

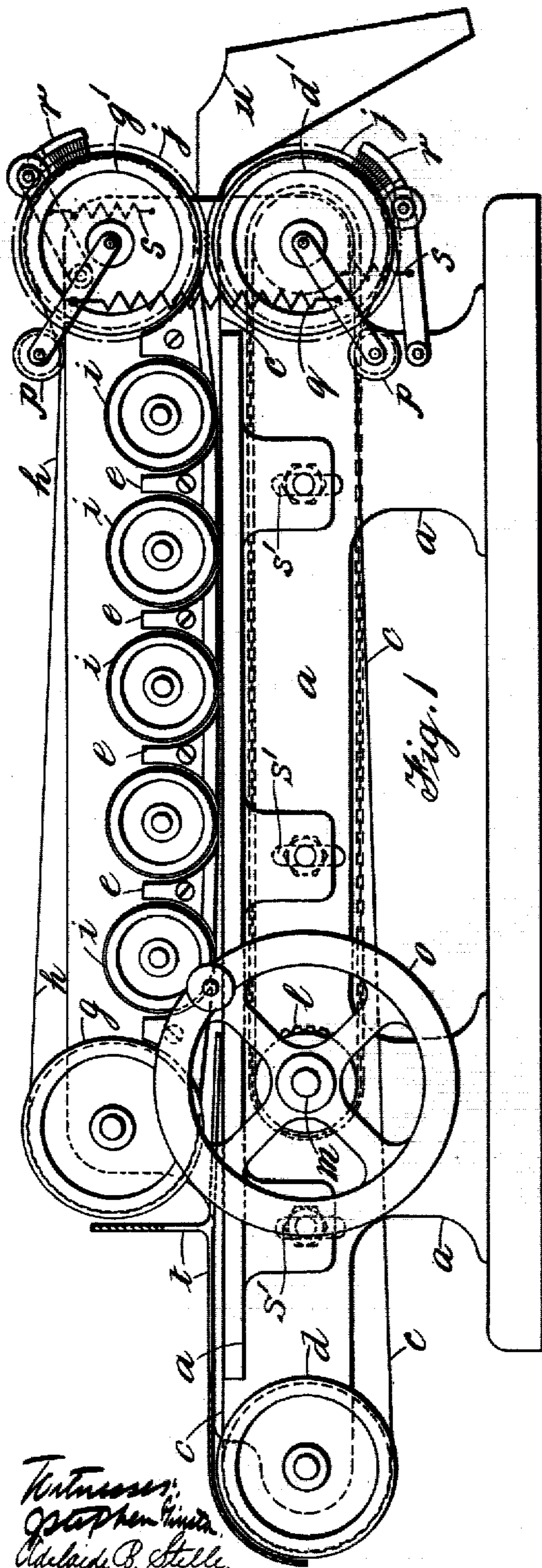
No. 828,799.

