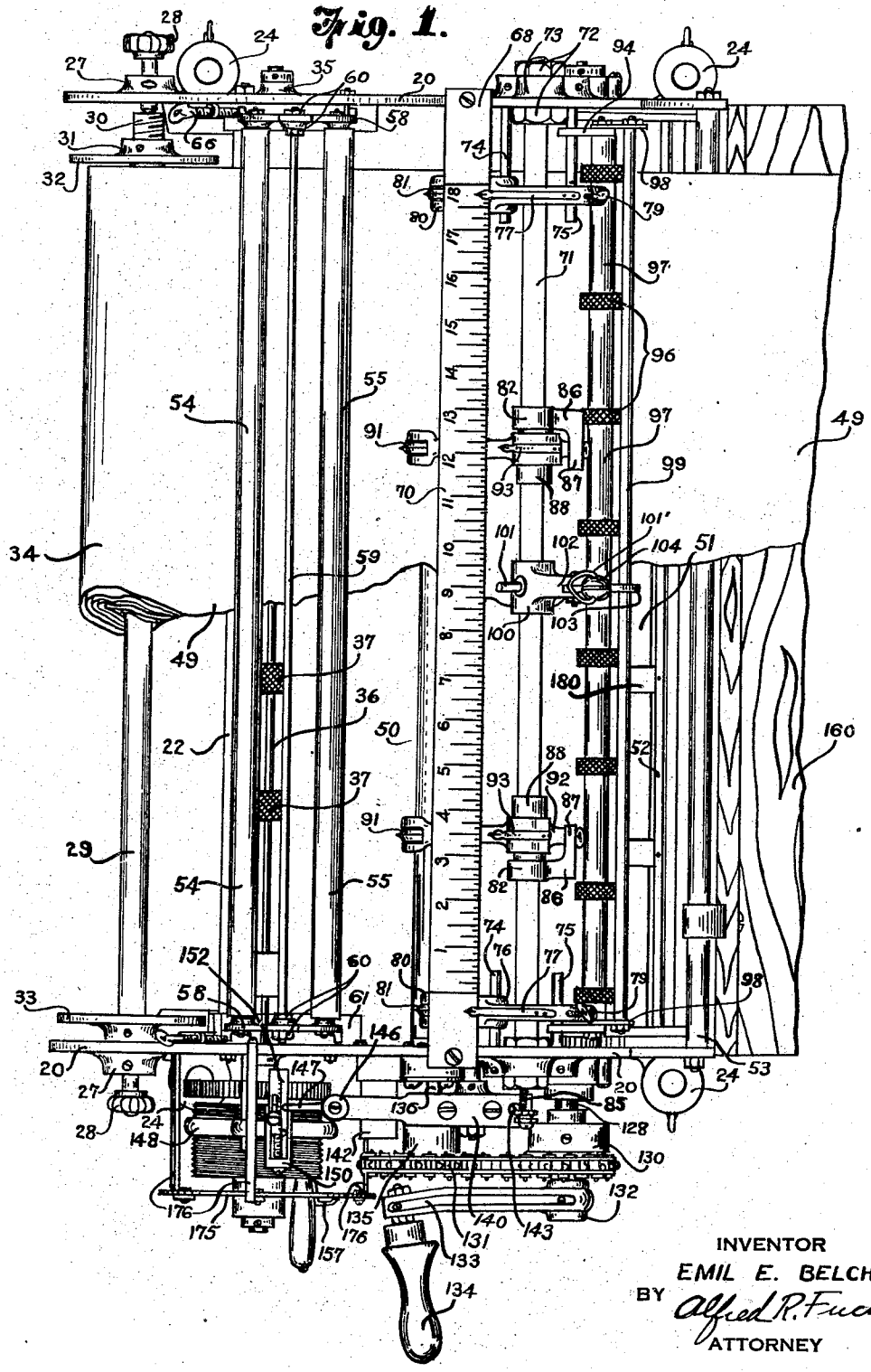
April 17, 1945. E. E. BELCH 2,373,644

WALLPAPER CUTTING, PASTING AND FOLDING MACHINE

Filed Dec. 8, 1941 3 Sheets-Sheet 1

Fig. 1.



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WALLPAPER CUTTING, PASTING AND FOLDING MACHINE

Filed Dec. 8, 1941 3 Sheets-Sheet 2

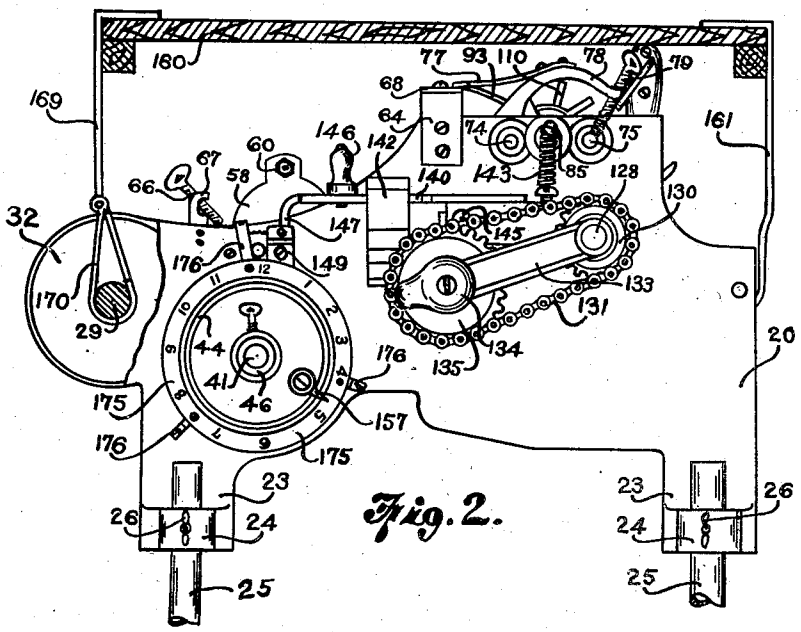


Fig. 2.

