

Oct. 6, 1953

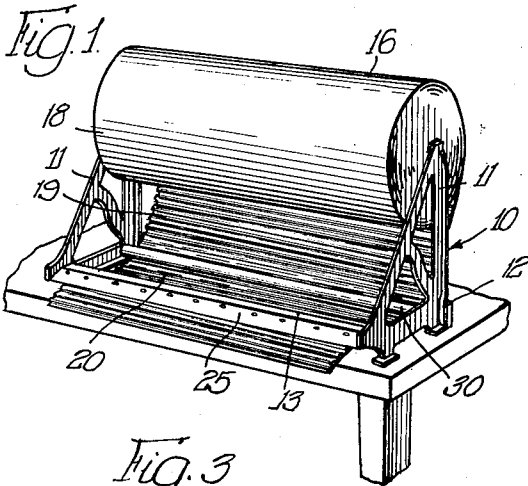
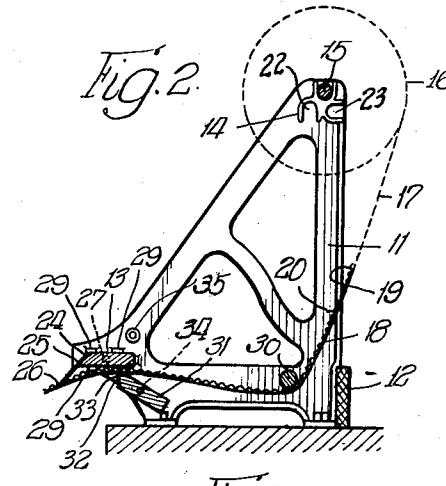
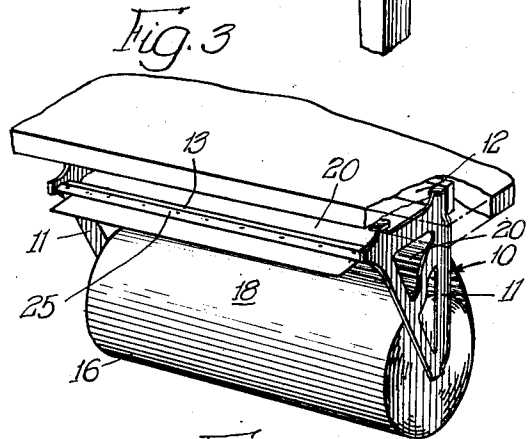
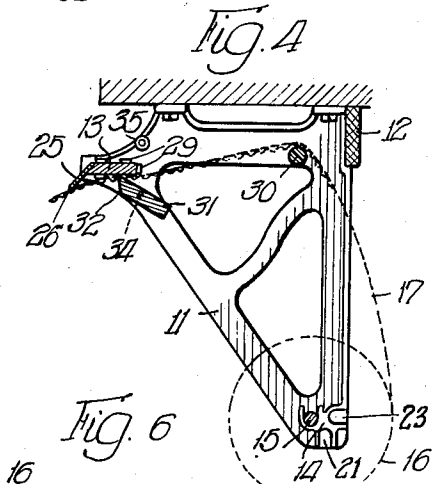
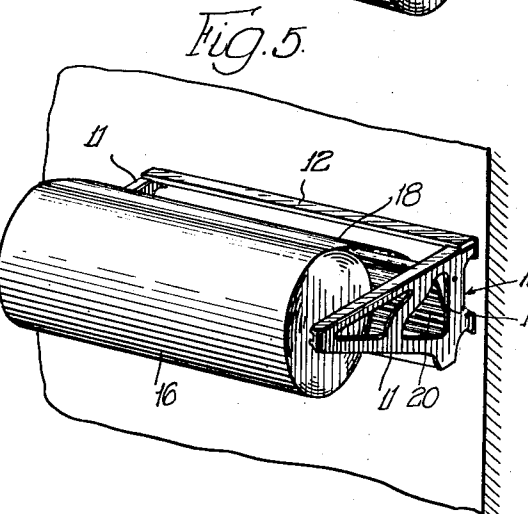
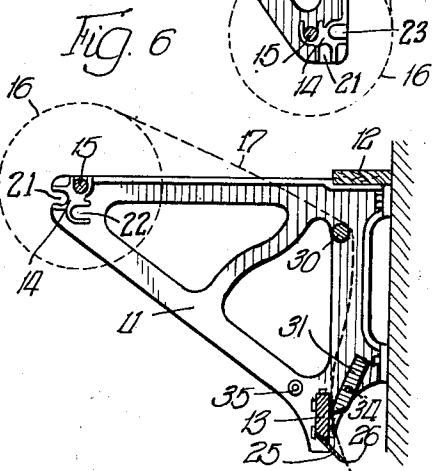
H. W. PUSHECK

