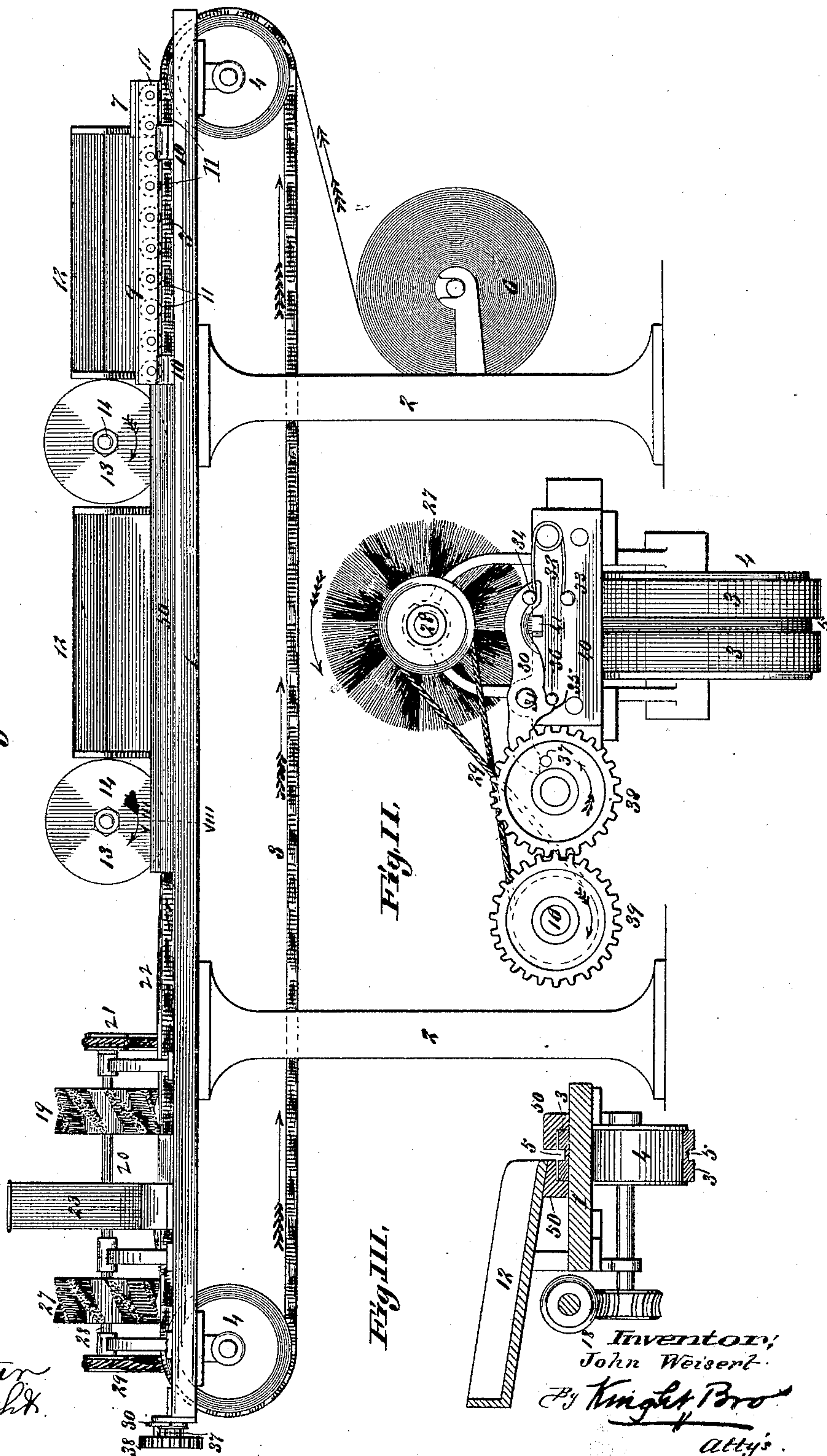


J. WEISERT.
CIGARETTE MACHINE.

No. 436,682.

Patented Sept. 16, 1890.

Fig. I.



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Fig. IV.

