S. M. LANGSTON.

CUT-OFF MECHANISM FOR SHEET MATERIAL.

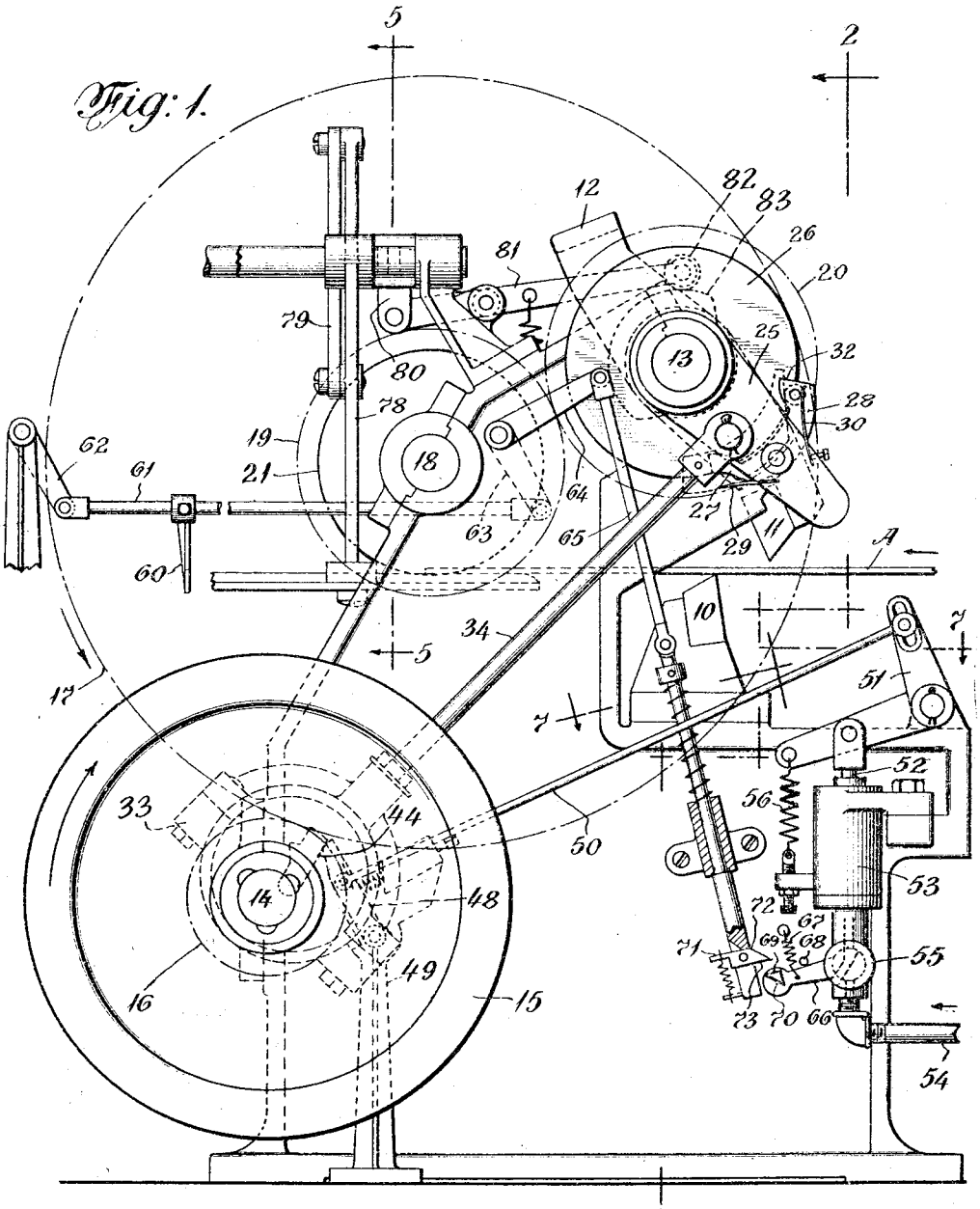
APPLICATION FILED OCT. 27, 1915.

1,176,575.

Patented Mar. 21, 1916

4 SHEETS—SHEET 1.

Fig. 1.



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4 SHEETS—SHEET 2.