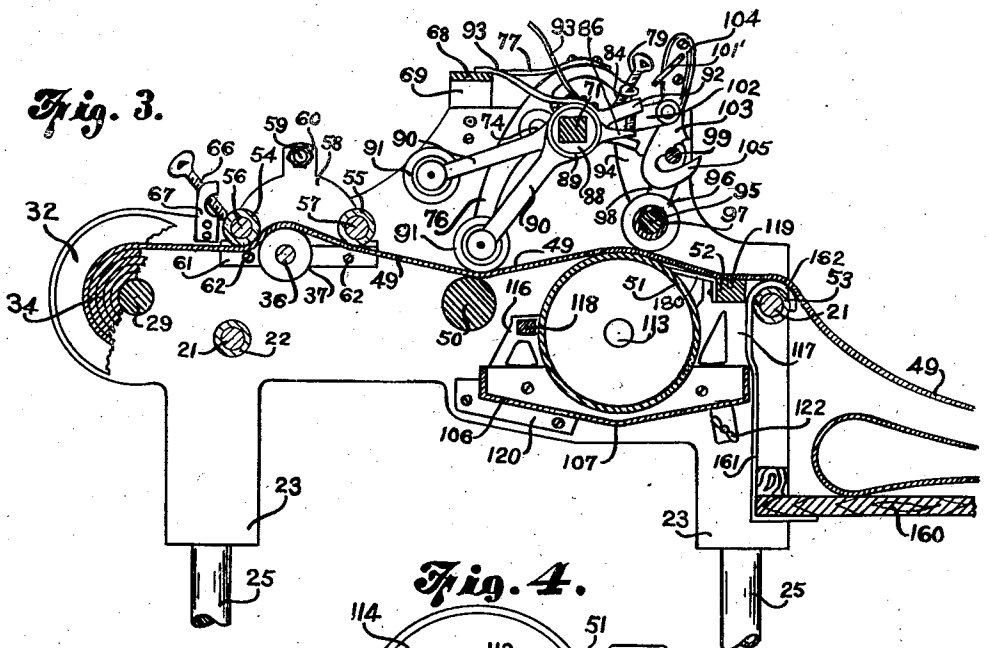


Fig. 3.

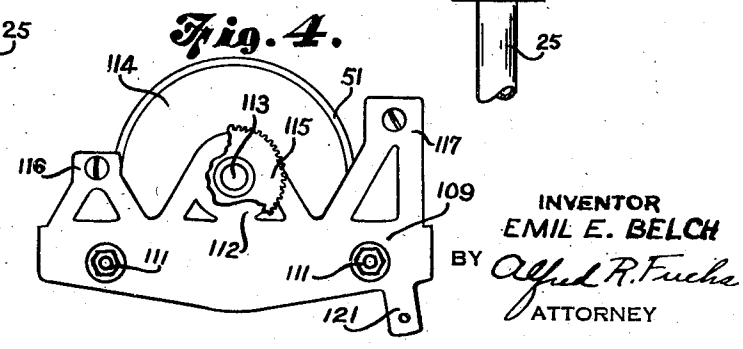


Fig. 4.

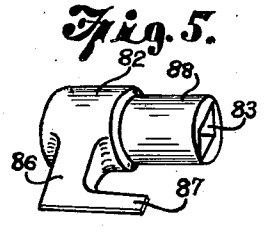


Fig. 5.

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WALLPAPER CUTTING, PASTING AND FOLDING MACHINE

Filed Dec. 8, 1941 3 Sheets-Sheet 3

Fig. 6.

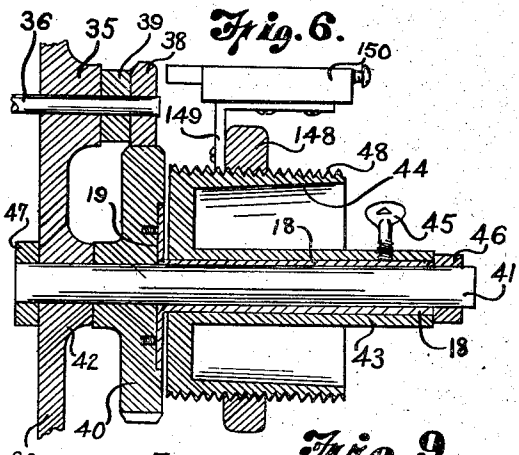


Fig. 7.

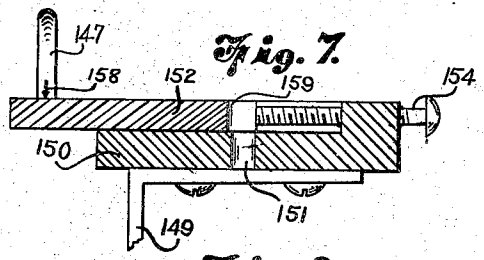


Fig. 8.

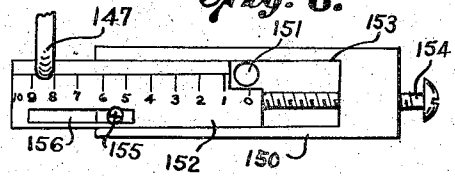


Fig. 9.

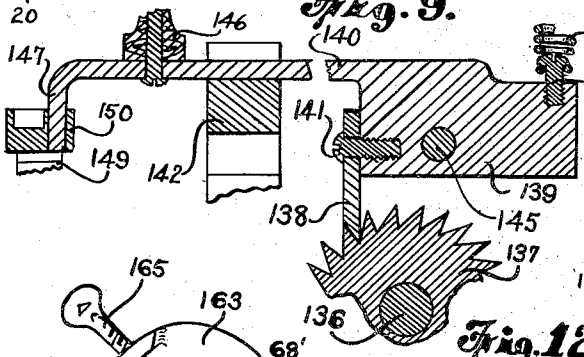


Fig. 10.

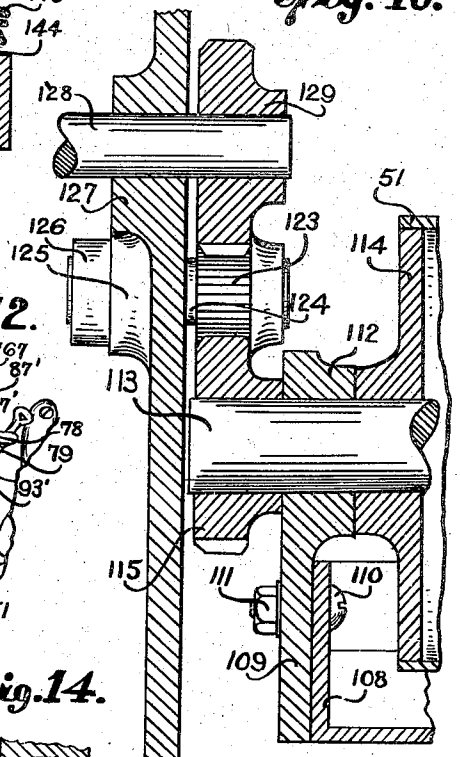


Fig. 12.

