Oct. 14, 1941. A. W. SCHALDACH 2,259,117

DEVICE FOR HOLDING AND CUTTING SHEET MATERIAL

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Fig. 1

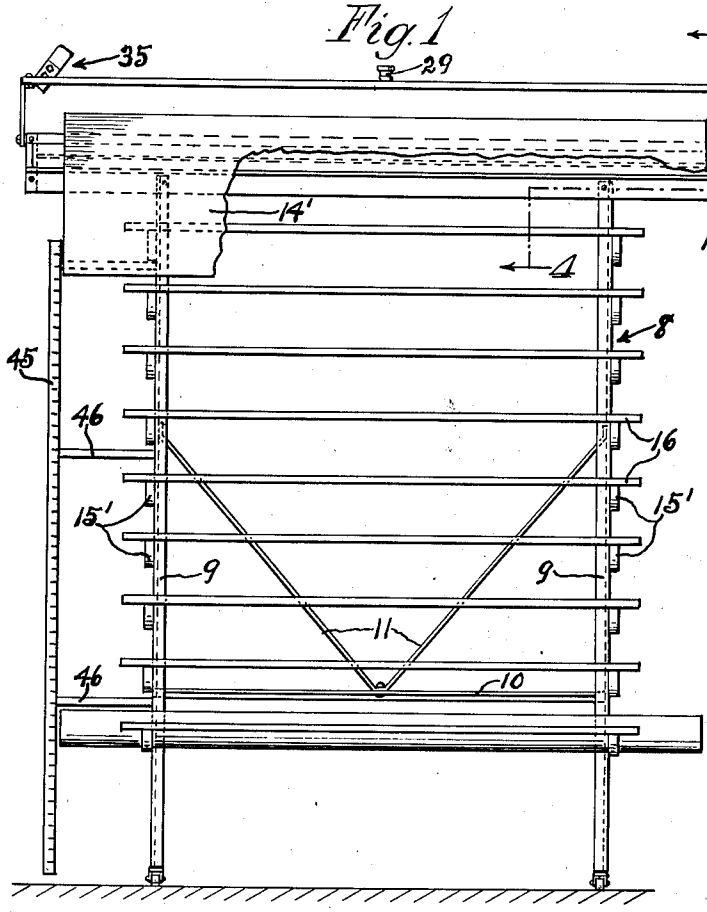

Fig. 2

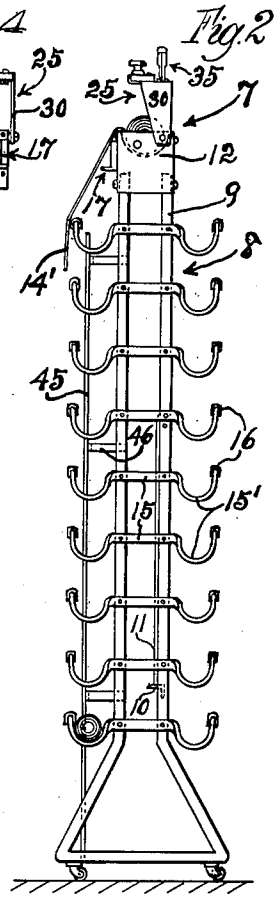

Fig. 3

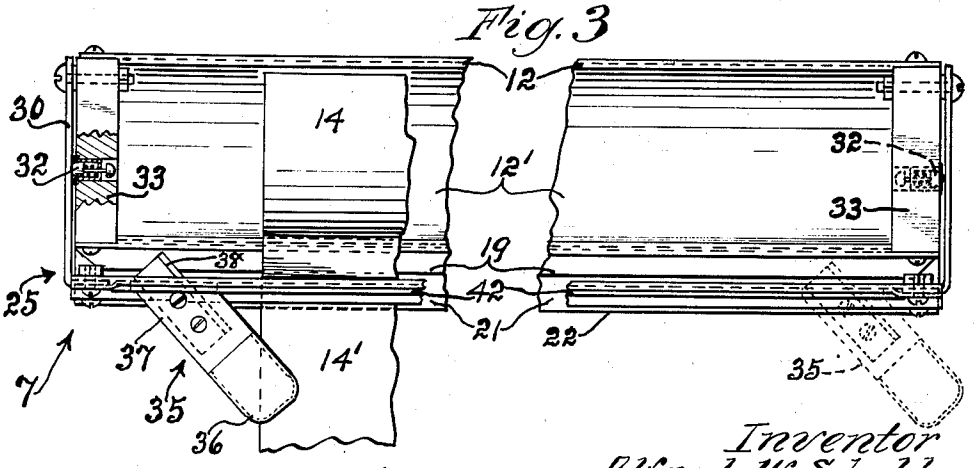

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Fig. 4

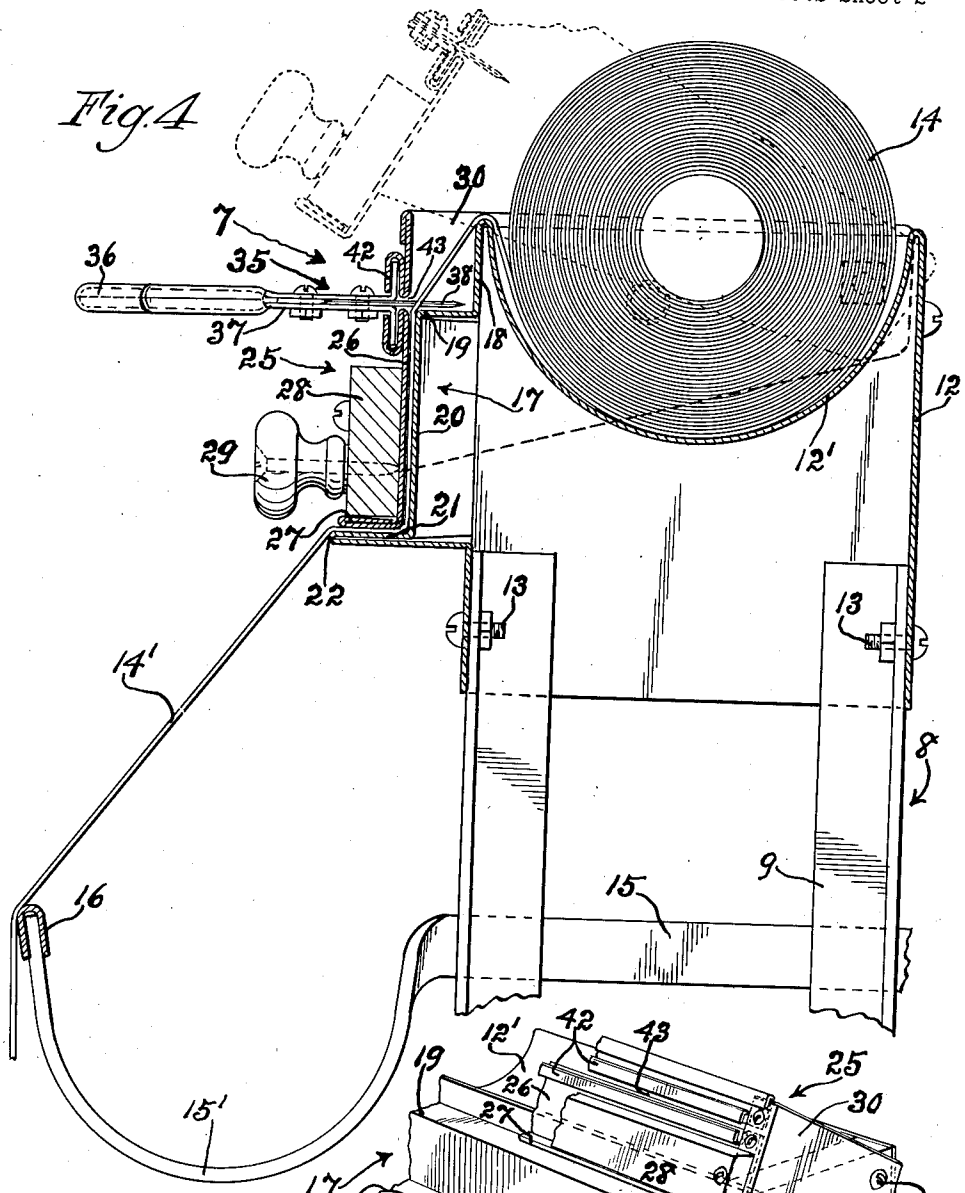


Fig. 6

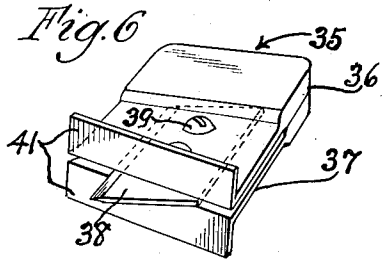
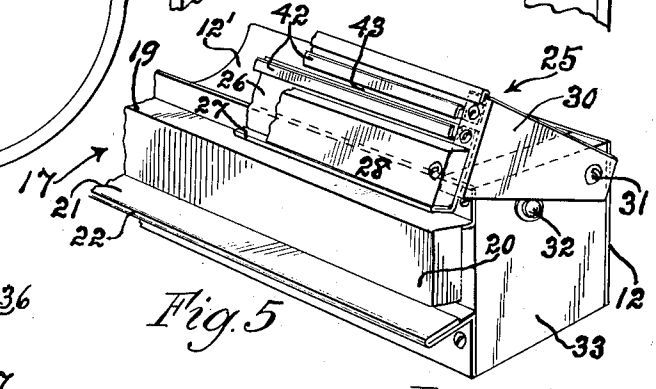


Fig. 5



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UNITED STATES PATENT OFFICE

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DEVICE FOR HOLDING AND CUTTING SHEET MATERIAL

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Application March 29, 1940, Serial No. 326,736

3 Claims. (Cl. 242—55.4)

This invention relates to a novel and improved device for holding and cutting sheet material.

One of the main objects of this invention is to provide an improved device for cutting a desired portion of sheet material, such as oilcloth and similar pliable sheet material, from a supply thereof, and whereby the material will be held firmly in place and a straight-cut end produced on said portion.

Another object of this invention is to provide a material cutting device which will hold the material firmly in place during the cutting operation, and will also hold the end of the portion safely in position after it has been cut off and will prevent it from dropping away from the device.