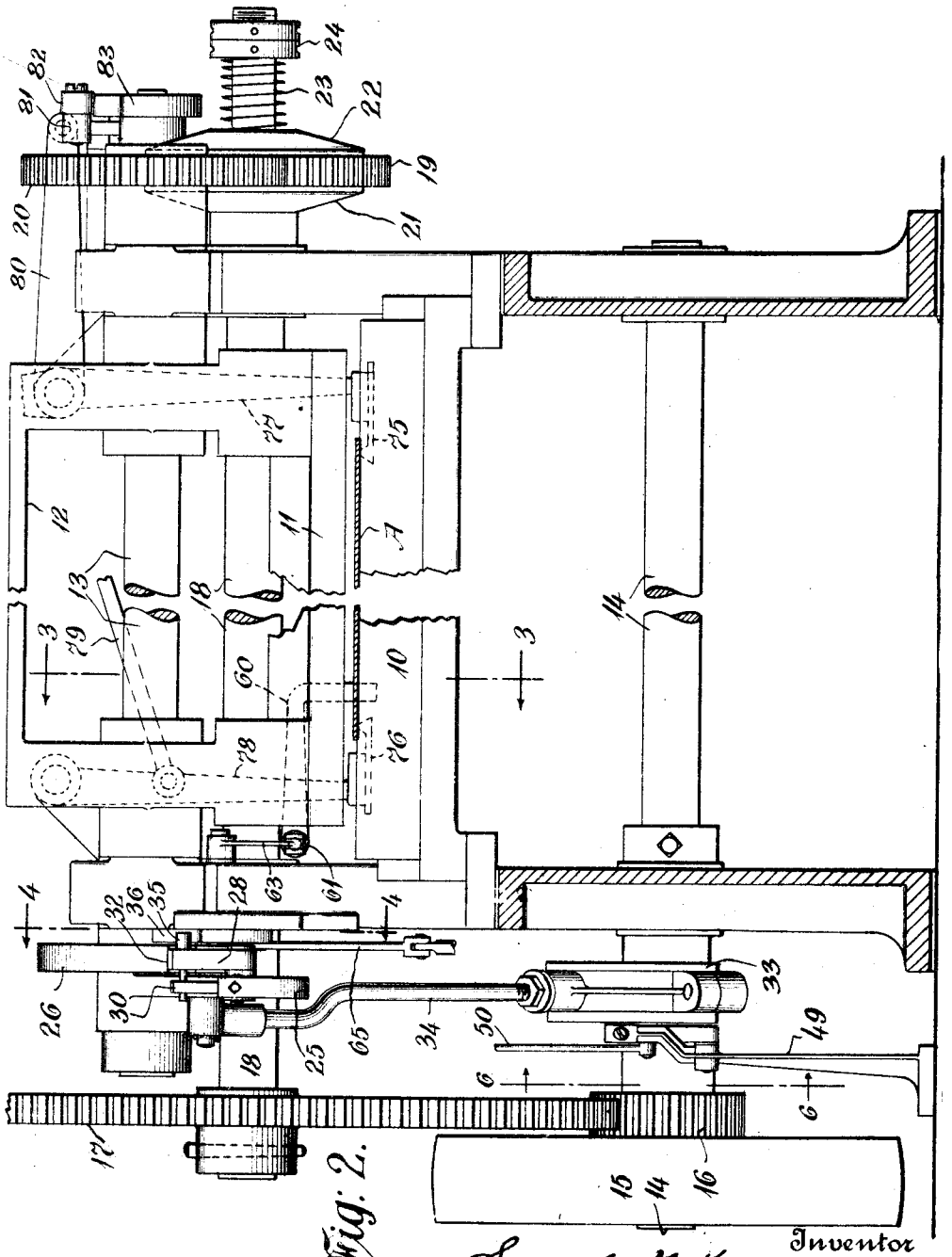


Fig. 2.

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4 SHEETS—SHEET 3.

Fig: 5.

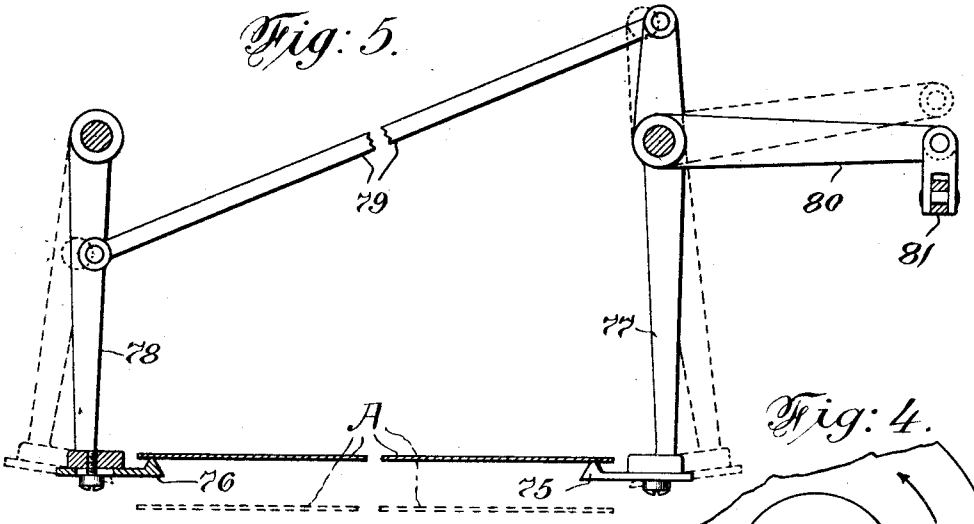


Fig: 4.

