

No. 609,813.

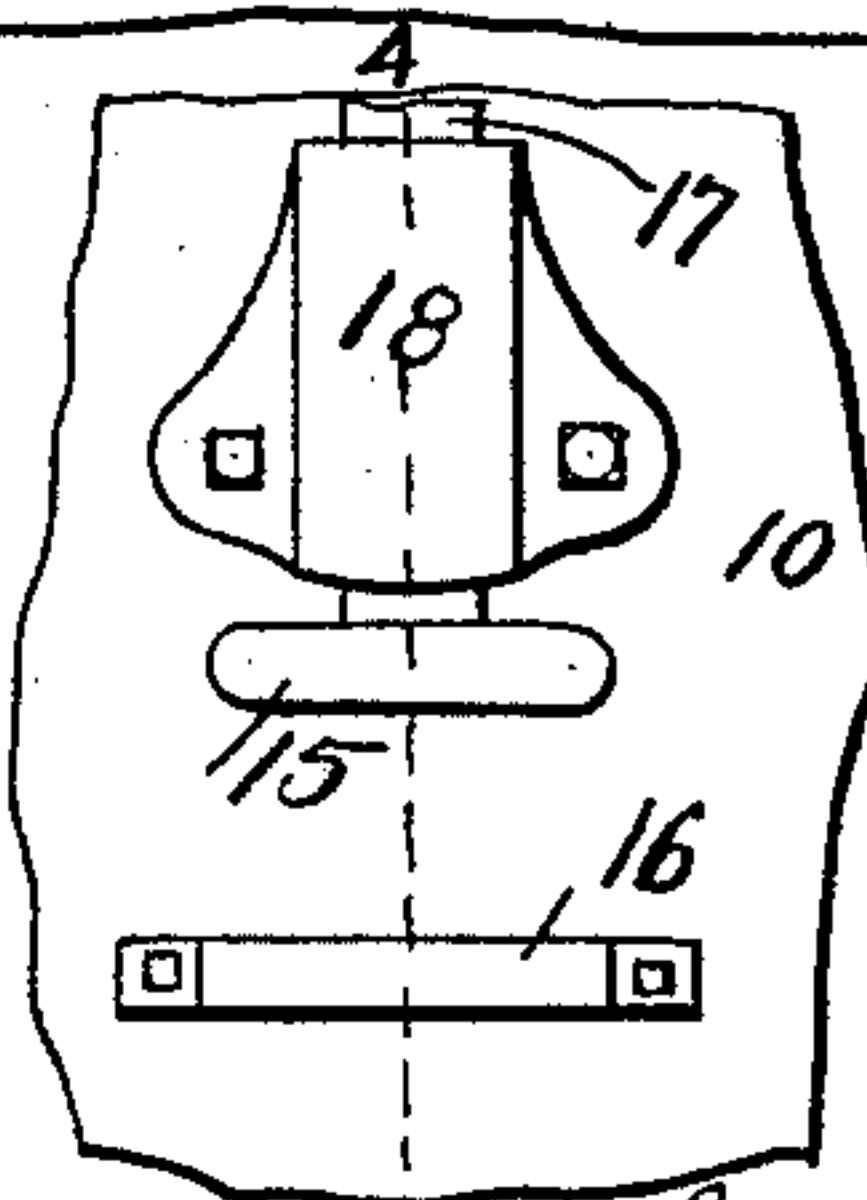
