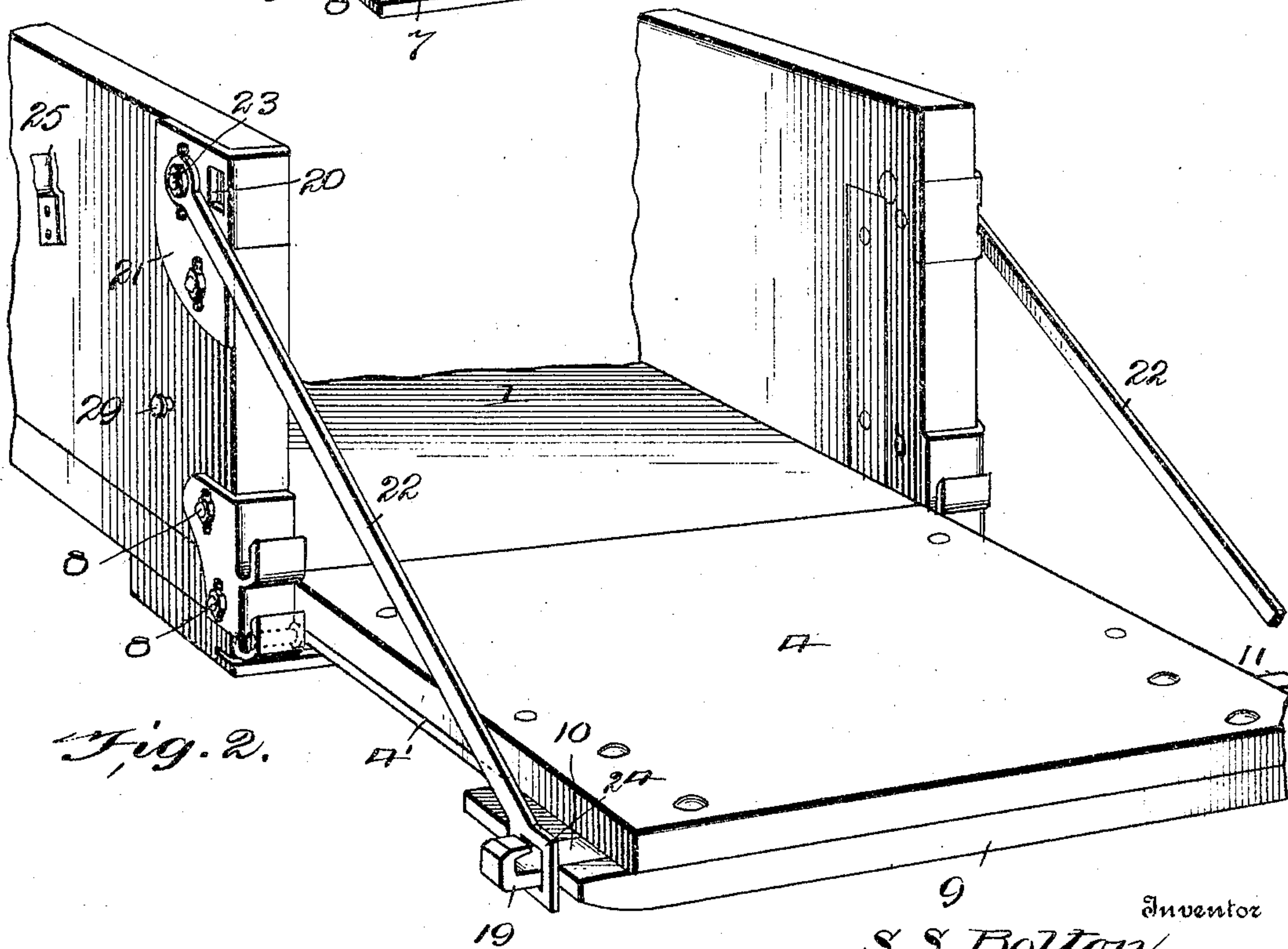
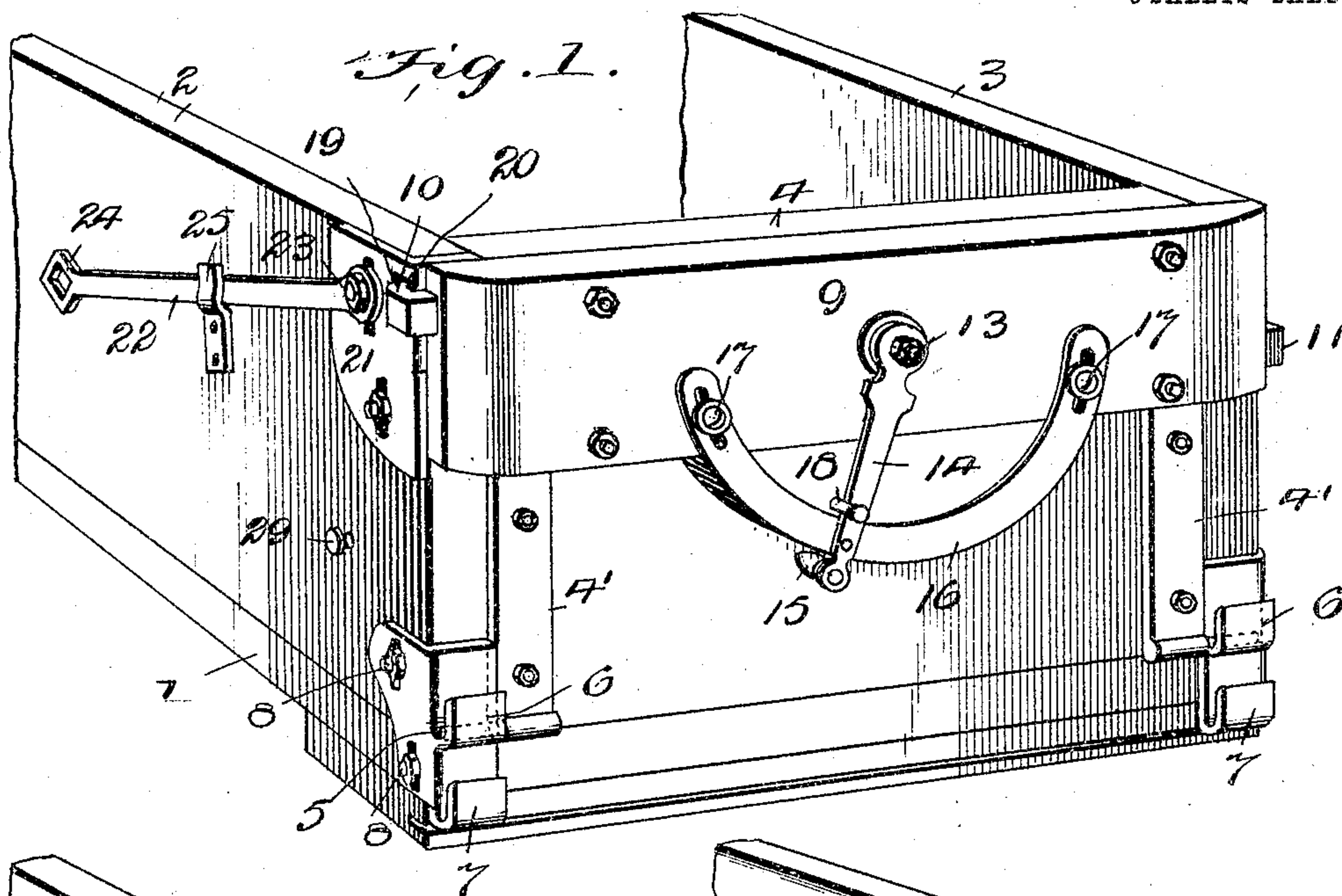


