Feb. 15, 1944. J. A. HOLMES 2,341,778

LINOLEUM RACK

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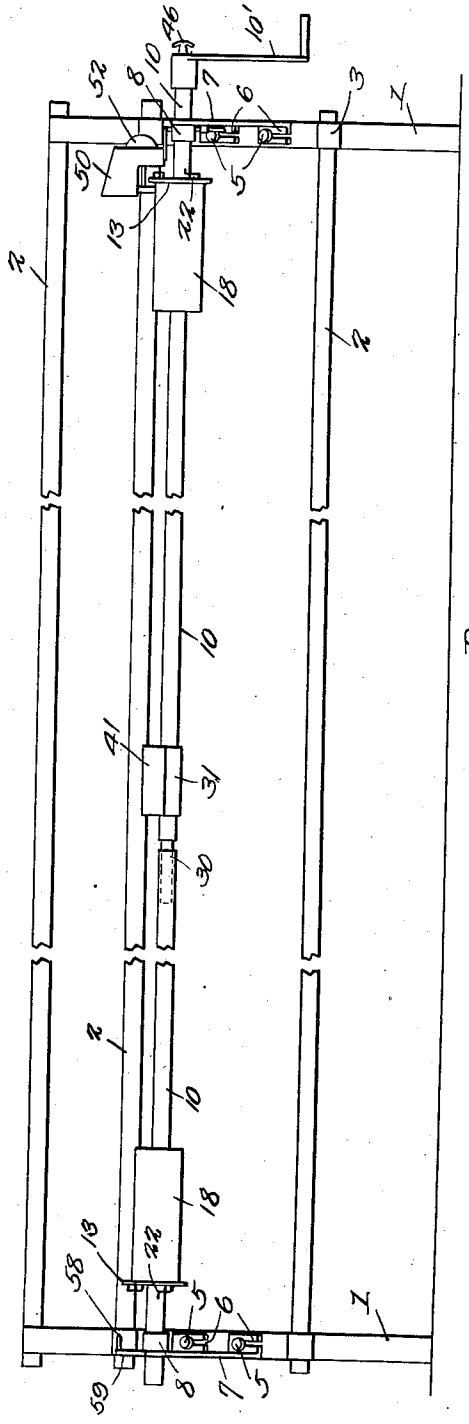


FIG. 1.

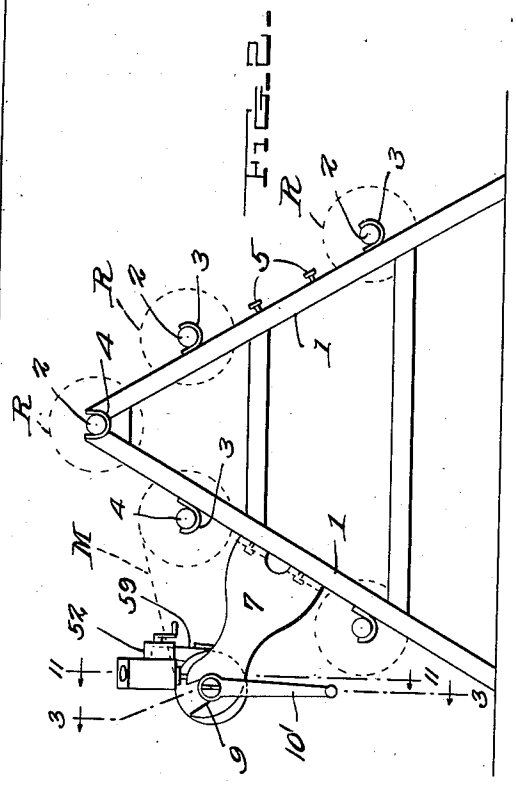


FIG. 2.

