

No. 767,157.

PATENTED AUG. 9, 1904.

L. M. LESLIE.  
BINDER.

APPLICATION FILED DEC. 16, 1903.

NO MODEL.

Fig. 1.

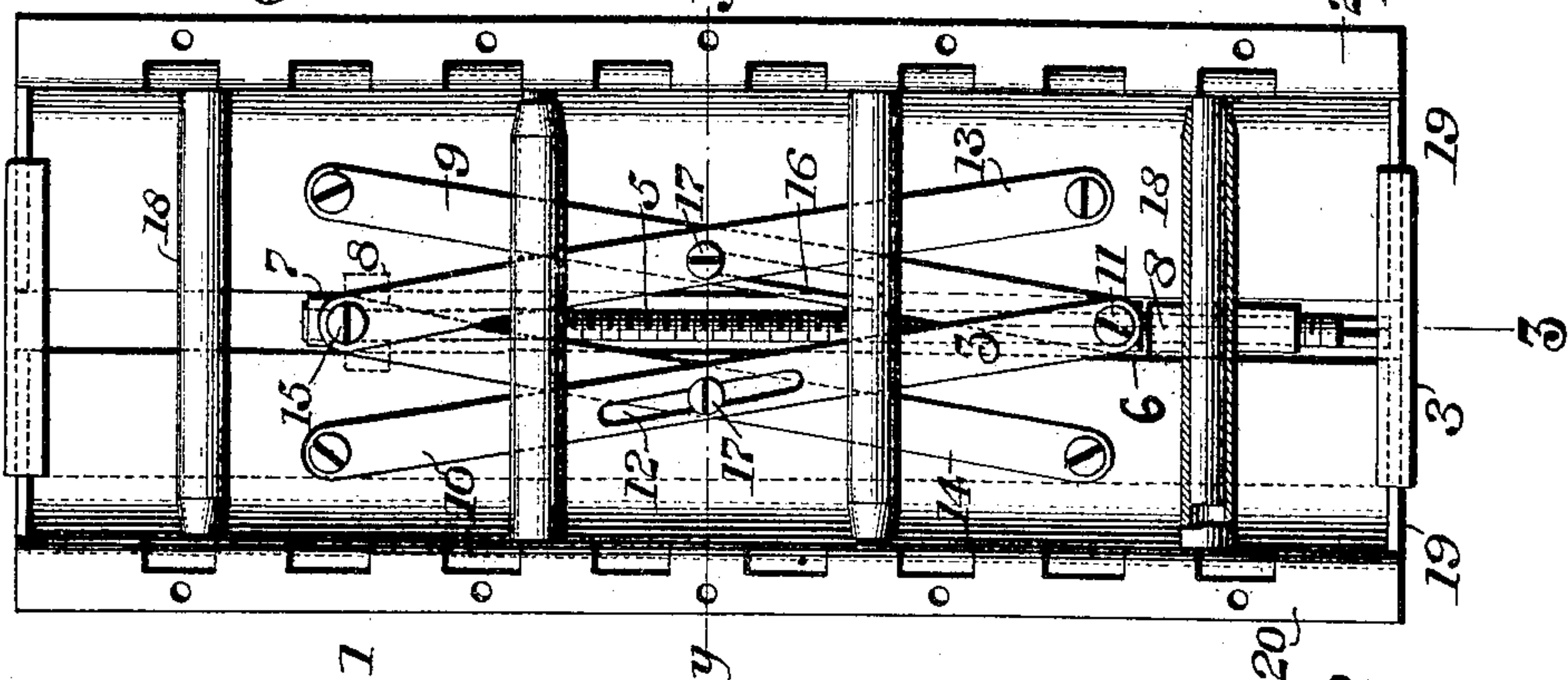


Fig. 2.