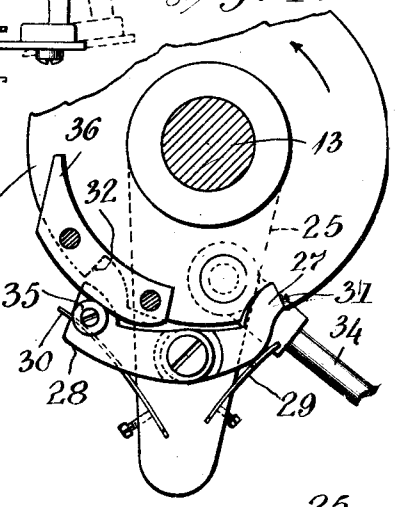
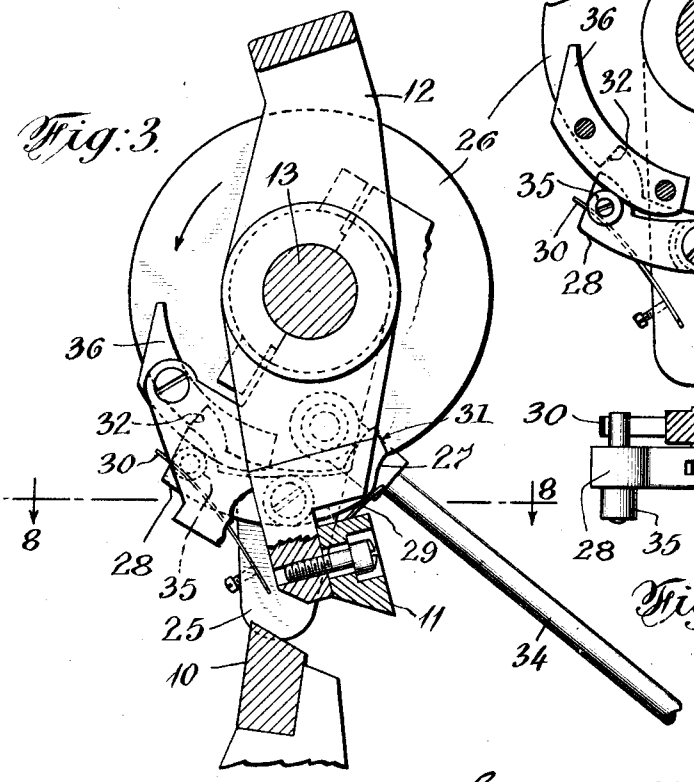


Fig: 3.



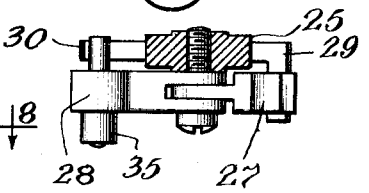


Fig: 8.

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4 SHEETS—SHEET 4.

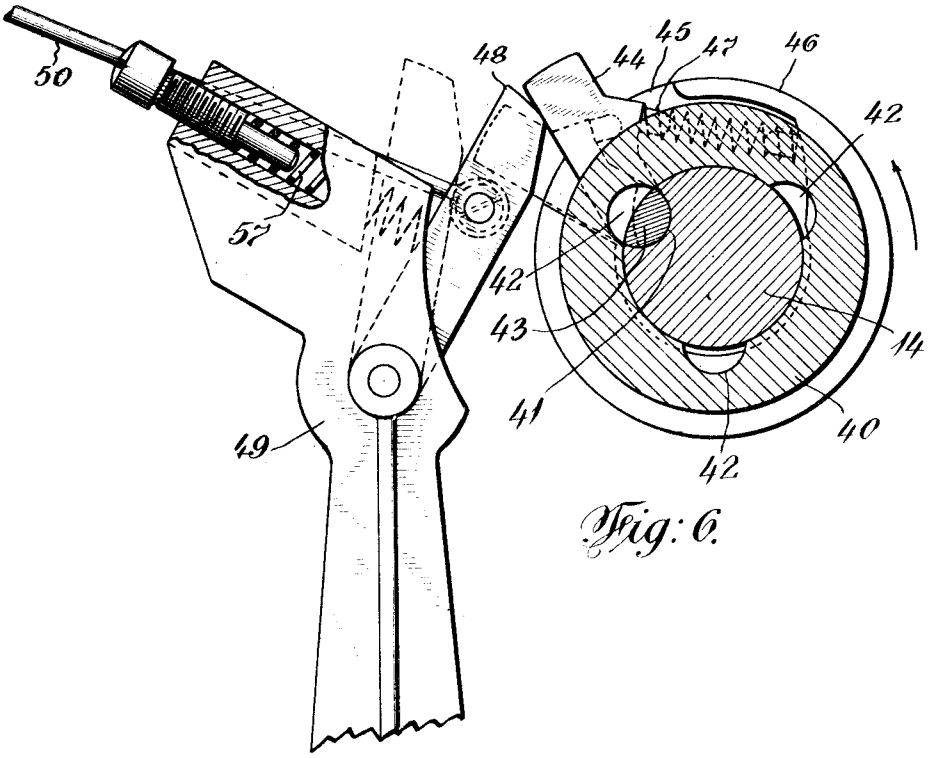
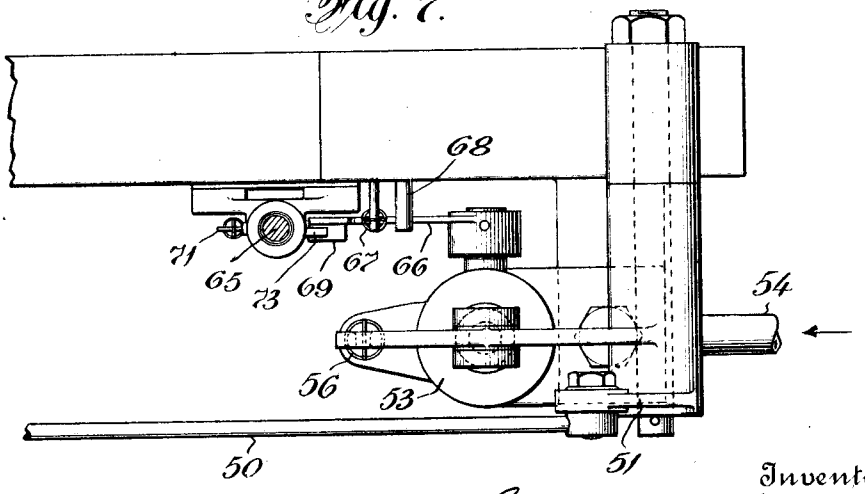


Fig: 6.