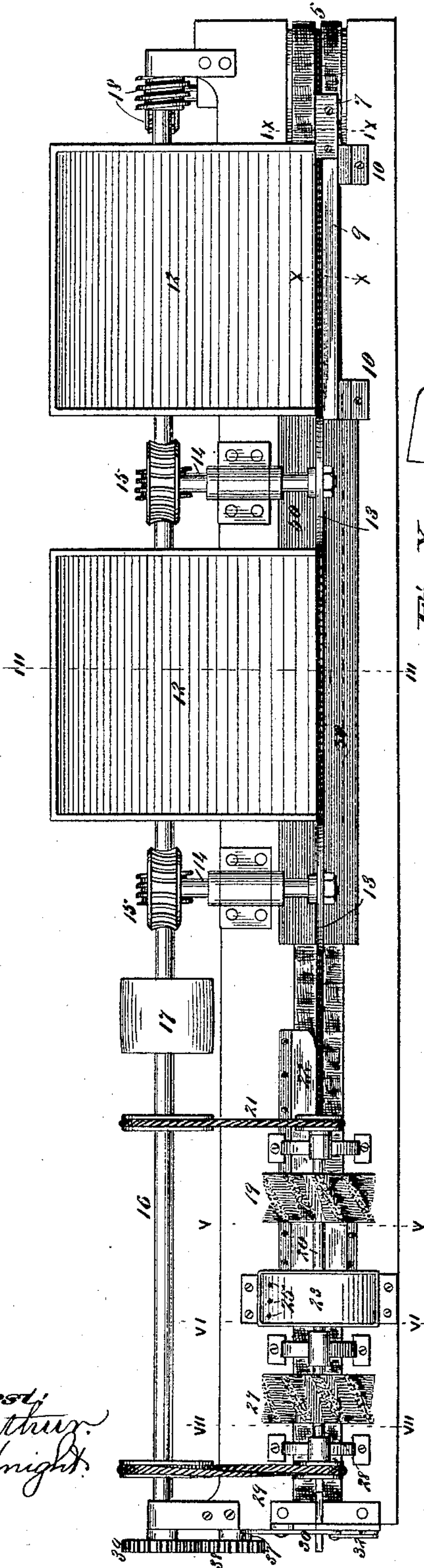


Fig. X.

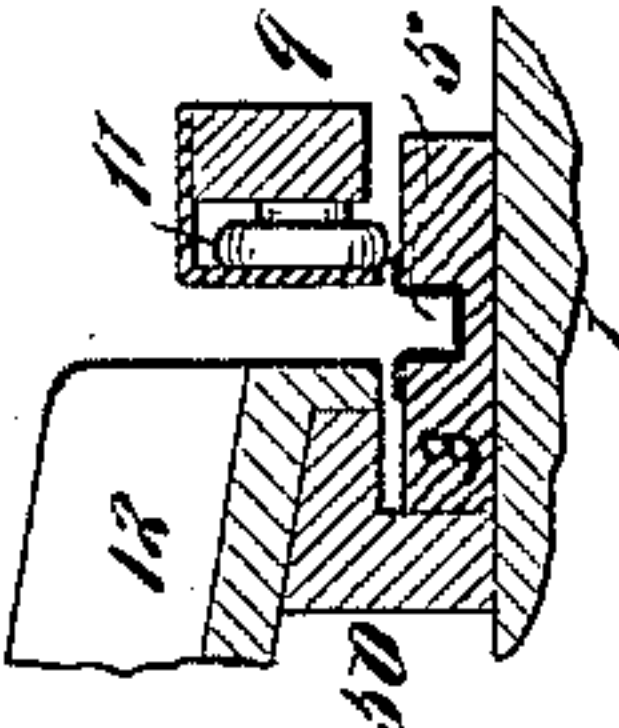


Fig. VII.

