

(No Model.)

3 Sheets—Sheet 1.

E. GEORGII.

MACHINE FOR PRESSING AND CUTTING CIGARETTES.

No. 591.250.

Patented Oct. 5, 1897.

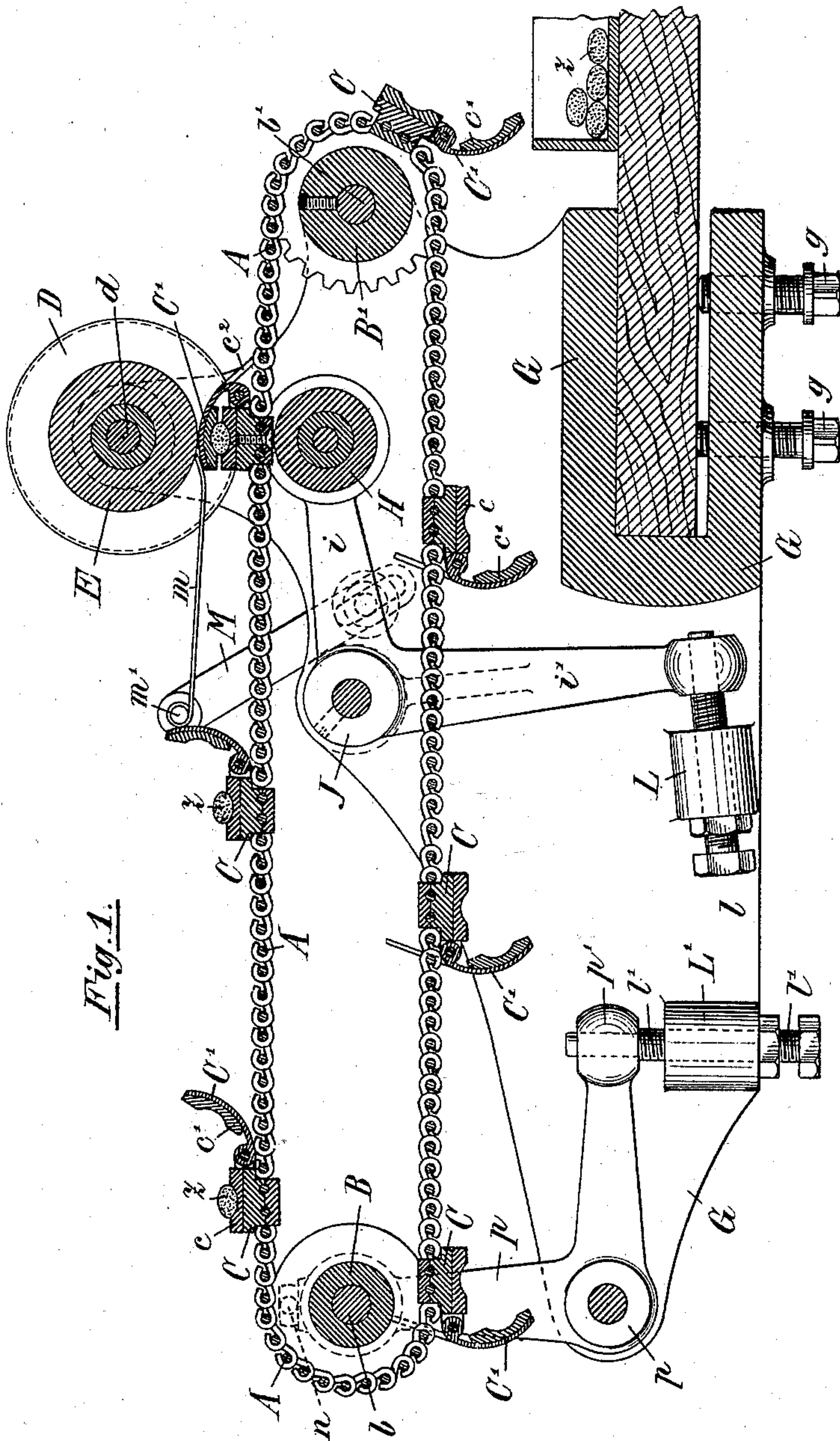


Fig. 1.