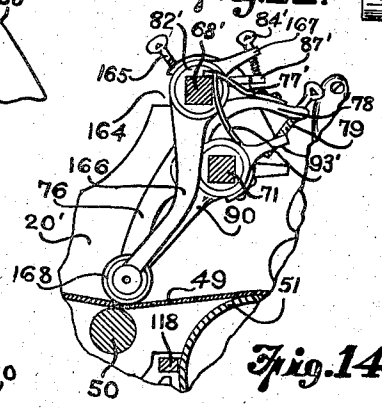


Fig. 13.

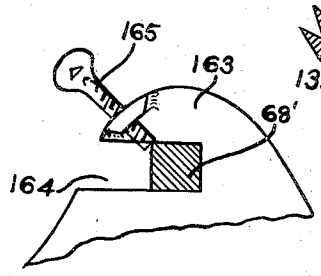


Fig. 11.

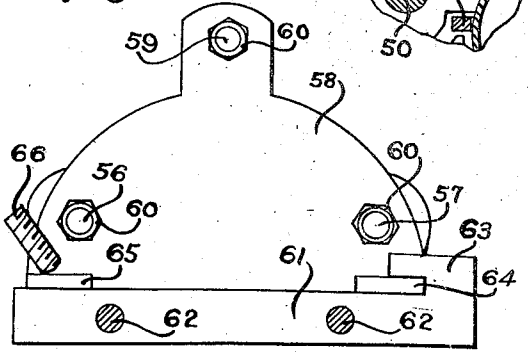
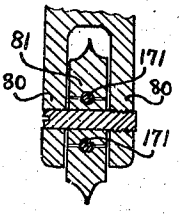


Fig. 14.



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Patented Apr. 17, 1945 2,373,644

UNITED STATES PATENT OFFICE

2,373,644

WALLPAPER CUTTING, PASTING, AND FOLDING MACHINE

Emil E. Belch, Kansas City, Mo.

Application December 8, 1941, Serial No. 422,093

20 Claims. (Cl. 91—14)

My invention relates to a machine for cutting, pasting and folding wall paper.

It is a purpose of my invention to provide a machine of the above mentioned character that is simple in construction and which will measure off a length of wall paper as may be determined by setting the machine to the length desired, which will prevent operation of the machine after the desired length of paper has been cut and had paste applied thereto, and which cannot be again operated until the machine is reset to cut the same length or any other desired length of paper.

It is a further purpose of my invention to provide a machine of the above mentioned character, which is provided with cutting means for trimming the edges of a roll of wall paper, and which is also adapted for cutting out borders having straight edges, or widths of paper less than the full width of the roll for fitting in corners or around openings, as may be desired. Furthermore the cutting mechanism is so constructed and arranged that the paper will be cut substantially through, but not entirely through, so as to be not completely severed at the cut, whereby the portions of the paper that constitute the trimmings, or cuttings, will remain in place until the paper is removed from the machine after having had the paste applied thereto and after having been folded in the customary manner for easy handling after having had the paste applied thereto. The portion of the paper that is to be removed can then be severed very easily from the strip that is to be used, by merely pulling off the trimmed edge portion, or other width of paper that is to be discarded.

It is a further purpose of my invention to provide a machine of the above mentioned character, into which a roll of paper can be readily inserted and quickly threaded into position ready for having the edges thereof trimmed or otherwise cut, and for application of paste thereto. In order to accomplish this, means is provided for causing the paper to follow an undulating path, whereby it will be tensioned and engaged properly with the above referred to measuring means and the paste roller, which means can be readily removed so as to place the web, or length, of paper extending from the roll in position over suitable rollers constituting part of the mechanism of the machine, and the means for causing the undulation in the web portion can be readily replaced in position in a minimum period of time without the removal of any large number of parts of the machine.

It is a further purpose of my invention to provide a machine of the above mentioned character, in which the paste container, the paste roll and other parts that might require daily cleaning, can be removed from the machine as a unit and also readily replaced in position.

It is a still further purpose of my invention to provide a machine of the above mentioned character with means for determining the length of paper that is to be cut off with paste applied thereto, comprising means for rotating the paste applying roller, measuring means operated by the movement of the web of paper through the machine, and stop means actuated by the measuring means for halting the operation of the means for rotating the paste roller when a predetermined length of paper has been measured off by the measuring means, said measuring means further comprising means for setting the same to measure off any desired length of paper.

Other objects and advantages of my invention will appear as the description of the drawings proceeds. I desire to have it understood, however, that I do not intend to limit myself to the particular details shown or described, except as defined in the claims.

In the drawings:

Fig. 1 is a plan view of my improved wall paper cutting, pasting and folding machine, partly broken away, showing a roll of paper in position on one side of the machine, the paper being broken away on the other side to more clearly show the mechanism.

Fig. 2 is a side elevation, partly broken away, of my improved machine, showing the table in inoperative position.

Fig. 3 is a vertical longitudinal sectional view through the machine, partly broken away.

Fig. 4 is a view of the paste container and associated parts removed from the machine, partly broken away.

Fig. 5 is a view in perspective of one of the carriers for the adjustable cutter members removed from the machine.

Fig. 6 is a fragmentary view partly in section and partly in elevation on an enlarged scale, of the measuring means for the length of paper.

Fig. 7 is a sectional view on a still larger scale, of a portion of said measuring means.

Fig. 8 is a top plan view of said portion of the measuring means, showing the scale provided thereon.

Fig. 9 is a longitudinal sectional view, partly

broken away, through the stop mechanism controlled by the measuring means.

Fig. 10 is a fragmentary sectional view on an enlarged scale of the drive for the paste roller and associated parts.

Fig. 11 is a fragmentary view partly in vertical section immediately inside the side frame of the machine adjacent the mounting for the means for holding down the web of paper, showing the detachable mounting means for said holding means in elevation.

Fig. 12 is a fragmentary section of a modified arrangement of cutter members.

Fig. 13 is an enlarged fragmentary view partly in section and partly in elevation of the mounting for the additional cutters shown in Fig. 12, and

Fig. 14 is a fragmentary detail sectional view of one of the cutter members.

Referring in detail to the drawings, my machine is provided with a pair of side frame members 20, which are secured in spaced relation to each other in any desired manner, as by means of cross members 21 having spacing sleeves 22 surrounding the same. Said side frame members 20 have depending bracket members 23 thereon that are provided with tubular sockets 24 for adjustably receiving tubular legs 25, whereby the height of the machine can be adjusted as may be desired, said legs being held clamped in adjusted position by means of suitable clamping screws 26.

