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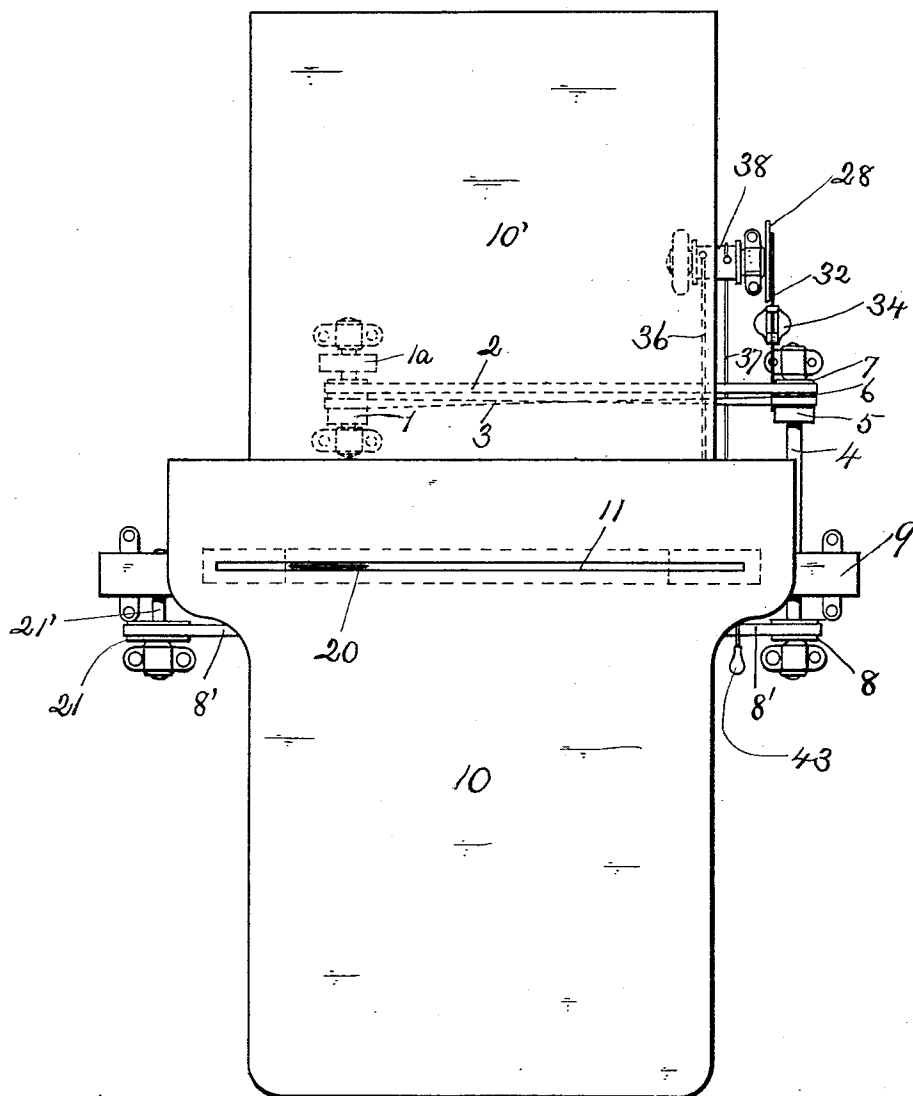
6 Sheets—Sheet 1.

R. T. PALMER, Jr. & F. W. MERCER.
FABRIC CUTTING MACHINE.

No. 564,026.

Patented July 14, 1896.

FIG-1-



Witnesses

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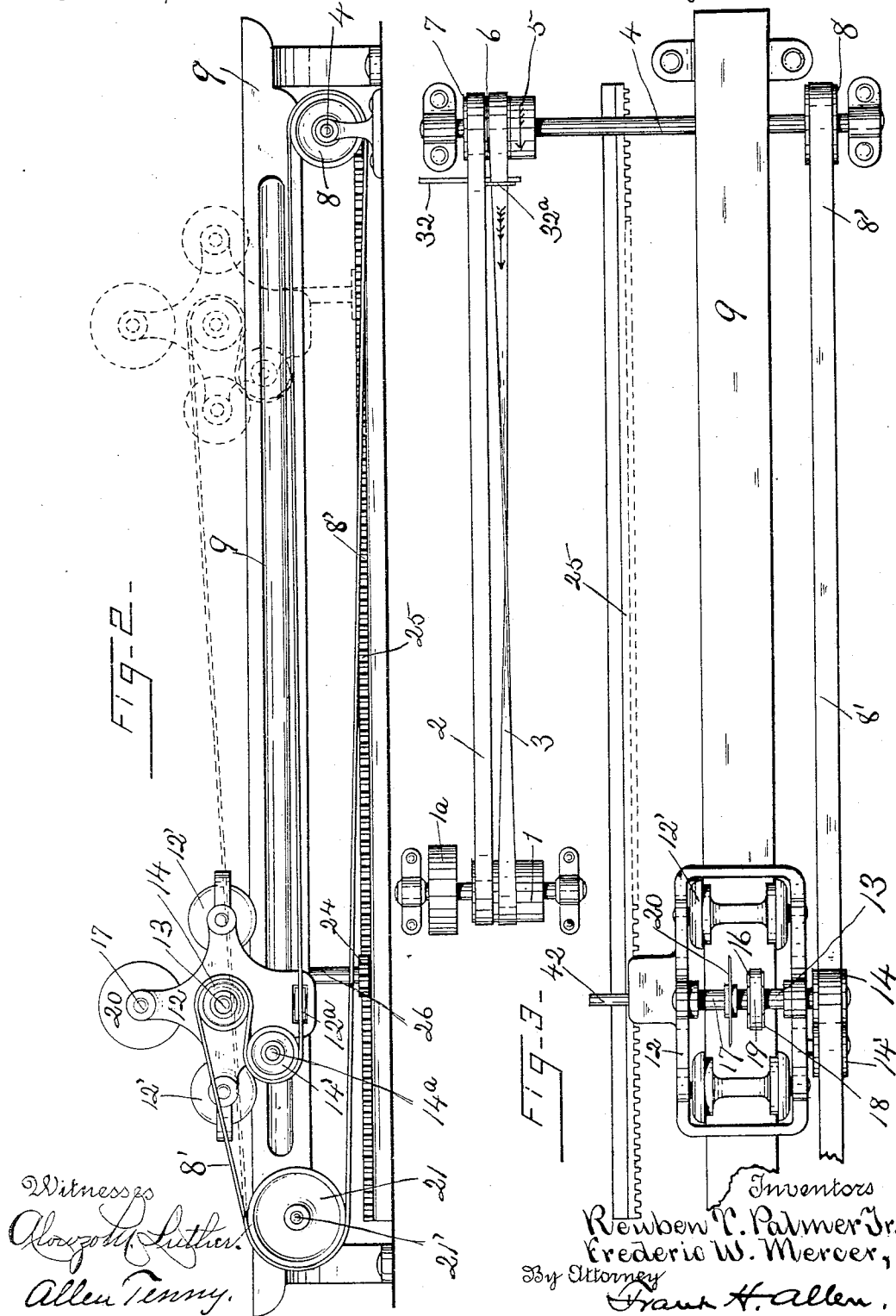
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6 Sheets—Sheet 2

