

No. 793,215.

PATENTED JUNE 27, 1905.

J. NIEMES.
SHEET DELIVERY MECHANISM.

APPLICATION FILED APR. 23, 1903.

4 SHEETS—SHEET 1.

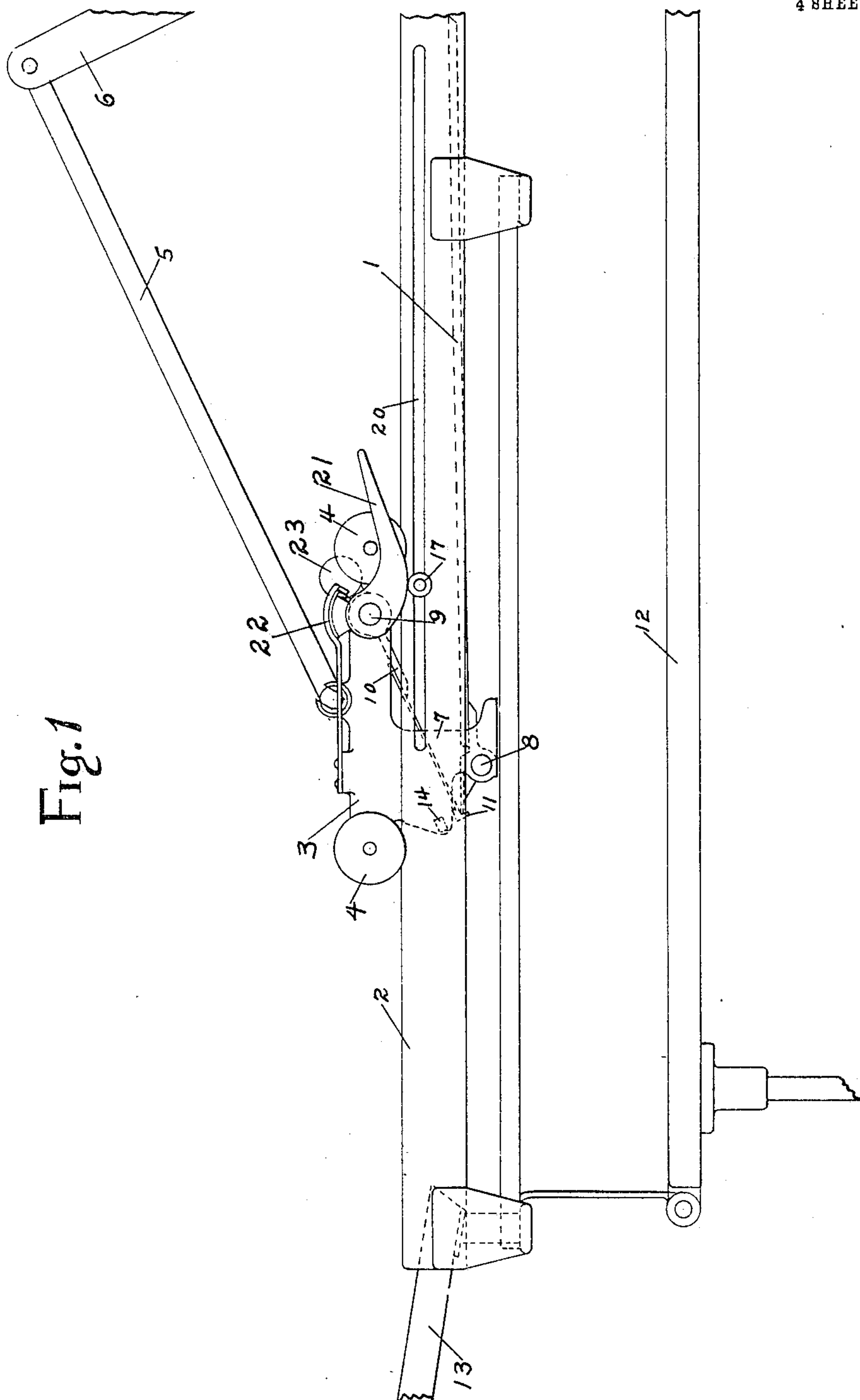


Fig. 1

