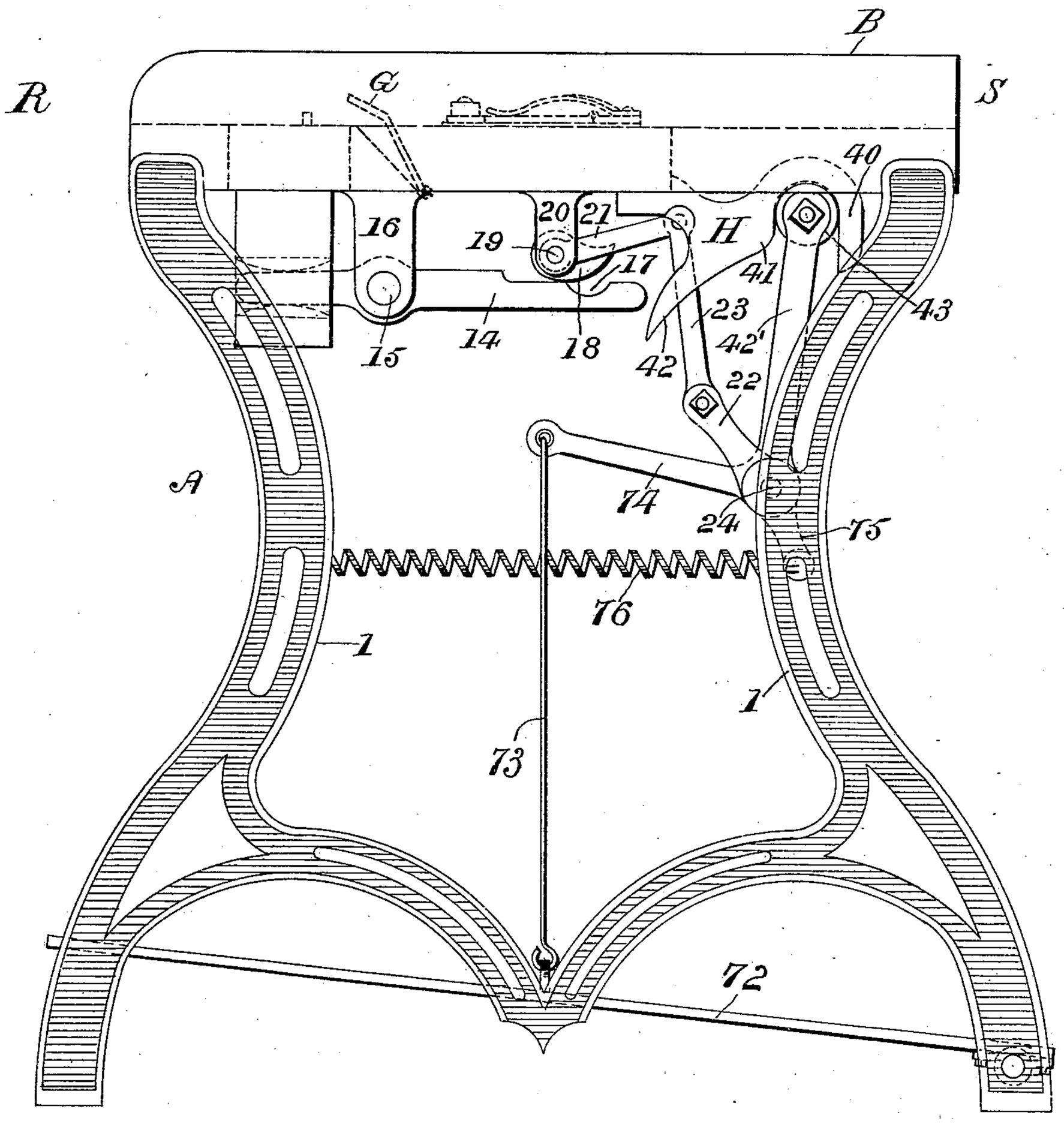
(No Model.) 7 Sheets—Sheet 1.

J. DELA MAR.

COMBINED CIGAR ROLLING TABLE AND WRAPPER CUTTER.

No. 547,556. Patented Oct. 8, 1895.

Fig. 1



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(No Model.) 7 Sheets—Sheet 2.

