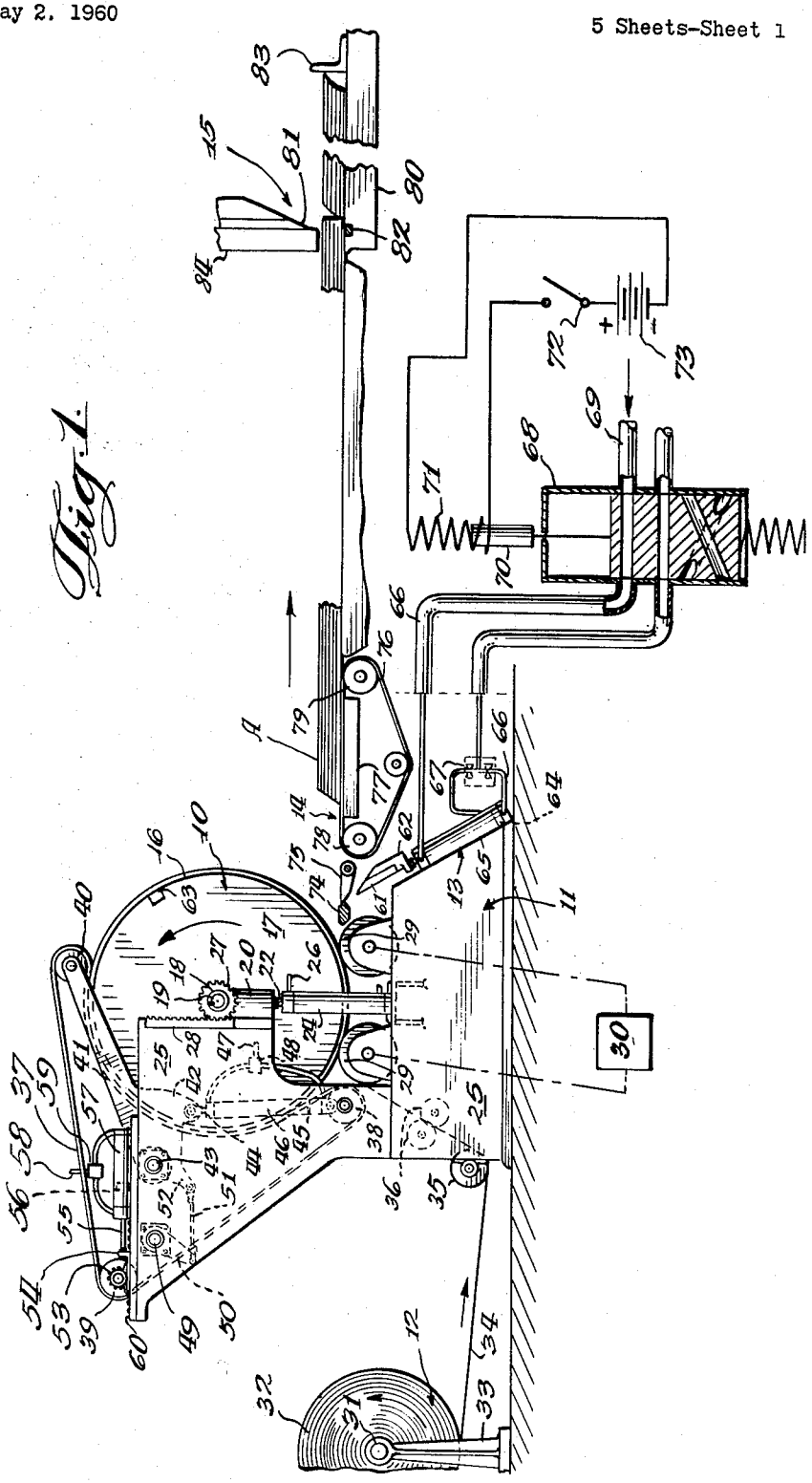
Sept. 1, 1964 W. H. BURGER 3,146,649

PAPERMAKING MACHINE

Filed May 2, 1960 5 Sheets-Sheet 1

Fig. 1.