Each side frame member 20 is provided with a threaded boss 27, which receives a screw-threaded headed member 28, whereby said members 28 are adjustable toward and away from each other. The inner ends of the members 28 are received in suitable sockets in the end of the shaft 29, whereby said shaft is rotatably mounted between said members 28 on the frame.. The shaft 29 is provided with a threaded portion 30 for receiving the threaded hub portion 31 of a flange 32, a similar flange 33 being fixed on the shaft 29 in any suitable manner at the opposite end thereof, said flange 32 being removable and adjustable toward and away from the flange 33, so as to provide a reel of a width corresponding to that of a roll of wall paper 34 mounted on the shaft 29 between said flanges 32 and 33. Suitable means can be provided, such as set screws, for holding the flange 33 in position and for holding the flange 32 in adjusted position.

Mounted in suitable bearings 35 in the side frame members 20 is a shaft 36, which forms part of the measuring mechanism. Mounted on said shaft 36 so as to be fixed in position thereon, are roughened or knurled rollers 37, said rollers being arranged at closely spaced intervals along said shaft 36. One end of the shaft 36 has a gear 38 fixed thereon, a collar 39 being mounted between said gear 38 and the bearing member 35, said gear 38 meshing with a gear 40 mounted rotatably on a stationary stub shaft 41 mounted in a boss 42 on the one side plate 20, as will be obvious from Fig. 6. The gear 40 has a tubular sleeve-like member 18 projecting therefrom, secured thereto by means of a flange 19. Said tubular member 18 being thus mounted on the shaft 41 to rotate with the gear 40. Said sleeve 18 has an elongated hub portion 43 of a drum 44 mounted thereon, said drum being detachably connected with the sleeve 18 so that the same can be rotated either with the sleeve or independently of the sleeve by suitable means, such as the thumb screw 45, a collar 46 being mounted on the shaft 41 to prevent disengagement of the drum therefrom, and a collar or head 47 being provided on the other end of the shaft 41 to hold said shaft in assembled relation on the side plate 20. The drum 44 is provided with a continuous thread 48 on the outer surface thereof, the purpose of which will be described below.

The roll of paper 34 is placed on the shaft 29, the flange 32 being removed for this purpose, and after the roll 34 is in place, and the flange 32 has been replaced the web of paper 49 extending from the roll 34 is placed over the shaft 36 in contact with the roughened rollers 37, as will be obvious from Figs. 1 and 3. Said web or paper 49 is also passed over a backing roller 50 forming part of the cutting mechanism, over a paste applying roller 51 and over a cutter bar 52 and a guide bar 53 to the exit end of the machine, in threading it through the machine, ready to be operated upon.

I order to assure intimate contact of the web 49 with the rollers 37, and tension it, so that the measuring mechanism actuated thereby will be accurate in its operation, and in order to have smooth contact of the web 49 with the backing roll 50 of the cutting mechanism, a pair of rollers 54 and 55 is provided located on opposite sides of the rollers 37 and above the same to depress the web of paper on opposite sides of said rollers 37 and hold the same firmly in engagement with said rollers 37. The rollers 54 and 55 are tubular members mounted on bars 56 and 57, and said rollers are removable as a unit by quick detachable connections with the frame, so that the threading of the web 49 in position in the machine is facilitated. The quick detachable mounting for said rollers comprises a pair of side members 58 having the bars 56 and 57 extending between the same and having an upward extension through which the bar 59 extends, said bars 56, 57 and 59 securing said side members 58 together in predetermined spaced relation, being provided with threaded ends for receiving the nuts 60 for securing the parts in position.

Each side frame member 20 is provided with a bracket 61, shown more in detail in Fig. 11, fixed thereto by suitable fastening elements 62, each of said brackets having a hook-like flange portion 63 receiving a lug 64 on a member 58 under the same. Each member 58 is also provided with a lug 65 projecting therefrom, which is engaged by the clamping screws 66, said clamping screws being screw-threadedly engaged with brackets 67 on the side frame members of the machine. It will be obvious that the entire frame made up of the side members 58 with the rollers 54 and 55 extending therebetween can be removed by merely unscrewing the two screws 66 and slipping the lugs 64 out from under the overhanging flanges 63.

The roller 50 is made of hardened steel and cooperates with cutter members to trim the side edges of the roll of wall paper and to cut the same in strips of desired width for placing around door and window openings, in corners, and other places where less than full widths of wall paper might be used, and for cutting borders. Cooperating also with the cutting mechanism is a scale, which comprises a cross bar 68, which is secured to upstanding brackets 69 on the side members 20, and serves as a means for holding the side members in properly spaced relation, said bar having a scale 70 thereon that is marked in inches and fractions of an inch in a customary manner.

Mounted between the side members 20 and secured thereto, and serving to hold said side members in properly spaced relation, is a bar 71, which is rectangular in cross section. Said bar 71 may be provided with threaded ends extending through the side frame members 20, with which the nuts 72 cooperate to clamp the bar 71 in position. Preferably, bosses 73 are provided on the side frame members to reinforce the same at the point of securement of the cross bar 71. A pair of rods, or fixed shafts, 74 and 75 also project inwardly from each of the side plates 20 on opposite sides of the mounting for the bar 71.

A lever 76 is mounted pivotally on each of the shafts, or rods, 74, each of said levers having a pointer 77 mounted thereon, which cooperates with the scale 70 in an obvious manner. Each lever also has a curved upper end portion 78, which has a thumb screw 79 screw-threadedly mounted therein, said thumb screws 79 engaging at the lower ends thereof with the rod-like members 75 and serving to hold the levers 76 in adjusted position along the rods 74 and 75, and also serving to exert the desired pressure through the levers on the cutter members cooperating with the roll 50. Said cutter members are rotatably mounted in bearings in enlargements 80 in the bifurcated lower ends of the levers 76, said cutters 81 being provided with beveled edges so as to provide cutting edges, which are not knife edges, being somewhat blunt, but sufficiently sharp to cut the web of paper 49 in cooperation with the hardened roller 50. It will be obvious that the cutters 81, the cutting edges of which align exactly with the tapered ends of the indicator members 77, can be adjusted to any desired position within the limits provided by means of the rod-like members 74 and 75 to trim the edges of the roll of paper as may be found desirable.