Another object of this invention is to provide such a material cutting device which will enable a person conveniently to aline the portion that is to be cut off, to provide a square-cut end thereon which is at right angles to its side edges.

A further object of this invention is to provide such a material cutting device which comprises alining means including gauge means, whereby the portion to be cut off can be measured conveniently as well as squared at its end.

Another object of this invention is to provide such a device wherein the cutting means includes a razor steel blade which is readily detachable and exchangeable, and is arranged to travel in a straight guide-way and to cooperate with material-engaging edge means for providing a straight and clean-cut end on the severed portion.

Another object of this invention is to provide such a device which has combined with the cutting and holding mechanism also means for supporting the supply of material from which the portion to be cut is extended thru this mechanism.

Another object of this invention is to provide such a device including a rack which is arranged to support several rolls of the sheet material in position for displaying the same, and which rack also carries a roll supporting member provided with the cutting means and holding means thereon, and the device is provided with gauge means adapted for measuring the portion as well as for alining it, preparatory to the cutting thereof from the roll.

These and various other objects and advantages are attained with this invention as will become apparent from the following description, taken in connection with the accompanying drawings in which the invention is illustrated in its preferred form, it being understood that various other arrangements and forms of construction may be resorted to for carrying out the objects and purposes of this invention.

In the drawings:

Fig. 1 is a front elevational view illustrating my invention in its preferred form of construction with the cutting and holding means shown in the release position.

Fig. 2 is an end elevational view thereof.

Fig. 3 is a partial top plan view of the essential mechanism of this invention, shown in its operative position and with parts broken away.

Fig. 4 is an enlarged cross-sectional view, taken on line 4—4 of Fig. 1.

Fig. 5 is a partial perspective view, indicating how the material holding and cutting means will be held in a partly elevated and released position on the roll supporting means.

Fig. 6 is a perspective view of the cutting means including the handle with the knife blade detachably mounted therein.

