Aug. 12, 1941. C. M. McCARTHY 2,252,086

CUTTING AND MEASURING APPARATUS FOR OILCLOTH OR SIMILAR MATERIAL

Filed April 18, 1940 3 Sheets-Sheet 1

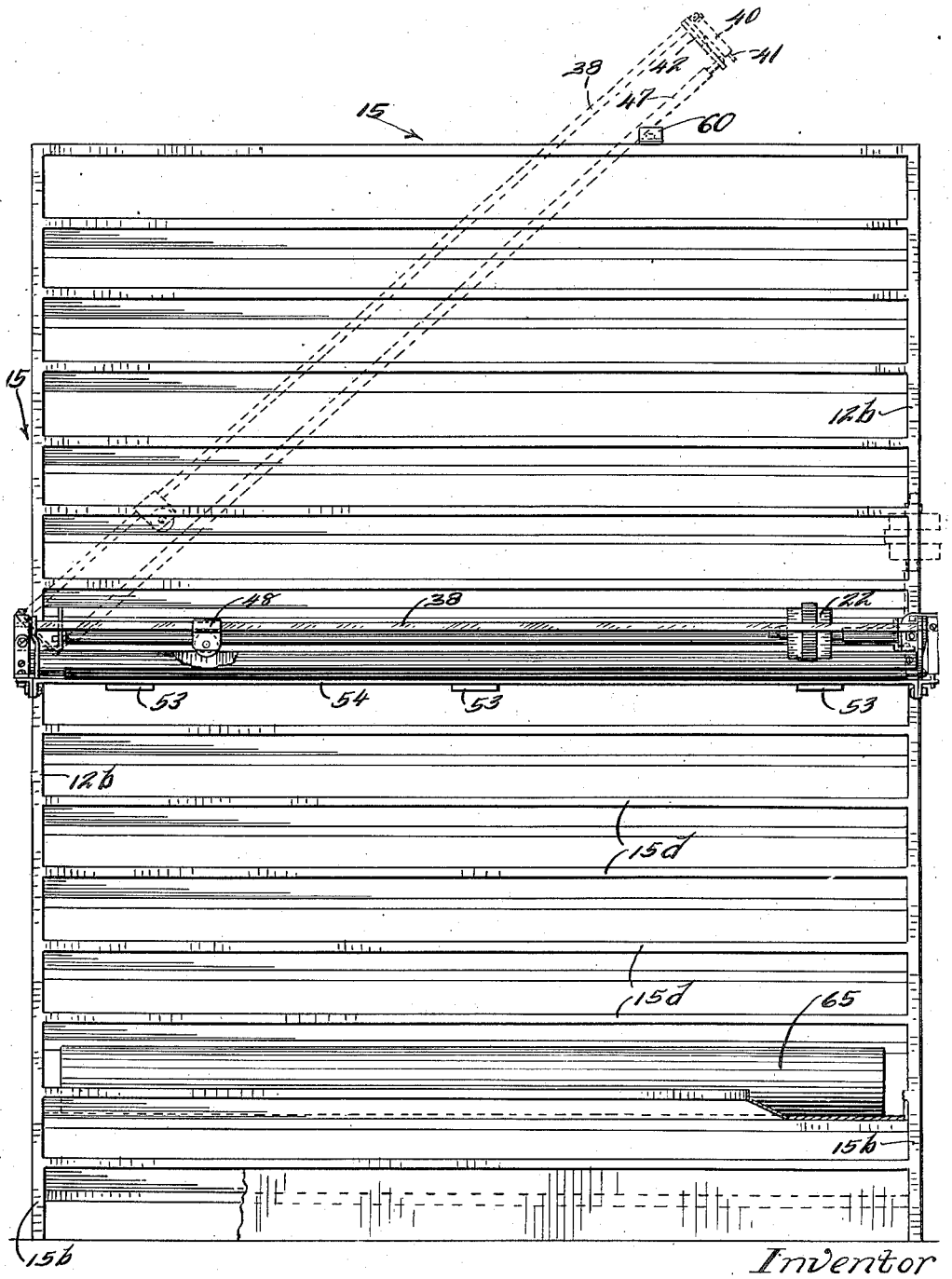


Fig. 1.

