Feb. 6, 1951 K. SIEG 2,540,694

BOX BLANK TAPING MACHINE

Filed March 27, 1948 3 Sheets-Sheet 1

Fig. 1.

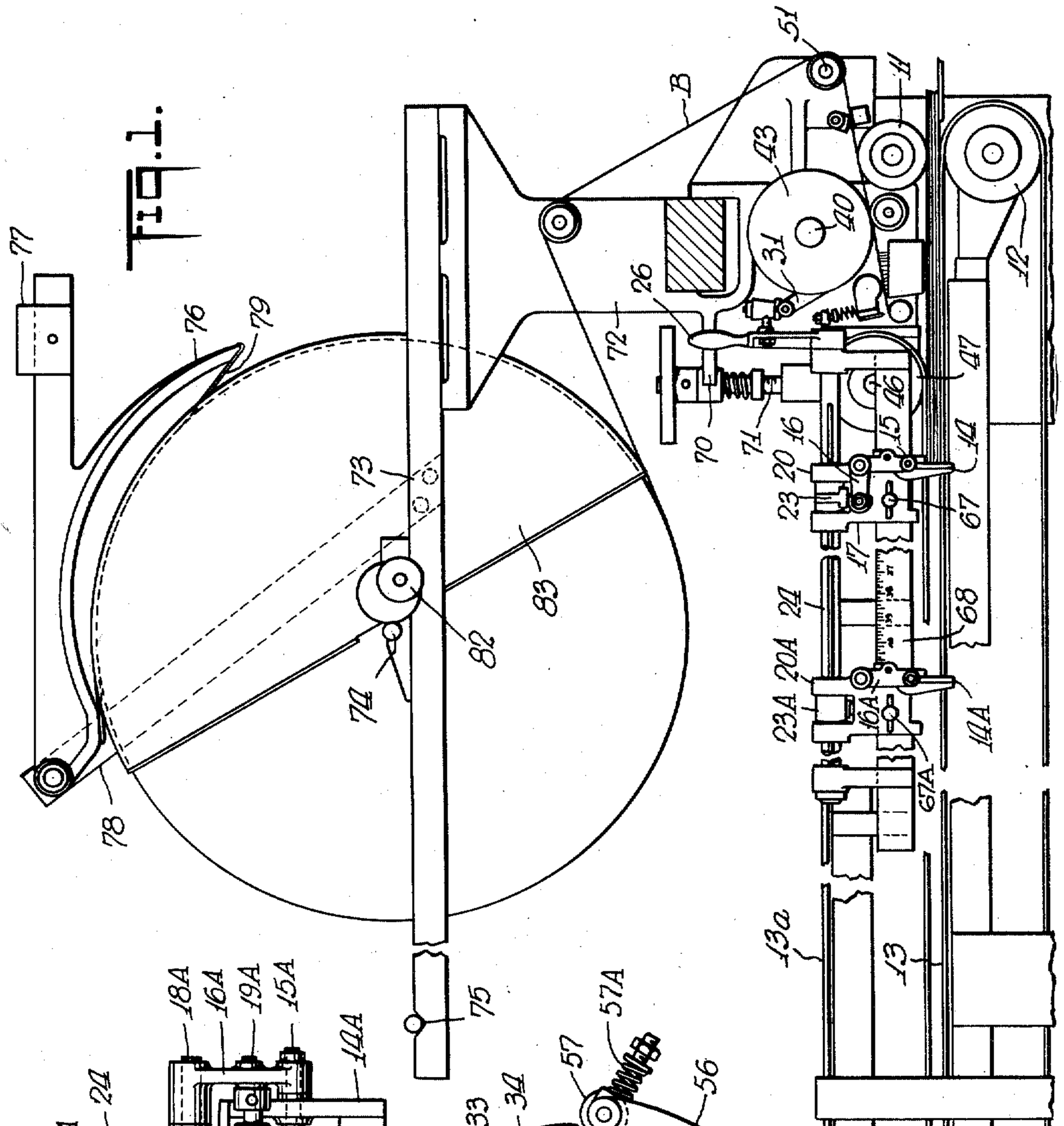


Fig. 6.

