(No Model.)

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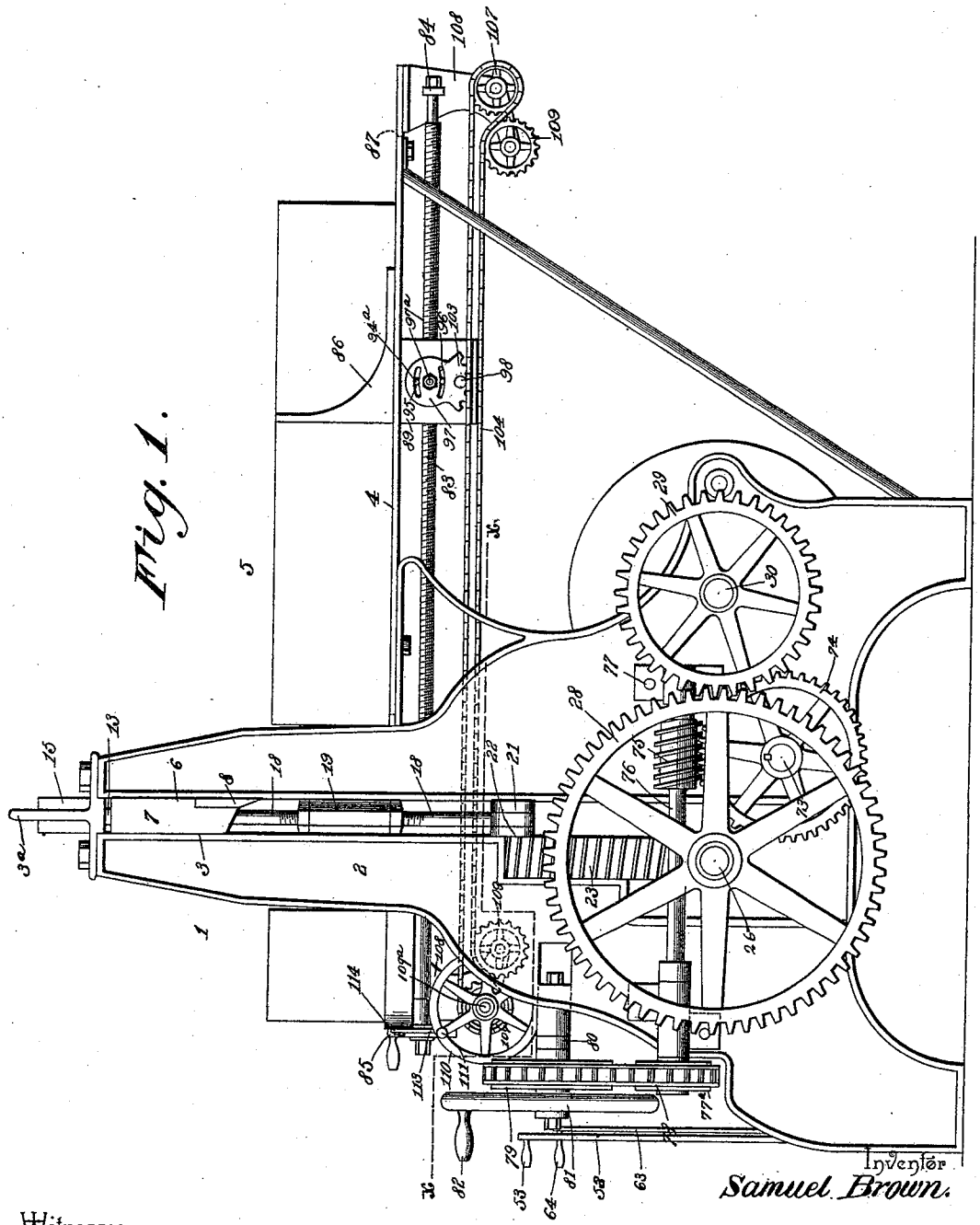
S. BROWN.

PAPER CUTTING MACHINE.

No. 539,502. Patented May 21, 1895.

Fig. 1.