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Filed April 18, 1940 3 Sheets-Sheet 2

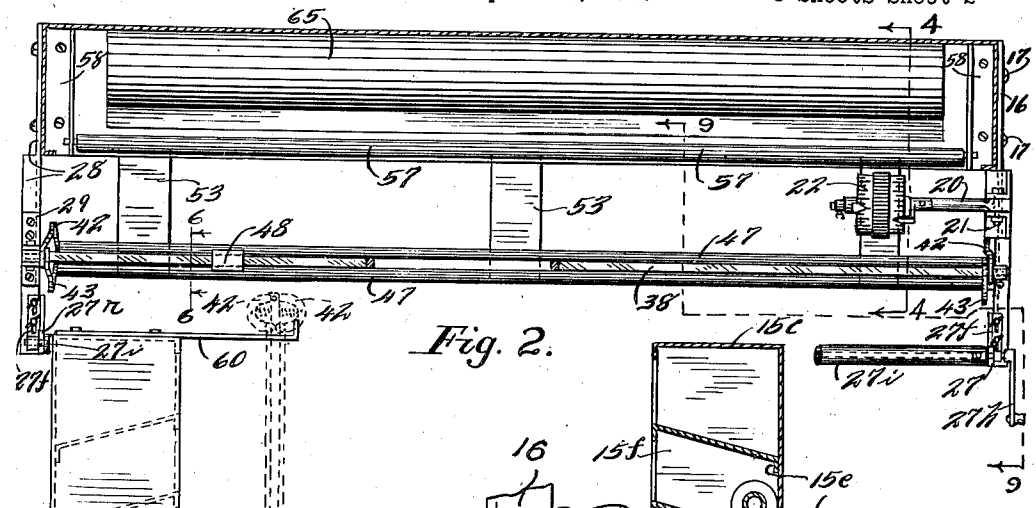


Fig. 2.

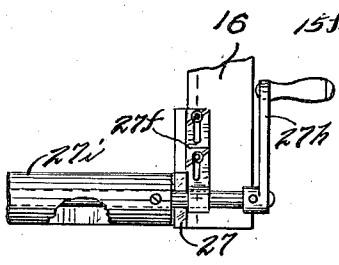


Fig. 13.