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Fig. 2

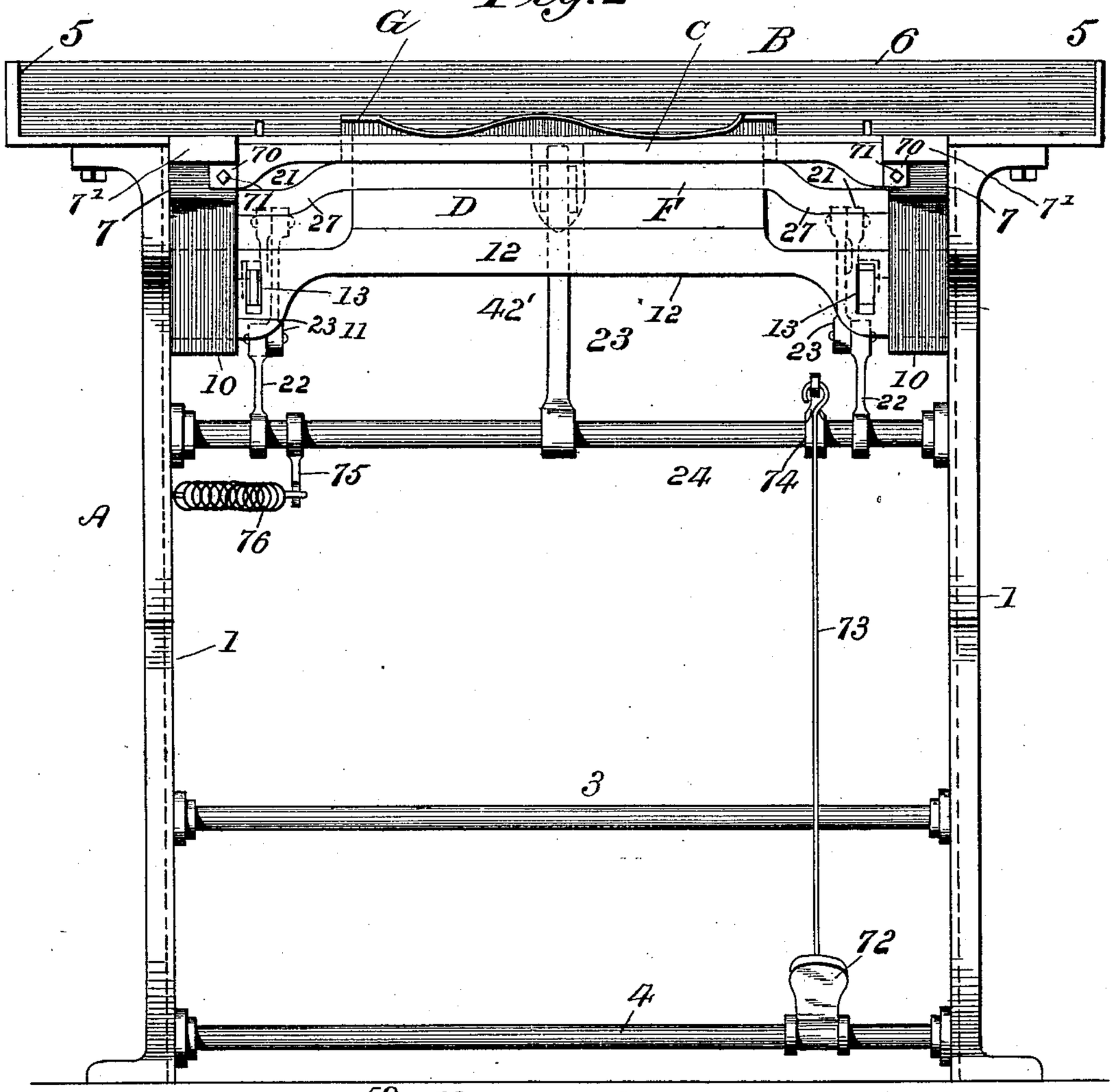

Fig. 9

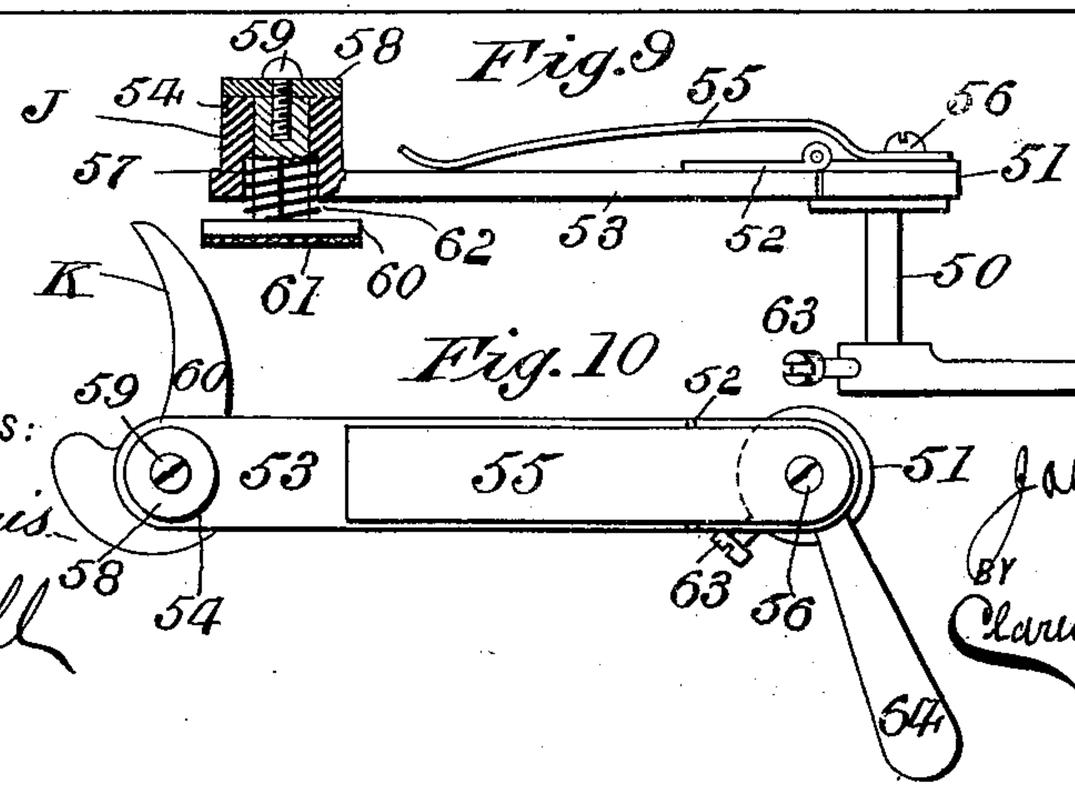

Fig. 10

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Fig. 3

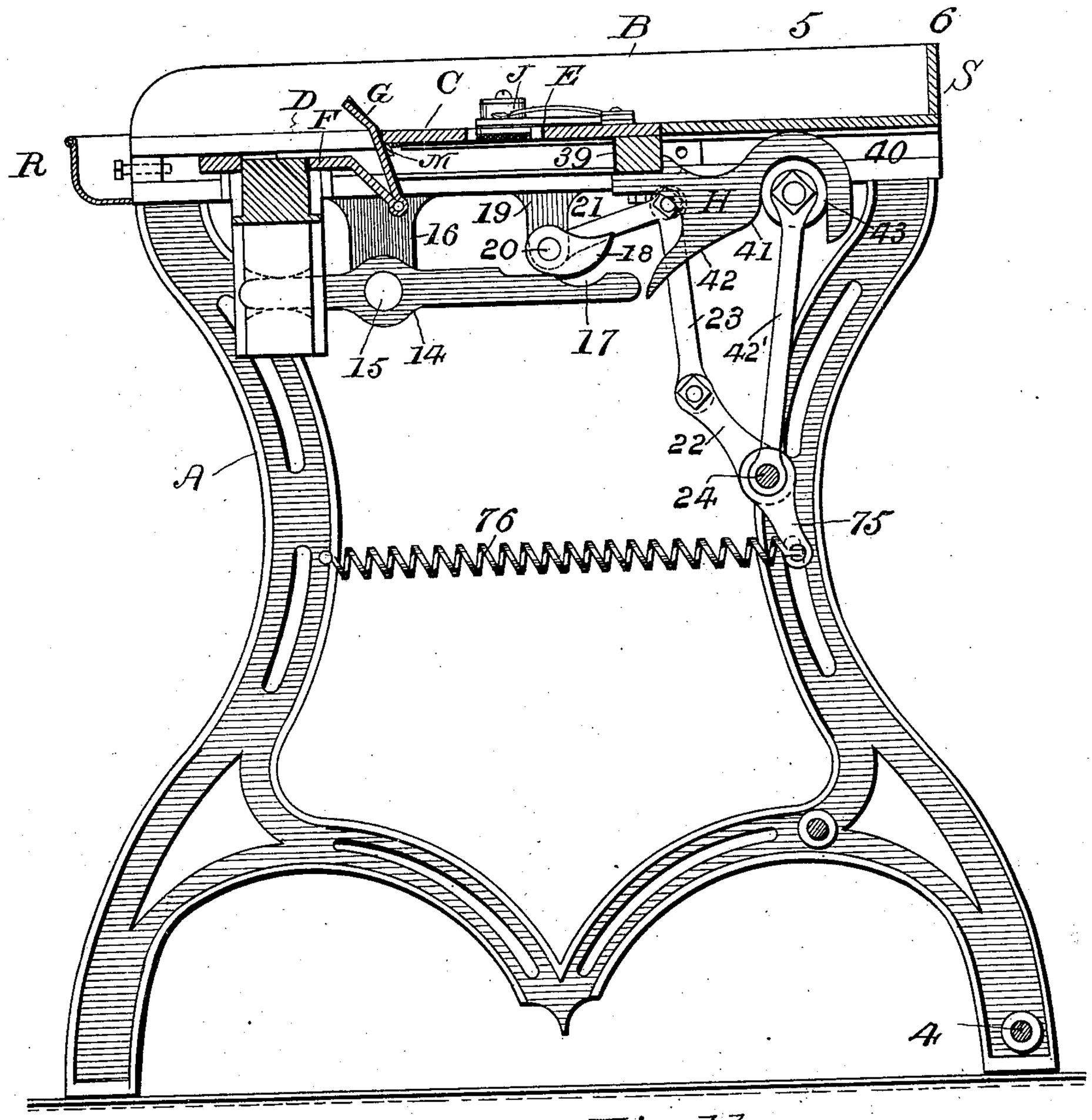
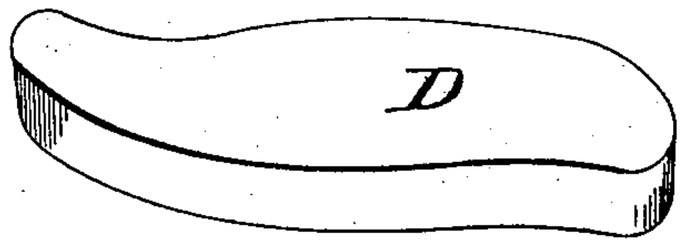


Fig. 11



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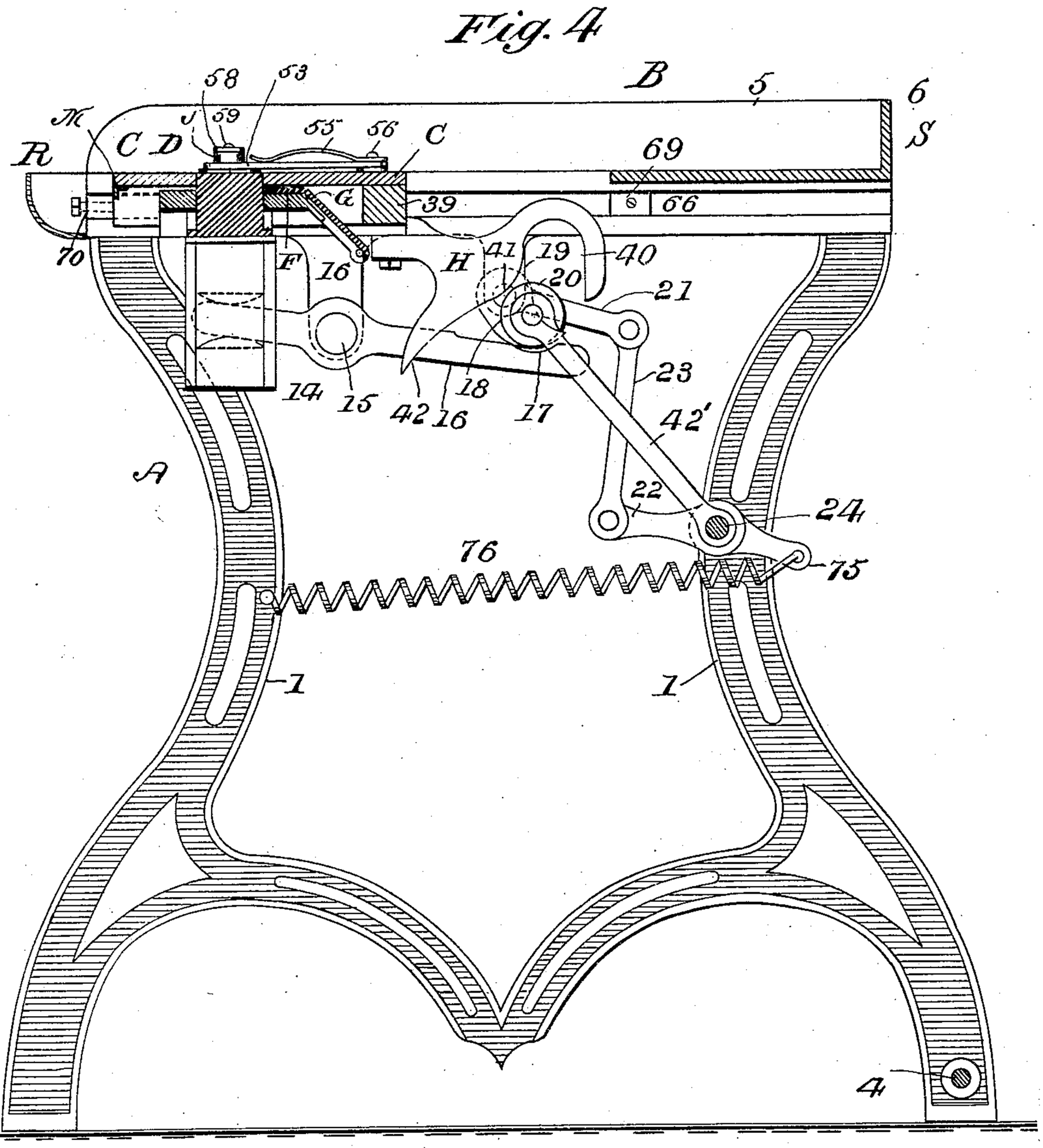
COMBINED CIGAR ROLLING TABLE AND WRAPPER CUTTER.