Fig: 7.



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By his Attorney

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UNITED STATES PATENT OFFICE.

SAMUEL M. LANGSTON, OF WENONAH, NEW JERSEY.

CUT-OFF MECHANISM FOR SHEET MATERIAL.

1,176,575. Specification of Letters Patent. Patented Mar. 21, 1916.

Application filed October 27, 1915. Serial No. 58,174.

To all whom it may concern:

Be it known that I, SAMUEL M. LANGSTON, a citizen of the United States, and resident of Wenonah, in the county of Gloucester and State of New Jersey, have invented certain new and useful Improvements in Cut-Off Mechanism for Sheet Material, of which the following is a specification.

This invention relates to certain improvements in cutter operating and controlling mechanism and is particularly useful in connection with the cutting of comparatively stiff sheet material being delivered at a uniform or continuous rate. Where the fabricating or delivering machine is so designed as to permit the intermittent stopping of the material, little or no difficulty is encountered in cutting off the delivery portion of the sheet during the rest periods, but the simple forms of cutter operating or controlling means which can be used under such conditions are inapplicable where the delivery of the material is continuous and the material is of such a character that it cannot be bent or buckled between the point of delivery and the cutter to take up the portion delivered during the cutting operation and while the movement of the sheet past the cutter is being momentarily prevented.

By means of my invention, I am able to place the cutter comparatively close to the point of delivery; positively force it at a rapid rate through the material; return it at an independent rate to an initial position; and normally hold it at said initial position ready to cut at the desired instant.

As an important feature of my invention, I positively and mechanically drive the cutter during only a comparatively short portion of its complete cycle of movement; namely, from an initial position at one side of the plane of the sheet to a point where the cutting operation is completed, and then release the cutter from this driving or forcing mechanism and frictionally return it to an initial position ready for the next cutting operation. The friction drive permits the cutter to stop when it engages a stop at said initial position and holds it ready for the positive actuating mechanism when the material has been advanced a sufficient distance and it is desired to cut off the next section.

Another important feature of my invention involves means for automatically bringing the positively acting driving mechanism into operation at the desired or predetermined intervals.

Another important feature involves mechanism for controlling the operation of the cutter driving means by the material itself and adjustable along the path of the material so that sections of various different desired lengths may be readily secured.

Other important features are involved in the various details of construction and combination of parts embodied in the preferred form of my invention and will be pointed out more particularly hereinafter.

In the accompanying drawings, in which similar reference characters indicate corresponding parts in the several views, I have illustrated one embodiment of my invention, but I wish it particularly understood that the machine there illustrated constitutes only one form which my invention may assume and that various details may be changed, omitted, or replaced by others and that the general arrangement of parts may be widely varied without departing from the spirit of my invention or the scope thereof as defined in the appended claims.

In these drawings, to which reference is to be had: Figure 1 is a side elevation of a machine embodying my invention; Fig. 2 is a vertical transverse section taken approximately on the line 2—2 of Fig. 1; Fig. 3 is a vertical longitudinal section on the line 3—3 of Fig. 2, but with the cutter past the cutting position; Fig. 4 is a vertical section on the line 4—4 of Fig. 2; Fig. 5 is a section on the line 5—5 of Fig. 1; Fig. 6 is a section on the line 6—6 of Fig. 2, but on a larger scale; Fig. 7 is a top plan view of a portion of the machine, certain parts being shown in section on the line 7—7 of Fig. 1; and Fig. 8 is a section on the line 8—8 of Fig. 3.

The specific form of machine illustrated is particularly designed for the cutting of a continuously delivered sheet of double faced corrugated paper into sections. It is of course understood that the specific machine illustrated might be employed for cutting other material, and that for some materials, various details of the machine might be changed or even omitted.

The cutter proper includes a stationary knife or cutter member 10 extending transversely of the machine and over which the sheet —A— of material to be cut may pass. For coöperation with this stationary cutter

10 there is a movable cutter 11 carried by a frame 12 mounted on a cutter shaft 13. The cutters are so mounted in respect to each other that the material between them is severed each time the movable cutter makes a complete revolution.