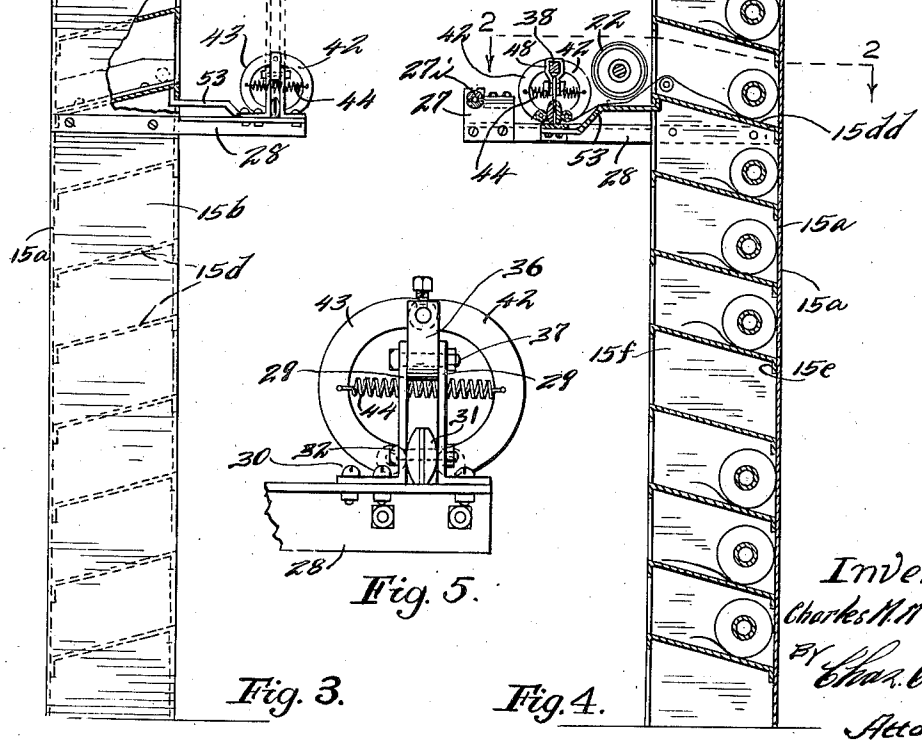


Fig. 3.

Fig. 4.

Fig. 5.

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CUTTING AND MEASURING APPARATUS FOR OILCLOTH OR SIMILAR MATERIAL

Filed April 18, 1940 3 Sheets-Sheet 3

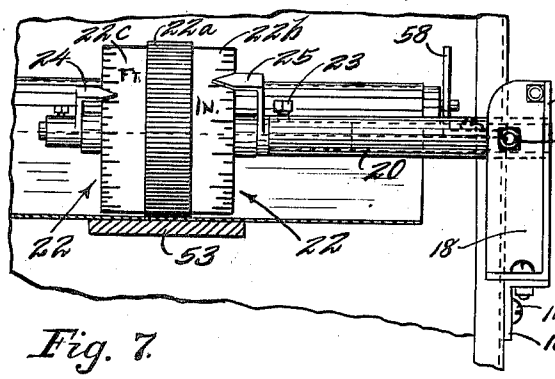


Fig. 7.

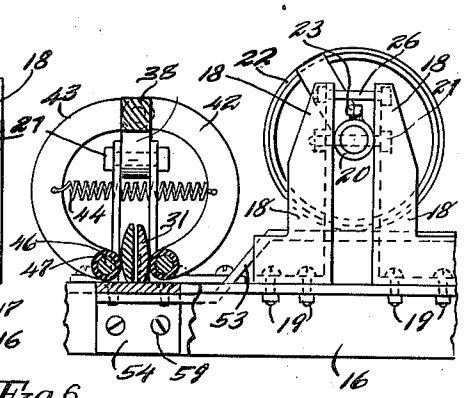


Fig. 6.

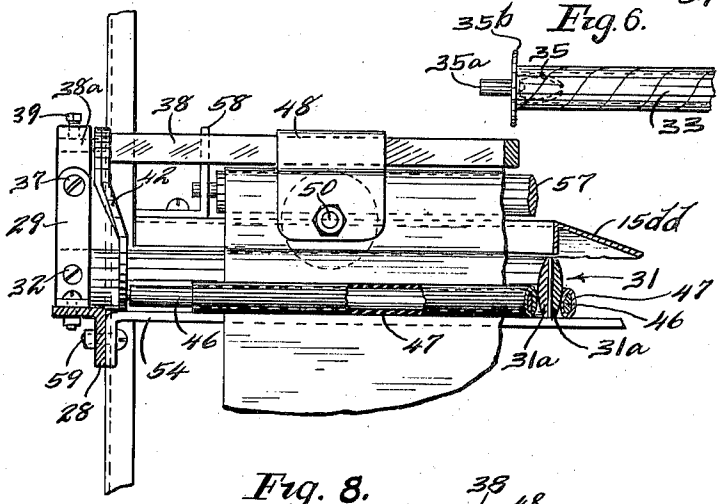


Fig. 8.

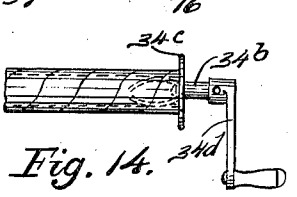


Fig. 14.

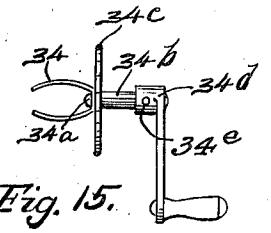


Fig. 15.

