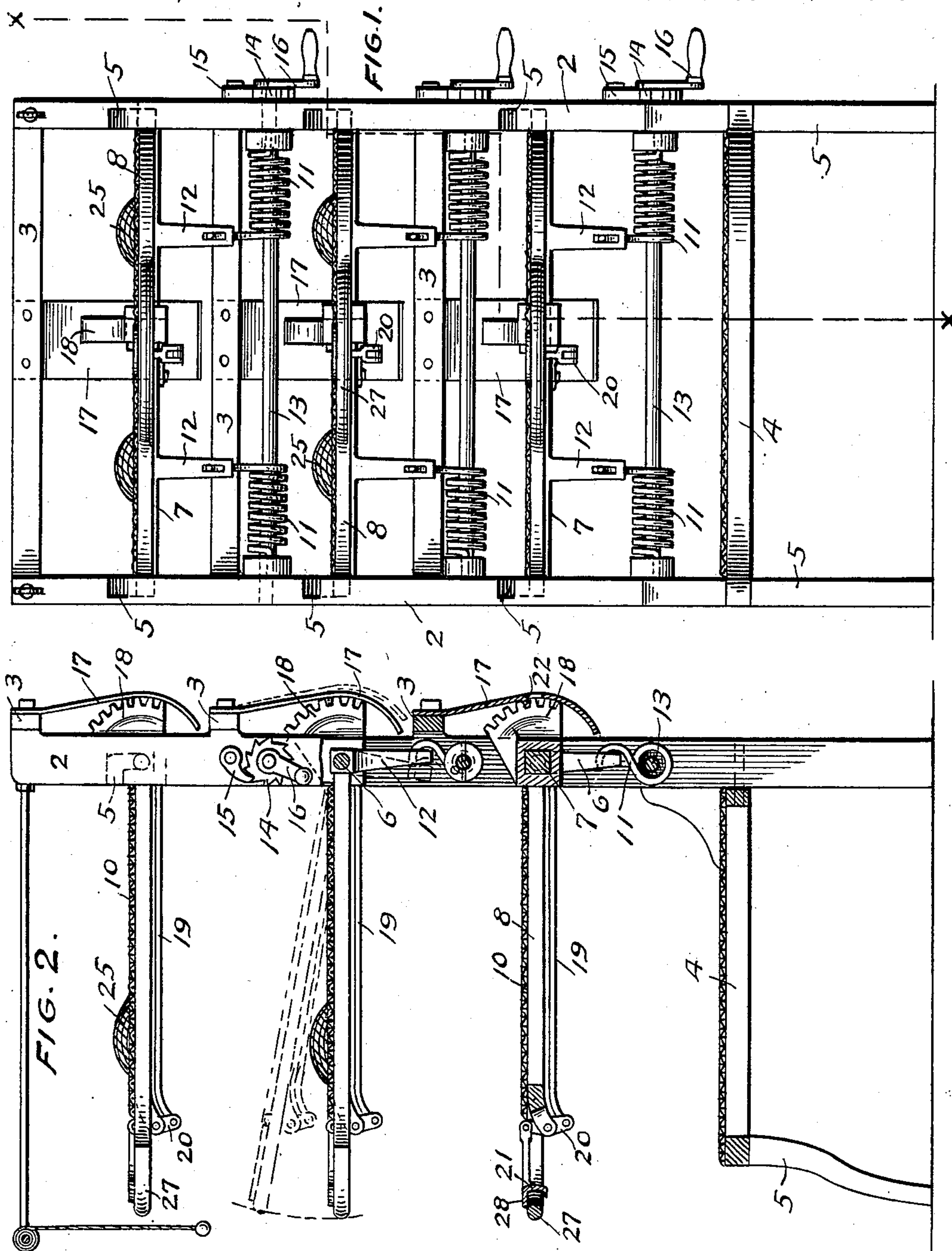


3 Sheets—Sheet 1.

No. 594,226.

Patented Nov. 23, 1897.



WITNESSES.