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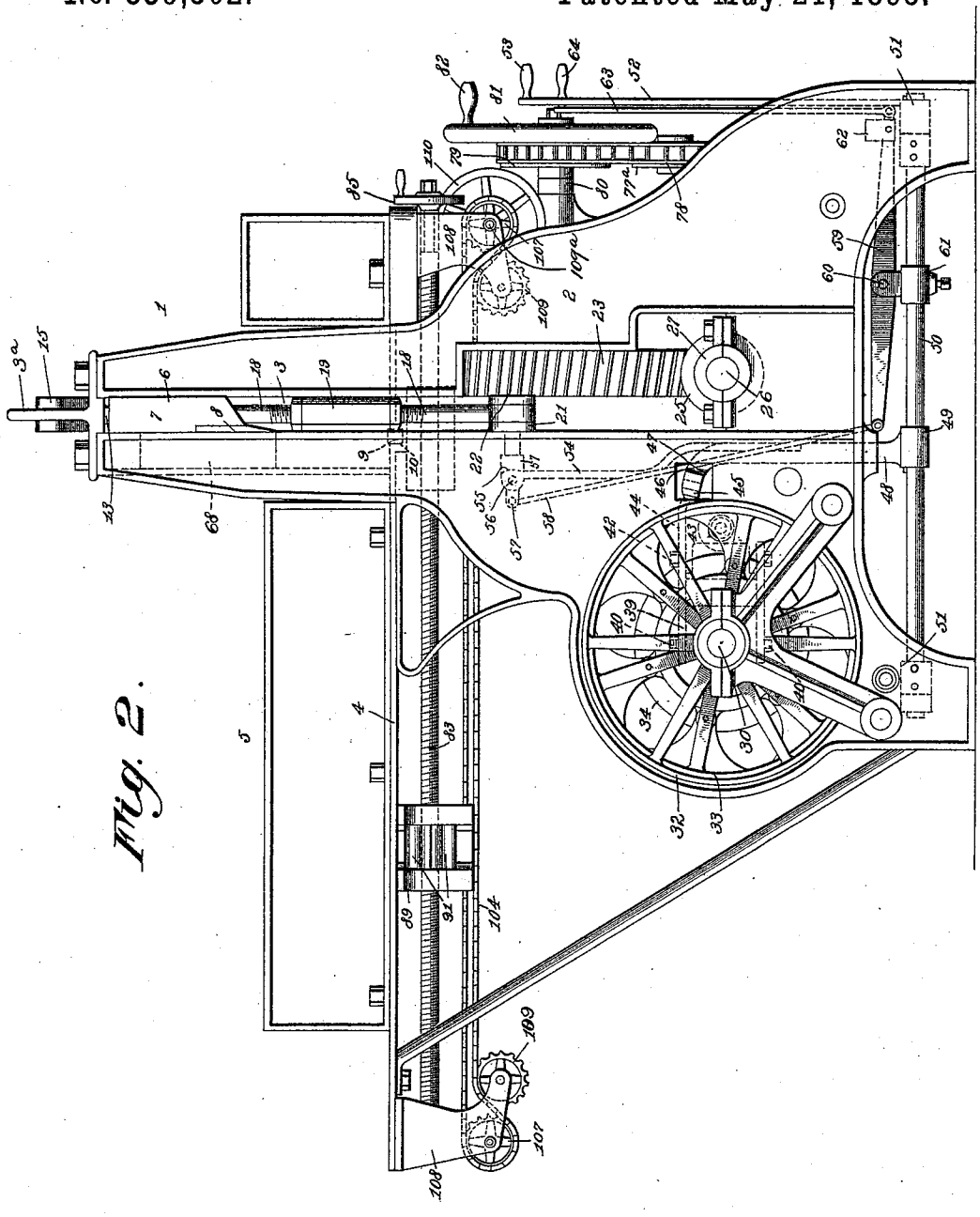

Fig. 2.

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(No Model.) 4 Sheets—Sheet 3.

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PAPER CUTTING MACHINE.

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Fig. 3.

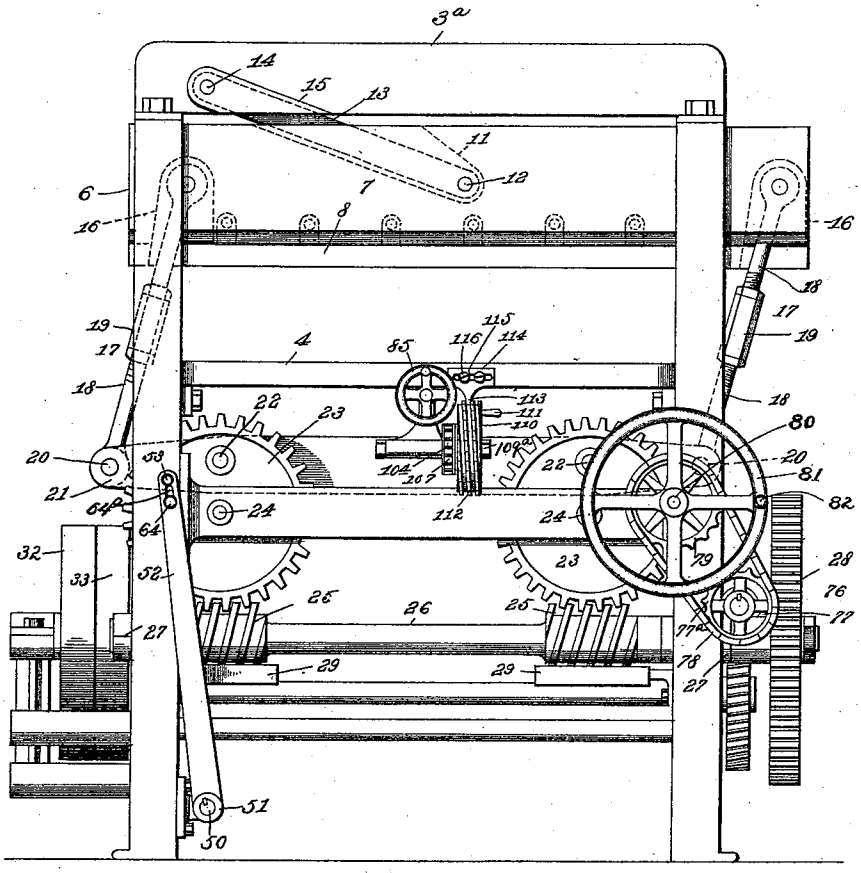
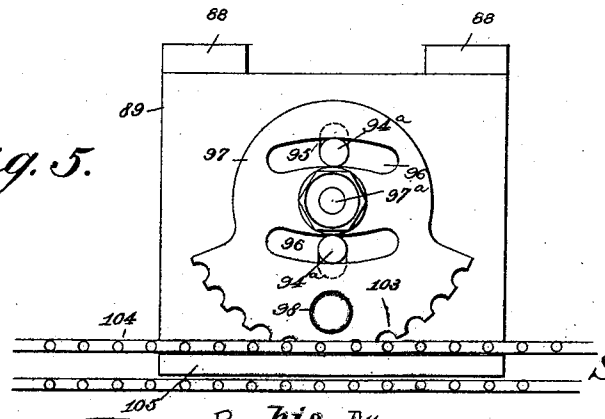