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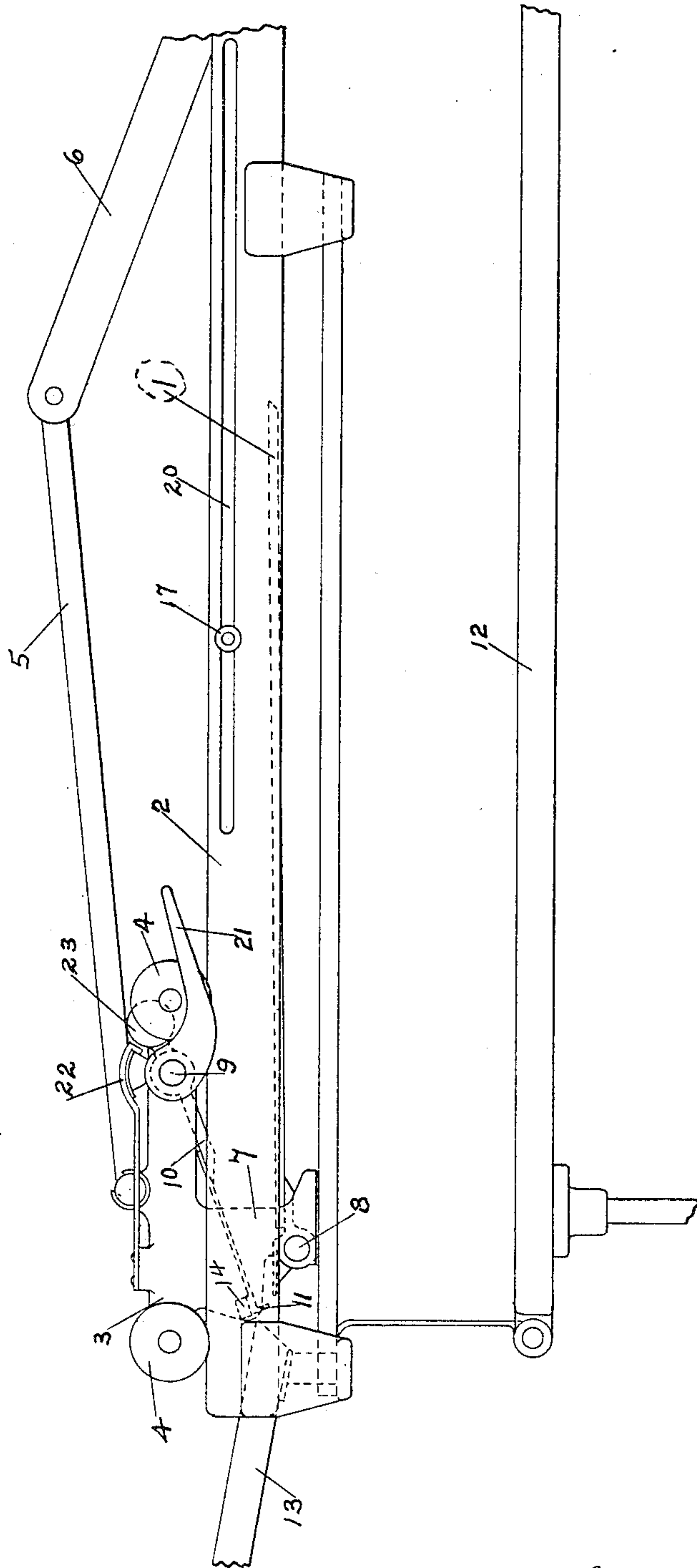
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4 SHEETS—SHEET 2.

22.2



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4 SHEETS—SHEET 3.

