

No. 752,961.

PATENTED FEB. 23, 1904.

A. DU BRUL.

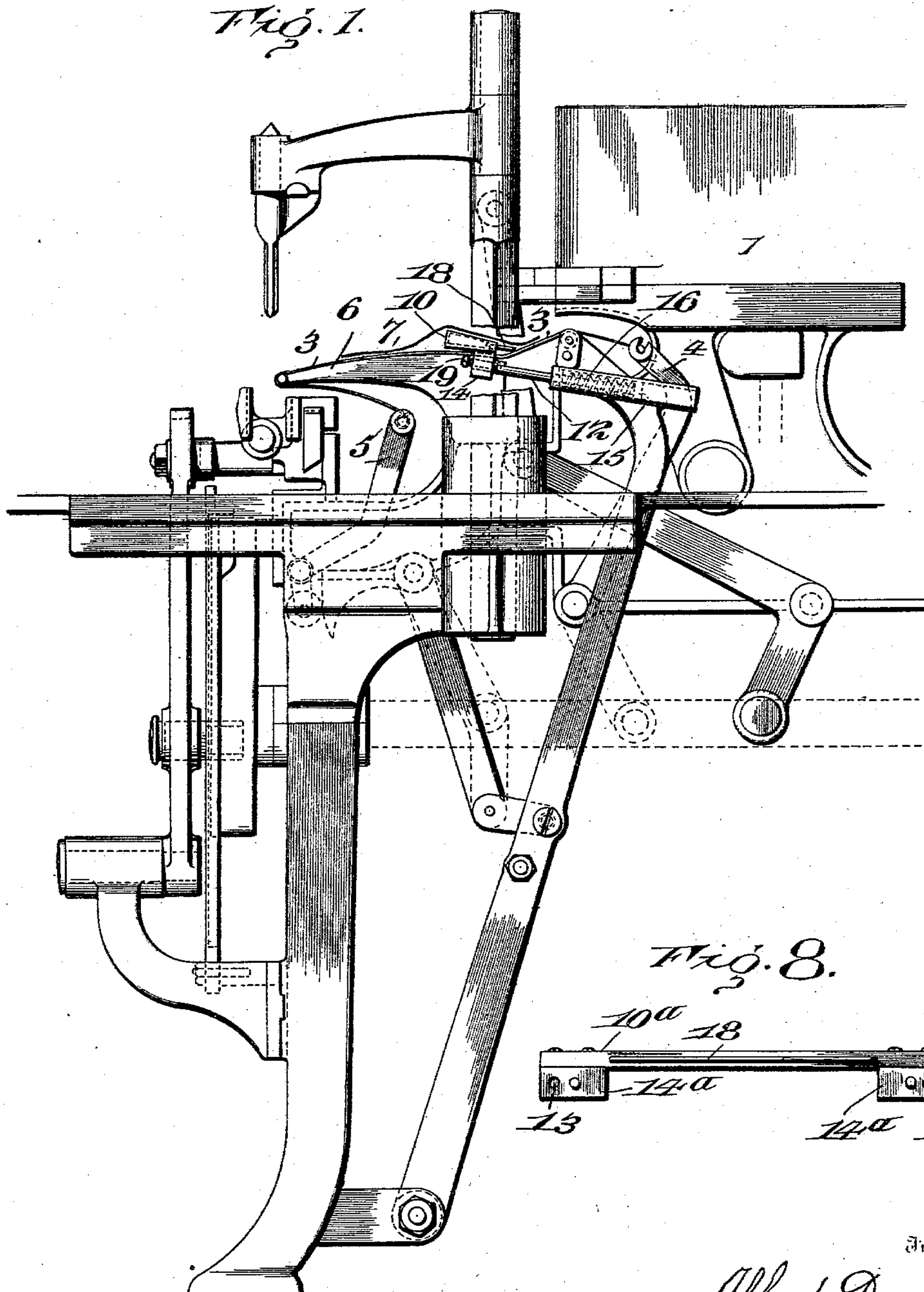
BINDER OR WRAPPER MECHANISM FOR CIGAR OR CIGARETTE MACHINES.

APPLICATION FILED DEC. 3, 1902.