Fig. 5.



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PAPER CUTTING MACHINE.

No. 539,502. Patented May 21, 1895.

Fig. 4.

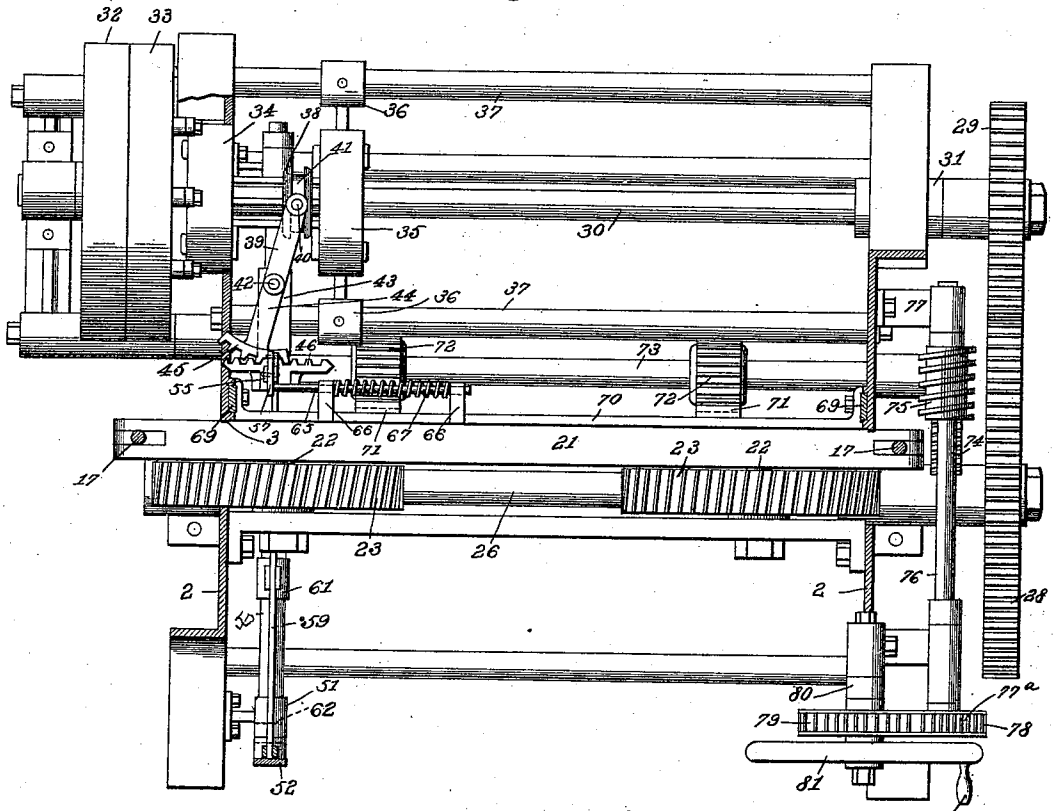


Fig. 6.

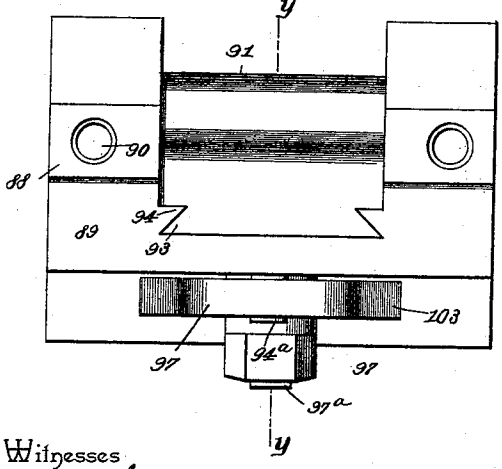
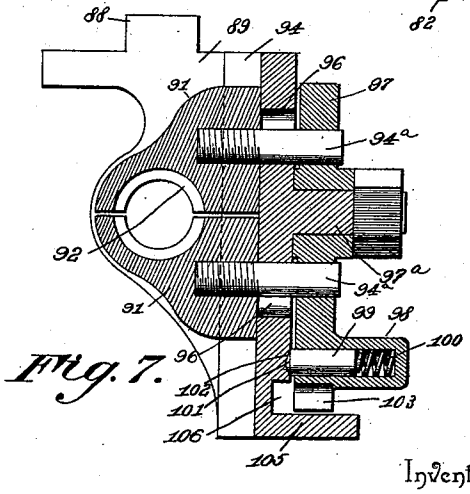


Fig. 7.



