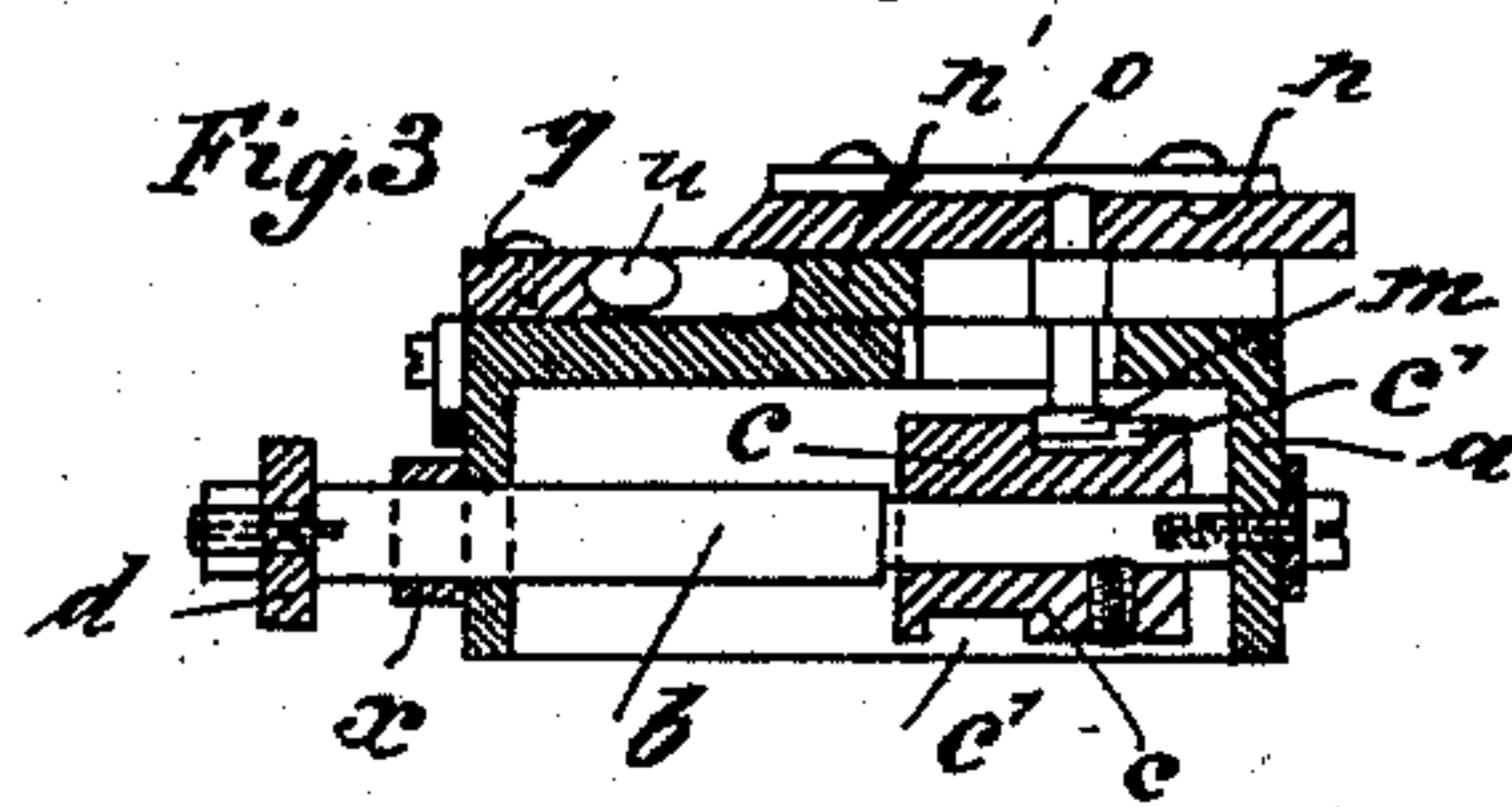
