

(No Model.)

3 Sheets—Sheet 1.

H. SMITH.
CARRIER APPARATUS.

No. 332,960.

Patented Dec. 22, 1885.

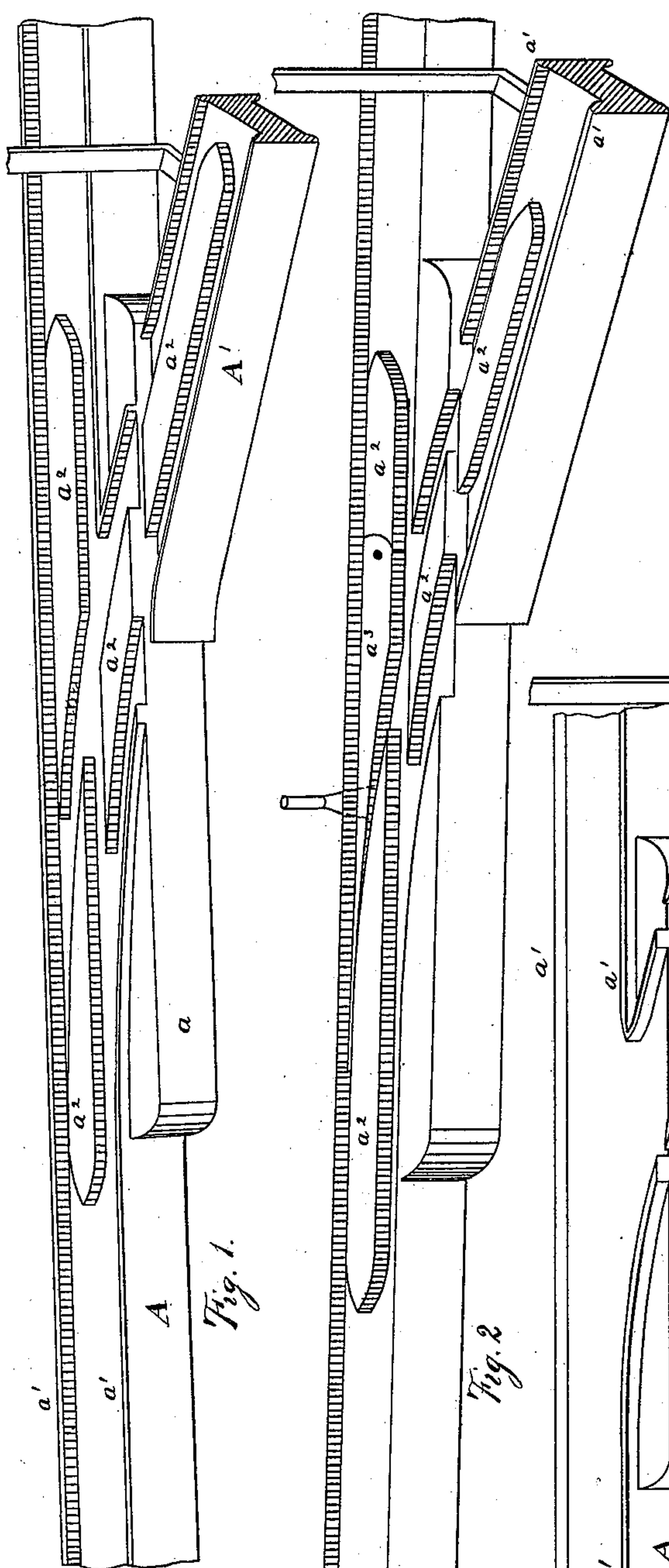


Fig. 1.

Fig. 2.

