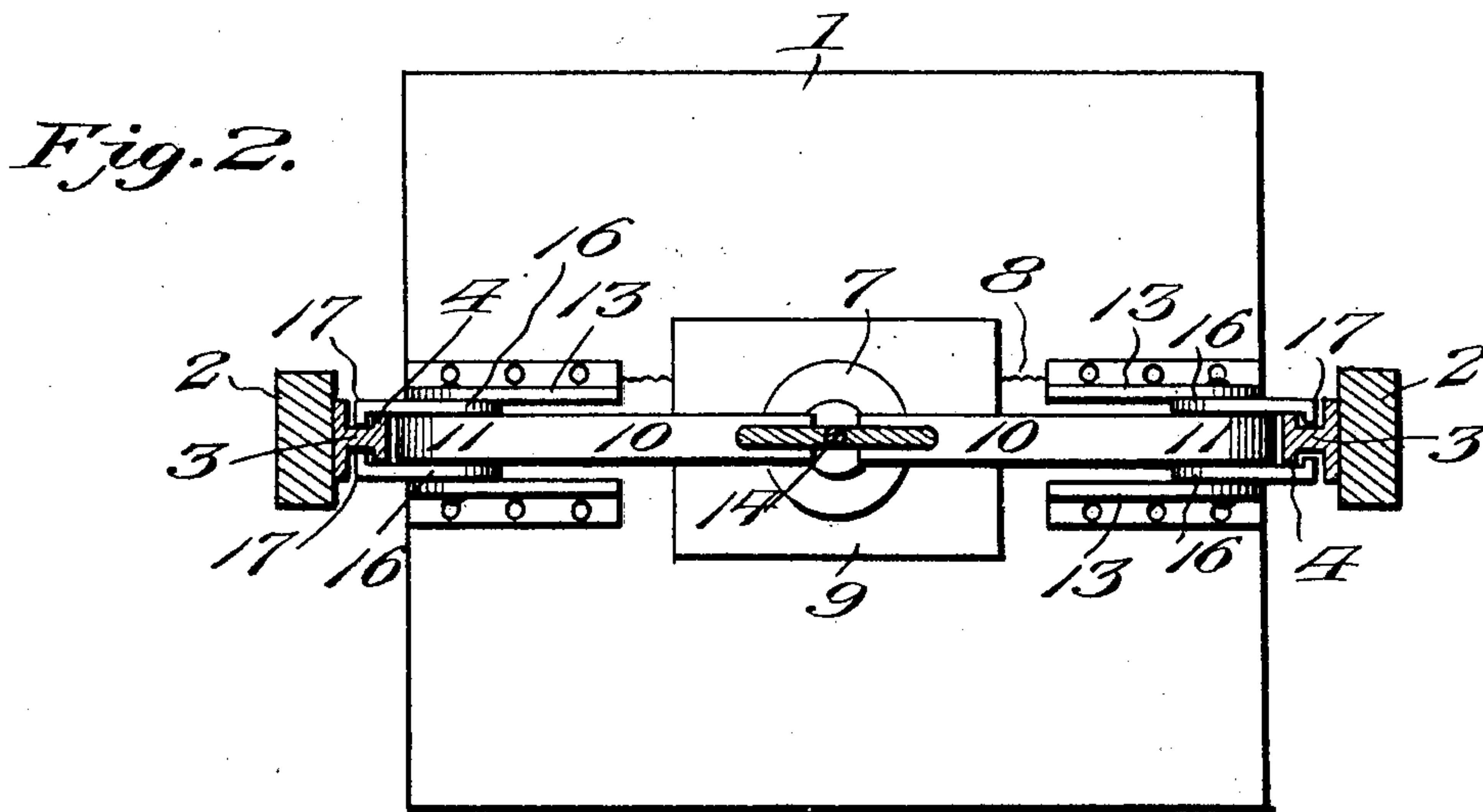