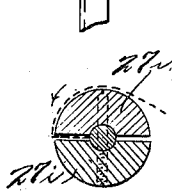


Fig. 12.

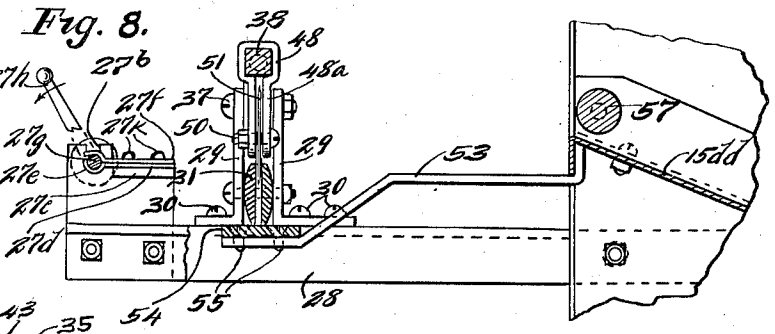


Fig. 9.

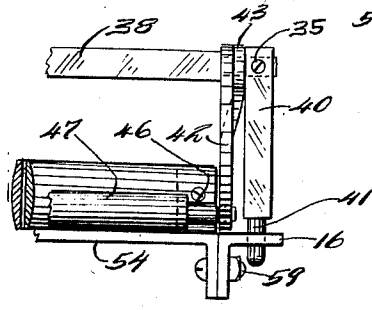


Fig. 10.

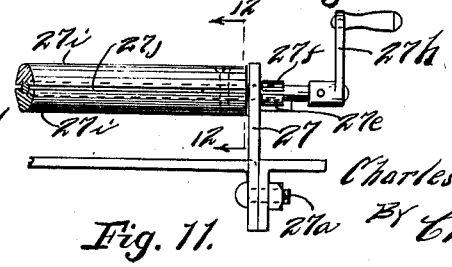


Fig. 11.

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2,252,086

UNITED STATES PATENT OFFICE

2,252,086

CUTTING AND MEASURING APPARATUS FOR OILCLOTH OR SIMILAR MATERIAL

Charles M. McCarthy, Minneapolis, Minn.

Application April 18, 1940, Serial No. 330,332

13 Claims. (Cl. 164—77)

This invention relates to a device for handling material such as oilcloth which is usually carried in rolls. Such material in stores is often carried in a cabinet having compartments for the various rolls. It has heretofore been difficult to dispense the material from the rolls to measure it and to sever the desired piece so that the severing cut extends perpendicular to the longitudinal edges thereof.

It is an object of this invention to provide a simple and efficient means by the use of which the cloth may be drawn from the roll, measured, held in cutting position and accurately cut across the width thereof.

It is another object of the invention to provide a simple and efficient means comprising a member over which the cloth may be positioned and resilient means for engaging the cloth at opposite sides of said member and holding it taut over the top of said member together with a cutter movable longitudinally of said member to cut the cloth through the taut portion thereof.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to similar parts throughout the several views and in which:

Fig. 1 is a view in front elevation of a cabinet having the device applied thereto, a portion of the device being shown in a different position in dotted lines;

Fig. 2 is a horizontal section taken substantially on line 2—2 of Fig. 4 as indicated by the arrows;

Fig. 3 is a view in end elevation of the device shown in Fig. 1, a portion being broken away and another portion shown in vertical section;

Fig. 4 is a vertical section taken substantially on line 4—4 of Fig. 2 as indicated by the arrows;

Fig. 5 is a view in end elevation of a portion of the device as seen from the left of Fig. 1;

Fig. 6 is a view in end elevation as seen from the right of Fig. 1, a portion being shown in vertical section substantially on line 6—6 of Fig. 2 as indicated by the arrows;

Fig. 7 is a partial view in front elevation of the parts shown in Fig. 1;

Fig. 8 is a partial view in front elevation of the parts shown at the left of Fig. 1, some parts being broken away and others shown in vertical section;