Power from any suitable source may be transmitted to the machine, for instance, by a belt to a pulley 15 mounted on a shaft 14. The pulley 15 may drive the cutter shaft 13 by either of two power transmitting connections, one of which serves to transmit power to the cutter during the actual cutting operation, while the other transmits power to the cutter to complete its cycle of movement from the close of one cutting stroke to the beginning of the next. The first of these operates only intermittently, while the second operates, or tends to operate, continuously. The second mentioned power transmitting means may vary greatly in detail, the prime requisite being that it shall not interfere with the operation of the other power transmitting mechanism and shall serve to carry the movable cutter merely to a predetermined position ready for the cutting stroke and permit it to remain there until the second mentioned power transmitting mechanism comes into operation. As a simple embodiment, I have illustrated the main drive pulley 15 as provided with a gear 16 meshing with a larger gear 17 mounted on a shaft 18. This shaft has a small gear 19 meshing with a gear 20 on the cutter shaft 13. One of these four gears is held to its shaft by friction so as to rotate therewith when the resistance to rotation is less than a predetermined amount and so that it can remain stationary when the resistance exceeds said amount. As illustrated, the gear 17 is held between two friction plates 21 and 22 fastened on the shaft 18. The plate 22 is pressed toward the gear by a coil spring 23 so that the pressure and therefore the friction may be varied by adjusting a nut 24 to vary the tension of the spring. Any suitable form of friction surfaces may be employed between the plates 21 and 22 and the gear 19. It will be noted that as long as the drive pulley 15 is rotating, the cutter shaft 13 and the movable cutter will rotate, or tend to rotate. Due to the fact that the gear 17 is so much larger than the pinion 16, this speed of rotation of the cutter shaft 13 will be very much less than that of the drive pulley 15.

The power transmitting mechanism for positively driving the cutter includes an oscillating member 25 pivoted on the cutter shaft 13 or on some bearing concentric therewith. Means, hereinafter described, is provided for positively and intermittently swinging this member or arm 25 through a limited arc. Adjacent to the arm 25 and rigidly secured to the shaft 13 is a disk 26 normally locked against rotation but adapted to be positively rotated by the arm when the latter moves in one direction. The connecting mechanism between the arm and the disk is illustrated as including two dogs or pawls 27 and 28 pivoted on the arm 25 and held in engagement with the periphery of the disk 26 by suitable springs 29 and 30. The periphery of the disk presents two shoulders 31 and 32 facing in opposite directions and preferably constituting the ends of a recess or recesses in the periphery of the disk. The shouldes are spaced at such distances apart and are so formed that normally the two pawls or dogs 27 enter between the two shoulders and substantially engage with both so that when the arm 25 is at rest in normal position, the disk is positively held against rotation in either direction. As the disk is connected to the cutter shaft, it is evident that the cutter will likewise be held stationary. The normal position of the arm 25 and disk 26 is substantially that shown in Fig. 1, the cutter 11 being just ready to begin the actual cutting stroke. For swinging the arm, the main shaft 14 is provided with an eccentric, having it encircling a strap 33 connected by a rod 34 to the arm 25. Thus, as the eccentric rotates, the rod 34 will be reciprocated and the arm 25 will swing back and forth through a predetermined arc. This arc may of course be varied by varying the diameter or eccentricity of the eccentric or by varying the distance between the axis of the cutter shaft 13 and the point of pivotal connection between the rod 34 and the arm 25. In practice, the distance through which the arm 25 swings is sufficient to carry the cutter from approximately the position shown in Fig. 1 through the cutting stroke and approximately to the position shown in Fig. 3. It will be noted that during this swinging of the arm in one direction, the disk and cutter are forced to move with the arm due to the engagement of the dog 27 with the shoulder 31 of the disk. During this stroke of the arm 25, means are brought into operation for disengaging the dog 28 from the disk so that when the arm 25 completes its stroke, the dog 28 will be in an inoperative position and the disk can continue rotating by the action of the train of gears and the friction connection. The means for disengaging the dog 28 may be of any suitable character, but preferably includes a stud or roller 35 on the side of the dog 28 and movable over a stationary cam 36 carried by the frame of the machine. The cam is of such shape that when the arm completes its stroke toward the left from the position shown in Fig. 1 and the cutter has been positively carried through the cutting stroke, the dog 28 has been disengaged from the disk. The arm 25 is returned to its initial position before the cutter is driven

through a complete revolution by the friction drive. In returning, the stud or roller 35 of the dog 28 moves back over the stationary cam and comes into spring-pressed engagement with the periphery of the disk. At the instant the disk and cutter reach the initial position, the dog 28 will engage with the shoulder 32 so as to positively stop the disk from further rotation in spite of the continued tendency for the latter to rotate by the action of the gearing and friction connection. While the cutter is being advanced by the positively acting mechanism including the eccentric, rod 34, arm 25 and disk 26, it will travel at a comparatively high rate of speed; that is, somewhat faster than it would be driven through the gearing and friction drive. This insures a quick, positive cut of the material and then permits the friction drive to slowly return the knife to the starting point. The friction, although continuously tending to rotate the knife, will permit a slip in one direction during the positive driving of the knife and will permit a slip in the reverse direction when the knife has been returned to the starting point and the shoulder 31 abuts against the pawl 28.

I have illustrated an eccentric directly driven from the main drive pulley 15, for giving the arm 25 a quick and positive movement. It is evident that instead of having an eccentric I might employ a cam of any other form, it being understood that an eccentric here operates merely as one form of cam. The eccentric or other cam might be driven at such a speed or rotated at such frequency that it will operate the cutter to cut the material into sections at predetermined time intervals or after a predetermined operation of the machine or movement of the material, or at the will of the operator.