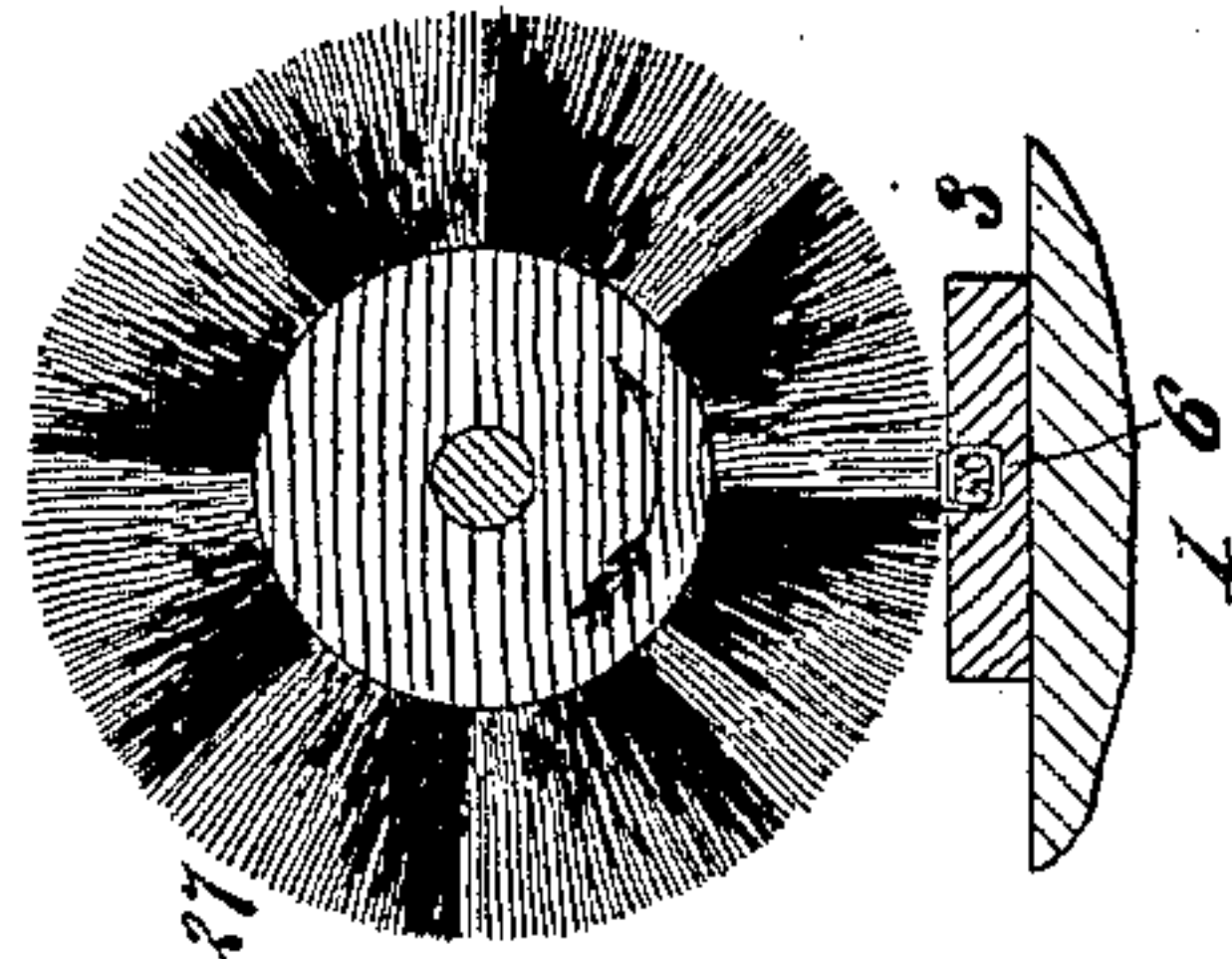


Fig. VI.