No. 547,556 Patented Oct. 8, 1895.

Fig. 4



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No. 547,556. Patented Oct. 8, 1895.

Fig. 5

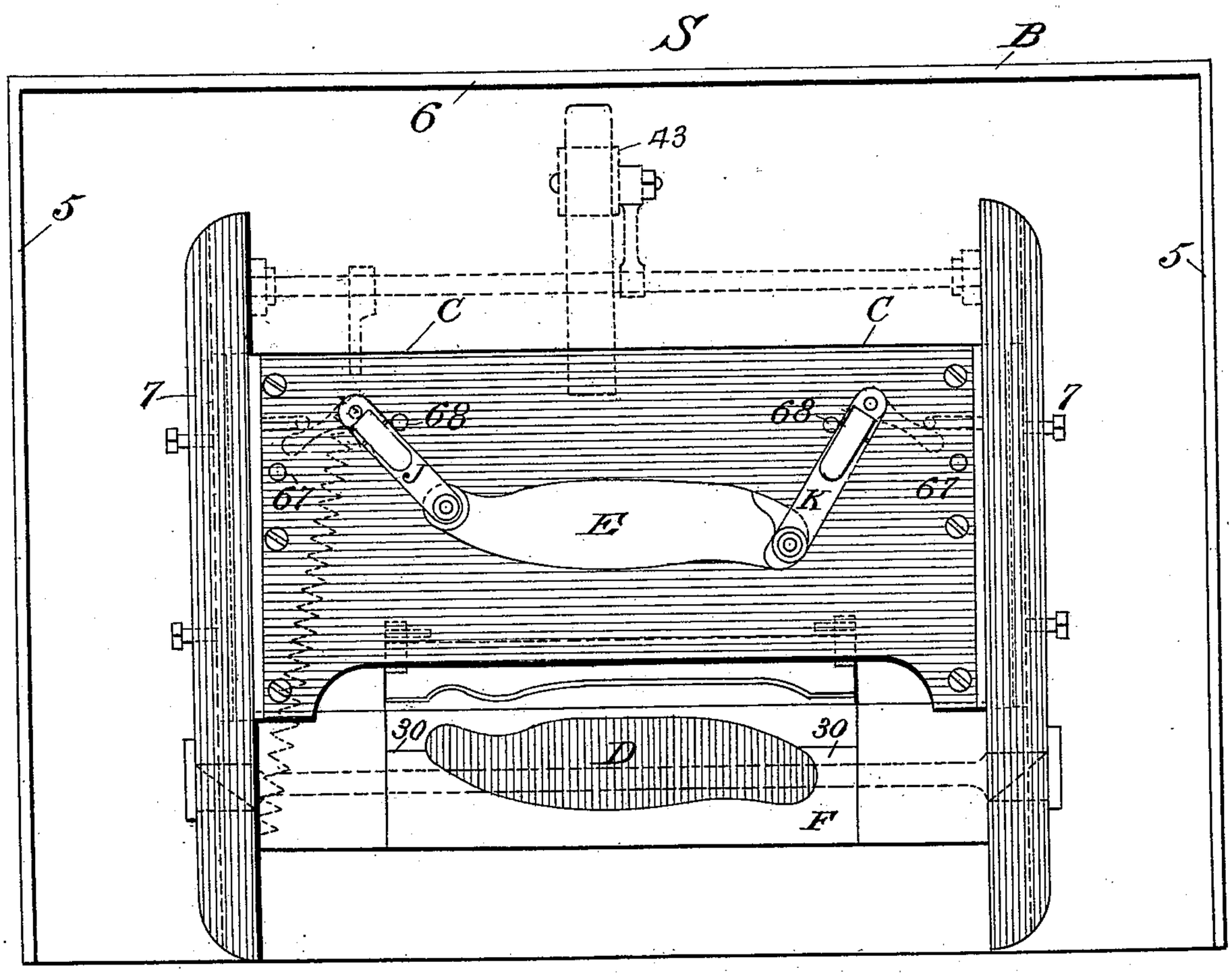


Fig. 12

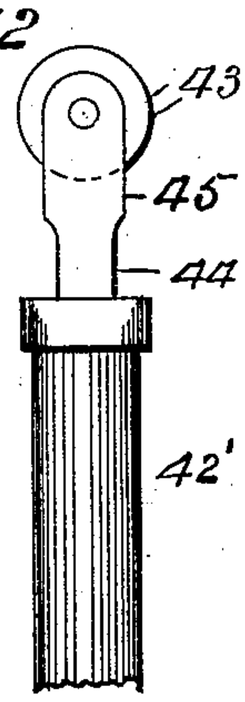
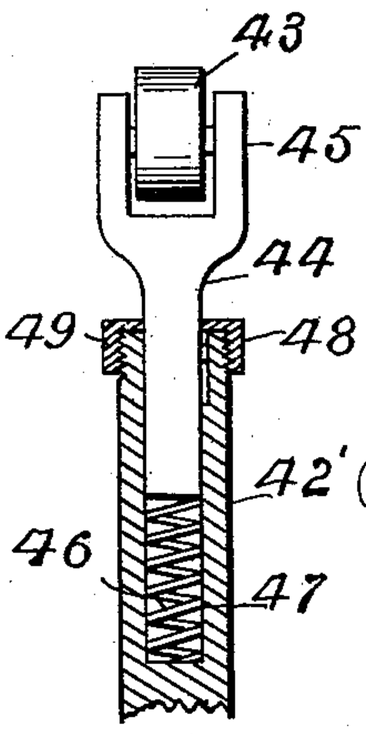


Fig. 13



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J. DELA MAR.

COMBINED CIGAR ROLLING TABLE AND WRAPPER CUTTER.