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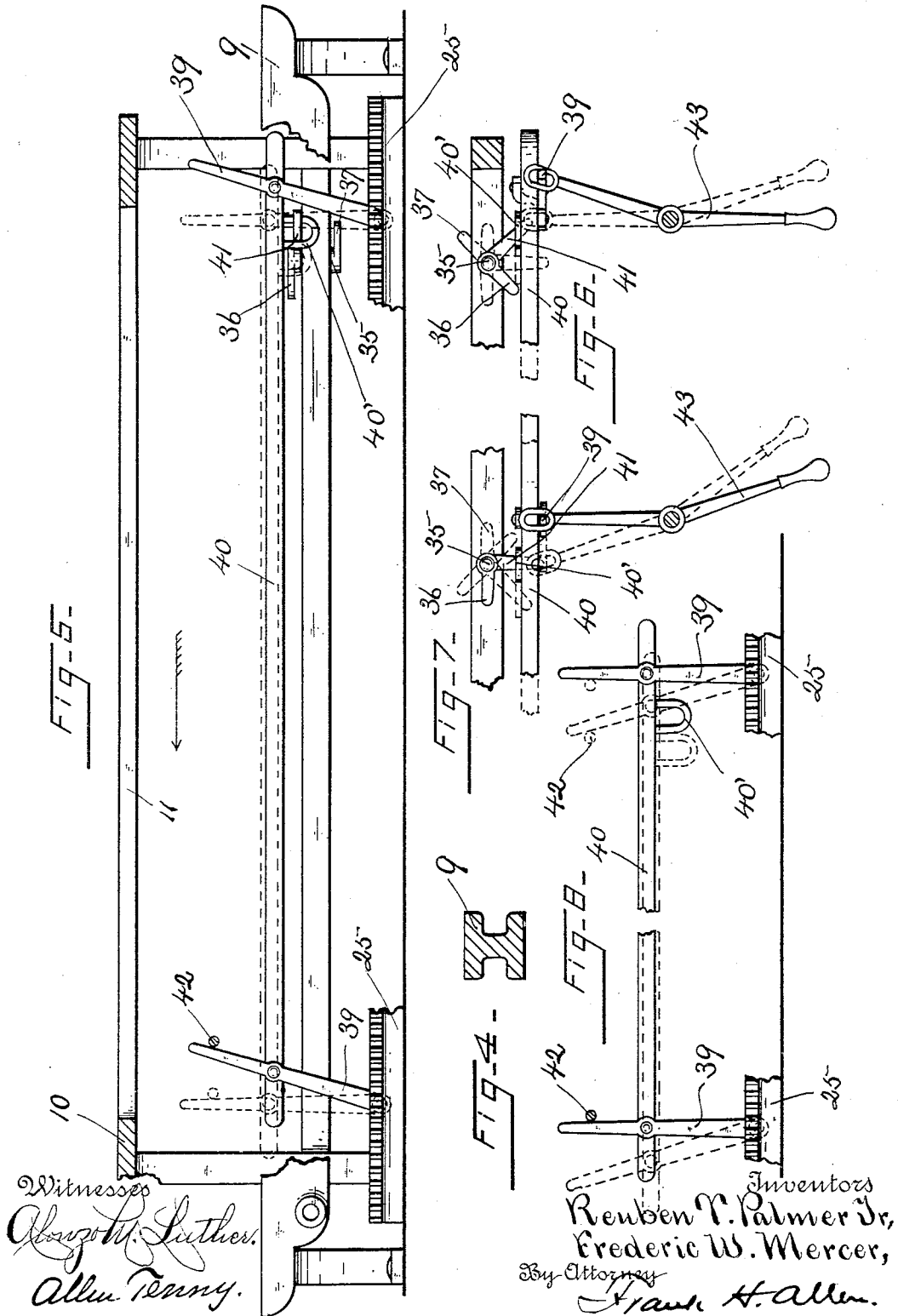
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6 Sheets—Sheet 3.