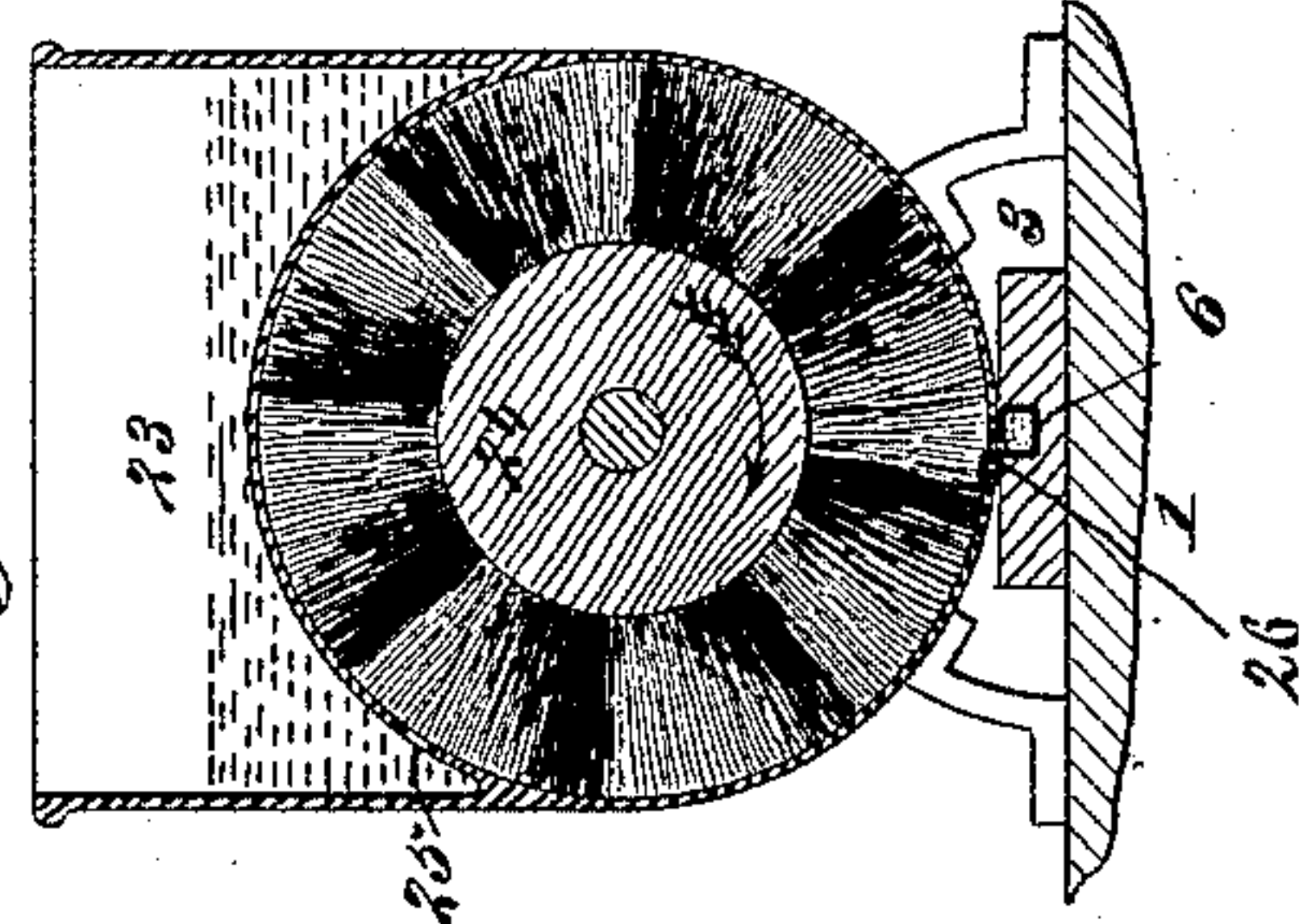


Fig. V.