2,654,544

DEVICE FOR USE IN TEARING SHEET MATERIAL

Filed May 6, 1948

2 Sheets-Sheet 1



INVENTOR.
Herbert W. Pusheck,
BY
Cromwell, Breist & Warden
ATTORNEYS

Oct. 6, 1953

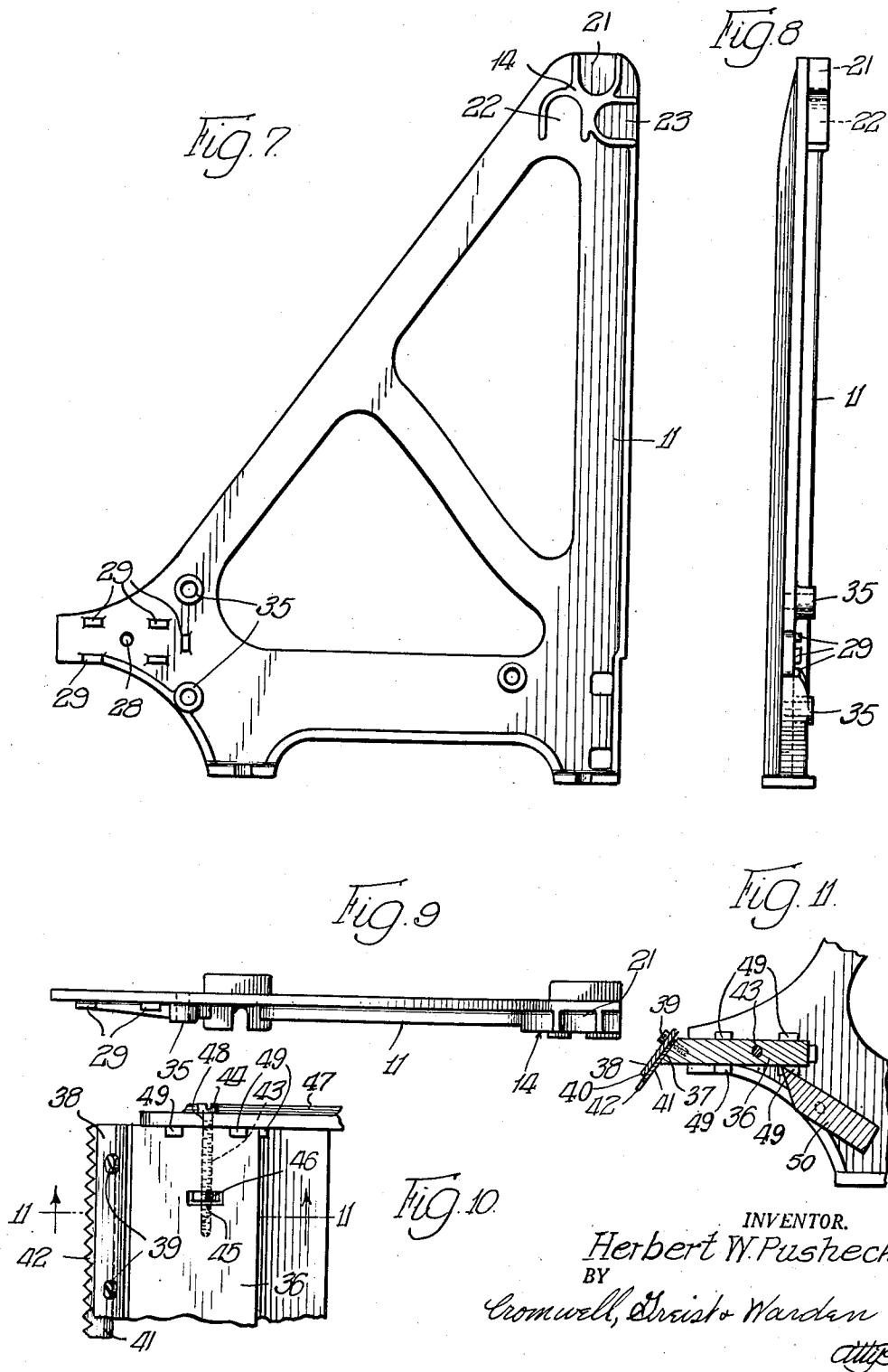
H. W. PUSHECK

2,654,544

DEVICE FOR USE IN TEARING SHEET MATERIAL

Filed May 6, 1948

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

2,654,544

DEVICE FOR USE IN TEARING SHEET MATERIAL

Herbert W. Pusheck, Evanston, Ill.