No. 783,172.

PATENTED FEB. 21, 1905.

S. S. BOLTON.  
END GATE CONSTRUCTION.  
APPLICATION FILED APR. 11, 1904.

3 SHEETS—SHEET 1.



9

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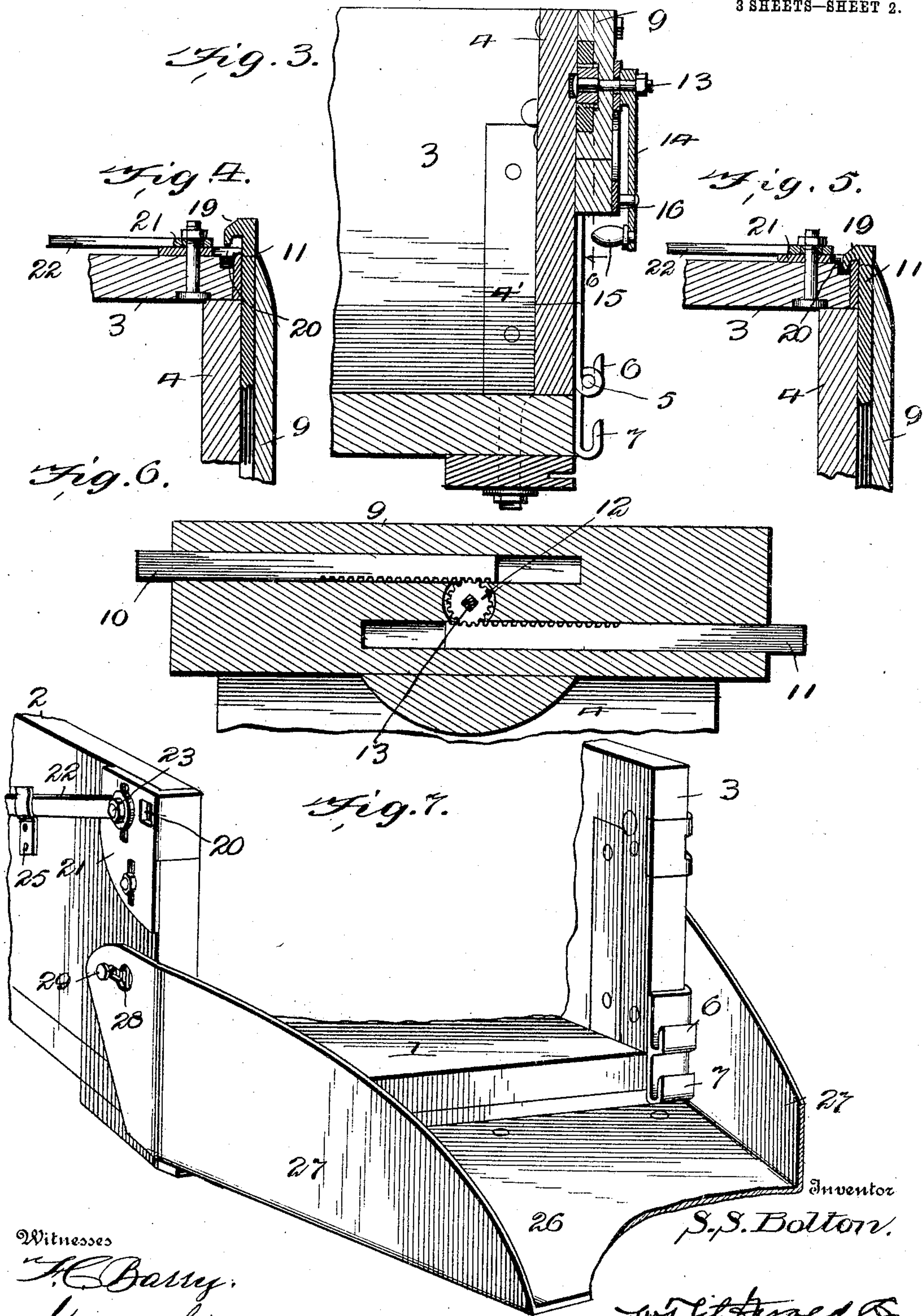
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3 SHEETS—SHEET 2.