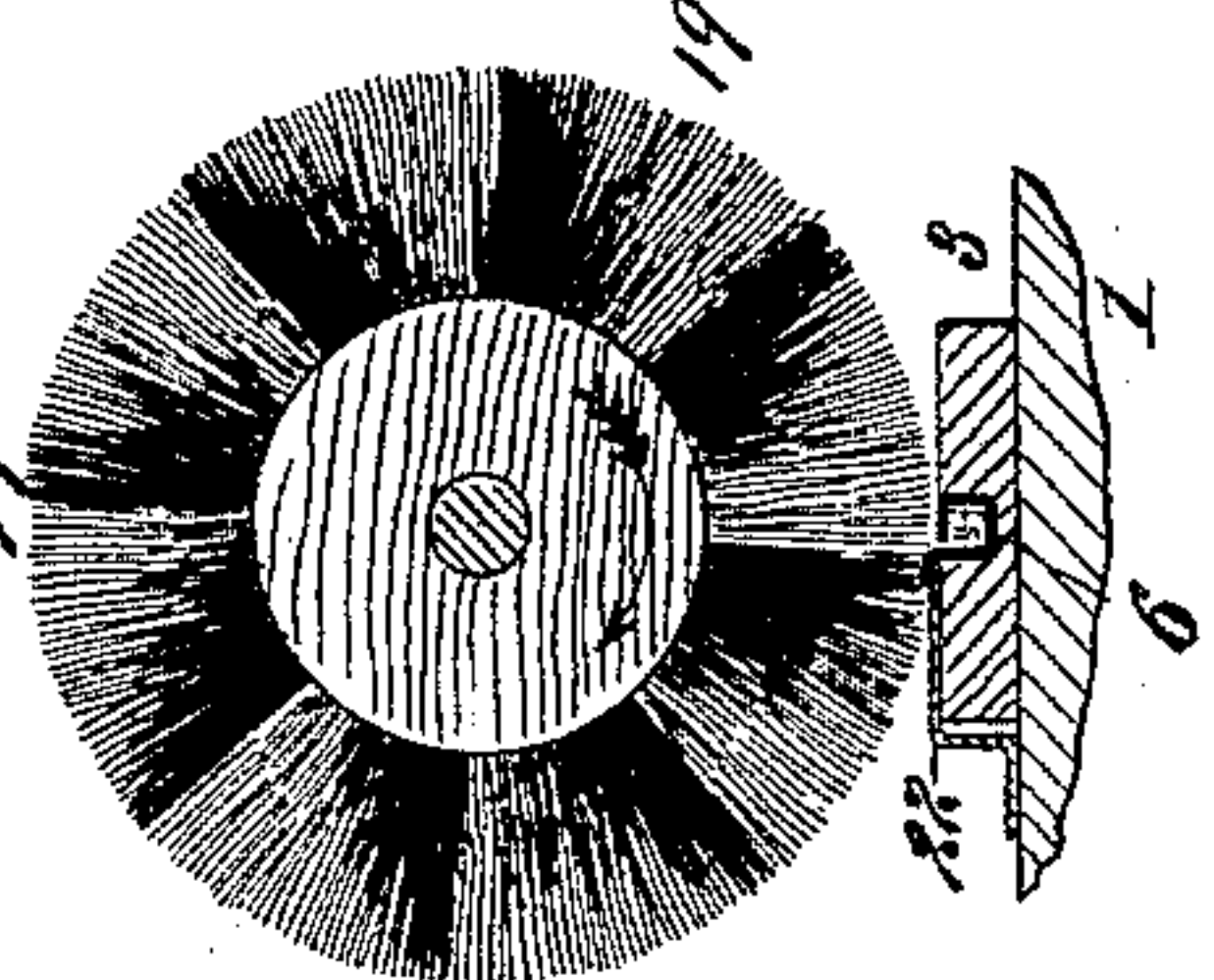


Fig. IX.

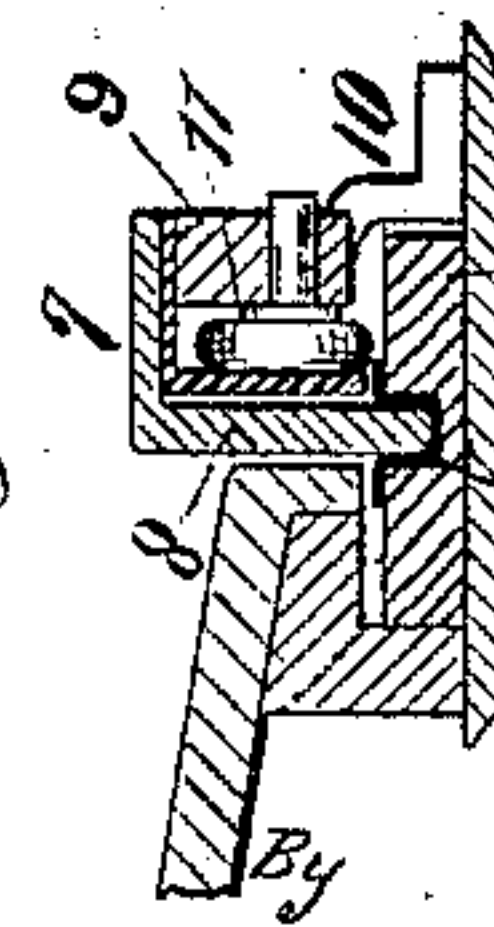


Fig. XI.