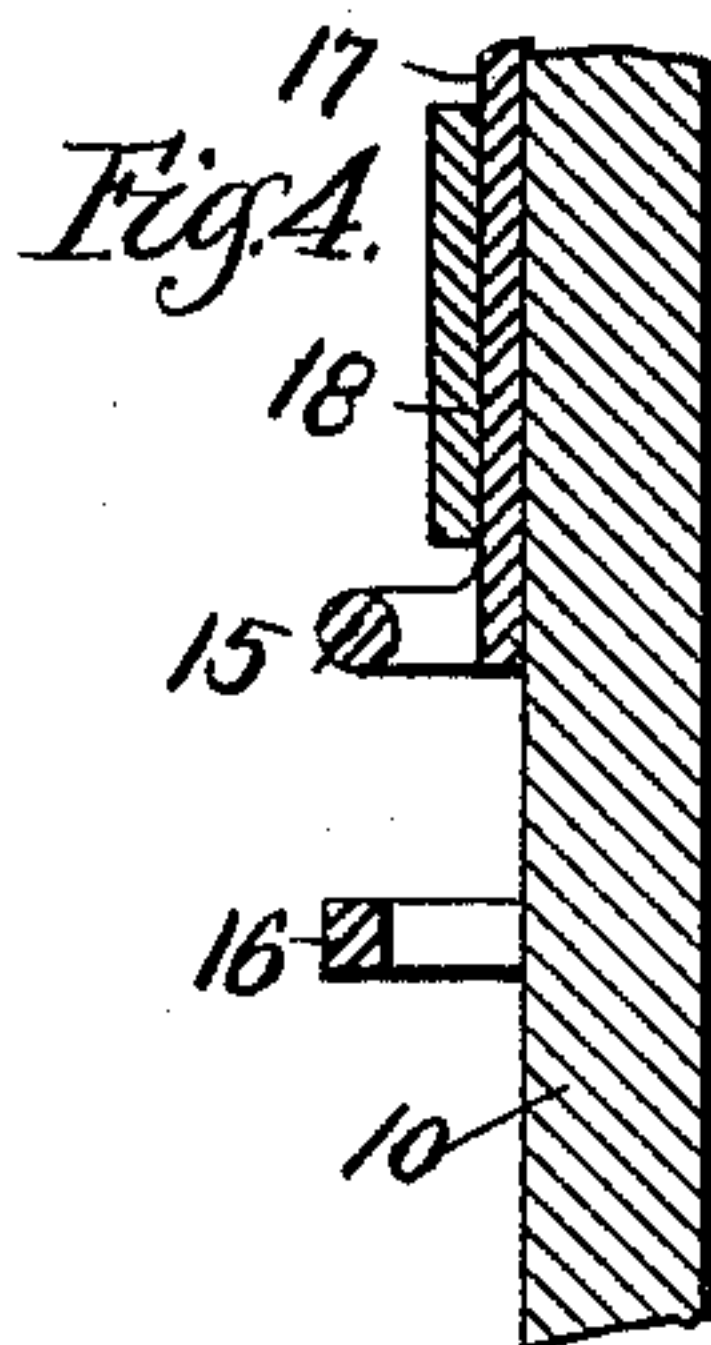
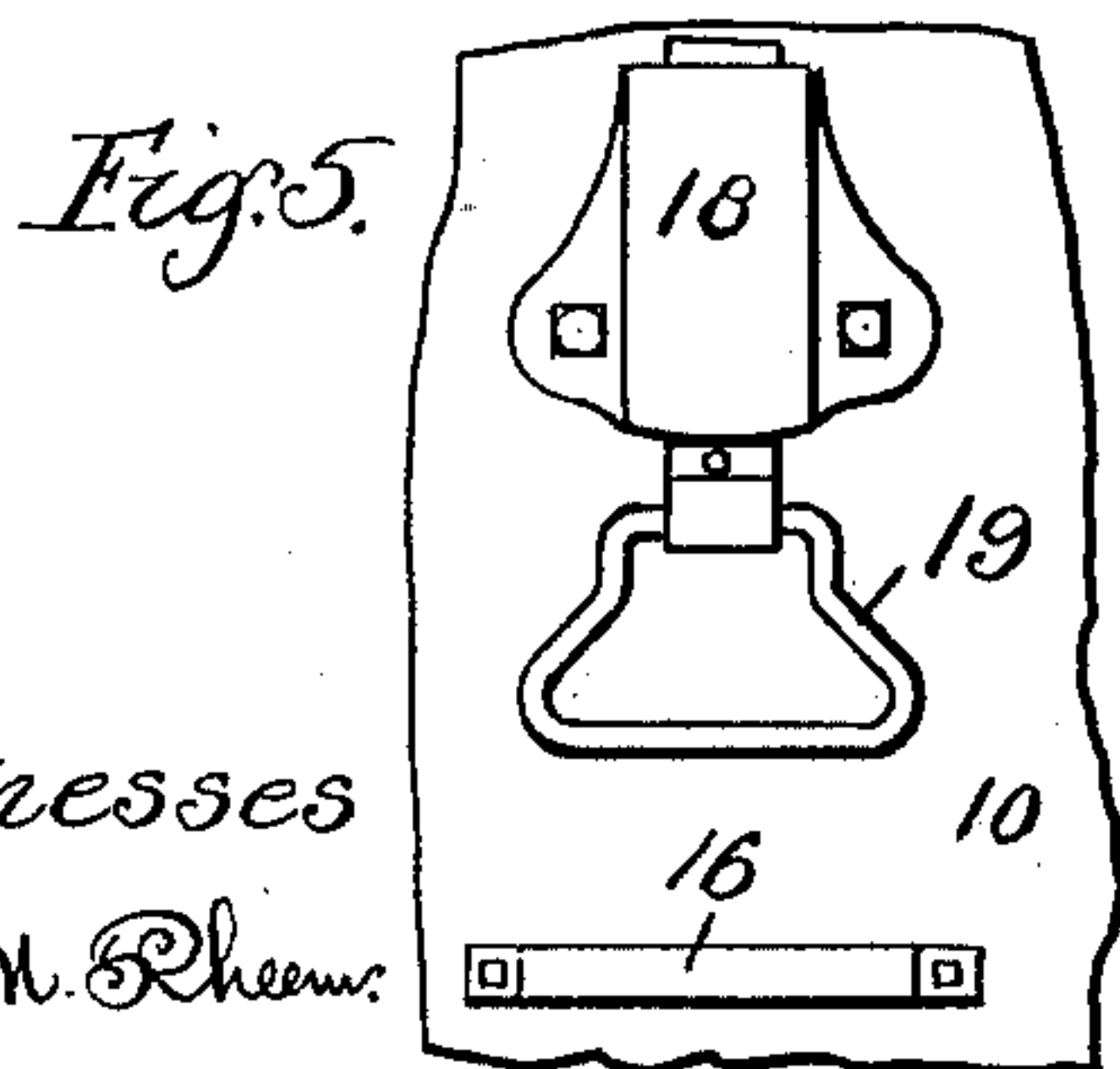