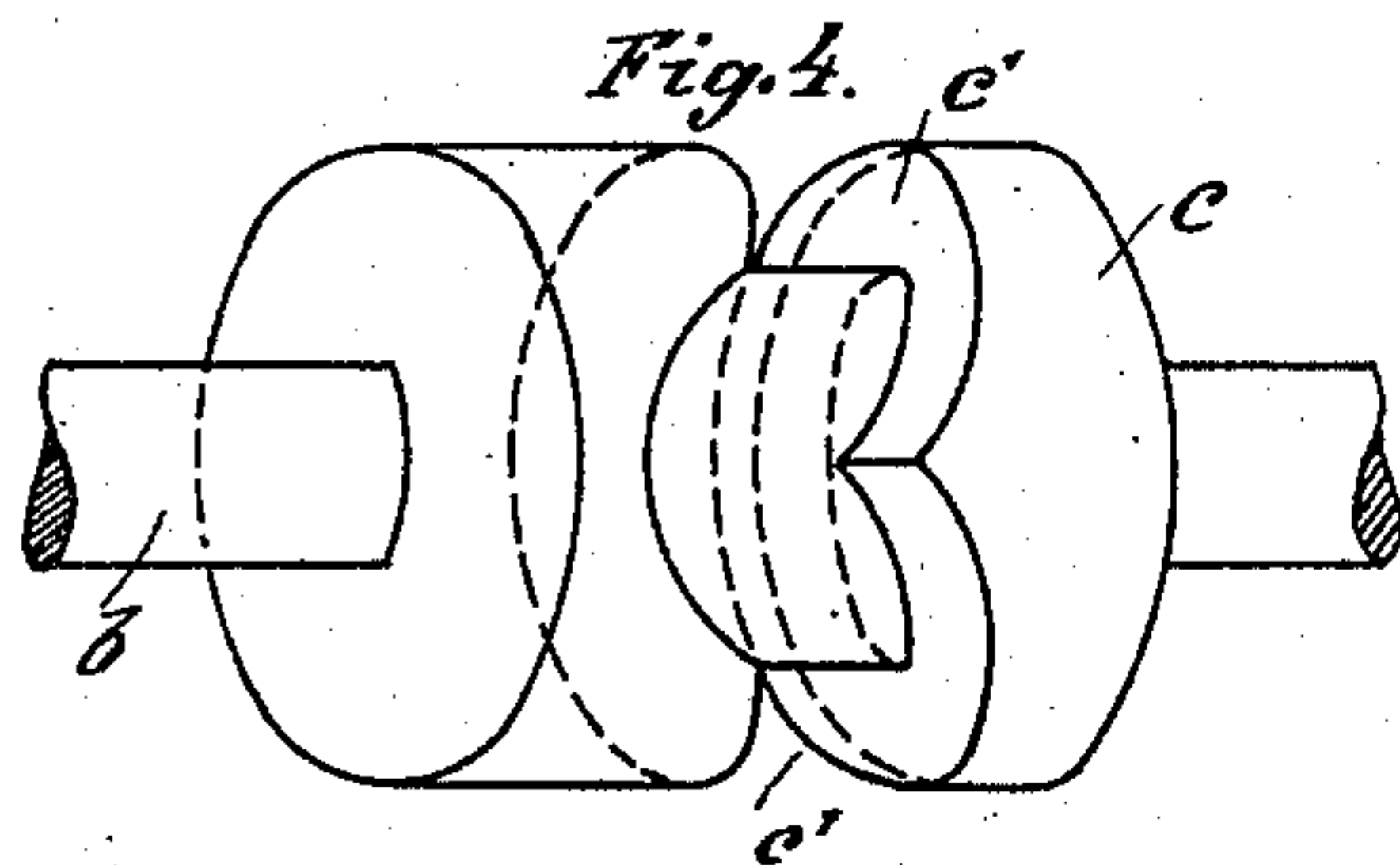
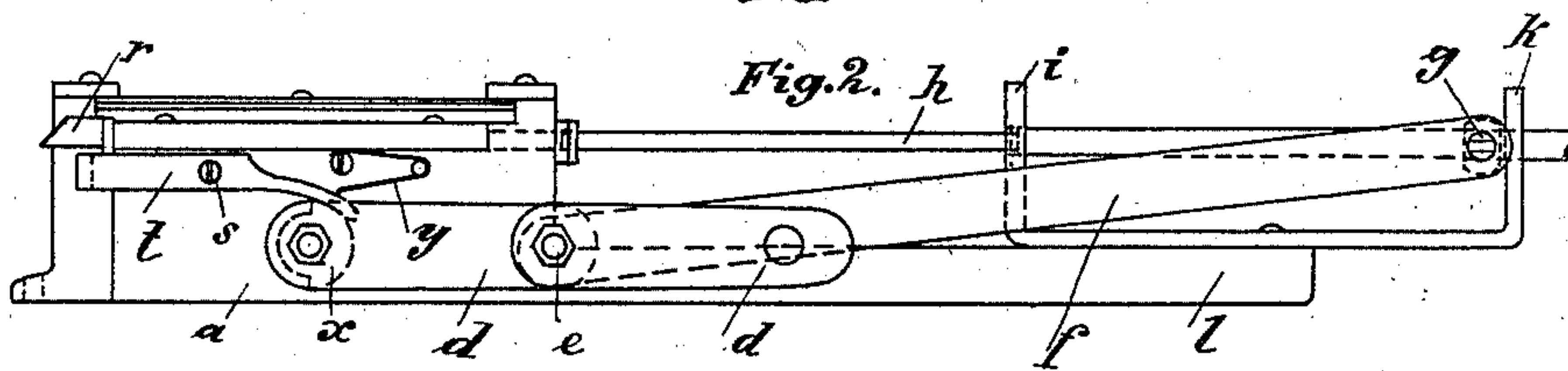