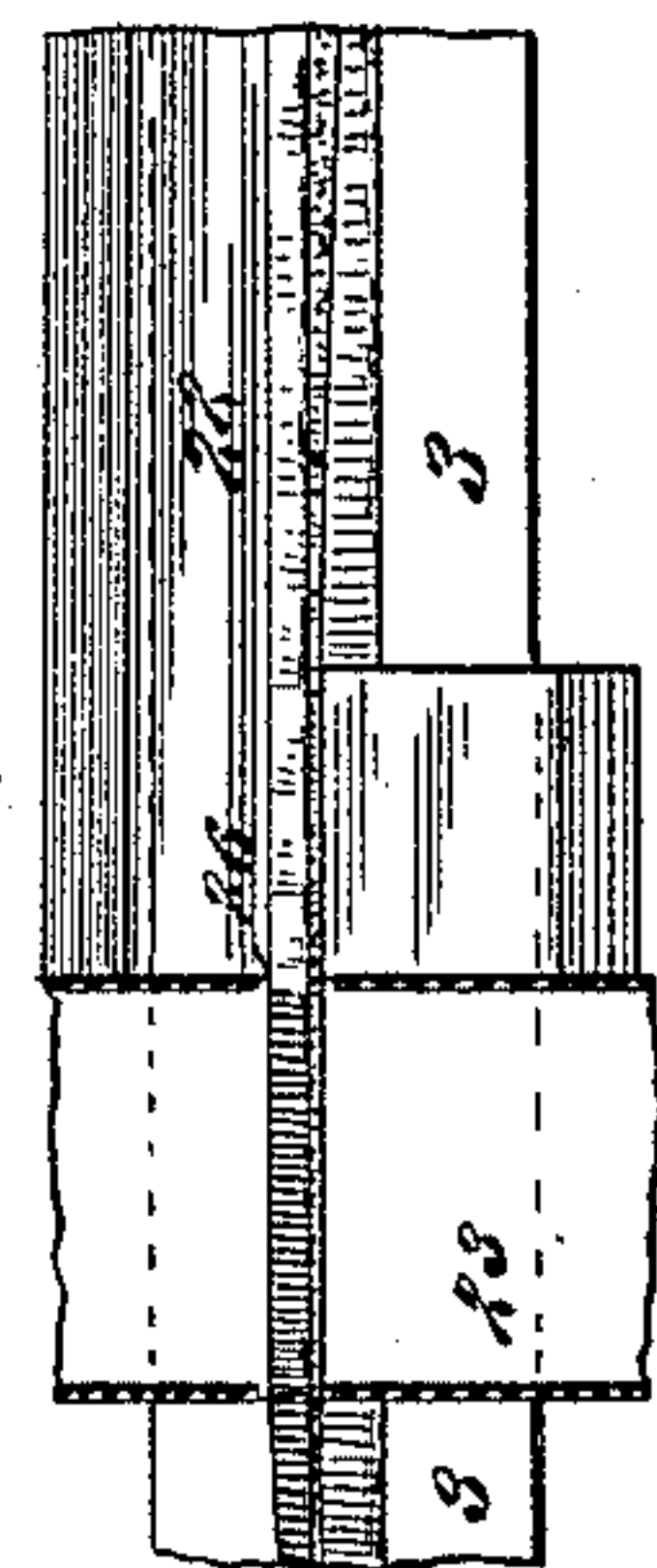
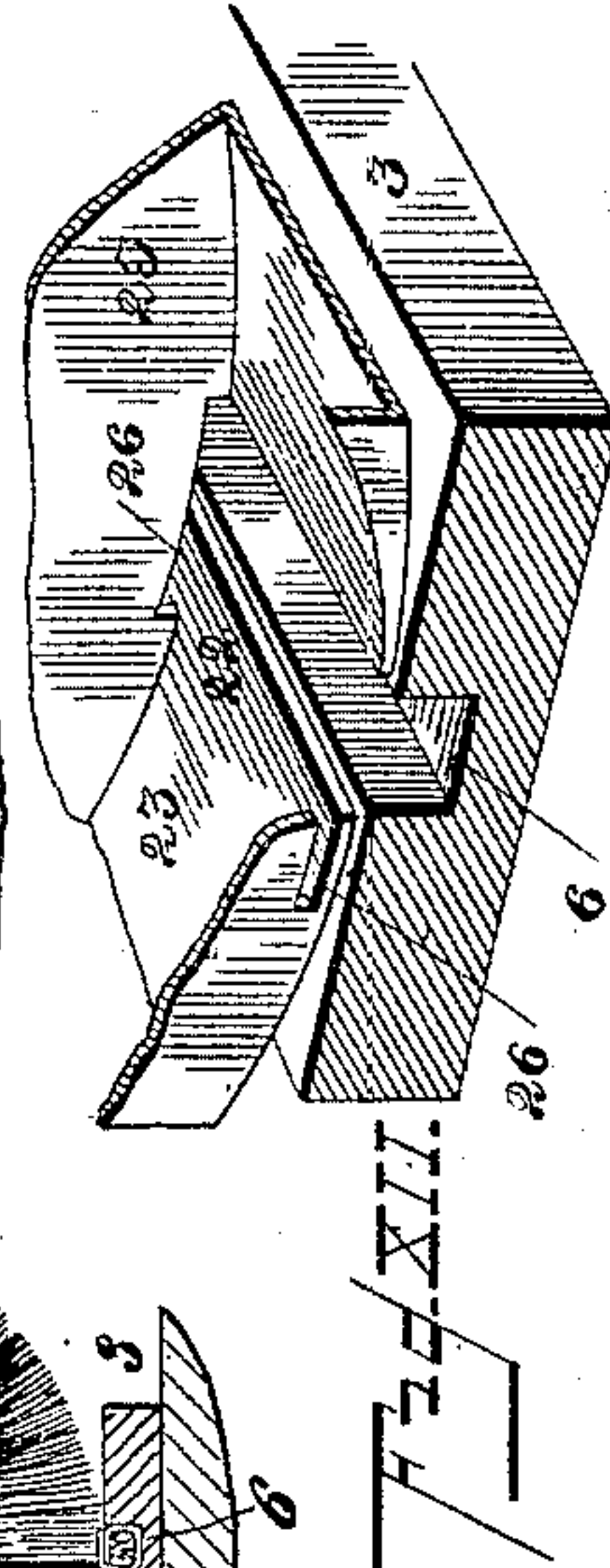