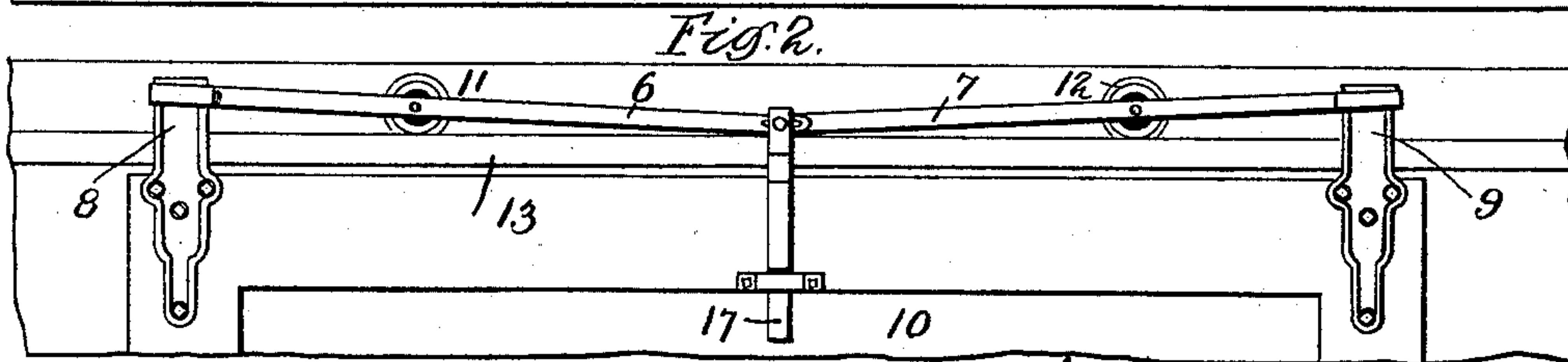