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Fig. 6

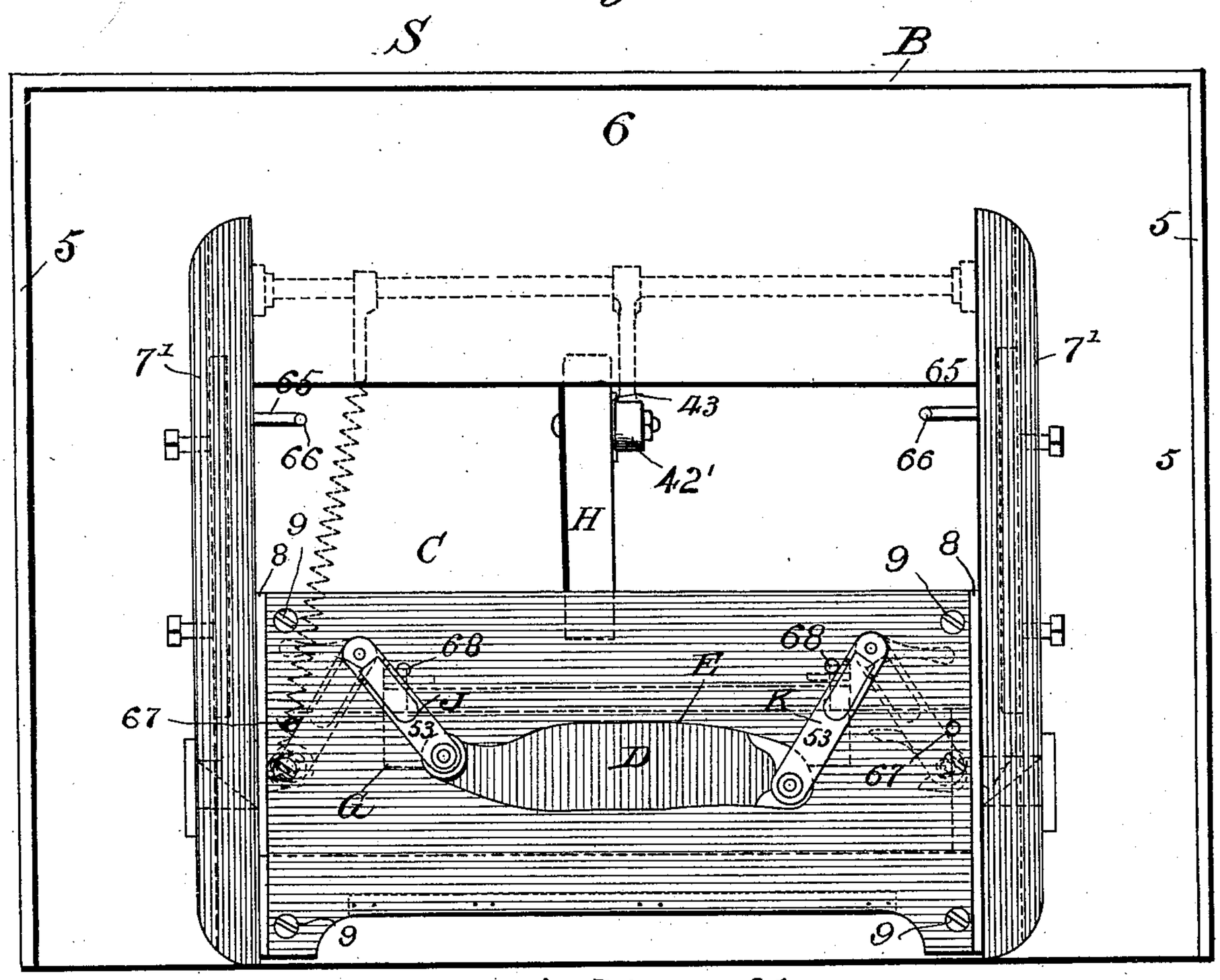


Fig. 14

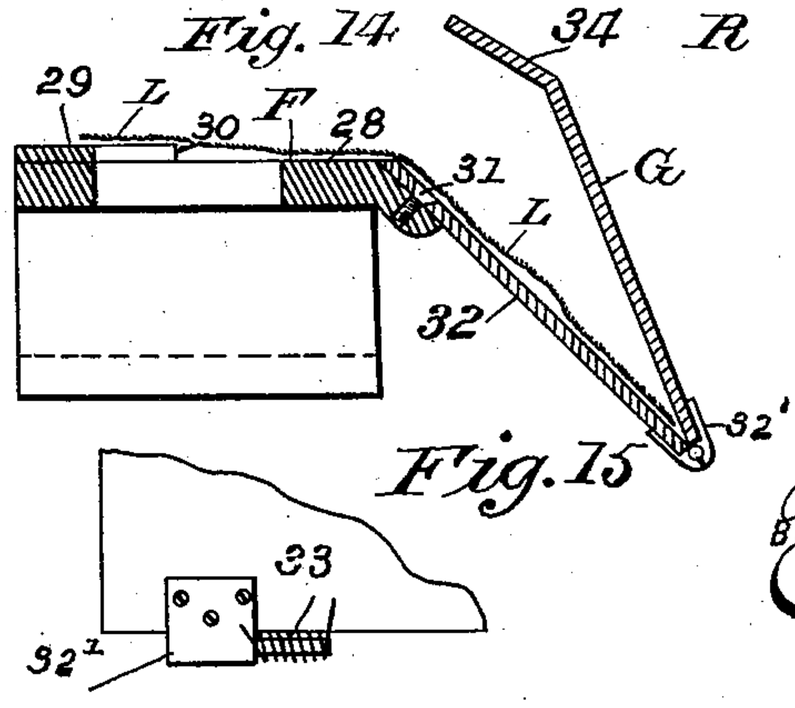
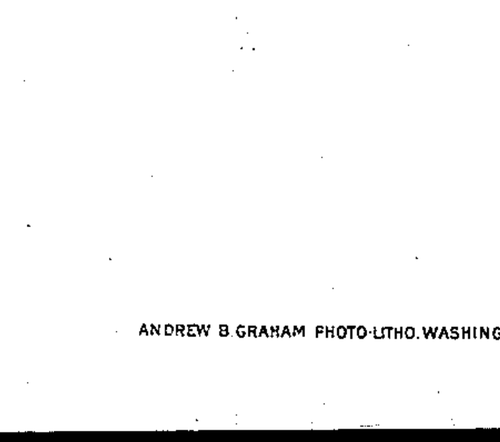


Fig. 15



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(No Model.) 7 Sheets—Sheet 7.

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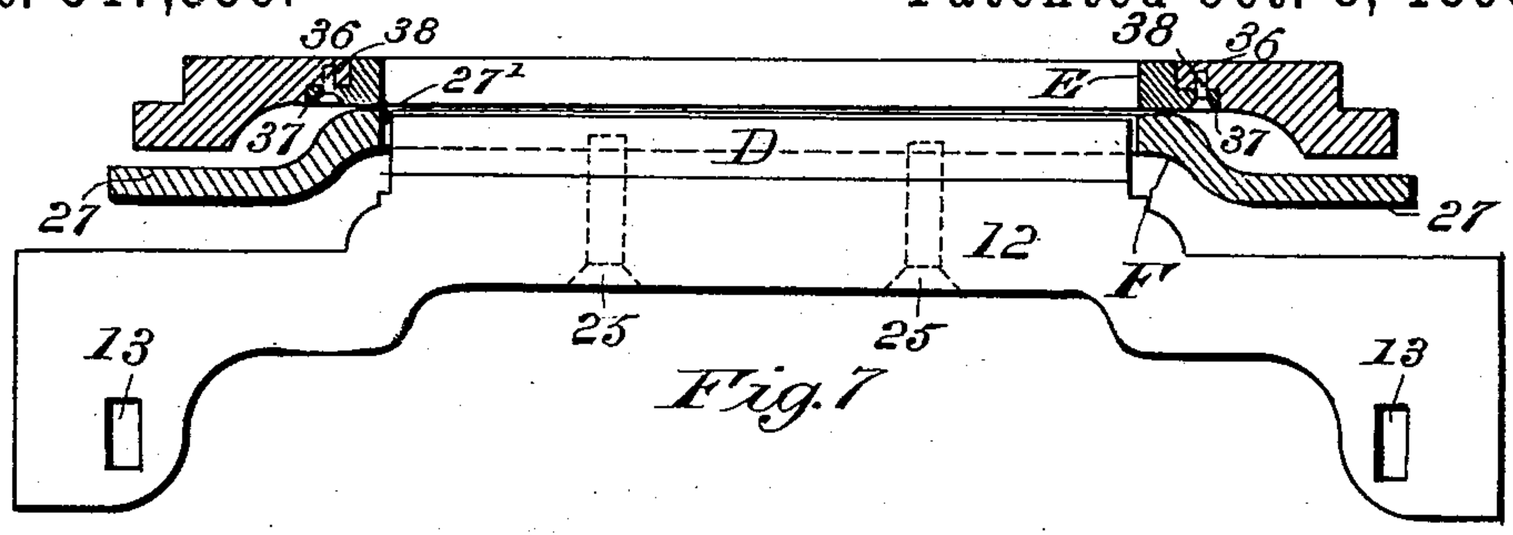

Fig. 7

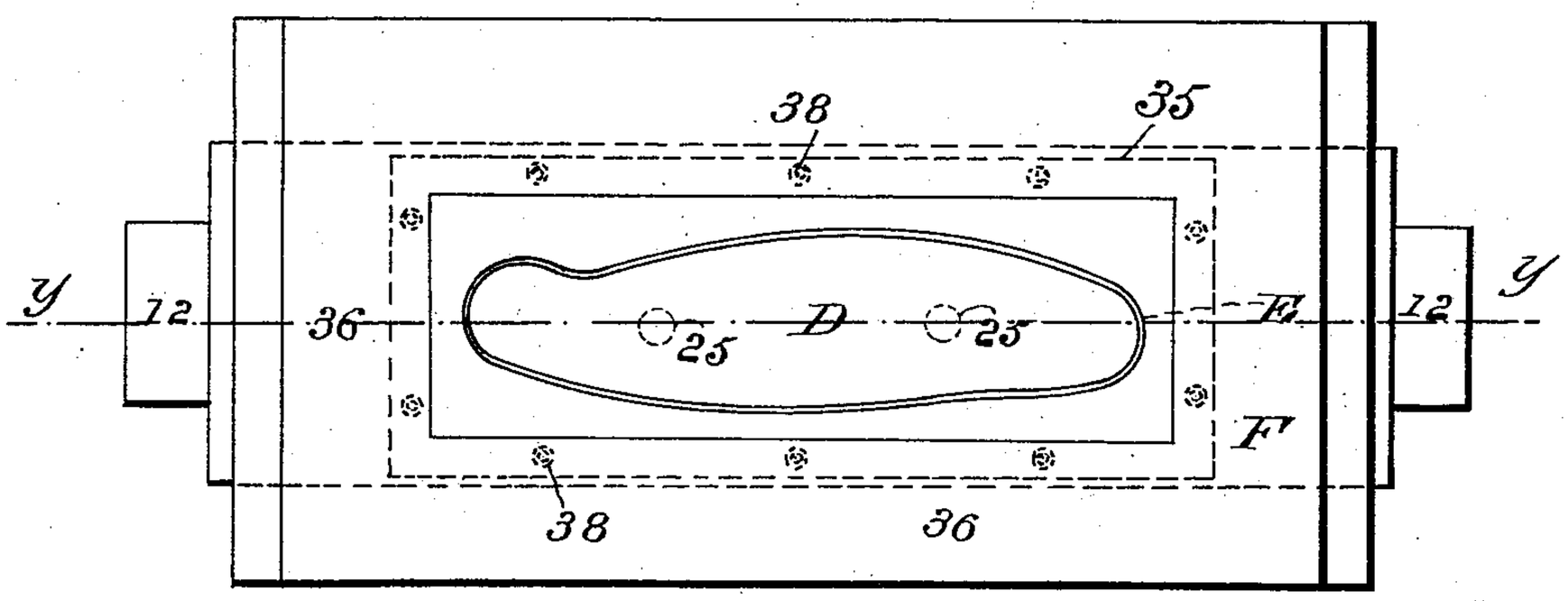

Fig. 8

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UNITED STATES PATENT OFFICE.

JOSEPH DELA MAR, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO BERNARD VAN LEER, OF SAME PLACE.

COMBINED CIGAR-ROLLING TABLE AND WRAPPER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 547,556, dated October 8, 1895.