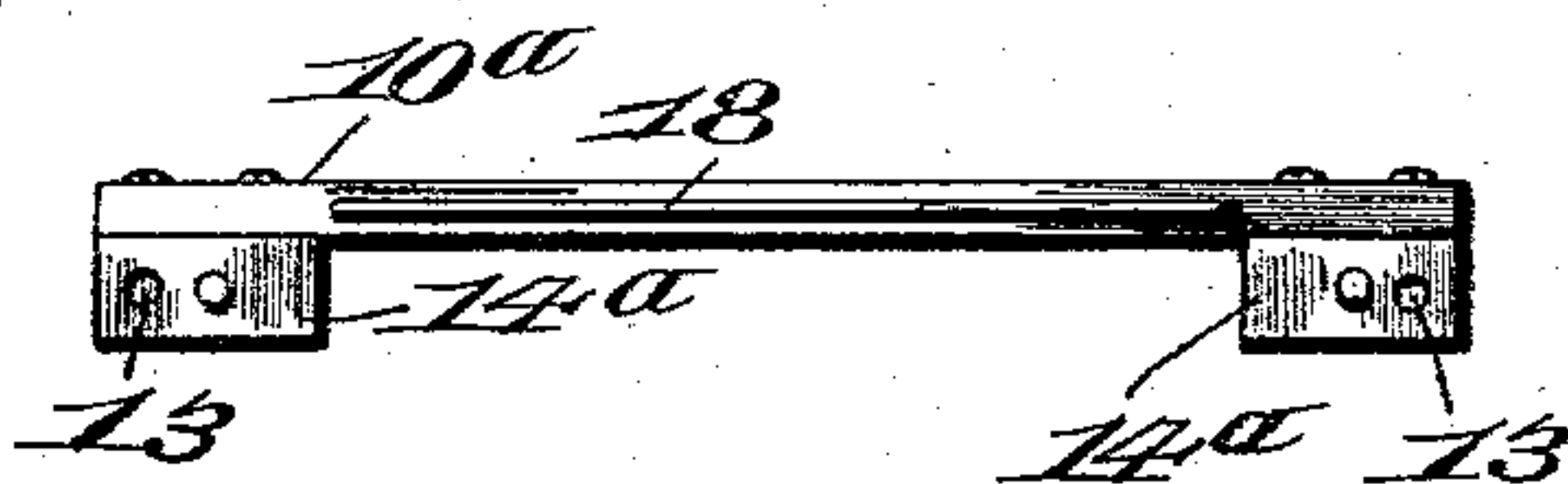
NO MODEL.