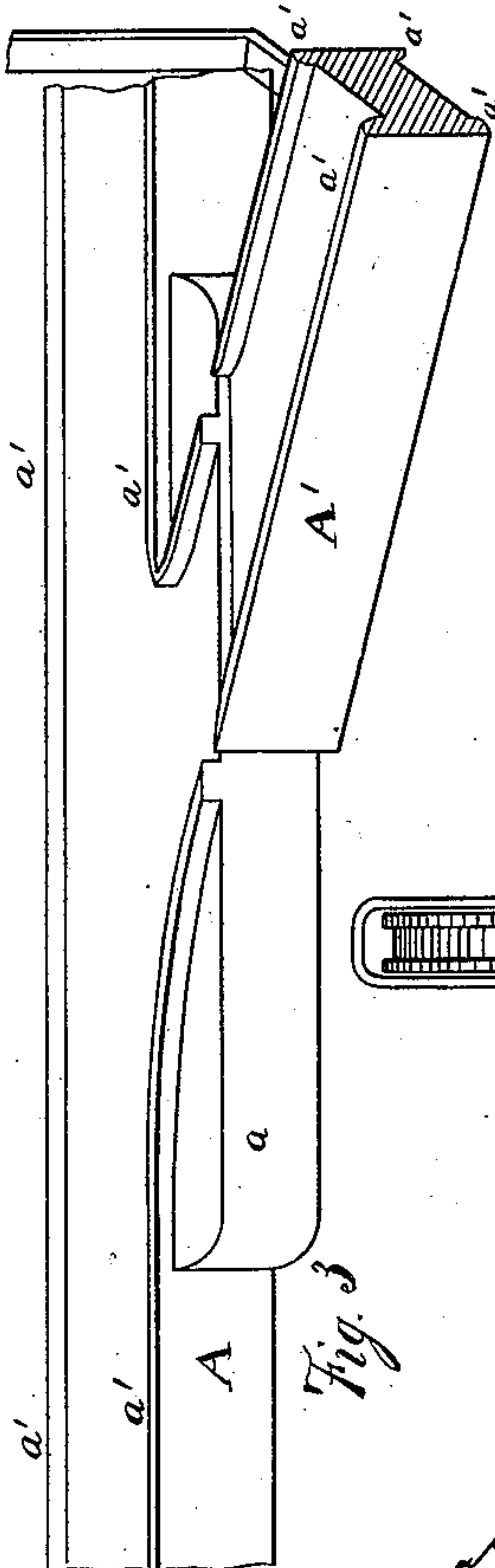


Fig. 3.

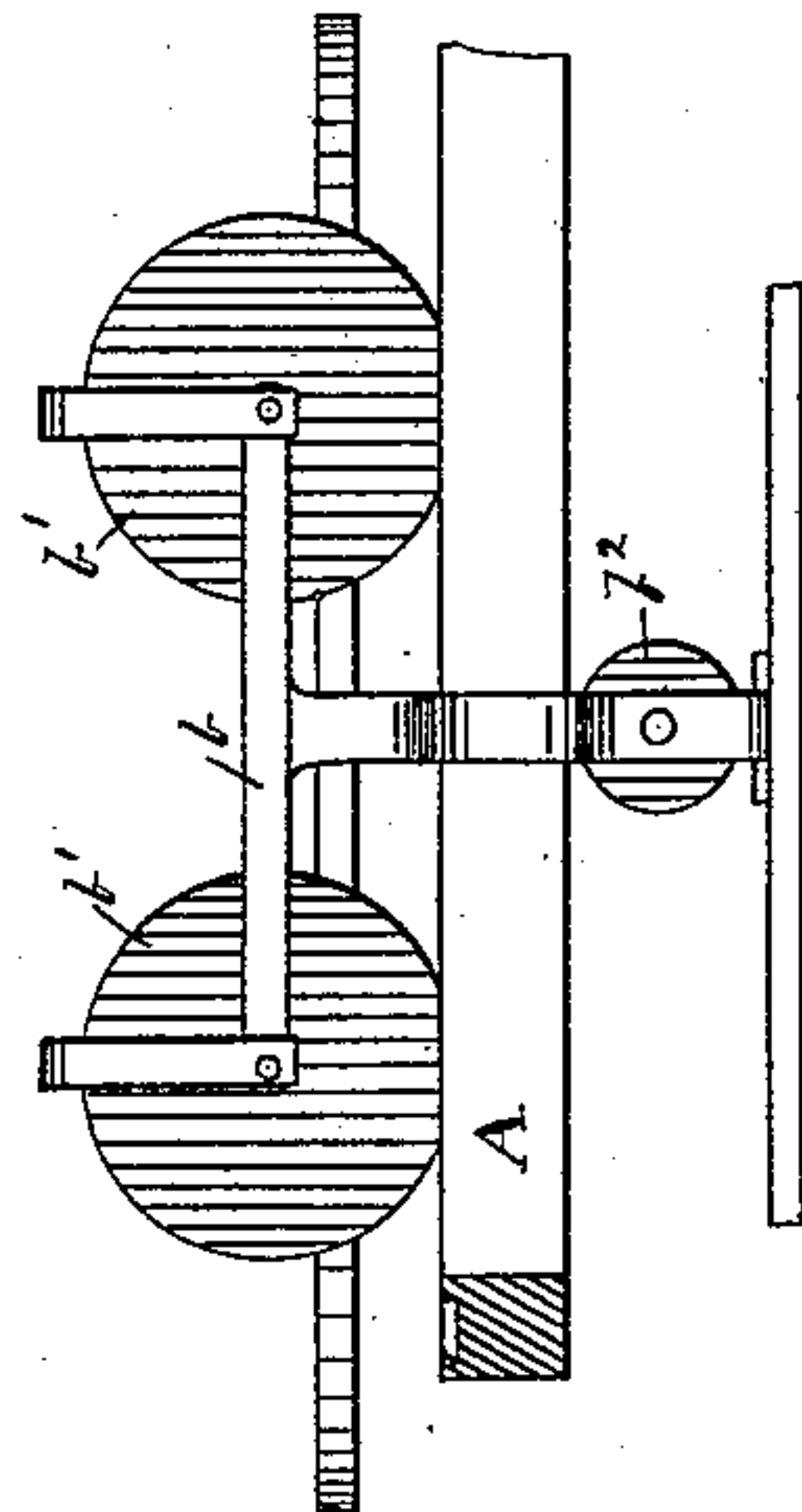


Fig. 5.