As an important feature of my invention, I so connect the eccentric to the source of power that it normally remains stationary and is automatically connected to the source of power for a single rotation only by the action of the material when a section of the desired length has passed the cutter. In the specific form of connecting mechanism illustrated, the main shaft 14 is permitted to normally remain stationary and the eccentric is locked thereto. The drive pulley 15 is loose on the shaft and has a collar, sleeve or bushing 40 at one side thereof. In the bearing surfaces between the shaft and the bushing, the shaft is provided with a longitudinally extending groove 41, which, during the rotation of the pulley in respect to the shafts, may register with a series of grooves 42. When two grooves are in registry, there is formed a cylindrical passage parallel to the axis of the shaft. Mounted within the groove of the shaft is a pin 43, one surface of which fits the groove while the outer surface lies in the same circumference as the outer surface of the shaft. Thus, when the pin is in the position indicated in Fig. 6, the pulley may freely rotate, the outer surface of the pin forming a part of the bearing surface. Upon rotating the pin about its own axis, a portion of it will be caused to project outwardly and enter one of the recesses 42 and when in such position, it will lock the shaft and pulley together so that the shaft must rotate with the pin. For controlling the position of the pin in its groove or recess 41, the said pin is provided with an outwardly extending arm 44 lying in a groove or passage 45 in a collar 46 carried by the shaft or by the eccentric on the latter. A spring 47 normally tends to swing the arm and rotate the pin to locking position. Adjacent to the shaft and mounted independently thereof is a stop 48 movable into or out of the path of the arm 44. When the arm engages with the stop, the spring 47 will be compressed and the pin 43 will be rotated to such a position that it will lie entirely within the groove 41 and the sleeve and pulley may rotate while the shaft remains stationary. Upon the removal of the stop from the path of the arm, the spring 47 will swing the arm to rotate the pin and lock the parts together. They will continue rotating together so long as the stop is out of the path of the arm, but as soon as it is returned to said path, the parts are automatically unlocked.

In Fig. 6, the parts are shown in solid lines in the position which they occupy while the shaft is stationary and they are shown in dotted lines in the position which they assume when the stop is removed and the shaft and drive pulley are locked together. Various other means for connecting together the shaft and drive pulley might be employed. For controlling the position of the stop, I provide means controlled by the movement of the material itself. The stop is shown as pivoted to a stationary support 49 which may be a part of the main frame of the machine. A link 50 connects the stop to a power mechanism suitable for positively moving said stop and capable of being controlled by the movement of the material. Such power mechanism is illustrated as including a pneumatic motor. The link 50 is connected to one arm of a bell-crank lever 51 while the other arm is connected to the piston rod 52 of a piston mounted in a cylinder 53 and operated preferably by compressed air. The cylinder is connected at its lower end to a conduit 54 supplying the compressed air and the flow of air to the cylinder is controlled by a three-way valve 55. The valve, when in normal position, prevents the flow of air from the conduit 54 and opens the cylinder to the atmosphere so that a

spring 56, a weight, or any other suitable means, may hold the piston in one limiting position. A spring 57 may tend to hold the to the stop 48, the latter will remain in the path of the arm 44 when the piston is in this position. A spring 58 may tend to hold the stop in the position indicated in Fig. 6 although either the spring 56 or the spring 57 might be omitted. The extent to which the stop 48 is moved for a given movement of the piston may be varied if desired by adjusting the point of connection, between the rod 50 and the arm of the bell-crank lever, along the length of the latter.

The air valve might be controlled by hand but preferably mechanism is provided for automatically opening the air valve and permitting the compressed air to lift the piston and move the stop 48 to inoperative position each time a predetermined length of the material has passed the cutter. Such mechanism might be controlled in various ways as for instance by a finger 60 projecting into the path of the sheet —A— beyond the cutter and adapted to be moved by the material. Any suitable means which may be electrical, pneumatic, mechanical, or otherwise, serves to open the air valve upon the movement of the finger. Merely as one example of such valve operating means, I have illustrated the finger 60 as supported by a rod 61 substantially parallel to the direction of movement of the material. The finger is adjustable along the length of the rod and the rod is supported on two links 62, 63, so that the rod may move along with the material when the latter engages with the finger. One of the links, for instance the link 63, is connected to an arm 64 and the latter is pivotally connected to a reciprocating rod 65 adapted to engage with the lever or handle 66 of the air valve 55.

The parts are normally in the position indicated in Fig. 1 and a spring 67 holds the valve in closed position and the valve stem against a stop 68. The valve lever has a projection presenting a flat face 69 and an inclined face 70 while the receiprocating rod 65 has a pivoted catch 71 presenting an inclined face 72 and a transverse face 73. As the paper is fed through the machine, it eventually engages with the finger 60 and moves the latter and the rod 61 in the direction of travel of the material and along with the latter. This forces the rod 65 downwardly and the engagement of the face 73 of the pivoted catch with the face 69 of the valve lever, causes the latter to swing downwardly and this shuts the outlet from the cylinder 53 and opens the inlet for compressed air from the conduit 54. The piston is instantly raised, the catch 48 is pulled out of the path of the arm 44, and the latter rotates under the action of the spring 47 to lock the drive pulley 15 and the shaft 14 together. The eccentric will thus be rotated to pull the cutter 11 through the cutting portion of its stroke. As soon as the material is cut off, it no longer presses against the finger 60 and the latter may return to its initial position.