3 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 8.*



Witnesses

*Ger. Annie*  
*Harold Friend.*

By

Inventor

*Albert DuBrul*  
*Knight Bros.*

Attorneys

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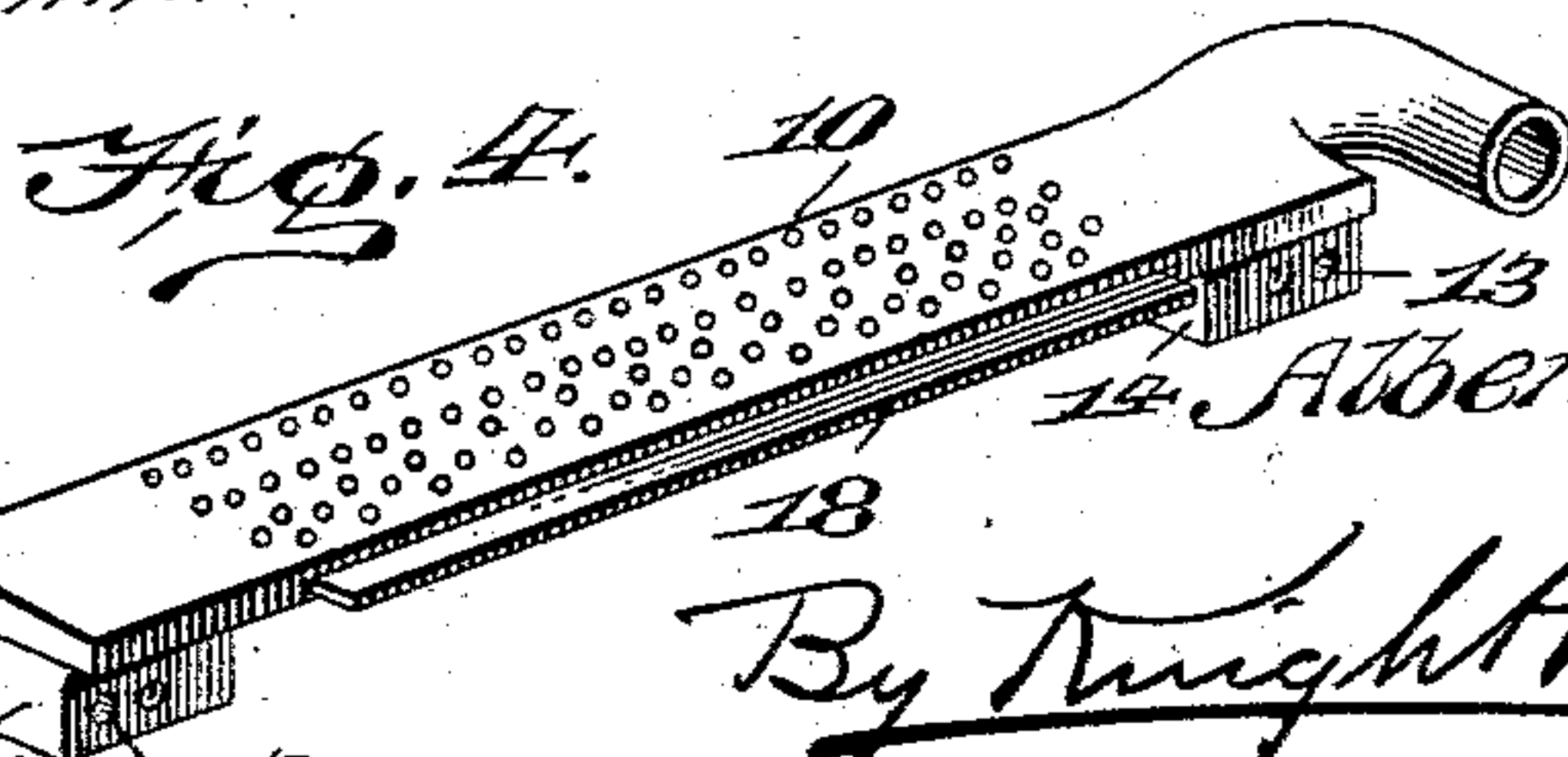
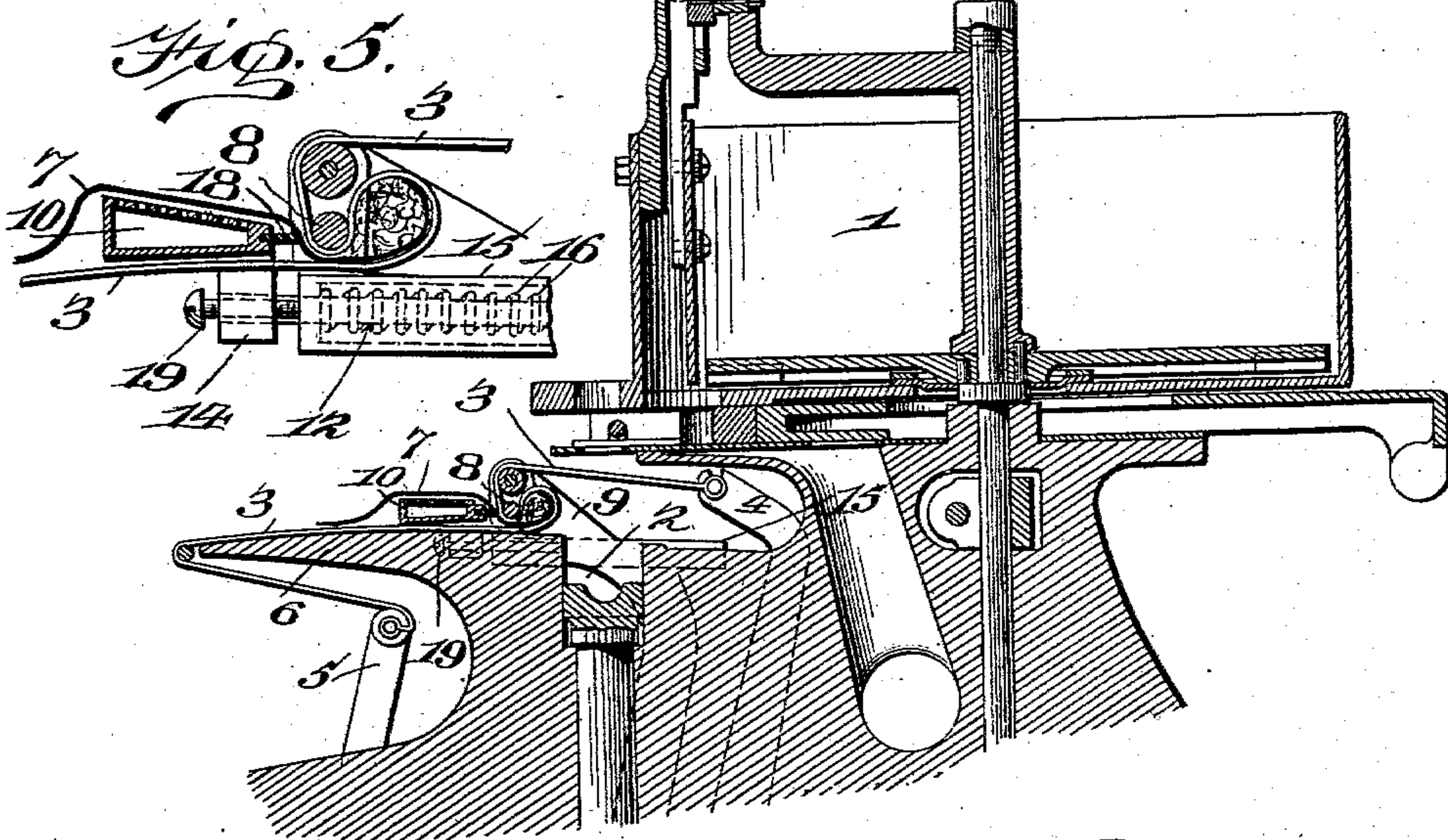
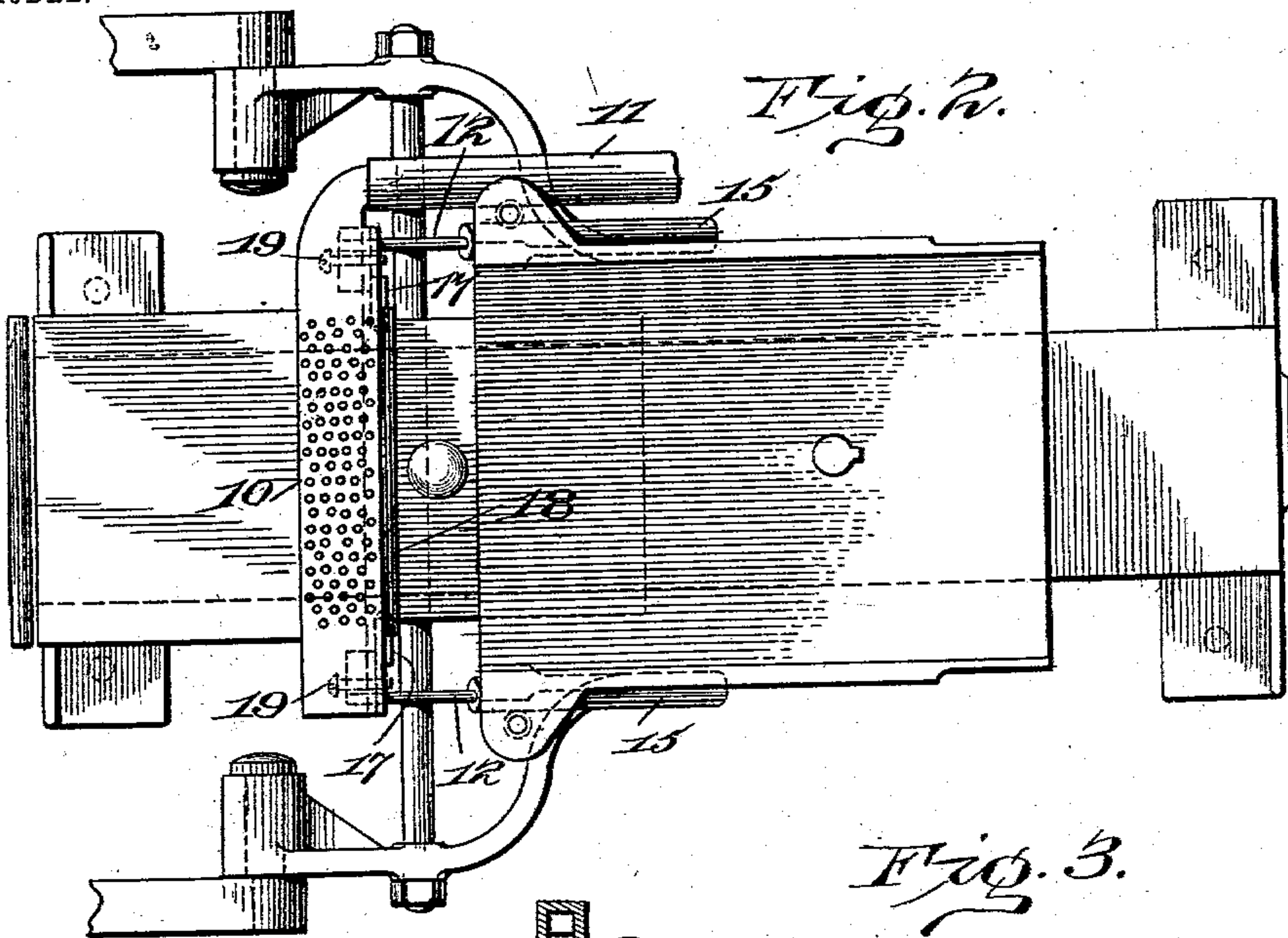
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NO MODEL.

