on it and arranged to swing to gradually advance the fulcrum-point of the lever, said link hav- 95 ing an opening to receive the lever, and the latter being provided with an offset lower end having a bearing for engaging the pivot of the link, substantially as described. 100

8. In combination with the operating-lever adapted to be connected with the brake-shoes, a shiftable support for gradually advancing the fulcrum-point of the lever, and to which 105 support the lever is pivotally connected, and means for locking the lever in its adjustment, substantially as described.

9. In combination with the operating-lever adapted to be connected with the brake-shoes, means for supporting the lever, said means 110 forming the fulcrum for the lever during a partial movement thereof in applying the brakes and for gradually advancing the fulcrum-point of the said lever, and means for 115 changing automatically the fulcrum of the lever on the further movement of the latter as the brake-shoes engage the surface to which they are applied, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 120 the presence of two witnesses.

JAMES J. SCHOFIELD.

Witnesses:

J. M. SEELY,

JNO. C. McNUTT.