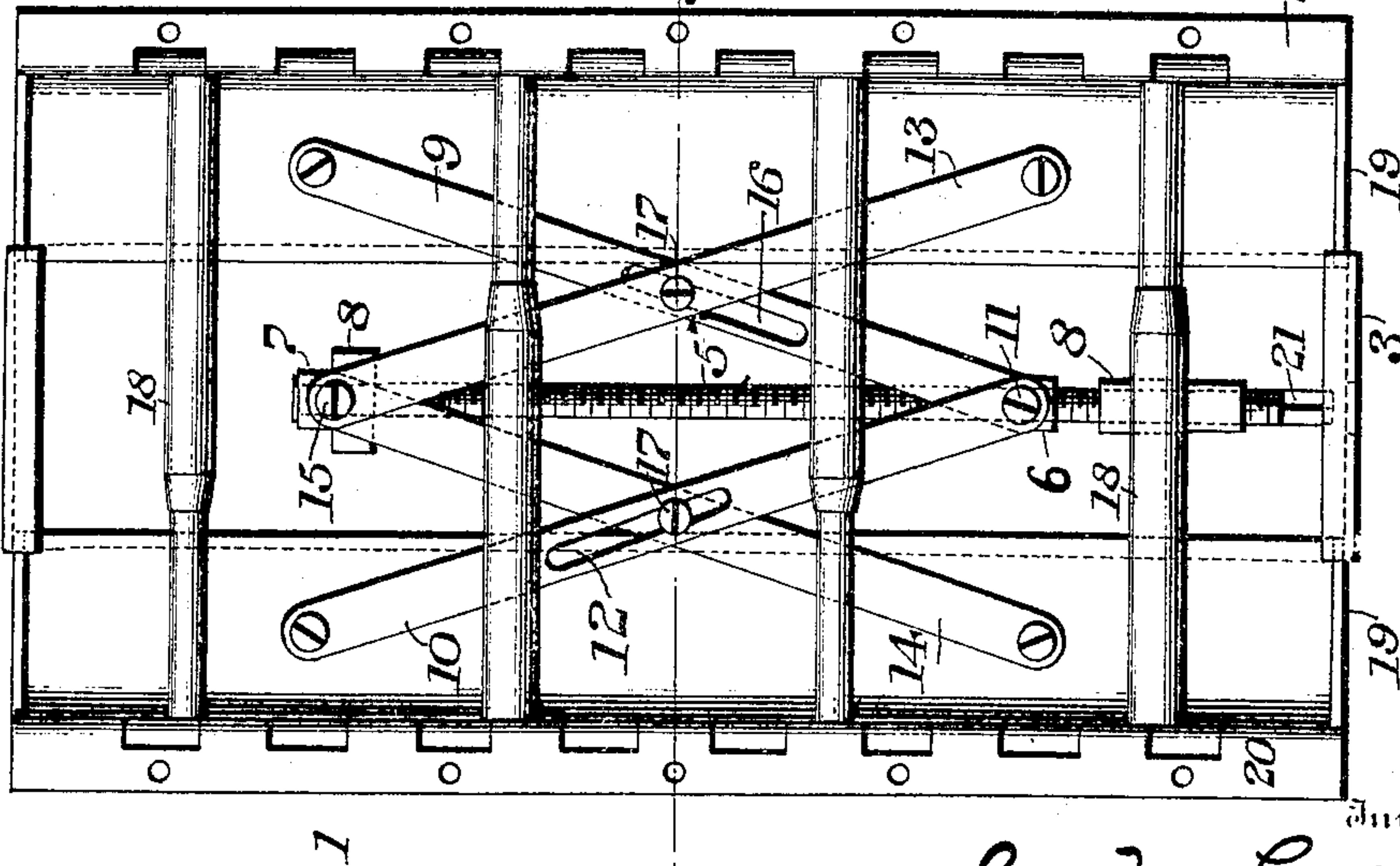


Fig. 3.