While in the ordinary use of wall paper it is only necessary to trim the edges, it is highly desirable, in order to obtain a neat job at door and window openings, to cut the web of paper longitudinally to less width than the normal width of paper between the marginal edges thereof after trimming, and sometimes it is desirable to cut a strip off one side of the web and sometimes off the other side of the web, or even both sides thereof. By providing the scale and providing adjustable cutter members that cooperate with the scale, widths of paper of any desired character can be cut on my machine, and in order to provide such adjustable cutter members the bar 71 is provided, said bar 71 being provided to obtain an adjustable mounting for intermediate cutter members that can be moved into position to cut the desired width or strip of paper that may be necessary for a narrower space than the normal width of a roll of paper, and which can be adjusted so as to be entirely out of cutting position when only the edges are to be trimmed, and which can be readily and quickly adjusted to position lengthwise of the scale and into and out of cutting position.

The mounting of each of these intermediate cutter members on the transverse bar 71 comprises a mounting member, such as shown in Fig. 5, having a body portion 82, which has a rectangular opening 83 therethrough for receiving the square rod 71. Said member 82 has a bracket portion 86 extending therefrom terminating in a stop finger 87 extending substantially parallel to the opening 83, and also has a reduced hub portion 88 extending from one side of the body portion 82. Said reduced hub portion 88 receives the tubular body portion 89 of a lever having an arm 90, having a cutter member 91 mounted in suitable bearings in the bifurcated lower end of said arm 90, and having an arm 92 extending therefrom in substantially the opposite direction to the arm 90, which is adapted to engage with the stop member 87 to hold the cutter member 91 in elevated position, as shown in Fig. 1, and as shown for one of said cutter members in Fig. 3. When it is desired to engage a cutter member with the web of paper 49 it is only necessary to slide the tubular portion 89 thereof lengthwise on the hub portion 88, so as to disengage the arm 92 projecting rearwardly therefrom, from the stop 87, and then replace the lever in position by sliding in the opposite direction on the hub portion with the rearwardly extending arm 92 thereof above the stop 87. The arm 92 has a thumb screw 84 screw-threadedly mounted therein, which can then be adjusted to engage the upper face of the stop 87 to cause the cutter member 91 to engage the web of paper with the desired pressure. Each cutter member is provided with an indicator, or pointer member, 93 cooperating with the scale 70, to indicate the position of said cutter member, said pointer, or indicator member, aligning with the cutting edge of the cutter member 91. Said thumb screws 84 also serve to hold the cutter members in adjusted position on the bar 71.

Pivotally mounted on the shaft 75 are links 94, which pivotally carry a rod-like member 95 having sleeves 97 rotatably mounted thereon, on which the rollers 96 are mounted. Mounted in fixed position on the links 94 are the arms or links 98, said links 94 and 98 together forming a bell crank lever. Pivotally mounted in the outer ends of the arms 98 is a rod-like member 99, which is located above the rod-like member 95. A bracket member having a hub portion 100 is mounted on the rod-like member 71, being adapted to be fixed in position thereon by means of a set screw. Said bracket has an arm 102 extending therefrom, on which is pivotally mounted a lever 103 having a handle portion 104 and a hook-like end portion 105, which is slotted to receive the rod 99 having a plurality of recesses in the upper side of the slot for adjustably receiving the rod-like member 99. It will be obvious that by adjustment of the handle member 104 the lever 103 can be adjusted to vary the position of the rod-like member 99, and thus the position of the rollers 96 and thus the pressure of the rollers on the web 49, pressing said web against the paste roller 51. The pressure of the rollers 96 can be completely relieved and the same lifted off the web of paper so as to space the same from the paste roller to permit threading of the web of paper into the machine by the opposite movement of the handle member 104, which will cause the rod-like member 99 to drop to the bottom of the slot and be lifted by means of the hook-like end portion 105 of the member 103, to thus move the rollers 96 away from the paste roller 51. A post 101 is provided on the member 100, with which a loop-like member 101' on the handle is adapted to engage to hold the lever in such position that the rollers 96 will be elevated.

The paste roller 51 is mounted for rotation within the paste receptacle, or pan, 106, which, preferably, has a sloping bottom so as to place the lowest portion 107 thereof substantially below the axis of rotation of the paste roller 51. Said paste roller is mounted to be removable as

a unit with the pan, said pan being, preferably, provided with side walls 108, to which supporting members 109 are secured in any suitable manner in fluid-tight relation, as by means of the bolts 110 and nuts 111. Said supporting members 109 are provided with bearing portions 112 for the shaft portions 113 provided on the roller 51, said roller being, preferably, hollow and having end walls 114 on which the shaft portions 113 are fixed. The shaft 113 can extend entirely through the roller if desired, or stub shafts can be utilized. Fixed on one of said shaft portions 113 is a pinion 115, said pinion being removable along with the roller and the shaft and the pan, so that the entire unit can be removed for cleaning paste off the same, when this is desired, the unit made up of the roller, paste pan and driving means therefor being readily transportable into position under a water faucet for washing the same off when this is desired.

The supporting member 109 is also provided with upstanding supporting members, or brackets, 116 and 117 thereon. Said brackets 116 support the bar 118 for removing excess paste from the surface of the paste roller 51, while the brackets 117 support the cutter bar 52 having a slot 119 therein, with which the usual hand cutter tool cooperates to cut off the length of paper at the point where the same overlies said slot 119. The pan member 107 rests at one end thereof and along its inclined bottom on the top surface of a bracket 120 provided on each side frame 20 of the machine. Any suitable means for detachably fastening the pan in position, so that it and the parts carried thereby will not move out of position, may be provided, such as the ears 121 thereon adapted to receive a thumb screw 122 engaging a suitable threaded opening in each side frame member 20.

Means for driving the paste roller is provided comprising a pinion 123 rotatably mounted on a stub shaft 124, which is rotatably mounted in a suitable bearing 125 in one of the side frame members 20, and which is provided with a collar 126 pinned thereto for holding the same in position in the bearing. Said pinion 123 is located toward the end of the machine carrying the roll of paper from the pinion 115, so that upon pushing the pan 107 into position these pinions will mesh. A bearing 127 is also provided in the side member 120 for a shaft 128, which has the pinion 129 fixed thereto, meshing with the pinion 123, and which has a sprocket wheel 130 fixed thereto, over which the sprocket chain 131 operates. Said shaft also has pinned thereto the hub portion 132 of a crank 133 having a handle 134 thereon. Thus the shaft 128, and through the pinions 129, 123 and 115, the paste roller 51, are rotated by rotating the crank by means of the handle member 134.