Fig. 9 is a vertical section taken on line 9—9 of Fig. 2 as indicated by the arrows;

Fig. 10 is a partial view in front elevation of some parts seen at the right of Fig. 1;

Fig. 11 is a partial view in front elevation of parts shown at the left of Fig. 9;

Fig. 12 is a vertical section taken on line 12—12 of Fig. 11 as indicated by the arrows;

Fig. 13 is a partial plan view of parts at the right hand end of Fig. 2 shown on an enlarged scale;

Fig. 14 is a view in front elevation of a core used with the device; and

Fig. 15 is a view of a crank portion used with the core shown in Fig. 14.

Referring to the drawings, a cabinet 15 is shown having a rear wall or side 15*a* end walls 15*b* and a top 15*c*. Shelves 15*d* extend between the end portions 15*b*, the same inclining downwardly toward rear wall 15*a* and having short vertical flanges 15*e* at their front and rear ends. Said partitions 15*d* form series of compartments 15*f* in cabinet 15. A member 16 illustrated as an angle iron extends along one end of cabinet 15 being secured by spaced headed screws 17. Sail member 16 forms the support for a pair of brackets 18 of angular form which are secured thereto by the headed and nutted screws 19. Brackets 18 have vertically extending spaced parallel portions between which is pivoted one end of a bar 20. While this bar might be of various forms, in the embodiment of the invention illustrated it is shown as formed of a tube and the end disposed between brackets 18 is pivoted thereto by a headed and nutted bolt 21. A measuring wheel 22 has a spindle received in one end of member 20 and held therein by a set screw 23. Measuring wheel 22 has a knurled central portion 22*a* and side portions 22*b* and 22*c* of smaller diameter than portion 22*a*, said latter portions being graduated to register in inches and feet respectively. Pointers 24 and 25 are positioned to cooperate with the graduations on portion 22*c* and 22*b* respectively. A headed and nutted bolt 26 extends between brackets 18 adjacent the top thereof, the same forming a rest for member 20 when the measuring roll 22 is in inoperative position as shown in dotted lines in Fig. 1. Member 16 is continued forwardly of the brackets 18 and the same has secured at its inner side by headed and nutted bolts 27*a* an upstanding bracket 27. Bracket 27 is of plate-like form and has at its top an open-ended slot 27*b*. Said bracket has a horizontal latch 27*c* thereon on which is mounted a plate 27*d* projecting forwardly and having a semi-cylindrical end 27*e* with its concave side

disposed upwardly. Another plate 27*f* is slidably connected to and overlies plate 27*d* and has a curved forward portion adapted to cooperate with portion 27*e* in receiving and holding in position a shaft 27*g* which also rests in the slot 27*b* of bracket 27. A crank handle 27*h* is secured to the outer end of shaft 27*g*. Shaft 27*g* has secured thereto segmental and substantially half-cylindrical members 27*i*, the same having their flat sides adjacent and separated by a narrow slot 27*j*. The members 27*i* thus form a slotted roll and this roll or roller extends from bracket 27 parallel to the front of cabinet 15 to another bracket 17*m* also supporting plates 27*d* and 27*f*, similar to those already described. Plates 27*d* and 27*f* are connected by sliding movement of plate 27*f* for headed screws 27*k*.

With the described construction the plates 27*f* may be moved rearwardly and the front curved portions thereof will move from over shaft 27*g*. Said shaft with the roller formed by portions 27*i* together with crank 27*h* may be lifted from bracket 27. When said parts are replaced shaft 27*g* will rest in brackets 27 and in portions 27*e* and plates 27*f* may be moved forwardly so that their forward curved portions move over shaft 27*g* somewhat resiliently.