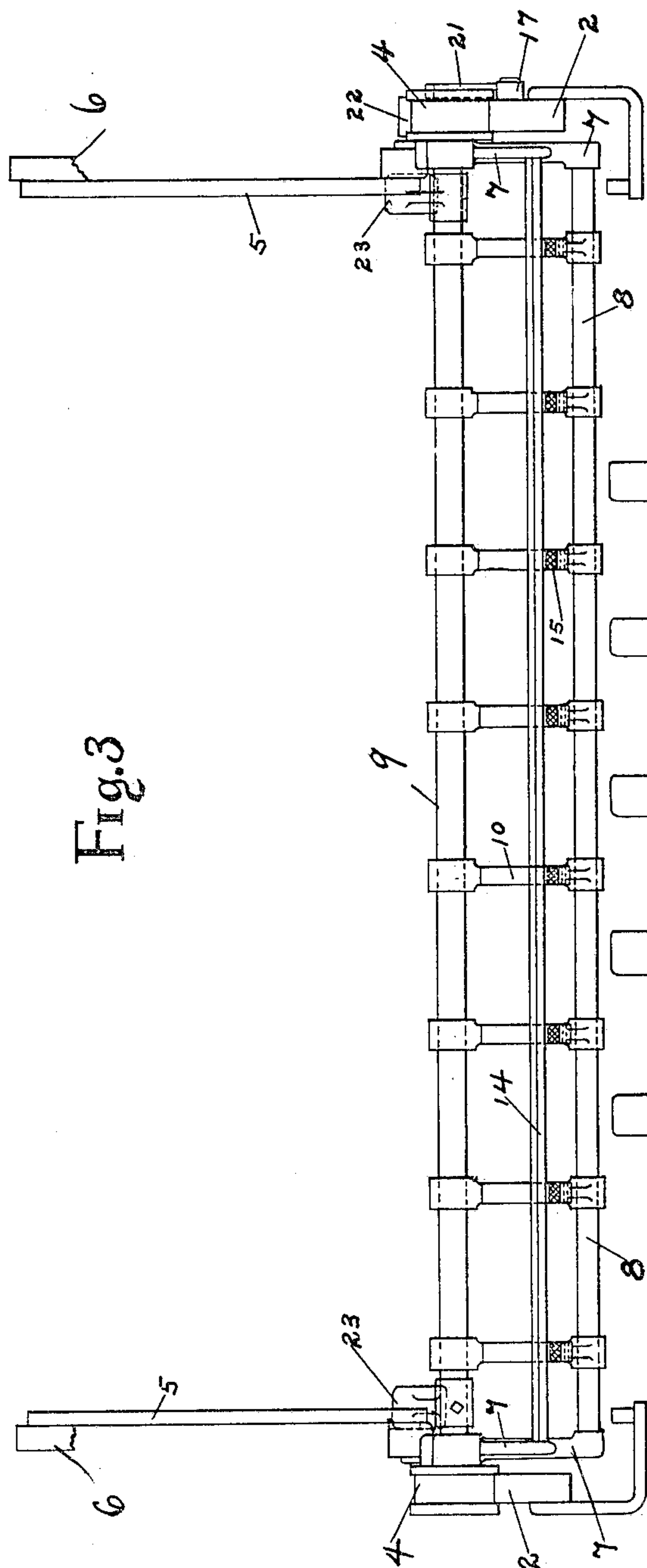


Fig. 3

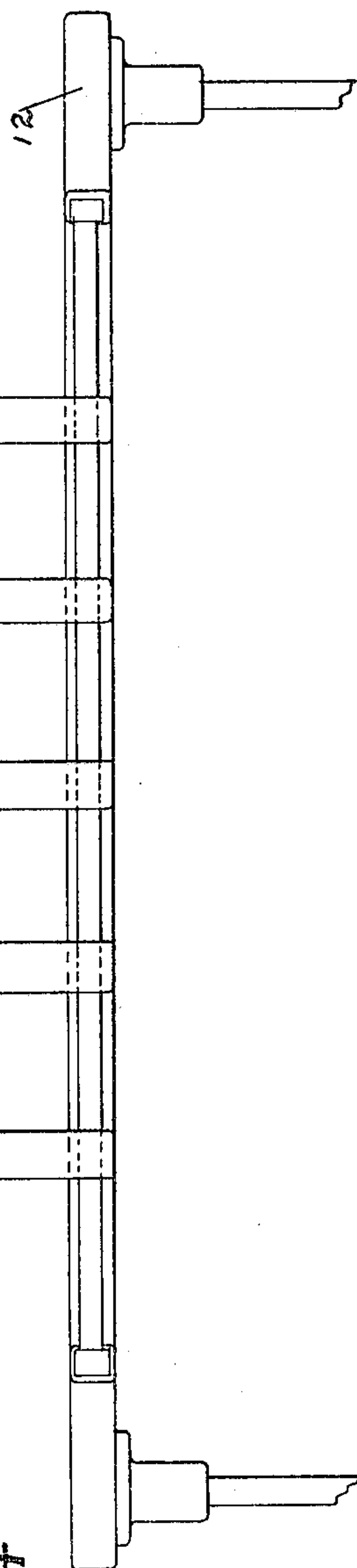


Fig. 4