R. T. PALMER, Jr. & F. W. MERCER.
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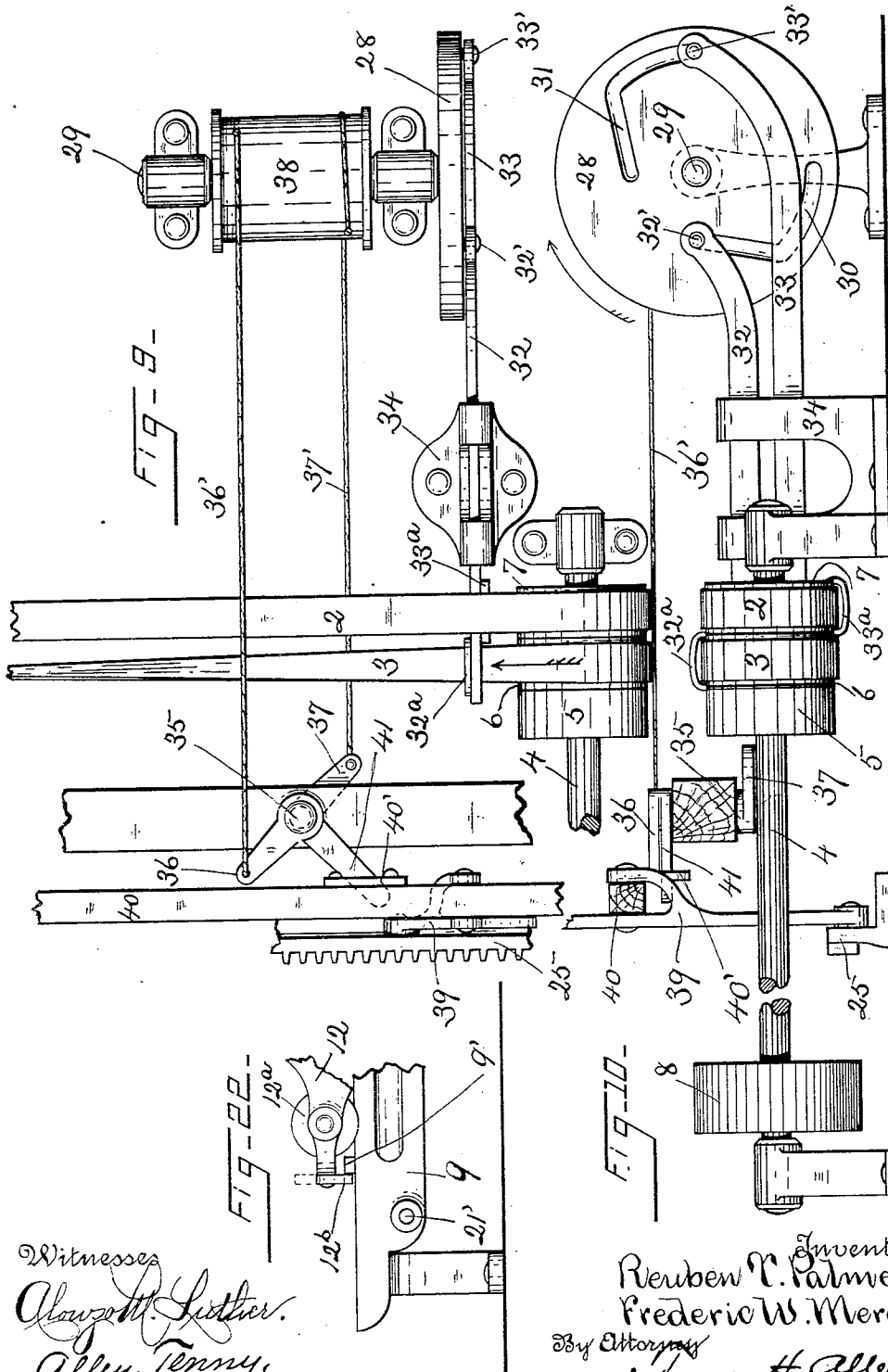
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6 Sheets—Sheet 4.

R. T. PALMER, Jr. & F. W. MERCER.
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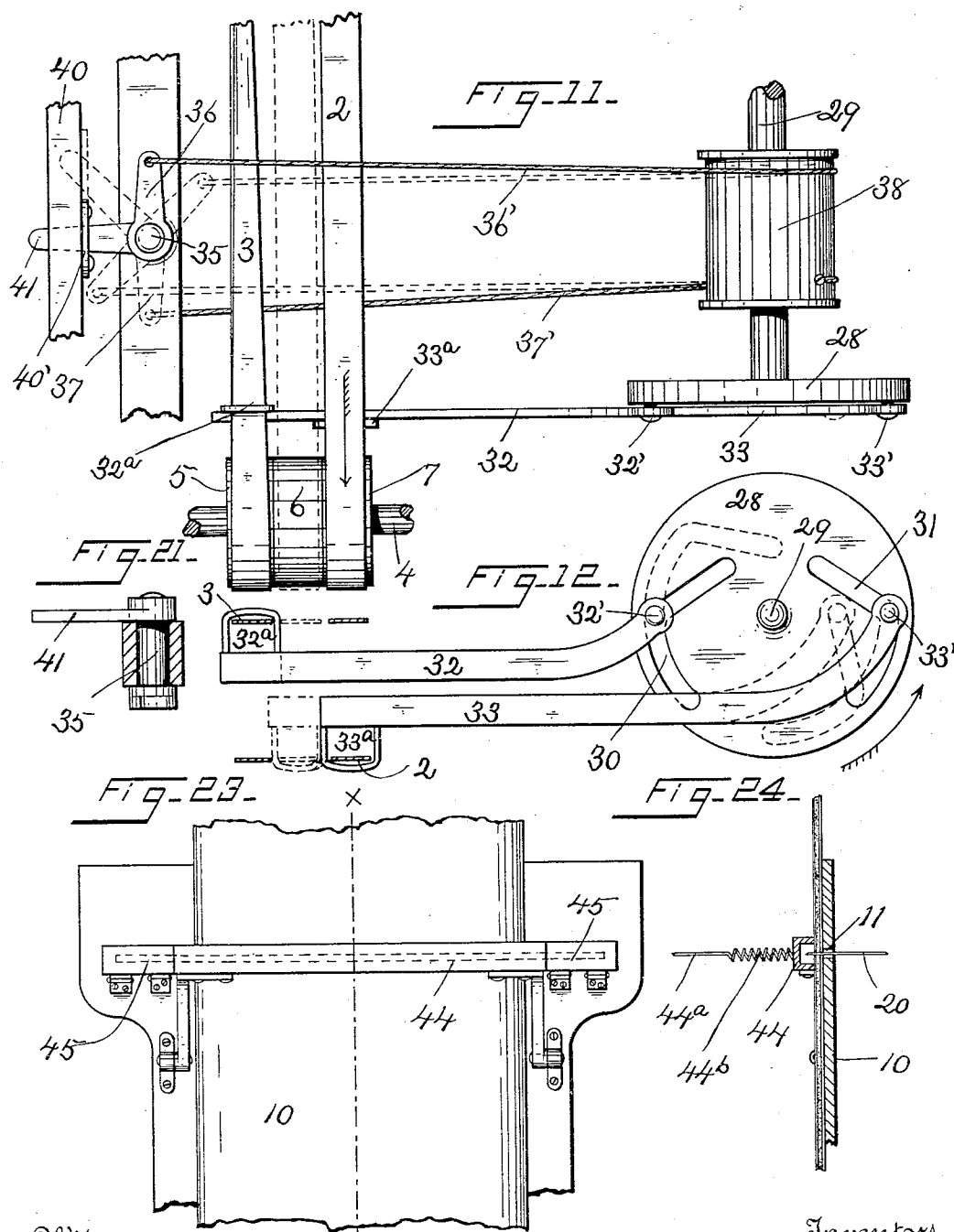
(No Model.)