Application filed May 17, 1895. Serial No. 549,614. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DELA MAR, a citizen of the United States of America, residing at the city and county of New York, in the State of New York, have invented certain new and useful Improvements in a Combined Cigar-Rolling Table and Wrapper-Cutter, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of my invention are, first, to provide a machine of simple and cheap form of construction, capable of being operated by unskilled and cheap labor, by the use of which the tobacco-leaf may be quickly and easily and with little if any extraction of the moisture therefrom cut into the required shape to form a cigar-wrapper, and, second, to provide means for holding the cut wrapper in position upon the wrapping-table so as to facilitate the operation of inclosing the cigar-bunch in such wrapper-leaf.

The machine of this invention is composed, in substance, of a moving wrapping-table, a female die carried by the wrapping-table, a male die adapted to enter and pass up through the female die when brought into registry therewith, a leaf support or table below the wrapping-table, means for holding the leaf to be cut in position upon the leaf-support while the wrapping-table is being moved so as to bring the female die into registry with the male die, a clamp or clamps for holding the cut wrapper in position upon the wrapping-surface after the same is carried up through the female die, mechanism for automatically bringing the clamp or clamps into registry with the female die when the wrapping-table is moved out of registry with the male die, and mechanism for moving the wrapping-table and for reciprocating the male die; although it is not to be understood that the invention is limited to a machine necessarily comprising at once all of the devices or mechanism before mentioned, for the invention consists in certain various combinations or arrangements of devices and parts and the construction of certain devices and parts, all substantially as will be hereinafter fully described, set forth, and claimed. Such machine is fully and particularly shown and described in the following specification, of which the accompanying drawings form a part, wherein similar letters and numerals of reference designate like or equivalent parts wherever found throughout the several views, and in which—

Figure 1 is a side view in elevation of my improved cigar-machine, looking from the right, the front of the machine being in all the views designated by the letter R and the rear by the letter S. Fig. 2 is a front view of such machine. Fig. 3 is a side view thereof in central vertical section, looking from the right, the working parts being shown in the extreme rearward position assumed by them, being the position they are in when at rest and the same position as shown in Fig. 1. Fig. 4 is a view in section similar to Fig. 3, except that the working parts of the machine are shown in the position assumed by them in the extreme forward working position thereof at the moment when the wrapper-leaf has been cut and is in position to be wrapped upon the cigar-bunch. Fig. 5 is a top plan view of the machine, showing the working parts in the same position as shown in Figs. 1 and 3; and Fig. 6 is a similar top plan view thereof, showing the working parts in the extreme forward position shown in Fig. 4. Fig. 7 is a view in central vertical section, on the line *y y* of Fig. 8, of the wrapping-table, female die and male die, and bar supporting the male die, and Fig. 8 is a top plan view of a portion of the wrapping-table, showing the female die in position therein. Fig. 9 is a side view of one of the wrapper-holding clamps and connections removed from the machine, and Fig. 10 is a view of a clamp similar to that shown in Fig. 9, except that the clamp-plate is of a different form. Fig. 11 is a view in perspective of the male die used in cutting the wrapper-leaf into the required shape to form a wrapper. Figs. 12 and 13 are detail views of the cam-roller and the lever used for actuating the moving wrapping-table, showing the manner of connecting such roller with its lever. Fig. 14 is a side view in central vertical section of the leaf-table and the leaf-holding plate attached thereto, and Fig. 15 is a view in detail of a portion of the leaf-holding plate, showing the hinge and the spring

by which such plate is normally kept in the open position shown in Figs. 3 and 15.

Referring to the drawings, the reference-letter A designates a supporting-base formed in any desired shape and manner of suitable material, but being preferably of two side pieces 1 of cast-iron of the form shown, joined together by suitable rods 3 and 4, or in any other desired way, and to render the same more rigid bolted securely to the floor when in position. Supported on top of this base A is a suitable table B, preferably of wood and of the form shown, consisting of the table-top having the upwardly-extending side pieces 5 and rear piece 6, secured thereto in such manner as to extend upward therefrom, say about three inches. Supported either by the frame A or by the table B, as may be desired, and running from front to rear of the table, nearly to the rear thereof, are suitable metal bars 7, having formed on the inner sides suitable slideways upon which rest the supporting end pieces 8 of the movable sliding wrapping table C, and in order to keep such table C in place suitable strips 7′ are secured on top of the bars 7 by means of suitable screws or in any other desired manner, so as to extend over the end pieces 8 of such table, as shown, the bars 7 and strips 7′ when together forming grooves or slots in which rest and slide the end pieces 8, as shown. In order to provide for wear and render the table C easy of movement I prefer to form the bars 7 and strips 7′ of hard steel and the end pieces 8 of brass, or vice versa, and to secure the end pieces 8 to the wrapping-table C by suitable screws 9 in such manner as to render renewal of the same easy when worn; and I also prefer to provide suitable gibs (not shown) for taking up the ordinary wear until renewal is necessary. Secured to each of the bars 7 in any desired manner, or in some cases formed integral therewith, adjacent to the forward end thereof, are vertical bars 10, in which, upon the inner sides thereof, are formed suitable vertical slideways in which reciprocate easily up and down the ends of the die-supporting bar 12. The bar 12 is preferably of the shape shown in Figs. 2 and 7 and is provided adjacent to each end with suitable holes or perforations 13, with rounded upper and lower walls, which perforations 13 are adapted to receive the forward ends of suitable levers 14, which are pivotally supported upon suitable pivot-studs 15, which are supported in suitable projections 16, secured to or formed integral with the strips 7, or in some cases secured to the table B or base A. The rear ends of such levers 14 are preferably provided on the upper sides with the rounded cavity 17, into which fit, when moved downward, the actuating end of a cam 18, each of which cams is rigidly secured upon a short shaft 19, which is revolubly supported in a suitable downwardly-depending stud 20, secured either to the bars 7, base A, or table B. Rigidly secured to the shafts 19 are suitable actuating-levers 21, pivotally connected with a lever 22, preferably by means of a suitable link or connecting-rod 23, and such lever 22 is rigidly secured to the main shaft 24 of the machine, which main shaft is mounted in suitable bearings formed in or secured to the side pieces 1 of the base A in such manner as to be wholly or partially revoluble therein.

Rigidly secured on top of the die-supporting bar 12, at the central portion thereof, preferably by means of suitable screws 25, is a male die D, which is of the shape and contour of the wrapper desired to be cut or punched from the wrapper-leaf thereby. Supported in any desired manner above the die-supporting bar 12, preferably by being secured at the ends either in the bars 7 or bars 10, is the leaf-table F, having a central perforation 27′, preferably of the same contour as is the male die D, in which perforation, with the top thereof level with the top of such leaf-table, normally rests such male die D.

As shown in Figs. 3, 4, and 14, the upper rear portion of the leaf-table F is preferably planed away about a sixteenth of an inch or so in such manner as to leave the rear portion 28 of such table-leaf lower than the front portion 29, the dividing line between the high front portion and the rear lower portion 28 being preferably a square shoulder 30, located at about the longitudinal center of the male die D.

Secured to the rear edge of the leaf-table F in any desired manner, preferably by means of suitable screws 31, preferably in such manner as to extend downward and rearward therefrom at an angle of about forty-five degrees, as shown, is a suitable thin metal plate 32, to the lower rear edge of which is secured by suitable hinges 32′ the upwardly and forwardly extending leaf-holding plate G, which is kept normally in the rearward open position shown in Figs. 3 and 14 by suitable springs 33, or in any other desired manner. The leaf-holding plate G is preferably of the shape shown in Fig. 14, having a downwardly and forwardly bent front end portion 34 of just sufficient thickness to fill the rear lower portion 28 of the leaf-table level with the front portion 29 thereof, when such plate G is forced down upon the leaf-table and into the position shown in full lines in Fig. 4 and in dotted lines in Fig. 6; and the front edge of such plate G is of such contour as to conform to the shoulder 30 of the leaf-table F, and to the rear contour-line of the die D, so as to permit such die to pass easily up by the same.

The wrapping-table C is provided, preferably, with a central perforation 35 of the rectangular form shown, which is preferably undercut around the edges, as shown in Fig. 7, so as to leave a shoulder 36 extending entirely around such perforation, and in this perforation is secured the female die E, the perforation of which is of the same size and contour as the male die D, in order to receive the same. The top of the female die E, when in position,

is preferably flush with the top of the wrapping-table C, and such die has an outwardly-extending bottom flange 37, which rests against the under side of the shoulder or flange 36 of the table C, and the die E is preferably held in place in the table by suitable screws 36, which pass upward through the flange 37 into the shoulder or flange 36, as shown in Fig. 7. Secured upon the under side of said wrapping-table C, at or near the forward edge thereof, is a leaf-stretching device preferably consisting of a suitable strip M of any soft yielding material, preferably soft rubber, of such thickness as to exert a pressure on the high front portion 29 of the leaf-table F, as it is forced forward over the same, sufficient to stretch the leaf over said leaf-table, but not sufficient to tear even the most fragile leaf.