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UNITED STATES PATENT OFFICE.

SAMUEL BROWN, OF SEAFORD, DELAWARE.

PAPER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 539,502, dated May 21, 1895.

Application filed October 4, 1894. Serial No. 524,907. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BROWN, a citizen of the United States, residing at Seaford, in the county of Sussex and State of Delaware, have invented a new and useful Paper-Cutting Machine, of which the following is a specification.

This invention relates to paper cutting machines; and it has for its object to provide certain improvements in machines of this character, whereby the same shall be more effective and positive in operation, and also more readily controlled by the operator for securing accurate adjustments and operation of the different parts of the machine.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a side elevation of a paper-cutting machine constructed in accordance with this invention. Fig. 2 is a similar view of the side opposite to the side shown in Fig. 1. Fig. 3 is a front end view of the machine. Fig. 4 is a horizontal sectional view on the line $x\,x$ of Fig. 1. Fig. 5 is an enlarged detail elevation of the sliding-gage adjusting-block and a portion of the adjusting-chain connected therewith. Fig. 6 is a top plan view of the adjusting-block for the sliding gage. Fig. 7 is a detail sectional view on the line $y\,y$ of Fig. 6.

Referring to the accompanying drawings, 1 designates a machine frame or stand essentially comprising the opposite upright frame sides 2, that are provided with the vertically disposed guide slots 3, and are connected at their upper ends by the transverse cross bar 3^a, and arranged for support between the upright frame sides 2, at a point intermediate of their upper and lower ends is the usual horizontal paper supporting table 4.

The horizontal paper supporting table 4, is securely bolted in position between the frame sides, and is extended rearwardly therefrom to the required distance according to the length of the table, and the said table has attached to one side edge thereof the usual vertically disposed side gage plates 5, that provide means for squaring up one side edge of the stack of paper that is arranged or placed on the table 4, for the purpose of being cut by the vertically reciprocating and horizontally swinging cutting knife 6.

The cutting knife 6, consists of the knife bar 7, and the beveled knife blade 8, attached to one side edge of the bar 7, and adapted to work directly over and onto the wooden knife block 9, that is seated in the transverse block groove or recess 10, formed transversely in the supporting table 4, in a line with the vertical movement of the knife blade.

The horizontal knife bar 7, is provided in its upper side with the recess 11, within which is pivoted on the pivot pin or bolt 12, the lower end of the swinging hanger link 13, the upper end of which is pivoted at 14, within the link recess 15, formed within the transverse frame cross-bar 3^a, at one side of the center of such bar, and the said link 13, serves to steady and support the knife bar in its vertical and horizontal movements.

The vertically reciprocating and horizontally swinging knife bar 7, is recessed at its opposite ends as at 16, to pivotally receive the upper ends of the sectional adjustable connecting rods 17, which rods are provided with right and left screw threaded portions 18, engaged by suitable adjusting nuts 19, which provide means for lengthening or shortening the rods as may be required for properly adjusting the cutting knife.

The lower ends of the adjustable connecting rods 17, are pivotally connected at 20, to the opposite extremities of the horizontal knife operating bar 21. The opposite extremities of the horizontal knife operating bar move in the lower portions of the slots 3, to provide means for communicating the proper movement to the knife, which is also guided in its up and down and horizontal movements in the opposite slots 3, above the table 4.

The horizontal knife operating equalizing bar 21, is pivotally connected near its opposite ends to the crank pins 22, of the opposite worm gear wheels 23, that are journaled at opposite sides of the frame below the table on the stub shafts 24, and mesh with the operating worms 25, formed on opposite portions of the horizontal worm shaft 26.

The horizontal worm shaft 26, is journaled

in suitable bearings 27, at opposite sides of the machine frame or stand and one extremity of the worm shaft 26, projects beyond one side of the frame or stand and has mounted thereon the spur wheel 28. The worms 25, of the shaft 26, work directly over stationary oil boxes 29, suitably mounted on a fixed part of the frame below the worms 25, to provide for a proper lubrication thereof. The spur wheel 28, on one end of the shaft 26, meshes with a smaller adjacent gear wheel 29, mounted on one end of the main horizontal drive shaft 30, journaled in suitable bearings 31, at opposite sides of the machine frame or stand.