Witnesses.

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Inventor.

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Fig. 2.

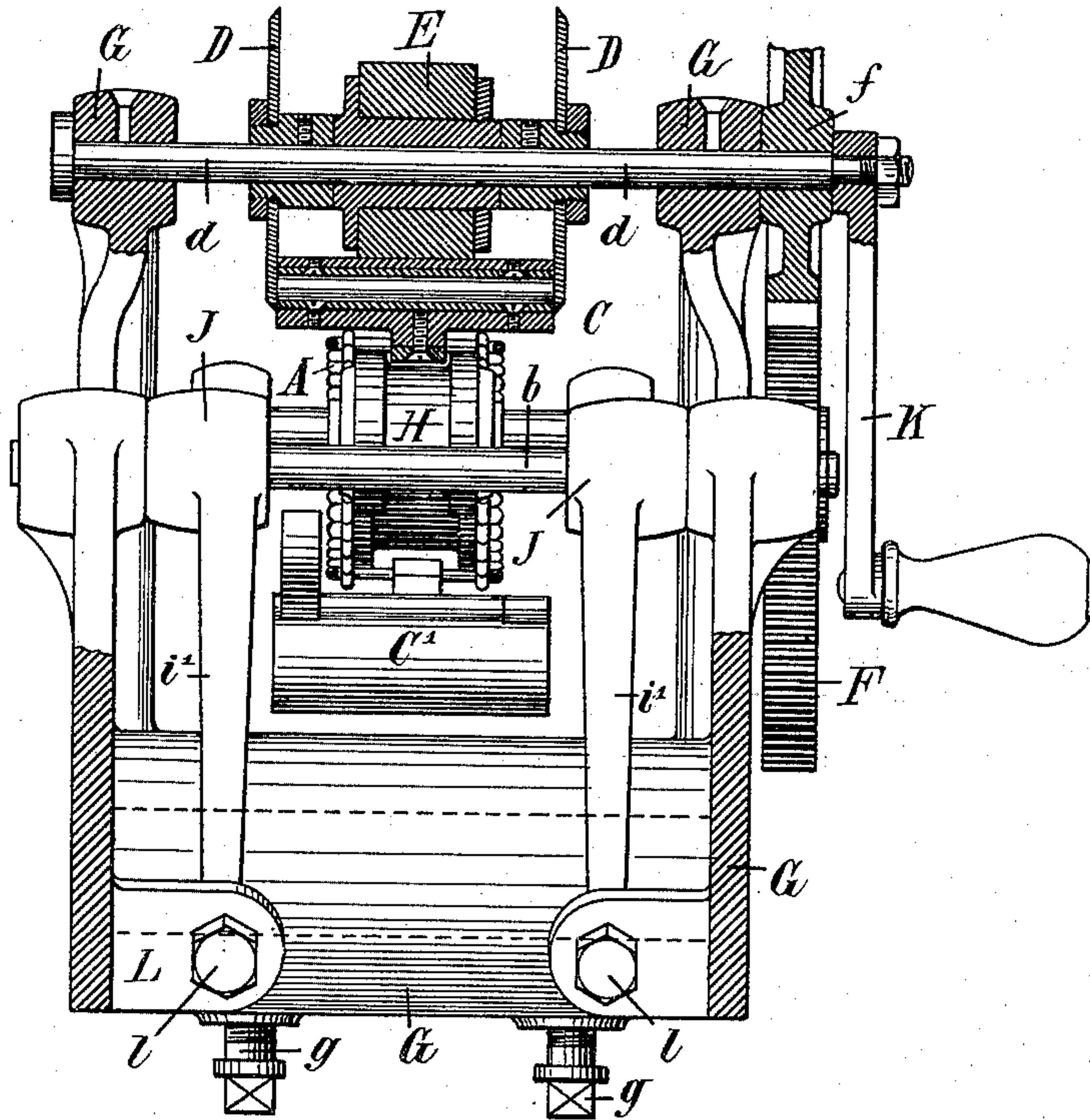


Fig. 4.