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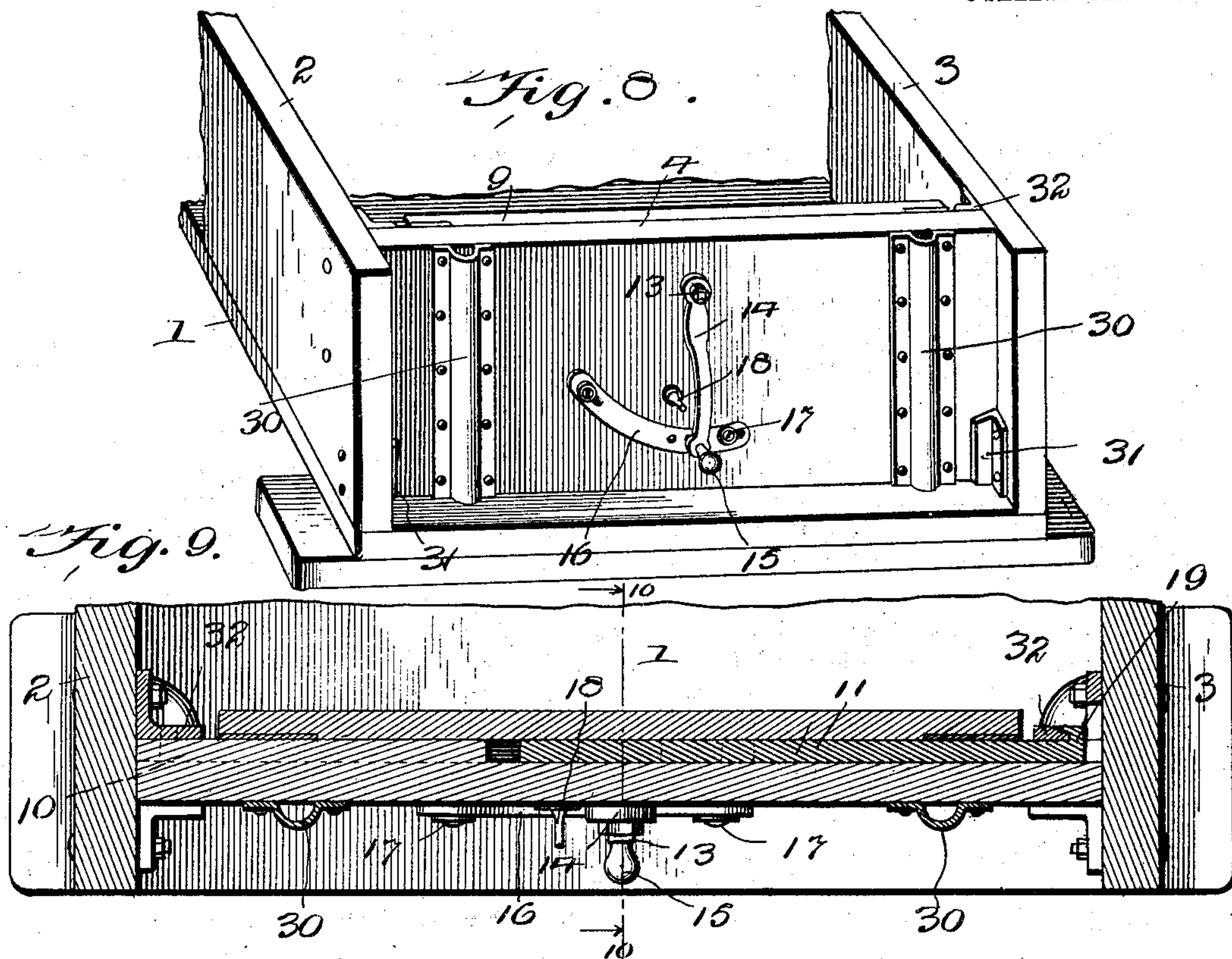


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