The transverse drive shaft 30 has mounted on the end thereof opposite the gear wheel 29, the loose pulleys 32 and 33, respectively, to receive the band or belt for operating the machine, and the loose pulley 33, is the driving pulley and is preferably made heavier than the pulley 32, so as to act in the capacity of a fly wheel for the machine.

The pulley 33, has bolted directly to one side thereof so as to be carried therewith a suitable friction or grip clutch 34, of any approved construction, and at a point adjacent to and spaced from the clutch 34, is a stationary or fixed stop clutch 35.

The stop clutch 35, is preferably of a similar construction to the clutch 34, and is arranged to have the drive shaft 30, rotate freely within the same, and the said stop clutch has connected to directly opposite sides suitable clamp arms 36, that are clamped onto stationary transverse frame rods 37, that are bolted to opposite frame sides and are arranged parallel to the shaft 30, at both sides thereof. The adjacent rotary and fixed clutches 34, and 35, are adapted to have play therebetween a movable clutch collar 38. The movable clutch collar 38, is feathered on the intermediate portion of the shaft 30, between the two clutches, so as to be readily moved from one clutch to the other and is also adapted to turn with the shaft, it therefore being obvious that when the collar 38, is moved into engagement with the clutch 34, carried by the wheel 33, the said wheel 33, will be locked to the drive shaft so as to turn the same and communicate motion to the cutting knife, while on the other hand by moving the clutch collar 38, into engagement with the stop or dead clutch 35, the shaft 30, will be locked against rotation so that the knife will be positively held locked in its elevated position as will be more particularly referred to.

The sliding clutch collar 38, is loosely embraced by a pivoted shifting frame or lever 39. The pivoted shifting frame or lever 39, is substantially U-shaped, and carries in the extremities of its opposite parallel arms the set screws 40, that loosely take into the peripheral groove 41, of the collar 38, to provide a connection between said collar and the shifting frame whereby the latter may move the collar into engagement with either of the clutches 34 or 35.

The U-shaped shifting frame or lever 39, is pivotally mounted by means of the pivot screw 42, on a stationary pivot block 43, arranged inside of the frame. Said shifting frame or lever is provided at one side of its pivot with an arm extension 44, provided with a segmental rack 45, that meshes with a similar rack or toothed head 46, formed on the upper curved end 47, of the rock arm or lever 48, the lower end of which is provided with a collar 49, mounted fast on the horizontal rock shaft 50, journaled in suitable bearings 51 at one side of the machine frame or stand. The said rock shaft 50, has mounted on the front end thereof the lower end of the swinging adjusting lever 52, the other end of which is provided with a handle 53, which is grasped by the operator when it is desired to rock the shaft 50, and thereby swing the arm or lever 48, to cause the collar 38, to be shifted in one direction through the medium of the pivoted frame or lever 39, connected with the arm or lever 48, as described.

The rock arm or lever 48, carries and has extended thereabove the trip arm extension 54, provided at its upper end with the pivot ear or boss 55, to which is pivotally connected on the pivot pin 56, the trip plate 57. The trip plate 57, pivotally connected to the upper end of the trip arm extension 54, normally projects horizontally to both sides of the said trip arm extension, and one end of the said trip plate has pivotally connected thereto the upper end of the connecting rod 58, the lower end of which is connected to one end of the oscillating lever 59.

The oscillating lever 59, is pivotally mounted intermediate of its ends as at 60, to the clamp collar 61, secured fast on the shaft 50, so as to rock therewith, and the said oscillating lever 59, carries on the end opposite the connection of the rod 58, therewith, the weight 62 that serves to normally depress one end of the lever 59, to hold the trip plate 57, normally in a horizontal position.

The oscillating lever 59, has connected to the weighted end thereof, the lower end of the sliding adjusting arm 63, that works at the rear side of the swinging adjusting lever 52, and is provided at its upper end with a grip handle 64, projecting through and working in a slot 64^a of the lever 52, below the handle 53. By reason of the adjacent positions of the handles 53 and 64, it is simply necessary to grip both handles with one hand to provide for simultaneously turning the shaft 50, and tilting or tripping the plate 57.

The trip plate 57, is operated in conjunction with a tappet rod 65, that is mounted in the offstanding perforated rod supporting lugs 66, projected from one side of the horizontal knife operating bar 21, and a coiled cushion spring 67, is mounted on the rod 65, between the lugs 66, to ease the contact of one end of said rod 65, with one side of the trip

plate 57, which normally lies in the path of the movement of said rod 65, as it is carried by the vertically reciprocating and horizontally swinging bar 21.

Assuming the clutch collar 38, to be engaged with the clutch 34, the machine will be in gear so that the knife will be operated, and after a cut is made by the knife on the table, the knife will continue to ascend until it reaches its upper limit of movement and is about to descend. At this point the horizontal swing or movement of the knife operating bar 21, carries one end of the tappet rod 65, against one side of the trip plate 57. This movement rocks the trip arm extension 54, and consequently rocks the shaft 50, carrying the rock arm or lever 48, and through the medium of the meshing racks 45 and 46, the clutch collar 38, will be disengaged from the clutch 34, and slid into engagement with the clutch 35, thereby immediately stopping the machine and automatically locking the shaft 30, against rotation, so that the knife will be held locked in its elevated position without danger of falling. When it is desired for the knife to again descend, the operator grasps the handles 53 and 64, and by moving the adjusting arm 63, upwardly, the lever and rod connections with such arm will swing the trip plate 57, out of the path of the tappet rod 65, and at the same time by swinging the adjusting lever 52, to rock the shaft 50, the clutch collar 38, can be quickly thrown into engagement with the rotary clutch 34 to again throw the working parts of the machine in gear.