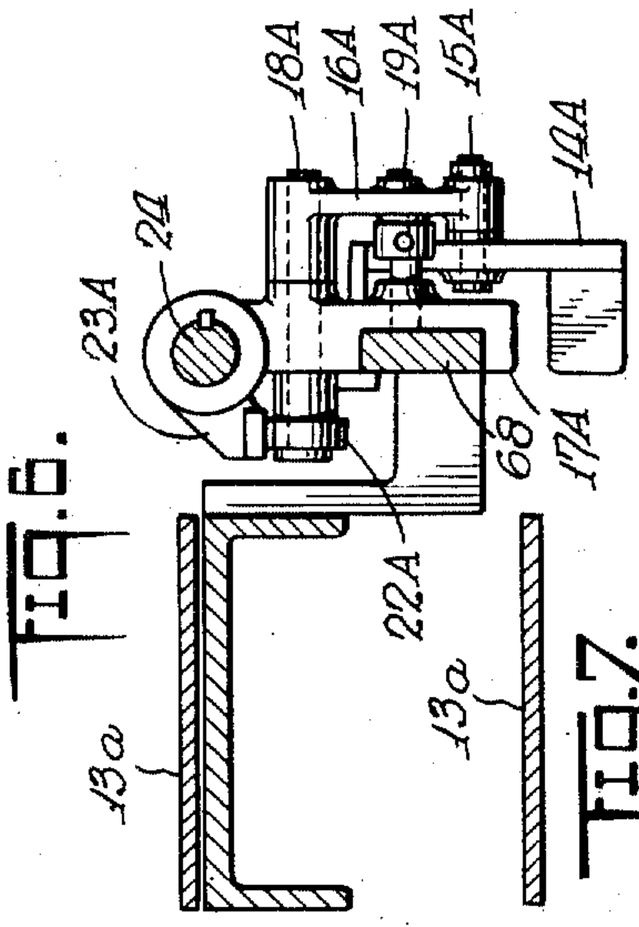
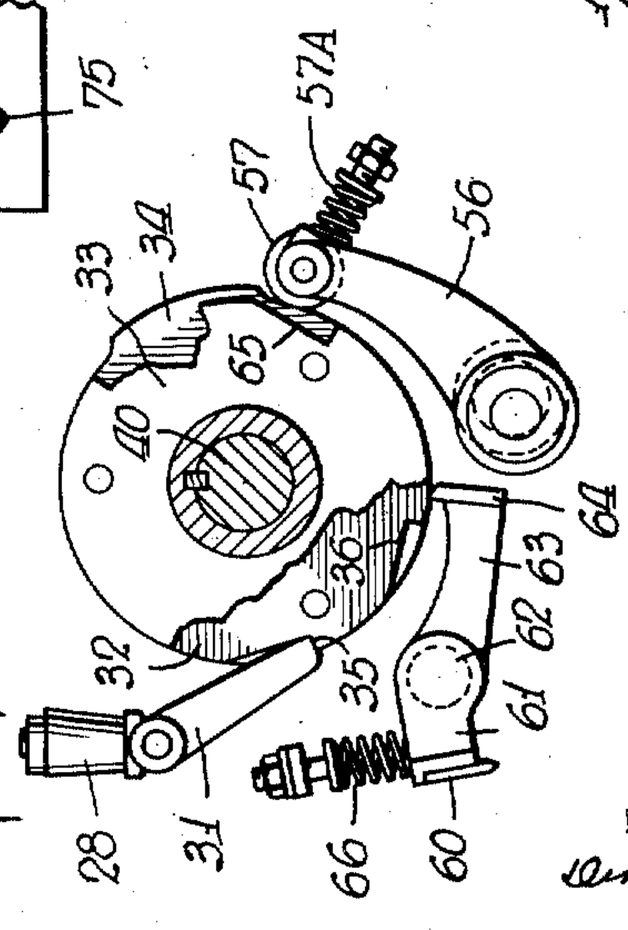


Fig. 7.



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BOX BLANK TAPING MACHINE

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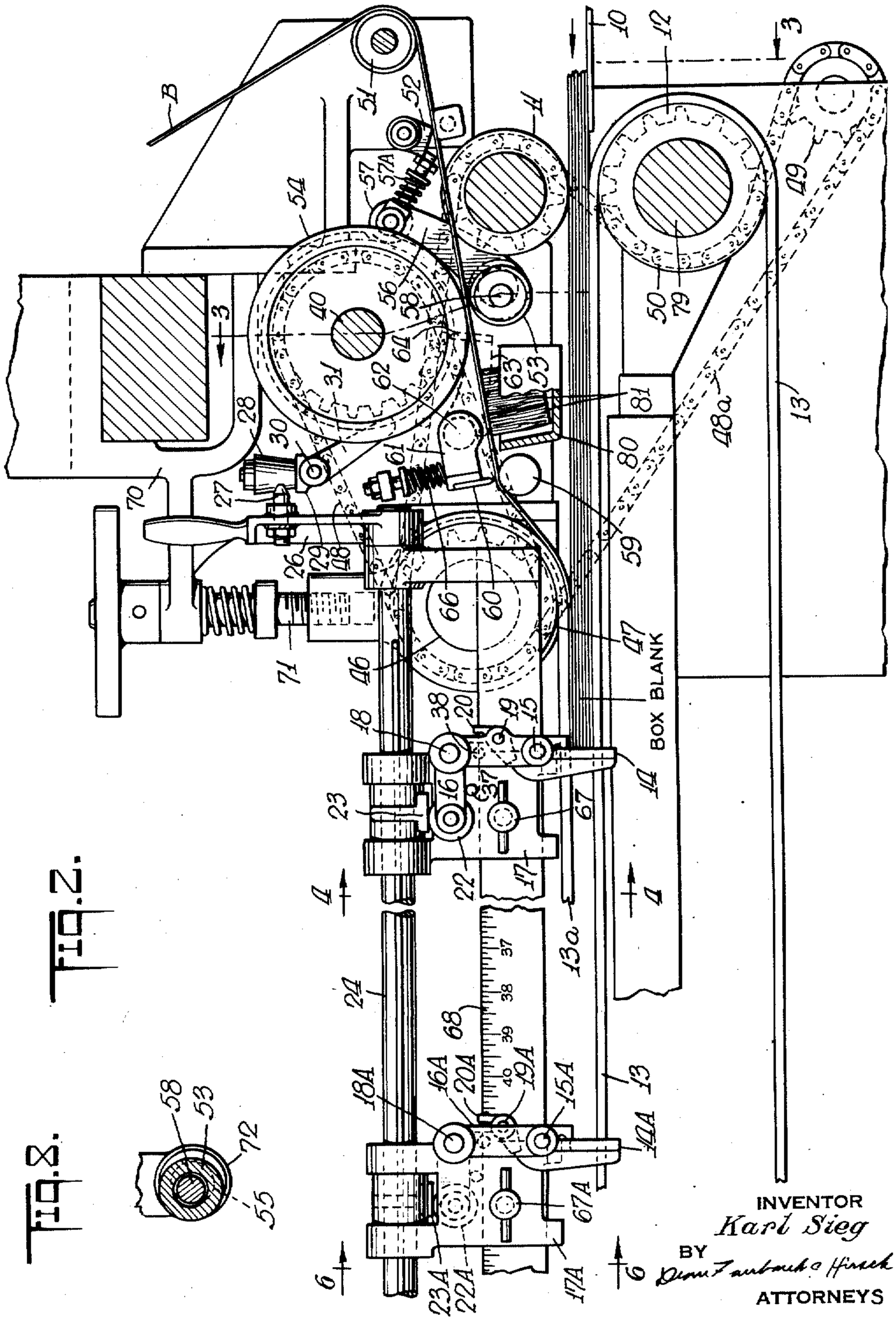

Fig. 2.

