

No. 859,983.

PATENTED JULY 16, 1907.

L. A. SCHAEFFER.
CIGAR MAKING MACHINE.
APPLICATION FILED SEPT. 25, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

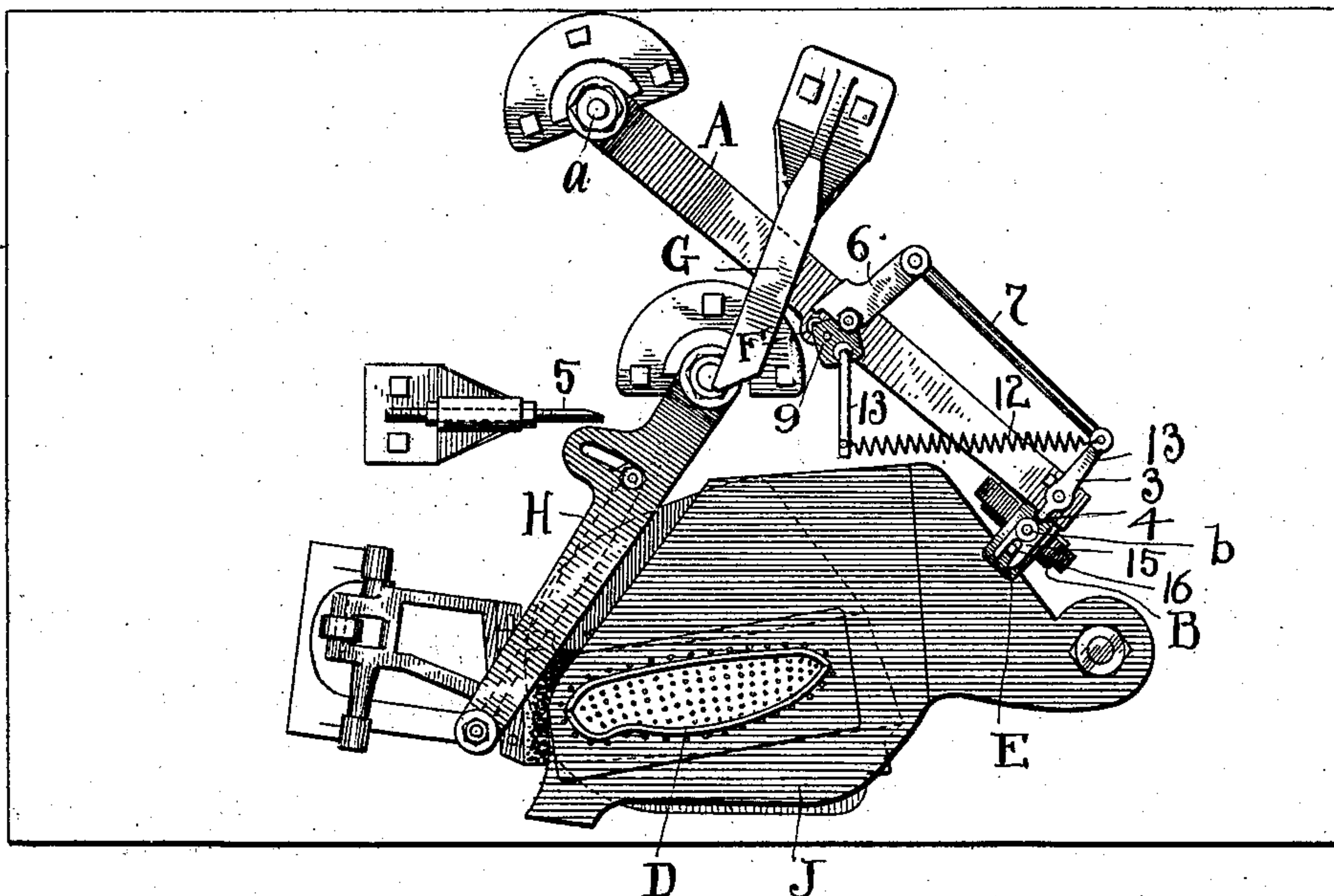
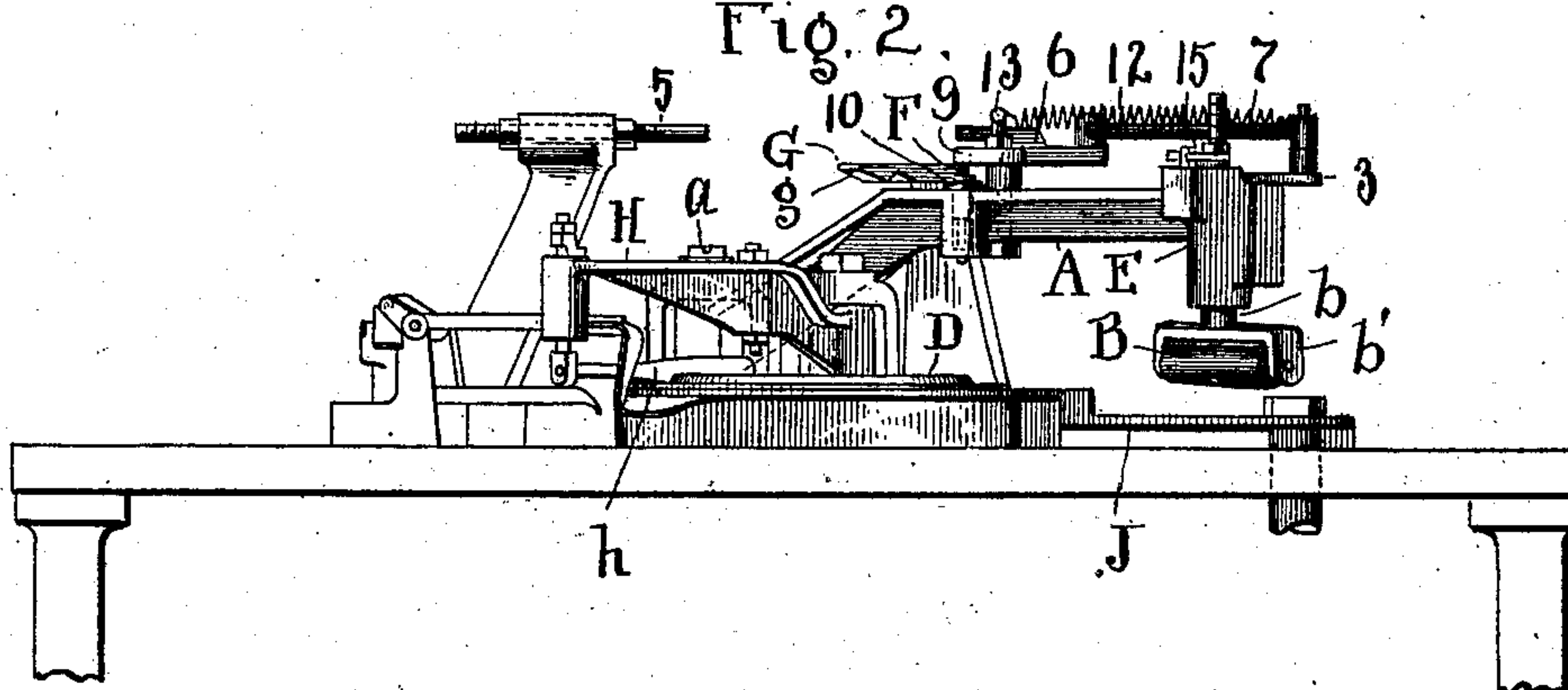