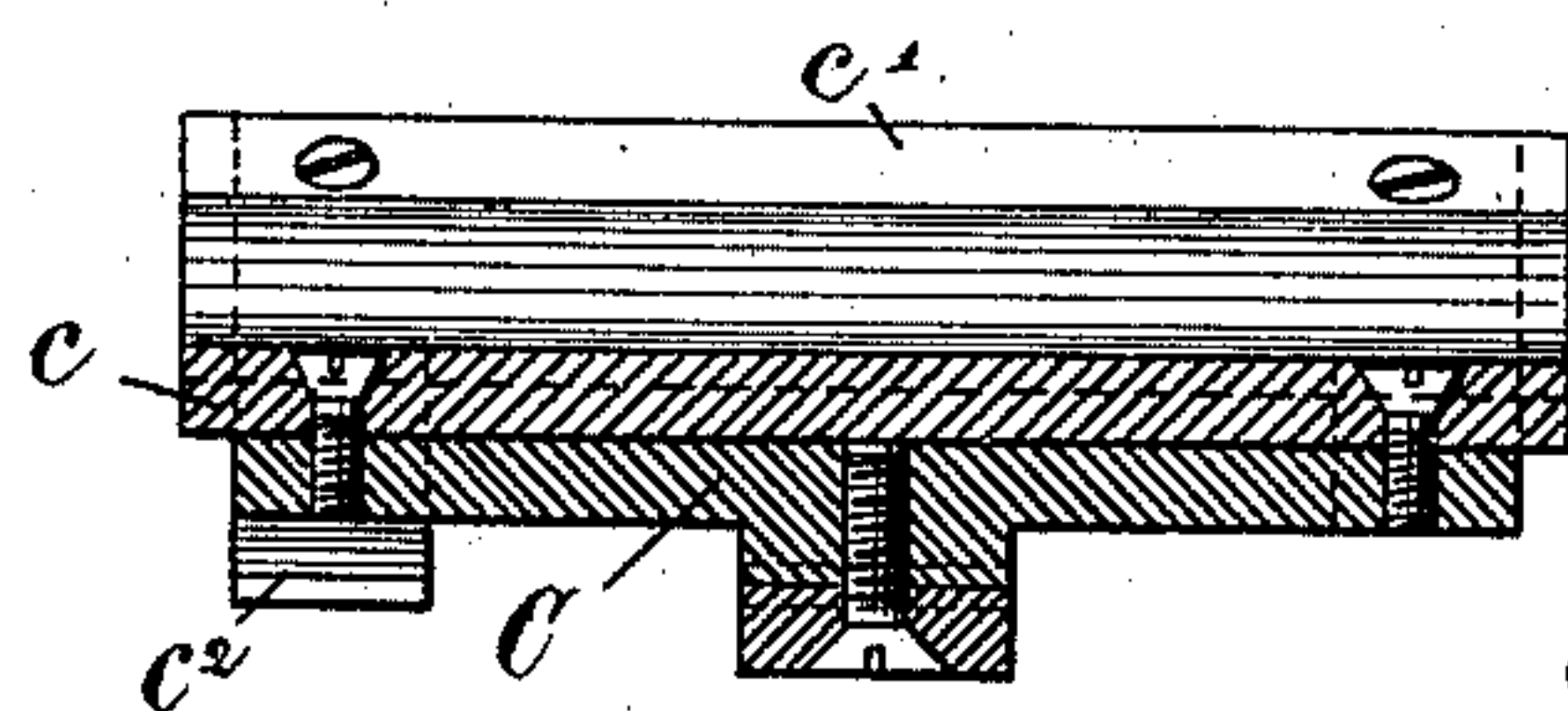


Fig. 5.