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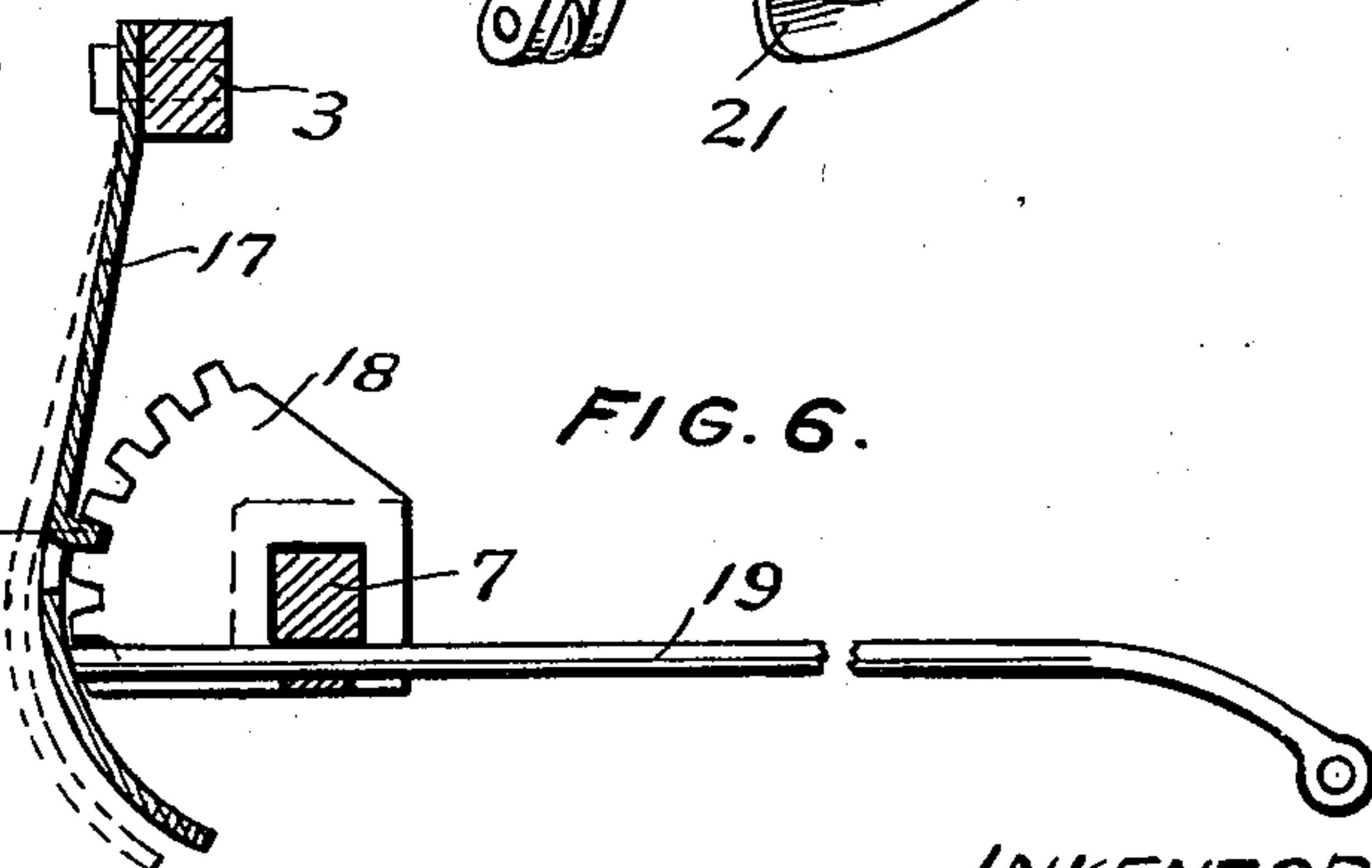