Firmly secured to the movable sliding wrapping-table C, preferably by being bolted or otherwise firmly secured to a rear cross-piece 39, which forms part of such table C, is a cam-piece H, preferably of the peculiar form shown, having a rear hook portion 40 open at the bottom, the forward edge of which hook merges by a somewhat abrupt curve, as shown at 41, into a slip-surface 42, which is preferably of about the form shown. Rigidly secured at its lower rearward end to the main shaft 24 is a lever 42′, carrying at the upper end a friction-roller 43, preferably of just sufficient diameter to fit easily in the hook portion 40 of the cam-piece H, as shown in Figs. 1 and 3, and such friction-roller is preferably attached to such lever 42′ by being revolubly mounted in the end of a rod 44, provided at its outer end for such purpose with a suitable fork 45, the inner end of which rod 44 is supported in a suitable cavity formed to receive it in the end of the lever 42′, and being kept normally pressed up in such cavity by a suitable coil-spring 47, and being kept from being forced completely out of such cavity by a pin 48 and screw-cap 49, as shown in Fig. 13, an elongated slot being formed on one side of such cavity 46 to receive the pin 48, of such form as to permit of free inward and outward movement of the rod 44 for a short distance, and to at the same time prevent rotation of said rod.

Passing down through the wrapping-table C, adjacent to either end thereof a short distance from the sides, in such manner as to be capable of whole or partial rotation, are two shafts 50, rigidly mounted upon the upper ends of which are suitable heads 51, to which heads are secured, preferably by suitable hinges 52, arms or levers 53, provided at their outer free ends with suitable bosses 54. Such arms or levers 53 are hinged to the heads 51 in such manner as to swing upward from the wrapping-table C, and are kept normally pressed downward by suitable springs 55, which are secured to the heads 51 by suitable screws 56. Secured to the bosses 54 in any desired manner, preferably by being provided with studs 57, which enter and pass through and move easily up and down in holes passing through the bosses 54, which studs have secured upon their tops suitable plates 58 by means of screws 59, are suitable clamp-plates 60 of any desired shape and form, and usually of brass and provided with suitable facings 61 of cork, rubber, or like material. Such clamp-plates 60 are usually formed of the same shape as are the respective ends of the female-die cavity, so as to fit snugly therein, (as shown in Fig. 6,) and I prefer to form the plate 60 upon the side of the machine at which the wrapper-leaf will be first released from the clamps when the wrapping operation is begun of the circular form shown in Fig. 9, and on the left side of the machine in Figs. 5 and 6, and to form the plate upon the side of the machine from which the wrapping-leaf will be last released when the wrapping or rolling of the cigar is nearly finished of the peculiar curved form shown in Fig. 10, and on the right side of the machine in said Fig. 6, and in order to facilitate further description of the machine, the clamp on the left side of the machine and first to be released will be designated as the "wrapper-clamp J," while the clamp on the left side of the machine and the last to be released will be designated as the "clamp K."

The wrapper-clamp K, in order that the same shall never be able to turn so as to cross the end of the female die, whereby entrance of the same down into such die would be prevented, is preferably mounted upon a stud 57, which by reason of its squareness or other irregular shape is prevented from rotating in its boss 54, while the circular wrapper-clamp plate J is preferably mounted upon a circular shaft which is easily revoluble in its boss 54, and in some cases such studs 57 may have coiled upon them above the plates 60 a suitable spring 62, as shown in Fig. 9, by which such plates will be forced down into the cavity or perforation of the female die E, even should the spring 55 not work; but these coil-springs are not essential, as the springs 55 are usually amply sufficient, but in some classes of work it may be found preferable to omit the springs 55 and use such spring 62, or the plates may be made heavy enough to fall by gravity and hold the cut wrapper in position by their weight alone, in which case both the springs 62 and 55 may be omitted; but I prefer to use the construction shown.

Rigidly secured upon the lower end of each of the shafts 50, preferably by means of a suitable set-screw 63, so as to be easily adjustable thereon, is a lever 64, and mounted in suitable studs 65, Fig. 6, which project inward from the slide-bar 7 on each side of the machine near the rear thereof, are two pins or stops 66, so situated as to come into contact with the lever 64, located upon their respective sides of the machine, so as to throw the wrapper-clamp plates I and K inward from the sides of the wrapping-table C and into the ends of the cavity of the female die E, when the

wrapping-table is pushed rearward to the limit of its travel, as shown in Figs. 3 and 5. In order to prevent such clamp-plates from being pushed too far toward the sides of the wrapping-table, I prefer to provide on top of the same suitable pins or stops 67, and also like stops or pins 68, by which extreme inward movement of said clamps will be prevented. In like manner the rearward movement of the wrapping-table C is limited by a suitable stop or stops 69, located, preferably, as shown in Fig. 4, and forward movement of such table is likewise limited by a similar stop or stops 70, preferably of the form shown, consisting of suitable studs firmly secured to the bars 7, having suitable regulating-screws 71, the ends of which abut against the front end of such wrapping-table, and the rear stops 69 are usually of the same form of construction.

Supported upon the rod 4 is a treadle 72, which is connected by a suitable connecting-rod 73 with the outer end of a lever 74, which lever is rigidly secured to the main shaft 24, and also rigidly secured to such main shaft is a lever 75, to the end of which is secured one end of a coil-spring 76, secured at its other end to one of the side pieces 1 of the base A, the arrangement being such that downward pressure upon the front end of the treadle 72 will partially rotate the main shaft 24 in such manner as to force the upper end of the lever 23 and consequently the wrapping-table C forward, and that the spring 75 will at once bring the shaft 24, lever 23, and wrapping-table C back into the normal rearward position shown in Figs. 1, 2, 3, and 5, so as to uncover the leaf-table F and allow the leaf-holding plate G to swing backward into the position shown in said figures and in Fig. 14 the instant the pressure is removed from the treadle 72.

The operation of the machine is as follows: The machine being at rest and the parts being in the extreme rearward positions shown in Figs. 1, 2, 3, and 5, the operator takes position at the front R of the machine and places a stripped tobacco-leaf L, from which the wrapper to be used is to be cut in position over the male die D and on the leaf-table F, lengthwise of such table and die and preferably with the straight edge of the stripped half-leaf coincident with the most extreme forward point of the front edge of the male die D, and with the rear part of the leaf extending down into the cavity or space lying between the plate 32 and the leaf-plate G, as shown in Fig. 14, taking care, of course, to so place such leaf L as to cut as large a number of wrappers as possible therefrom and so economize tobacco, and the moment such leaf L is in position the operator presses with his foot down upon the treadle 72, while at the same time holding the leaf properly stretched in position over the die D, and as the wrapping-table C is in consequence moved forward the first forward movement of such table forces the hinged leaf-holding plate G down upon the tobacco-leaf L, when the parts will be in the position shown in Figs. 4 and 6, so as to hold such leaf firmly in position upon the leaf-table F. As the leaf-stretching device formed by the yielding facing M, secured to the wrapping-table C, comes in contact with the leaf on top of the high front portion 29 of the leaf-table F, as the portion of the leaf to the rear is held in place by the pressure of the leaf-holding plate G, which table F may for such purpose, if desired, be provided with an under surface of soft rubber or similar yielding material M. The continued forward movement of the wrapping-table C over the high front portion of said leaf-table stretches the tobacco-leaf tightly across the same and over the male die D to smoothness in such manner as to remove the wrinkles therein, but, by reason of the yielding nature of the strip M, not with sufficient pressure to tear or mutilate even the most fragile of tobacco-leaves, and the instant the wrapping-table C has reached its extreme forward position and is stopped by the screws 71 of the stops 70 the male die D will be in such position as to register with the female die E. During this movement of the table C to the front the same has been carried forward by the pressure of the friction-roller 43 upon the forward inner side of the hook portion 40 of the cam-piece H, but the moment the wrapping-table C is stopped in its forward movement, as described, such friction-roller 43, as the pressure is continued upon the treadle, is forced down out of said hook portion 40 of said cam-piece H and along the slip-surface 42 thereof, the spring 47 yielding sufficiently to permit of such roller passing out of such hook portion 40, and as during the entire downward movement of the treadle and the forward movement of the roller 43 the cams 18 have been rotated rearward, so as to force the rearward working elongated portion of such cams downward by the mechanism connecting such cams 18 with the main shaft 24, at or immediately after the stoppage of the forward movement of the wrapping-table C, the said cams 18 come into contact with the top of their respective levers 14, so as to force the rear ends of such levers downward and the forward ends thereof upward, and this forces the die-supporting bar 12 upward in the slides of the bars 10, so as to force the male die D up through the female die E in such manner as to punch out of the tobacco-leaf L (shown in Fig. 14) and carry upward through said die E to a level with the top of the wrapping-table C and on top of said male die D a cut wrapper punched from the said tobacco-leaf of the shape and contour of said dies, and just before the top of the male die D reaches its highest level, even with the top of the female die E and wrapping-table C, so as to form an even and smooth surface upon which to wrap the said wrapper upon the cigar-bunch, the cut wrap-