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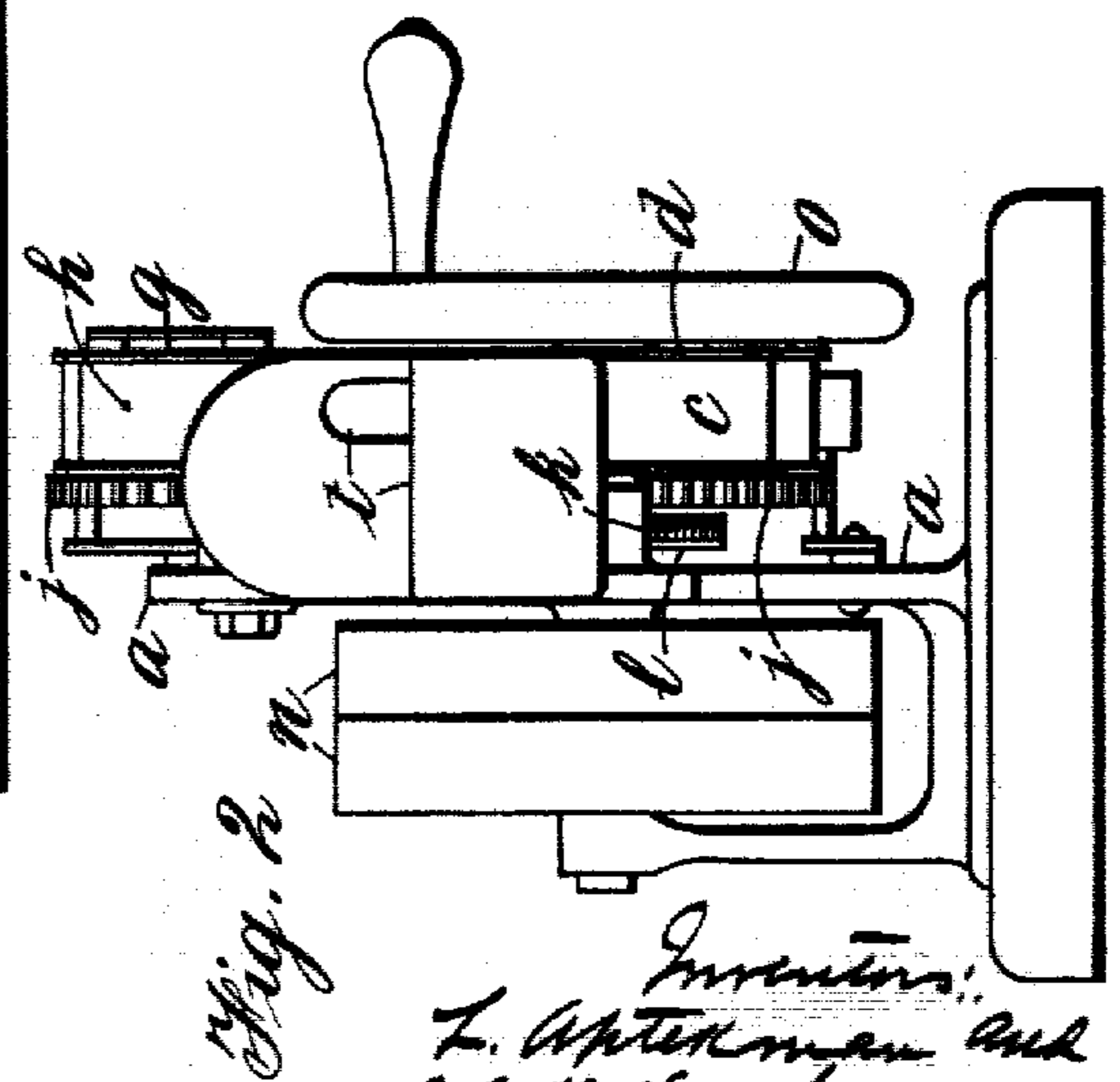