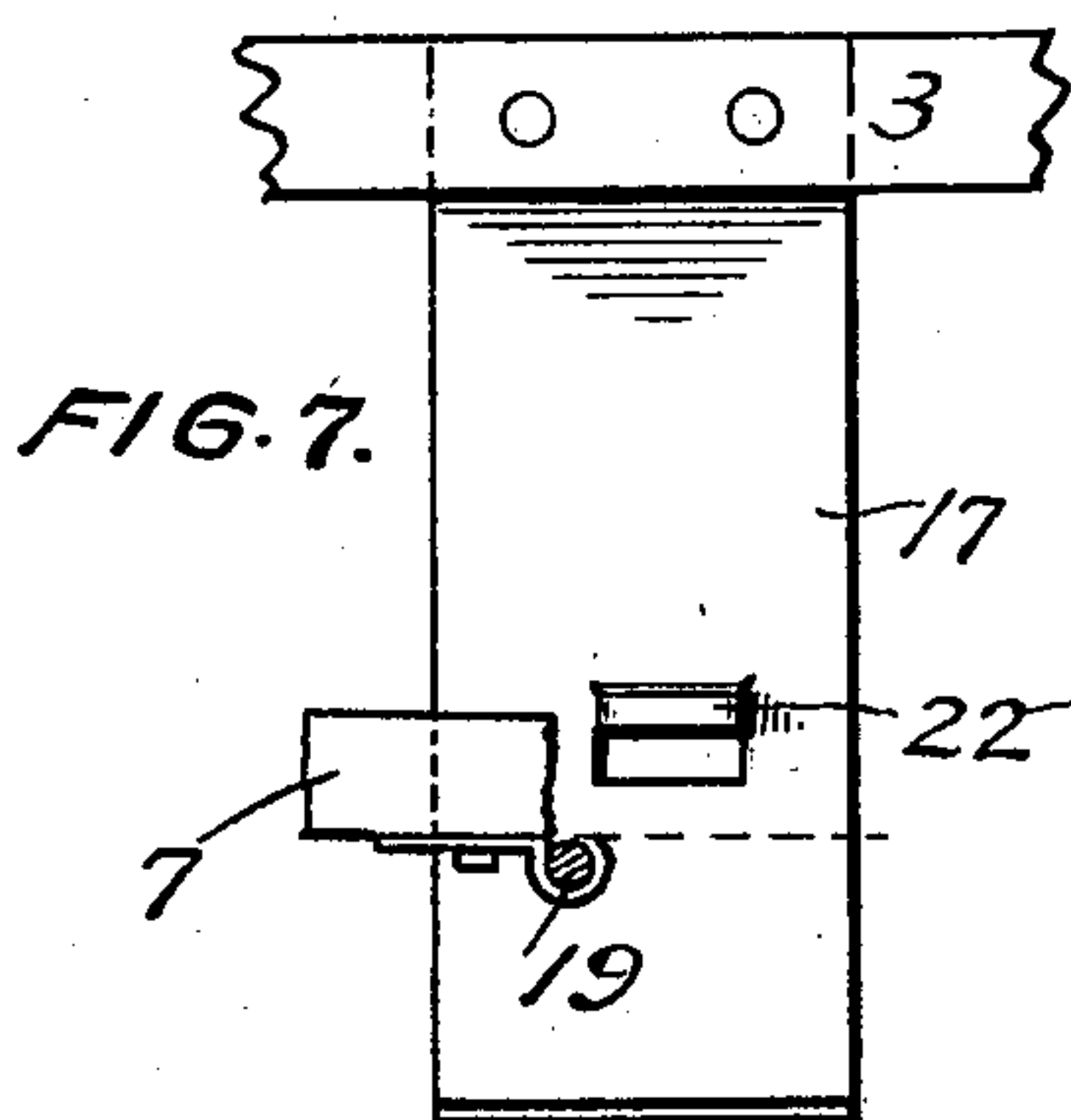
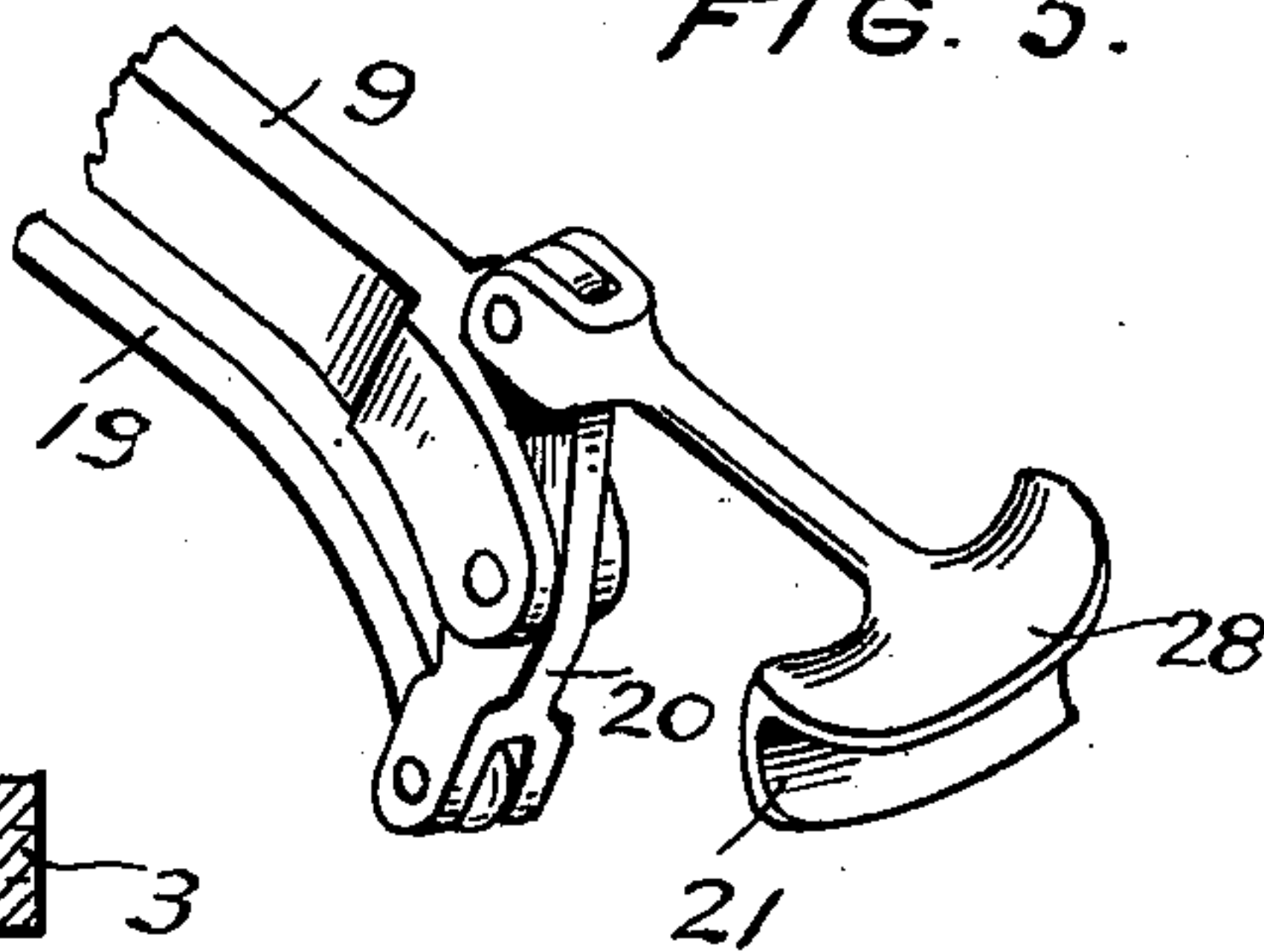