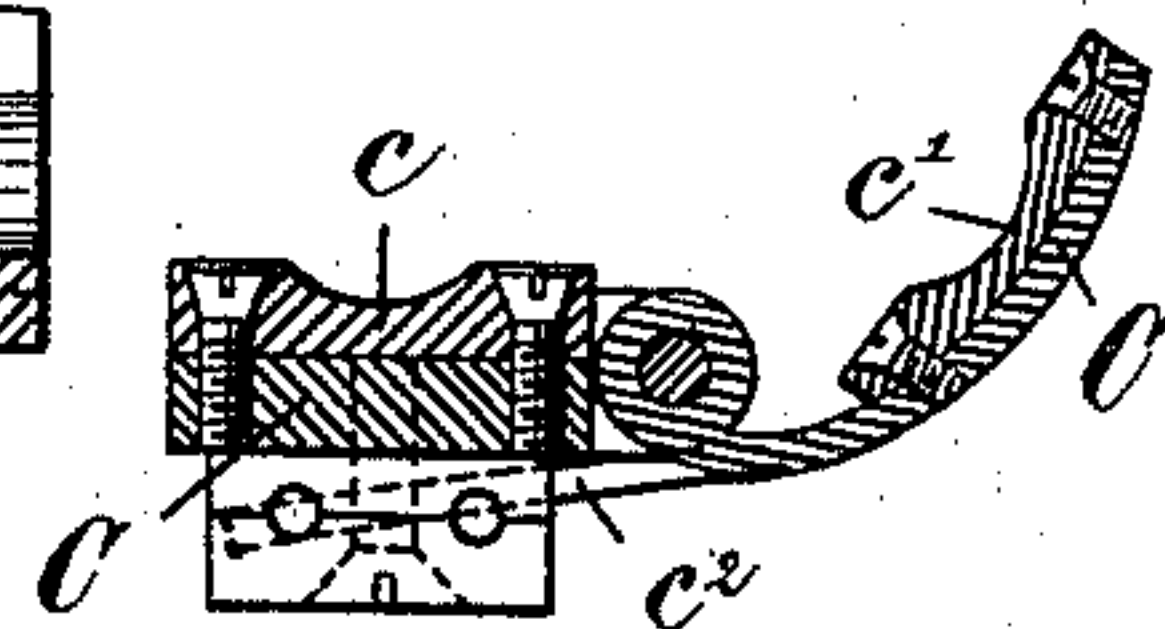
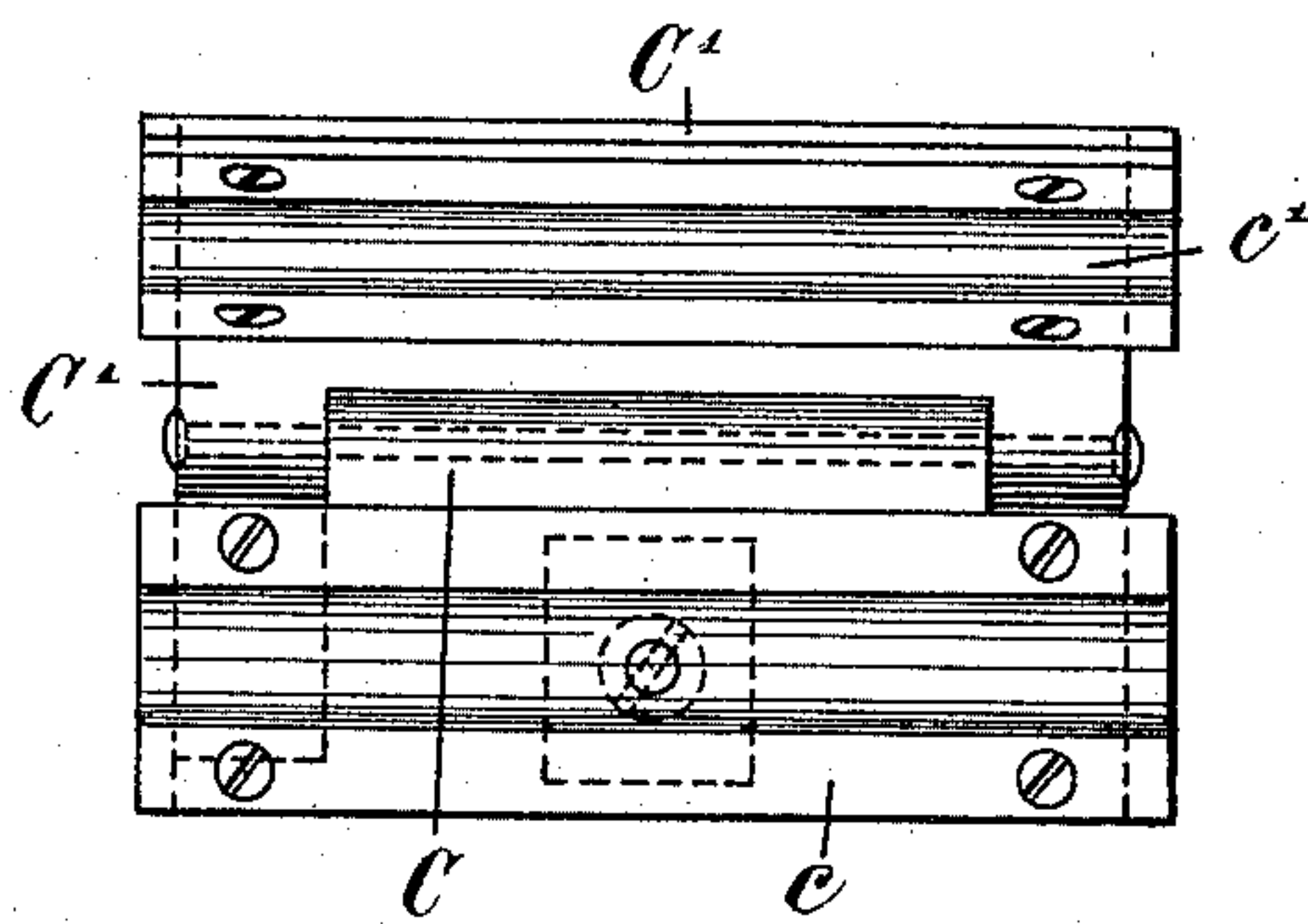