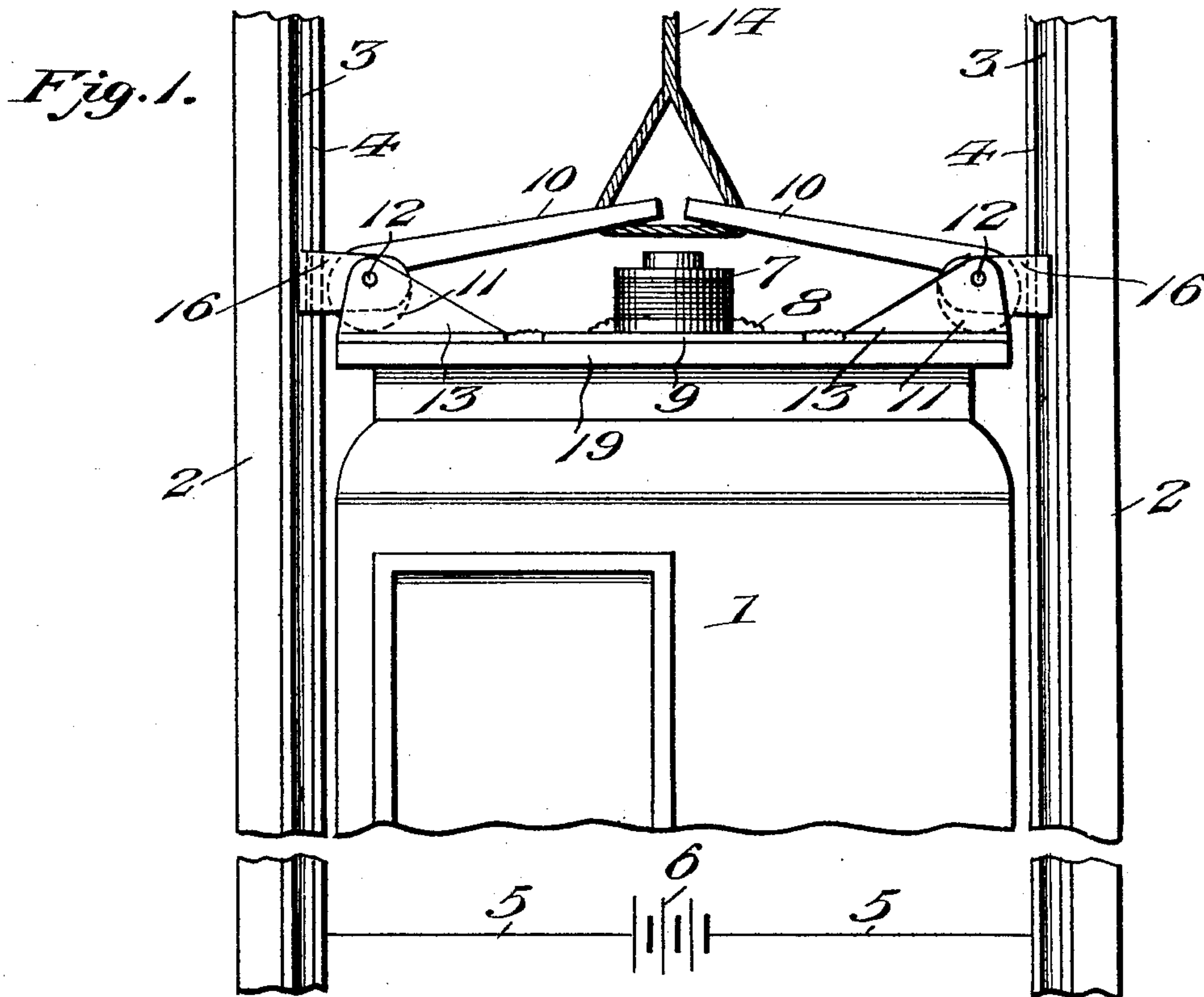