3 SHEETS—SHEET 2.



Witnesses

H. J. Dieterich  
H. F. Zimmer

Inventor

Albert DuBrul

By Knight Bros

Attorneys



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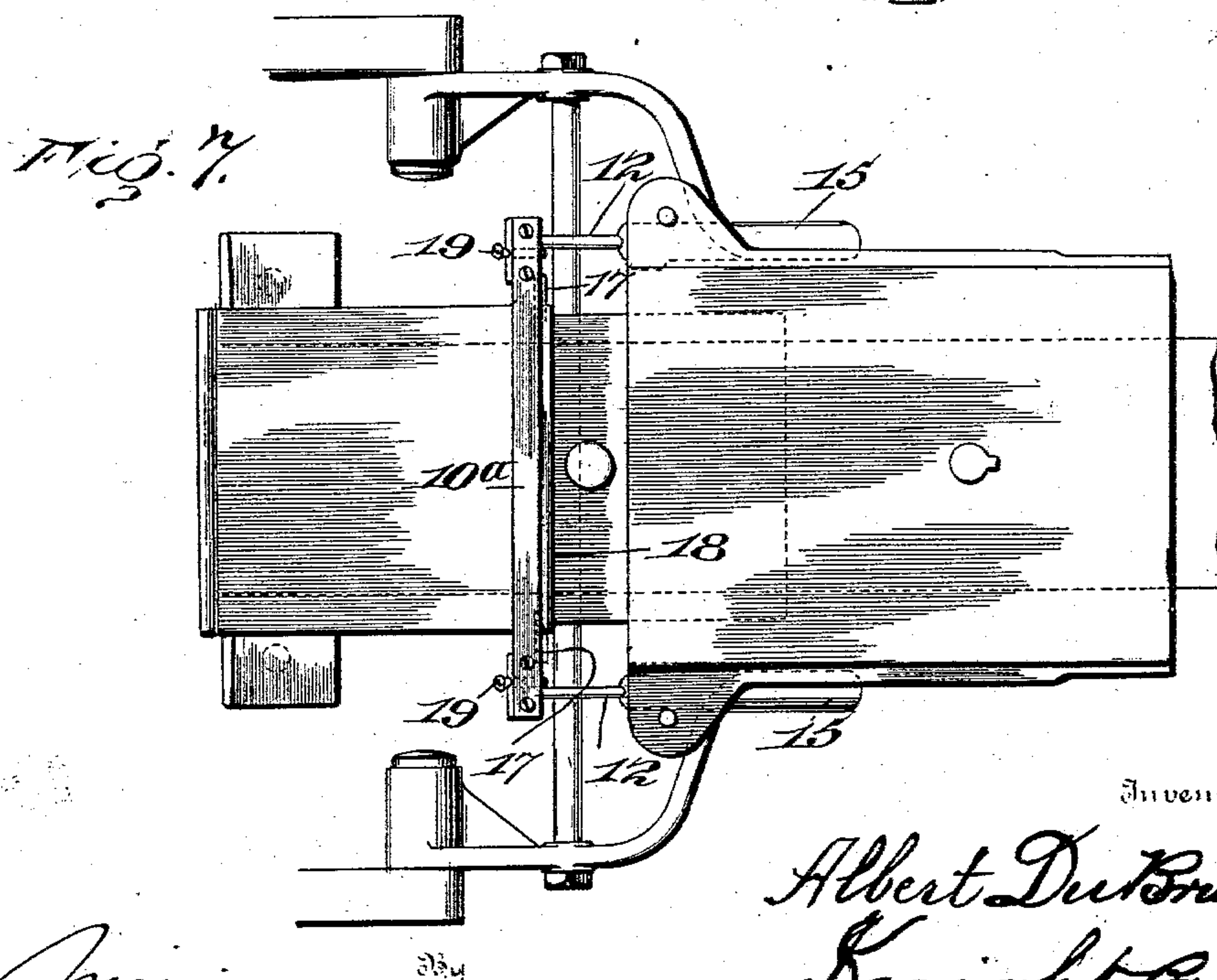
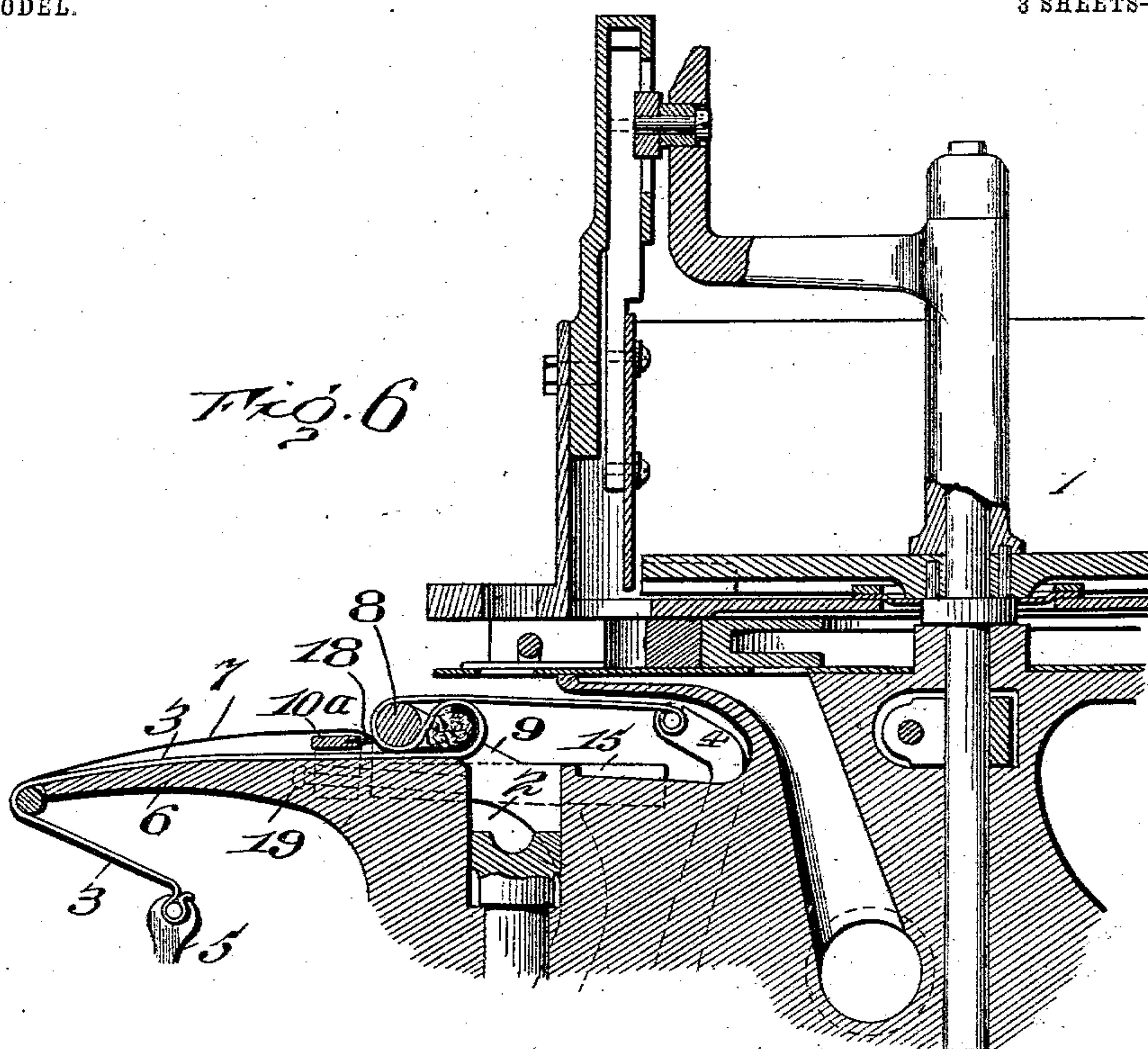
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APPLICATION FILED DEC. 3, 1902.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses

*Wm. M. Lewis*  
*Harold Lewis*

Inventor

*Albert DuBrul*  
*Knight Bros.*

Attorneys



# UNITED STATES PATENT OFFICE.

ALBERT DU BRUL, OF NEW YORK, N. Y., ASSIGNOR TO THE MILLER, DU BRUL & PETERS MANUFACTURING COMPANY, OF CINCINNATI, OHIO,  
A CORPORATION OF OHIO.

## BINDER OR WRAPPER MECHANISM FOR CIGAR OR CIGARETTE MACHINES.

SPECIFICATION forming part of Letters Patent No. 752,961, dated February 23, 1904.