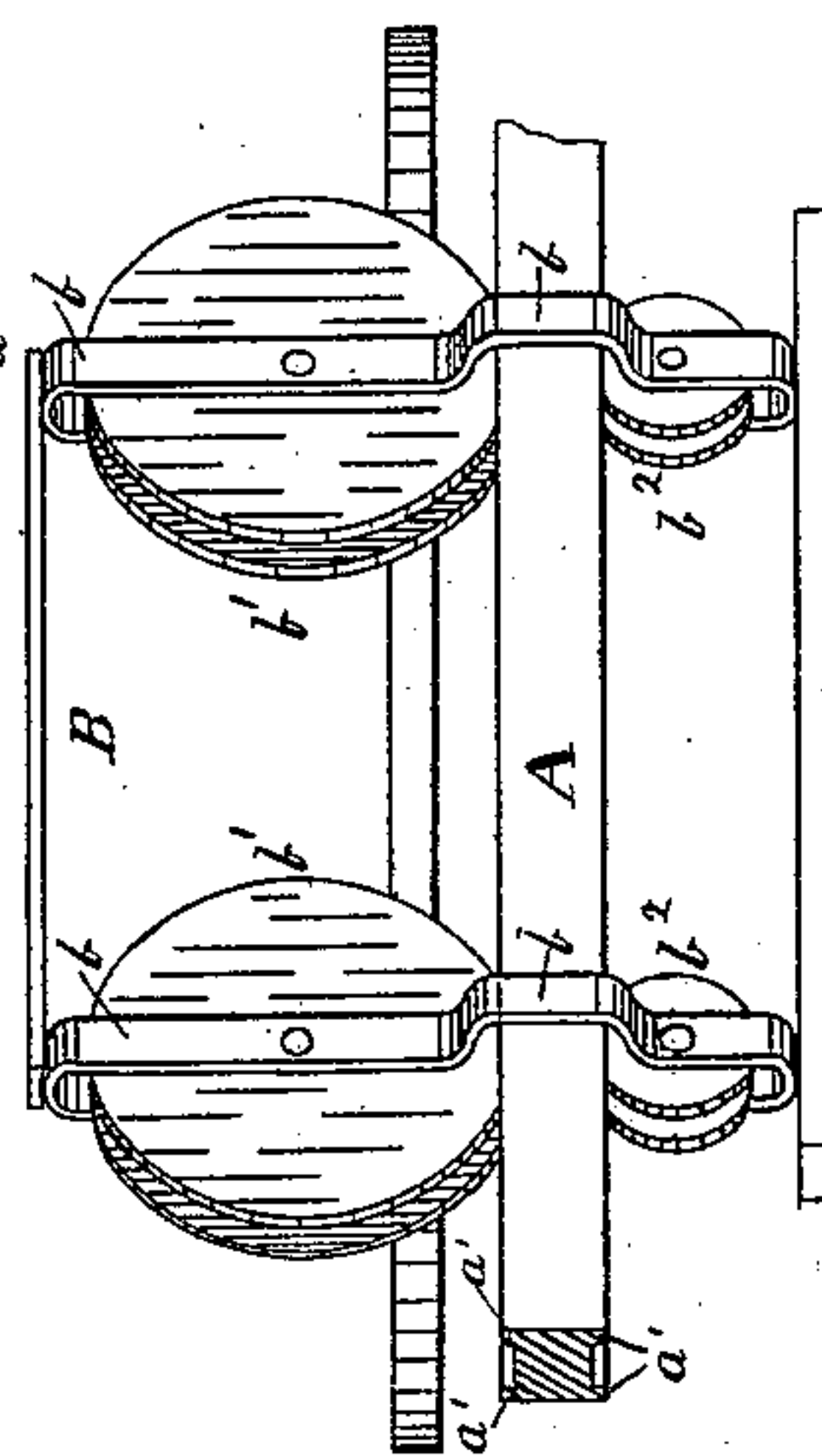


Fig. 4.

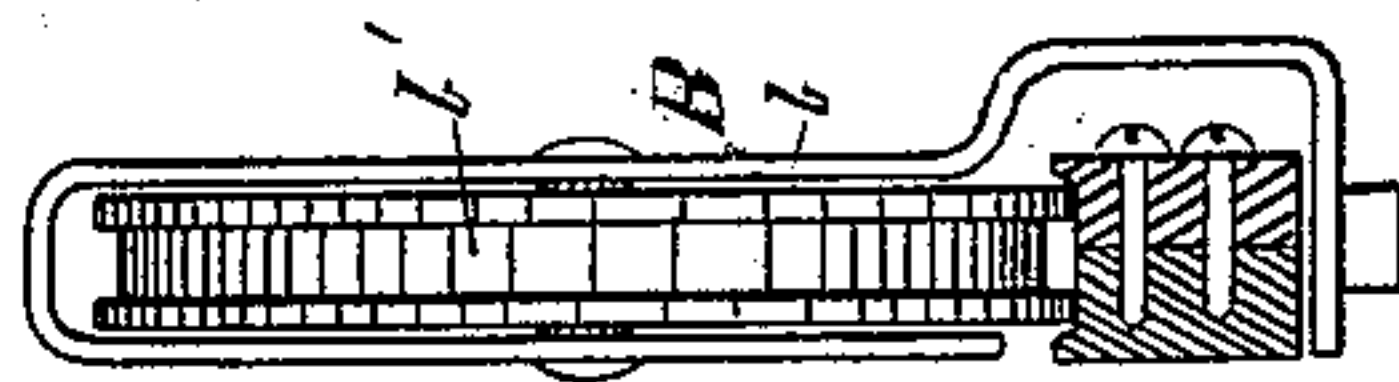


Fig. 6.