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LINOLEUM RACK

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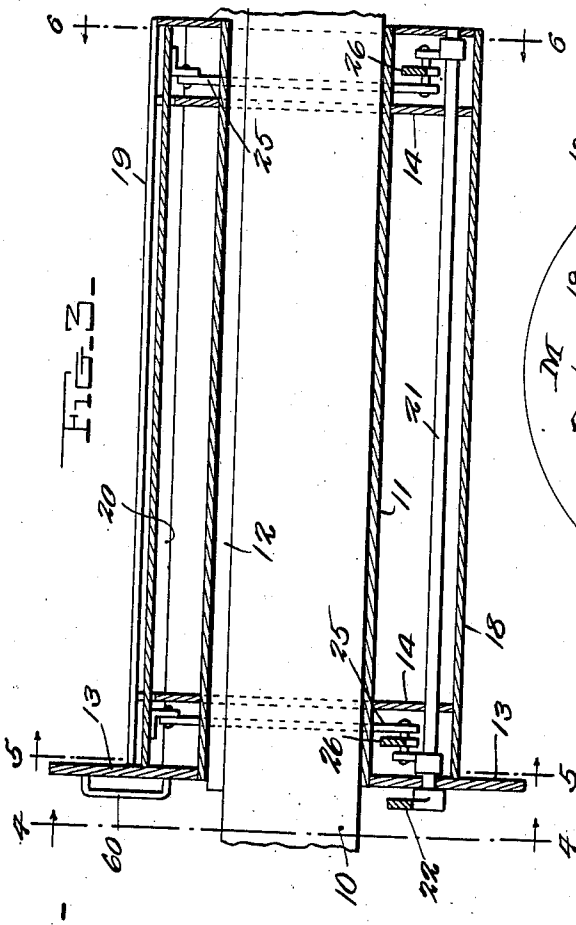


FIG. 3.

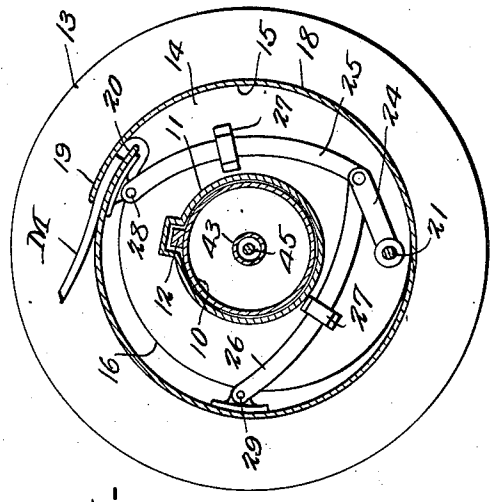


FIG. 6.

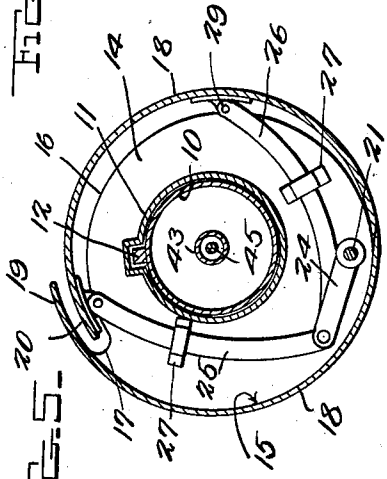


FIG. 5.

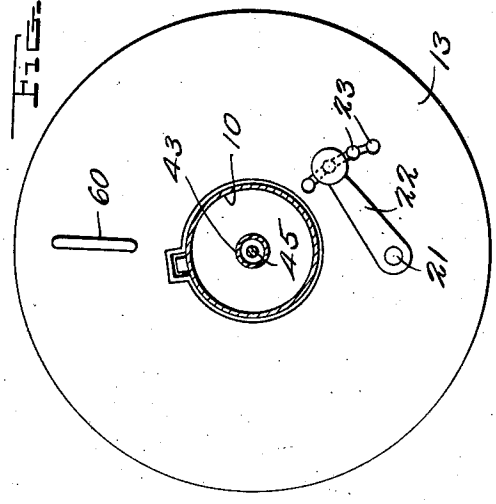


FIG. 4.

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LINOLEUM RACK

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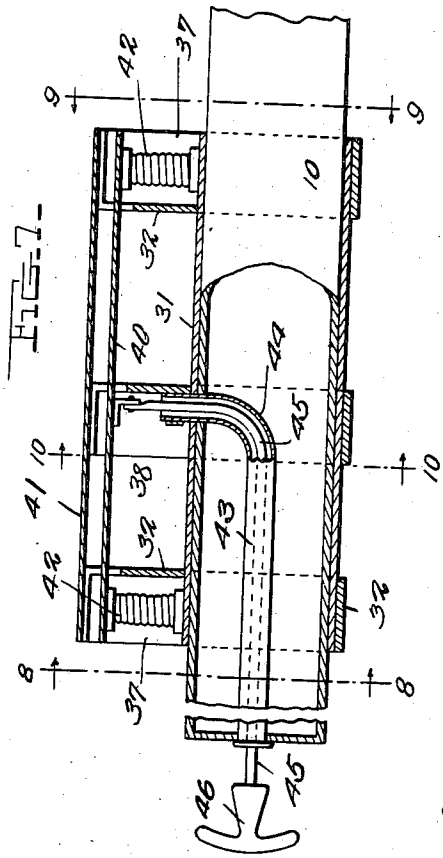


FIG. 7.