Guided to slide vertically between the frame sides 2, above the table and at one side of the knife, is the transverse clamp bar 68, the opposite ends of which are connected to the upper ends of the opposite guide bars or arms 69. The opposite guide bars or arms 69, are connected at their lower ends to the opposite ends of the transverse adjusting bar 70, provided with the parallel rack bars 71, that are vertically disposed and are engaged by the adjusting pinions 72, mounted on the transverse adjusting shaft 73.

The transverse adjusting shaft 73, is journaled in the opposite frame sides and has mounted on one end thereof outside of the frame, the worm gear wheel 74, that meshes with an operating worm 75.

The operating worm 75, is formed on the side worm shaft 76, journaled in suitable bearings 77, secured on one of the frame sides of the frame, and the threads of said worm 75 may be and preferably are quite fine, so that there will be no slipping of the clamp bar 68, when the same is clamped down onto the paper to be cut or trimmed.

The side worm shaft 76, has mounted on the front end thereof the chain or sprocket wheel 77^a, over which passes an adjusting chain 78, driven from a larger chain or sprocket wheel 79, mounted on a stub shaft 80, securely bolted in position at the front side of the machine frame or stand.

The chain or sprocket wheel 79, is mounted at one side of the adjusting wheel 81, provided with a handle 82, for turning the same to adjust the clamp bar 68, through the medium of the connections described. By reason of employing the chain gearing 77^a, 78 and 79, it will be obvious that provision is made whereby the bar 68, may be adjusted as quickly as desired, while at the same time permitting the use of a worm 75, with fine threads, so that there will be no slipping of the clamp bar from its adjusted position.

The paper supporting table 4, has arranged thereunder the longitudinal feed screw 83, mounted at its opposite ends in suitable bearings 84, located at opposite ends of the table below the same, and said feed screw 83, has mounted on the front end thereof at the front end of the table the usual adjusting wheel 85, and said feed screw is adapted to provide means for the proper adjustment of the sliding end or back gage 86, that is arranged to work on top of the table to provide means for adjusting or feeding the stock to be cut up to the knife.

The sliding gage 86, works on the table 4, over the longitudinally disposed slot 87, therein, which slot accommodates for movement the slide tongues 88, of the sliding gage adjusting block 89, working below the supporting table.

The slide tongues 88, of the sliding block 89, are tapped with the bolt holes or openings 90, to receive the bolts for clamping the bottom of the sliding gage 86, thereto.

The sliding gage adjusting block 89, is open at one side to accommodate for movement therein the adjustable nut sections 91. The adjustable nut sections 91, are provided with the semi-cylindrical interiorly threaded portions 92, that are adapted to embrace and mesh with the threads of the feed screw 83, when in engagement therewith, and said adjustable nut sections 91, are provided at one side with the dove-tailed tongues 93, that slide in the correspondingly shaped groove 94, formed in one side of the gage adjusting block 89. Both of said adustable nut sections 91, are provided with the offstanding adjusting pins 94^a, that project through and work in the vertically disposed slots 95, formed in the block 89, above and below the center thereof, and the outer projecting ends of said pins 94^a, engage in the opposite reversely disposed cam slots 96, formed at both sides of the center of the adjusting disk 97.

The adjusting disk 97, is pivotally secured on the pivot bolt 97^a, to one side of the adjusting block 89, and said disk 97, is provided near the lower side thereof with the offstanding hollow socket 98, that accommodates for movement therein the sliding catch stud 99, that is normally pressed inward by means of the spring 100, also arranged within the socket 98. The inner end of the said catch stud 99, is pointed or beveled as at 101, to engage in the catch notch or depression 102, formed in

the outer side of the block 89, to provide means for holding the disk 97, in a position that indicates the threaded portions of the nut sections to be in engagement with the feed screw 83.

The adjusting disk 97, is provided with a segmental toothed lower side 103, with which meshes the upper side of an endless adjusting sprocket chain 104, and the portion of the chain 104, engaging with the toothed portion 103, of the disk 97, is supported to travel over the guide flange 105, projected outwardly from the lower side of the adjusting block 89, and above the flange 105, the said block is grooved at 106, to accommodate one edge of the chain 104, and by reason of the flange 105, and the groove 106, the chain 104, is positively held in engagement with the segmental toothed lower side 103, of the disk 97.