Fig. 6.



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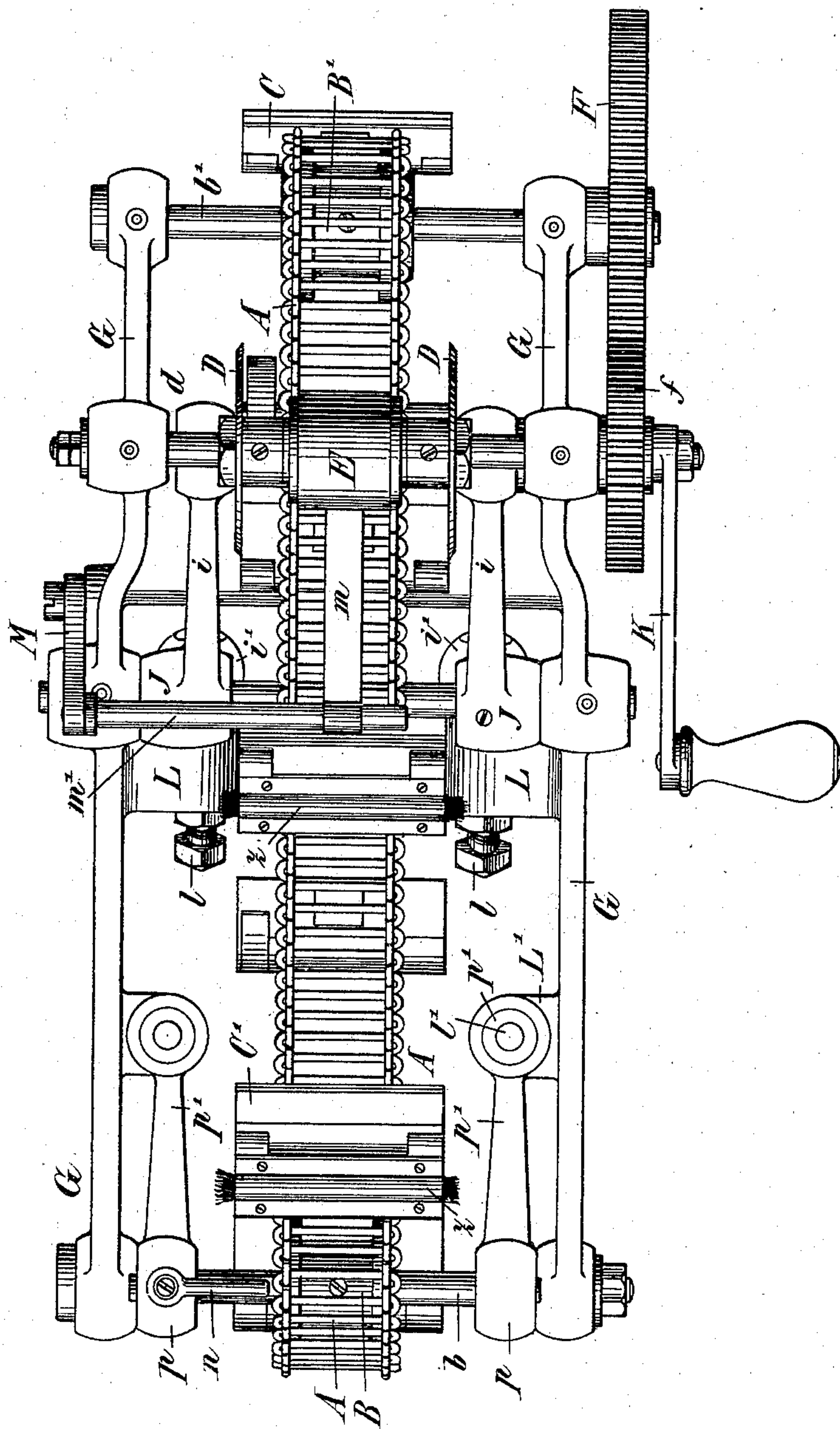