6 Sheets—Sheet 5.

R. T. PALMER, Jr. & F. W. MERCER.
FABRIC CUTTING MACHINE.

No. 564,026.

Patented July 14, 1896.



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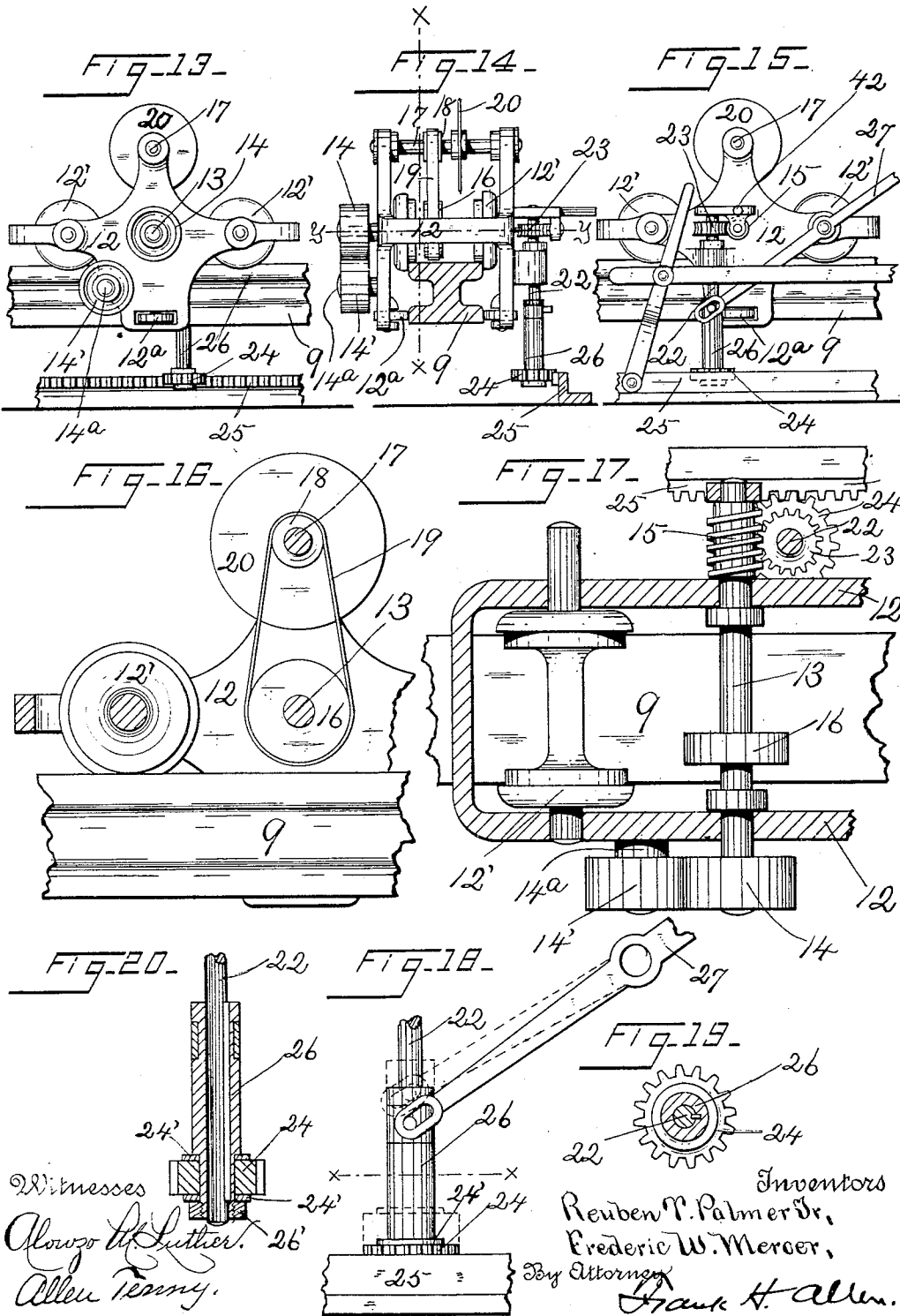
(No Model.)

6 Sheets—Sheet 6.

R. T. PALMER, Jr. & F. W. MERCER.
FABRIC CUTTING MACHINE.

No. 564,026.

Patented July 14, 1896.



UNITED STATES PATENT OFFICE.

REUBEN T. PALMER, JR., AND FREDERIC W. MERCER, OF NEW LONDON,
CONNECTICUT, ASSIGNORS TO THE R. T. PALMER COMPANY, OF SAME
PLACE.

FABRIC-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 564,026, dated July 14, 1896.

Application filed January 19, 1895. Serial No. 535,569. (No model.)

To all whom it may concern:

Be it known that we, REUBEN T. PALMER, Jr., and FREDERIC W. MERCER, citizens of the United States, and residents of the city and county of New London, State of Connecticut, have invented certain new and useful Improvements in Fabric-Cutting Machines, which improvements are fully set forth and described in the following specification, reference being had to the accompanying drawings.