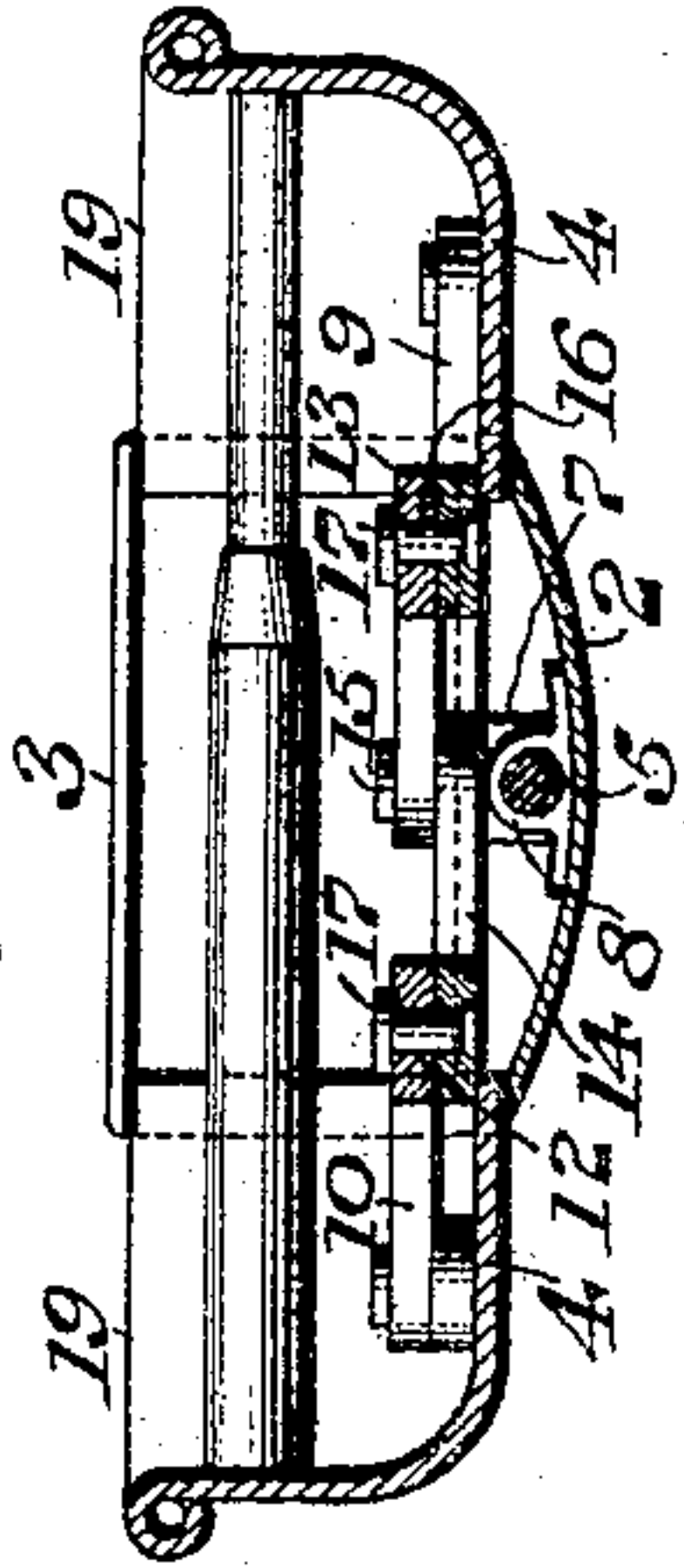


Fig. 4.