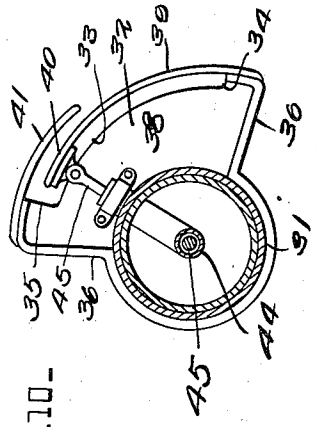


FIG. 10.

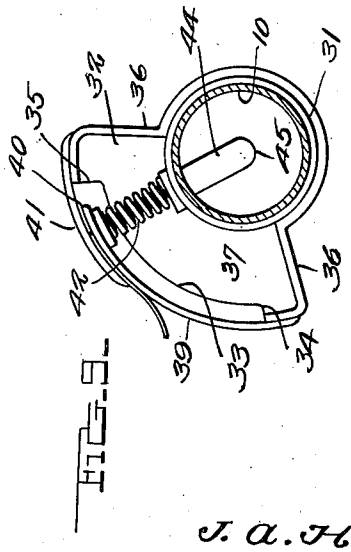


FIG. 9.

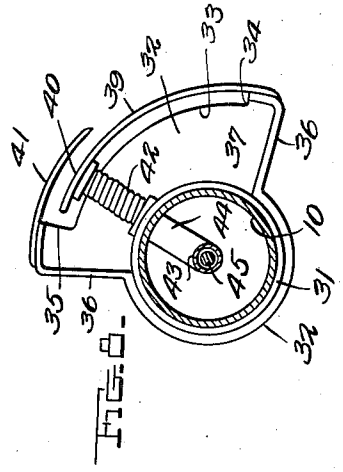


FIG. 8.

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LINOLEUM RACK

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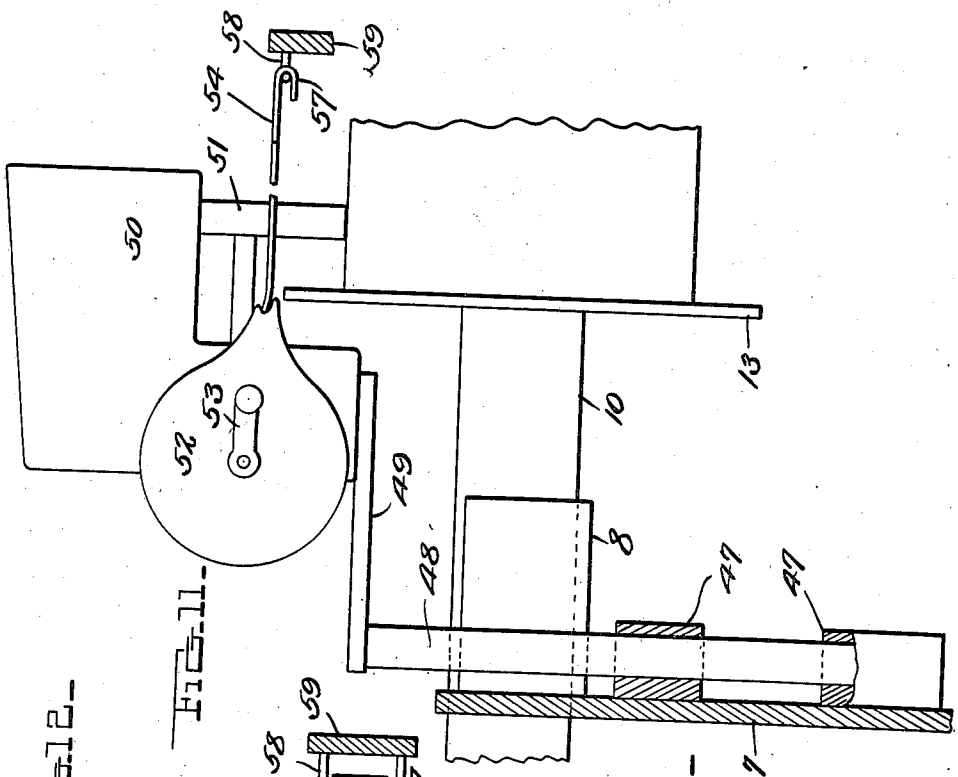


FIG. 11.