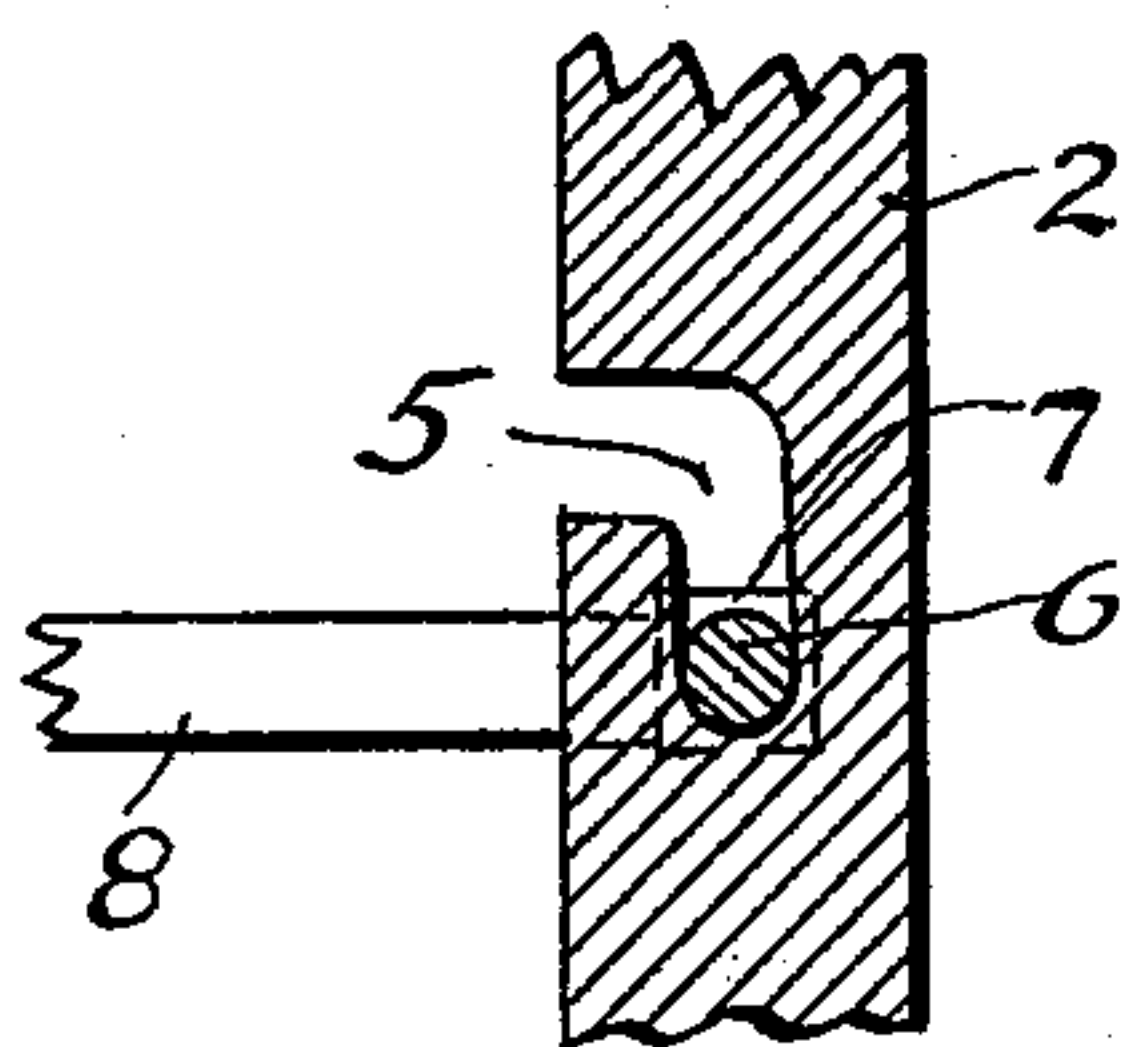
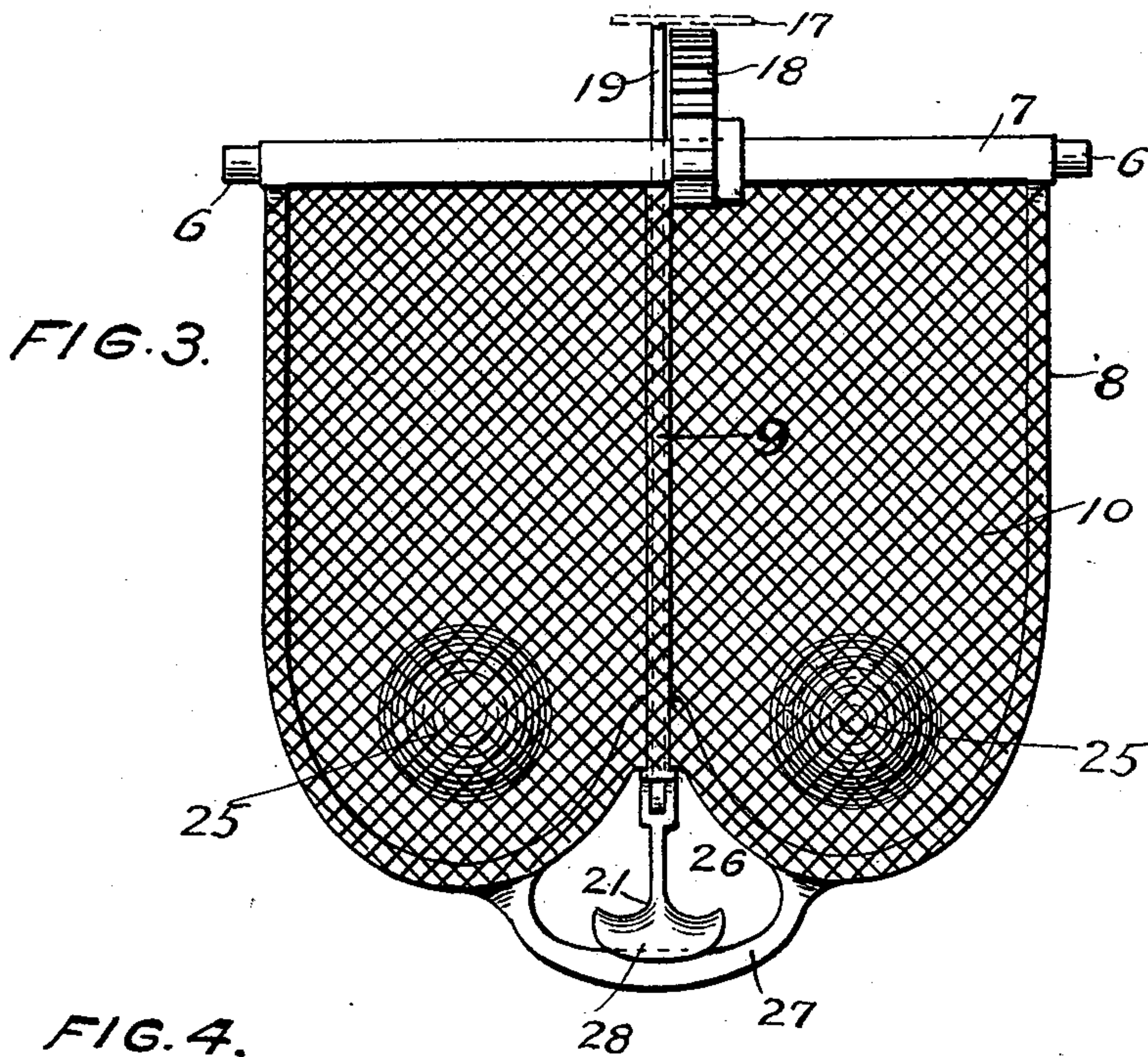
(No Model.)