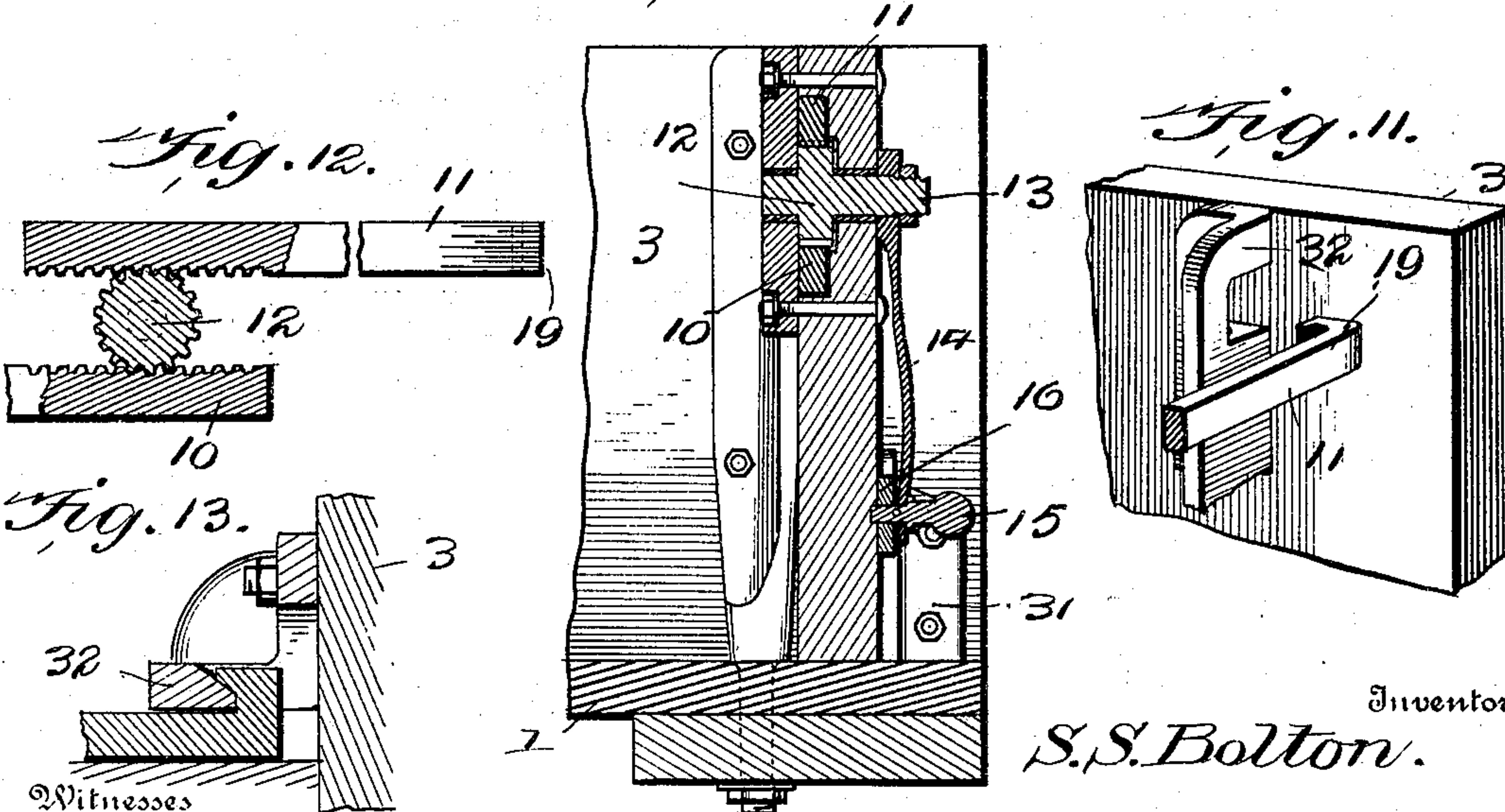
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3 SHEETS—SHEET 3.