per is brought into contact with the plates 60 of the wrapper-clamps J and K, so as to press such wrapper down on the top of the male die D and hold the same in place thereon, the peculiar spring construction of such wrapper-clamps causing the same to be carried upward on top of the leaf until they are on a level with the top of the female die and wrapping-table, at which time all the parts will be in the position shown in Figs. 4 and 6. The operator then slides the clamp J sidewise to the left, off from the cut wrapper and male die, into the position shown in dotted lines in Fig. 6, and laying a cigar-bunch upon the cut wrapper begins to inclose the same in such wrapper in the well-known manner, beginning at the left hand of such wrapper, from which the clamp J has just been removed, and rolling toward the right until close to the clamp K, when such clamp K is moved sidewise to the right into the position shown in dotted lines in said Fig. 6, when such wrapper will be no longer held in position in any manner, and the cigar may be finished and pointed in the usual way. As soon as the cigar has been finished the operator lifts his foot from the treadle 72, and the instant the pressure is released from such treadle the action of the spring 76 instantly forces the wrapping-table back into the rearward position shown in Figs. 1, 2, 3, and 5, and during the latter portion of such rearward movement of such wrapping-table the levers 64 of the wrapper-clamps J and K are brought forcibly into contact with their respective actuating-pins 66, so as to force said clamps inward toward the center of said wrapping-table C, and when the plates of such clamps register with the ends of the perforation or cavity of the female die E the springs thereof instantly force such plates down into such perforation or cavity and into the positions shown in Fig. 5. At the same time, and the instant the levers 14 are released from the pressure of the cams 18, as the said cams are carried upward the male die D is carried downward by gravity by reason of the weight of the same and of the die-supporting bar 12, and simultaneous with the removal of the pressure of the wrapping-table C upon the leaf-holding plate G, such plate G is swung rearward into the open position shown in said Figs. 1, 2, 3, 5, and 14 by the action of the springs 33. The operator then draws the remaining portion of the wrapper-leaf up out of the space between the leaf-holding plate G and plate 32, and stretches the same over the leaf-table F and die D, and again presses down upon the treadle to punch out another wrapper, and the operation described is repeated. This operation is continued until the leaf has been used up, when the waste portions of the leaf are removed and a new leaf substituted therefor.

Heretofore wrappers have been held in position upon the wrapping-tables during wrapping or rolling of cigars by air-pressure and by the use of suction-boxes, and by reason of this suction it has been found that the cut wrapper and the leaf from which it is cut is frequently dried so rapidly as to interfere with the wrapping or rolling process, whereby large quantities of valuable wrapping tobacco is ruined and made useless for wrappers. In my improved machine, inasmuch as there is no air-blast whatever, and as the larger portion of the leaf from which the wrapper is to be cut when first taken from the moistening-cloths is inserted in the space lying between the plate 32 and leaf-holding plate G, where the same is protected from contact with the air and is pressed between the plates into a smooth form, it will be found that there is little if any escape of moisture from the leaf during operation, whereby loss of wrapping-tobacco is reduced to a minimum quantity.

The form of wrapper-die shown in the drawings is that used in cutting wrappers of the shape used in wrapping what is known as "right-hand-wrapped cigars," and when the machine is to be used in cutting wrappers to be used in wrapping left-hand-wrapped cigars dies of opposite shape and of the contour and shape of the dies shown when the same are inverted end for end are used. While I have shown the female die E as removable from the wrapping-table C, in some cases, the female die may be formed integral with such table C. While I have shown the table C as a sliding table, the same may be made to move in a different manner, if desired, and in some cases the male die D may be made rigid and stationary, and the wrapping-table C, carrying the female die E, may be carried downward upon said male die D instead of having said male die move upward through the female die and wrapping-table. While I prefer to use a leaf-holding plate G of the form shown, the form thereof may be in many cases greatly modified, and in others such leaf-holding plate may even be wholly omitted, although I prefer to use the same, as it has many advantages.

When it is desired to change the dies in order to change from the manufacture of right-hand-wrapped to left-hand-wrapped cigars, or vice versa, or to change the size of the wrappers used or the contour thereof, it is only necessary to remove the male and female dies, the leaf-table, and the leaf-holding plate by removing the proper screws and bolts and to substitute therefor others of the proper shapes and sizes. By this arrangement and by merely having extra dies, leaf-tables, and leaf-holding plates an infinite number of different shaped and sized cigars may be wrapped upon the same machine at a minimum of cost.

While I have shown and described herein a male die with a solid center, and while I prefer in most cases to use a die of such form, if desired, a hollow male die in the form of a hollow sharp-edged punch may in some cases be used surrounding a suitable central table to support the leaf during wrapping, and in

such case the female die may be used therewith or some other equivalent device may be used to assist the hollow punch in cutting the wrapper.

While I have shown and described two wrapper-clamps J and K, and while I prefer to use at least that number, I do not intend to limit myself thereto, as one clamp will frequently, and especially when the machine is used by a skilled operator, be found sufficient, and when only one clamp is used the clamp K, which is the one holding in place the end of the wrapper last to be wrapped upon the cigar-bunch, is usually the one retained, and the clamp J is the one omitted. While I prefer to use clamps formed as shown, I do not limit myself thereto, nor in my broader claims do I intend to limit myself to any particular mechanism or device for holding the cut wrapper in place upon the wrapping-surface, which is formed in part by the top of the male die, by the top of the female die, and by the top of the wrapping-table C.

It is also evident that many changes other than those mentioned herein may be made in the construction, combination, and arrangement of the various parts of my improved cigar-machine without departing from the scope of my invention, and I do not intend to limit myself to the exact form of construction shown, but—

Having now particularly described and ascertained the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cigar-machine of the class described, the combination with a table, of means for cutting a cigar wrapper from a tobacco leaf, and an automatically operating clamping device or devices for holding the cut wrapper in position upon the table during wrapping, substantially as shown and described.

2. In a cigar-machine of the class described, the combination with a female die, of a male die, and automatically operating means for holding the cut wrapper in position upon the face of the male die after the wrapper is cut by the same, substantially as shown and described.

3. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a moving wrapping-table, a female-die carried by the wrapping-table, and means for holding the cut wrapper in place upon the wrapping-surface after cutting, substantially as shown and described.

4. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a leaf-table F through which said die moves, a moving wrapping-table C and a female die carried by the wrapping-table, substantially as shown and described.

5. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a leaf-table F through which said die moves, a moving wrapping-table C, a female-die carried by the wrapping-table, and means for holding the cut-wrapper in place upon the male-die after the same is cut, substantially as shown and described.

6. In a cigar-machine of the class described, the combination with a male-die, of a moving wrapping-table, a female-die carried by the wrapping-table, and a leaf-holding-plate G, substantially as shown and described.

7. In a cigar-machine of the class described, the combination with a male die, of a leaf-table F, a leaf-holding-plate G, a moving wrapping-table, and a female-die carried by the wrapping-table substantially as shown and described.

8. In a cigar-machine of the class described, the combination with a leaf-table F, of a reciprocating male-die D, a sliding wrapping-table C, and a female-die E carried by the wrapping-table, substantially as shown and described.

9. In a cigar-machine of the class described, the combination with the leaf table F, of a moving wrapping-table, a female-die carried by the wrapping-table, a reciprocating male-die, a leaf-holding-plate or device G, and means for holding the cut wrapper upon the male-die after the same is cut, substantially as shown and described.

10. In a cigar-machine of the class described, the combination with the table, of a female die, a male-die, and an automatically-operating clamp or clamps for holding the cut wrapper upon the surface of the male-die after the same is cut, substantially as shown and described.

11. In a cigar-machine of the class described, the combination with the table, of a female die, an upwardly moving male die, and an automatically-operating clamp or clamps for holding the cut wrapper in place upon the surface of the male die after the same is cut, substantially as shown and described.

12. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a moving wrapping-table, a female-die carried by the wrapping-table, and a clamp or clamps for holding the cut-wrapper in place upon the wrapping-surface after cutting, substantially as shown and described.

13. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a leaf-table F through which said die reciprocates, a moving wrapping-table, a female-die carried by the wrapping-table, and a clamp or clamps for holding the cut-wrapper on the male-die, substantially as shown and described.

14. In a cigar-machine of the class described, the combination with a male-die, of a moving wrapping-table, a female-die carried by the wrapping table, a leaf-holding-plate G, and a clamp or clamps for holding the cut-wrapper upon the male-die after cutting, substantially as shown and described.

15. In a cigar-machine of the class described, the combination with a male-die, of a leaf-table F, a leaf-holding-plate G, a moving wrap-

ping-table, a female-die carried by the wrapping-table, and a clamp or clamps for holding the cut wrapper in place, substantially as shown and described.

16. In a cigar-machine of the class described, the combination with a leaf-table F, of a reciprocating male-die D, a sliding wrapping-table C, a female-die E carried by the wrapping-table, and a clamp or clamps for holding the cut-wrapper in position upon the face of the male die, substantially as shown and described.

17. In a cigar-machine of the class described, the combination with a female-die, of a male-die, and a clamp or clamps bearing upon the male die for holding the cut wrapper in position thereon after the same is cut, substantially as shown and described.

18. In a cigar-machine of the class described, the combination with a female-die, of an upwardly moving male-die, and a clamp or clamps bearing upon the male-die for holding the wrapper in position upon the same after cutting, substantially as shown and described.

19. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a moving-wrapping-table, a female-die carried by the wrapping-table, and clamps bearing upon each end of the male-die for holding the cut-wrapper in place upon the male-die after the same is cut, substantially as shown and described.

20. In a cigar-machine of the class described, the combination with a reciprocating male-die, of a leaf-table F through which said die reciprocates, a moving-wrapping-table, a female-die carried by the wrapping-table, and clamps bearing upon each end of the male-die for holding the cut-wrapper in position upon the male-die after the same is cut, substantially as shown and described.

21. In a cigar-machine of the class described, the combination with a male-die of a moving-wrapping-table, a female-die carried by the wrapping-table, a leaf-holding-plate G, and clamps bearing upon each end of the male-die for holding the cut-wrapper in position upon the male-die after the same is cut, substantially as shown and described.