No. 803,425.

PATENTED OCT. 31, 1905.

E. L. MATER.  
SAFETY DEVICE FOR ELEVATORS.  
APPLICATION FILED JULY 3, 1905.

2 SHEETS—SHEET 1.



Inventor

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Witnesses

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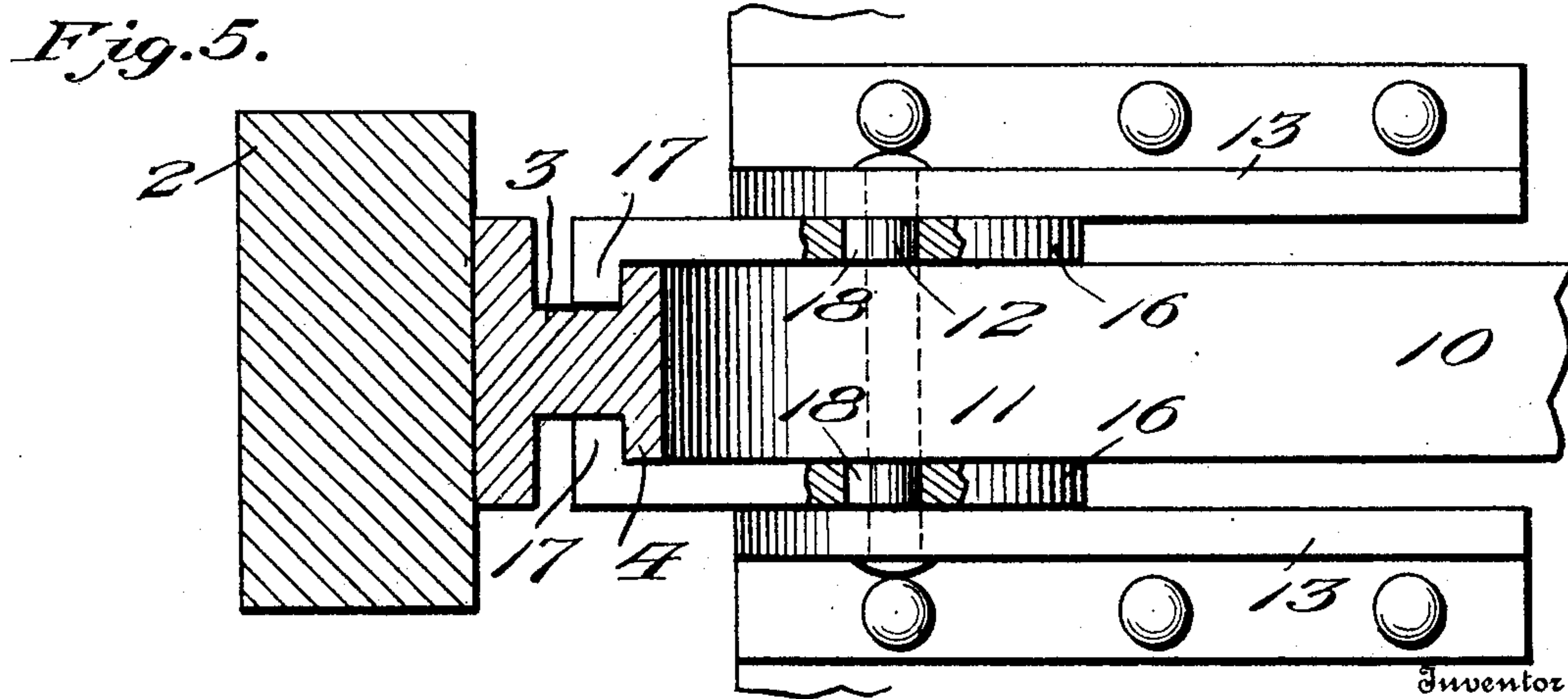
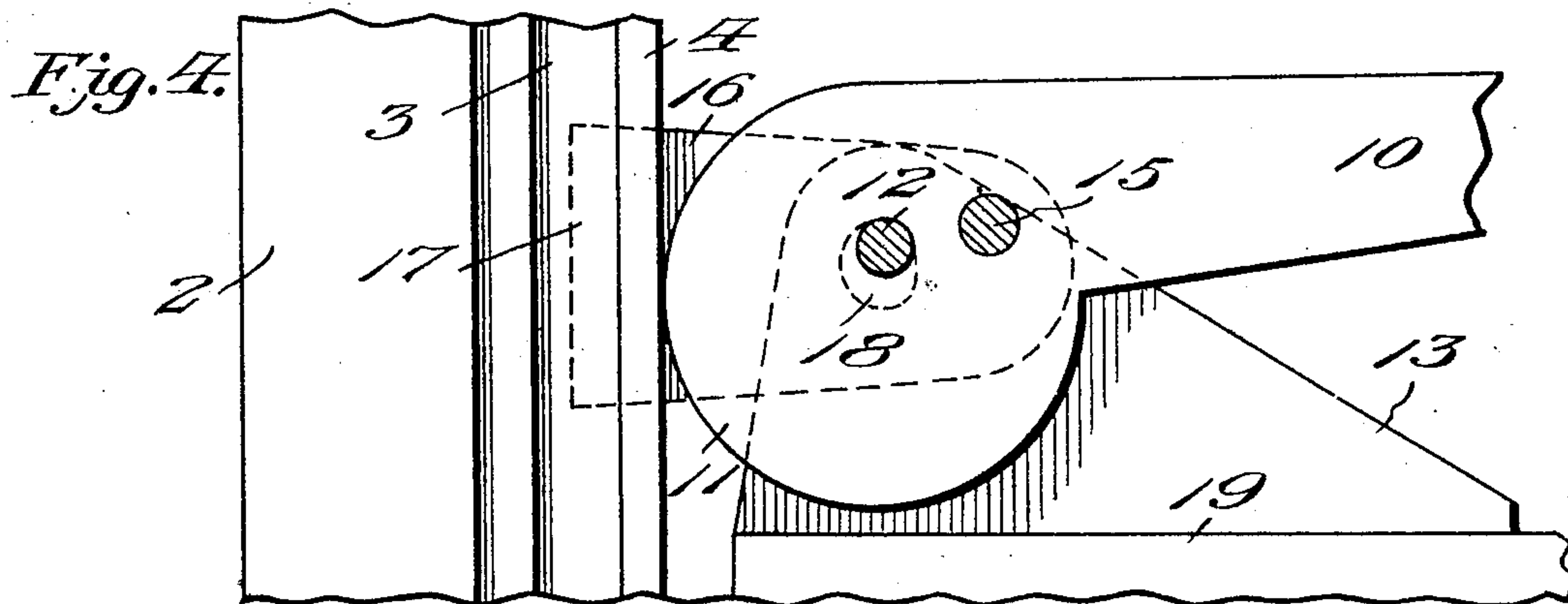
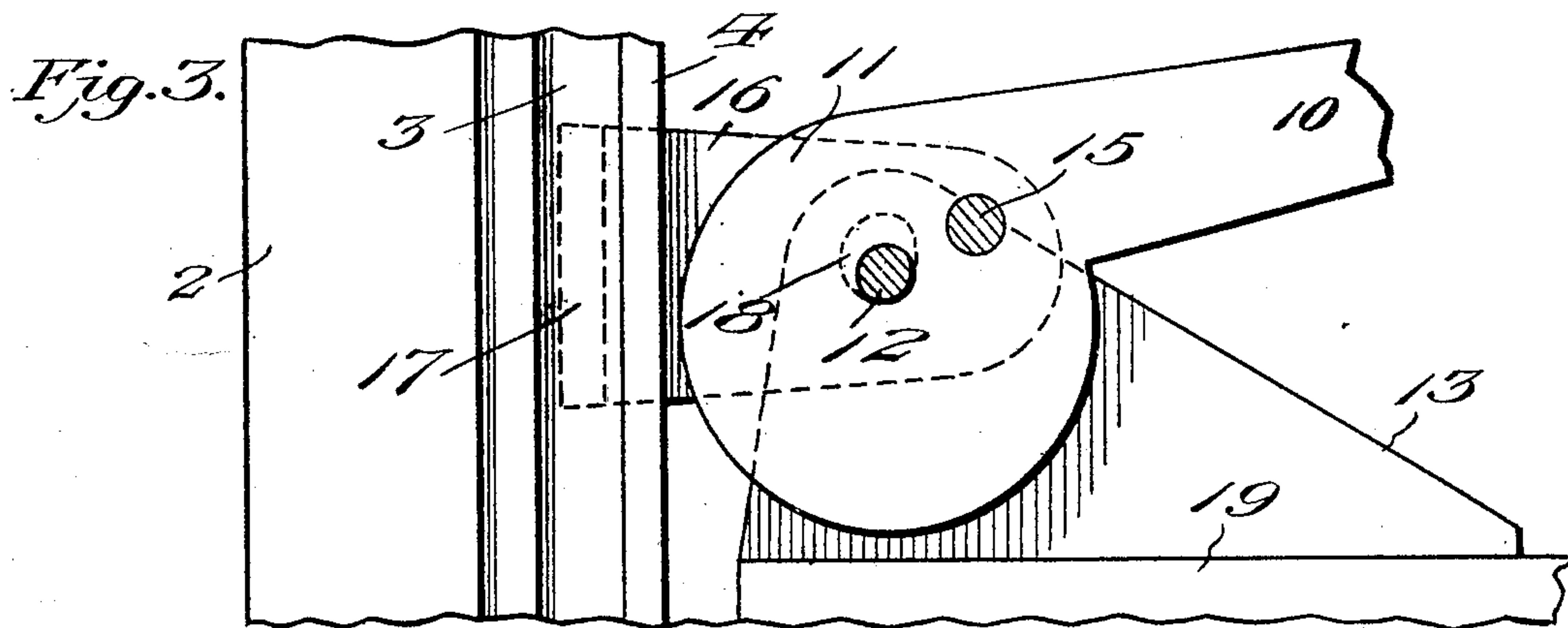
By