Application May 6, 1948, Serial No. 25,467

4 Claims. (Cl. 242—55.5)

1

This invention is concerned with improvements in a device for supporting a long strip of corrugated paper in roll form which enables a section of the strip of any desired length to be pulled from the roll and torn evenly and which holds the new end of the strip in an easily accessible position in readiness for the next pulling and tearing operation.

It is an object of the invention to provide a device for the purpose described which comprises a pair of side frame members, a tear-off bar and a holding bar, and interchangeable connections for securing the tear-off bar and the holding bar to the side frame members, whereby the side frame members may be rigidly attached to a support in a plurality of different positions.

It is a further object of the invention to provide in a device of the character described a supporting stand comprising a pair of side frame members and means including a clover-leaf supporting bracket for receiving the ends of the paper supporting rod in a plurality of different positions.

These and other objects of the invention will be apparent to those skilled in this art from the description of the embodiment of the device which is shown by way of illustration in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a device which embodies the principles of the invention and which is arranged on the top of a packing table or other support;

Fig. 2 is a vertical section through the center of the device;

Fig. 3 is a perspective view similar to Fig. 1 but showing the device attached to the under side of the packing table;

Fig. 4 is a vertical section through the center of the device as arranged in Fig. 3;

Fig. 5 is a perspective view similar to Fig. 1 but showing the device attached to a supporting wall;

Fig. 6 is a vertical section through the center of the device as arranged in Fig. 5;

Fig. 7 is an elevation of the inside of one of the side frame members of the device;

Fig. 8 is an end elevation of the side frame member;

Fig. 9 is a top plan view of the side frame member;

Fig. 10 is a partial plan view of a modified form of tear-off bar, showing the end of the same attached to a side frame member of the supporting stand; and

Fig. 11 is a section taken on the line 11—11 of Fig. 10.

2

The device of this invention constitutes an improvement over the device described in applicant's Patent No. 2,349,635, May 23, 1944.

Referring to the drawing, the illustrated embodiment of the device comprises a stand 10 which is adapted to be rigidly secured by screws or similar means to the top of a packing table, or other working surface as in Fig. 1 and which is so constructed that it may be secured, alternatively, beneath the packing table as in Fig. 3 or extending from a supporting wall or other supporting means as in Fig. 5.

The stand 10 is characterized by two side frames 11 of generally triangular form, which are rigidly connected together at the back of the stand adjacent one of the corners of the triangle by a horizontal brace or frame bar 12. The side frames 11 are also connected by a horizontal tear-off bar 13 adjacent one of the other corners of the triangle and clover-leaf bearing brackets 14 are provided adjacent the third corner for removably supporting the ends of a bar 15 on which a roll 16 of corrugated paper 17 is adapted to be rotatably supported. The side frames 11 are spaced apart a sufficient distance to clear the ends of roll.

While the device is illustrated for use in connection with corrugated paper, it will be understood that it may be used with other types of paper or other sheet material of a similar nature.

The particular roll of paper 16 which is illustrated is composed of a long strip 17 of corrugated paper consisting of a plain sheet 18 and a corrugated sheet 19. The corrugated sheet 19 is bonded to the plain sheet 18 with the corrugations 20 running crosswise of the strip, thus rendering the strip laterally stiff but longitudinally flexible.

The brackets 14 which support the rod 15 at one corner of the stand 10 are of clover-leaf configuration (Figs. 7 to 9). They provide open sided sockets or recesses 21, 22 and 23 which are adapted to removably support the ends of the rod 15 in any one of the illustrated positions of the frame members 11 (Figs. 1 to 6). When the frame members 11 are secured in upright position as in Fig. 1 the ends of rod 15 are supported in sockets 21. When the frame members 11 are secured in inverted or depending position as in Fig. 3 the ends of rod 15 are supported in sockets 22 and when the frame members 11 are secured projecting from a wall as in Fig. 5 the ends of rod 15 are supported in sockets 23.

The tear-off bar 13 is generally rectangular in cross section with a beveled or inclined forward face 24 along which there is secured a thin sheet metal plate 25 which plate terminates in

3

a relatively sharp edge 26 forwardly of the edges of the bar and extends in an oblique angle outwardly of the widest side thereof. The edge 26 of the plate 25 is sufficiently sharp to provide an effective tearing blade. The bar 13 is provided with screws 27 or other securing means at the ends and the side frame members 11 are each provided with a cooperating aperture 28 and positioning lugs 29 arranged so that the bar 13 may be secured in rigid relation to the frame members 11 in either the position shown in Figs. 1, 2 and 5, 6 or the reverse position shown in Figs. 3, 4 so that the tearing blade 26 extends outwardly and downwardly in each position of the stand 10.