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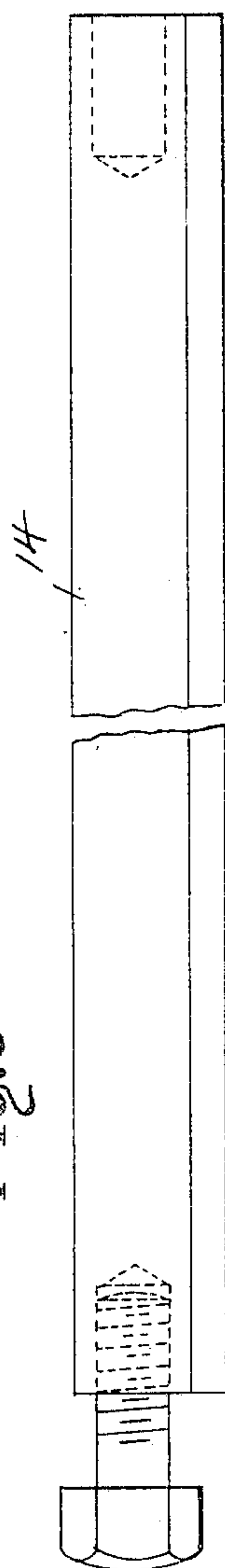
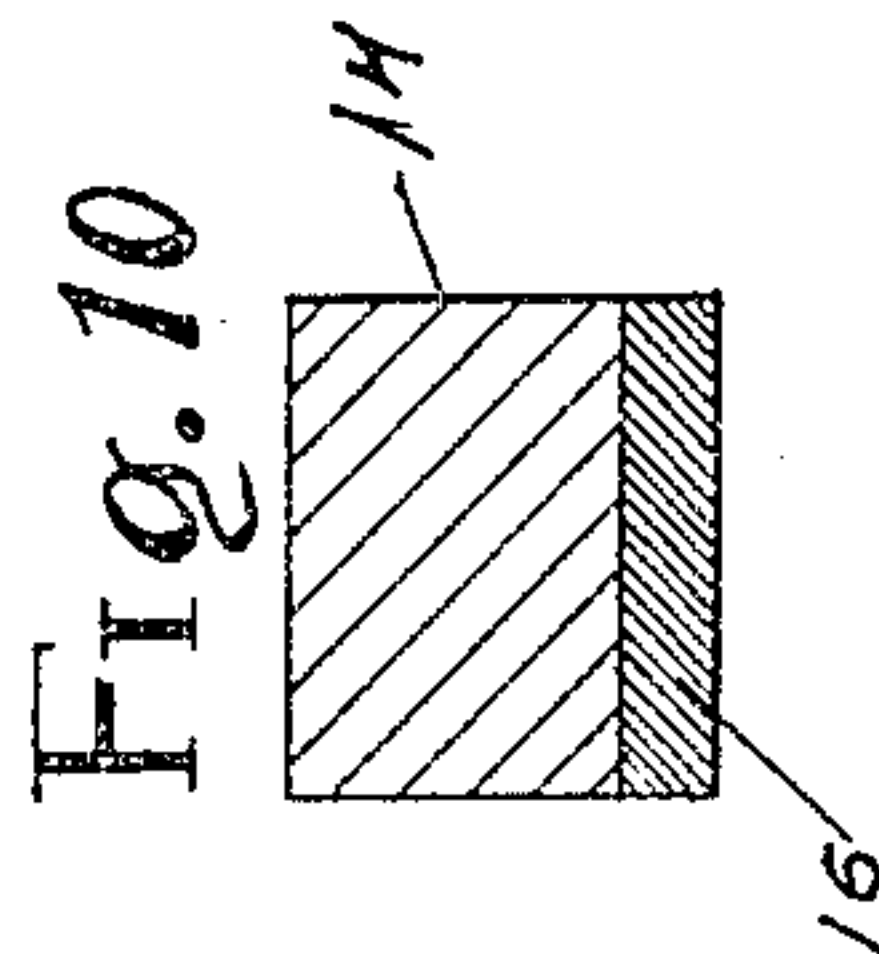