Witnesses.

W. A. Belong

Robt. H. Porter.

Inventor.

Harvey Smith

Per. *Hallcock & Hallcock*

Att. S.

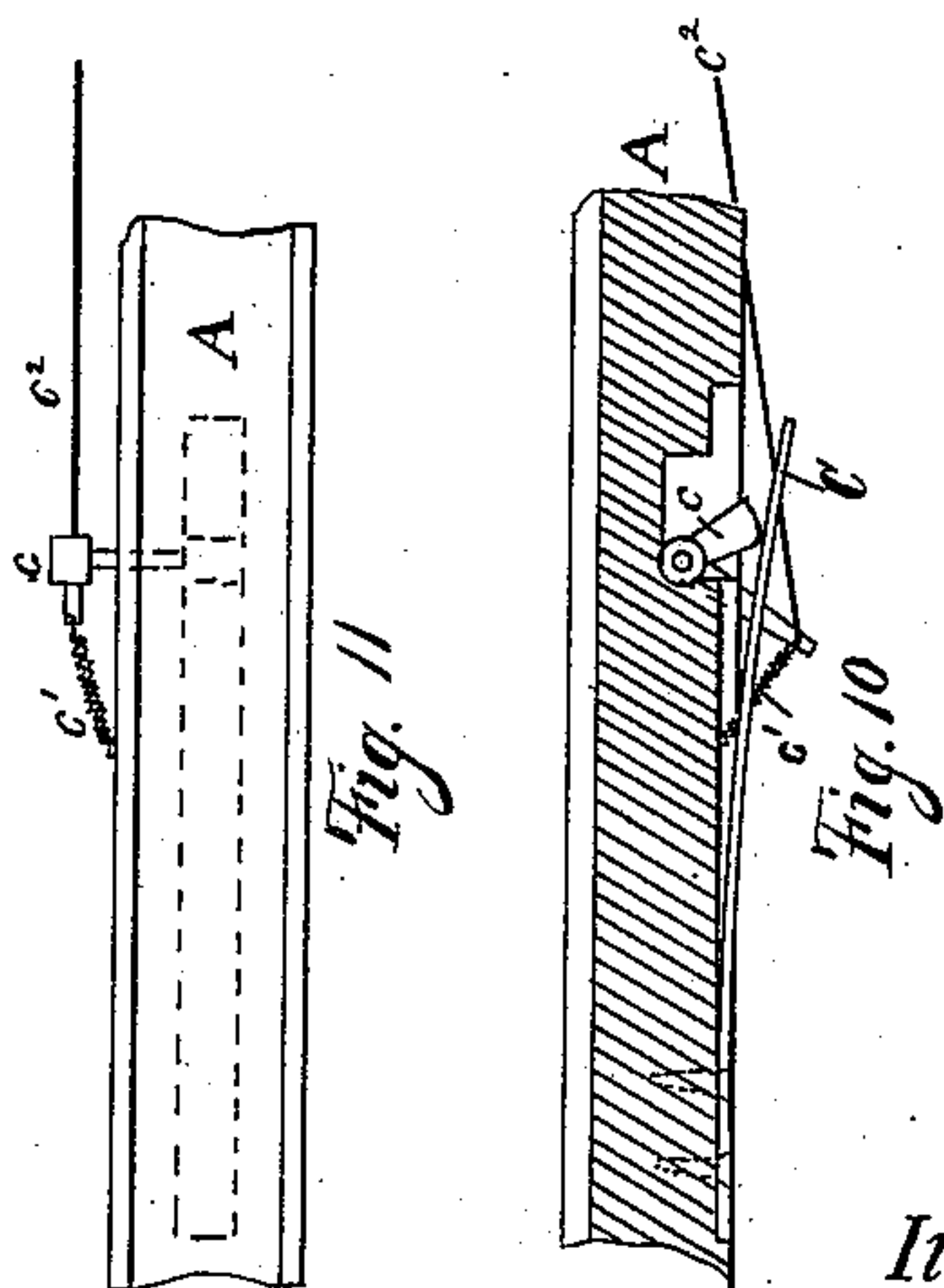
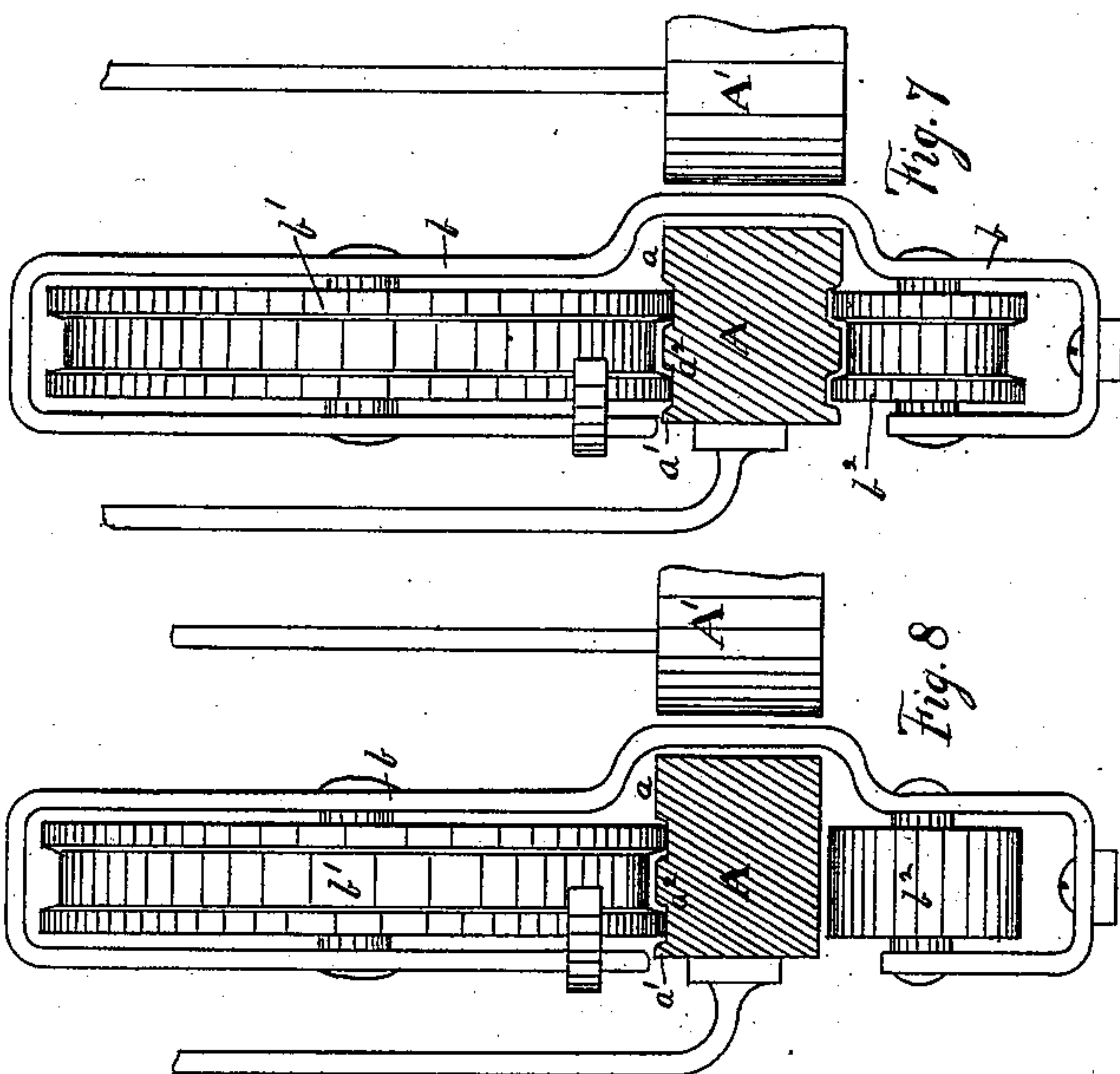
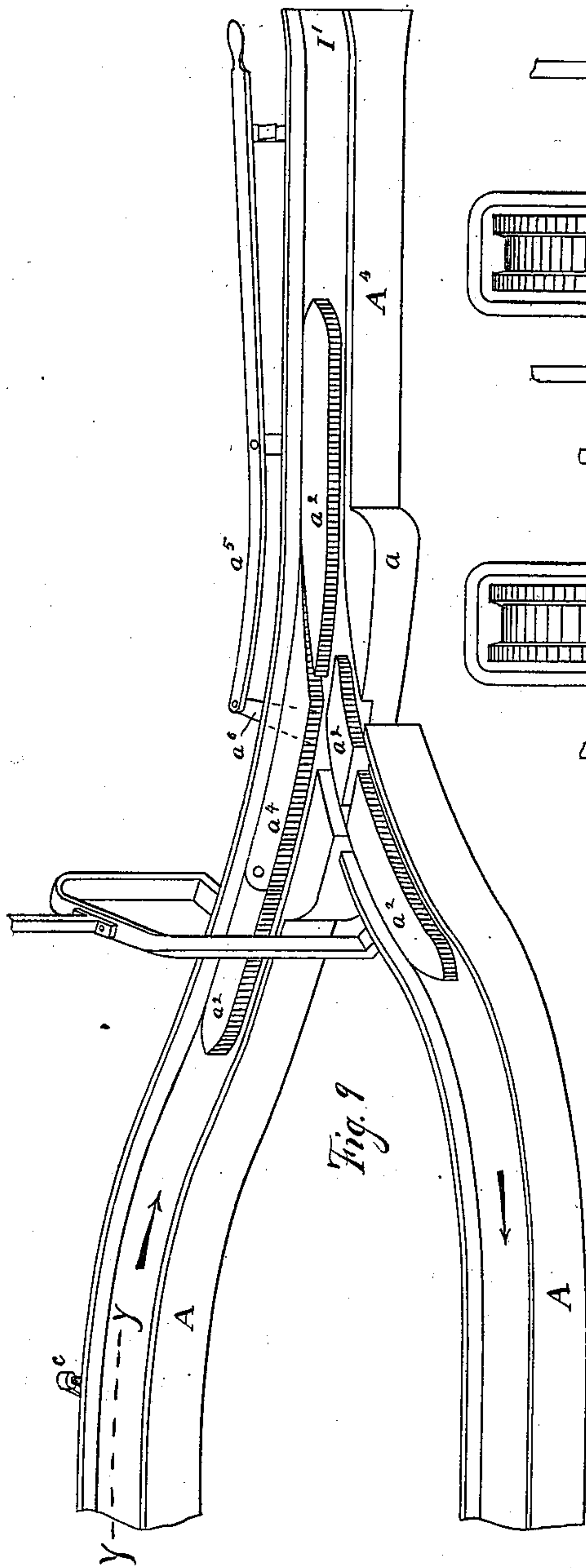
(No Model.)