My present invention as disclosed herein is particularly adapted for cutting off a desired portion or length of pliable sheet material, such as oilcloth, rubberized cloth, paper, and the like, from a supply of the material, such as the customary roll, bolt, pack, etc.; and the illustrated form of invention is particularly suited for use with sheet material which is put up in a roll, and from which the desired portion is extended thru the device to be cut off thereby from the roll.

The main and essential part of this invention as disclosed herein consists of the improved combination mechanism 7 of holding and cutting means, whereby the sheet material is safely held in position and the desired portion is cut off therefrom in such a way as to provide a square-cut end thereon.

In Figs. 1 and 2 of the drawings the essential mechanism 7 of this invention is disclosed as mounted on a rack 8 which includes spaced standards 9 connected and reinforced by cross means 10 and diagonal means 11; while material supporting means 12 is mounted on top thereof, as by means of bolts 13, to enable convenient attaching and detaching of said supporting means on the standards. This supporting means disclosed includes a trough-shaped or dished portion 12' for supporting the supply of material 14, which is shown in the form of a roll.

The form of rack illustrated includes a plurality of arms 15 which extend across the standards and their ends provide curved holding portions 15' disposed at the two sides of the standards; while brace members 16 extend along the

sides of the rack and are secured to the ends of the curved portions 15', so that each pair of portions 15' with its brace member 16 thereon serve as a supporting channel for a roll of material. Said means 16 also serves for supporting the end portion of the roll which may be extended thereover and depended therefrom for display.

This supporting means 12 carries the improved cutting and holding means 7, and it is apparent that it is arranged so it can be readily mounted on any suitable form of rack, different from the form shown herein, and can likewise be mounted on a wall bracket or secured to the wall if desired.

In the form disclosed the means 12 has material engaging and guiding means 17 extending from the dished portion 12', which means 17 is adapted to have the desired length or portion 14' of the material extended thereover as it is drawn from the supply 14, as best shown in Figs. 2 and 4. Said means 17 is arranged in the form of curved face means which is engaged by the extended portion 14' of the material during the cutting operation, and this means includes an upper portion 18 provided with outer edge means 19, along which and in cooperation with which the cutting knife travels, as is best shown in Fig. 3 and is described hereafter; while a face portion 20 extends downward from edge means 19 and a face portion 21 extends horizontally outward from its lower end. Said portions 20 and 21 together form a curved face which is shown as trough-shaped herein; while the outer edge of portion 21 provides a ledge 22 which is parallel to edge means 19 and extends transversely or squarely across the path of travel of the portion 14' of the material.

The desired portion of material, when it is first drawn from the roll, then extends over and rests on the edge means 19 and on the ledge 22 of the face means 17. Said ledge 22 then serves for alining or squaring the material as it is extended thereover, whereby to enable producing a square cut end on said cut-off portion and likewise on the part which remains projecting from the roll.

Means 25 is provided herein which is arranged and shaped to cooperate with face means 17 for holding the material, and it is curved or shaped to fit snugly against said face means. In this form shown the means 25 includes a vertical wall portion 26 and a lower horizontal wall portion 27, adapted to fit closely against face portions 20 and 21, when moved into the holding or operative position, so as to hold the material firmly therebetween. A reinforcing bar 28 with a knob or handle 29 thereon is mounted on said wall portions 26 and 27, and this means 25 is movably mounted on the device, being preferably swingably mounted by a pair of side arms 30 extending rearwardly and pivoted by elements 31 on the supporting means 12.

The movable holding means 25 may be frictionally held vertically in a released position, as indicated in Fig. 2; but I preferably also provide special holding elements 32 which are shown as spring pressed lugs set in the side members 33 of supporting means 12, so that these lugs will hold the arms slightly elevated diagonally, as best shown in Fig. 5, to facilitate drawing the desired portion 14' from the roll and extending it between the face means 17 and the cooperating holding means 25. These elements 32 are yieldable so that the arms 30 can be pressed down thereover into the lower and operative position, as shown in Fig. 3.

The cutting means 35 provided herein comprises a handle 36 which can be made conveniently from a portion of sheet metal, and it includes two spaced side portions 37 which hold the knife blade 38 therebetween, and for economy and efficiency a safety razor blade is used for the knife, and is secured in the handle by screws 39.