Fig. 3.

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UNITED STATES PATENT OFFICE.

EMIL GEORGH, OF STUTTGART, GERMANY.

MACHINE FOR PRESSING AND CUTTING CIGARETTES.

SPECIFICATION forming part of Letters Patent No. 591,250, dated October 5, 1897.

Application filed April 24, 1897. Serial No. 633,704. (No model.)

To all whom it may concern:

Be it known that I, EMIL GEORGH, residing at 14 Wagenburgstrasse, Stuttgart, Germany, have invented a new and useful Machine for Pressing and Cutting Cigarettes, of which the following is a specification.

My invention relates to improvements in machines for cutting and pressing cigarettes and the like.

The object of the present invention is to provide a machine for cutting cigarettes of various forms and sizes at both ends at one and the same time while simultaneously compressing the same into any desired shape. Elliptical cigarettes are at present very much in demand, and since cigarettes made by machine or by hand are mostly made of circular cross-section such cigarettes must be subsequently pressed into the desired form. Moreover, the tobacco projecting beyond the paper wrapper must be afterward trimmed flush with the edges of the wrapper.

The machine hereinafter described is designed to carry out the trimming as well as as the pressing simultaneously.

In the drawings, Figure 1 is a longitudinal sectional view of a machine embodying my invention; Fig. 2, a transverse section, and Fig. 3 a plan of the same. Figs. 4 to 6 illustrate, on an enlarged scale, the clamp within which the cigarette is held and pressed in trimming.

The machine consists, essentially, in an endless chain or an endless band or apron A, passing over two rollers B and B', a continual motion being imparted to the said chain or band by means of the hand, foot, or power, and upon which are attached a number of clamping-pieces C, having hinged covers C'. Into these clamps, in which are mounted round, oval, or quadrangular or any other desired dies, the cigarettes are placed by hand, whereupon the covers C' are closed, the cigarettes being then carried below two circular cutters D, which serve to trim the projecting tobacco at both ends of the cigarettes even with the paper wrapper. The cigarettes within the clamps in passing below the knives are simultaneously either maintained in their round cross-section or compressed into a quadrangular, oval, or any other desired form, and subsequently they automatically drop from

the clamps into a subjacent collecting-receiver at one end of the machine.