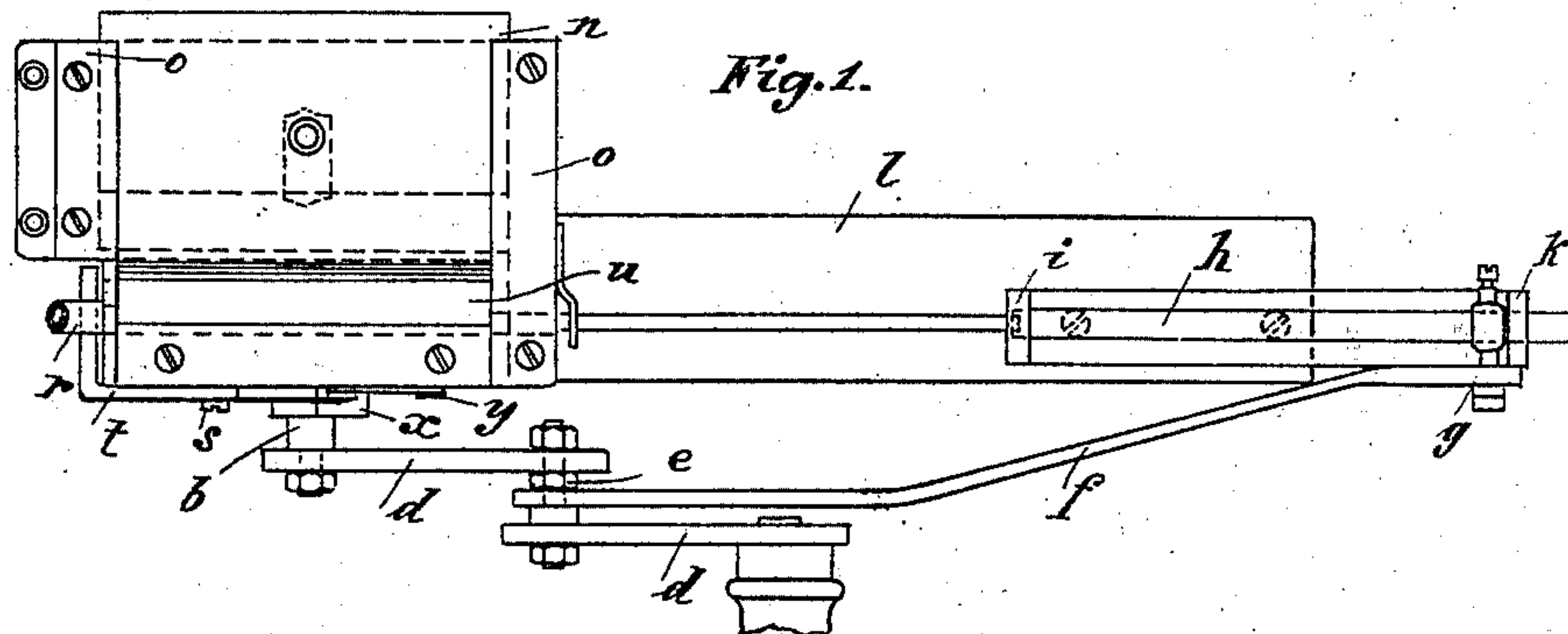