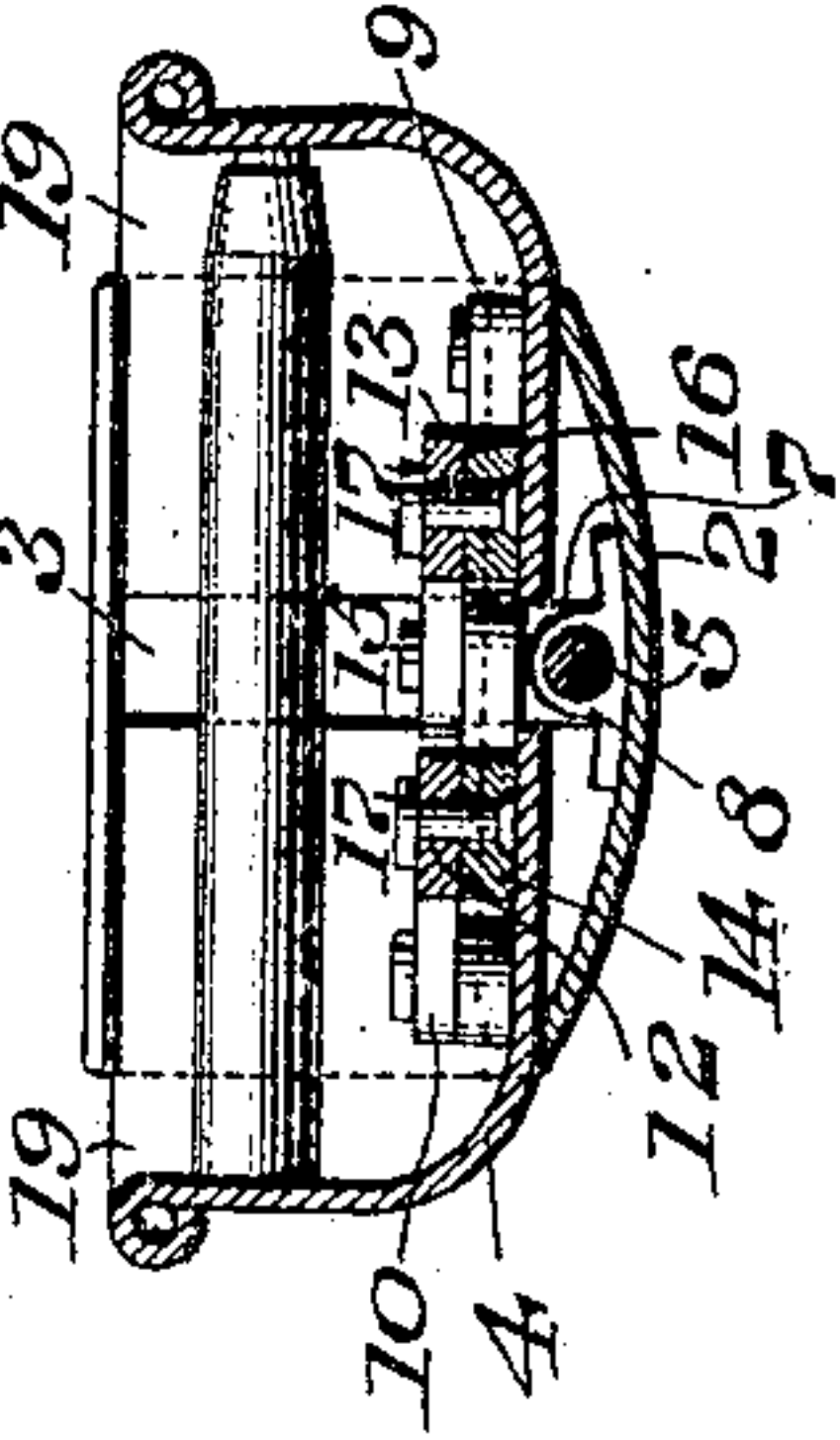
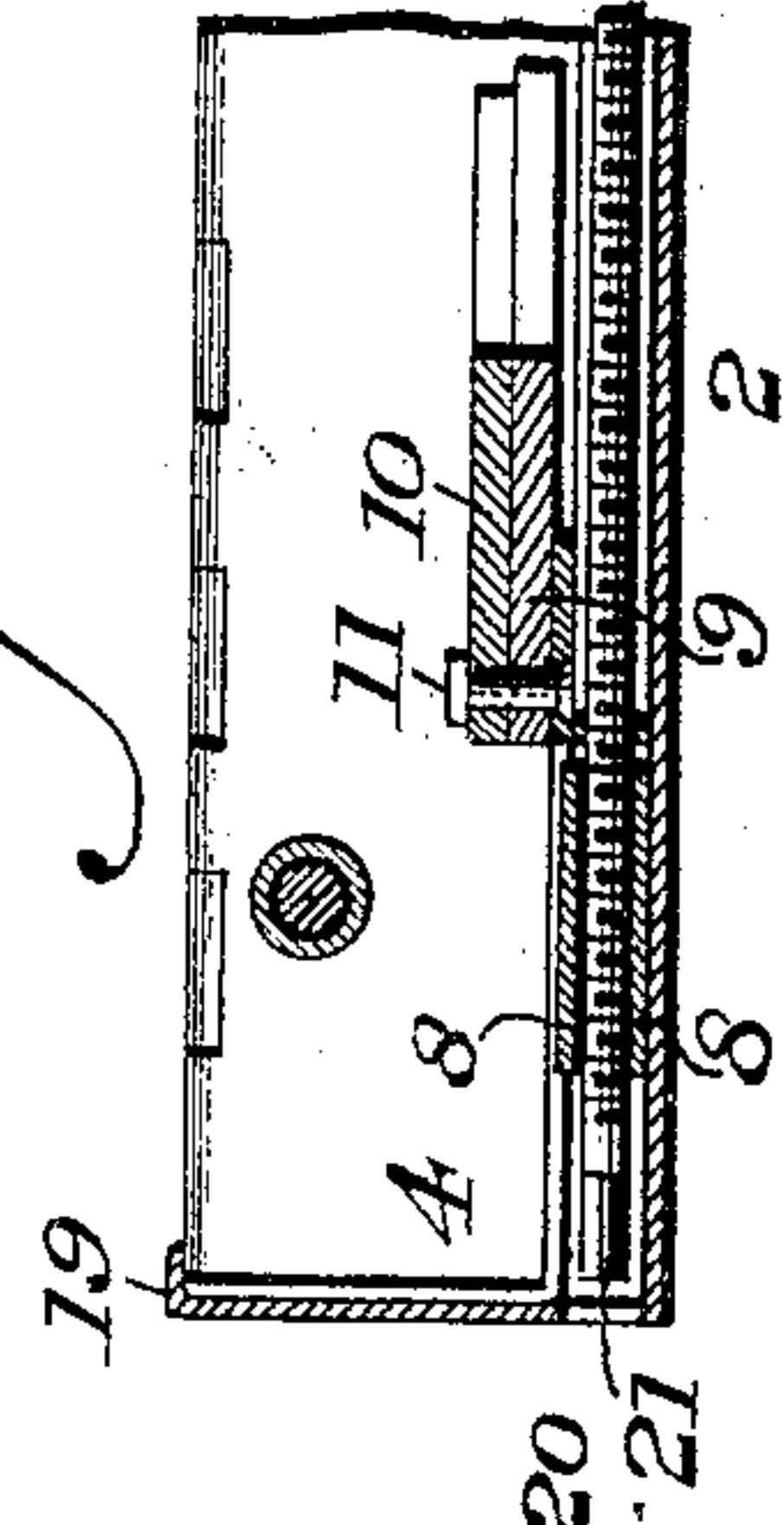