Fig. XII.



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Fig. VIII.



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UNITED STATES PATENT OFFICE.

JOHN WEISERT, OF ST. LOUIS, MISSOURI.

CIGARETTE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 436,682, dated September 16, 1890.

Application filed January 13, 1890. Serial No. 336,774. (No model.)

To all whom it may concern:

Be it known that I, JOHN WEISERT, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Cigarette-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved machine for making cigarettes; and which is automatic in its operation; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side elevation of my improved machine. Fig. II is an end elevation. Fig. III is a vertical transverse section taken on line III III, Fig. IV. Fig. IV is a top view. Fig. V is a vertical transverse section taken on line V V, Fig. IV. Fig. VI is a similar view taken on line VI VI, Fig. IV. Fig. VII is a similar view taken on line VII VII, Fig. IV. Fig. VIII is a detail vertical section taken on line VIII VIII, Fig. I. Fig. IX is a similar view taken on line IX IX, Fig. IV. Fig. X is a similar view taken on line X X, Fig. IV. Fig. XI is a detail view showing the lower part of the paste-box in section and the parts beneath it in top or plan view. Fig. XII is a perspective view of the lower part of the paste-box.

Referring to the drawings, 1 represents a table supported on suitable legs 2.

3 represents a traveling or running endless band supported by and passing around drums or rollers 4, journaled to the ends of the table. This band is provided with a longitudinal central groove 5, as shown clearly in Figs. II, IV, and X.

6 represents a roll of paper, which forms the wrappers of the cigarettes. The paper passes from the roll onto the band over the groove at the receiving end of the machine, as shown in Fig. I. The paper is in the form of a ribbon of sufficient width to be folded lengthwise into the groove of the band and to project above the band on each side of the groove.

Located above the band at the receiving end of the machine is a plate 7, (see Figs. I, IV, and IX,) which has a downwardly-extending edge 8, that projects into the groove of the band and forces the paper ribbon into the

groove of the band, as shown in Fig. IX. This plate 7 is secured to a bar 9, made fast in the table of the machine by means of brackets 10, the bar extending beneath the plate 7 and having journaled in it a series of rollers 11, as shown in Figs. I and IX. These rollers hold the inner edge of the paper ribbon onto the band, while the edge 8 of the plate 7 presses the paper ribbon into the groove of the band, thus causing the paper ribbon to move or draw in from one side only as it is pressed into the groove.

12 represents hoppers placed over the table, and in which the tobacco is placed and from which it is discharged into the trough in the ribbon while in the groove of the band.

Close to each hopper there is located a grooved disk 13 on a shaft 14, driven by worm-and-wheel connection 15 on an operating-shaft 16, provided with a pulley 17. The band 3 is also driven from this shaft through means of a worm-and-wheel connection 18. (See Fig. IV.) The function of the disks 13 (see Figs. IV and VIII) is to pack the tobacco into the trough formed in the ribbon while the latter is carried in the groove of the band.

I have shown two hoppers 12 and two packing-disks 13; but only one would be used at a time, and of course but one might be provided.