It will be noted that the catch 71 is pivoted so as to swing in only one direction from the normal. Thus, when the rod 65 is forced downwardly, the valve will be positively opened but as the rod 65 continues to move in a straight line while the valve lever is swinging about an axis, the catch 71 may pass the projection on the valve lever and the valve will instantly close by reason of the spring 67. Thus, the raising of the piston and the removal of the catch 48 continues for only a very brief instant and therefore the stop 47 may come back to initial position before the eccentric has made a complete revolution and be in the path of the arm when the latter completes a single revolution. Even though the parts 60 to 65 have not returned to normal position when the eccentric has completed a revolution, a second revolution of the eccentric and a second cutting stroke by the cutter is prevented.

It will be noted that if the rotary cutter be moved comparatively slowly by the friction driving mechanism, it might be possible to let the eccentric make two or more strokes before it is unlocked from the driving means as the pawls 27 would be riding back and forth on the smooth portion of the periphery of the disk 26 and would not in any way effect a movement of the cutter until the latter had approximately completed its revolution under the action of the friction driving means.

Even though the air valve returns to its normal position before the parts 60 and 65 have returned to their normal position, it will be noted that on the upward movement of the rod 65, the pivoted catch 71 may swing and pass the projection on the valve lever and reach a position above the latter. The inclined surfaces 70 and 72 facilitate the tilting of the pivoted catch during such upstroke of the rod 65.

Although various different means may be provided for disposing of the sections of the material after they are severed from the main sheet, I preferably so arrange the parts that the sections will be dropped to a lower level and below the finger 60 as soon as the cutter is operated. As a simple embodiment of such supporting means, I have illustrated two supports 75 and 76 adapted to lie beneath the opposite edges of the sheet after the latter passes the cutter. These supports are carried by depending pivoted arms 77 and 78 and these arms are connected together by a link so as to swing toward or from each other simultaneously. With the

supports in the normal position as shown in dotted lines in Fig. 5, the sheet will rest on them but when they are separated, the sheet will drop between. For intermittently separating the guides, one of the arms, for instance the arm 77, may have an arm 80 rigid therewith and connected to one end of a lever 81, the opposite end of the latter having a roller 82 resting on a cam 83 rigid with the cutter shaft 13. The cam may be of such form as shown in dotted lines in Fig. 1 that once during each revolution of the cutter shaft and directly after the cutting action, the end of the lever 81 engaging with the cam may drop. This will swing the sheet supports away from each other and let the cut-off section drop. Shortly thereafter, the cam will operate to return the lever 81 and the parts operated by the latter to their initial or normal position.

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

1. Cut-off mechanism including a rotary cutter, positively acting driving mechanism for rotating it through a part of a revolution, and friction means for rotating it through the remainder of the revolution.

2. Cut-off mechanism including a rotary cutter, positively acting means for moving the cutter through that portion of each revolution in which the cutting action takes place, and friction means for completing the remaining portion of each revolution.

3. Cut-off mechanism including a rotary cutter, high speed means for moving the cutter through the operating portion of its revolution, and separate slow speed means for moving said cutter through the balance of its revolution.

4. Cut-off mechanism including a cutter having a predetermined path of movement, positively acting means for moving the cutter along a portion of said path, and friction means for moving the cutter along the balance of the path.

5. Cut-off mechanism including a movable cutter, means continuously tending to move said cutter, a stop normally preventing the movement of said cutter, and means for positively moving said cutter through a portion of its cycle of movement and simultaneously disengaging said stop to permit said first mentioned means to move said cutter through the balance of its cycle of movement.

6. Cut-off mechanism including a movable cutter having a predetermined cycle of movement, an oscillating member, means for oscillating it intermittently, means for preventing movement of said cutter when said member is in a predetermined position and said cutter is at a predetermined point in its cycle of movement, means for moving said cutter with said member when the latter is moved in one direction and simultaneously rendering inoperative said second mentioned means, and independent means for moving said cutter through the remainder of its cycle of movement.

7. Cut-off mechanism including a rotary cutter, an oscillating member concentric therewith and normally stationary, a stop carried by said member for preventing rotation of said cutter past a predetermined point when said member is in normal position, and means for rotating said cutter upon the oscillation of said member in one direction.

8. Cut-off mechanism including a rotary cutter, an oscillating member concentric therewith and normally stationary, a stop carried by said member for preventing rotation of said cutter past a predetermined point when said member is in normal position, means for rotating said cutter upon the oscillation of said member in one direction, and means for continuing the movement of said cutter to said predetermined point independently of the return movement of said member.

9. Cut-off mechanism including a rotary cutter, a member having a back and forth movement, and connecting means between said cutter and said member for rotating said cutter during a movement of said member in one direction from a normal position and for stopping said cutter in a predetermined position in respect to said member after the return of said member to said normal position.