The sprocket chain 131 also operates over a sprocket wheel 135, which is mounted on the reduced end portion of the roller 50 to rotate with said roller, said reduced end portion being indicated by the numeral 136 and having a ratchet wheel 137 mounted thereon, which is shown more clearly in Fig. 9. Both the roller 50 and the paste applying roller 51 rotate in a clockwise direction as viewed in Fig. 3, and the ratchet teeth are so positioned on the ratchet wheel 137 that such clockwise rotation of the shaft portion 136 and thus of the roller 50 will be prevented by engagement of the tooth, or pawl, 138 with said ratchet teeth. The pawl 138 is carried by the enlarged body portion 139 of a lever 140, said pawl, or tooth, being, preferably, of hardened steel and being detachably secured to said body portion 139 by a fastening element 141. The lever 140 is urged toward a grooved stop bracket 142 provided on the frame member 20 by means of a coil spring, or similar resilient means, 143 engaging the headed fastening element 144 on the body portion 139 of the lever and having the other end thereof secured to the frame 20 in any suitable manner as by a bolt 85. The lever is mounted on a pivot 145 and is provided with a handle member 146 for lifting the same against the tension of the spring 143 when this is desired. Said lever 140 is provided with a downturned end reduced portion 147 forming a finger, the purpose of which will be described below.

Screw-threadedly mounted on the thread 48 on the drum 44 is an internally threaded ring member 148, which carries a bracket 149, upon which a block 150 is mounted, having an opening 151 therein adapted to receive the depending finger portion 147 on the lever 140. A scale 152 is slidably mounted in a corresponding recess 153 in the block 150, and an adjusting screw 154 engages said scale 152 so that the zero point on said scale can be accurately aligned with the center of the opening 151. The depending finger 147 also cooperates with the scale 152, which is provided with a set screw 155 mounted in the slot 156 for fixing the same in adjusted position, and the scale provided on the scale member 152 is calibrated in feet.

The drum 44 is, of course, rotated by means of the shaft 36, carrying the rollers 37 and the ratio of the gears 38 and 40 is such that each time that the rollers 37 rotate sufficiently for a foot of length of the web 49 to pass thereover, the drum 44 will make one turn and accordingly the marks on the scale indicate one turn of the drum, which equals one foot of length of the web 49 passed over the measuring rollers. A scale is also provided on the face of a ring 175 mounted on brackets 176 (see Figs. 1 and 2) with which a pointer 157 mounted on the drum 44 cooperates, said scale dividing the ring 175 in twelve parts to thus indicate one-twelfth of a turn of the drum 44, or inches of length of the web 49 passing over the measuring rollers 37.

In order to cut off and apply paste to a desired length of paper from the web 49, the web is cut off at a suitable matching mark, by running a cutter transversely thereof over the groove 119 on the cutter bar 52. These matching marks are dots or similar markings provided to indicate the proper places to cut off the paper, printed thereon, so as to enable the paper hanger to match the pattern on adjoining strips of paper. With the paper in this position the thumb screw 45 is turned to release the drum 44 from the sleeve 18. The lever 140 is then lifted to disengage the finger 147 from the opening 151 and the drum 44 is rotated on the sleeve 18 until the desired length of paper to be cut off is indicated on either the scale 152, or the scale 152 and the scale on the member 175, if a different amount than an even foot is to be cut off. The exact alignment of the finger 147 with a mark on the scale 152 is possible due to the provision of an indicator 158 on the finger 147. However, the scale on the ring 175 is so calibrated that when the "12" mark on said scale is in alignment with the pointer 157, the indicating member 158 will be exactly aligned with a foot mark on the scale 152.

After the proper adjustment of the scale has been obtained, the thumb screw 45 is tightened

to secure the drum 44 to the sleeve 18 to rotate in unison therewith. Then, as the paper is drawn through the machine by rotation of the crank 133, the drum will be rotated one turn for each foot of paper passing over the rollers 37 and, of course, over the groove or slot 119 in the cutter bar 52. The finger 147 will ride along on the surface of the scale member 152 adjacent the scale provided thereon until the shoulder 159 thereon is reached, whereupon said finger 147 will drop off the scale member 152 and into the opening 151. When this takes place the tooth, or pawl, 138 constituting a stop member, will engage between two teeth of the ratchet wheel 137, halting rotation of the shaft 136 and of the sprocket wheel 135, thus stopping rotation of the sprocket wheel 130 and the paste roller 51 also. The web 49 is now ready to be again cut off by means of the usual hand tool run over the cutter bar 52 over the slot 119. After this has been done the paper is again ready for measuring, if the proper match mark is in position; and if not, then the finger 147 can be lifted out of the opening 151 and the mechanism rotated sufficiently by means of the crank to bring the match mark in proper position. After this has been done the drum can be released from the shaft 41 and the measuring mechanism controlling the stop reset in the manner previously described.

After the web of paper 49 passes over the cutter bar 52 it passes over the curved surface of the guide member 53, which constitutes the tubular portion of one of the members for connecting the side frame members 20 to each other, a rod-like member 21 extending through the same. Said member 53 is located immediately above the table 160, the plate side of the web 49 being downward as it approaches the table 160, which will cause the same to adhere to the table and fold thereon in a well known manner. Said table 160 is suspended from the tubular member 53 by means of brackets 161 having hook-like portions 162 extending around the tubular member 53. Fingers 180 are provided to guide the web 49 from the roll 51 to the cutter bar 52.

The machine as above described, is suitable for cutting widths of wall paper of any desired dimensions and for trimming the edges of rolls of paper, but inasmuch as most wall paper borders are printed four to the roll, that is, four borders arranged longitudinally beside each other lengthwise of the length of paper, additional cutter members are necessary to cut out all the borders at the same time. In order to provide for such an arrangement, the machine may be modified as shown in Figs. 12 and 13, in which a portion of the paste roller 51 is shown and the backing roller 50 with the web of paper 49 in position thereon. The cutter members for trimming the edges are mounted on the members 76 in the same manner as previously described, and the intermediate cutter members on the levers 90 are provided on the square bar 71 in the same manner as previously described.