*Victor J. Evans*

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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

ELMER L. MATER, OF DOWAGIAC, MICHIGAN.

## SAFETY DEVICE FOR ELEVATORS.

No. 803,425.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed July 3, 1905. Serial No. 288,123.

*To all whom it may concern:*

Be it known that I, ELMER L. MATER, a citizen of the United States, residing at Dowagiac, in the county of Cass and State of Michigan, have invented new and useful Improvements in Safety Devices for Elevators, of which the following is a specification.

This invention relates to safety devices for elevators of the type disclosed in Letters Patent No. 784,410, granted to me March 7, 1905, and has for its objects to produce a comparatively simple inexpensive device of this character in which the gripping or clamping members will securely engage the rails in the event of the operating-rope breaking, one wherein the eccentric-levers serve to operate auxiliary clamping members which act in conjunction with the levers for engaging the rails, and one whereby the construction disclosed in my prior patent is materially improved and simplified.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a portion of an elevator-car and its supporting-frame, showing my invention applied for use. Fig. 2 is a top plan view of the same. Fig. 3 is an enlarged detail view in elevation of one of the rail-clamping devices, showing the parts in non-clamping position. Fig. 4 is a similar view showing the parts in clamping position. Fig. 5 is a plan view, partly in section, showing the parts of the clamping devices in the position as in Fig. 4.

Referring to the drawings, 1 designates an elevator-car arranged for travel between frame members or posts 2, equipped with metal guide members or rails 3, having at their outer edges oppositely-projecting flanges 4 and electrically connected by means of wires 5, leading to a battery or other electrical source 6, there being secured upon top of the car an electromagnet 7, of ordinary construction, wired, as at 8, to a base-plate 9.

Arranged in line with and designed to act, respectively, upon the outer faces of the rails 4 is a pair of primary clamping members or levers 10, which are identical in construction and operation and each having a substantially circular cam portion or head 11 eccentrically pivoted, as at 12, between a pair of spaced bearing members or brackets 13, attached to

the top of the car 1, the outer free ends of the levers being disposed above the magnet 7 and connected by the elevator-cable 14, which serves the usual function in raising the car and acts to maintain the levers 10 normally in the position illustrated in Fig. 1 with the cam-heads 11 out of contact with the rails 3. Eccentrically pivoted to each of the heads 11 by means of a pintle 15 is a pair of auxiliary clamping or gripping members 16, disposed, respectively, on opposite sides of the adjacent rail 3 and provided at their outer ends with inturned engaging portions or flanges 17, adapted for frictional engagement with the flanges 4, said members 16 having slots 18 to receive the pintle 12 for permitting movement of said members to and from gripping position, as more fully hereinafter explained.

The elevator-car 1 is provided with a metal top 19, to which the base-plate 9 and bearing-brackets 13 are attached and through the medium of which said parts are electrically connected, while the gripping members 16 are insulated in any suitable manner from the levers 10 and also from the brackets 13, whereby the electric current through the magnet 7 will be normally broken when the levers 10 are out of contact with the rails 3.

In practice the levers 10 are normally maintained in the position illustrated in Fig. 1 by means of the cable 14, under which conditions the heads 11 will be in non-contact with the rails and the members 16 in inactive or non-gripping position, as illustrated in Figs. 2 and 3, under which conditions the magnet 7 will be deenergized, as heretofore explained. If, however, the cable 14 should break, the free ends of the levers 10 will drop by gravity sufficiently to cause their cam-heads to contact with the rails 3, whereupon the circuit will be completed and the magnet energized, thus attracting the levers which constitute armatures and cause the cam-heads to bear forcibly upon the outer faces of the rails, while at the same time the gripping members 16 will be moved for forcible engagement with the opposite faces of the rails as formed by the flanges 4, whereby the clamping devices comprising the members 10 and 16 will act upon and firmly engage the rails for effectually stopping the elevator-car.

Having thus described my invention, what I claim is—

1. In a device of the class described, an elevator-car and a guide-rail therefor, an arma-



ture on the car adapted to contact with the rail, a flexible element connected with and adapted for maintaining the armature normally in non-contacting position, an electro-  
5 magnet adapted to be energized and attract the armature upon contact of the latter with the rail, and a gripping member operated by and cooperating with the armature for clamping the rail.

10 2. In a device of the class described, an elevator-car, a vertical guide member sustained adjacent thereto, an armature pivotally mounted upon the car and having a cam-head adapted to contact with the guide member, a  
15 magnet adapted to attract said armature for maintaining the cam-head in contact with the member, and a gripping device connected with the armature and cooperating with the cam-

head of the latter for clamping the guide member between them. 20

3. In a device of the class described, an elevator-car, a vertical guide member sustained adjacent thereto, a clamping-lever pivotally connected with the car and having a cam-head designed to contact with the guide member, 25 and a gripping device connected with the lever and operable by the latter, said head and device being adapted for cooperation to clamp the guide member between them.

In testimony whereof I affix my signature in 30 presence of two witnesses.

ELMER L. MATER.

Witnesses:

IDA M. MATER,  
LILLIE M. CONKLIN.