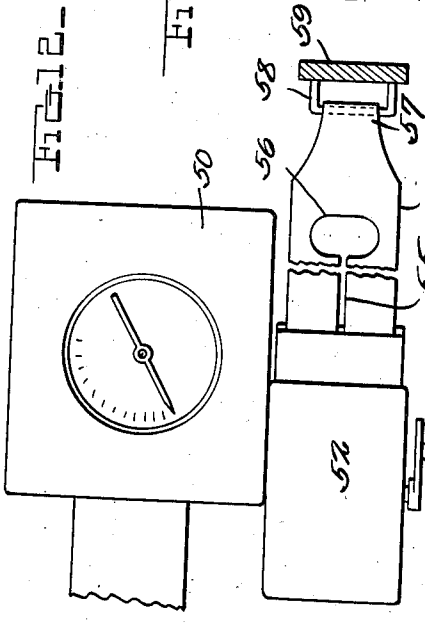


FIG. 12.

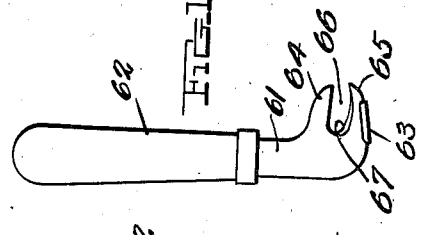


FIG. 14.

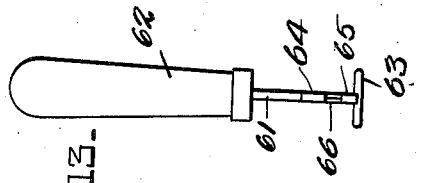


FIG. 13.

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Patented Feb. 15, 1944 2,341,778

UNITED STATES PATENT OFFICE

2,341,778

LINOLEUM RACK

John Alroy Holmes, Modesto, Calif.

Application September 24, 1941, Serial No. 412,186

4 Claims. (Cl. 242—72)

This invention relates to a rack for holding rolls of linoleum and for rolling, measuring and cutting a desired length taken from any one of the rolls supported thereby, it being possible to do the work easily and accurately and also to keep available and on display at all times a number of rolls of material of different patterns any one of which can be cut without the labor of lifting the entire roll into or out of position.

Another object is to provide a device of this character which is simple and compact in construction and will not readily get out of order.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a front elevation of the rack, parts being broken away.

Figure 2 is a side elevation, rolls of material thereon being indicated by broken lines.

Figure 3 is a central longitudinal section through one of the roll-engaging cores, its shaft being shown in elevation.

Figure 4 is a section on line 4—4, Figure 3.

Figure 5 is a section on line 5—5, Figure 3.

Figure 6 is a section on line 6—6, Figure 3.

Figure 7 is a central longitudinal section through portions of a shaft of the intermediate clamp thereon.

Figure 8 is a section on line 8—8, Figure 7.

Figure 9 is a section on line 9—9, Figure 7.

Figure 10 is a section on line 10—10, Figure 7.

Figure 11 is an elevation of the measuring device and cutter guide, a portion being broken away and parts of the supporting arms being shown in section.

Figure 12 is a plan view of the measuring device and cutter guide, a portion being broken away.

Figure 13 is an edge view of a cutting tool.

Figure 14 is a side view thereof.

Referring to the figures by characters of reference, 1 designates A-shaped standards connected by a plurality of spaced rods 2 removably mounted in brackets 3 on the legs of the standards and in sockets 4 at the tops of said standards. Each of these rods is insertible into a roll R of linoleum or like sheet material to be dispensed and it will be obvious that a number of rolls thus can be displayed simultaneously.

Each leg of each standard has a pair of headed studs 5 projecting therefrom and the pairs at either side of the standards are adapted to be detachably engaged by the slotted base flanges 6 of supporting arms 7 which thus are held in forwardly projecting positions on the standards. The upper ends of the arms are provided with bearing members 8 extending toward each other from slots 9 in the arms and these members and slots receive the end portions of a tubular shaft 10 having an operating crank 10' or the like. Cores 11 are removably mounted on shaft 10 at points between arms 7 and are keyed thereto as at 12 so as to rotate therewith. Each core has a head 13 at its outer end and is also provided with spaced eccentric plates or discs 14 rotatable therewith. Each disk is concentric with the core for a portion of its circumference as at 15 while the remainder 16 of its margin is eccentrically located and terminates at the inner end of a shoulder 17. A plate 18 of resilient material, such as steel or brass, is extended the length of the core and is fixedly secured to the portions 15 of the plates or disks. One end of the plate 18 is extended beyond the shoulder 17 to form a jaw 19 while the remaining portion of the plate is free to flex and is adapted to be contracted toward the eccentric portions 16 of the disks so as to produce a gap between jaw 19 and the other end 20 of the plate which extends between the disks and jaw 19 constitutes a movable jaw.