Fig. 8.

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BOX BLANK TAPING MACHINE

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Fig. 3.

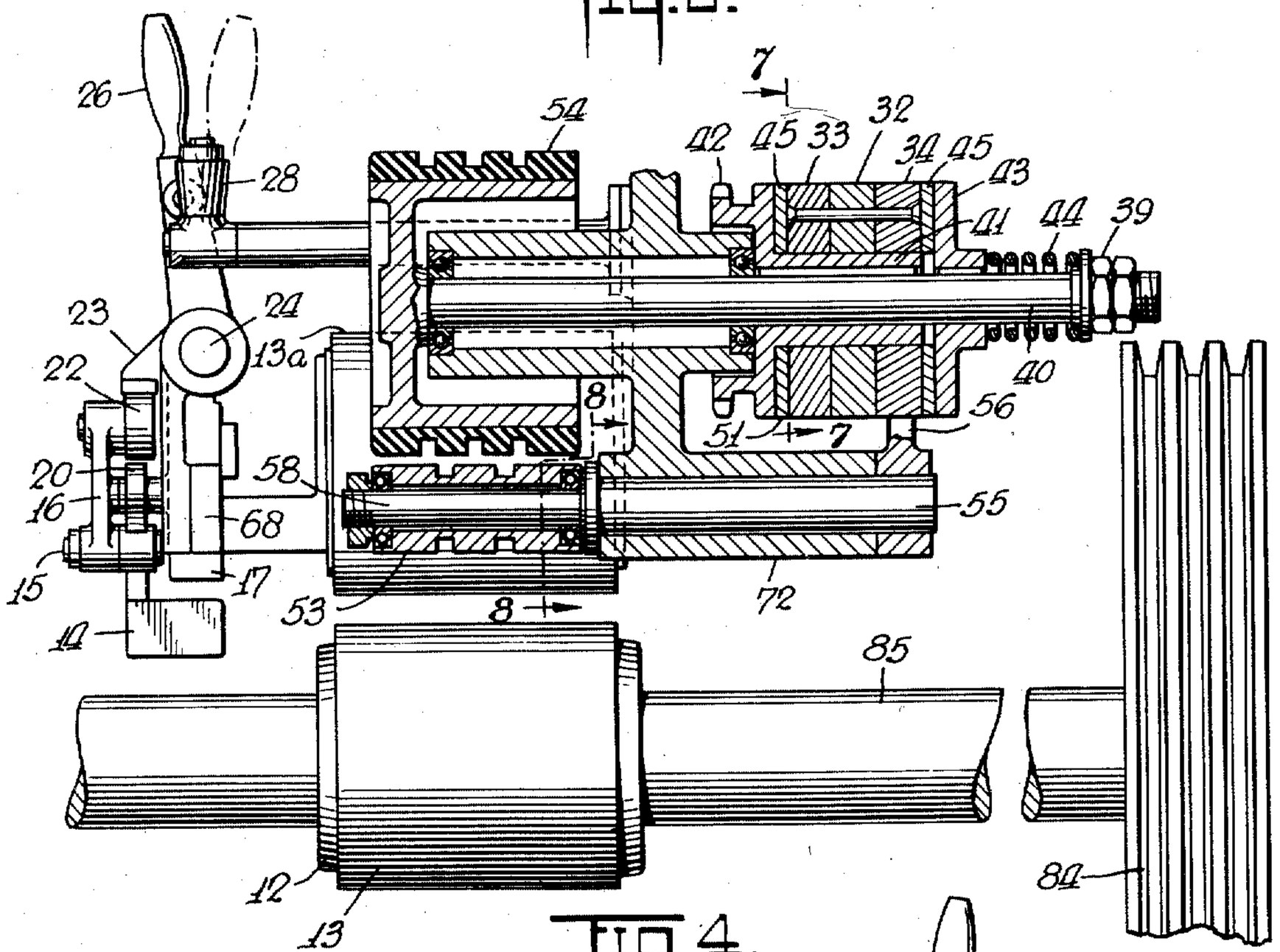


Fig. 4.