Fig. 2.



ATTEST.

R. B. Moore
H. Moore

BY

INVENTOR

Lester A. Schaeffer

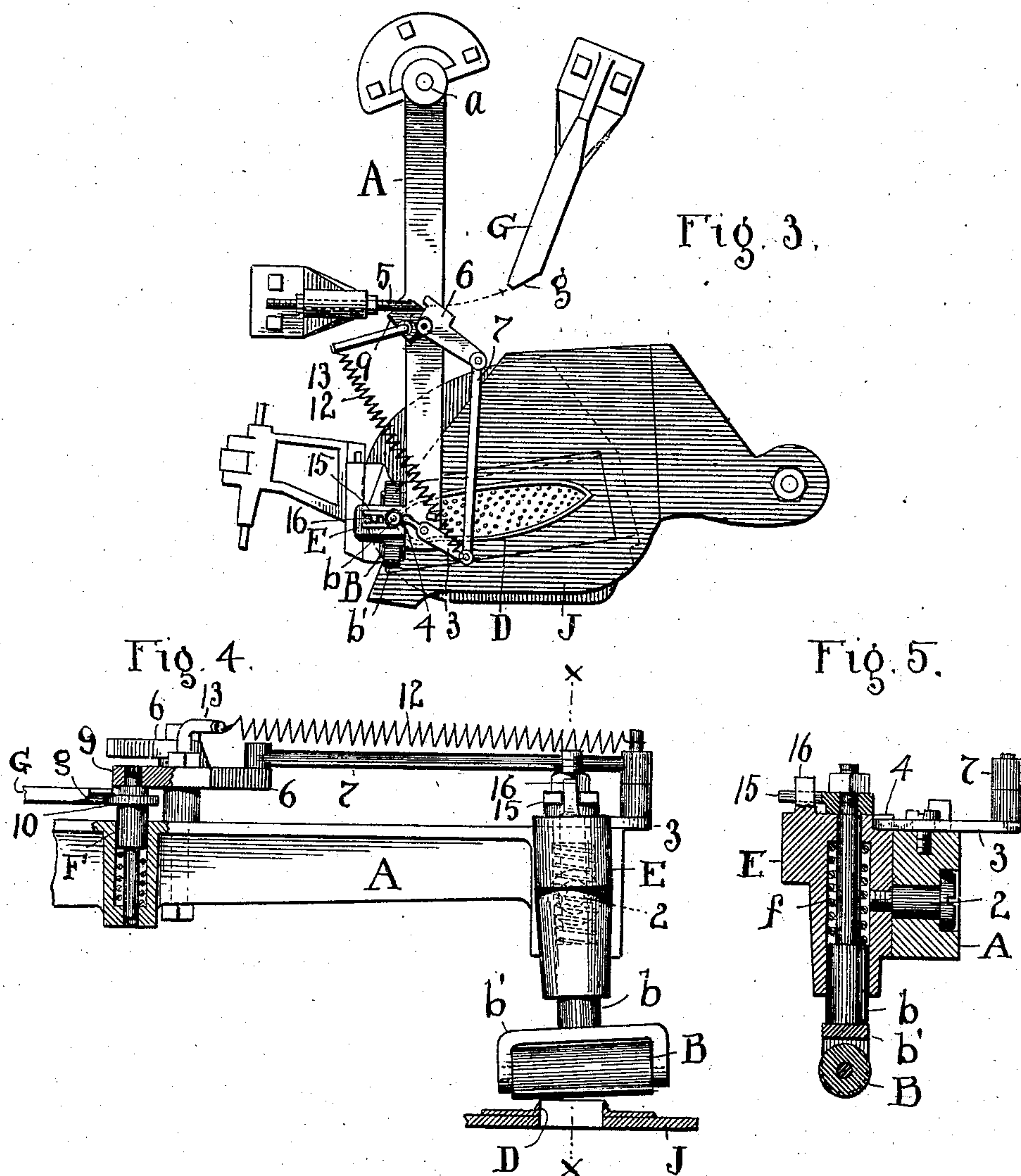
H. J. Fisher ATTY.

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A. L. Moore

INVENTOR
Lester A. Schaeffer

By *H. J. Fisher* ATTY.

UNITED STATES PATENT OFFICE.

LESTER A. SCHAEFFER, OF DAYTON, OHIO, ASSIGNOR OF TWO-FIFTHS TO EDGAR A. SCHAEFFER AND B. D. ANNEWALT, OF CLEVELAND, OHIO.

CIGAR-MAKING MACHINE.

No. 859,983.

Specification of Letters Patent.

Patented July 16, 1907.

Original application filed September 25, 1905, Serial No. 278,964. Divided and this application filed September 25, 1905, Serial No. 280,066.