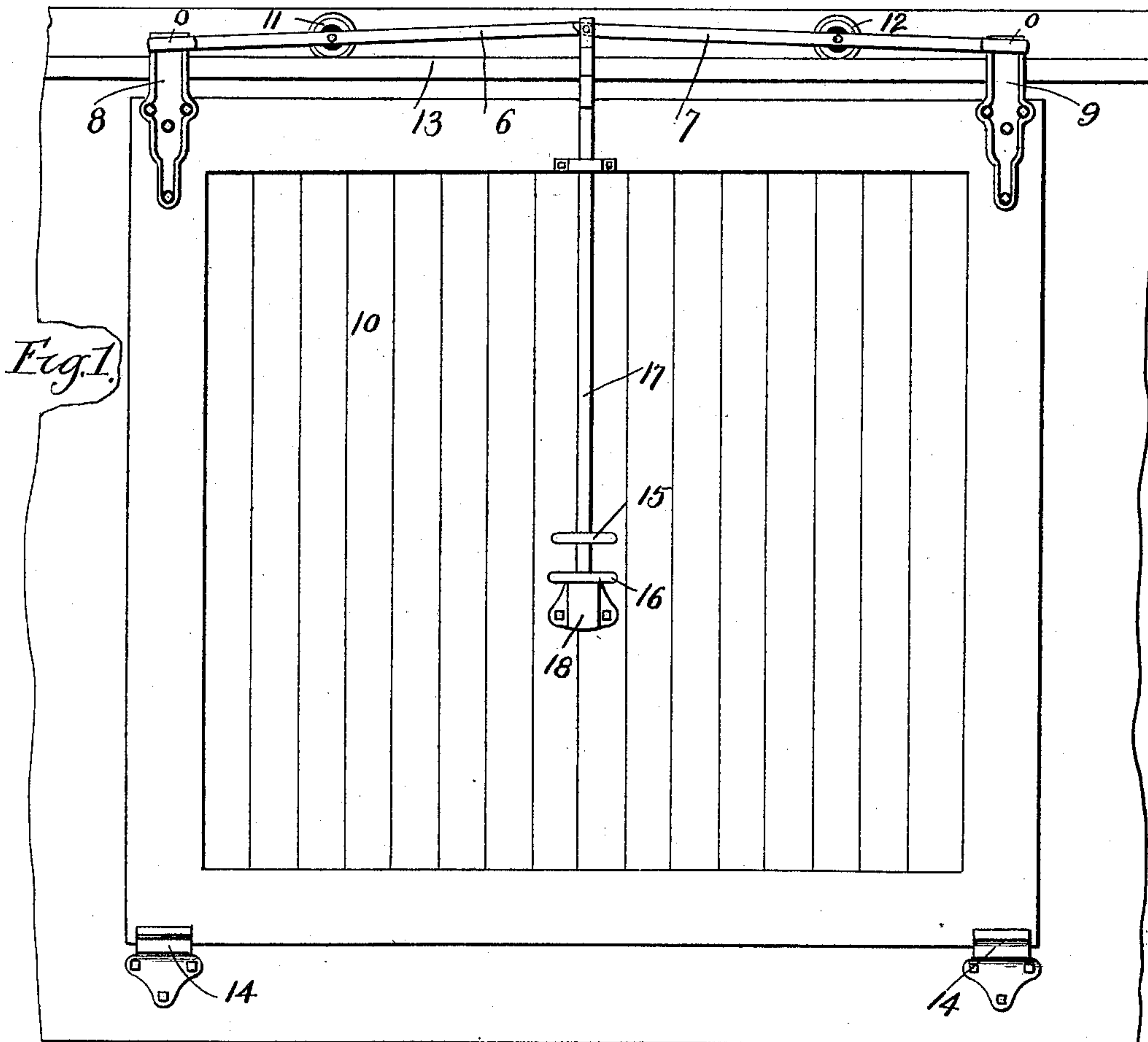
Patented Aug. 30, 1898.