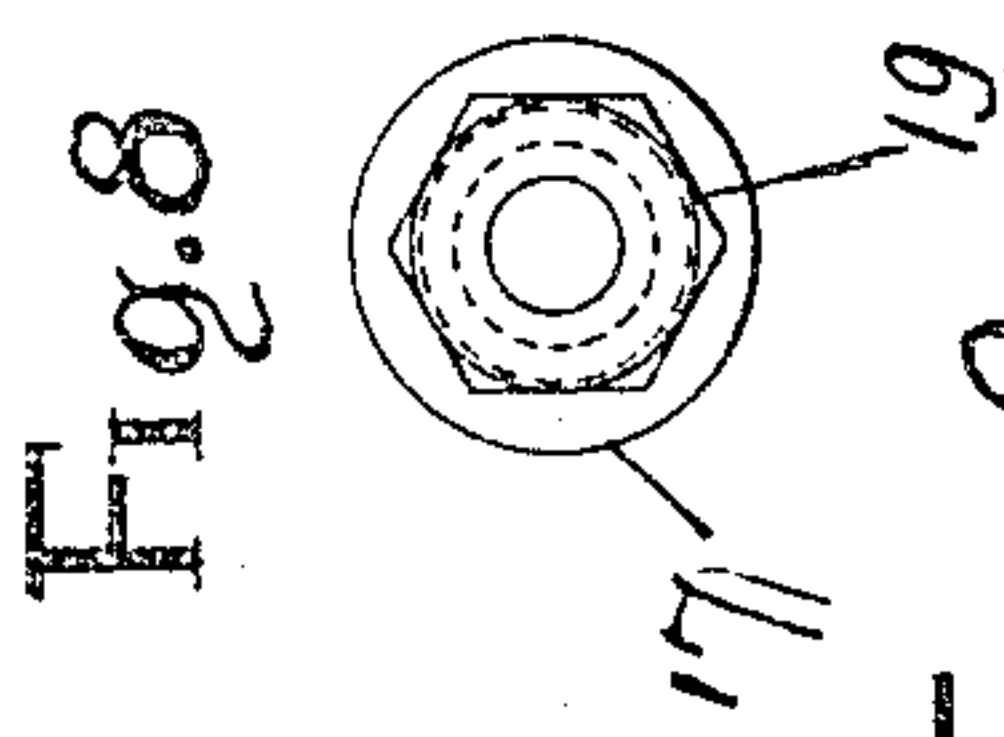
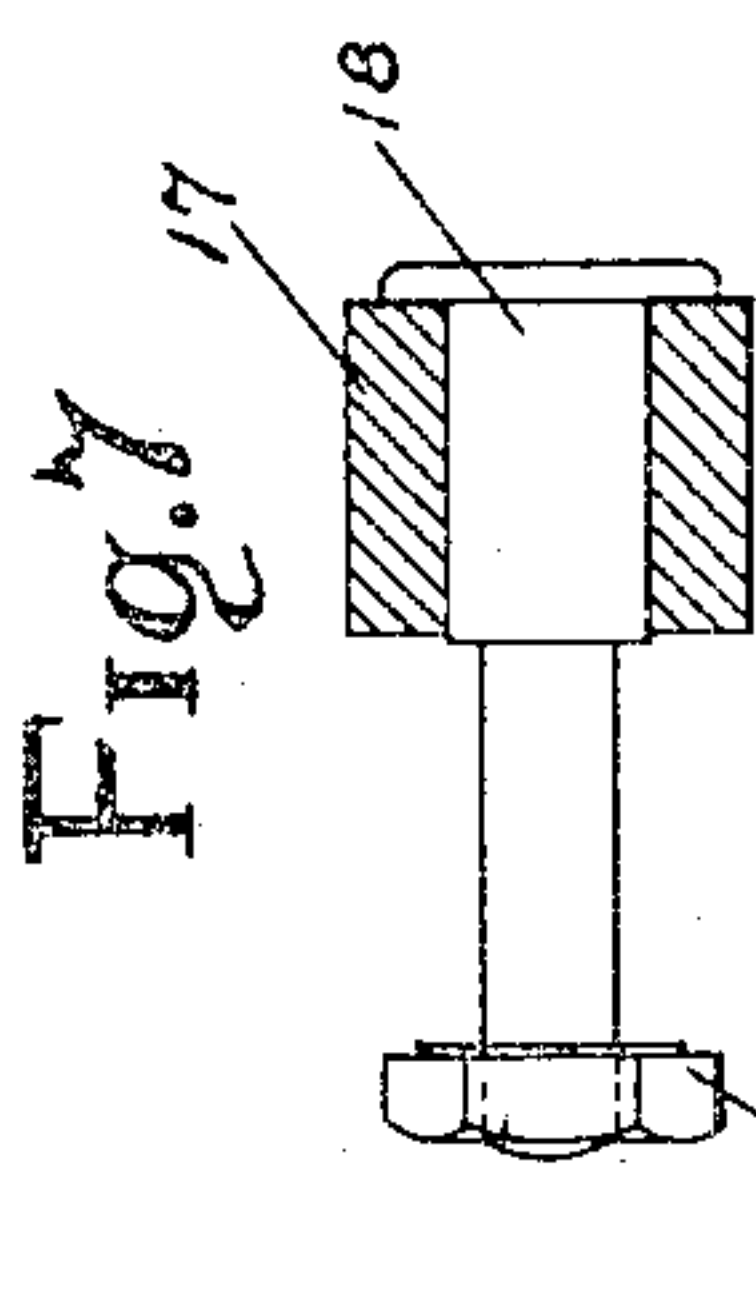
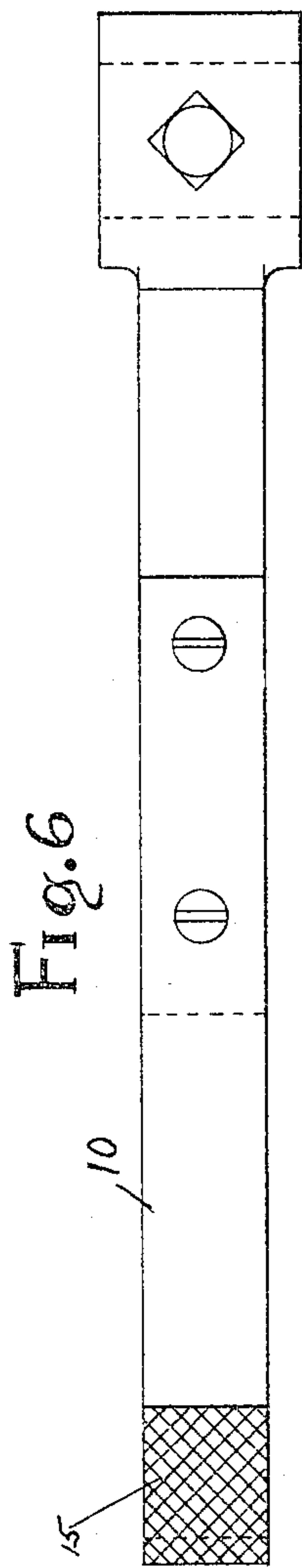