A rock shaft 21 is journaled in the disks 14 and extends through head 13, the outer end of this shaft being provided with suitable means, such as a crank arm 22, whereby it can be actuated. Any suitable means can be used for holding the crank arm against accidental displacement following angular adjustment. For example a portion of the arm can be snapped into any one of an arcuate series of recesses 23 in the head.

Located adjacent to the disks and secured to shaft 21 so as to move therewith, are arms 24 each of which has diverging arcuate links 25 and 26 pivotally connected thereto adapted to slide and rotate in guides 27. Links 25 are pivotally connected to the inner side of movable jaw 20, as shown at 28, while links 26 are pivotally connected at 29 to the flexible portion of plate 18 at points removed from the end portion or jaw 20. Thus when shaft 21 is turned in one direction the plate 18 is flexed to thrust jaw 20 toward jaw 19

whereas when the movement is reversed jaw 20 will be pulled away from jaw 19.

Shaft 10 is preferably made of two sections interfitting at their meeting ends as shown at 30 and one of these sections has a core or sleeve 31 fixed thereto, carrying segmental plates 32 the arcuate margin of each of which is cut away at 33 to provide shoulders 34 and 35. Oppositely extending flanges 36 extend from the shoulders 34 and 35 to the core 31 and define opposed recesses 37 at the outer sides of the plates 32 and an intermediate compartment 38. A flexible plate 39 of steel, brass or the like is fastened to flanges 36 at shoulders 34 and bridges recesses 33, its free end being located near shoulder 35 and forming a movable jaw 40. Another plate 41, constituting a rigid arcuate jaw is secured to flanges 36 at shoulders 35 and is positioned to lap jaw 40.

A coiled spring 42 is located in each recess 37 and thrusts against jaw 40 to thrust it normally toward jaw 41 as shown in Figure 9.

A guide tube 43 is centrally located in that section of shaft 10 on which the plates 32 are mounted and one end of this tube is curved laterally as at 44 and is secured to and opens through the wall of the shaft. See Figure 7. The other end of the tube opens through that end of shaft 10 on which crank 22 is mounted. An actuating member in the form of a spring wire 45 of sufficiently heavy gauge to transmit longitudinal thrust, is slidable in the guide tube. One end projects from the tube at crank 10' and carries a knob 46. The other end of the wire extends into chamber 38 and is attached to the center of movable jaw 40.

One arm 7 has brackets 47 in which a stem 48 is mounted to slide and rotate. This stem has a radial arm 49 at its upper end on which is mounted the casing 50 of a device for indicating linear measure. This can be of any desired construction and is of a type operated by a small wheel 51 forming a part thereof. As the measuring device per se constitutes no part of this invention but can be acquired in the open market, it is not deemed necessary to illustrate and describe it in detail. The wheel 51 is positioned to overhang one of the cores 18 and to rest on and frictionally engage any material wrapped about the core. A supplemental casing 52 is fixedly connected to one side of casing 50 and is of the type holding a spring-restrained steel tape adapted to be wound or taken up by a crank 53. In the present case the steel tape 54 has a longitudinal slot 55 one end of which is enlarged as at 56. A hook 57 is provided at the free end of the tape and when the tape is pulled from its casing and stretched lengthwise of the rack, hook 57 can be placed in engagement with a keeper 58 on an extension 59 of that arm 7 remote from casing 52.

In practice several rolls of material can be displayed on the respective rods 2. By means of handles 60 on heads 13 the cores can be adjusted relative to each other so as to be adapted to the width of the material to be cut. Shafts 21 are turned to move the jaws 20 inwardly and wire 45 is shifted to pull jaw 40 away from jaw 41. While jaw 40 is thus held, the free end of the material M to be cut is drawn from its roll and inserted between jaws 40 and 41 after which the jaw 40 is released and its springs will shift it so as to cause the material to be clamped tightly between the jaws.

Portions of the end of the sheet material will also enter between jaws 19 and 20 and by turning shafts 21 the jaws will clamp firmly on the material. Stem 48 is then rotated to swing the casing 50 over the sheet material so that the friction wheel 51 will engage it at the gripped end. Tape 54 is unreeled and hooked into keeper 58 and tends to prevent the casing 50 and wheel 51 from swinging out of proper position. Obviously other means could be used for this purpose.