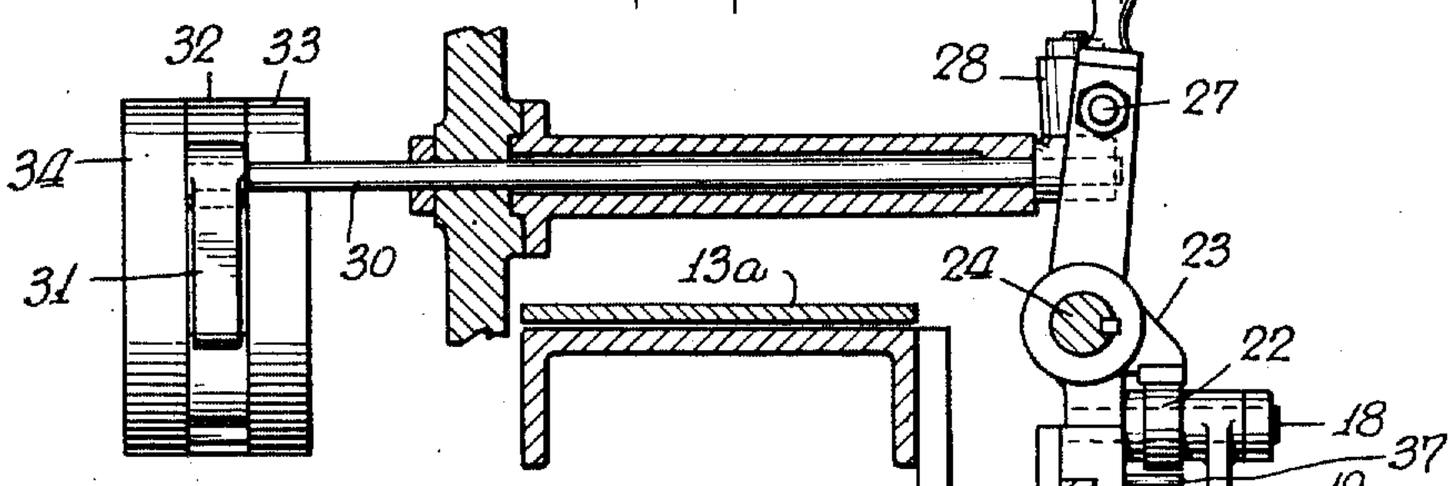
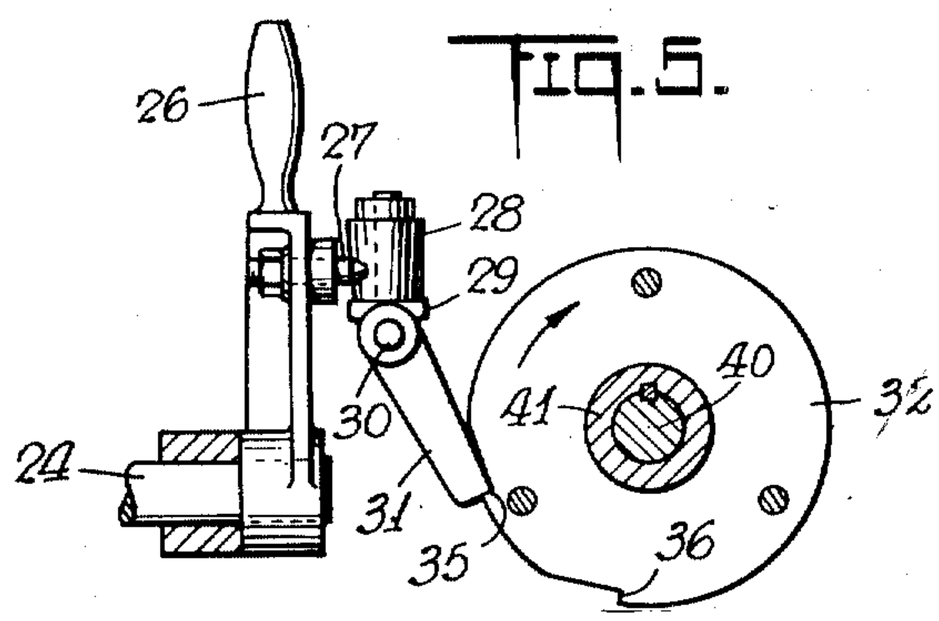


Fig. 5.



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Patented Feb. 6, 1951 2,540,694

UNITED STATES PATENT OFFICE

2,540,694

BOX BLANK TAPING MACHINE

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Application March 27, 1948, Serial No. 17,472

18 Claims. (Cl. 216—29)

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This invention relates to the taping of folded box blanks which have panels for the peripheral walls and flaps for forming the top and bottom of a box. These flat blanks, partially folded to bring the edges of two panels together, are fed in succession through the machine, and as they advance an adhesive coated tape is applied to secure said edges together. The main object of the present invention is to secure greater accuracy and dependability in the control of the mechanisms which start the feeding of the tape to the blanks and which cut off the tape when the proper length of the tape has been delivered and applied to the blank so that the tape will terminate at the fold lines at the ends of the side panels of the blank.

It has been proposed to control the starting of the feeding of the tape to the blank by a target in the path of movement of the blank and to control the cutter by the action of a rotatable cam. Control means of this type are shown in the patents of Bright, 2,157,735, George 2,167,357 and Cohen 2,248,744.

It has also been proposed to employ two targets in the path of the blank, one acting through mechanical means to effect the starting of the tape, and the other to control an electric means for operating the tape cutter.

For blanks of different sizes and shapes it is necessary to adjust the target to insure the starting of the tape feeding so that the front end will register with the front end of the panel, and to adjust the cam so that the tape will be cut off at the proper point to register with the rear end of the panel. Accurate circumferential adjustment of a cam in respect to the position of the target and for different sizes of blanks is difficult to accomplish, and readjustment to correct error in initial adjustment can be made only while the machine is at rest.

In my improved machine, separate targets are employed to control the tape feeding and tape cutting, and these control the time of operation of the cams rather than rest position of the cams. Thus, no circumferential adjustment of any cams is required for different box blanks, and the time interval between target operation and cutting operation is easily set by mere adjustment of the positions of the targets in accordance with the length of a side panel of the blank and the length of flap.