3 Sheets—Sheet 2.

L. BLUMENKRANZ.
CLOTHING CABINET.

No. 594,226.

Patented Nov. 23, 1897.



WITNESSES

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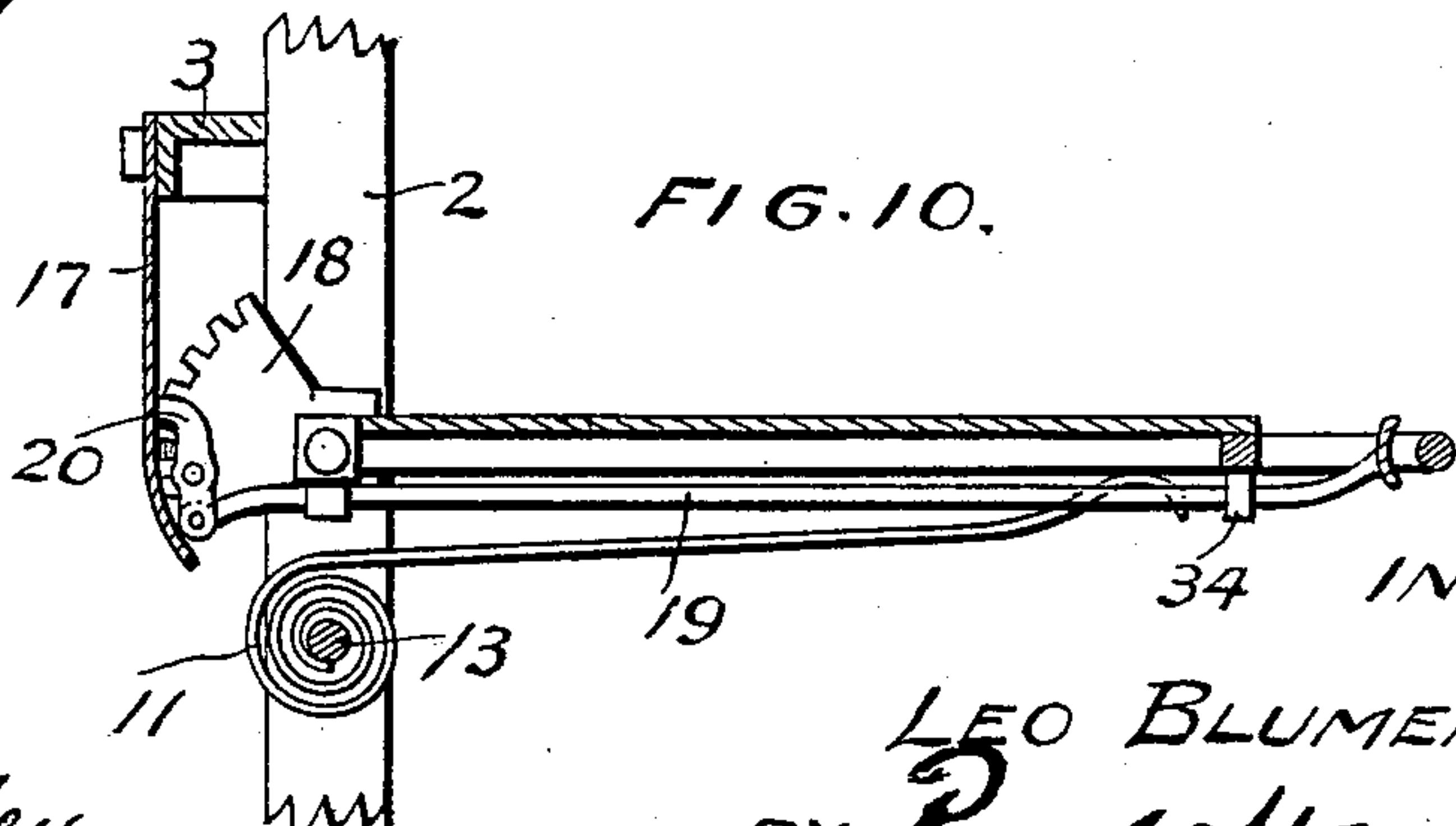
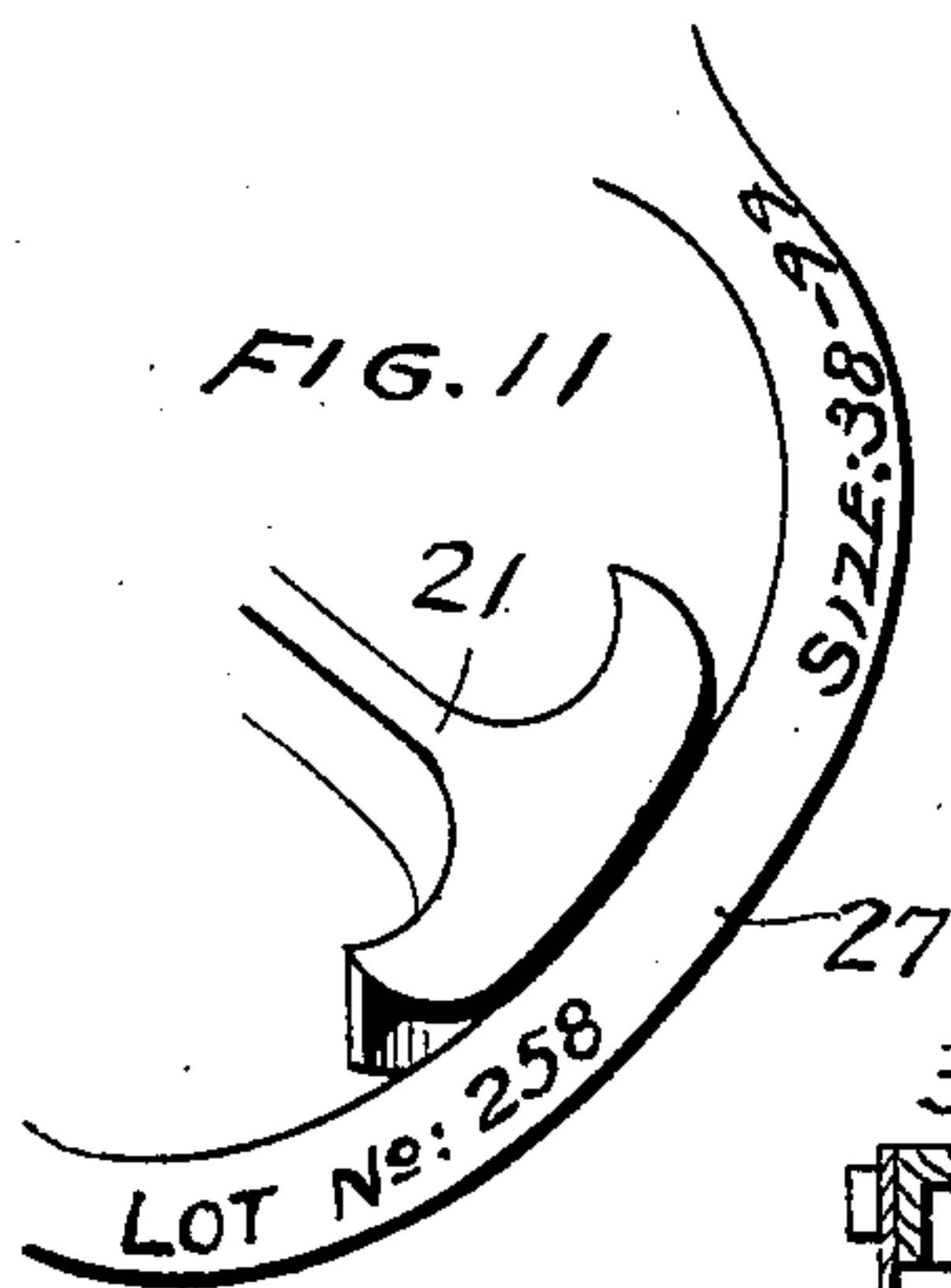
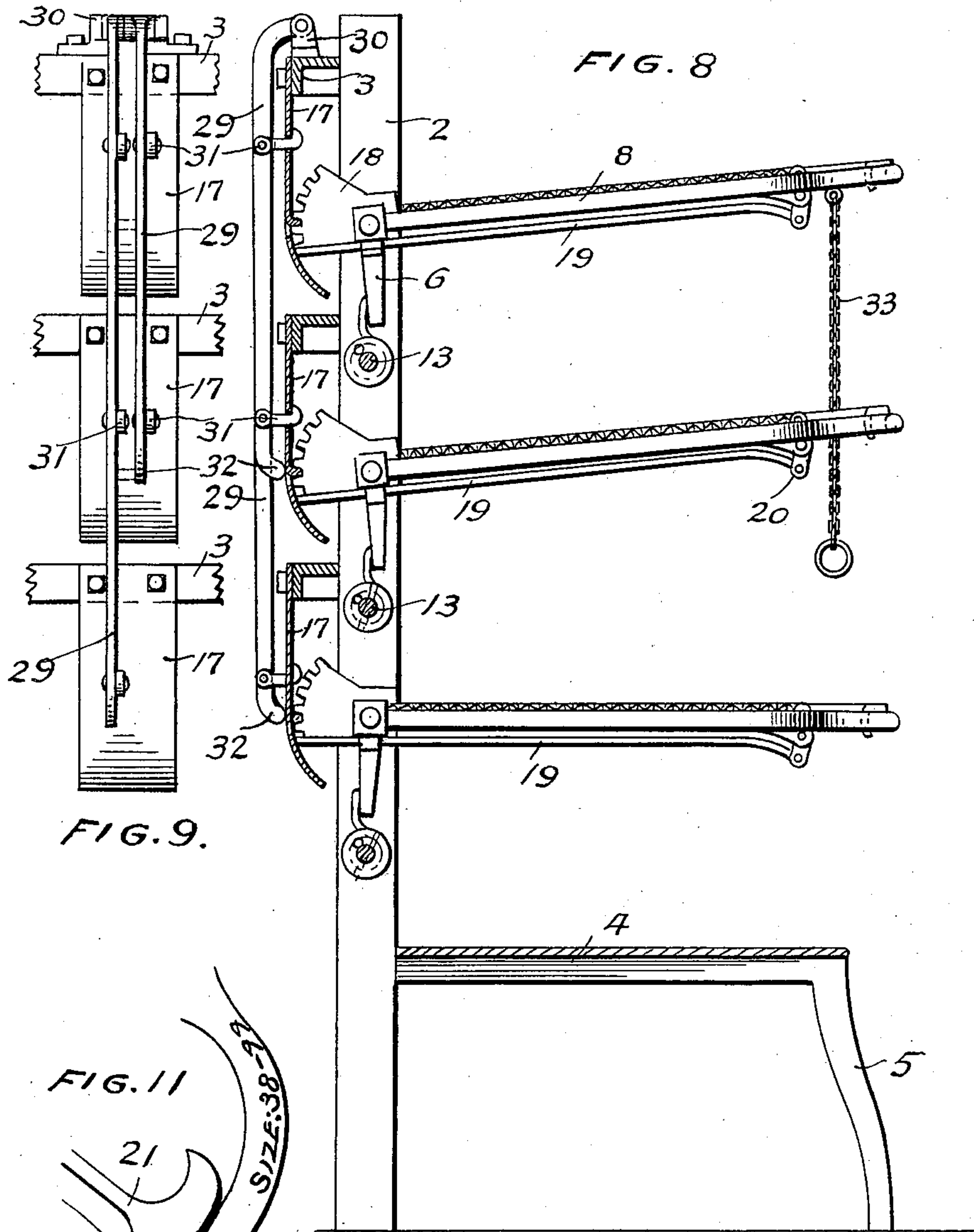
(No Model.)