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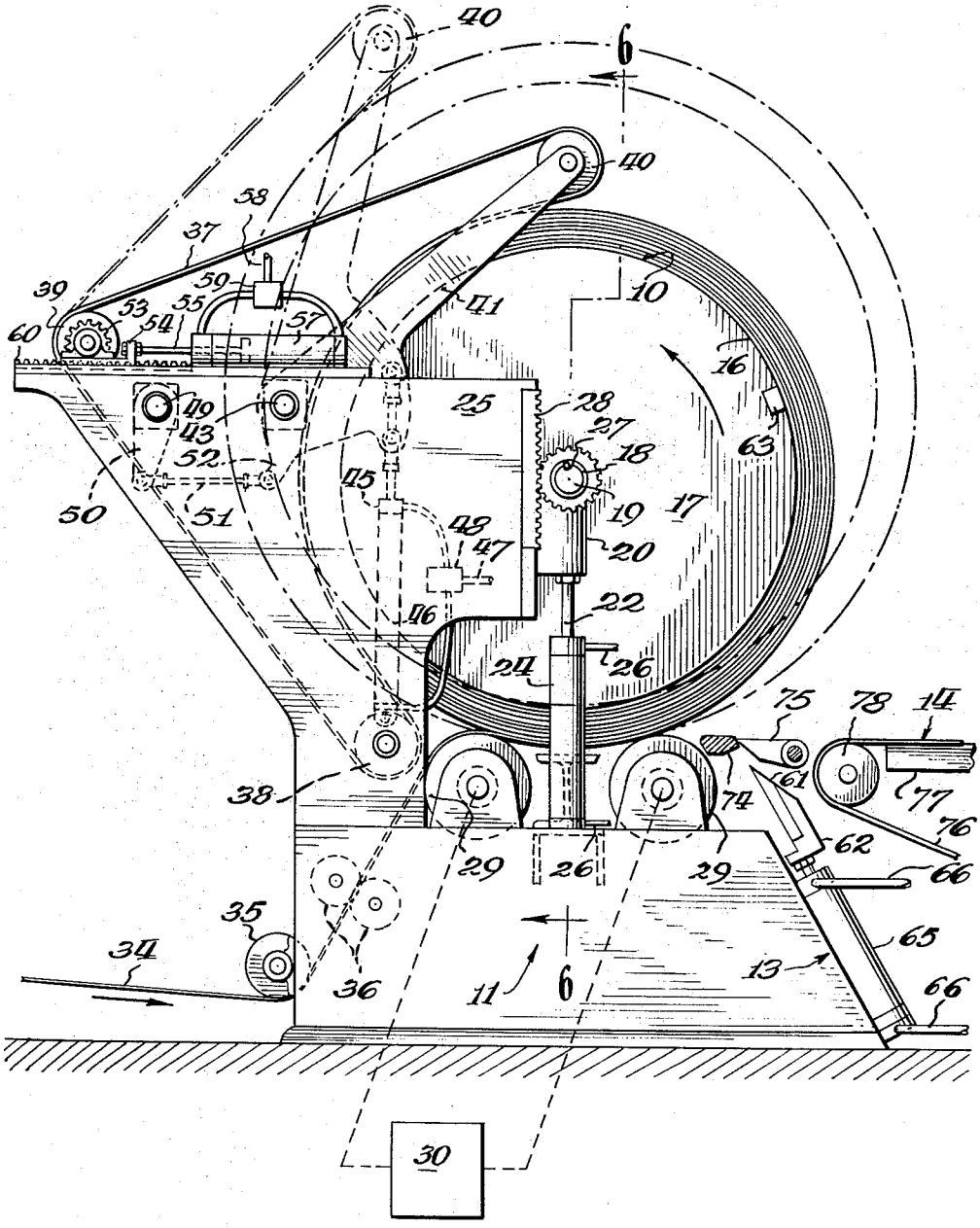
PAPERMAKING MACHINE

Filed May 2, 1960 5 Sheets-Sheet 2

Fig. 2.



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PAPERMAKING MACHINE

Filed May 2, 1960 5 Sheets-Sheet 3

Fig. 7.

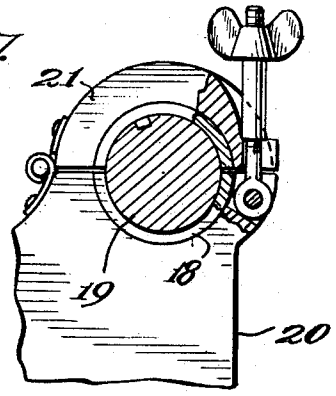

Fig. 3.