The adjusting chain 104, extends longitudinally under the feed screw 83, and is arranged to pass over the end sprocket wheels 107, supported on the bearing brackets 108, depending from opposite ends of the supporting table 4, and adjacent to the end sprocket or chain wheels 107, are mounted the idler chain or sprocket wheels 109, over which passes the lower portion of the adjusting chain 104, which is thereby elevated to a position out of the way of the movement of the bar 21, and other working parts of the machine.

The end sprocket wheel 107, below the front end of the table is mounted on the short adjusting shaft 109^a, on one end of which shaft is mounted the indicating worm wheel 110 provided with a handle 111, for turning the same to move the chain 104, whereby the disk 97, is operated for adjusting the nut sections 91, and for moving the sliding gage adjusting block 89, to the position desired. The wheel 110, is provided with a peripheral graduated indicating worm or thread 112, which is sufficiently long to indicate the position of the block 89 at any point on the feed screw 83, and loosely engaging between the threads of the worm 112, is the indicator finger 113, of the sliding index plate 114. The sliding index plate 114, is provided with a horizontal slot 115, receiving the screws 116, for fastening the plate to the front end of the table, while at the same time allowing it to move back and forth within the worm 112, as the wheel 110, is turned in any direction.

By reason of the graduated worm wheel 110, the operator at the front end of the table can at a glance observe the point on the table where the gage 86, is located without having to measure the same with a measuring stick as is now commonly done, and in order to move the gage 86, to any indicated point, it is simply necessary to turn the wheel 110, which will communicate motion to the chain 104. The chain 104, when adjusted will carry the catch stud 99, out of engagement with the block 89, and will oscillate the disk 97, which, through the medium of its cam slots 96, will separate the nut sections 91, from each other, and therefore will disengage the same from the screw 83. With the sectional nut disengaged from the screw 83, a continued movement of the chain 104, will slide the block 89 and the gage 86, carried thereby to any point desired, when by reversing the travel of the chain the sectional nut will be again engaged with the screw 83, and this engagement of the nut with the said screw will be indicated by the stud 99, clicking into the catch notch or depression 102, and which engagement of said stud will be felt by the operator turning the wheel 110, so that it is then simply necessary to turn the wheel 85, controlling the screw 83, to provide for the accurate adjustment of the gage 86, which is required to properly feed the paper to the point where it is cut or trimmed by the descending knife.

By reason of the employment of the chain 104, in connection with the sliding block 89, and the sectional nut carried thereby, it will be understood that one of the principal functions of this construction is to provide means whereby the back or end gage 86, can be rapidly moved any distance to the required position with relation to the table and the cutting mechanism without incurring the delay of the usual slow adjustment by means of simply the screw. In connection with the adjusting devices for the back gage just described, it is to be further observed that the specific construction and arrangement of these adjusting devices renders it possible to dispose the longitudinal feed screw 83, closer to the table than in machines now commonly used. By disposing the longitudinal screw 83, as near as practicable to the under side of the paper supporting table 4, it will be readily understood that the screw will be relieved of any undue strain placed thereon when the pile of paper is moved forcibly back against the back gage as is customary. Where the feed screw is located at some distance below the table 1, it will be observed that the tendency of said screw to spring or give when any strain is placed thereon is more than where the screw is located close to the table, and furthermore, the close disposition of the screw to the table admits of the use of a fine thread on the screw, which is much more desirable than a coarse thread, for the reason that where a coarse thread is employed, as is necessary in most machines to secure a quick adjustment of the gage, the said gage will necessarily be somewhat loose, and will not remain in a fixed adjustment and will yield considerably to the paper when forced or pushed thereagainst.

In the present invention the manner of adjusting the sliding gage adjusting block dispenses with the necessity of a coarse thread on the feed screw, inasmuch as the said screw is not depended upon to give a quick adjustment to the gage, and the fine threads of the said screw answer the purpose of securing the accurate adjustment of the gage, and furthermore absolutely prevent the same from

yielding or loosening when the paper is chocked up against the same. Another point of advantage to note in this connection is that the disposition of the feed screw admits of the use of a small hand wheel 85, at one end thereof, which hand wheel is disposed below the plane of the table, while at the same time providing for turning the feed screw sufficiently fast for all purposes.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a paper cutting machine, the combination with the knife; of a horizontally moving knife operating bar connected with the knife and carrying a tappet, suitable gearing for the knife operating bar, a pulley-rotated clutch arranged on one of the shafts of the gearing, a fixed stop clutch arranged adjacent to the rotary clutch, a clutch collar feathered on the shaft between the two clutches, a pivotally supported shifting frame connected with said collar, a lever-adjusted rock shaft having an arm or lever connected with said shifting frame, a trip supported by the arm or lever of the rock shaft and adapted to be engaged by the tappet of said knife operating bar, and means for simultaneously releasing the tappet from said trip and adjusting said rock shaft, substantially as set forth.