In Fig. 14 a cylindrical core 33 is shown preferably made from cardboard. Core 33 has a cylindrical opening therethrough into which may be inserted the member 34 having oppositely disposed curved resilient arms connected at one end by a central portion which is secured by bolt or rivet 34*a* to a shaft 34*b* carrying a circular flange 34*c*. A crank 34*d* is secured at one end of shaft 34*b* in any suitable manner as by pin 34*e*. Another member 35 similar to member 34 is secured at its central portion to a shaft 35*a* also having a circular flange 35*b*. As shown in Fig. 14 when members 34 and 35 are inserted in the core 33 flanges 34*c* and 35*b* engage the ends of said core respectively.

A member 26 is secured to the opposite end of cabinet 15, the same being illustrated as formed of an angle bar having a horizontal flange at its front portion which projects beyond cabinet 15. Said flange forms a support for a pair of oppositely disposed brackets 29 of right angular form having horizontal portions secured to member 28 by headed screws 30. A member 31 is secured between the vertical portions of brackets 29 by a headed and nutted bolt 32. Member 31 extends between members 16 and 26 and is also secured to a bar 54 to be later described. Member 31 comprises oppositely disposed portions 31*a* having the general form of segments in vertical cross section, the chords of said segments being substantially vertical so that said portions have outer convex surfaces which are closer together at their tops and bottoms than at the intermediate or central portions of said member 31. A block 36 is pivoted between the upper ends of brackets 29 by a headed and nutted bolt 37, said block being bored to receive the reduced cylindrical end 38*a* of a bar 38 illustrated as of square from in cross section, said reduced end being secured by set screw 39. Bar 38 extends from block 36 to a similar block 40 which also receives one reduced end thereof which is held by a screw 35. Block 40 has a pin 41 extending downwardly therefrom adapted to be received in an aperture in the horizontal flange of member 16. Adjacent blocks 36 and 40, bar 38 has a cylindrical portion on which are journaled oppositely extending curved arms 42 and 43. Said arms are oppositely disposed with their concave sides facing each other and are connected by a tensile coiled spring 44. There are a pair of arms 42 and 43 at each end of bar 38. Said arms 42 and 43 at their free ends are bored to receive the reduced ends of rods 46 shown as of cylindrical form. Rods 46 have surrounding the same resilient or yielding sleeves 47 of rubber or similar material. Bar 38 has mounted thereon for sliding movement a yoke 48 made of plate-like material, the same extending across the top and along the sides of bar 38 and having depending spaced portions 48*a* between which extends a headed and nutted bolt 50 forming a journal for a cutting disk 51, the lower portion of which is adapted to travel between the portions 31*a* of member 31. Spaced bars 53 are secured to cabinet 15 and extend forwardly therefrom beneath and adjacent one of the shelves 15*dd*, said bars 53 supporting at their forward ends a bar 54 which extends longitudinally beneath member 31, said bar 54 having its ends downturned and secured to members 16 and 28 respectively by headed and nutted screws 59. Bar 54 is secured to the bars 53 by small countersunk screws 55. A roller 57 has reduced end portions journaled in brackets 58 secured to the ends of shelf 15*dd*. A rod-like bracket 60 is secured to cabinet 15 and to the top of the top wall 15*c* somewhat adjacent one end wall and projects forwardly substantially the same distance as member 16.

In operation, the rolls of oilcloth or similar material 65 will be disposed in compartments 15*f*, the same being shown as carried on tubular cores 66, said rolls resting against the rear wall 15*a*. When it is desired to dispense a piece of cloth, the particular roll will be placed on shelf 15*dd*. The free edge of the cloth 65*a* will be carried over roller 57 and the cloth drawn out over member 31. The measuring roll 22 which normally stands in position with rod 20 vertical as shown in dotted lines in Fig. 1, will now be lowered onto the cloth and will rest upon the same on the end bar 53. The operator will draw the cloth forward to the roller formed by the portions 27*i*. The edge of the cloth can then be inserted in one of the slots 27*j*. The operator can now turn crank 27*h* in a direction to wind the cloth on the roller formed by portions 27*i*. Care, of course, will be taken to see that the cloth is squared with the roller and with member 31 and this can easily be accomplished by observing the pattern on the cloth. The cloth will be moved forward by turning crank 27*h* and the cloth will move under the measuring roller 22 and turn the same so that the cloth will be accurately measured. When the desired amount of cloth has been drawn from the roll the operator will take hold of bar 38 and attached parts which normally rests on the bracket 60. Member 38 together with the rollers 47 will now be lowered and rolls 47 will move into engagement with the cloth pressing it down around the sides of member 31. The rolls 47 move down to the position shown in Fig. 6 so that they remain in this position, being below the widest part of member 31. The cloth is thus drawn taut over the top of member 31. The operator now takes hold of member 48 and moves the same with cutter 51 along member 38, cutter 51 moving between the portions of member 31 and severing the cloth. The cloth is cut with a nice clean