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PAPERMAKING MACHINE

Filed May 2, 1960 5 Sheets-Sheet 4

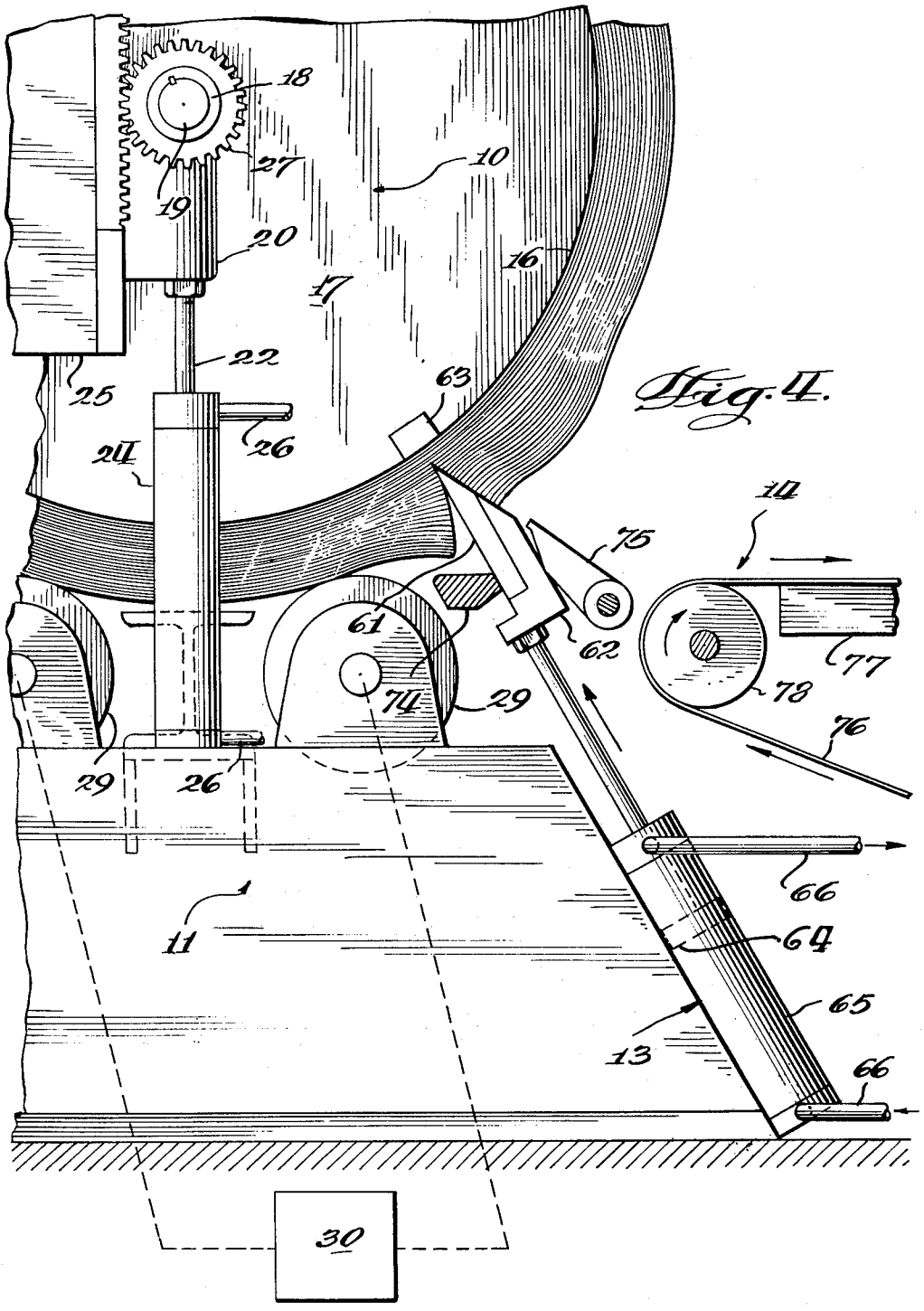

Fig. 4.

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PAPERMAKING MACHINE

Filed May 2, 1960 5 Sheets-Sheet 5

Fig. 5.

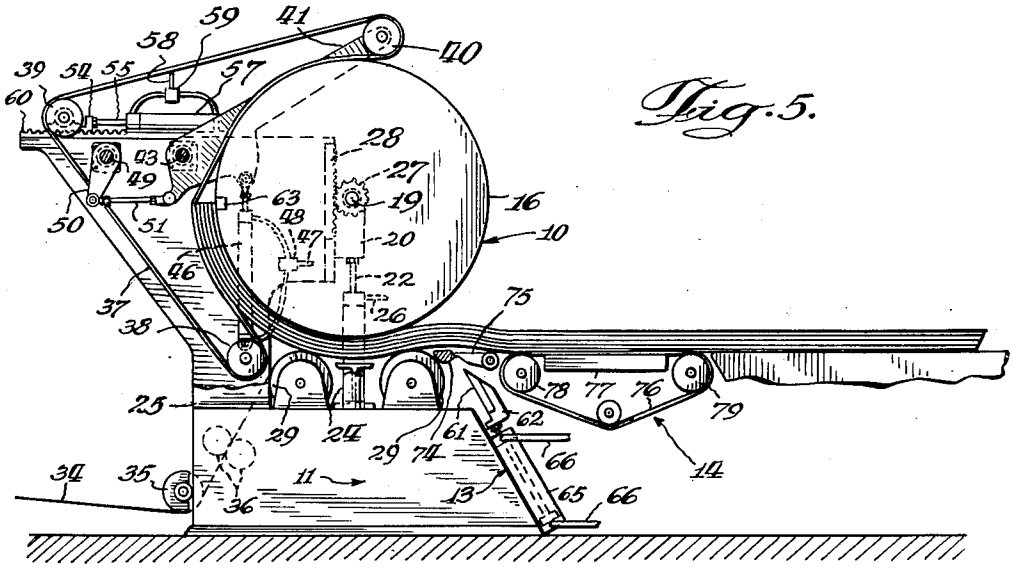
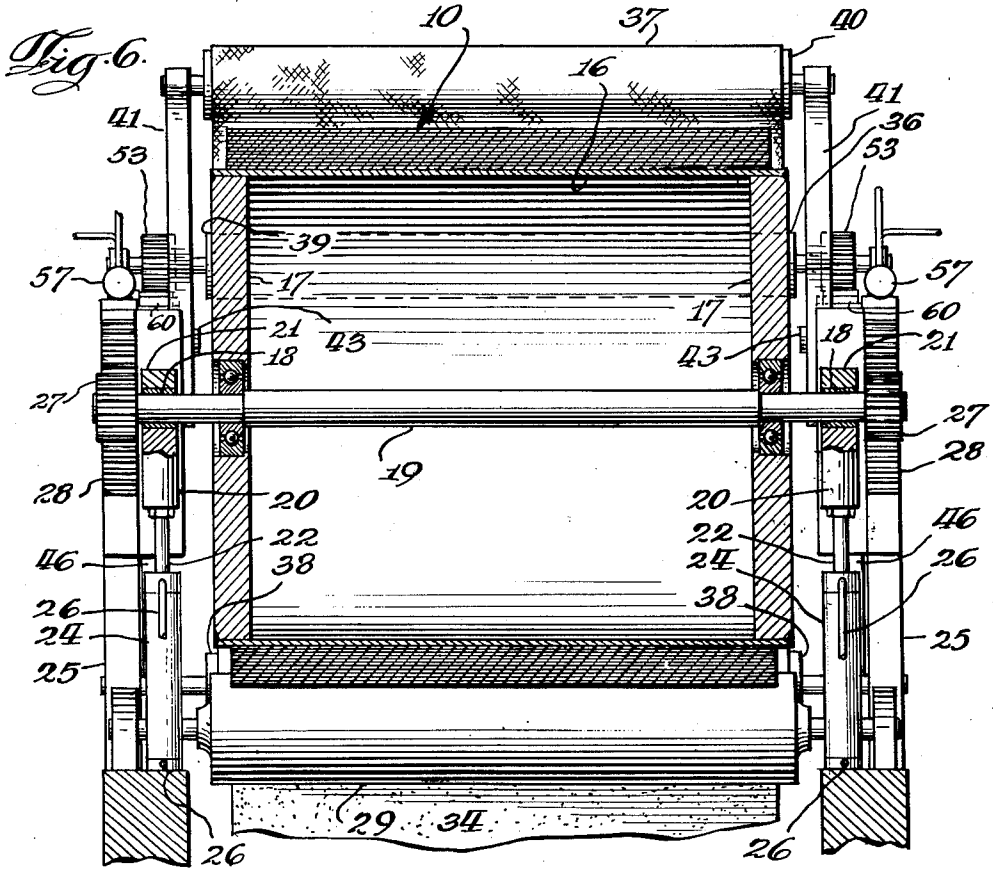