In the manufacture of bedquilts or comfortables it is a common practice to produce the material for making the same in continuous lengths, and of a width equal to that of the finished quilt. Such continuous lengths are made up usually of a compound fabric, consisting of suitable face fabrics, between which is interposed a filling of cotton or like material, and the edges of such lengths are suitably sewed or bound to inclose the filling; the construction of the compound fabric being well known to those conversant with quilt manufacture. These lengths of compound fabric are cut into sections to produce quilts of desired size, and, after having been cut off from the main piece, said sections are in suitable condition to be "finished," that is, to have performed upon them certain operations necessary to complete them or make them "marketable;" these operations consisting of sewing or binding their edges, quilting desired designs or patterns thereon, &c.; but as these various "finishing" operations, as well as the method of preparing the continuous lengths of fabric, are well known in the art and therefore form no part of this present invention, it is thought unnecessary to describe the same in detail; this invention relating only to the operation of cutting or severing the continuous compound stock into sections suitable for quilts.

The object, therefore, of this invention is to provide a machine for cutting into sections the continuous lengths of compound fabric, thereby converting the latter into pieces of proper size to be "finished up" into quilts. This cutting operation, so far as we are aware, has heretofore been performed by hand and was necessarily slow and unsatisfactory; the

edges of the cut ends of the fabric being often left ragged, and a deep binding was therefore required to conceal such ragged edges, hence occasioning a waste in stock which, in some instances, amounts to an item of some considerable size; but, when this cutting operation is performed by our newly-invented machine, the objections just recited are entirely overcome and the work is performed in a manner much expeditiously, satisfactorily, and economically than it has heretofore been possible to accomplish it.

To facilitate the explanation of our invention, we have provided, in connection with this specification, the accompanying sheets of drawings, the various figures of which are described as follows:

Figure 1 is a plan view of our machine. Fig. 2 is an elevation of a track or way and a carriage mounted to travel thereon, said carriage carrying a circular cutting-knife. This view illustrates also the manner in which power is imparted to said carriage to cause the same to travel upon its track and to rotate its knife. Fig. 3 is a plan view of the various features illustrated in Fig. 2. Fig. 4 is a cross-sectional view of the above-referred-to track. Fig. 5 is an elevation of a portion of certain belt-shipping mechanism actuated in part by the traveling carriage. Figs. 6 and 7 are plan views of certain of the elements illustrated in Fig. 5. Fig. 8 illustrates in somewhat changed positions some of the features of Fig. 5. Fig. 9 is a plan view, on a somewhat enlarged scale, of the belt-shipping mechanism proper. Fig. 10 shows in elevation the elements of Fig. 9. Fig. 11 is a view similar to that of Fig. 9, showing somewhat changed the positions of the various features illustrated. Fig. 12 shows in elevation some of the elements of Fig. 11. Fig. 13 is a side elevation, Fig. 14 an end elevation, and Fig. 15 an elevation of the side opposite to that shown in Fig. 13, of the said traveling carriage. Figs. 16 and 17 are vertical and horizontal sectional views of said carriage on a somewhat enlarged scale and are taken, respectively, on lines *x x* and *y y* of said Fig. 14. Fig. 18 is an elevation of a certain pinion and its shaft carried by said carriage,

which pinion forms an important element in the driving mechanism. Fig. 19 is a horizontal sectional view of said pinion, taken on line *x x* of Fig. 18. Fig. 20 is a vertical sectional view of the various elements shown in Figs. 18 and 19. Fig. 21 is an elevation of certain arms or levers forming important features of the belt-shipping mechanism. Fig. 22 illustrates means for locking the carriage against movement at either end of its track. Fig. 23 is a plan view of means provided for firmly holding the fabric against displacement during the cutting operation. Fig. 24 is a sectional view taken on line *x x* of the last-named figure.

Before proceeding to describe minutely the mechanism of our machine, we will first describe, briefly, the manner of its operation, and, in a general way, the various elements which, when properly assembled and operated, serve to accomplish the end for which the machine was designed.

When our machine is in use, the compound fabric (which is usually manufactured in one continuous length) is fed or drawn forward on a large platform or table, denoted in the drawings by reference-number 10. Near one end of this table 10 is located a slot 11, extending in a direction at right angles to the length of said table and nearly across the same. Over this slot 11 the compound fabric is drawn until the length of such portion of fabric fed over the slot is equal to the length of the piece which it is desired to cut from the continuous fabric, or, in other words, is equal to the length of quilt which it is desired to manufacture. That portion of the fabric fed or drawn over the slot 11 is supported on a table 10', located adjacent to the table 10, or may, if desired, be constructed as a part thereof; but for convenience in shipping and setting up a machine we prefer to provide two separate tables.

Suitably supported beneath table 10, as hereinafter described, is a circular cutting-knife 20, the circumferential cutting-edge of which extends upward through the slot 11 and somewhat above the plane of the top of the table 10. Knife 20 is caused, under proper conditions, to traverse slot 11, first in one direction and then in the other, and during such travel of the knife a very rapid rotary motion is imparted thereto.

During the operation of drawing the compound fabric over the slot the knife 20 is at rest at one end thereof, as fully explained hereinafter, and thus is out of the path of the fabric. As soon, however, as it is desired to sever the portion of the fabric drawn forward from the main piece or length, said knife is caused to travel from end to end of the slot, and the very rapid rotary motion of the same serves to cut the fabric lying over the slot and thus detach it from the main piece.

The direction of rotation of the knife 20 is dependent upon its direction of travel, said knife when traveling in either direction be-

ing so revolved as to best operate to sever the fabric.

The knife 20 is carried forward and backward by means of a carriage 12, upon which it is suitably mounted, said carriage 12 traveling upon an elevated track 9, located beneath the table 10 approximately in vertical alinement with the slot 11 and parallel therewith, said track 9 being preferably of a length somewhat greater than the width of the table 10.

Power is imparted to the carriage 12 to drive the same and to rotate its knife 20 by means of a certain belt 8'. To enable the carriage 12 to be driven forward and backward on the track 9, it is necessary that means be provided for driving the said belt 8' in opposite directions, and this is accomplished by providing certain mechanism by means of which the driving-pulley 8 of the said belt 8' may be suitably controlled. The controlling mechanism just referred to is so constructed that between each reversal of movement of the said belt 8' its driving-pulley 8 (and consequently all mechanism driven thereby) is caused to automatically come to rest, and the mechanism of our complete machine is so timed that, at the time of such periods of rest, the carriage 12 will have completed its travel in the direction in which it was last moving, thereby leaving the rotary knife 20 at one end of the slot 11; the lengths of such periods of rest being optional with the operator of the machine.