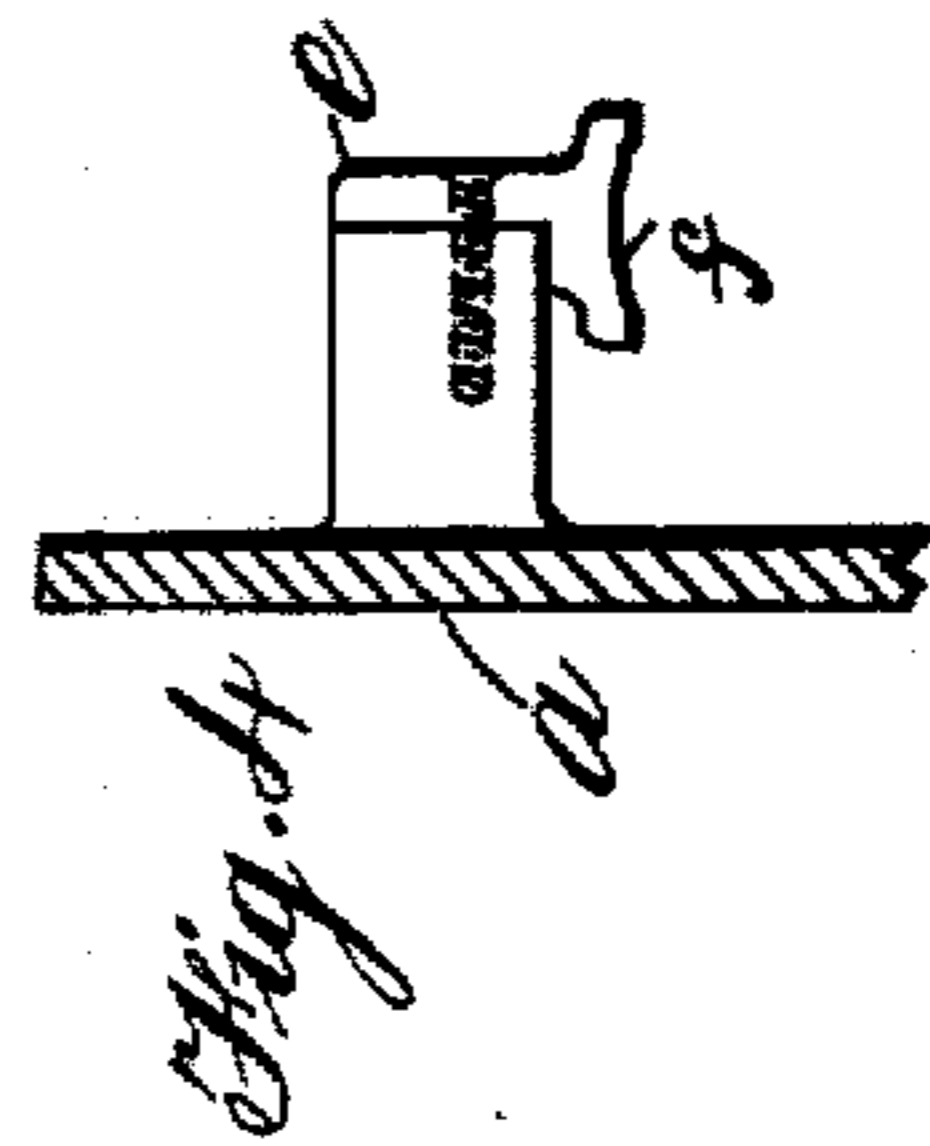
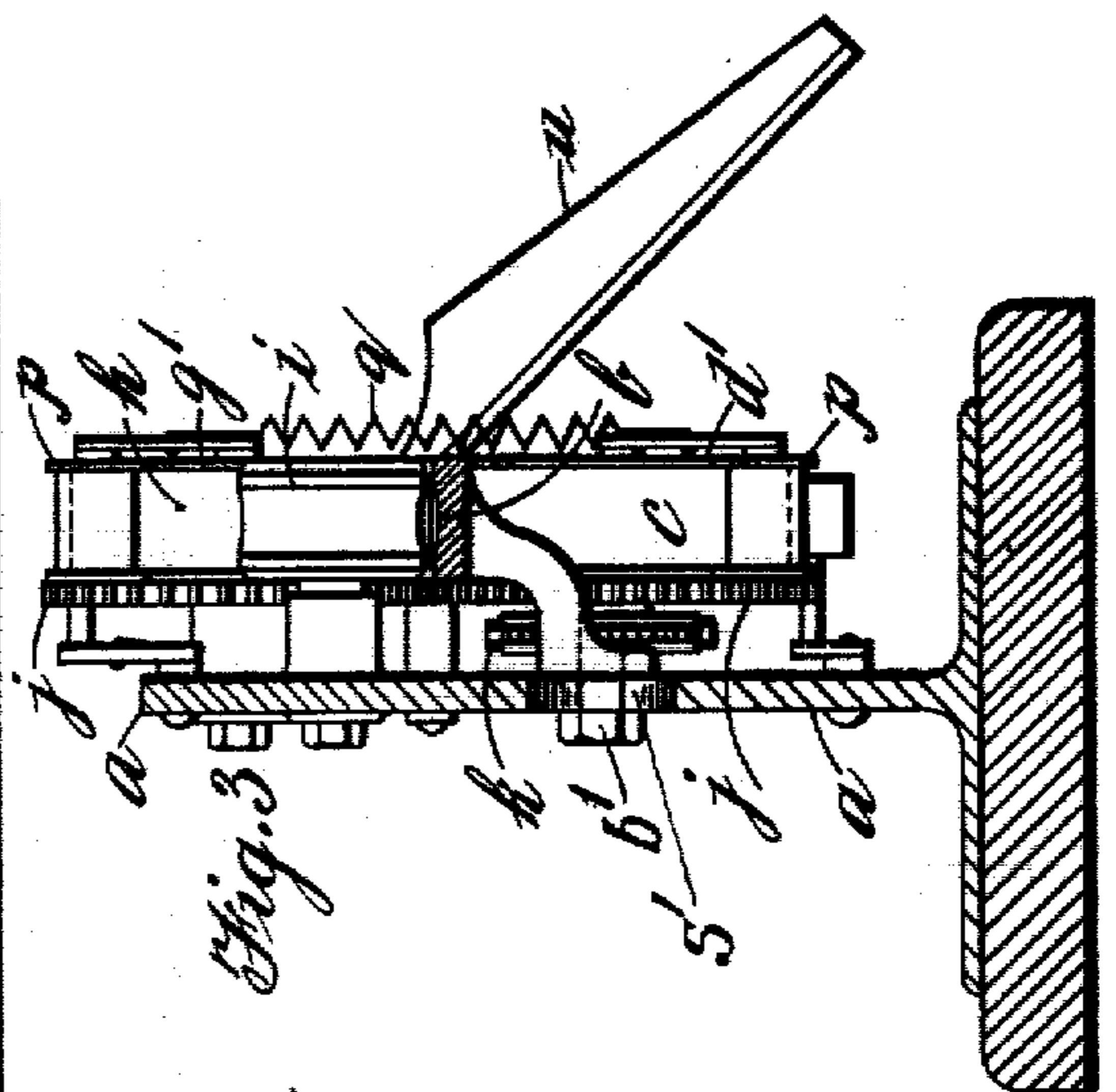
L. APTEKMAN & C. C. O. VAN LENNEP.