Fig. 6.



United States Patent Office 3,146,649 Patented Sept. 1, 1964

3,146,649

PAPERMAKING MACHINE

William H. Burger, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed May 2, 1960, Ser. No. 25,996
4 Claims. (Cl. 83—86)

My invention relates to the manufacture of cellulosic products and more particularly to cutting mechines designed to convert paper in web form into sheets.

The product of a Fourdrinier machine is generally a continuous web of paper, which for convenience of handling and further processing, is first wound into a roll as it passes from the machine. Since much paper is ultimately used in sheet form, it is necessary to provide equipment which will rapidly and accurately produce stacked sheets from webs thus stored in roll form.

Such equipment has previously been proposed and is descibed in a co-pending application of D. C. Beaulieu and R. W. Martinek, Ser. No. 843,661, filed October 1, 1959. This equipment includes a rotatable drum possessing a substantial circumference around which a web is wound. When a layer of 6½ to 7 inches of web has been built up, the drum is stopped, and a guillotine knife is actuated to laterally sever the built up web to form a slab of paper sheets across the face of the drum, the resulting slab being of such convenient dimensions that it may subsequently be fed to and trimmed by a conventional paper cutter into stacked sheets of a desired size. This equipment has been found to accelerate the production of stacked sheets far above previously known paper sheeting machines yet produces none of the paper dust which had formerly been a major drawback of the slower type units. The equipment proposed in this prior application also includes an endless belt of substantially the same width as the drum, looped about suitable pulleys, so that a segment of the belt at all times embraces a substantial portion of the surface of the drum or the paper wound thereon. The purpose of the belt is to firmly hold upon the drum surface the slab of paper sheets after it has been severed and as it is being fed to the cutter used for trimming to size. Although the belt is thus effective for its intended purpose after slab-severing, it is nevertheless in contact and moves with the web during the entire web build-up operation and requires a substantial expenditure for power. This undue use of the belt also leads to considerable belt replacement and maintenance costs. Furthermore, with this prior construction, it is rather difficult to remove the drum and replace it with a drum of different size, when different size sheets are required, since the belt must also be removed and readjusted.

The prior equipment also includes a fixed axle drum supported only by two side journals, such manner of mounting permitting the tensile strength of the web to limit the tightness with which the web can be wound onto the drum. This arrangement may thus lead to a slightly irregular build-up of the web of paper on the drum and to relative difficulty in the severing of the slab of paper wound on the drum. Once the slab has been severed, this equipment also requires that the forward slab end be guided manually to a conveyor to start the feeding of the slab to the cutter, since the severed slab ends hang freely

and the drum and belt in their movement do not tend to guide a slab end onto the conveyor.

It is, therefore, an object of the present invention to provide an improved drum type cutting machine or sheeter which provides for rapid and easy sheet size change, requires less power to operate and has lower maintenance costs, and affords greater ease and simplicity of operation. It is a more specific object of the present invention to provide an improved sheeter having a winding drum that is so constructed and so mounted in the machine that it can be easily removed and replaced by a comparably constructed drum of diffeent diameter for supplying different sheet sizes. It is a further object of the invention to provide such an improved sheeter which, in order to facilitate such drum replacement, has a belt extending around only a small portion of the periphery of the drum in position only during the time when the sheets are being severed and removed from the drum.

Yet another object of the invention is to provide such an improved sheeter in which the drum and the paper web wound on the drum are supported from beneath the drum by a pair of driven rolls, so as to wind the web on the drum in a firm condition, thus making for easier slab cutting, and so as to transfer the slab onto a subsequent conveyor without requiring that the forward slab end be guided manually onto the conveyor.

My improved sheeter in its preferred form includes a rotatable winding drum that is mounted for vertical movement and a pair of rolls beneath the drum adapted to support the drum and the web as it is wound on to the drum. It also includes an endless belt, which is carried by a roll system and which belt remains as guided by the roll system at one side of the drum out of contact with the drum, while the paper web is being wound onto the drum. The belt support system is movable and so arranged and constructed that the belt can be adjustably disposed over one side of the drum and the web wound on the drum at a time just prior to the severing and transferring operation.