(No Model.)

M. STERN.
CIGARETTE MAKING MACHINE.

No. 598,753.

Patented Feb. 8, 1898.



Witnesses:

Herbert Lawson.
Alfred Robertson

Inventor:

M. Stern
Alexander & Dowell
by his Attys.

UNITED STATES PATENT OFFICE.

MORITZ STERN, OF FRANKFORT-ON-THE-MAIN, GERMANY.

CIGARETTE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 598,753, dated February 8, 1898.

Application filed January 7, 1897. Serial No. 618,363. (No model.)

To all whom it may concern:

Be it known that I, MORITZ STERN, a subject of the King of Prussia, Emperor of Germany, residing at No. 34 Kronprinzenstrasse, Frankfort-on-the-Main, in the Empire of Germany, have invented a new and useful Cigarette-Making Machine, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain improvements in cigarette-making machines; and it consists in the novel construction and combination of parts hereinafter described and claimed.

15 In the accompanying drawings, which illustrate a cigarette-machine embodying this invention, Figure 1 is a view in plan. Fig. 2 is a view in side elevation. Fig. 3 is a view in cross-section; and Fig. 4 is a view showing drum *c* in perspective, enlarged.

Throughout the views similar parts are marked with like letters of reference.

On a cast-iron casing *a* is journaled a transverse shaft *b*, on which is a drum *c*. A crank *d* is keyed on this shaft *b*. This crank has pivoted on it at *e* one end of a bar *f*, which is pivoted at its other end *g* to a stud *g'* on a rod *h*, guided in eyes *i* *k* on an extension *l* of the casing, the rod being capable of moving longitudinally.

30 Above shaft *b* is a slide *n*, which is movable transversely of the casing in guides *o* and is provided with a depending stud *m*, that passes through a slot *a'* in the casing and engages the cam-groove *c'* of drum *c*. When the drum *c* makes a revolution, the slide *n* is caused to reciprocate to and fro.

Upon the top and front edge of the casing is fixed a bar *q*, concaved on its inner edge opposite the concaved edge of a bar *n'*, fixed to slide *n*. A short mouthpiece *r* is mounted at one end of the casing near bar *q*. A lever *t* is pivoted at the point *s* to the front of the casing, and its end *t'* is bent so as to underlie mouthpiece *r*. The other end of lever *t* is acted upon by a double cam-disk *x*, mounted on the shaft *b* in such a manner that the lever *t* holds the cigarette-tube (not shown) on the mouthpiece *r* while it is being filled. The cigarette-tube when filled is released by the lever and can then be removed. A small

spring *y* has a constant tendency to force the lever against the mouthpiece.

When the slide *n* is in the position shown in Fig. 3, the tobacco, as in all machines of this kind, can then be introduced into the aperture *u* intermediate bars *q* and *n'*. Upon the further rotation of drum *c* stud *m* forces the slide *n* forwardly and bar *n'* contracts the opening gradually. During the further rotation of the drum bar *f* pulls the rod *h* at the proper time to the left, and the end of rod *h* passes into the space between bars *q* and *n'* as soon as the slide *n* has completed its forward movement. The tobacco in excess is pushed off by the projecting edge *n²* of plate *n*, and the rod *h* is then caused by further rotation of the crank to compress the tobacco to some extent and to force the same out through the mouthpiece *r* into the cigarette-tube, of paper, which was previously mounted upon the mouthpiece. Thereafter the cam-disk *x* acts to slightly lift the end of lever *t*, so as to cause it to release the paper tube as soon as the rod *h* has pushed the tobacco filling into it. In consequence of the peculiar form of the groove in the drum *c* the slide is quickly opened and closed, this happening always when the crank has moved into its proper position. By this means cigarettes can be made in the shortest possible time. In cigarettes thus made the tobacco is filled in quite uniformly and not too tightly.

It will be understood that the shape in cross-section of the cigarettes is not limited to the oval form indicated in the drawings. By suitably varying the concavities of the edges of bars *q* and *n'* cigarettes could be made just as easily of round or other form in cross-section. In each case, however, it is obvious that the short mouthpiece *r*, upon which the paper tubes are mounted, should be altered in cross-section accordingly.

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

1. The combination of a stationary and a movable bar concaved on their edges, a cam-grooved drum engaging a stud on one bar for moving it toward the other; and a holder for an empty cigarette wrapper or tube at the ends of the bars; with a sliding rod or plunger

for pushing the compressed and formed filler from between the bars into said tube, a crank on the drum-shaft and a bar connecting said crank to said rod, for the purpose and substantially as described.

2. The combination of the fixed bar, the sliding plate opposite thereto having a depending stud, and a reciprocating rod adapted to pass between the bar and plate; with the crank-shaft below the plate, the cam-grooved drum thereon engaging the stud on said plate; and the bar *f* connecting rod *h* to a crank on said shaft, for the purpose and substantially as described.

3. In a cigarette-machine the combination of the casing *a*, the shaft *b* journaled therein, the grooved drum *c* and crank *d* on said shaft; the fixed bar *q* and the sliding plate *n* having a stud *m* engaging the groove of the drum; and the movable bar *n'* attached to plate *n*; with the sliding rod *h*, and the bar *f* connect-

ing said rod to the crank *d*, all substantially as and for the purpose described.

4. The combination of the casing, the fixed bar *q*, the sliding bar *n'* and its plate *n* having a depending stud as *m*; and the reciprocating rod *h* adapted to work between bars *q* and *n'*; with the crank-shaft *b*, the cam-grooved drum *c* thereon engaging stud *m* for operating plate *n*; and the bar *f* connecting the rod *h* to a crank *d* on said shaft; with the tube-holder *r* at the end of bar *q*, the pivoted spring-closed clamp-lever, and the cam *x* on shaft *b* for releasing lever *t*, all constructed and arranged substantially as and for the purpose described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MORITZ STERN.

Witnesses:

DEAN B. MASON,
JEAN GRUND.