Referring now particularly to the drawings, 1 indicates an ordinary pulley (preferably of wide face) mounted upon a counter-shaft suitably located relatively to our machine. Said shaft is shown in Fig. 3 as supported in standards bolted to the floor and as provided with a pulley 1^a, that may be driven by belt from the line-shaft of the factory. Motion is imparted from pulley 1, through belts 2 and 3, to a shaft 4, which we term the "main shaft" of our machine, and said shaft has mounted thereon pulleys 5, 6, and 7, located in proper alinement with the drum-pulley 1, to receive the said belts 2 and 3. Main shaft 4 is shown as located as quite near the floor and as supported in proper standards.

By reference to Fig. 3 it will be seen that the belts 2 and 3 are respectively straight and crossed. With this construction it will be readily understood that motion imparted by belt 2 will be in the same direction as the driving-pulley 1, but that imparted by the belt 3 will be in the direction reverse to that of the driving-pulley 1.

Of the pulleys 5, 6, and 7, the pulleys 5 and 7 are loosely mounted upon the shaft 4, while the pulley 6 is fixedly secured thereon. We have provided certain belt-shipping mechanism, (hereinafter fully described,) by means of which either the belt 2 or the belt 3, as desired, may be brought into operative engagement with the pulley 6, and thus cause the main shaft to revolve in accordance with the

desired direction of travel of the knife-carriage.

When either the belt 2 or the belt 3 is imparting motion to the main shaft 4, the one not thus at work is idly driving its loose pulley 5 or 7, as the case may be, and, under proper conditions, said belts may both be thrown upon the idle-pulleys, and, when thus "shipped," the main shaft 4 remains stationary while the pulleys 5 and 7 revolve idly thereon. In Figs. 3 and 9 we have illustrated belt 3 as having been thrown upon the pulley 6 to drive the main shaft 4 in the direction of the arrow in said figures. The belt 2 is then causing pulley 7 to revolve idly. In Fig. 11 the belts 2 and 3 are each shown as thrown upon the idle-pulleys, in which case the shaft 4 remains stationary. In said Fig. 11 the belt 2 is shown in dotted lines as having been shipped onto the fixed pulley 6, in which case the shaft 4 would be revolved in the direction of the arrow in said figure.

From the above explanation it will be readily understood that by properly shipping the belts 2 and 3 the shaft 4 may be caused to revolve in either direction desired, or said shaft may be caused to remain at rest. Shaft 4 extends under the track 9, near one end thereof, and said shaft bears at that end opposite the pulleys 5, 6, and 7, a pulley 8, which latter acts as a driver from which power is carried by a belt 8' to drive the carriage and its circular knife.

Reference-number 9 indicates the elevated track already referred to.

12 denotes the traveling-knife carriage, and 12' its flanged wheels, which traverse the track 9 when the carriage is in motion. Wheels 12^a may also be provided to engage the sides of said track, and thus serve to prevent any lateral deflection of said carriage.

Journalled in the carriage 12 and extending in a direction at right angles to its directions of travel is a shaft 13, bearing upon one end (outside the frame of the carriage) a pulley 14. On the opposite end of shaft 13 (outside the carriage-frame) is located a worm 15 for a purpose to be explained, and on said shaft (between the side frames of the carriage) is another pulley 16.

Journalled in the frames of carriage 12, in approximately vertical alignment with shaft 13, and parallel thereto, is a similar shaft 17, bearing thereon a pulley 18, that is connected by belt 19 with the pulley 16. Shaft 17 is the cutter-shaft of our machine and bears thereon the rotary cutter 20.

Belt 8', driven by pulley 8, is supported near the opposite end of the track by a pulley 21, mounted loosely on a stud 21', projecting from the side of track 9. Belt 8', engaging the pulleys 8 and 21, also engages the pulley 14 of carriage 12, which latter pulley is in proper alinement with the said pulleys 8 and 21. To insure perfect frictional contact of belt 8' with the pulley 14, an idle-pulley 14' is provided on a stud 14^a, projecting from

carriage 12, said idle-pulley being so located that the belt is caused to encircle one-half or more of the circumferential face of pulley 14.

The relative positions of the pulleys 8, 14, 21, and 14' and the manner in which belt 8' engages the same will be clearly understood by making special reference to Fig. 2 of the drawings. It will at the same time be understood that motion imparted to shaft 13 by means of belt 8' will from said shaft (by means of pulleys 16 and 18, connected by belt 19) be transmitted to the shaft 17, and thus cause the circular cutter to revolve, and the speed of the latter relative to the shaft 13 will be regulated by the relative sizes of the pulleys 16 and 18.

Having now described the manner in which motion is imparted to the rotary cutter, we will proceed to describe the mechanism provided to cause the carriage 12 to travel on its track, and also for governing the direction of travel of said carriage.

Supported in suitable bearings on that side of carriage 12, opposite pulley 14, is a vertical shaft 22, on the upper end of which is mounted a worm-gear 23, engaged and driven by the worm 15, already referred to as mounted upon shaft 13. On the lower end of shaft 22 is peculiarly mounted a pinion-gear 24, engaging a rack 25, located on or near the floor and of a length about equal to the track 9, to which latter said rack is parallel. It will now be seen that, when shaft 13, through its worm 15, imparts motion by means of worm-gear 23 to the vertical shaft 22, that the pinion 24, located on the lower end of said shaft 22, will crawl on rack 25 and thereby cause the carriage to travel forward or backward on its ways in accordance with the direction of rotation of the pinion 24.