*Fig. 10.*



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# UNITED STATES PATENT OFFICE.

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## END-GATE CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 783,172, dated February 21, 1905.

Application filed April 11, 1904. Serial No. 202,623.

*To all whom it may concern:*

Be it known that I, SAMUEL S. BOLTON, a citizen of the United States, residing at Scottville, in the county of Mason and State of Michigan, have invented certain new and useful Improvements in End-Gate Constructions; 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.

My invention relates to end-gates for wagon-beds; and it consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claim.

The prime object of my invention, among others, is to provide an end-gate which will be useful for a great variety of purposes and not only perform the office of an end-gate proper, but may be utilized as a discharging and receiving chute.

A further object of my invention is to provide simple, though reliably efficient, means for locking the end-gate in a closed position, whereby it will be practically impossible for it to casually come open.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a perspective view of my improved end-gate complete and disposed in a closed position. Fig. 2 is a similar view showing the end-gate disposed in an open position. Fig. 3 is a central sectional view of Fig. 1. Fig. 4 is a detail view showing a horizontal section of the locking devices in an unlocked position. Fig. 5 is a similar view showing the locking devices in a locked position. Fig. 6 is a longitudinal section of the end-gate, showing the position of the rack-bars and gear co-operating therewith. Fig. 7 is a perspective view showing a discharging-chute of special form as attached to the end of the wagon-bed in lieu of the end-gate. Fig. 8 is a perspective view showing a slightly-modified construction of the end-gate. Fig. 9 is a longitudinal section of the end-gate. Fig. 10 is a

sectional view of Fig. 9 on line 10 10. Fig. 11 is a perspective view of the locking device for holding the end-gate in union with the side-boards of the wagon-bed. Fig. 12 is a detail view showing the rack-bars and co-operating gear. Fig. 13 is a sectional view of the hooked end of one of the rack-bars and its co-operating keeper or bracket.

The various details and co-operating accessories of my invention will for convenience be designated by numerals, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 indicates the bottom section of the wagon-bed, while 2 and 3 designate the side-boards thereof, said wagon-bed being made of the usual or any preferred construction, and co-operating with the ends of the side-boards 2 and 3 is the end-gate 4, made sufficiently long to fit between the side-boards. The end-gate is provided at each end with a reinforcing cleat or bar 4', each of which is provided at its lower end with an outwardly-extending journal or lug 5 of proper size to rest in one of the brackets 6 or 7, as may be preferred and as hereinafter set forth, said brackets being secured to the side-boards in any preferred way, as by the locking-bolts 8. Seated in the upper end of the side-board and preferably inclosed by the cross-bar or cleat 9 I dispose the locking members employed to hold my end-gate in a closed position, said locking members comprising a pair of rack-bars, as indicated by the numerals 10 and 11, said rack-bars being designed to co-operate with and be controlled by the gear-wheel 12, secured rigidly to the controlling-shaft 13, to the outer end of which I attach the controlling-handle 14, provided with the handle proper, 15. I also attach to the reinforcing bar or cleat 9 the segmental bar 16, held in place in any preferred way, as by the bolts or screws 17, a stop or pin 18 being also provided at a convenient point to limit the movement of the controlling-handle 14 in a manner hereinafter set forth.