3 Sheets—Sheet 2.

H. SMITH.
CARRIER APPARATUS.

No. 332,960.

Patented Dec. 22, 1885.



Witnesses:

M. Schless

Robt. H. Porter.

Inventor:

Henry Smith

Per. Hallock ~~Hallock~~

All's.

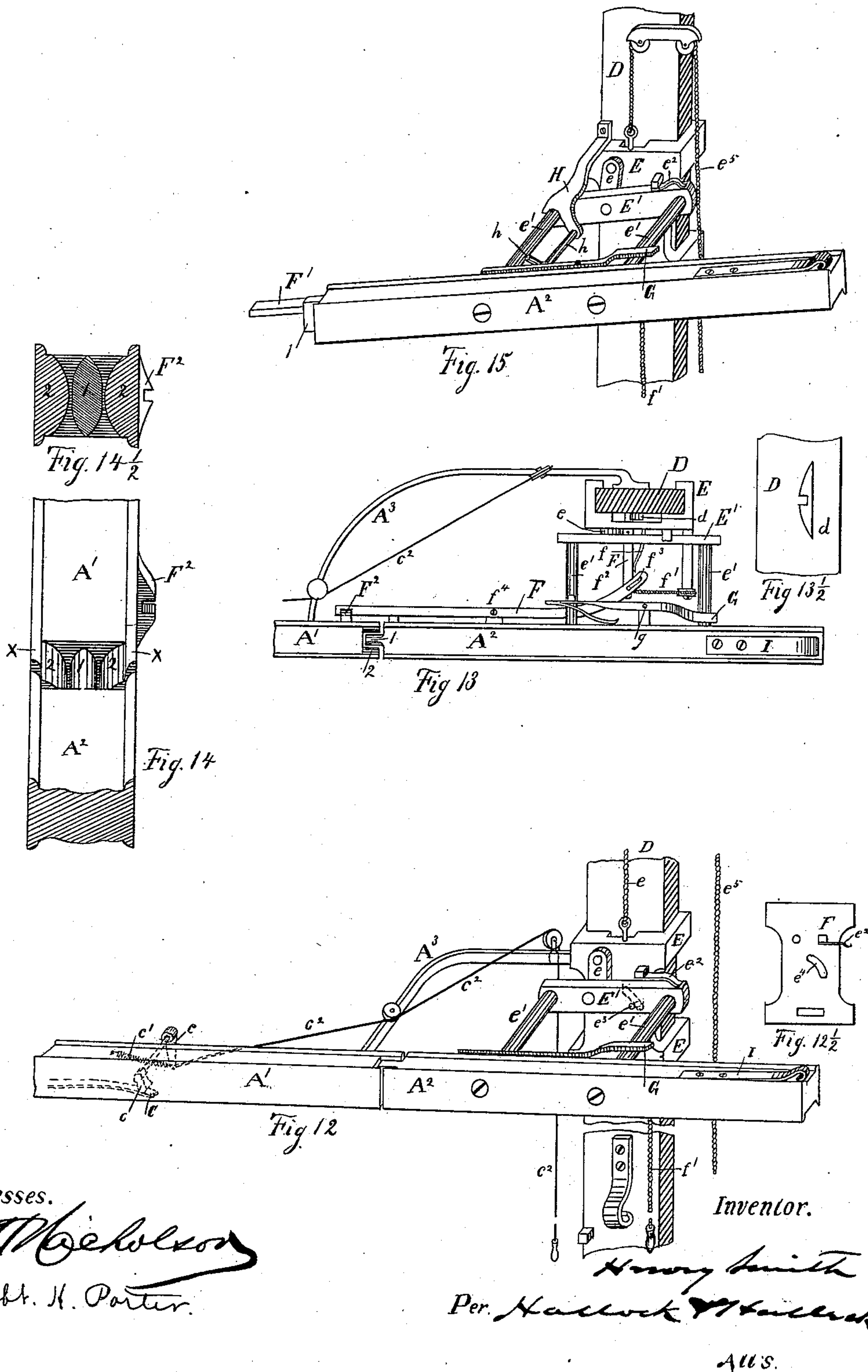
(No Model.)

3 Sheets—Sheet 3.

H. SMITH.
CARRIER APPARATUS.

No. 332,960.

Patented Dec. 22, 1885.



Witnesses.

W. H. Belknap

Robt. H. Porter.

Inventor.

Henry Smith

Per. *Hallcock* *Hallcock*

All S.

UNITED STATES PATENT OFFICE.

HERVEY SMITH, OF ERIE, PENNSYLVANIA.

CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 332,960, dated December 22, 1885.

Application filed November 18, 1885. Serial No. 183,220. (No model.)