We have already stated that pinion 24 is peculiarly mounted on shaft 22. Such mounting consists in securing said pinion to a sleeve 26, splined on shaft 22, instead of mounting the pinion directly on said shaft. Sleeve 26 is controlled by an operating-handle 27, pivotally secured to the carriage 12, Figs. 15 and 18. By properly rocking handle 27, sleeve 26 may be so slid on shaft 22 as to withdraw pinion 24 from rack 25, or should it be thus withdrawn to force the same into contact with said rack. The above provision for withdrawing the pinion from its rack is especially useful when it is desired to sharpen the rotary cutter, which (when said pinion and rack are disengaged) will still be revolved, but no traveling motion will be imparted to the carriage.

To guard against any liability of the carriage to move when its pinion 24 is withdrawn from the rack, a boss 9' may be located near one end of the track, (the left-hand end, as shown,) and to coact therewith we have provided a button 12^b, pivotally secured to the carriage 12, this construction and the manner of its use being best seen in Fig. 22, said button being turned up, as shown in dotted lines,

when not in use. Pinion 24 is secured to sleeve 26 by a nut 26', but instead of being clamped rigidly to said sleeve by the nut 26', washers 24' of flexible material like leather are interposed between said pinion and the confronting portions of the sleeve and nut. Under ordinary conditions pinion 24 will revolve with shaft 22 and sleeve 26; but should said shaft be started very suddenly, as is generally the case, the sleeve will at first be allowed to revolve idly within the pinion, but the pinion and sleeve will very soon revolve in unison. This construction prevents the breaking of teeth in either the rack or pinion, which otherwise might be occasioned by starting the pinion rapidly.

Reference-number 28 denotes a disk, constructed as a face-cam, which disk forms an important element of the belt-shipping mechanism of our device. Disk 28 is mounted upon a shaft 29, extending in a direction at right angles to the shaft 4 and supported in suitable standards. Cut in disk 28 are cam-grooves 30 and 31, controlling, respectively, certain rods 32 and 33, supported, and arranged to slide horizontally, in a standard 34. Rod 32 has fixedly secured at one end a stud 32', extending into the groove 30, and rod 33 has a similar stud 33', extending into the groove 31.

Rods 32 and 33 control, respectively, the belts 2 and 3, said belts passing through suitable openings in the free ends of said rods or through loops 32^a 33^a, secured to said rods, as shown in the drawings. The sliding movement, above referred to, of rods 32 and 33, is controlled by rotary movement of the disk 28 by reason of the studs on said rods engaging the grooves 30 and 31, as described, and any such movement of either of said rods will cause the belt which such rod controls to be correspondingly shipped.

A portion of each of the cam-grooves 30 and 31 is concentric with the shaft 29, and said grooves are so located on disk 28 that when the latter is partially rotated, as hereinafter explained, the rods 32 and 33 will not be moved in unison; that is to say, when rod 32 is in motion rod 33 is stationary, and vice versa.

Assuming that the disk 28, rods 32 and 33, and belts 2 and 3 are in their respective positions shown in Fig. 10, in which figure the belt 3 is on the fixed pulley 6 and the belt 2 is on the loose pulley 7, should disk 28 be rotated in the direction of the arrow of said figure, it will be seen that the groove 30 will cause the rod 32 to commence to slide to ship belt 3 off pulley 6 and onto the loose pulley 5. (See Fig. 11.) It will also be seen by reference to Figs. 10 and 12 that during such rotary movement of the disk, the concentric portion of groove 31 will control the stud 33' of rod 33, and for that reason no motion will be imparted by the disk to said rod 33.

Should disk 28 be left in the position to which it has now been rotated, (the position

shown in Fig. 12,) the belts 2 and 3 will engage idle-pulleys 5 and 7, respectively, and while thus in position no motion will be imparted to the shaft 4. Should continued rotary movement be imparted to disk 28, the groove 31 will then begin to actuate rod 33 to ship belt 2 from pulley 7 onto the fixed pulley 6, (See dotted lines, Figs. 11 and 12). During the last-described movement of the disk 28 the concentric portion of groove 30 will have engaged the stud 32' of rod 32, and for that reason no motion will be imparted to said rod. (See Fig. 12.) Should disk 28 now be rotated in the direction opposite to that of the said arrow in Fig. 10, said disk will act through rods 32 and 33 to first ship belt 2 onto idle-pulley 7, and continued rotation of said disk will serve to ship belt 3 onto the fixed pulley 6.

It should be noted, when belts 2 and 3 are upon their idle-pulleys and no motion is being imparted to the shaft 4, that during such time pulley 8 on said shaft must necessarily be stationary, and consequently the carriage 12 will also be stationary.

We have provided certain mechanism by means of which carriage 12 automatically controls the belt-shipping mechanism to throw the belt 2 or 3, as the case may be, off the pulley 6 at about the completion of the travel of the carriage in either direction.

Pivottally located near the floor, preferably on some fixed portion of the machine-table, is a short vertical shaft or stud 35, having extending therefrom in opposite directions arms 36 and 37, and to the free end of each of said arms is secured a cord or chain, that of arm 36 being denoted by reference-figure 36' and that of arm 37 by reference-figure 37'.

The opposite ends of the cords 36' 37' are secured to a drum 38, mounted upon the shaft 29, on which is secured the disk 28. Cords 36' and 37' are so secured to said drum that any rotary motion thereof will serve to wind thereon one of the cords and will simultaneously act to unwind the companion cord. Stud 35 forms an important link of the mechanism controlling the shipping of the belts 2 and 3; rotary motion of said stud serving through its arms 36 and 37 and cords 36' and 37' to rotate drum 38, and such rotary movement of the drum will (through its shaft 29) be communicated to disk 28, which latter controls the belt-shipping rods 32 and 33, as already explained. The direction and extent of rotation of said disk is of course controlled by the direction and extent of rotation of the stud 35.

Hinged to the rack 25, near each end of track 9, are arms 39. These arms 39 are connected by, and serve to support horizontally, and parallel to track 9, a bar 40, said bar being pivottally secured to the arms 39 about midway their length and adapted to be moved substantially like one bar of parallel rulers. The arms 39 are designed, under proper conditions, to rock on their pivots, thus imparting an endwise traveling movement to said bar 40, which latter is provided at the proper

point with an opening or depending loop 40', into which enters the free end of an arm 41, extending radially from stud 35 at right angles to the arms 36 and 37. Such endwise movement of bar 40 will, through the arm 41, in the opening 40', cause a rocking motion to be imparted to the stud 35 with the results already described.