3 Sheets—Sheet 3.

L. BLUMENKRANZ.
CLOTHING CABINET.

No. 594,226.

Patented Nov. 23, 1897.



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UNITED STATES PATENT OFFICE.

LEO BLUMENKRANZ, OF MINNEAPOLIS, MINNESOTA.

CLOTHING-CABINET.

SPECIFICATION forming part of Letters Patent No. 594,226, dated November 23, 1897.

Application filed April 3, 1897. Serial No. 630,524. (No model.)

To all whom it may concern:

Be it known that I, LEO BLUMENKRANZ, of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Clothing Cabinets or Shelving, of which the following is a specification.

The invention relates to shelving or to clothing-cabinets for use in stores or ware-rooms. Ordinarily clothing is arranged in piles upon tables, and it is very inconvenient to get out an article from the lower part of the pile, the upper part of the pile being almost invariably thrown down or disarranged, to the detriment of the clothing and the appearance thereof and necessitating in large stores one or more clerks to keep the stock in order.

The object of my invention is to provide convenient shelves or cabinets by means of which a stock of clothing or like goods may be kept conveniently at hand and any article may be quickly gotten at without disturbing the others, the whole stock being kept in the best of order and shape.

The general object of the invention is to lighten the work of handling various stocks of clothing or dry goods, and a particular object is to provide a cabinet in which the goods may be kept in order, may be classified and kept clean, and which cabinet will be portable and durable and of little greater cost than ordinary wooden shelving or tables.

My invention consists in the combination, with a suitable support, of a number of shelves projecting therefrom, means to raise the same, and a lock whereby each shelf is held in a horizontal position until it is released and lifted to make room beneath it for the convenient handling of the goods upon the lower shelf; and the invention further consists in particular constructions and in combinations of parts, all as hereinafter described, and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a front view of a cabinet or set of shelves embodying my invention. Fig. 2 is a side view thereof, the lower portion being

shown in section upon the line xx of Fig. 1. Fig. 3 is a plan view of one of the shelves removed from the support. Fig. 4 is an enlarged detail section showing the slots in which the shelves are pivoted or hinged. Fig. 5 is a perspective view of the hand-grip provided in connection with each shelf and whereby the same is released to be raised by the lifting-spring. Fig. 6 is a detail view showing the lock for the shelf and the releasing-rod to engage the spring or lock. Fig. 7 is a front view of the device shown in Fig. 6. Fig. 8 is a sectional view illustrating a modified form of the releasing mechanism, whereby the shelves above a given shelf are released simultaneously therewith. Fig. 9 is a rear view of the spring-pawls of the cabinet and the bars connecting the same. Fig. 10 is a sectional detail showing a modified arrangement of the lifting-spring and of the releasing or thrust rod. Fig. 11 is a perspective detail of the handle upon the shelf and that upon the thrust-rod.

As shown in the drawings, the cabinet comprises a support and a series of shelves. The back is made up of the posts 2 and the cross-rods 3, which tie the posts together. At the bottom there is a fixed shelf 4, the forward end of which is preferably supported by legs 5. The space beneath is preferably open. Any suitable means may be used to brace the posts which support the shelves and the weight thereon. The two posts are provided on their inner sides with slots 5, which at the top open through the forward edges of the posts or bars 2. These slots receive the studs or ends 6 of the shelf rods or shafts 7. The shelves 8 comprise the side bars or frame portions, which project from the shafts or rods 7, and in double shelves of the form shown in the drawings there is preferably a middle bar or stay 9. The space between the bars or frame portions of each shelf is filled with a suitable wire fabric 10 or with wood, either of which materials makes a light and durable shelf. The shelves and the weight thereon are counterbalanced by springs 11. Each shelf rod or shaft is provided with one or more downwardly-extending arms 12, to be engaged by the spring or springs 11, and the springs are arranged upon the cross-shaft 13, in connection with which there is a ratchet 14 and pawl 15, by which the

shaft may be held to maintain any desired tension upon the spring. A crank 16 may be provided on the end of each spring-shaft 13, or the same may be fitted for use with a removable crank or key. As the spring will normally raise the weight of the shaft and the goods thereon, it is necessary to lock the same down in a horizontal position. For this purpose I provide the spring-pawls 17 upon the rear part of the vertical frame of the cabinet, and these pawls engage with ratchets or toothed segments 18, carried by the shelf rods or shafts. To release the spring-pawls, each shelf is provided with a thrust-rod 19, preferably arranged on the under side of the shelf and operated by means of a small lever 20, pivoted in the forward end of the shelf and provided with a pull or handle 21.

The particular form and construction of the parts described need not be adhered to, as my invention may be embodied in numerous forms; but it is preferred that the spring-pawls 17 be made of flat or plate steel and that the dog or lug 22 upon each be stamped from the body of the spring itself, as shown clearly in Figs. 2, 6, and 7. It is also preferred that the lower end of each spring-pawl 17 be curved to conform with the arc described by the segments 18 when the shelf is tilted or raised. This is in order that the end of the thrust-rod 19 may at all times and in any position of the shelf engage with the spring to move the same away from the segment 18 to free the shelf in order that it may be pulled down to the horizontal position.

The shelves are preferably made double—that is, adapted to hold two articles of the same kind side by side. For coats or like articles which do not lie flat when folded I prefer to provide raised portions 25 on the shelves, over which the sleeve and shoulder parts of the coats are placed, the same preventing the crushing or wrinkling of the coats by the pressure of other articles placed on top of the same, each shelf being adapted to hold quite a number of articles.