Application filed December 3, 1902. Serial No. 133,762. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT DU BRUL, a citizen of the United States, and a resident of the borough of Queens and city and State of New York, have invented certain new and useful Improvements in Binder or Wrapper Mechanisms for Cigar or Cigarette Machines, of which the following is a specification.

This invention relates to binder or wrapper mechanisms for cigar or cigarette machines; and it has for its object to provide an improved means for holding the binder or wrapper in place upon the rolling-table.

A further object is to provide improved means for spreading or smoothing out the binder or wrapper as the bunch is rolled, so that it will be rolled around the bunch in a smooth condition free from wrinkles.

With these and other objects in view my invention consists of the parts and the combination of parts hereinafter fully described, and pointed out in the appended claims.

While I have shown and described my invention applied to a cigar-bunch machine, I desire it to be understood that the same may by making slight changes be applied to an all-tobacco-cigarette machine.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a cigar-bunch machine with my present improvements applied thereto. Fig. 2 is a plan of the bunch-rolling mechanism. Fig. 3 is a vertical section through my improvement and the adjacent parts of the cigar-bunch machine. Fig. 4 is a detail of the binder or wrapper holding and spreading means. Fig. 5 is an enlarged detail view similar to that shown in Fig. 3 with the table removed. Fig. 6 is a view similar to Fig. 3 without the holding means or suction-box. Fig. 7 is a plan view of Fig. 5, parts being removed. Fig. 8 is a detached view of an elevation of a slightly-modified spreader, as shown in Figs. 5 and 6.

In the cigar-bunch machine to which my invention is shown applied there is employed a hopper 1, from which a charge of tobacco is delivered by suitable mechanism into a

pocket 2 onto a belt or apron 3, secured at one end to a lever 4 and at the other end to a lever 5 and extending over a table 6, adjacent to the pocket 2. A binder 7 is placed upon that part of the belt or apron which extends over the table 5, and a roller 8, carried by levers 9, then rolls the bunch upon the table 6 to surround it by the binder 7. While the bunch of tobacco is being brought toward the binder and also in the act of rolling the bunch said binder is often displaced, and this has been heretofore prevented by perforating the belt and the table and providing suction means. The objections to this construction are numerous. The belt is weakened by the perforations, besides being liable to be blurred with paste and having the holes clogged up, and the holes cannot be easily cleaned without more or less injury to the belt. Furthermore, it is necessary to provide a holding means which will not interfere with the paste upon the wrapper or binder while said wrapper is being placed around the bunch. The suction-box which I provide above the apron contacts only with the under side of the wrapper or binder, which carries the paste on the edge of its upper face. Hence the paste cannot get into the perforations of the suction-box and interfere with the function of the latter. In using pasted wrappers they will ordinarily be cut in pads and raked off, so as to expose the edge of each wrapper for the reception of paste. The wrappers are thus placed one at a time in the proper position upon the air-suction holder. To overcome these difficulties, I have provided a movable suction-box 10, having perforations through its top placed over the belt 3 and connected with any suitable suction means by a flexible hose 11. The box 10 may be supported in any suitable manner; but it is preferred to connect it to the levers 9, which carry the roller 8, by means of guide-rods 12, secured at one end in openings 13 of depending lugs 14, near each end of said suction-box, and at their other ends working in barrels 15, in which are mounted springs 16, whereby an elastic con-



nection is formed between the holding and spreading means and the roller 8, and a relative movement is permitted between said parts, so that after a bunch has been placed within the binder another charge may be deposited into the pocket 2, the roller passing to the other side of the pocket 2, while the suction-box is held over the table 6 by means of stops 17, which are mounted upon the side of the table 6 and engage with the depending lugs 14 of the suction-box.

The material from which binders are made is naturally not straight, and in ordinary rolling action it is wrinkled or creased when applied to the bunch. It has, however, been sought to prevent this by providing a delicate frictional material which will produce a slight dragging or spreading effect upon the binder-leaf in advance of the roller; but in these constructions there is no means for limiting pressure of the frictional material against the leaf. I have therefore provided my machine with a spreader attachment, the pressure of which may be limited and varied. This spreader attachment may consist in securing to the edge of the suction-box 6 a tongue 18, of rubber, leather, or other delicate frictional material, or the suction-box may be dispensed with and a head 10<sup>a</sup> employed having lugs 14<sup>a</sup> and secured, as is the suction-box, to the rods 12, the latter form being clearly shown in Figs. 6, 7, and 8. The adjustment or limitation of the pressure is preferably accomplished in both instances by set-screws 19, which pass through the lugs 14 in one instance and 14<sup>a</sup> in the other instance and are adapted to engage when the binder is being wrapped around the bunch with the ends of the barrels 15, the turning of the screws 19 in one direction or in the other bringing the frictional material toward or from the binder.