10. Cut-off mechanism, including a rotary cutter, friction means continuously tending to rotate the cutter in one direction, a normally stationary member adjacent to said cutter, means for intermittently moving said cutter in one direction and returning it to normal position, means carried by said member for moving said cutter with said member during one movement of the latter, and means for stopping said cutter in a predetermined position after the return movement of said member to its normal position.

11. Cut-off mechanism, including a rotary cutter, an oscillating driving member, means for locking said member to said cutter during a movement of said member in one direction, and disengaging it from said member during the return movement of the latter, independent driving means operable to continue the movement of said cutter after its release from said member, and a stop operable to limit the rotation of said cutter by said last mentioned means when the cutter reaches a predetermined position.

12. Cut-off mechanism, including a rotary cutter, an oscillating driving member, means for locking said member to said cutter during a movement of said member in

one direction, and disengaging it from said member during the return movement of the latter, independent driving means operable to continue the movement of said cutter after its release from said member, and a stop operable to limit the rotation of said cutter by said last mentioned means when the cutter reaches a predetermined position.

13. Cut-off mechanism, including a rotary cutter, an oscillating driving member, means for locking said member to said cutter during a movement of said member in one direction, and disengaging it from said member during the return movement of the latter, independent driving means operable to continue the movement of said cutter after its release from said member, a stop operable to limit the rotation of said cutter by said last mentioned means when the cutter reaches a predetermined position, and means for disengaging said stop during the movement of said cutter by said member.

14. Cut-off mechanism, including a rotary cutter, a normally stationary, oscillatory arm, pivoted dogs carried by said arm and engaging with said cutter to prevent rotation of the latter in either direction when said arm and said cutter are in normal positions, and means for disengaging one of said dogs to permit continued movement of said cutter during a movement of said cutter with said arm in one direction.

15. Cut-off mechanism, including a rotary cutter, a normally stationary, oscillatory arm, oppositely facing dogs carried by said arm and engaging with said cutter to prevent rotation of the latter in either direction when said arm and said cutter are in normal positions, means for disengaging one of said dogs to permit continued movement of said cutter during a movement of said cutter with said arm in one direction, and independent driving means for continuing the rotation of said cutter to said normal position.

16. Cut-off mechanism, including a rotary cutter, a normally stationary, oscillatory arm, means carried by said arm and engaging with said cutter to prevent rotation of the latter in either direction when said arm and said cutter are in normal positions, means for disengaging said first mentioned means to permit continued movement of said cutter during a movement of said cutter with said arm in one direction, and independent means frictionally engaging with said cutter to return the latter to its normal position during the return movement of said arm.

17. Cut-off mechanism, including a rotary cutter, a driving member and two independent power transmitting connections between said member and said cutter, one of said connections including a friction grip continuously tending to drive said cutter but permitting the faster driving or stopping of said cutter, and the other of said connections including a stop for normally holding the cutter in a predetermined position, and a member intermittently acting to positively drive said cutter and simultaneously disengage said stop.

18. Cut-off mechanism, including a rotary cutter, a driving member, power transmitting connections between said driver and said cutter and including a friction grip, a normally stationary member, a stop carried thereby and operating to hold said cutter in a predetermined position, and means for intermittently moving said member and disengaging said stop to permit the driving of said cutter by said first mentioned means.

19. Cut-off mechanism, including a rotary cutter, a friction driving means continuously tending to rotate said driver, means acting normally to hold said cutter in a predetermined position, and a second driving means for intermittently moving said cutter through a portion of its cycle of operation.

20. Cut-off mechanism, including a rotary cutter, a friction driving means continuously tending to rotate said driver, means acting normally to hold said cutter in a predetermined position, a source of power, a second driving means and means for intermittently connecting said second driving means to said source of power to disengage said holding means and move said cutter through a portion of a revolution.

21. Cut-off mechanism, including a rotary cutter, a friction driving means continuously tending to rotate said driver, a second driving means acting normally to hold said cutter in a predetermined position, a source of power, and means controlled by the material to be cut for intermittently connecting said second driving means to said source of power to move said cutter through a portion of a revolution.

22. Cut-off mechanism, including a rotary cutter, a friction driving means continuously tending to rotate said driver, a second driving means acting normally to hold said cutter in a predetermined position, a source of power, and fluid-operated means for intermittently connecting said second driving means to said source of power to move said cutter through a portion of a revolution.

23. Cut-off mechanism, including a rotary cutter, means normally holding said cuttter in a predetermined position, a source of power, normally inoperative connections between said source of power and said cutter, means controlled by the advancement of the material to be cut for rendering said connections operative to drive the cutter through a relatively small portion of a revolution, and independent means for rotating it through the balance of the revolution.

24. Cut-off mechanism, including a cutter, a source of power, an oscillatory member for operating said cutter, an eccentric connected to said member, means for locking said eccentric to said source of power, and means controlled by the material to be cut off for normally holding said locking means in inoperative position.

25. Cut-off mechanism, including a cutter, a source of power, an oscillatory member for operating said cutter, an eccentric connected to said member, means for locking said eccentric to said source of power, and pneumatic means normally preventing the movement of said locking means to operative position.

Signed at New York city in the county of New York and State of New York this 26th day of October, A. D. 1915.

SAMUEL M. LANGSTON.

Witnesses:
C. W. FAIRBANK,
FLORENCE LEVIEN.