cut and as the cloth is held taut it is an easy operation to move the cutter along through it. It will be seen that member 31 can cooperate with cutter 51, thus acting as a cutter. The operator can now turn crank 27h to wind upon the short end of the cloth on the roller and the roller and cloth thereon together with shaft 27g can be lifted by moving members 27f rearwardly. The roll of cloth can now be slid endwise from the end of the roll formed by portions 27i opposite crank 27h. The cloth is thus nicely rolled and can be easily and quickly wrapped up to be dispensed. As the cut edge of the cloth is at the top and central portion of member 31 it will be measured from this point when it is again drawn out. The measuring roll 22 can thus be set on the cloth and again set for zero feet and zero inches. The bar 38 is accurately positioned in its holding function by the pin 41 entering the recess in member 16. After the material is severed the bar 38 and attached parts is again raised and placed on bracket 60.

It may be desired to furnish a core on which the dispensed cloth is wrapped. If this is the case such a core as shown in Fig. 14 is used. The members 34 and 35 can be placed in the core 33 as shown, shaft 27g with its attached roll and crank 27h may be removed from brackets 27 as already described and the core 33 with shaft 35a, shaft 34b and crank 34d can be placed in the brackets 27. Shafts 35a and 34b will be held by the portions 27e and the member 27f as already described. The operator will have to start the edge portion of the cloth about the core 33 to begin the winding operation by means of crank 34d. Otherwise the cloth is drawn out by operation of crank 34d just as has been described by operation of crank 27h. When the desired amount of cloth is wound on core 33, the same can be removed as already described after which members 34 and 35 will be removed from the core. The core 33 with the cloth wound thereon can then be wrapped and dispensed as desired.

From the above description it will be seen that I have provided a very simple and efficient device for measuring, holding and severing material which is of the soft or limp nature, such as oilcloth. The material can be easily and quickly drawn from the roll, accurately measured and quickly cut and dispensed. The operation of handling the cloth or dispensing the same is greatly simplified and the time required is greatly reduced. The operator can observe how the pattern of the cloth lines up with the rolls 47 or other longitudinally extending parts so that he can be sure that the cloth will be cut by cutter 51 at right angles to the edges thereof. The device is simple in construction and can be easily attached to cabinets or other holding devices where the material is kept. The device has been amply demonstrated in actual practice and found to be very successful and efficient.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention, which generally stated, consists in a device capable of carrying out the objects above set forth in the parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:

1. A device for handling oilcloth or similar material and cutting the same from a roll comprising a member extending along and adjacent said roll over which said cloth may be positioned said member having downwardly extending diverging side surfaces, a cutter constructed and arranged to move along said member and cooperate therewith to cut said cloth and means engaging said cloth and drawing it taut at either side of said member against said surfaces and holding the same taut over said member throughout the length thereof so that it can be effectively cut.

2. A device for handling and cutting oilcloth or similar material comprising a member having curved convex surfaces at opposite sides and over the top of which a layer of said cloth is adapted to be positioned, means resiliently engaging said cloth to press the same against said sides and holding said cloth taut across the top of said member and a cutter constructed and arranged to move along said member and cooperate therewith to cut said cloth whereby said cloth is cut through the taut portion thereof.