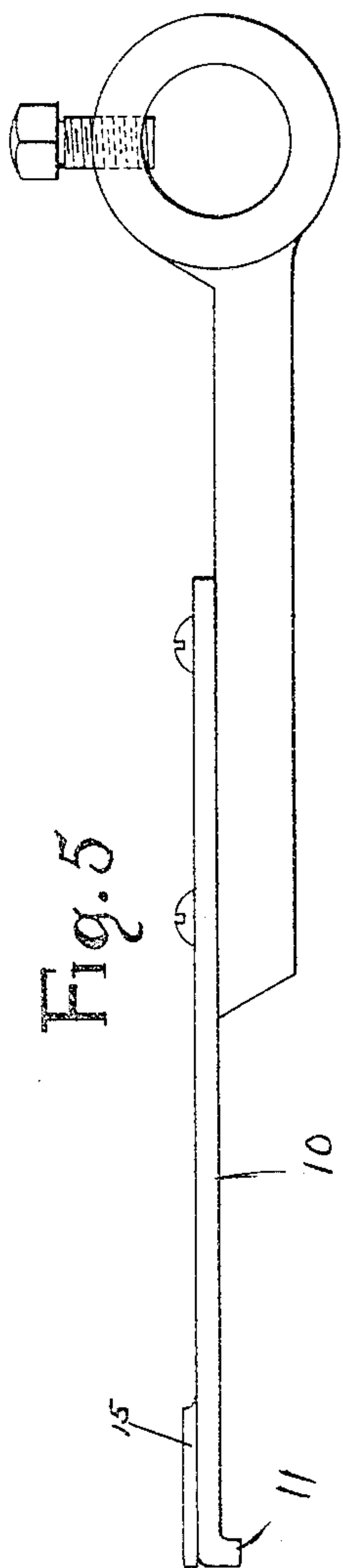
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APPLICATION FILED APR. 23, 1903.