In the drawings is represented a small trimming-machine for manual operation, in which the chain A is driven by a crank K from the cutter-shaft *d* through the gears *f* and F, the latter of which is mounted on the shaft *b'*, upon which is also secured the sprocket-roller B', which engages with the chain A. Below the cutter-disks and below the chain A is arranged a pressure-roller H, which is preferably elastic and which is made vertically adjustable by being journaled in the horizontal arms *i* of pivoted bell-crank levers J, whose vertical arms *i'* may be adjusted by set-screws *l*, which are mounted in bosses L of the frame G of the machine. As the clamps C pass under the cutter-disks D, in which operation the cover C' is first closed by striking against a stud *m'*, which is secured to a supporting-piece M, fastened to the frame A, the cover C' and the clamp C are compressed by the roller H and the roller E, arranged between the knives D, and at the same time the trimming of the cigarette at both ends takes place. To retain the cover C' on the clamping-piece C on that portion of its path before these parts are pressed together by the rollers E and H, a spring *n*, which is secured to the stud *m'* and whose end rests upon the cover, is provided.

Within the clamp C and the cover C' are arranged interchangeable interiorly trough-shaped dies *c* and *c'*, which in pressing together the members of the clamp compress the cigarette Z into the desired form corresponding to the form in cross-section of the troughs.

The cigarettes are placed into the open clamps C by hand. In passing the rear roller B' the covers C' open automatically and the cigarette automatically drops from the clamp into the collecting-receiver below. In order that the covers C' of the clamps C, which hang downward during their progress on the under side of the chain A, will remain open after passing the front roller B, a stud *n* is so arranged at the side of the front guide-roller B for the chain A that, so soon as the clamp C arrives at the upper portion of the roller B, an arm *c'*, attached to the cover C' at one side thereof and extending beyond the hinge,

impinges against this stud and opens the cover C'.

For the purpose of maintaining the chain A taut as the links become worn, the axle *b* of the one roller B is journaled in the arms *p* of two bell-crank levers P, pivoted on the frame G, the other arms *p'* of said levers being susceptible of adjustment by set-screws *l'*, which are threaded into bosses L' of the frame G.

The frame G is secured to a table, work-bench, or the like by means of a clamp G' and clamp-screws *g*.

Instead of an endless chain A any other endless band of leather, fabric, or the like, to which the clamping parts are secured, may manifestly be employed.

The speed of the chain depends on the skill of the operator who attends to the introduction of the cigarettes into the clamp-troughs.

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

1. In a cigarette-machine, the combination of an endless chain, a series of compressing-dies carried by said chain, revoluble knives working above said chain, and mechanism for simultaneously operating said knives, dies, and the chain.

2. In a cigarette-machine, the combination of a pair of knives, an endless chain arranged below said knives, compressing-dies carried by said chain and adapted to pass closely between said knives, and mechanism for simultaneously operating the knives, dies, and the chain.

3. In a cigarette-machine, the combination of an endless chain, clamps carried by said chain, dies removably fitted in said clamps, means for automatically closing the clamps, and means for operating the chain.

4. In a cigarette-machine, the combination of an endless chain, compressing-clamps carried thereby, a stud arranged in the path of said clamps to close the same, a spring extending from said stud and adapted to bear on the passing clamps, and means for operating the chain.

5. In a cigarette-machine, the combination of a pair of revoluble knives, a compressing-roller arranged between the same, an endless chain, compressing-clamps mounted on said chain and carried thereby between the knives and below the compressing-roller, and means for simultaneously operating the chain, knives and roller.

6. The combination of the endless chain, compressing-dies carried thereby, a pair of knives adapted to operate at the ends of the dies, a compressing-roller above the chain, an adjustable pressure-roller below the chain and in the same vertical plane as the compressing-roller, and suitable operating mechanism.

7. A machine for compressing and trimming cigarettes comprising a pair of knives, an endless belt passing below said knives, a series of compressing-dies carried by said belt, and means for keeping the dies closed as they pass between the knives.

8. A cigarette-machine comprising means for compressing the cigarettes into elliptical form and means for trimming the ends of the cigarette simultaneously with the compressing thereof.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EMIL GEORGII.

Witnesses:

AUGUST B. DRAUTZ,
CHRISTIAN BANEY.