The invention consists of the novel methods, constructions, arrangements and devices to be hereinafter described and claimed, for carrying out the above stated objects, and such other objects, as will be apparent from the following description of a preferred form of the invention, illustrated with reference to the accompanying drawings, wherein:

FIG. 1 is an elevational view, partly schematic, of a paper converting machine embodying the principles of the invention and including a rotatable drum on which paper is wound prior to cutting and a movable belt for supporting the paper;

FIG. 2 is an elevational view on an enlarged scale of the portion of the machine including the rotatable drum and illustrating layers of paper wound on the drum;

FIG. 3 is a view similar to FIG. 2 and showing the belt removed from the paper on the drum prior to cutting;

FIG. 4 is a view on a still further enlarged scale of the drum part of the machine showing the paper on the drum being cut;

FIG. 5 is an elevational view of the machine on a reduced scale illustrating cut paper being removed from the drum;

FIG. 6 is a sectional view of the machine taken on a plane passing through the center of the drum; and

FIG. 7 is a side view of a journal yoke for supporting the drum.

Like characters of reference designate like parts in the several views.

Referring now to the drawings, the paper sheet cutting machine or sheeter may be seen to comprise, in general, a winding drum 10, a drum stand 11, a backstand 12 for a roll of paper, a retractable paper-cutting mechanism 13, a conveyor 14, and a guillotine-type trimmer 15.

The drum 10 comprises an outer shell 16, external headers 17, and anti-friction bearings 18, one of which is concentrically disposed in each header 17, to rotatably receive a central shaft 19. The shaft 19 is rotatably supported at points a short distance inwardly from its ends on a pair of journal yokes 20, which are fitted with releasable buckles 21. The yokes 20 are supported for vertical motion by push rods 22 fixed to double acting pistons 23 that fit slidably within hydraulic cylinders 24. The cylinders 24 are disposed on and supported by a frame 25 and are connected to a source of hydraulic fluid 26. A pinion 27 is keyed to each end of the shaft 19, and the pinions mesh with racks 28, which are set into the frame 25.

The drum 10 is rotatably supported along its face by a pair of winder rolls 29 which are rotatably supported by the frame 25. Each of the rolls 29 is driven by a conventional variable speed driving mechanism 30 of a type to drive the roll to the left as seen in FIG. 1 at a predetermined slower speed than the other roll 29.

The backstand 12 comprises a reel 31 for carrying a roll of paper 32, the reel being rotatably supported by a pair of stanchions 33. Paper is taken from the roll 32 in a web or continuous sheet 34, and an idler roll 35 is provided around which the sheet is guided onto the shell 16 of the drum 10. Two or more slitters 36 of conventional construction may be positioned to act upon the paper web 34 as it passes from the roll 32 to the drum 10 for edge trimming the web and longitudinally dividing the web into a plurality of narrower webs.

An endless belt 37 extends around a roll 38 that is axially fixed with respect to the frame 25 and also extends around a roll 39 that is adjustable with respect to the frame 25. A movable roll 40 is also provided within the belt 37 and is rotatably supported by arms 41 of irregularly shaped parts 42, which are pivotally mounted about pins 43 set on each side of the frame 25. Push rods 44 are pivotally attached to the pivotable parts 42, and each push rod carries a double acting piston 45. Each piston 45 is slidably disposed within a hydraulic cylinder 46 which is pivotally attached to the frame 25. A source of hydraulic pressure 47 together with a four way valve 48 is provided for each of the cylinders 46. A shaft 49 is journalled in the frame 25 and extends from one side of the frame to the other, and a crank 50 is rigidly attached to each end of the shaft 49. A movable link 51 extends between each crank 50 and an arm 52 of the pivotable part 42.

Adjustable roll 39 carries pinion gears 53 on its ends, and the roll 39 is journalled in pillow blocks 54 slidably disposed on aligned horizontal ways included in the frame 25. Connecting rods 55 are rigidly attached on one end to blocks 54 and on their opposite ends to double acting pistons 56 which fit slidably within respective hydraulic cylinders 57. The cylinders 57 are fixed horizontally with respect to the frame 25 and are provided with a supply of hydraulic pressure 58 controlled by four way valves 59. Racks 60 are set in the frame 25 and operate cooperatively with the pinions 53 to position both ends of the adjustable roll 36 simultaneously.

The cutting mechanism 13 comprises a knife blade 61 fixed in a knife holder 62 which embraces the blade. A narrow maple cutting block 63 adapted to cooperate with the cutting blade 61 is fitted in a channel in the shell 16 and is oriented laterally across the face of the drum 10. A pair of hydraulically actuated double action pistons 64

slidably disposed within cylinders 65 are provided, one of which pistons is mechanically connected near either end of the knife holder 62 for the purpose of moving the knife 61 and the holder 62 towards the block 63. Parallel conduits 66 link the upper and lower ends of cylinders 65 and are connected by flow dividers 67 of any conventional type that provide equal output pressures in a pair of output conduits or parts. A four way diaphragm valve 68 with ports permitting flow to and from either flow divider 67 is interposed between a source of hydraulic pressure 69 and the flow dividers 67.

The valve 68 is actuated by an armature 70 moving within a coil 71 which is controlled by a switch 72. A direct current supply 73 is available at the switch 72.