G. P. JONES.

CAR DOOR.

(Application filed Oct. 18, 1897.)

(No Model.)



Witnesses
Wm. M. Rheem.
H. A. Elden.

Inventor
Graham P. Jones,
by Donald Adams, Percival Jackson,
attys.

UNITED STATES PATENT OFFICE.

GRAHAM P. JONES, OF CHICAGO, ILLINOIS.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 609,813, dated August 30, 1898.

Application filed October 18, 1897. Serial No. 655,507. (No model.)

To all whom it may concern:

Be it known that I, GRAHAM P. JONES, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification.

My invention relates to car-doors, and particularly to that class of car-doors in which apparatus is provided for raising and lowering them upon cam-brackets which operate when the door is lowered to throw it over into engagement with the side of the car, binding it firmly in place and preventing it from undue movement whether the door be open or closed.

The object of my present invention is to provide certain improvements in car-doors of this description, which object I accomplish as illustrated in the accompanying drawings and as hereinafter specified.

Referring to the drawings, Figure 1 is a side elevation of part of a car, illustrating my improved car-door. Fig. 2 is a partial side elevation showing the operating-levers in another position than that shown in Fig. 1. Fig. 3 is an enlarged detail of the lower end of the operating-rod and the operating-handles. Fig. 4 is a vertical section on line 4 4 of Fig. 3. Fig. 5 is a detail showing a modified form of handle.

In my present invention the mechanism for lifting and lowering the car-door and movably supporting it upon the track is similar to that described in my application filed of even date herewith, Serial No. 655,506, consisting of levers 6 7, pivotally connected at their outer ends to hangers 8 9, respectively, said hangers being connected to opposite ends of the upper portion of the car-door 10. The levers 6 7 are also pivotally connected to wheels 11 12, which run upon a track 13, the arrangement being such that when the inner ends of the levers are in their uppermost position the car-door will be in its lowermost position, resting upon one or more brackets 14, (best seen in Fig. 1,) which are preferably constructed the same as in my application hereinbefore referred to, but which may be of any construction suitable for the purposes in hand, and therefore further illustration and description are deemed unnecessary. When

the inner ends of the levers 6 7 are moved to their lowermost position, (illustrated in Fig. 2,) the outer ends of said levers are thrown upward, raising the door and permitting it to swing out from the side of the car. At the same time it is supported upon the wheels 11 12, and may therefore be opened or closed, being carried meanwhile on the track 13.

The operating mechanism of the door, which forms the subject of my present invention, is different from that shown in my said application in that instead of providing a flexible device for operating the door handles 15 16 are provided, one of said handles being carried by the operating-rod 17, which is connected to the inner ends of the levers 6 7, the other handle being fixedly secured to the car-door. In Fig. 1 I have shown this handle as being secured to a bracket 18, which receives the lower end of the rod 17. In the form illustrated in Figs. 3 and 4 the handle 16 is secured to the car-door at a point a short distance below the bracket 18 and the handle 15 is secured to the lower end of the rod 17, which passes through the bracket 18. In both cases, however, the bracket 18 serves as a guide for the lower end of the rod 17. The handle 15 may be a rigid one, as shown in Figs. 3 and 4, or it may be pivotally connected to the rod, as shown at 19 in Fig. 5.

By providing the operating-rod 17 with handles 15 16, arranged in juxtaposition, as shown herein, the operation of the door is much simplified and improved, as by this means after the door has been raised by drawing down the rod 17 by means of the handle 15 the operator may then grip the handles 15 16 together, and thus hold the door in its raised position properly while sliding it in either direction.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a sliding car-door, and mechanism for lifting and lowering it to and from its sliding position, of an operating device for said lifting and lowering mechanism, a handle carried by said operating device, and a stationary handle carried by the car-door in proximity to said first-mentioned handle, substantially as described.

2. The combination with a sliding car-door, and mechanism for lifting and lowering it to

and from its sliding position, of an operating device for said lifting and lowering mechanism, a handle carried by said operating device, a stationary handle carried by the door in
5 proximity to said first-mentioned handle, and a guide for said operating device, substantially as described.

3. The combination with a sliding car-door, levers pivotally connected to the upper portion of the door, and wheels carried by said
10 levers, of a track upon which said wheels run,

a connecting-rod connected to said levers, a guide for said connecting-rod carried by the car-door, a handle carried by said connecting-rod, and a handle carried by the car-door in
15 proximity to said first-mentioned handle, substantially as described.

GRAHAM P. JONES.

Witnesses:

GEORGE J. M. PORTER,
BELDEN D. JONES.