The upper free ends of the arms 39 extend into the path of a stud 42, projecting from the side of carriage 12. When stud 42 comes in contact with either of the arms 39, the forward movement of the carriage causes said stud to rock the arm engaged thereby until a sufficient endwise movement has been imparted to the bar 40 to cause the latter to rock stud 35, and thus ship the belt 2 or 3 onto its loose pulley, and thus cause further forward movement of the carriage to cease.

An operating-handle 43 is provided at one side of the machine, (the right-hand side, as shown in the drawings,) whose inner end is connected with the upper free end of one of the arms 39, or, if desired, with the bar 40. By means of this handle it will be seen that bar 40 may be so moved, to actuate the belt-shipping mechanism, as to throw belts 2 or 3 onto or off from the fixed pulley 6.

Referring now particularly to sheets 3, Figs. 5, 6, 7 and 8, it is assumed that belt 3 is acting as the driving-belt, and that the carriage 12 is in motion on track 9 and has about completed its travel in the direction of the arrow in Fig. 5, stud 42 having just come in contact with one of the arms 39. Continued forward movement of the carriage rocks the said arm 39 until the latter assumes the position shown in full lines in Fig. 8 and in dotted lines in Fig. 5, during which movement the operating-handle 43 has been changed from the position shown in full lines in Fig. 6 to that shown in dotted lines in said figure. When arms 39 have reached their last-mentioned position, sufficient endwise movement will have been imparted to bar 40 to cause the same to rock the stud 35 from the position in which said stud is shown in Fig. 9 to the position in which it is shown in Fig. 11, from which figures it will be seen that such rocking of the stud 35 has caused the shipping of belt 3 (by reason of the mechanism heretofore described) from pulley 6 unto the idle-pulley 5, thus causing the carriage 12 to come to rest. When it is desired to again start the carriage, operating-handle 43, which is now in the position shown in full lines in Fig. 7 and dotted lines in Fig. 6, is forced into the position shown in dotted lines in Fig. 7, thus imparting additional endwise movement to the bar 40 and forcing said bar and its supporting-arms 39 into the position shown in dotted lines in Fig. 8. This additional movement of bar 40 rocks stud 35 into the position indicated by dotted lines in Fig. 11, and such rocking of the stud 35 will (through the mechanism above mentioned) cause the belt 2 to be shipped onto the driving-pulley 6 and thus cause car-

riage 12 to travel back on its track until stud 42 reaches and engages the arm 39 opposite to that already mentioned, Fig. 8, dotted lines. Continued movement of said carriage in the last-described direction then forces said arm into the position shown in the full lines in Fig. 8, when the various elements of the belt-shipping mechanism, acting in a manner reverse to that already described, will ship belt 2 onto its idle-pulley, and consequently the carriage will come to rest.

When it is desired to again start the carriage, the handle 43 is properly operated to throw the bar 40 into the position shown in full lines in Fig. 45, which acts again to ship belt 3 onto the driving-pulley 6 and causes the carriage 12 to again travel in the direction of the arrow.

We have provided means whereby the fabric being operated upon may be clamped in position over the slot 11. This clamping device consists of a bar 44 of considerable length, but preferably somewhat shorter than said slot 11. Bar 44 is hinged over the slot 11, as shown, and in its under side is cut a groove within which the rotary knife travels when the clamping device is in use. The bar 44 has a tendency to rock upward on its hinges by reason of certain wires 44^a, attached thereto and suspended from some elevated point, said wires being provided midway their length with suitable spiral springs 44^b.

Hinged to table 10, near each end of slot 11, are covers 45, formed, practically, as continuations of the bar 44. Under these covers 45 the rotary knife rests when not in use, and thus all liability of injury to the operatives of the machine is guarded against.

Assuming that a machine constructed in the manner described has been provided and that it is desired to operate the same, an amount of fabric of the desired length to be cut is fed forward under bar 44 and firmly clamped in position over slot 11 by means of said bar, which is held down upon the fabric. Operating-handle 43 is now grasped and forced in the proper position to cause the carriage 12 (which has been at rest at one end of said slot) to travel across the slot 11 and thus sever a length or piece of the fabric, said carriage coming to rest automatically at the opposite end of said slot, as already fully explained. A new length or piece of fabric is now drawn forward and clamped in the same manner as before, the operating-handle is again properly manipulated to cause the carriage to again traverse its track, but this time in a direction the reverse to that just described, and another piece of fabric is severed from the main length.

Our machine, as a whole, is very simple in its construction, easily and cheaply produced, and, as above stated, performs very rapidly the work for which it was designed.

Having thus described our invention, we claim—

1. In a fabric-cutting machine, in combi-

nation, a slotted table, a track beneath and parallel with said table-slot, a revolving knife journaled in a carriage mounted to travel upon said track, as set forth, a fabric-clamping bar movably mounted over the table-slot, and a housing 45 at each end of said slot and in line with said clamping-bar when the latter is in its operative or clamping position, all substantially as and for the purpose specified.

2. In a fabric-cutting machine, a table having a slot, a track beneath and parallel with the slot, a rotating knife journaled on a carriage mounted to travel upon said track, a fabric-clamping bar mounted over the table-slot, housing at each end of the slot in line with the clamping-bar when the bar is in its operative position, and means for driving the carriage and knife, as and for the purpose described.

3. In combination, a track, a carriage, and means for moving it on the track, a knife

carried by a shaft a clamping-bar mounted on the carriage, means for rotating the shaft, and housings in line with the clamping-bar when the bar is in operative position, as and for the purpose described.

4. In combination, a slotted table, a track beneath and parallel with the slot, a rotating knife journaled in a carriage mounted to travel upon said track, a rack parallel with the track, a gear-shaft journaled in the carriage having a gear secured thereto by frictional contact only, said gear meshing with the rack, means for throwing the gear out of mesh with the rack, and a housing at each end of the slot, as and for the purpose described.

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