2. In a paper cutting machine, the combination with the knife; of a horizontally moving knife operating bar connected with the knife and carrying a tappet, gearing connected with said bar to operate the same, a drive shaft geared with said gearing, a pulley rotated clutch arranged on the drive shaft, a fixed stop clutch arranged adjacent to the rotary clutch, a clutch collar feathered on the shaft between the two clutches, a pivotally supported shifting frame or lever loosely connected with said sliding collar and provided with an arm extension having a segmental rack, a suitably arranged rock shaft having an arm or lever provided with a segmental rack meshing with that of the shifting frame or lever, and a trip arm extension adapted to be engaged by the tappet of said knife operating bar, a swinging adjusting lever connected with said rock shaft, and means for releasing or tripping the tappet from said trip arm extension, substantially as set forth.

3. In a paper cutting machine, the combination with the knife; of a horizontally operated knife operating bar connected with the knife, a spring cushioned tappet rod supported at one side of and carried by said operating bar, gearing connected with the said bar to operate the same, a pulley rotated clutch arranged on one of the shafts of the gearing, a fixed stop clutch arranged adjacent to the rotary clutch on the same shaft, a clutch collar feathered on the shaft between the clutches, a pivotally supported shifting frame loosely connected with said collar and provided with an arm extension having a segmental rack, a suitably arranged rock shaft, a rock arm or lever attached to said rock shaft and provided with a segmental rack meshing with that of the shifting frame, and with an upwardly extended trip arm extension, a trip plate pivotally mounted on the upper end of said trip arm extension and adapted to have one end normally lie in the path of said tappet rod, a swinging adjusting lever connected to one end of the rock shaft and provided with a grip handle and a slot below the grip handle, an oscillating lever pivotally supported on the rock shaft and carried therewith, a connecting rod connected to one end of said lever and to one end of the trip plate, and a sliding adjusting arm arranged to work at one side of the adjusting lever, said arm being connected at one end to one end of the oscillating lever and provided at its other end with a grip handle projecting through the slot of said adjusting lever, substantially as set forth.

4. In a paper cutting machine, the combination with the table, and the back gage mounted to slide on the table; of the feed screw arranged longitudinally under the table, a sectional adjustable nut arranged on the screw and connected with the gage, an adjusting device for the nut sections having a toothed portion, and a longitudinally arranged adjusting chain engaging with the teeth of said adjusting device to provide for adjusting the nut sections and for quickly adjusting the position of the gage when the nut sections are disengaged from the screw, substantially as set forth.

5. In a paper cutting machine, the combination with the table, and the back gage mounted to slide on the table; of the feed screw arranged longitudinally under the table, an adjustable nut arranged on the screw and connected to said gage, and an adjusting chain arranged longitudinally under the screw and connected with said nut to provide for engaging and disengaging the same and to quickly shift the position of the same when disengaged from the screw, substantially as set forth.

6. In a paper cutting machine, the combination with the horizontal table and the sliding back gage mounted on the table; of the longitudinal feed screw arranged under the table, a sliding gage adjusting block mounted under the table and connected with the gage, a sectional adjustable nut mounted within said block and embracing the feed screw, an adjusting device for the nut sections, and a longitudinally arranged adjusting chain connected with said adjusting device to adjust the nut sections and to provide for moving said adjusting block in either direction when the nut is disengaged from the screw, substantially as set forth.

7. In a paper cutting machine, the combination with the horizontal table and the back gage sliding thereon; of the longitudinal feed screw arranged under the table, a sliding gage adjusting block mounted under the table and connected to the gage, said block being provided in one side with a dove-tailed groove, adjustable nut sections provided with registering semi-cylindrical threaded portions to engage the screw, and with dove-tailed tongues to slide in the groove of the block, an adjusting device mounted on said block and connected with said nut sections to adjust the same, and a longitudinally arranged adjusting chain connected with said adjusting device to adjust the nut sections, and to provide for the quick adjustment of the sliding block independent of the screw, substantially as set forth.

8. In a paper cutting machine, the combination with the horizontal table and the back gage sliding thereon; of the longitudinal feed screw arranged under the table, a sliding gage adjusting block mounted under the table and connected with the back gage, said block being provided at its lower side with a supporting guide flange, vertically disposed slots and a catch notch or depression, adjustable nut sections mounted to slide within the block and provided with offstanding pins projected through said vertical slots, an adjusting disk pivoted on one side of the block and provided with opposite cam slots to receive said pins, a segmental lower toothed side, and a spring actuated sliding catch stud adapted to engage said catch notch or depression, and a longitudinally arranged adjusting chain guided to work over said supporting guide flange in mesh with the toothed lower side of said disk, substantially as set forth.

9. In a paper cutting machine, the combination with the table and the sliding back gage thereon; of the longitudinal feed screw arranged under the table, a sectional adjustable nut arranged on the screw and connected to said gage, end sprocket or chain wheels arranged at opposite ends of the table, a longitudinal adjusting chain arranged to pass over said sprocket or chain wheel and engaging with said nut, an indicating worm wheel mounted at one side of one of said sprocket or chain wheels, and provided with a peripheral graduated indicating worm or thread, and a movable index plate supported to slide on one end of the table and provided with an indicator finger loosely engaging in the worm or thread of said indicating wheel, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL BROWN.

Witnesses:
JOHN H. SIGGERS,
D. P. WALHAUPTER, Jr.