The construction of the shelf shown in Fig. 3 leaves a convenient notch or recess 26 in its forward edge, and a handle 27 bridges the gap. The pull or handle 21 is provided with a top portion 28, which preferably laps upon the handle 27, so that no other support need be provided for the short lever, of which the handle 21 forms a part.

In unlocking the shelf the handles 27 and 21 are grasped and pinched together, this movement being accompanied by a slight lifting motion or a downward pull, as required, to quickly lift or depress the shelf.

In place of the compound-lever construction embodied in the shelf shown in Figs. 1 and 2 a simple spring-lever like that shown in Fig. 10 may be used, the spring-shaft being arranged more closely beneath the shelf rod or shaft and an arm of the same spring being extended to the outer part or end of the shelf. The thrust-bar construction may be

varied, as shown in Fig. 10, the short lever or link 20 being pivoted on the segment 18 in position to engage the spring-pawl. In the cabinet shown in Figs. 1 and 2 the shelves must be released and lifted independently.

If it is desired to enable the operator to disengage all of the shelves above a given shelf simultaneously and with one movement, I connect the various pawls 17 belonging to the different shelves, as shown in Figs. 8 and 9, so that the operation of the thrust-rod upon any shelf will disengage the pawls of the shelves above it, so that said shelves will be lifted by the springs belonging thereto. These rods 29 are pivoted on a block 30 upon the frame at the top of the cabinet. The rod 29, which engages with the lower spring-pawl 17, also engages, by means of links 31, with all of the pawls above it, while the rod which extends upward from the second pawl 17 does not engage with the lower pawl. Each rod 29 is provided with an end 32 for engagement with the pawl, and the links 31 slip through holes in the parts 17, so that the uppermost pawl 17 may be moved out of engagement with the top shelf without releasing the lower shelves. As the throw of the lever decreases in proportion to the distance from its free end, the links 31 engage the spring-pawls at different distances from the fastenings of the pawl, the throw of the lever being compensated by the throw of the pawl in each case. A chain 33 may be provided as a convenience in drawing down the upper shelves.

In practice the distance between the shelves varies according to the kind of goods to be stored thereon. Clothing-cabinets are made with from four to six inches between the shelves, several coats or other articles being placed upon each shelf. If it is desired to arrange more than the usual number of articles upon one shelf, the shelf next above the same may be easily removed by slipping the ends of the shelf rod or shaft out of the notches or slots in the frame-post. The shelf-handles are usually marked with the lot-number or sizes of the goods placed thereon, as indicated in Fig. 11. The articles upon any particular shelf may be easily gotten at after lifting the shelf or shelves above the same. The cabinet greatly facilitates the arrangement and the ordering of a stock of goods.

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

1. The combination, in a clothing-cabinet, of a number of shelves, locks for securing the same, and means for automatically lifting any one of said shelves when it is released, substantially as described.

2. The combination, in a clothing-cabinet, of a number of hinged or pivoted shelves, with means for securing the same in substantially horizontal positions, and means for automatically lifting said shelves, substantially as described.

3. In a clothing cabinet or shelving, the

combination of a series of hinged or pivoted shelves, with means for locking each shelf in a substantially horizontal position, means for releasing the same, and springs for automatically lifting or tilting said shelves when released, substantially as described.

4. The combination, in a clothing-cabinet, of a suitable support, of shelves removably pivoted or hinged thereon, springs for supporting the weight of the shelves and the articles on the same, and means for locking the shelves in horizontal positions, as and for the purpose specified.

5. In a clothing-cabinet, the combination, with hinged shelves and means for locking the same in a horizontal position, of springs to raise said shelves when the same are released, and means for adjusting the tension of said springs, substantially as described.

6. In a clothing-cabinet, the combination, with a series of hinged or pivoted shelves, with toothed segments provided upon said shelves, pawls to engage therewith, means for disengaging said pawls, and means for automatically lifting the shelves or any one thereof when released from engagement with respective pawls, substantially as described.

7. In a clothing-cabinet, the combination, with a series of hinged or pivoted shelves, each provided or connected with a toothed segment or part, a spring-pawl to engage therewith, thrust-rods provided upon said shelves to disengage the pawl opposite each of the same, a handle provided upon each shelf for the operation of its thrust-rod, and an adjustable lifting mechanism provided in connection with each shelf, substantially as described.

8. In a clothing-cabinet, the combination, of the hinged shelf, with the segment carried thereby, the pawl to engage said segment, the push-rod, the handle upon said shelf, and the

handle arranged in connection with said rod and to be grasped with the handle of the shelf, as and for the purpose specified.

9. The combination, in a clothing-cabinet, of the hinged or pivoted shelves, means for locking the same in position, the spring shaft or arbor, the springs thereon, and adapted to automatically lift said shelves, substantially as described.

10. The combination, in a clothing-cabinet, of two or more hinged or pivoted shelves, means for automatically raising the same, means for locking the shelves, and means upon the lower shelf for unlocking the same and also unlocking the shelf above it, substantially as described.

11. In a clothing-cabinet, the combination, with a suitable support of two or more hinged shelves, pawls for securing said shelves in position, means for lifting the shelves, and a bar or rod engaging the pawl of the lower shelf and connected with the pawl of the shelf or shelves above the same, and means upon each shelf for operating the respective pawls, as and for the purpose specified.

12. The combination, with a suitable support, of a series of shelves hinged thereon, locks for securing the same in position, springs for lifting the shelves, a pivoted bar or lever engaging the lock of the lower shelf and having links or ties engaging the locks of the other shelves, and means upon the shelves for operating said locks, substantially as described.

In testimony whereof I have hereunto set my hand this 23d day of March, A. D. 1897.

LEO BLUMENKRANZ.

In presence of—

C. G. HAWLEY,
M. E. GOOLEY.