In carrying out my invention, a graduated bar or scale is provided and along which the two targets may be separately adjusted. The first target is placed at the proper position along the

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bar, as shown by the marking on the scale, and in accordance with the length of the closure flap on the front end of the box blank, so that the tape feeding will begin at the proper time to insure the front end of the tape engaging the blank at the fold line at the base of said flap. The second target is also adjusted along the same scale, so that the distance between the two targets will correspond to the length of the side panel of the blank. Thus the length of the cut off section of the tape will be the same as the spacing between the targets, and the length of said panel. By measuring the length of the flap and the length of the panel and properly setting the targets along the length of the scale, accurate taping may be effected for blanks of different sizes and having different relative proportions of the constituent parts.

In a preferred embodiment of my invention which is illustrated in the accompanying drawings, there is employed a rotary cam with two cam parts or sections and a stop part or section, one cam part serving to control the operation of the tape feeder and the other cam part serving to control the operation of the tape cutter, the stop part being controlled by both targets. The cam makes one complete revolution for each blank and has a slip friction drive, and the two stops are for temporarily holding the cam against rotation and out of operation at two points in its revolution. The first target acts to release one stop and permit rotation of the cam to the next stop, during which partial rotation one cam part actuates the tape feeder. The second target acts later to release the second stop and permit completing of the revolution of the cam to the first stop, during which time the other cam part actuates the taper cutter. The cam is then in a position to start another cycle when the first target is engaged by the next successive blank.

Thus, the cam makes one complete revolution for each blank, and two separate part-revolutions are started when the end of the blank reaches the two targets in succession. By measuring the length of the first flap of the blank and measuring the total length of this flap and the panel, the targets may be slid along the scale to the markings thereon which show these two measurements, and the targets are secured at those positions. No other adjustments are required, regardless of the size or proportions of the blank, and the blanks may be fed at any speed and with any variation in the spacing between successive blanks fed to the machine. Thus there are no

revolving cams or any parts other than the targets which require adjustment for a particular size or shape of blank. The accuracy of operation is not in any way affected by variation in the speed of the machine, and both adjustments are along the same scale.

In the form illustrated in the accompanying drawing, mechanical means are employed for releasing the cams when the targets are operated. It will be understood that the targets may control an electric circuit including a solenoid for releasing the cams.

In the accompanying drawings there is shown merely one of many possible variations in the details of a machine embodying my invention. In these drawings:

Fig. 1 is a side elevation of the machine.

Fig. 2 is a side elevation, partly in section, and similar to a portion of Fig. 1, but on a larger scale.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is a vertical longitudinal section parallel to the plane of Fig. 2, and showing the cam stops.

Fig. 6 is a section on the line 6—6 of Fig. 2.

Fig. 7 is an end view of the control cams, and taken on the line 7—7 of Fig. 3, and

Fig. 8 is a section on the line 8—8 of Fig. 3.

In the specific form illustrated, the box blanks which have been folded by hand or in an automatic folding machine, are fed along a feed table 10 and between a pair of feed rollers 11 and 12. The lower feed rollers 12 supports a conveyor belt 13 which cooperates with an upper belt 13*a* to carry the blanks through the machine, and the upper belt presses the tape onto the blank. These belts do not extend across the full width of the blank, but do extend across the area at the abutting edges thereof where the tape is applied. In the path of the blanks are mounted two targets, one for controlling the start of the cam part which operates the tape feeding mechanism, and the other for controlling the start of the cam part which operates the tape cutting mechanism. These targets are adjustable along the path of the blank, and are easily swung by the blank.

The first of these targets includes a paddle 14 mounted on a pivot pin 15 carried by a depending arm of a bell crank lever 16 which is pivoted on a bracket 17 adjustable along the length of the scale on the machine, as will be hereinafter described. The bell crank lever 16 is mounted on a pivot pin 18 and has, on the depending arm thereof, a pivot pin 19 carrying a latch 20, one end of which is normally in the path of movement of the upper end of the paddle 14 to temporarily limit the swing of the latter in a clockwise direction on its pivot 15.

The horizontal arm of the bell crank lever 16 has a roller 22 which presses upwardly against the lower face of an arm 23 keyed to slide along a splined shaft 24, so that when the paddle 14 is pushed to the left from the position shown in Fig. 2 by the advancing folded box blank the bell crank lever 16 will be rotated clockwise to lift the arm 23 and oscillate the shaft 24 in one direction. This shaft is held against endwise movement and is provided with a lever arm 26 carrying a cam pin 27 in the path of movement of which is a roller 28. This roller is mounted on one arm of a lever 29 mounted on a pivot pin 30, and the other arm constitutes a pawl 31 traveling on the surface stop part or section 32 of the cam. This stop section is integral with or rigidly connected with two cam parts 33 and 34. As shown in Fig. 3,

the parts 32, 33 and 34 are coaxial and rigidly connected to this stop section, and collectively are here designated as the cam. The stop section 32 has two notches 35 and 36, as shown in Fig. 5.

In the operation of starting the tape, the swing of the paddle 14 by the blank lifts the arm 23, oscillates the shaft 24, and swings the arm 26 in one direction. This causes the cam pin 27 to engage the roller 28 on the lever 29 and swing the lever out of the path of the pin and move the pawl 31 away from the stop section 32 of the cam and out of the notch 35. This permits the entire cam to be rotated by its slip friction drive, but the pawl 31 immediately comes back into engagement with the periphery of the cam to engage the second notch 36 to stop the cam. During this partial revolution of cam parts 32, 33 and 34, the cam part 34 acts to feed the tape to the blank while rotating the distance from notch 35 to notch 36.