The conveyor 14 comprises in horizontal alignment a fixed slat 74 and a pivotable wedge shaped slat 75 which is rotatable upwardly when the knife 61 is active to cut the paper wound on the drum 10. An endless belt 76, which has its upper pass slideably supported by a table 77, is disposed about a pair of rolls 78 and 79.

The trimmer 15 may comprise a platform 80 and a knife 81 movable toward a cutting block 82 adapted to cooperate with the knife 81 to cut paper sheets therebetween. The knife 81 may preferably be a commercially available guillotine cutter mounted so that the bevel of its blade is disposed toward the finished work.

A guide 83, adjustable with respect to platform 78, is provided to define the longitudinal dimension of the sheet to be cut by the knife 81 and a movable bar clamp 84 is slidably disposed and coextensive with the knife to prevent motion of the slab during the time the knife is active to cut.

In operation, the paper web 34 is unwound from the roll of paper 32, passes beneath the idler roll 35, may or may not be acted upon by the slitters 36, and thence presents itself to the nip formed by the drum 10 and the nearest of the winder rolls 29. The winder rolls 29, driven by the variable driving mechanism 30, rotate to pass the paper web 34 through the nip and along the periphery of the shell 16, to the next nip between the farthest of the winder rolls 29 and the drum 10 and thence around the drum, using the drum as a core and support for the paper web 34. The drum 10 is rotated in a counter-clockwise direction, as shown in FIGURE 1, as it rests upon the clockwise driven winder rolls 29, and the nearest of the rolls is differentially driven at a slightly slower speed than the farthest to produce a hard wound roll. The paper is wound on the drum 10 until a susbtantial thickness of paper exists on the drum, as shown in FIG. 2. The drum 10, for example, may have a circumference of about 200 inches with a diameter slightly less than 64 inches, depending upon the size of the sheets desired to be subdivided from the slab produced. It is contemplated that the paper web shall be wound on the drum 10 until the paper has a thickness, for example, of about 5 inches. Use of a larger drum 10 permits a build-up of less depth for a given weight of slab and a proportionately smaller amount of waste due to the large variance of length in the innermost and outermost layers.

As the 34 begins to build up on the drum 10, the shaft 19 rises vertically with respect to the winder rolls 29. The shaft 19 rotates slowly as it rises, the pinions 27 uniformly carrying both ends upwardly in the path described by the racks 28 which are set in the frame 25. The yokes 20 are attached to the rods 22 and the assembly follows upwardly, slowly drawing the pistons 23 outwardly from within the cylinders 24. Hydraulic fluid flows out from the upper portion of the cylinders 24, but the resistance to flow is such that sufficient pressure is maintained to exert a downward pressure on the shaft 19 providing a damping action upon the shaft and insuring that the sheet as it is wound on drum 10 remains in close contact with the winder rolls 29 at all times.

After such a thickness of paper, as for example 5 inches, has been built up on the drum 10, drum rotation

is stopped and the valves 48, which are normally positioned to maintain pressure in the lower portion of the cylinders 46, are actuated to direct the flow from the source of pressure 47 into the upper portion of the cylinders 46. The pistons 45 then descend within the respective cylinders 43 carrying the push rods 44 downwardly. The push rods 44 support the irregularly shaped pivotable parts 42 during web wind up in an upward position of the parts 42 when the belt 37 does not engage the paper wound on the drum 10. The descending push rods 44 cause these parts 42 to rotate about the pins 43, and the arms 41, which carry the movable roll 40, advance toward the paper built up on the drum 10 until the surface of the paper supports the belt 37 carried about the rolls 38, 39, and 40. A portion of the belt 37 conforms to the outline of the built-up web 34 and limits further rotary motion of the pivotable parts 42. The mechanism comprising links 51 which connect the rotating parts 42 with the cranks 50 on either end of the shaft 49 insures that the described lowering operation is accomplished uniformly across the face of the roll.

The belt 37, when in position to support the built-up web 34 once it has been severed, may be further adjusted to better accommodate various drum sizes and paper build-up depths by positioning the valves 59 to properly supply hydraulic pressure to either end of cylinders 57, such pressure acting upon the pistons 56 disposed within. The connecting rods 55, carried by the pistons 56, in turn move the pillow blocks 54, which support the adjustable roll 39 on either side of the belt tensioning mechanism, as shown in FIG. 3. The pinion gears 53 carried on the ends of the roll 39 actively engage the racks 60 and cooperate to insure that both ends of the adjustable roll 39 are uniformly positioned. Readjustment of the movable roll 40 by the pistons 45 may be needed so that the belt 37 can be made to firmly embrace the web built up on the different size drum 10 for a substantial portion of the paper slab.