Fig. 5.



Witnesses  
P. J. Stagle.  
L. Bouville.

Leon M. Leslie.  
Watersheim & Fairbanks  
Attorneys



# UNITED STATES PATENT OFFICE.

LEON M. LESLIE, OF LESLIE, NEW JERSEY, ASSIGNOR TO WILLIAM MANN COMPANY, A CORPORATION OF PENNSYLVANIA.

## BINDER.

SPECIFICATION forming part of Letters Patent No. 767,157, dated August 9, 1904.

Application filed December 16, 1903. Serial No. 185,341. (No model.)

*To all whom it may concern:*

Be it known that I, LEON M. LESLIE, a citizen of the United States, residing at Leslie, county of Bergen, State of New Jersey, have  
5 invented a new and useful Improvement in Binders, of which the following is a specification.

My invention relates to the novel construction of a binder-frame, which is simple and  
10 durable in construction and capable of being readily adjusted, and consists of suitable jaws having means for operating said jaws to open and close the same.

It further consists of novel details of construction, all as will be hereinafter fully set forth.

Figure 1 represents a top plan view of a binder-frame embodying my invention, showing the parts in closed position. Fig. 2 represents a top plan view of a binder-frame,  
20 showing the parts in open position. Fig. 3 represents a sectional view on line *x x*, Fig. 2. Fig. 4 represents a sectional view on line *y y*, Fig. 1. Fig. 5 represents a sectional view  
25 on line *z z*, Fig. 1.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a binder-frame embodying my invention, having a back 2, which is formed in any suitable  
30 manner and of any suitable material and in the present instance is shown slightly curved and provided with the ends 3, which may be integral with the same or suitably attached thereto, while movably mounted on the said  
35 back are the jaws 4, which in the present instance are longitudinally immovable, but can move laterally in order to increase or decrease the space between the same in order to permit  
40 the insertion or removal of the loose leaves.

5 designates a longitudinally-extending threaded rod, which is supported in bearings 8 and on which is movably mounted a nut 6,  
45 and the end of said rod is pivotally mounted in the lug 7.

9 and 10 designate bars, one end of the same being secured to one of the jaws 4, while the opposite end of said bars are pivotally attached

together, as at 11, and also to the nut 6, the bar 10 having the slot 12 therein. 50

13 and 14 designate bars, one end of each of which is attached to the jaw 4 and the opposite end of the same being pivoted together at 15 and being attached to the lug 7, in which the rod 5 is pivotally mounted, it being seen  
55 that the bar 9 is provided with a slot 16 and that the bars 13 and 14 each have a headed pin 17, which are adapted to slide in the slots 12 and 16, the construction just described being substantially the lazy-tongs principle. 60

Suitably connected with the jaws 4 are the binding posts or supports 18, which are preferably telescopic in construction, whereby this support will extend between the jaws whether the latter are in open or closed position, and  
65 I preferably make the supports staggered—that is to say, that the outer or larger portion of a support is connected with one jaw and that the next support has the outer or larger portion connected with the opposite jaw. If  
70 desired, I may employ a suitable guide for the jaws, which are also provided with the end pieces 19 in order that the ends of the book will always be closed.