To all whom it may concern:

Be it known that I, LESTER A. SCHAEFFER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Cigar-Making Machines; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to improvements in cigar making machines, and the invention consists specifically in means for cutting a cigar wrapper on the machine, and is a division of an application for improvements in machines for making cigars filed concurrently with
15 this application and bearing Serial No. 278,964.

In the accompanying drawings Figure 1 is a plan view of the wrapper roller cutting portion of the cigar making machine above referred to, and Fig. 2 is a front elevation of the mechanism shown in Fig. 1. Fig.
20 3 is a plan view of the portion of the said mechanism containing the roller for cutting the leaf and the means for tilting the same, and Fig. 4 is an elevation of the said mechanism looking in from the left of Fig. 3 and showing the roller tilted for its return trip. Fig. 5 is a
25 vertical sectional elevation of the roller and its immediate support, as will hereinafter more fully appear.

In the manufacture of cigars by machinery it is desirable that there should be a wrapper cutting mechanism on the machine, and adapted to both cut and to
30 hold the wrapper preparatory for the wrapping operation. This operation immediately succeeds the cutting of the wrapper, as is found especially in the machine above referred to and in which all the operations are automatic. Furthermore, several different ways
35 have been employed from time to time for cutting wrappers on machines, all of which include a die or cutter shaped to the form the wrapper is desired to have, and in one instance having a roller running broadly across both edges of the die and cutting out
40 the wrapper while the reverse movement of the roller is idle, suction being employed to hold the wrapper in place.

In another machine, and as set forth in my concurrent application Serial No. 64,738, the roller is arranged
45 and adapted to run around the circuit of the die, making the run up one side and around the end of the die and down the other side, thus making a single running contact with the die. This latter construction has the advantage of accommodating the roller to any inequalities in the die, which is practically impossible in a roller that bears on both edges across the die at the same time.

In the present construction I provide means for run-

ning the roller forward over one edge and back over the other, with the roller tilted or inclined horizontally
55 first one way and then the other, the change from one inclination to the other coming at the inner end of the sweep of the roller where it pauses temporarily for reversal. The means by which this novel operation is worked out comprise a horizontally swinging or rota-
60 table arm A, which carries the wrapper cutting roller B at its outer end, and said arm is pivoted at *a* upon the main frame or table of the machine in such position and relation as to sweep the roller back and forth over the die or wrapper cutter D. Normally the said
65 arm is retired to starting position as seen in Fig. 1, and the limit of its inward sweep and the position of reversal or tilting of the roller is shown in Fig. 3. Here the roller is seen to have reached the inner end or portion of the die, and the roller itself is tilted from the
70 outer edge to the inner edge thereof, so as to travel back and cut along the inner edge as will hereinafter more fully appear. In the full machine above referred to this operation is automatic, but the said lever may be operated by hand in a more simple form of the
75 machine.

In detail, the roller B Fig. 5, is supported on a vertical spindle *b* having a bracket *b'* at its lower end in which the said roller is rotatably mounted, and the said spindle is carried by a head E, in which it is rota-
80 table and has a reduced portion surrounded by a spiral spring *f*. The said head is supported upon its inside against the end of arm A by means of a horizontal pivot screw or pin 2, projecting through a hole in said arm, in this instance, and having threaded fastening engagement at its extremity in the side of the said
85 head. This affords a rocking support for the head upon said arm, and the extent of such rocking is determined by the degree or distance the roller is required to tilt or incline as it travels over the respective edges of the die back and forth. Obviously, the rotation on pin 2 would be slight under such requirements, and the tilting of the said spindle or standard B through the head E is automatically effected by means of a short lever 3 pivoted between its ends on
95 the top and end of arm A and adapted to engage at its inner end in a recess 4 in the top and rear portion of head E. It follows that when lever 3 is rotated on its pivot it will turn the head E upon its pivot 2 more or less and thus tilt roller B to an inclined horizontal position.
100