Each of the rack-bars 10 and 11 is provided with the hook-like terminal 19, adapted to engage an aperture 20 in the plate 21 near the upper corner of each side-board, and it is there-



fore obvious that by a proper movement of the controlling-handle 14 the hook-terminals 19 may each be simultaneously moved inward or outward, as desired.

5 By the arrangement of parts and the construction just described it will be observed that the brackets 6 coöperating with the lugs 5 will act as a hinge for the end-gate and permit said end-gate to be moved outward at its  
10 upper edge to occupy the position shown in Fig. 2, it being understood that the lugs 5 shall have been lifted out of the bracket 6 and into engagement with the bracket 7 and that the bracing-arms 22, which are pivotally se-  
15 cured to the upper edge of each of the side-boards 2 and 3, as by the bolt 23, may be thrown outward into engagement with the hook-terminals 19, as by entering said terminals through an opening provided in the ends  
20 of said arms, said opening being designated by the numeral 24. By this arrangement the end-gate will sustain a very heavy weight placed thereon, as will be obvious. When the arms 22 are not employed for sustaining the  
25 end-gate in a horizontal position, they may be moved forward and dropped into the keepers 25, provided at a convenient point upon the outer side of each of the side-boards 2 and 3.

In Fig. 7 it will be seen that the end-gate has  
30 been wholly removed and replaced by a conveyer-chute 26, having the side bars or flanges 27, each provided with the keyhole-aperture or bayonet-slot 28, adapted to engage a pin or bolt-head 29, carried by the side-boards  
35 2 and 3. This conveyer-chute will be found very desirable for discharging grain, coal, or the like, as will be obvious.

In Fig. 8 and the following views I have shown a slightly-modified construction, where-  
40 in it will be observed that the end-gate 4 is provided with the reinforcing-standard receiving cleats 30, while the lower end of the end-gate is prevented from having an outward movement by means of the cleats or brackets 31.  
45 The hook-terminals 19 upon the rack-bars 10 and 11 are each designed to engage a keeper 32, and it therefore follows that when the rack-bars are drawn inward the hooks will en-  
50 gage their keepers and secure the end-gate reliably in a locked position.

By reference to Fig. 10 it will be observed that the gear 12 is formed integral with its shaft 13, or said parts may be otherwise formed, as preferred. It will thus be seen that I have provided a reliably-efficient form of locking  
55 device whereby the end-gate may be secured in an upright position or may be lowered into a horizontal position, as shown in Figs. 2 and 1, and that said end-gate will be reliably sup-  
60 ported in a horizontal position by the bracing-arms 22, thus fitting the wagon-bed for conveniently receiving or discharging its load, and while I have described the preferred combination and construction of parts deemed  
65 necessary in carrying out my invention I desire to comprehend in this application all substantial equivalents and substitutes as may be considered as falling fairly within the scope and purview of my invention.

Believing that the advantages and manner  
70 of constructing and using my invention have thus been made clearly apparent, further description is deemed unnecessary.

What I claim as new, and desire to secure by Letters Patent, is—

75 The herein-described adjustable end-gate, comprising the end-gate proper having suitable supporting-lugs at each end thereof and at its lower edge brackets carried by the side-boards coöperating with said lugs, in combi-  
80 nation with locking-bars 10 and 11 longitudinally movable in said end-gate and having substantially L-shaped hooks at their outer ends, the inner ends of said locking-bars being pro-  
85 vided with rack-bars, a pinion 12 disposed between said locking-bars and adapted to move with the rack-bars thereon, a shaft supporting said pinion and having a handle portion to rotate the same, keepers secured to the inner face  
90 of said side-boards having slots with which said L-shaped terminals engage, and means to secure said locking-bars in their locked or un-  
locked positions, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two sub-  
95 scribing witnesses.

SAMUEL S. BOLTON.

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W. F. FAIRBANKS.