During this operation of the target the bell crank lever 16 and the roller 22 swing only a short distance, and the upper end of the paddle 14 is then permitted to move in respect to the bell crank lever 16 so that the paddle 14 may freely swing on the pivot pin 15 and out of the path of the blank. The lever 16 normally rests on a pin or stop 37 on the bracket 17 so that the paddle 14 will be in a vertical position and held by the latch 20 against swinging clockwise in respect to the bell crank lever 16. When the bell crank lever 16 and target 14 have been swung clockwise by the box blank to a sufficient distance so that the pin 27 has pushed the roller 28 sufficiently to release the latch or pawl 31 from the notch 35 and permit it to engage the notch 36, the upper end of the latch 20 will engage and be stopped by a pin 38 also on the bracket 17, and the latch will swing on its pivot 19 until the lower end of the latch is moved out of the path of a shoulder on the paddle 14. The paddle can then freely swing on the pivot pin 15, and to a substantially horizontal position, with it lower end resting freely on the top of the blank. This permits the bell crank lever 16 to drop back to the position shown in Fig. 2, but the arm 23 will not drop, and the lever arm 26 will remain in a position beyond the roller 28. After the blank has moved entirely past the paddle, the latter may drop down and the latch will drop behind the shoulder on the paddle and be ready for operation again when the next blank comes along. A swing of the paddle through about 15° to 20° before the latch 20 engages the pin 38 is ordinarily sufficient. The extent to which the paddle itself swings on pivot 15 after being released by the swinging of the latch 20 will vary with the thickness of the box blank.

The second target may be identical in all respects with the first one described, but acts to oscillate the shaft 24 in the opposite direction. The parts of the second target are marked on the drawings with the same reference numerals as those of the first target, but with the suffix "A" added to each. The arm 23A of the second target extends in the opposite direction to the first target, as is shown in Fig. 6. Thus, as the end of the blank engages the paddle 14A, the arm 23A will be lifted and the shaft 24 will be rotated counter-clockwise, as viewed in Fig. 6, instead of clockwise. This oscillation of the shaft 24 will return the lever 26 from the position shown in dotted lines in Fig. 3 to the position shown in solid lines, and will cause the pin 27 on the arm

26 to again pass the roller 28 and swing the lever 26 to move the pawl 31 out of the notch 36 and permit continued rotation of the stop section 32 of the cam to the position shown in Fig. 5, where it is brought to rest by the engagement of the pawl 31 in the notch 35. During this second portion of the rotation of the cam, the tape cutter will be operated as hereinafter described. When the paddle 14A has been swung a sufficient distance to oscillate the shaft 24, the paddle will be released by the catch, and will be free to swing further and ride along the surface of the blank.

The cam sections 33 and 34 which, as previously noted, are rigid with the stop section 32, are stopped whenever the latch 31 engages either of the notches 35 and 36 of the stop section 32. While the cam rotates the distance from notch 35 to notch 36, it operates to start the feeding of the tape to the box blank, and while it completes the full rotation it acts to control the tape cutter.

The three rigidly connected sections of the cam are mounted on a shaft 40 but are frictionally driven from the latter. As shown particularly in Fig. 3, the shaft has a sleeve 41 keyed thereto and provided with a driving sprocket wheel 42. A plate 43 is keyed on the shaft and a spring 44 and an adjustable nut 39 cause the cams to be clamped between this plate and the sprocket wheel. At opposite sides of the set of cam sections are friction washers 45, so that the cams will rotate with the shaft except when such rotation is prevented by the pawl 31 acting on the stop section 32.

The upper belt 13*a* is mounted on a roller 47 driven from a shaft 46, and the shaft 40 is driven from this shaft 46 by a chain 48 extending around the sprocket wheel 42. The roller 47 is driven by a chain 48*a* extending around a sprocket 49, thence around a sprocket 50 on the shaft of the feed roller 12 which carries the blank conveying belt 13, then around a sprocket wheel connected to the feed roller 11, and then around a sprocket on the shaft 46. The parts are so proportioned that the peripheral speeds of the rollers 11, 12 and 47 are the same. The tape B, from any suitable source of supply, passes around an idler 51 beneath a snubber 52, and thence between feed rollers 53 and 54. The roller 54 is secured to the shaft 40 so as to be continuously rotated with the sprocket 42, and the roller 53 is mounted on a stud 58 projecting from the end of a rock shaft 55 and eccentric in respect thereto. An arm 56 secured to this rock shaft has a roller 57 engaging the tape feed cam section 34. Thus the shaft 55 is oscillated by cam section 34 once during each rotation of the set of cams. The oscillation of the shaft 55 from the cam section 34 causes the roller 53 to move up and pinch the tape between the roller 53 and the driven roller 54. Thus when the cam section 34 lifts the roller 53, rollers 53 and 54 cooperate to feed the tape. The projection on the cam section 34 is so positioned, as shown in Fig. 7, and extends along a sufficient arcuate distance, that the positive feeding of the tape begins as soon as the latch 31 leaves the notch 35, and continues as long as the roller 57 is held on the cam projection 34 and until the latch 31 is moved out of the notch 36 to let the cam rapidly complete its cycle of rotary movement.