The operation of my invention is as follows: A binder being placed upon the suction-box with its end projecting over the pocket 2 and a charge or bunch being deposited upon the apron 3 in the pocket 2 while in the position shown in Fig. 1, the roller 8 is moved forward, throwing the belt around the bunch, the binder 7 being held in place by the suction-box 10, which is separated from the roller 8 by reason of the lugs 14 engaging with the stops 17. When the ends of the barrels 15 reach the projecting ends of the set-screws 19, the spreader 18 holds the binder up against the roller 8, and the bunch is then wrapped in the usual manner within the binder upon the table 6. After the binder has been placed around the bunch the roller 8 is returned to the other side of the pocket 2 and the suction-box and spreader returns with it until the lugs 14 engage with the stops 17, thereby separating the suction-box and spreader and the roller and adapting the apron for the reception of another charge.

Various changes in form, proportion, and construction may be made within the scope of the appended claims without departing from the spirit of my invention.

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

1. In a machine of the character set forth, the combination with the binder-rolling means, of an air-suction-holding means for the binder moving in advance of the binder-rolling means, and over which the binder is drawn as it is wrapped around the bunch.

2. In combination with the apron, the table, and the roller, of a machine of the character set forth; an air-suction-holding means disposed above the apron, holding the binder and having such binder drawn over it during the operation of rolling the binder about the bunch.

3. In combination with the apron, the table, and the roller, of a machine of the character set forth; an air-suction box located above the apron, having the binder held upon it, and drawn over it in the operation of rolling the binder around the bunch; said air-suction box moving over the table in advance of and at the same speed with the roller, and maintaining its relation thereto during the rolling operation.

4. The combination with the apron, the table and the roller, of a means acting on the binder independently of the roller to hold the binder on the apron against the movement due to the approach of the roller to the binder, and a spreading-tongue for the binder during the wrapping operation, carried by the binder-holding means and projecting therefrom toward the bunch.

5. The combination with the apron, the table and the roller, of a suction-box movable with the roller for holding the binder on the apron.

6. The combination with the apron, the table and a roller, of a suction-box disposed above the apron, for holding the binder thereon, and movable with the roller.

7. The combination with the apron, the table and the roller, of a lever carrying the roller, and a suction-box also carried by the lever and movable relatively thereto.

8. The combination with the apron, the table and the roller; of a lever carrying the roller; a suction-box; connections between the suction-box and the lever comprising a rod, a barrel and a spring within the barrel; and a stop limiting the movement of the suction-box in one direction.

9. The combination with the apron, the table and the roller, of a suction-box, and an elastic connection between the suction-box and the roller.

10. The combination with the apron, the table and the roller, of a suction-box movable



with the roller, an elastic connection between the suction-box and the roller, and means for separating the roller and the suction-box.

11. The combination with the apron, the table and the roller, of a suction-box for holding the leaf on the apron, and a spreading attachment carried thereby.

12. The combination with the apron, the table and the roller, of a suction-box disposed over the apron and a spreading attachment carried by said box.

13. The combination with the apron, the table and the roller, of a suction-box disposed over the apron, and a tongue carried by the suction-box.

14. In combination with the apron, the table the roller and a spreader, connections between the roller and the spreader comprising guiding-rods projecting from one of the two latter parts, spring-barrels carried with the other of said parts, and springs confined between the spring-barrel and the supporting and guiding rods.

15. In a cigar-bunch machine, the combination with the apron, the table, the roller, and

the spreader, of spring-barrels carried with one of the two latter parts, supporting and guiding rods working in said spring-barrels, and carried by the other of said parts, springs in said barrels engaging the supporting and guiding rods, and drawing the spreader toward the roller, and set-screws for limiting the approach of the spreader to the roller.

16. In a cigar-bunch machine, the combination with the apron, the table, the roller and the spreader, of spring-barrels carried with one of the two latter parts, supporting and guiding rods working in said spring-barrels, and carried by the other of said parts, springs in said barrels drawing the spreader toward the roller, and arresting-stops mounted upon the machine in the path of the spreader to arrest its rearward movement as the roller passes from it.

The foregoing specification signed this 25th day of November, 1902.

ALBERT DU BRUL.

In presence of—

H. WHYRICH,

F. BROERMAN.