APPARATUS FOR FLATTENING OR SHAPING THE SIDES OF CIGARETTES.

APPLICATION FILED SEPT. 8, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

LAZARIDAS APTEKMAN AND CYRIL CHARLES OGILVY VAN LENNEP, OF
LONDON, ENGLAND.

APPARATUS FOR FLATTENING OR SHAPING THE SIDES OF CIGARETTES.

No. 828,799.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed September 8, 1905. Serial No. 277,600.

To all whom it may concern:

Be it known that we, LAZARIDAS APTEKMAN, foreman, a subject of the Sultan of Turkey, residing at 42 Settle street, and CYRIL CHARLES OGILVY VAN LENNEP, cigarette manufacturer, a subject of the King of Great Britain, residing at 33 and 35 Endell street, London, in the county of Middlesex, England, have invented a new and useful Improvement in Machinery or Apparatus for Flattening or Shaping the Sides of Cigarettes, of which the following is a specification.

Ordinary cigarettes are usually made cylindrical in shape, the tobacco used being inclosed in a thin cylindrical case of paper; but sometimes for convenience of packing and other reasons it is preferred that such cylindrical cigarettes should be flattened at two opposite sides, so that in cross-section their shape is rectangular with two opposite sides flattened to the desired extent, the edges connecting them being curved more or less to the shape of part of the original cigarette, or sometimes it is desired that the flattened sides should not be perfectly flat from side to side in end view, but slightly curved or arched from side to side.

The subject of our present invention is a machine into which cylindrical cigarettes are fed in one by one and after having been properly flattened upon two opposite sides in the way described are delivered from the machine in the finished shape required.

The accompanying drawings are in illustration of our invention.

Figure 1 is a side elevation of the machine. Fig. 2 is an end view. Fig. 3 is a transverse section. Fig. 4 is a detailed view of the segment *e*, showing the curved recess *f*.

In order to put our invention in operation, we take a frame *a*, of wood or other suitable material and of sufficient length to properly complete the cigarettes, which are fed through it from end to end. Upon the part *p'*, bolted to the frame *a* by bolts *b'*, we make a shallow longitudinal recess or channel *b*, (see Fig. 3,) extending from end to end, and we arrange in this channel the upper part of an endless belt or band *c*, of suitable flexible material or fabric, which passes round pulleys *d d'* at each end of the frame *a*, by revolving which the belt *c* can be made to travel continuously along in or upon the groove or recess *b*, which recess is in the case

where the flattened sides of the cigarettes are intended to be slightly curved or arched transversely hollowed slightly transversely to correspond, as shown in Fig. 3. When, therefore, the endless band *c* is made to travel forward round the rollers *d d'* at the ends of the frame *a*, it passes along the longitudinal groove or recess *b* and can be bent down by suitable pressure, so that it takes the same curve transversely as the curved recess.