To all whom it may concern:

Be it known that I, HERVEY SMITH, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Carrier Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to conveyers for stores and other like service; and it consists in certain improvements in the construction thereof, as will be hereinafter fully set forth, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a perspective view of a fragment of track at a switch-point. Fig. 2 is a like view showing a movable switch-tongue, a^3 , added to the parts shown in Fig. 1. Fig. 3 is a like view, and shows a track having no central ribs, a^2 , as in the two former figures. Fig. 4 is a perspective view showing a fragment of track with a trolley thereon. Fig. 5 is a like view to Fig. 4 with a modified track and trolley. Fig. 6 shows the track in vertical transverse section and an end view of a car-trolley of modified construction. Fig. 7 is a similar view to Fig. 6 with a car like the one seen in Fig. 4, and shows the car passing a switch-point. Fig. 8 is a like view to Fig. 7, but shows a car like the one in Fig. 5. Fig. 9 is a perspective view of the end of the tracks at the central station, arrows on the track indicating the direction in which cars travel on the tracks. Fig. 10 is a vertical longitudinal section of the track on the line yy in Fig. 9. Fig. 11 is a top view of the track, showing the parts seen in Fig. 10. Fig. 12 is a perspective view of the car-elevator at one of the way-stations, and shows a fragment of a switch-track. Fig. 12 $\frac{1}{2}$ is an elevation view of the part E seen in Fig. 12. Fig. 13 is a plan view of the same parts seen in Fig. 12. Fig. 13 $\frac{1}{2}$ shows the catch d on the face of the bar D seen in Fig. 13. Fig. 14 is a longitudinal perspective of part of the elevator-track section A^2 and the end of the switch-track A, and shows the manner in which the two parts connect. Fig. 14 $\frac{1}{2}$ is a transverse vertical section on the line xx in Fig. 14. Fig. 15 is a perspective

view of the elevator in position to dispatch a car onto the track which leads away from the way-station.

The parts and construction of my device are as follows: A is the track, and A' the switch-track. These tracks are of the same construction. The novel feature of their construction is that side ribs, a' , are placed along the track, forming a wide tread-face in between the ribs. Fig. 3 shows the track having this construction with no other adjuncts. On such a track a plain wide-faced wheel may be used. To divert a car having such wheels running on such a track from the main to the switch-track some form of fender or guide would have to be placed above or below the track. I prefer to use wheels having central grooves in their faces, as seen in Figs. 4, 6, 7, and 8, and at the switch-points put in the center of the track frog pieces or ribs a^2 , as seen in Figs. 1, 2, 7, 8, and 9; but when this is done with no movable switch-tongue, as seen in Fig. 1, a diverting-fender of some kind must be used to divert the car from the main to the switch track.

In Fig. 2 I show a movable switch-tongue, a^3 . Cars running on the track which leads from the way-stations to the central station are never diverted onto switches, but run from switch-tracks onto the main track. That track may be made without any frog-ribs, as seen in Fig. 3, or with them, as seen in Fig. 1; but it will need no switch-tongue or other means for guiding the car than the track-ribs.

I prefer to make the under face of the track with side ribs; but central frog-ribs need not be placed on that face of the track; but in Fig. 7 I show such ribs on both the upper and lower face of the track. If desired, the frog-ribs a^2 may be on the under face of the track and not on the upper face.

In three companion applications I have shown constructions which possess, in common with the construction I here show, a leading general feature of construction, which is specially claimed in one of said applications, and that feature will not be claimed in this application. In that application the peculiar feature of the track I here show was shown with others; but it was not there claimed, being left to form a part of this application.

In Fig. 9 I show a method of joining the

ends of the two tracks of a line at the central station, so that cars can be received and sent out without removing them from one track and putting them onto the other. The track
 5 A in that figure with the arrow pointing to the right is the track by which cars run to the central from the way-stations, and the other track, A, is the one leading away from the central station, and the track A⁴ is the terminal track-section. Frog-ribs a² are provided
 10 at the junction the same as at a switch-point, and a movable switch-tongue, a⁴, is provided, and a hand lever and link, a⁵ and a⁶, for moving said tongue.

15 A car entering the central station runs over the switch-tongue lengthwise; but when the car is sent out the switch-tongue is moved and opens a channel for the wheel-flange, which will turn the car off onto the outgoing track.
 20 The end of the track A⁴ is enlarged, as at I', to prevent cars running off.

To prevent cars running into the central station or onto the elevator at the way-stations, I put on the under side of the track a
 25 spring, C, which is kept extended from the track by a lever, c, and spring c', (see Figs. 10, 11, and 12,) and a cord, c², which runs to within reach of the attendant, may be pulled and move the lever c, so the spring C will
 30 move up against the track.

When the spring is in the position shown in Fig. 10, the cars will be stopped, and when the attendant pulls the cord c² the spring will
 35 move back and allow the car to pass. This spring may be on the upper face of the track or on the side opposite the hangers and perform its office.

On the track-section A² on the elevator there is a spring, I, to stop the cars, and a spring
 40 catch-lever, G, pivoted at g on the side of the track-section A², will engage with the trolley-frame and hold the car on the elevator until the catch-lever is pushed back, which is effected by its coming in contact with the bent
 45 rod h on the arm H when the elevator is drawn up to dispatch a car. (See Fig. 15.)

It is important that the track-section on the elevator be kept squarely in line with the
 50 switch-track A' when receiving a car, and the elevator should be locked in place, so it will not drop when it receives a car.