3. A device for handling and cutting oilcloth or similar material comprising a member having spaced portions of segmental form in transverse cross section with the chords of said segments substantially vertical and facing each other whereby the opposite surfaces of said member are convex and a pair of members extending substantially parallel to said member and movable over said convex surfaces to press a layer of cloth extending over said member against said convex surfaces and adapted to be held at the lower portions of said surfaces to hold said cloth taut over the top of said member and a cutter movable along said member and between said portions to cut said cloth through the taut portion thereof.

4. The structure set forth in claim 3, said last mentioned members comprising rollers resiliently held against said portions of said first mentioned member.

5. A device for handling material such as oilcloth carried in a roll and for cutting the same comprising a member adapted to extend longitudinally of said roll over which said cloth may extend, said member comprising spaced portions having convex outer surfaces which are closer together at the bottom of said member than at the intermediate portion thereof and a pair of resilient cylindrical members extending longitudinally of said member, means for yieldingly pressing said resilient members against said opposite sides so that they are retained in position at the bottom of said surfaces to hold said cloth taut over the top of said member and a disk cutter movable between said portions to cut said cloth at said taut portion.

6. A device adapted to be used with a cabinet having compartments for receiving rolls of oilcloth or similar material comprising a member extending in front of said compartments substantially parallel thereto having spaced portions with outer convexly curved surfaces, said surfaces being closer together at the bottom of said member than at the intermediate portion thereof, a second member movable toward and from said first mentioned member and having spaced resilient portions extending longitudinally of said member, means for yieldingly holding said portions adjacent each other so that they can be pressed down over a layer of cloth on said first mentioned member to press said cloth against said convex surfaces to hold the same taut at the top of said member and a cutter having a blade

movable between said portions to cut said cloth at the taut portion thereof.

7. The structure set forth in claim 6, said second member being hinged at one end adjacent one end of said first mentioned member and positioning means at the other end of said second member.

8. A device for handling oilcloth or similar material disposed on a roll in a rack or cabinet having in combination, frame members adjacent each end of said cabinet, a member extending in front of said cabinet over which said material may be drawn from said roll, means pivoted to one of said frame members comprising yielding members extending longitudinally in slightly spaced relation and resiliently connected, said means being movable to dispose said members at opposite sides of said first mentioned member to press said material thereagainst and hold the same taut over said member and a cutter movable along said member to cut said material.

9. The structure set forth in claim 8, and guiding and holding means at the opposite end of said means cooperating with said other frame member to position and hold said means.

10. A device for handling oilcloth or similar material disposed in a roll in a rack or cabinet having in combination, frame members adjacent each end of said cabinet, a member in front of said cabinet over which said material may be drawn from said roll, means pivoted on one of said frame members comprising a member having a pair of spaced curved arms at each end pivoted thereto, rods carried by the other ends of said arms and extending between said pairs, resilient means connecting said rods, said means being movable toward said member to dispose said rods at opposite sides thereof against said material to draw the same over said member and a cutter movable along said member to cut said material.

11. A device for handling oilcloth or similar material for cutting the same as it is taken from a roll comprising a member extending along and adjacent said roll over which the cloth may be positioned, said member having a top and sides and a clamping means comprising members arranged for resilient movement away from each other, movable downwardly over said cloth and member to move said cloth down along both sides of said member to draw it taut over the top of said member and press it yieldingly against the sides of said member so that said cloth can easily be cut by a cutter moving along and cooperating with said member.

12. The structure set forth in claim 11, said member comprising spaced portions and a cutter comprising a blade adapted to move between said portions to sever said cloth.

13. A device for handling oilcloth or similar material and for cutting the same as it is drawn from a roll comprising a member extending along and adjacent said roller, said member being constructed and arranged to cooperate with a cutter and having a top and sides and means comprising resiliently connected members extending along substantially the entire length of said member and arranged to be moved downwardly over said cloth and member to move said cloth down along both of said sides and draw the same taut over said top, said members pressing said cloth resiliently against the sides of said member to hold it taut and a cutter movable along said member at the top thereof to sever said cloth.

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