4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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SHEET-DELIVERY MECHANISM.

SPECIFICATION forming part of Letters Patent No. 793,215, dated June 27, 1905.

Application filed April 23, 1903. Serial No. 153,887.

To all whom it may concern:

Be it known that I, JACQUE NIEMES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sheet-Delivery Mechanism, of which the following is a full, clear, and exact specification.

My invention relates to sheet-deliveries employed for alternately placing blank sheets between the printed sheets as they are deposited upon the delivery-table to prevent what is known in the art as "smut"—that is, the soiling of one sheet by the fresh ink of another or of the smearing of the face of one by contact with the back of another—or for other purposes; and my invention has for its primary object to provide improved, simple, and efficient means for automatically delivering a smut-sheet upon the table or pile of printed sheets each time a printed sheet is deposited.

A further object of my invention is to so combine my improvements with an ordinary sheet-delivery as to make the latter perform the twofold purpose of delivering both the printed sheet and the smut-sheet; and a still further object of the invention is to provide improved means whereby the delivery when acting as a smut-sheet delivery may be caused to release the sheet at various points in the length of its stroke, so as to adapt it for delivering smut-sheets of different sizes.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a side elevation of a sheet-delivery embodying my improvements, showing the parts in the act of moving forward to deliver the printed sheet. Fig. 2 is a similar view showing the parts at the extremity of the stroke for delivering the printed sheet ready to receive the smut-sheet. Fig. 3 is an end view thereof. Fig. 4 is an end view of the filing-table. Fig. 5 is an enlarged detail side elevation of one of the gripper and stop bars. Fig. 6 is a plan view there-

of. Fig. 7 is a longitudinal sectional view of the adjustable trip hereinafter explained. Fig. 8 is an end view thereof. Fig. 9 is a side elevation of a bar hereinafter described which coöperates with the grip-bars for holding the smut-sheet, and Fig. 10 is a cross-section thereof.

The invention is illustrated in connection with an ordinary horizontal reciprocating sheet-delivery, in which it is customary to support the sheet-delivery fingers 1 upon side tracks or rails 2 by means of carriages or trucks 3, having wheels 4 running upon the rails 2 and secured by connecting-rods 5 with the usual arms 6, operated by some moving part of the printing-press well understood and not necessary to show and describe in this application. The carriages 3 are provided with hangers or depending portions 7, in which is mounted a transverse rod 8, to which the forward ends of the delivery-fingers 1 are secured and supported in the usual or any suitable way, and at higher points on the trucks or carriages 3 are secured opposite the ends of a shaft 9, upon which are placed the usual arms 10, which carry the gages or stops 11, adapted to coöperate with the forward ends of the delivery-fingers 1 to hold the printed sheet from sliding off the fingers until the delivery reaches the forward end of its stroke, as shown in Fig. 2, whereupon the gages or stop-bars 10 rise, as indicated in said figure, and the sheet glides out and falls upon the delivery-table 12 as the fingers 1 recede toward the right as viewed in Fig. 2.