Once the belt 37 has been adjusted properly, the drum, and the belt 37 in contact therewith, are rotated slowly to such positions that the cutting block 63 is in position to cooperate with the knife 61 in severing the built up web 34. The retractable paper cutting mechanism 13 is then rendered operative by closing the switch 72, so that the current from supply 73 flows through the coil 71 raising the armature 70. Flow from the hydraulic pressure source 69 through the lower four way valve 68 into the lower flow divider 67 follows. The fluid passes through the flow divider 67 into conduits 66, and a balanced pressure is thus supplied to the lower end of cylinders 65. The pistons 64 move inwardly together, carrying the knife holder 62 and the knife blade 61 radially toward the cutting block 63 set in the drum 10. The knife 61 in so moving lifts movable wedge-shaped slat 75 and passes beyond it to sever the paper web 34 looped in many layers about the drum 10, as illustrated in FIGURE 3, radially to the drum axis and transversely of the paper loop. It will be noticed that the pivot of the slat 75 is offset with respect to the path of travel of the knife 61 and the slat 75 lies in this path of travel, so that the slat 75 is pivotally moved by the knife 61 as the knife moves toward the drum 10. In effect, there is now positioned about the drum 10 a slab A of many individual sheets of paper, which slab is held firmly on one end between the winder rolls 29 and the drum 10 and by the belt 37 and drum 10 throughout the remainder of its length requiring support. The knife 61 is withdrawn from its cutting position by opening the switch 72 thereby stopping the flow of current within coil 71 and allowing armature 70 to drop downwardly, reversing the four way valve 68 so as to permit the flow of hydraulic fluid to the upper flow divider 67 to retract the knife assembly and allow slat 75 to return to place. The slab A is now ready to be transferred to the conveyor 14 and trimmer 15.

The drum 10 is rotated slowly in the counterclockwise direction, as shown in FIG. 5, by driving the winder rolls 29, and the paper sheets in the form of a slab A are guided through the nips formed by the drum 10 and the winder rolls 29. The moving slab A next passes over the fixed slat 74 and the movable slat 75 which has now descended into horizontal alignment and the slats support the slab as it passes over the cutting mechanism 13. Aided by the moving belt 76, the slab A is then delivered onto the table 77 so as to flatten out the loop. Alternately, the table 77 may be used without the belt 76; and in this case, the slab A may be slid or transported on rollers (not shown) across the table to the trimmer 15.

The support belt 37 functions to hold the remainder of the slab A of paper sheets until the trailing edge of the slab has passed from the drum 10, through the nips formed by the winder rolls 29 and drum 10, and thence to the endless belt 76 which ultimately delivers it to the platform 80, as shown in FIGURE 5. Any appreciable movement of the sheets within the slab with respect to each other is thus minimized. The belt 76 may be driven about its rolls 78 and 79 simply by the movement of the slab A on to the table 77, or if desired, the rolls 78 and 79 and belt 76 may be power driven.

The uneven edge of the slab A extending across the table 77 onto the platform 80 is cut away by the knife 81 descending toward the block 82 while the horizontal clamp 84 is positioned to hold the stack in place. The trimmings are then moved away either to the side or the back, and the next portion of the slab A is moved until its leading edge is stopped by the guide 83 suitably positioned for the sheet size desired. The web portion 34 is then clamped, the guide 83 moved backward slightly to permit the stack to move backwardly during cutting, and the guillotine 81 actuated. Further operation in a similar manner produces multiple stacks of paper of the desired size which may subsequently require a trimming of the running edges of the stack at an additional station to the side or rear (not shown). When using drums of large circumference, the spacing between the trimmer 15 and the drum 10 may be such that the guide 80 limits further movement of the slab A while the trailing edge of the slab is still retained on the drum 10.

When the trailing edge of the slab A has passed out from beneath the belt 37, the valves 48 are reversed to permit access of fluid under pressure from the source 47 to the lower portion of the cylinders 46. The pistons 45 then act to rotate the pivotable parts 42 back to their original positions at one side of the drum, so that winding operations can again be resumed.

After the web material 34 has been wound on to the drum 10 as illustrated in FIG. 3, the incoming web 34 may be severed between the slitters 36 and the driving roll 29 located adjacent to the slitters 36. The knife 61 may then be actuated so as to provide the cut sheets on the drum 10, and the sheets may be moved off the drum as above described. This cutting of the web 34 between the slitters 36 and the driving roll 29 adjacent thereto may simply be by hand, utilizing a knife attached on the end of a pole, for example.

Another way in which the incoming web 34 may be severed after the drum 10 has been wound with web is simply to allow the incoming web 34 to remain uncut prior to actuation of the knife 61. The knife 61 may be actuated after the web material has been wound on the drum 10 as illustrated in FIG. 3; the cut sheets may then be moved on to the table 77 with rotation of the drum 10, and this same motion of the drum will draw a length of incoming web 34 from its supply roll (not shown), over the rolls 29 and on to the table 77. The cut sheets may be moved sufficiently far along the table 77 so that the incoming web 34 is exposed above the knife 62, and the incoming web 34 may be cut by again actuating the knife 61.

The leading end of the incoming web 34 may be held by hand against the surface of the drum 10 as the drum is slowly rotated for starting a new roll of webbing on the drum. Alternately, the leading end of the incoming web 34 may be held fixed with respect to the surface of the drum 10 by utilizing pressure sensitive adhesive tape and sticking the leading end of the web on to the drum with the tape.

The method of cutting piles or slabs of paper sheets as above described may be contrasted to prior methods in which rotary cutters are utlized to cut at the most 6 or 8 sheets at a time, allowing the paper dust to enter between the sheets as they descend upon previously cut sheets in order to form a pile which must be subsequently trimmed. Embodiments of sheeters of the type herein described provide slabs or piles of paper sheets between which there is substantially no paper dust that can interfere with the subsequent printing of the sheets, particularly by means of the offset printing process. Additionally, sheet cleaning devices may be used in conjunction with my preferred embodiment to insure that there is substantially no dust or debris adhering to the web 34 as it passes to the drum.