The means for actuating lever 3 may be largely varied and come within the terms of the invention, but in this instance I show an adjustable stop 5 supported from the main frame of the machine and adapted to
105 engage the heel of an actuating lever 6 pivoted on arm A

and connected by rigid link 7 with lever 3. The said stop 5 is in such position upon the main frame that when the lever A reaches its limit at the inner end of its stroke the stop will engage lever 6 and cause it to rotate upon its pivot according to the adjusted position of said stop and thus actuate lever 3 and tilt the roller. The parts are then held in this position by means of a spring pressed bolt F Fig. 4 socketed in arm A in position to engage in a hole in the outer integral end 9 of lever 6, and said bolt has a collar 10 about its body. On the return of arm A to starting place the roller B is reversely inclined through a fixed projection G having a tapered inclined end or edge *g* which engages upon collar 10 of bolt F and depresses the same so as to release lever 6. Then spring 12 acts and throws all the said parts with roller B into opposite or starting inclination, Fig. 2. One end of spring 12 is attached to a finger 13 on the heel of lever 6 and the other end at the outer end of lever 3.

The wrapping roller carrying arm is indicated by H and the wrapping roller by *h*, while J is the die carrying plate, adapted to be raised after cutting the wrapper to make room for the wrapping mechanism.

It is to be noticed as peculiar to this machine that while a straight roller is used of a length to reach across the die it is always in an inclined or tilted position and therefore cuts only along one edge in each of its movements back and forth over the die. This gives me the advantage of a narrow rolling contact with the edge of the die which accommodates itself to the slightest inequalities therein and assures the perfect severing of the wrapper from the tobacco leaf.

A slotted arm 15 fixed to the upper end of spindle *b* has a sliding engagement with post 16 on head E adapting said spindle to a vertical movement under tension of spring *f* but preventing its rotation.

What I claim is:—

1. In a machine for making cigars, a pivoted member adapted to swing laterally back and forth, a wrapper cutting roller thereon, and means on said member adapted to tilt the roller operatively in respect to a horizontal plane, in combination with an oblong die longitudinally disposed in the line of the arc movement of said roller.

2. In a machine for making cigars, an arm rotatable horizontally, a wrapper cutting roller carried by said arm

adapted to travel on the arc of a circle, and means to alternately raise and depress the ends of said roller as the roller travels over its work, in combination with an oblong die longitudinally disposed in the path of said roller.

3. In a machine for making cigars, a horizontally swinging arm and a wrapper cutting roller supported thereon on a vertical axis, and means to incline said axis and thereby tilt the roller.

4. In a machine for making cigars, a rotatable arm and a wrapper cutting roller thereon having an upright axis, a separate support for the roller on said arm and means adapted to turn said support to tilt the roller and incline the same horizontally.

5. In a machine for making cigars, a radially movable arm, a wrapper cutting roller having an adjustable vertical spindle and a member carrying said spindle having a horizontal pivot on said arm, and mechanism to turn said member on its pivot and thereby tilt the said roller, in combination with a die plate beneath said roller.

6. In a machine for making cigars, a swinging arm and a wrapper cutting die, a roller upon the outer end of said arm having a vertical carrying spindle and a tilting support for said spindle, and means to tilt said support and spindle and incline said roller reversely in the back and forth movements of said lever.

7. In a machine for making cigars, the combination of a wrapper cutting die having an irregular curved cutting edge, with a cutting roller, an arm carrying said roller and adapted to sweep said roller on the arc of a circle on bisecting lines over said die edge, and means to tilt said roller to one inclination in the outward sweep of said arm and to the opposite inclination in the backward sweep thereof.

8. In a machine for making cigars, an arm adapted to swing horizontally and a tilting member thereon, a vertically movable spindle within said member, a cutting roller carried by said spindle, and mechanism to tilt the said member to opposite inclinations alternately in the back and forth movements of said arm, in combination with devices to engage said mechanism and cause its reversal.

9. In a machine for making cigars, a horizontally movable arm and a roller having a vertical carrying spindle and a spring therefor, a supporting member for said spindle pivotally mounted on said arm, mechanism carried by said arm adapted to tilt said member, and fixed projections adapted to operate said mechanism at the reversing movements of said arm.

In testimony whereof I sign this specification in the presence of two witnesses.

LESTER A. SCHAEFFER.

Witnesses:

R. B. MOSER,
C. A. SELL.