Contiguous to the point where the delivery-fingers 1 stop in their feeding or delivery stroke is arranged a smut-sheet feed-board 13, preferably in an inclined position, so that the smut-sheets thereon may be readily fed downwardly, one at a time, before the delivery reaches the end of its delivery stroke, as shown in Fig. 2, in such a position that when the gages or stop-bars 10 rise they will engage under the lower edge of said smut-sheet and impinge the same against a transverse bar 14, secured across the delivery and supported at opposite ends upon the hangers or depending portions 7 of the carriages 3. In order that the stop-bars 10 may better perform this service, their upper surface and

their lower ends are preferably provided with gripping-surfaces 15 and the lower side of the bar 14 with a leather facing or other suitable pad 16. It will thus be seen that when the gages 11 rise to permit the printed sheet to slide off the delivery-fingers the upper sides of these gages simultaneously engage the lower edge of the advanced smut-sheet. Consequently as the delivery-carriages 3 recede the smut-sheet is dragged toward the right over the upper side of the printed sheet while the latter is sliding from the delivery-fingers, it being understood that the delivery-fingers recede from under the printed sheet and allow the latter to slide off and gravitate upon the table 12 in the ordinary way. In order now that the grippers 15 may release the smut-sheet by the time the forward edge thereof arrives at the rear edge of the printed sheet, so as to permit the smut-sheet to fall in the proper place and at the same time restore the gages or stops 11 to their former position for receiving the next printed sheet on the delivery-fingers 1, the stop-bars 10 are thrown downwardly by a trip. This trip is in the form of an antifriction-roller 17, mounted upon a stud 18, which is adjustably secured by nut 19 in a longitudinal slot 20 in one of the side rails or tracks 2 in such a position that a cam or lever 21, secured to one end of the shaft 9, will engage with the antifriction-roller 17 and throw the stop-bars 10 downwardly. The trip 17 18 being adjustable, it is readily seen that the grippers 15 may be caused to release the smut-sheet at any desired point in the length of the stroke, thus adapting the machine for delivering smut-sheets of various sizes at a required locality on the delivery-table.

The arms 10 may be held in either position in which they are placed until moved by the trip 17 or by the usual operating mechanism of the sheet-delivery in any suitable way—such, for example, as a friction-shoe 22, mounted upon carriage 3 and bearing upon the hub of the cam or lever 21 with sufficient force to retain the arms 10 in the position in which they are placed, the arms 10, if desired, being counterbalanced by a weight 23.

The means for raising the stop-bars or gages 10 and simultaneously pressing them against the bar 14 preferably consists of the arms 5, which press upon the upper sides of the counterweights 23 as the arms straighten out or come down in the act of pushing the carriages forward, and thus operate the stops or gages gradually without jerk or jar.

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

1. In an apparatus for the purpose de-

scribed, the combination of a sheet-delivery proper, comprising a printed-sheet-supporting surface and vibratory gages for retaining the printed sheet thereon during the delivery stroke, a bar arranged above said gages and adapted to be impinged thereby when the gages rise away from said supporting-surface, for gripping a smut-sheet, and means for causing said gages to alternately engage said bar and supporting-surface as the delivery proper reciprocates.

2. In an apparatus for the purpose described, the combination of a sheet-delivery proper, comprising a sheet-supporting surface, a rocker-shaft and a gage or stop secured to said shaft for retaining the sheet on said surface, means coöperatively related to said gage or stop for gripping a smut-sheet when the gage or stop rises away from said surface, means for causing said gage or stop to alternately engage said surface and last said means, and a friction means for retaining said gage or stop in the position in which it is placed.

3. In an apparatus for the purpose described the combination of a sheet-delivery proper, comprising a printed-sheet-supporting surface, a rocker-shaft, a bar arranged above said sheet-supporting surface and movable in unison therewith, and means mounted upon said rocker-shaft for alternately retaining the printed sheet against said sheet-supporting surface and gripping a smut-sheet against the under side of said bar as the shaft rocks, and means for causing said shaft to rock as the sheet-delivery proper reciprocates.

4. In an apparatus for the purpose described the combination of a sheet-delivery proper comprising a printed-sheet-supporting surface and means for retaining the sheet thereon during the delivery stroke, a gripping member arranged above said sheet-supporting surface and means acting in conjunction with said delivery proper for gripping a smut-sheet against the under side of said gripping member when the delivery proper releases the printed sheet.

5. In an apparatus for the purpose described the combination of a gripping member for a smut-sheet, a sheet-delivery proper in unison with which said gripping member moves, comprising a printed-sheet-supporting surface arranged below said gripping member, a rocker-shaft, and means on said rocker-shaft for engaging both said gripping member and sheet-supporting surface whereby the smut-sheet will be gripped when the printed sheet is released.

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Witnesses:

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