22. In a cigar-machine of the class described, the combination with a male-die, of a leaf-table F, a leaf-holding-plate G, a moving wrapping-table, a female-die carried by the wrapping-table, and clamps bearing upon each end of the male-die for holding the cut-wrapper in position upon the male-die after the same is cut, substantially as shown and described.

23. In a cigar-machine of the class described, the combination with a leaf-table F, of a reciprocating male-die D, a reciprocating wrapping-table C, a female-die E carried by the wrapping-table, and clamps bearing upon each end of the male-die for holding the cut-wrapper after the same is cut, substantially as shown and described.

24. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a cam-piece H secured to such table and having the hook portion 40 and slip-surface 42, and an actuating-lever 42′ for moving the cam-piece H, substantially as shown and described.

25. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a cam-piece H secured to such table and having the hook portion 40 and slip-surface 42, a friction-roller 43, a lever 42′ carrying the roller 43, and means for vibrating the lever 42′, substantially as shown and described.

26. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a cam-piece H secured to such table and having a hook portion 40 and slip-surface 42, a friction-roller 43, a vibrating lever 42′ carrying the roller 43, and a treadle 72 in actuating connection with the lever 42′, substantially as shown and described.

27. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a cam-piece H secured to such table and having a hook portion 40 and slip surface 42, a lever 42′, a rod 44 carried by the lever 42′, a spring 47 normally pressing the rod 44 toward the cam H, and means for vibrating the lever 42′, substantially as shown and described.

28. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a cam-piece H secured to such table and having a hook portion 40 and slip surface 42, a lever 42′, a rod 44 carried by the lever 42′, a friction-roller 43 carried by the rod 44, a spring 47 normally pressing the rod 44 toward the cam H, and means for vibrating the lever 42′ so as to reciprocate the table C, substantially as shown and described.

29. In a cigar-machine of the class described, the combination with a moving wrapping-table C, of a die D reciprocating upward through such table C, and mechanism for moving the table and reciprocating the die, substantially as shown and described.

30. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a reciprocating-die D located below the table, and mechanism for reciprocating the table C and for forcing the die D up into the female-die when such dies are in registering position, substantially as shown and described.

31. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a reciprocating-die D located below the table, means for stopping the forward movement of the table C the instant the two dies are in registry, and mechanism for forcing the die D into the female-die, substantially as shown and described.

32. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a male-die D located below the table C,

a lever or levers 14 for moving such die D upward, a cam or cams 18 for moving the lever or levers 14, a shaft 24, means for actuating the shaft 24, mechanism for moving the table C and mechanism for moving the cam or cams 18 in actuating connection with the shaft 24, substantially as shown and described.

33. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a male-die D located below the table C, a cam-piece H having a hook portion 40 and slip-surface 42 secured to the table C, a lever or levers 14 for moving the die D, a cam or cams 18 for moving the lever or levers 14, a shaft 24, means for actuating the shaft 24, a lever 42′ in actuating connection with the cam-piece H, and with the shaft 24, and mechanism connecting the cam or cams 18 with such shaft 24, substantially as shown and described.

34. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a male-die located below the table, a lever or levers 14 for moving such die D, a cam or cams 18 for moving the lever or levers 14, a shaft 24, means for actuating the said shaft 24, mechanism for moving the cam or cams 18, and mechanism for moving the table, both of which are in actuating connection with the shaft 24, and a clamp or clamps for holding the cut wrapper in position upon the male-die D after the same is cut, substantially as shown and described.

35. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a reciprocating male-die D, and a swinging clamp or clamps mounted upon the table C and resting on top of the male die when swung inward when such die is in the upward position, substantially as shown and described.

36. In a cigar machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, an automatically operating swinging-clamp or clamps pivoted in the table and having clamping plates 60 capable of vertical movement, and means for normally forcing the plates 60 downward, substantially as shown and described.

37. In a cigar-machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, and an automatically operating swinging-clamp or clamps each of which consists of a shaft 50, head 51, bar 53 secured to the head by the hinge 52, spring 65, and clamp-plate 60, substantially as shown and described.

38. In a cigar-machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, and a clamping device or devices each of which consists of a shaft 50, a bar 53 secured to the shaft 50 by a suitable hinge 52, a clamp plate 60 supported at the outer end of the bar 50 and a spring or springs for forcing the said plate 60 downward, substantially as shown and described.

39. In a cigar-machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, and an automatically operating swinging-clamp or clamps each of which consists of a shaft 50, a bar 53 secured to the shaft 50 by a suitable hinge 52, a boss 54 carried by the bar, a stud 57 passing through the boss and provided with a top plate 58, and a clamp plate 60 secured to the bottom of the stud 57, substantially as shown and described.

40. In a cigar-machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, and an automatically operating swinging-clamp or clamps each of which consists of a shaft 50, a bar 53 hinged to such shaft, a boss 54 carried by the bar, a stud 57 passing through the boss and provided with a top plate 58, and a clamp-plate 60 secured to the bottom of the stud 57, substantially as shown and described.

41. In a cigar-machine of the class described, the combination with the wrapping-table, of the wrapper-cutting mechanism, and an automatically operating swinging-clamp or clamps each of which consists of a shaft 50, a bar 53 hinged to such shaft, a boss 54 carried by the bar, a stud 57 passing through the boss and provided with a top-plate 58, a clamp-plate 60 secured to the bottom of the stud 57, and a spring 62 bearing upon the bottom of the clamp-plate 60, substantially as shown and described.

42. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a male-die, a clamp or clamps pivotally supported by the table, and means cooperating with the table in its movement for automatically throwing such clamp or clamps into registry with the female die as the table is moved rearward, substantially as shown and described.

43. In a cigar-machine of the class described, the combination with a reciprocating wrapping-table C, of a female-die carried by such table, a male-die adapted to move upward into the female-die when the two are in registry, a clamp or clamps pivoted to the table and adapted to come in contact with the face of the male-die when the same is forced up into the female-die, and means cooperating with the table in its movement for automatically throwing such clamp or clamps into registry with the female-die, substantially as shown and described.

44. In a cigar-machine of the class described, the combination with a reciprocating table C, of a female-die carried by such table, a male-die adapted to move upward into the said female-die when the two are in registry, a clamp or clamps secured to a shaft or shafts

50 pivotally supported in the table C, a lever or levers 64 secured to the shaft or shafts, and a stopping device or devices 66 adapted to be brought into contact with the lever or levers 64 as the table C is moved rearward in such manner as to move the lever or levers 64 and actuate the clamp or clamps, substantially as shown and described.

45. In a cigar-machine of the class described, the combination with a moving wrapping-table C, of a female-die carried by such table, a leaf-table F having a high portion 29 and low portion 28, a leaf-holding-plate G, and a male-die D, substantially as shown and described.

46. In a cigar-machine of the class described, the combination with an upwardly moving male-die D, of a female die E above the male die, a leaf support F located below the die E, and a leaf holding plate G, operating in connection with the support for holding the leaf in place upon the support, substantially as shown and described and for the purposes set forth.

47. In a cigar-machine of the class described, the combination with an upwardly moving male-die D, of a female-die E above the male-die, a leaf support F located below the die E and a leaf-holding-plate G having the bent portion 34 operating in connection with the support for holding the leaf in place upon the support, substantially as shown and described and for the purposes set forth.

48. In a cigar-machine of the class described, the combination with the reciprocating wrapping-table carrying the female-die E, of an upwardly reciprocating male-die D, a leaf-table F through which the male die D reciprocates, and a leaf-holding-plate G adapted to be forced down upon the leaf-table by the movement of the wrapping-table, substantially as shown and described.

49. In a cigar-machine of the class described, the combination with a leaf-table, of a wrapping-table C reciprocating over the same, a strip of yielding material M secured to the wrapping-table, a female-die E, and a male-die D, substantially as shown and described.

50. In a cigar-machine of the class described, the combination with a leaf-table F having a high front portion 29 and rear lower portion 28, of a leaf-holding-plate G, a reciprocating wrapping-table C, a strip of yielding material M secured to the wrapping-table, a male-die D and a female-die E, substantially as shown and described.

51. In a cigar-machine of the class described, the combination with a leaf-table F, of a leaf-holding-plate G, a reciprocating wrapping-table C, a strip of yielding material secured to the wrapping-table, a male-die D and a female-die E, substantially as shown and described.

52. In a combined cigar-rolling-table and wrapper-cutter, the combination with a wrapping-table, of a female-die, an upwardly moving male-die, a leaf support F, a plate 32, and a leaf-holding-plate G operating in connection with the support for holding the leaf in place upon the support, substantially as shown and described.

53. In a combined cigar rolling table and wrapper-cutter, the combination with a wrapping-table, of a female-die, a male-die, an inclined plate 32, and a leaf-holding-plate G hinged to the plate 32, substantially as shown and described.

54. In a combined cigar rolling table and wrapper-cutter, the combination with a wrapping-table, of a female-die, a male-die, an inclined plate 32, a leaf-holding-plate G hinged to the plate 32, and means for normally forcing the plate G away from the plate 32, substantially as shown and described.

Signed at the city and county of New York, in the State of New York, this 16th day of May, A. D. 1895.

JOSEPH DELA MAR.

Witnesses:
R. C. MALEY,
GEO. DUSTERDIECK.