This cutting means is operatively mounted on the holding means, and for that purpose the handle portions 37 are provided with a pair of oppositely extending flanges 41, and the vertical wall portion 26 of means 25 is provided with a pair of channel means 42 which are spaced to provide a slot 43 therebetween. Said pair of flanges 41 are mounted slidably in the pair of channel means 42, and the knife blade 38 extends thru slot 43, and is adapted to travel longitudinally of the slot and adjacent to edge 19 during the cutting operation, as indicated in Figs. 3 and 4.

With this construction, the movable holding means 25 with the cutting means 35 thereon is readily swingable upwards on pivots 31, and is conveniently held released above elements 32, to facilitate extending the desired portion 14' of the material between the holding means 25 and face means 17; and when this means 25 is then pressed down into its operative position, the knife 38 extends thru slot 43 and is positioned adjacent edge 19, being then readily drawn thru said slot for cutting off the portion from the supply. The cut-off portion is then still held safely in place by the holding means, and is only released therefrom when the latter is swung upwardly for that purpose. The ledge 22 at the same time serves as means whereby to aline the extended portion, so as to enable cutting a square-cut end on said portion 14' and likewise on the extending part remaining on the roll.

The material engaging face means 17 with its edge 19 and the alining ledge 22, combined with the cooperating holding means 25 and the cutting means 35, provide the essential mechanism 7 of this invention; and that is conveniently connected with suitable supporting means 12 for supporting the supply of material, from which the desired portion is extended thru this mechanism and is severed thereby.

This invention is preferably also provided with additional alining means 45 to cooperate with the ledge 22, and said means is extended at right angles to the ledge 22 and the adjacent edge 19; and in this illustrated form said means is mounted on rack 8, by bracket means 46, and is thereby connected with said ledge, so as to cooperate therewith and facilitate alining the portion 14' relative to the cutting means, in order to assure the provision of a square-cut end on said portion and also on the remaining part extending from the roll. This member 45 is preferably also graduated and is in the form of a ruled bar or gauge, whereby to measure accurately the portion or length of material to be cut from the supply; and its upper gauge mark is set at a certain distance from the cutting edge 19, for instance nine inches, so that the desired length of material for said portion can readily be measured accurately and at the same time be alined properly to provide a square-cut end thereon.

I claim:

1. In a material cutting device, means for supporting a supply of sheet material, means connected therewith and providing a trough shaped face including a substantially horizontal lower wall and a rear wall extending upward therefrom

and having an upper edge over which the portion of material to be cut is drawn from the supply, holding means including two walls joining at an angle and fitting closely against said two walls of said face and movable away therefrom and from said edge, to facilitate passing the portion between them, and being also movable close thereto for holding the portion of material in bent position and firmly in place before and after the cutting operation, and cutting means carried by the movable holding means and movable thereon along said edge for cutting off the desired portion from the supply.

2. In a material cutting device, means shaped to support and retain a roll of pliable sheet material thereon, trough-shaped face means extending from the forward side of said supporting means and over which the portion of material is drawn to be cut from the roll, said face means including a rear wall with an upper edge and also a lower wall with a front alining ledge which is parallel to the edge and both extending transverse to the path of travel of said portion, holding means swingably mounted at its two ends and having walls providing rear and lower face means to fit the trough part of said first-mentioned face means and movable closely against it to hold said portion of material bent and thus firmly in position between said rear and lower walls of the two means, even after the portion is cut-off from the roll, to prevent dropping thereof, and cutting means carried by the swingable holding means and including a readily detachable knife blade which is movable along said edge for cutting off said portion of material from the roll.

3. In a material cutting device, means for supporting a supply of sheet material, means extending therefrom and including an edge forward thereof and also a curved face beyond said edge over which the portion of material to be cut is extended, holding means having its ends swingably mounted on the supporting means and comprising a pair of flanges bent over and providing a pair of adjoining channels having a slot therebetween, said holding means being shaped to fit snugly against said face for holding the portion of uncut material firmly in position, even after it is cut off from the supply and thus prevent its dropping from the device, and cutting means comprising a handle of doubled-over sheet metal including a pair of oppositely extending flanges which are slidable in said channels and also a knife removably carried in said handle and extending thru said slot to coact with said edge and move along the same in its cutting operation.

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