With the parts thus assembled shaft 10 is rotated and winds the engaged material around the shaft and as it is thus wound the material will rotate wheel 51 which, in turn, will operate the measuring mechanism. Stem 48 will of course slide upwardly as the diameter of the rolled material increases. When this mechanism indicates the desired length of material has passed the wheel 51, a cutter is inserted into slot 55 at the enlarged end 56 thereof and is drawn along the slot so as to be guided by the tape. The cutter, as shown in Figures 13 and 14 can consist of a flat shank 61 having a handle 62 at one end while its other end has a flat head 63 extending laterally beyond superposed blades 64 and 65. These blades are spaced by a material-receiving slot 66 the lower wall of which is in the form of a cutting edge 67 curved inwardly and upwardly. Thus by placing the edge of the sheet material in slot 66 and pulling shank 61 along slot 55 with head 63 beneath and supporting the material, an accurate straight cut can be made.

After the operation is completed the jaws are released from the material, shaft 10 is lifted from arms 7, its two parts withdrawn from the rolled section and the shaft then reassembled and replaced.

When desired the arms 7 and the parts carried thereby can be detached and transferred to the studs 5 at the opposite side of the rack.

A rack such as herein described results in a considerable saving of floor space, and eliminates the danger of cracking, breaking and tearing the sheet material while being handled, linoleum being especially liable to crack when handled in cold weather. Furthermore there is effected a considerable saving of time required to handle, measure and cut the material, one person being able to do the work which heretofore has required the services of two persons.

While the rack is especially suited for use in handling linoleum, it is also adaptable for handling other materials such as rug runners, felt padding, window shade fabrics and, in fact, most materials supplied in rolls and sold in selected lengths.

What is claimed is:

1. A device of the class described including a tubular shaft, spaced means rotatable with the shaft for gripping the end of a sheet of material wound thereon, and supplemental means on the shaft and between said gripping means for gripping said end of the material and comprising a segment, an arcuate rigid jaw thereon, an arcuate resilient jaw extended between the segment and the rigid jaw, a tubular guide coaxial with the shaft and having a radially disposed end portion, and a flexible jaw-retracting shaft connected at one end to the resilient jaw and extended at its other end from the tubular shaft, said flexible shaft being slidably mounted in the guide.

2. A device of the class described including a winding shaft, disks thereon and rotatable therewith, a resilient plate wrapped about the disks and having a shiftable end and an end fixed to the disks, the two ends of the plate being in constant overlapping relation and being normally

spaced to receive therebetween one end of sheet material to be rolled, a shaft carried by the disks, separate crank arms between the disks and movable with the shaft, and separate link connections between each crank arm and the movable end and an intermediate portion respectively of the plate, said arm and links cooperating to spread the plate radially and grip inserted sheet material between said ends to hold the gripped portion of the sheet in a position substantially parallel with the plate, or to contract the plate to reduce the diameter of the wrapped sheet and release the gripped sheet.

3. In a device of the class described a means for holding a roll of sheet material, said means including a tubular shaft, spaced means rotatable with the shaft for gripping the end of a sheet of material wound thereon, and supplemental means on the shaft and between said gripping means for gripping said end of the material and holding it substantially concentric with the shaft, said supplemental means comprising a segment, an arcuate rigid jaw thereon, an arcuate resilient jaw extended at all times between the segment and the rigid jaw, a tubular guide coaxial with the shaft and having a radially disposed end portion, and a flexible jaw-retracting shaft connected at one end to the resilient jaw and extended at its other end from the tubular shaft, said flexible shaft being slidably mounted in the guide.

4. A device of the class described including a tubular shaft, spaced means rotatable with the shaft for gripping the end of a sheet of material wound thereon, and supplemental means on the shaft and between said gripping means for gripping said end of the material and comprising a segment, an arcuate rigid jaw thereon, an arcuate resilient jaw extended between the segment and the rigid jaw, a tubular guide coaxial with the shaft and having a radially disposed end portion, a flexible jaw-retracting shaft connected at one end to the resilient jaw and extended at its other end from the tubular shaft, said flexible shaft being slidably mounted in the guide to retract the resilient jaw, and springs interposed between the resilient jaw and the shaft for urging said jaw into gripping position against the pulling action of the flexible shaft.

JOHN ALROY HOLMES.