Alternate paper web supplies may also be used including a plurality of webs supplied simultaneously to the winding drum 10. These sheets would come from a backstand 11 of a type that supports additional paper rolls 32. Drum speeds can be reduced or the time required for winding a given thickness of paper on the drum prior to cutting can be shortened during multiple feed operation.

The winding drum 10 including the shell 16 supported by the headers 17 each carrying one of the bearings 18 is designed to be easily removed from the shaft 19 when a final slab of different size is desired. This operation is carried out by removing one of the keyed pinions 27 from one end of the shaft 19 and releasing the buckles 21 permitting the yokes 20 to come apart. The winding drum 10 is then slipped off the pinion-less end of the shaft 19 and replaced with a similarly constructed drum of suitable diameter.

The easily replaceable drum 10 of my invention can be run at high speeds when building up the paper webbing since the belt does not contact the drum and thus need not be moved when the drum moves. The power required is much less than in operations where the belt also moves and the replacement interval for the belt and its auxilliary equipment is considerably lengthened.

Transfer of the slab A from its looped position about the drum to the table is also accomplished in a convenient and suitable manner, since it is not only guided and supported by the belt 37 but also is gripped tightly in the nips between the drum 10 and the winder rolls 29.

The retractable cutting knife 13 operates to rapidly sever the hard wound webbing 34 in a simplified and efficient manner and produces a slab A with clean-cut edges.

I wish it to be understood that my invention is not to be limited to the specific constructions, arrangements, and devices hereinabove described, except only insofar as the claims may be so limited, as it will be apparent to those skilled in the art that changes may be made without departing from the principles of the invention.

What is claimed is:

1. In a machine for forming a pile of sheets from web material, a rotatable drum upon which layers of said material may be wound on rotation of the drum, means for drivingly rotating said drum, a knife movable radially of said drum when the drum is stationary for severing the layers of said material as so wound on the drum transversely of the material to form a slab of sheet material disposed about the drum, an endless belt, means for movably holding said belt in the form of a loop with a part of said loop embracing said drum and the sheet material upon the drum for holding the material after severance by said knife as said drum is rotated by said driving means for unwinding said slab therefrom so as to form a pile of sheets, said belt holding means including a plurality of rotatable rolls, a pair of end arms rotatably carrying one of said rolls and mounted as levers, a rotatable shaft spaced from the centers of rotation of said end arms, and means drivingly connecting said end arms to the opposite ends of said rotatable shaft so that the arms swing through the same angle simultaneously to provide for uniform retraction of the belt from said drum and the web material wound thereon so that the web material may be wound on the drum without corresponding movement of the belt.

2. In a machine for forming a pile of sheets from web material, a rotatable drum upon which layers of said material may be wound on rotation of the drum, means for drivingly rotating said drum, a knife movable radially of said drum when the drum is stationary for severing the layers of said material as so wound on the drum transversely of the material to form sheet material disposed about the drum, an endless belt, a plurality of rotatable rolls for movably holding said belt in the form of a loop with a part of the belt embracing said drum and the sheet material on the drum for holding the material as a slab after severance by said knife as said drum is rotated by said driving means for unwinding said slab from the drum so as to form a pile of sheets, a pair of end arms mounted as levers to support one of said rolls, a rod extending through said machine from side to side, a crank on each end of said rod, and a link connecting each of said cranks with one of said end arms to provide for uniform movement of said arms and uniform retraction of the belt from said drum so that the web material may be wound on the drum prior to cutting of it by said knife without corresponding movement of the belt.

3. In a machine for forming a pile of sheets from web material, a rotatable drum upon which layers of said material may be wound on rotation of the drum, means for drivingly rotating said drum, a knife movable radially of said drum when the drum is stationary for severing the layers of said material as so wound on the drum transversely of the material to form sheet material disposed about the drum, an endless belt, a system of cooperating rolls holding said belt in the form of a loop with a part of said loop embracing said drum and the sheet material on the drum for holding the material as a slab subsequent to cutting of the material by said knife as said drum is rotated by said driving means for unwinding said slab therefrom so as to form a pile of sheets, said system of rolls including an adjustable roll and a pair of end arms mounted as levers to support another one of said rolls so that the belt may be retracted from said drum to allow the winding of sheet material on the drum prior to cutting of the sheet material, and a motor connected to each end of said adjustable roll for simultaneously moving both ends of the adjustable roll so that said belt may be snugly adjusted about said drum after the belt has been brought into contact with said drum and the web material wound thereon by moving said end arms.

4. In a machine for forming a pile of sheets from web material, a rotatable drum upon which layers of said material may be wound on rotation of the drum, means for drivingly rotating said drum, a knife mounted to move in a certain path radially of said drum for severing the layers of said material as so wound on the drum transversely of the material when the drum is stationary to form sheet material disposed about the drum, said knife being positioned on the lower side of the drum, a horizontal table positioned adjacent said knife for receiving cut sheets of web material from said drum as the drum is rotated by said driving means subsequent to action by

said knife in cutting the web material on the drum, a slat or platform member, and a pivot for pivotally mounting said slat, said pivot being offset with respect to said path of knife travel and positioning said slat within said path so that the slat allows the knife to perform its cutting operation by yielding to the inward movement of the knife and subsequently retracting to provide a platform which is positioned above the knife and which supports the cut sheets as they move onto said table with rotation of said drum subsequent to the cutting action by said knife.

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