After the tobacco is filled into the trough in the ribbon while in the groove of the band the advancing movement of the band carries the paper ribbon, and the tobacco also, of course, beneath a transverse brush 19, located on a shaft 20, journaled over the groove of the band, said shaft being driven from the shaft 16 by a suitable connection 21. Before reaching this brush the outer edge of the paper ribbon is moved over a plate 22, (see Figs. I, IV, and XI,) and is smoothed down closely onto the plate by the brush 19, while the inner edge of the paper ribbon is folded over onto the tobacco by the same brush, which turns in the direction of the arrow, as shown in Fig. V. The advance movement of the band then carries the paper ribbon partly folded or partly-formed continuous cigarette beneath a paste-pot 23, within which revolves a transverse brush 24, (see Fig. VI,) the pot being provided with perforations 25, through which its contents pass onto the brush. The

lower edge of the pot is provided with an opening, as shown at 26, Figs. VI, XI, and XII, which admits the outer edge of the paper ribbon, which has not been folded onto the tobacco, as shown in Fig. VI, and the brush revolving in the direction indicated by the arrow in Fig. VI, or in the same direction as brush 19, pastes this edge of the paper ribbon, and the further movement of the band carries the paper ribbon beneath a transverse brush 27. (See Figs. I, IV, and VII.) This brush is mounted on a shaft 28, journaled over the groove of the band, and is driven from the shaft 16 by means of a connection 29. This brush 27 is turned in an opposite direction to the brushes 19 and 24 and folds the outer edge of the paper ribbon, which has been pasted inward over the inner edge of the paper ribbon which was folded over the tobacco by the brush 19, as shown in Fig. VI, and the paste causes the two edges of the paper ribbon to adhere. Thus the tobacco is neatly enveloped in the paper ribbon and a continuous cigarette is formed, and it is only necessary to cut it off into proper lengths to form single cigarettes.

The cutting up of the cigarette is accomplished by means of a knife 30. (Shown in Fig. II.) The knife is pivoted at 31 to a plate 40, secured to the table 1, and is held in its proper or normal position by a spring 32, connected to the plate 40 and bearing at its free end against a projection 34 on the inner end of the knife. The knife is provided with a point 35, which comes against a projection 36 on the plate 40 and limits the upward movement of the inner end of the knife under the influence of the spring 32. The inner end of the knife is automatically depressed to cut off the cigarettes by means of a projection 37 on a gear-wheel 38, journaled to the table of the machine, and which is engaged by a similar wheel 39 on the end of the shaft 16. As the wheel 38 is turned, the projection 37 comes against the outer end of the knife, and, raising this end, depresses the inner end and accomplishes the cutting. The cigarettes here drop into a receptacle provided for them in a completed condition.

As shown in Fig. I, the band 3 does not extend quite to the knife 30, but the continuous cigarette extends beneath the knife and is supported beyond the band by means of the plate 40, which is provided with a notch 41, corresponding to the groove in the band.

The table of the machine may be provided with strips 50 at its central portion, under which the edges of the paper ribbon pass after leaving the presser-plate 7 8, and which

prevent the edges from moving in an upwardly direction as the tobacco is pressed into the trough of the ribbon while it is in the groove of the band. These strips are shown in Figs. III and IV.

The centrally-grooved band may be of leather, rubber, or other suitable substance or material.

I claim as my invention—

1. The combination of a traveling grooved band, a presser-plate for forcing the paper ribbon into the groove of the band, means for holding the inner edge of the paper ribbon down on the band, a device for discharging the material into the trough of the paper ribbon, a disk for pressing the material down in the trough, a brush for folding the inner edge over the material and the outer edge outward, a guide-plate on which the outer edge is folded, and a brush for folding the outer edge of the paper ribbon inward over the inner edge of the paper ribbon, substantially as described.

2. The combination of a traveling grooved band, a presser-plate for forcing the paper ribbon into the groove of the band, means for holding the inner edge of the paper ribbon down on the band, a device for discharging the material into the trough of the paper ribbon, a disk for pressing the material down in the trough, a brush for folding the inner edge over the material and the outer edge outward, a guide-plate on which the outer edge is folded, a brush for pasting the outer edge as it lies on the guide-plate, and a brush for folding the outer edge inward over the inner edge, substantially as described.

3. The combination of a traveling grooved band, a presser-plate for forcing the paper ribbon into the groove of the band, means for holding the inner edge of the paper ribbon down on the band, a device for discharging the material into the trough of the paper ribbon, a disk for pressing the material down into the trough, a brush for folding the inner edge over the material and the outer edge outward, a guide-plate on which the outer edge is folded, a paste-pot having perforations through which the paste passes, and openings through which the outer edge passes, a brush revolving within the paste-pot and pasting the inside of the outer edge, and a brush for folding the outer edge inward over the inner edge, substantially as described.

JOHN WEISERT.

In presence of—

E. S. KNIGHT,

A. M. EBERSOLE.