However, instead of providing the scale member 70 on the bar 68 shown in Fig. 1, a rectangular bar 68', serving both as a mounting for the additional cutter members and as a scale, may be provided, the same being quick detachably mounted in upward extensions 163 on the side frame members 20'. Any suitable form of quick detachable mounting can be used, a slot 164 being shown for receiving the member 68', and thumb screws 165 being provided for securing the same in position in the slots 164. The cutter members and the mountings therefor are similar to those described in connection with the intermediate cutters, comprising a mounting member 82', similar to the member 82, upon which the lever 166 is rotatably mounted, the same having a rearward extension 167 having a thumb screw 84' mounted therein engaging with the finger 87' for holding the cutter members 168 in adjusted position and in cutting engagement with paper in a similar manner to the thumb screw 84, said extension 167 engaging under the finger 87' when it is desired to hold said cutters out of cutting position. The lever 166 has a bifurcated lower end portion, in which the cutter member 168 is rotatably mounted, said cutter 168 being similar to the cutter 91 previously described.

In cutting borders, preferably, four of the cutters 166 are mounted on the rod-like member 68', in such positions as to align with the edge portions of the border where cutting is to take place. These, together with the edge trimming cutters 81 and the intermediate cutters 91, can be so arranged as to cut the four borders out of the roll of paper at the same time. It is preferred, instead of merely elevating the cutters 168 out of cutting position, to remove these entirely when the machine is not being used for cutting borders. This can be done by unscrewing the clamping screws 165, removing the bar 68' and sliding the cutters and the mountings therefor off the bar and then replacing the bar 68', using it merely as a scale. The cutter members 168 do not have to be provided with pointers to operate on the scale for cutting borders, as the borders can be cut without the use of a scale, but if desired, pointers can be provided on the body portions of these cutter members to cooperate with the scale on the member 68'. The carriers 90 and 76 for the cutter members are, however, provided with pointers similar to those previously described, but of different shape and length to cooperate with the scale on the member 68', which will be in a different position than the scale 70, these being indicated by the numerals 77' and 93' and corresponding in function to the pointers 77 and 93.

Referring to Fig. 2 it will be noted that the table member 160 can be swung on the hook members 162, so that the brackets 161 will extend upwardly instead of downwardly from the tubular member 53 with the table in an inverted position, serving as a cover for the mechanism, so as to make the same more compact for carrying purposes. A handle, or handles, of suitable character (not shown) may be provided on the bottom side of the member 160 for convenience in carrying the machine, the legs 25 being, of course, removed when the machine is to be disassembled for carrying purposes. In order to make a carrying means out of the table 160, a pair of brackets 169 are provided having snap hooks 170 thereon for engagement around the shaft 29 when the wall paper roll 34 has been removed therefrom.

The size of the sprockets 130 and 135 and the gears of the train comprising the gears 129, 123 and 115, is, preferably, such that the paste roller 51 will have a very slightly greater surface speed than the backing roller 50 for the cutting mechanism, thus keeping the web 49 tensioned even if some slight slippage occurs between the paste covered surface of the roller 51 and the surface of the web of paper 49. The cutter members 81 are freely rotatably mounted in the levers carrying the same, the mounting for all said rollers

being, preferably, on ball bearings, as shown in Fig. 14 for the rotating cutter member 81, said ball bearings being indicated by the numeral 171 in Fig. 14.

What I claim is:

1. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a positively driven paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll, and means for guiding the web of paper extending from said roll to said paste roller, said cutting mechanism comprising a positively driven, smooth faced backing roller positioned below said guiding means and the portion of said paste roller engaged by said web, and freely rotatable cutter members engaging said web of paper on the face thereof opposite said backing roller to hold said web in firm contact with the upper side of said backing roller at said cutter members.

2. In a wall paper cutting and pasting machine, a frame means for rotatably mounting a roll of wall paper therein, a paste receptacle removable from said frame, a positively driven paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a smooth surfaced backing roller, with which one face of said web of paper is adapted to engage, and freely rotatable cutter members engaging said paper on the face opposite that in engagement with said backing roller, to hold the web of paper extending from said roll to said paste roller in firm contact with the upper side of said backing roller at said cutter members, said paste roller being mounted on said receptacle and being removable from said machine as a unit with said receptacle, and means for positively driving said paste roller including driving means carried by said receptacle, and driving means carried by said frame engaging with the driving means on said receptacle upon said receptacle being placed in operative position on said frame.

3. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, means for removing excess paste from said roller, a cutter bar adjacent said roller, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a backing roller with which one face of said web of paper is adapted to engage, and rotatable cutter members engaging said paper on the face opposite that in engagement with said backing roller, to hold the web of paper extending from said roll to said paste roller in firm contact with the upper side of said backing roller at said cutting members, and means for detachably securing said web holding means in position, said paste roller, receptacle, cutter bar and means for removing excess paste being detachable from said machine as a unit.

4. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism comprising a backing roller, with which one face of said web of paper is adapted to engage, and rotatable cutter members engaging said paper on the face opposite that in engagement with said backing roller, to hold the web of paper extending from said roll to said paste roller in firm contact with the upper side of said backing roller at said cutter members, rotatable means driven by the longitudinal movement of the web of paper thereover in its movement through said machine for measuring the length of paper to have paste applied thereto, means for rotating the paste roller, and stop means for said paste roller rotating means actuated by said measuring means.

5. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism comprising a backing roller over which the web of paper from said roll to said paste roller extends, and rotatable cutter members engaging said paper on the face thereof opposite that toward said backing roller, said cutter members holding the web of paper extending from said roll to said paste roller in firm contact with the upper side of said backing roller at spaced points along the same, means actuated solely by the movement of the web of paper through said machine for measuring the length of paper to have paste applied thereto, means for rotating the paste roller, stop means for said paste roller rotating means actuated by said measuring means, and means for adjusting said stop means independent of the means for rotating said roller relative to said measuring means.

6. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll comprising margin trimming cutters and cutters adjustable to any position between said margin trimming cutters, said last mentioned cutters having means for holding the same out of cutting position, each of said cutters comprising a freely rotatable cutter blade, a backing roller, the web of paper extending from said roll to said paste roller extending over said backing roller and being engaged by said blades at said backing roller, adjustable means cooperating with said paste roller to hold said web in contact therewith, a crank positively connected with said paste roller to rotate the same to pull said web through said machine, and means for positively rotating said backing roller by means of said crank.

7. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism comprising a backing roller, the web of paper extending from said roll to said paste roller over the upper side of said backing roller, and rotatable cutter members engaging said paper on the face opposite that in engagement with said backing roller to hold said paper in firm contact with said backing roller at spaced points along the same, rotatable means driven by the longitudinal movement of the web of paper through said machine for measuring the length of paper to have paste applied thereto, means for holding said web in engagement with said rotatable measuring means detachably mounted on said machine, means for rotating the paste roller, and stop means for said paste roller rotating means actuated by said measuring means.

8. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism

comprising a backing roller, the web of paper extending from said roll to said paste roller over the upper side of said backing roller in firm contact therewith and rotatable cutter members engaging said paper on the face opposite that in engagement with said backing roller, means actuated by the movement of the web of paper through said machine for measuring the length of paper to have paste applied thereto, means for holding said web in engagement with said measuring means comprising a pair of bars deflecting said web downwardly on opposite sides of said measuring means, said bars having a common mounting, said mounting and bars being detachable from said machine as a unit, means for rotating the paste roller, and stop means for said paste roller rotating means actuated by said measuring means.

9. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a hard smooth roller, means for rotating said rollers, said means rotating said paste roller at a slightly greater surface speed than said hard smooth roller, the web of paper from said roll extending over said hard roller to said paste roller, and freely rotating cutter wheels engaging said web to cut said paper without severing the same completely in cooperation with said hard smooth roller.

10. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a hard smooth roller, a bar rectangular in cross section mounted above and out of vertical alignment with said last mentioned roller, a scale parallel to and adjacent said bar, carriers slidably mounted on said bar, arms pivotally mounted on said carriers, rotatable cutter blades on the extremities of said arms, said blades being movable toward said smooth roller, and means on said carriers for holding said arms in retracted position with said blades out of cooperative relation to said hard smooth roller.

11. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, adjustable means for holding the paper in engagement with said paste roller, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a hard smooth roller, a bar rectangular in cross section mounted above and out of vertical alignment with said last mentioned roller, a scale parallel to and adjacent said bar, carriers slidably mounted on said bar, arms pivotally mounted on said carriers, rotatable cutter blades on the extremities of said arms, said blades being movable toward said smooth roller, means on said carriers for holding said arms in retracted position with said blades out of cooperative relation to said hard smooth roller, and means on said bar for adjusting said adjustable holding means relative to said paste roller.

12. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last-mentioned means comprising a threaded drum, means for driving said drum in positive proportion to the lineal movement of a web of paper from said roll, a threaded ring having screw-threaded engagement with said drum, means for holding said ring against rotation, a stop member for said means for rotating said rollers and means carried by said ring determining the position of said stop member.

13. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last-mentioned means comprising a threaded drum, means for driving said drum in positive proportion to the lineal movement of a web of paper from said roll, a threaded ring having screw-threaded engagement with said drum, means for holding said ring against rotation, a stop member for said means for rotating said rollers and means carried by said ring determining the position of said stop member, comprising means for holding said stop member out of holding position terminating at a predetermined point to permit said stop member to move into holding position.

14. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last mentioned means comprising a threaded drum, means for driving said drum in positive proportion to the lineal movement of a web of paper from said roll, a threaded ring having screw-threaded engagement with said drum, means for holding said ring against rotation, a stop member for said means for rotating said rolls and means carried by said ring determining the position of said stop member, comprising means for holding said stop member out of holding position terminating at a predetermined point to permit said stop member to move into holding position, said means having a scale thereon and said stop member having means thereon to indicate the position of said stop member relative to said scale.

15. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last mentioned means comprising a threaded drum, means for driving said drum in positive proportion to the lineal movement of a web of paper from said roll, a threaded ring having screw-threaded engagement with said drum, means for holding said ring against rotation, a stop member for said means for rotating said rolls and means carried by said ring determining the position of said stop member, comprising means for holding said stop member out of holding position terminating at a predetermined point to permit said stop member to move into holding position, said means being adjustable relative to said ring and having a scale thereon and said stop member having means thereon to indicate the position of said stop member relative to said scale.

16. In a machine of the character described, means for rotatably mounting a roll of wall pa-

per, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison with said paste roller having a slightly higher surface speed than said other roller, and means controlling the operation of said last mentioned means comprising a pivoted stop member, a toothed member fixed to rotate with the means for rotating said rollers, said stop member having means thereon engageable with the teeth of said toothed member to hold said means for rotating the rollers stationary, and means driven in proportion to the lineal movement of a web of paper from said roll for engaging said stop member with said toothed member after a predetermined length of said web has passed through said machine.

17. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last mentioned means comprising a pivoted stop member, a toothed member fixed to rotate with the means for rotating said rollers, said stop member having means thereon engageable with the teeth of said toothed member to hold said means for rotating the rollers stationary, and means driven in proportion to the lineal movement of a web of paper from said roll for engaging said stop member with said toothed member after a predetermined length of said web has passed through said machine, said last mentioned means being adjustable to determine the length of said web to be passed through said machine before rotation of said means for rotating the rollers is halted.

18. In a machine of the character described, means for rotatably mounting a roll of wall paper, a paste roller, cutting mechanism between said mounting and roller comprising a driven roller, means for rotating said rollers in unison, and means controlling the operation of said last mentioned means comprising a threaded drum, means for driving said drum in positive proportion to the lineal movement of a web of paper from said roll, a threaded ring having screw-threaded engagement with said drum, means for holding said ring against rotation, a stop member for said means for rotating said rollers, means carried by said ring determining the position of said stop member, and a detachable connection between said drum and the driving means therefor permitting rotation of said drum independently of said driving means to adjust the position of said ring relative to said drum.

19. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism mounted between said paste roller and said mounting for said roll, comprising a backing roller over which the web of paper from said roll to said paste roller extends, and rotatable cutter members engaging said paper on the face thereof opposite that toward said backing roller, said cutter members holding the web of paper extending from said roll to said paste roller in firm contact with the upper side of said backing roller at spaced points along the same, and a table for receiving said web of paper from said paste roller by gravity for folding said web, said table being mounted to swing about an axis adjacent said paste roller and having means spaced from said mounting for detachably securing the same to said roll mounting in an alternative position over the top of said machine, to suspend said machine from said table.

20. In a wall paper cutting and pasting machine, means for rotatably mounting a roll of wall paper therein, a paste receptacle, a paste roller extending into said receptacle, cutting mechanism mounting between said paste roller and said mounting for said roll comprising margin trimming cutters and cutters adjustable to any position between said margin trimming cutters, said last mentioned cutters comprising cutters having means for holding the same out of cutting position, and cutters detachably mounted on said machine independently of said other cutters, each of said cutters comprising a rotatable cutter blade, a backing roller, the web of paper extending from said roll to said paste roller extending over said backing roller and being engaged by said blades at said backing roller, and means for rotating said paste roller to pull said web through said machine.

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