Above the frame *a* we arrange a second hollow adjustable longitudinal bar or frame, preferably made in separate segments *e e e*, as shown, the lower side of which is provided with a longitudinal transversely-curved recess *f*, as shown in Fig. 4, corresponding exactly with the lower recess *b* first described. This upper frame or the segments *e* of which it is composed is fixed upon the top of the frame *a* of the machine, as shown in Fig. 4, at a height above the lower longitudinal recess *b*, which can be adjusted to the exact distance required by means of the vertical slot *s'* in the frame *a*, and at or near each of its ends we arrange a pulley *g g'*, round which passes an endless band *h*, similar to the first one, *c*, already described, and exactly opposite the latter, and we cause this band to travel forward together with and exactly at the same speed as the latter. We arrange the frames or segments *e*, carrying the upper endless band *h*, at such a height and position that the space between them and the lower band *c* at the end in which the cigarettes which are to be flattened are introduced is slightly less than the diameter of the cylindrical cigarettes, while the space between them at the end where the flattened cigarettes are delivered is reduced to that of the thickness of the finished flattened cigarettes.

We prefer to arrange between the segments *e* of the upper frame a sufficient number of rollers *i*, of wood or other suitable material, turning in bearings on the sides of the frame *a*, their peripheries being slightly concave in transverse section, as shown in Fig. 3, so that as they press upon the endless band *h*, which passes over the cigarettes passing under them, the cigarettes are flattened and at the same time the flattened surfaces are made slightly convex transversely. At the end of the machine where the finished cigarettes

are delivered we fix upon the spindles of the pulleys toothed wheels *j j* of the same size, which gear with each other, so that when one of them is made to revolve at the proper speed the two bands *d* and *h* travel forward at exactly the same speed, gradually compressing the cylindrical cigarettes which have been introduced at the other end and finally delivering them in the desired flattened condition; or, as shown in drawings, the spindle of the lower toothed wheel *j* may carry a chain-wheel geared by a chain *k* to a second chain-wheel *l* upon a shaft *m*, driven from any suitable power by fast and loose pulleys *n n*. A hand-wheel *o* may be fixed upon the same shaft.

Rollers *p p*, provided with springs *q*, keep the bands *c* and *h* properly stretched. Hinged brushes *r r*, also provided with springs *s s*, keep the surface of the bands *c h* properly cleaned. *t* is a guard to prevent injury to the person feeding the cigarettes into the machine. The flattened cigarettes are delivered at *u*.

The details of construction and arrangement may be varied more or less, as may be found advisable.

Having fully described our invention, what we desire to claim and secure by Letters Patent is—

1. In a shaping-machine for cigarettes, the combination with the lower frame, provided with a shallow longitudinal channel, an upper frame having a similarly-constructed channel, a belt passing along the first channel, means for driving the belt, a second flexible belt traveling along the channel of the upper frame, said belt being arranged at a slight incline, so that the cigarettes passing through the channels are flattened, and delivering means disposed at the outer ends of the channels, substantially as described.

2. In a cigarette-machine for flattening the sides of cigarettes, a frame provided with a longitudinal channel, a driven belt passing through said channel, a longitudinal adjustable member provided with a channel disposed adjacent to said frame, the channel in

the latter member being in registry with that of the frame, a second endless flexible belt passing through said second channel, means for driving the belts, and means for delivering the cigarettes after they have passed through the channel, substantially as set forth.

3. In a machine of the type set forth, a frame provided with a channel, a longitudinal adjustable member disposed adjacent to said frame, provided with a channel adapted to register with the channel of the frame, belts passing through each of said channels, and means for driving the belts, substantially as described.

4. In a machine for flattening cigarettes, a frame provided with a channel somewhat convex in cross-section, and a second frame provided with a similar channel, said frame being adjustable and slightly inclined from the forward end of the machine to the rear end of the machine, belts passing in each of said channels, means for driving the belts, and a delivery means disposed at the ends of the channels, substantially as set forth.

5. In a device for shaping and flattening cigarettes, a main frame, and an adjustable frame, said latter frame being inclined from the forward portion of the machine to the rear thereof, conveyers or belts working within each of said frames, and means for driving the same, substantially as described.

6. In a machine of the character described, a pair of frames, one of said frames being adjustable and inclined with relation to the other of said frames, each frame being provided with a longitudinal channel, belts passing through said channels, means for operating the belts, and delivery means adapted to engage with the cigarettes as they emerge from the channels, substantially as described.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

LAZARIDAS APTEKMAN.

CYRIL CHARLES OGILVY VAN LENNEP.

Witnesses:

ARTHUR E. EDWARDS,

ALEX. N. FAREWELL.