The tape cutter includes an anvil block 59 and a cutter blade 60 carried on one end of a lever arm 61 mounted on a stud 62. The stud

also carries a lever arm 63, on one end of which is a plate or projection 64 engaging the periphery of the cam section 33. This cam section has a notch 65 presenting a substantially radially extending shoulder. Normally, the edge of the plate 64 rides on the cylindrical surface of this cam section and holds the cutter blade 60 above the anvil block. When the cam section 33 reaches the point where the plate 64 drops off of the shoulder and into the notch 65, the blade 60 is suddenly forced against the anvil 59 to cut the tape. This cutting movement of the blade is accelerated by the action of a spring 66 pressing down on the upper side of the blade-carrying arm 61. The projection on the cam section 34 and the notch in the cam section 33 are so positioned circumferentially in respect to the notches 35 and 36 of the stop section 32, as shown in Fig. 7, that when the stop section 32 is in the position shown in Figs. 5 and 7, the roller 57 is on a cylindrical portion of the cam section 34 and the plate 64 is riding on the cylindrical portion of the cam section 33. When the blank reaches the first target and the pawl 31 is moved out of the notch 35, the three parts 32, 33 and 34 of the cam may rotate through the friction drive, and the roller 57 will immediately engage the cam projection on the cam section 34 and press the roller 53 against the roller 54 to start feeding the tape, so that the advanced end of the tape will be fed from the cutter blade 60 to the blank beneath the upper belt 13*a*.

The distance between notches 35 and 36 is slightly shorter than the distance between roller 57 and the end of the projection on cam 34 which in turn is somewhat shorter than the distance between plate 64 and the dropping point of notch 65. Thus, when the cam moves from notch 35, roller 57 climbs immediately onto the projection of cam 34 and stays on this projection after the cam has reached notch 36. After the second target releases the cam from notch 36, the roller 57 drops from the projection to the cylindrical surface of cam 34 and slightly afterwards plate 64 drops into notch 65 and the tape is cut.

When the blank reaches the second target the pawl 31 is released from the notch 36 and the cam sections 33 and 34 will start rotating. The notch 65 in the cam section 33 is so positioned that the plate 64 will drop into the notch 65 immediately after the pawl moves out of the notch 36, and the cutter blade 60 will at once operate to cut off the tape at the proper point so that the end of the cut off section will register with the second fold line of the blank. The further rotation of the cam sections, while the section 32 is traveling to bring the notch 35 around to the pawl 31 first lifts the cutter 60 and recompresses the cutter spring 66, and then brings the two cam surfaces of the sections 33 and 34 around to proper rest positions, as shown in Fig. 7, to begin operating again when another blank strikes the first target and the feeding of the tape begins again.

From the foregoing description and a consideration of the accompanying drawings, it will be seen that by placing the two targets at the proper positions along the scale bar in accordance with measurements of the blank, the first target will release the cam to start tape feeding at such a time that the tape end will register with the first fold line and the interval between the successive operations of the cam will correspond to the spacing between the targets, so that the cut off will take place at the proper time for

the end of the tape to register with the second fold line. The machine may be employed for taping box blanks of a wide variety of sizes, and with wide variation in the relative lengths of the side panels and the closure flaps, and in order to get accuracy of taping it is merely necessary to set the two targets at the proper places along the scale bar, determined by the length of the panel and the flap.

If at the beginning of the operation it is noted that the tape does not register with the fold line, correction may be made without stopping the machine. It is merely necessary to slightly loosen the clamp screws **67** and **67A** which hold the brackets **17** and **17A** on the scale **68** and move the brackets in the proper direction, and again clamp them in position. No adjustment need be made as to the cams or any of the parts actuated by the cams, regardless of the size or proportion of the blank being taped.

Other parts of the apparatus shown in the drawing may be common to other taping machines. The frame of the machine may have a bracket **70** supporting an adjusting screw **71** for supporting and vertically adjusting the shaft **46** which carries the pulley or roller for the upper belt **13***a*, and the frame may also support the roll of tape. As shown, the frame has a bracket **72** on which are mounted horizontal bars **73**. Each bar may have two notches **74** and **75** for the spindles or axles of rolls of tape, so that a fresh roll may be supported in the notches **75** ready to be moved over to the notches **74** when the first roll is nearly used up. A suitable brake may be employed for keeping the tape under light tension. As shown, an arm **76** having a curved lower surface and an adjustable weight **77**, is pivoted on a bracket **78** secured to the bars **73**, and has a flexible band **79** resting on the roll of tape. The tape roll may be shifted axially to the proper adjusted position in respect to the abutting edges of the blank to be taped, by adjusting screws **82** acting on semi-circular discs **83**.

A suitable moistener is provided for the adhesive on the tape, just in advance of the point of application of the tape. This may include a water pan **80** and a brush **81**. Power may be applied to the machine from a pulley **84** on the shaft **85** which carries the lower belt pulley or roller **12**.

If an electric control be employed, a solenoid may be connected to the latch **31**, and the circuit controlled by the swinging of the targets.

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

1. A machine for taping box blanks fed in succession therethrough, and of the type in which there are provided a tape feeder, a tape cutter, and two targets in the path of movement of the blanks, one for initiating the operation of said tape feeder and the other for initiating the operation of said tape cutter, said machine being characterized by a member having different movements imparted thereto by said targets, and means whereby the operation of said tape feeder is mechanically controlled by one of said movements, and the operation of said tape cutter is mechanically controlled by the other of said movements.

2. A machine for taping box blanks fed in succession therethrough, and of the type in which there are provided a tape feeder, a tape cutter, and two targets in the path of movement of the blanks, one for initiating the operation of said tape feeder and the other for initiating the operation of said tape cutter, said machine being characterized by a rock shaft extending lengthwise of the path of movement of the blanks and having different movements imparted thereto by said targets, and means whereby the operation of said tape feeder is mechanically controlled by one of said movements and the operation of said tape cutter is mechanically controlled by the other of said movements.

3. A machine for taping box blanks fed in succession therethrough, and of the type in which there are provided a tape feeder and a tape cutter, said machine being characterized by a shaft extending parallel to the path of movement of the blanks, two targets adjustable along said shaft and operating to rotate said shaft, means for initiating the operation of said tape feeder by one rotary movement of said shaft, and means for initiating the operation of said tape cutter by another movement of said shaft.