The construction of the elevator and the parts to effect the above purposes is as follows: The bar D is the track of the elevator,
 55 which consists of a sliding block, E, which embraces the bar D, and the frame E' e' e', which is connected to the block E by being pivoted on the link e, which is pivoted onto the block E. The track-section A² is attached to the
 60 arms e' e' of the elevator-frame. There is a pin, e³, on the back of the bar E' of the elevator-frame, which enters a curved slot, e⁴, in the face of the sliding block E, and there is a spring, e², attached to the block E, which bears
 65 on the top of the bar E' and keeps the pin e³ seated in the lower end of the slot e⁴; but when the elevator is to be tipped up to send a car

off from it the spring e² is overcome, and the pin e³ moves up in the slot e⁴.

The means for tipping the elevator consists
 70 of the cord e⁵, by which it is drawn up, and the arm H, against which one side of its frame strikes when it reaches the plane of the dispatching switch-track. (See Fig. 15.) The elevator-frame, being pivoted on a pivoted link,
 75 may have a lateral movement, and the form of the arm H where the elevator-frame piece comes against it is such as to move the frame laterally at the time it is tipping it. This insures a perfect conjunction of the track-section
 80 A² with the dispatching-switch. The track-section A² has at its end which connects with the switch-tracks a tenon, 1, and the switch-tracks have at their ends a notch to receive it. As the elevator must receive a car, let it down
 85 onto the counter, and again elevate it to the dispatching-switch. The notch in the end of the receiving-switch, into which the tenon 1 enters, must be open above and below, so the tenon may pass through it vertically. The
 90 sides of this notch 2 2 are curved, so that it is wide at the top and the bottom, but narrow in the middle, (see Fig. 14½,) and when the elevator is in position to receive a car from the switch-track A' the point 1 of the track-
 95 section A² will be held so as to keep the track-sections in line. To insure the two tracks standing in the same horizontal plane when a car is to be received, I put a catch, F², on the side of the switch-track, and on the track-section
 100 A² I put a latch, F', which will enter the notch in the catch.

To insure the elevator not falling when it receives a car, I put a catch, d, on the elevator-
 105 bar D, and pivot a latch, F, on the elevator. (See Figs. 13 and 13½.) These two latches I connect together by having a pin, f², in the latch F enter a slot, f³, in the latch F², and a cord, f', connected with one of the latches and running down over a pulley to the attendant
 110 enables him to open both latches at once, and a spring, f, bearing on the latch F, will actuate both latches.

What I claim as new is—

1. In a carrier apparatus, the combination,
 115 with a bar-track which is supported by fixtures attached to one of its vertical sides so as to permit a trolley which embraces three sides of the track to travel thereon, of ribs raised along the edges thereof outside of the wheel-tread,
 120 substantially as and for the purposes set forth.

2. In a carrier apparatus, the combination,
 125 with a bar-track which is supported by fixtures attached to one of its vertical sides so as to permit a trolley which embraces three sides of the track to travel thereon, of ribs raised along the edges thereof on both its upper and lower face.

3. In a carrier apparatus, the combination,
 130 with a bar-track which is supported by fixtures attached to one of its vertical sides so as to permit a trolley which embraces three sides of the track to travel thereon, of ribs raised along the edges thereof outside of the wheel-tread,

and frog-ribs on the track-face placed midway between said ribs at the switches, and a car-trolley having centrally-grooved wheels.

4. In a carrier apparatus, the combination, with a bar-track which is supported by fixtures attached to one of its vertical sides so as to permit a trolley which embraces three sides of the track to travel thereon, of ribs raised along the edges thereof outside of the wheel-tread, and frog-ribs α^2 and movable switch-tongue α^3 .

5. In a carrier apparatus, the combination, with the incoming and outgoing tracks at the central station, of a terminal track forming a junction with both said main tracks, in a manner substantially as shown, whereby a car may be received from the incoming track onto said terminal track and switched from it onto said outgoing track.

6. In a carrier apparatus, the combination, with a track which is adapted, as shown, to receive a trolley which embraces three sides of the track, of the spring C on the face of said track, and means, substantially as shown, for operating the said spring to stop and release cars moving on the said track.

7. In a carrier apparatus, the combination, with the switch-track A' and the track-section A^2 on the elevator, of the tenon and notch for holding said parts in the same vertical plane,

and the latch F' F^2 , for holding said parts in the same horizontal plane, substantially as set forth.

8. In a carrier apparatus, the combination, with the car-elevator and the receiving-switch, of a catch on the track of the elevator and on the switch-track, the latches F and F' , operating on said catches, and means, substantially as shown, for disengaging said latches simultaneously, for the purposes mentioned.

9. In a carrier apparatus, the combination, with the track-section on the elevator, of the spring-catch G, for locking a car thereon, and means, substantially as set forth, for disengaging said catch by the upward movement of the elevator, for the purposes mentioned.

10. In a carrier apparatus, the combination, substantially as set forth, of the elevator-slide E, the link e, pivoted on said slide, the elevator-frame pivoted on said link, and the arm H on the elevator-track D, for moving said frame and link on their pivots, substantially as set forth.

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

HERVEY SMITH.

Witnesses:

JNO. K. HALLOCK,
ROBT. H. PORTER.