20 designates suitable hinges, to which the  
75 leaves or covers of the book are attached. The end of the longitudinally-extending rod is provided with a suitable end 21 for engagement with a suitable key and proper opening in the end walls 3. 80

The operation will be readily seen. By turning the rod 5 in the proper direction the nut 6 is moved on the rod—as, for example, the parts being in the position seen in Fig. 1 and the rod is turned the nut 6 is caused to move  
85 thereon toward the center and in so moving carries with it the pivoted ends of the bars 9 and 10, the ends of which being attached to the jaws cause the same to separate and at the same time force out the other ends of the arms  
90 13 and 14 by reason of the connection with the pin 17. It will thus be seen that the jaws are in the position seen in Fig. 2, the supports 18 opening in a suitable manner, as will be seen. By a reverse turning of the rod 5 the bars  
95 draw together the jaws 4. It will thus be seen



that a strong endurable construction results and that the bars are easily operated to increase or decrease the size of the book, as desired.

5 It will be evident that various changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown  
10 and described.

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

1. In a binder, a back, jaws movably mounted on said back, a longitudinally-extending threaded rod, a traveler on said rod, a pair of arms each pivotally connected at one end to said traveler and at its opposite end to one of said jaws, a second pair of arms pivotally connected together at one end and each having its opposite end pivotally connected to one of said jaws, said second pair of arms crossing said first-named pair and being operatively connected thereto to receive motion directly there-  
25 from.

2. In a binder, a back, jaws movably mounted on said back, a longitudinally-extending threaded rod, a traveler on said rod, a pair of arms each pivotally connected at one end to said traveler and at its opposite end to one of said jaws, a second pair of arms pivotally connected together at one end and each having its opposite end pivotally connected to one of said jaws, a stationary support for the pivotal point of said second pair of arms and means  
35 whereby said second pair of arms is operatively connected with said first-named pair.

3. A binder, comprising a back, jaws movably mounted on said back, a plurality of  
40 pairs of arms crossing each other, pivotal connections between the outer ends of said arms and said jaws, pivotal connections at the inner ends of said arms, a longitudinally-disposed threaded rod and a traveler on said rod  
45 pivotally connected with one pair of said arms, the second pair of said arms having pivotal and sliding connection with said first-named pair.

4. In a binder, a back, jaws movably mount-

ed on said back, a threaded rod suitably supported, a traveler on said rod, a pair of arms having one end of each pivotally attached to each other and to said traveler and the opposite ends attached each to one of said jaws and a second pair of arms having one end of each pivotally attached to the other and the opposite end pivotally attached to the jaws, said pairs of arms crossing each other and being positively supported at their points of juncture.  
60

5. In a binder, a back, jaws movably mounted on said back, a threaded rod suitably supported, a traveler on said rod, a pair of arms having one end of each pivotally attached to each other and to said traveler and the opposite ends attached each to one of said jaws and a second pair of arms having one end of each pivotally attached to the other and the opposite end pivotally attached to the jaws and slots in each of one pair of arms and pins in each of the other pair of arms adapted to be seated in said slots.  
65

6. In a binder, a back, jaws movably mounted on said back, a threaded rod suitably supported, a traveler on said rod, a pair of arms having one end of each pivotally attached to each other and to said traveler and the opposite ends attached each to one of said jaws and a second pair of arms having one end of each pivotally attached to the other and the opposite end pivotally attached to the jaws, means for operatively connecting said two pairs of arms, and supports extending between said jaws in open or closed position.  
75

7. A binder comprising a back, jaws movably mounted on said back, a plurality of pairs of arms crossing each other, pin-and-slot connections between said arms at their points of crossing, pivotal connections between the outer ends of said arms and said jaws, pivotal connections at the inner ends of said arms, a longitudinally-disposed threaded rod and a traveler on said rod, pivotally connected with one pair of said arms.  
85

LEON M. LESLIE.

Witnesses:

THEO H. BAILEY,  
FREDRIC MÖHLE.