4. A machine for taping box blanks fed in succession therethrough, said machine having a tape feeder, a tape cutter, cam means for operating said tape feeder and said tape cutter, a slip friction drive for said cam means, means for normally preventing operation of said cam means, two targets in the path of movement of the blanks, and means for releasing said cam means when said targets are moved in succession by a box blank.

5. A machine for taping box blanks fed in succession therethrough, and having a scale bar extending lengthwise of the path of movement of said blanks, two targets independently adjustable along said scale bar and in accordance with the dimensions of a blank to be taped, a tape feeder, a tape cutter, and mechanical means operated by said targets for effecting successive operations of said tape feeder and cutter.

6. A machine for taping box blanks fed in succession therethrough, and having a scale bar extending lengthwise of the path of movement of said blanks, two targets adjustable along said scale bar and in accordance with the dimensions of a blank to be taped, a tape feeder, a tape cutter, a shaft extending parallel to said scale bar, means for rotating said shaft by one of said targets, means controlled by said rotation to start operation of said tape feeder, means for rotating said shaft by the other of said targets, and means controlled by said rotation to start operation of said tape cutter.

7. A machine for taping box blanks fed in succession therethrough, and having a tape feeder, a tape cutter, an oscillatory member for controlling the operation of said tape feeder and said tape cutter, and a pair of targets along the path of movement of the blanks, one of said targets operating to start oscillation of said member in one direction to operate the tape feeder, and the other of said targets operating to start oscillation of said member in the reverse direction to operate the tape cutter.

8. A machine for taping box blanks fed in succession therethrough, and having two targets in the path of movement of the blanks, a tape feeder, a tape cutter, an oscillatory member, means for moving said member in one direction by one target to control the starting of said tape feeder and means for moving said member in the opposite direction by the other target to control the starting of said tape cutter.

9. A machine for taping box blanks fed in succession therethrough, and having a shaft extend-

ing along the path of movement of the blanks, a pair of targets spaced along the path of movement of the blanks, means operated by one of said targets for oscillating said shaft in one direction, means operated by the other of said targets for oscillating said shaft in the reverse direction, and a tape feeder and a tape cutter controlled by the oscillations of said shaft.

10. A taping machine for box blanks, and of the type in which the blanks are fed in succession through the machine, and having means for feeding the tape to the blanks and means for cutting the tape into sections corresponding to the length of the box panels, said machine being provided with a pair of targets separately adjustable along the path of movement of the blanks and movable by said blanks, a cam rotatable through one revolution for each blank fed through the machine, means controlled by one target for permitting partial revolution of said cam for operating said tape feeder, and means controlled by the other target for permitting completion of the rotation of the cam for operating said tape cutter.

11. A taping machine for box blanks, and of the type in which the blanks are fed in succession through the machine, and having means for feeding the tape to the blanks and means for cutting the tape into sections corresponding to the length of the box panels, said machine being provided with a pair of targets independently adjustable along the path of movement of the blanks in accordance with the dimensions of a blank to be taped and movable by said blanks, mechanical means controlled by one of said targets for operating said tape feeder, and mechanical means controlled by the other target for operating said tape cutter.

12. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor and independently adjustable along the path of movement of said blanks, and in accordance with the dimensions of a blank to be taped, a tape feeder mechanically controlled by one of said targets, and a tape cutter mechanically controlled by the other of said targets.

13. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor and independently adjustable along the path of movement of said blanks, and in accordance with the dimensions of a blank to be taped, a tape feeder, a tape cutter, a cam for controlling the operation of said tape feeder, and a cam for controlling the operation of said tape cutter, one of said cams being controlled by one of said targets and the other of said cams being controlled by the other of said targets.

14. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor, a tape feeder, a tape cutter, a cam for controlling the operation of said tape feeder, and a cam for controlling the operation of said tape cutter, said cams being rigidly connected, a friction drive for said cams, a stop means normally preventing operation of said cams, means operatively connected to one target for releasing said stop means and permitting operation of said tape feeder, and means operatively connected to the other target for releasing said stop means and permitting operation of said tape cutter.

15. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor, a tape feeder, a tape cutter, a pair of coaxial, rotatable, rigidly connected cams, means controlled by one of said cams for operating said tape feeder, means controlled by the other of said cams for operating said tape cutter, a friction drive for said cams, means normally preventing rotation of said cams, means operatively connected to one of said targets for releasing said cams to permit partial rotation thereof and operation of said tape feeder, and means operatively connected to the other target for releasing said cams to permit completion of their rotation and effect operation of said tape cutter.

16. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor, a tape feeder, a tape cutter, a rotatable member having a pair of circumferentially spaced stops and a pair of cams, one cam for controlling said tape feeder and the other for controlling said tape cutter, means operated by one target for releasing one stop and permitting partial rotation of said member, and means operated by the other target for releasing the other stop and permitting completion of the rotation of said first mentioned stop.

17. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor, a tape feeder, a tape cutter, a rotatable cam, means controlled by one target for effecting partial rotation of said cam, means controlled by the other target for effecting completion of the rotation of said cam, and means for operating said tape feeder and said tape cutter in succession during rotation of said cam.

18. A taping machine for box blanks, including a conveyor for the blanks, two spaced targets in the path of movement of the blanks on said conveyor and independently adjustable along the path of movement of said blanks, and in accordance with the dimensions of a blank to be taped, a tape feeder mechanically controlled by one of said targets, and a tape cutter mechanically controlled by the other of said targets, the operation of said tape feeder being terminated substantially simultaneously with the operation of said tape cutter.

KARL SIEG.

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