From the roll 16 the strip 17 extends along the back of the frame 10 (as shown in Figs. 1 and 2) and around a guide rod 30 which is positioned above the base at the back of the frame, and then extends forwardly to the tear-off bar 13. The strip 17 contacts the wide under surface of the bar 13 and is pressed into engagement therewith by a horizontal holding or cam bar 31 which is positioned immediately adjacent the bar 13 in parallel relation to the latter. While the strip 17 is illustrated as extending along the back of the frame, it may be drawn from the other side of the roll 16 and extended diagonally across the frame. Likewise the strip 17 may be supplied from the roll 16 with the corrugations 19 on the bottom surface of the plain sheet 18, as in Figs. 3 and 4.

The holding bar 31 is generally rectangular in cross section having a narrow face 32 provided with an inclined surface which terminates in a relatively sharp edge 33. The bar 31 is provided on its ends with laterally projecting pivot pins 34 which are positioned near the inclined or beveled face 32 so that when the bar 31 is mounted in proper relation to the bar 13 it is biased or tilts of its own weight to bring the sharp edge 33 of the beveled surface 32 into engagement with the under surface of the strip 17 throughout the width of the latter and to hold the strip 17 against the surface of the bar 13 along a line spaced inwardly from the blade edge 26.

The frame members 11 are provided with a pair of spaced apertures 35 arranged on opposite sides of the positioning lugs 29 for receiving the pivot pins 34 on the ends of the bar 31 to permit the bar 31 to be mounted in tilting relation to the bar 13 when the frame members are in upright or extending position as in Figs. 2 and 6 or when in the inverted position as in Fig. 4.

It will be noted that the relatively sharp edge 33 of the bar 31 is urged into engagement with the widest surface of the bar 13 in all positions of the stand 10 and that it keeps the strip 17 at all times snugly pressed against the surface of the bar 13 in readiness to be pulled forwardly of the knife edge 26 the desired distance and torn crosswise and it also prevents backlash. The clamping pressure of the edge 33 against the bar 13 prevents the strip 17 from moving sideways or backwardly while being torn and also holds the free edge of the strip 17 from backward movement while permitting it to be pulled forwardly without appreciable resistance. After a length of strip 17 has been torn off, the new end hangs free below the blade 25 where it may be readily grasped when another length of the strip is desired.

A modified form of tear-off bar is illustrated

4

in Figs. 10 and 11. In this form a base member 36 of generally rectangular cross section is provided with an inclined or beveled surface 37, and a relatively thin metal plate 38 is secured to the beveled surface by screws 39 or similar fastening means. The plate 38 terminates in a relatively sharp tearing edge 40. An auxiliary plate 41 having a saw-toothed edge 42 is clamped between the plate 38 and the surface 37, with the saw-toothed edge 42 extending beyond the edge 40 of the plate 38. The auxiliary plate 41 extends from adjacent the end of the plate 38 inwardly thereof any desired distance. The auxiliary plate 41 is adapted to facilitate tearing tough material, such as cloth or the like in which tearing is more readily begun by the saw-toothed like edge 42.

The base member 36 of the tear-off bar is provided at the end thereof with an axially extending aperture 43 which is adapted to accommodate a securing bolt 44. The aperture 43 passes through a transverse slot 45 in the member 36 in which there is embedded a nut 46 for threaded engagement with the bolt 44. The side frame member 47 is provided with an aperture 48 for accommodating the bolt 44 and also with inwardly extending lugs 49 for positioning the end of the member 36. A holding bar 50 is provided for cooperation with the member 36 in the same manner as in the preferred form.

While specific materials and details of construction have been referred to in describing the illustrated embodiment, it will be appreciated that other materials and other details of construction may be resorted to within the spirit of the invention.

I claim:

1. In a device of the character described, a supporting stand comprising laterally spaced side frame members which are adapted to be selectively mounted in a vertical or horizontal position relative to a support, a tear-off blade including a base member, said base member having an axially extending aperture in an end thereof adapted to receive a securing bolt, a nut embedded in said base member in line with said aperture for threaded engagement with said bolt, one of said frame members having an aperture for receiving said securing bolt, and a plurality of inwardly extending positioning lugs on said frame member for cooperation with said bolt to secure said tear-off blade in fixed relation to said frame member.

2. In a device of the character described, a supporting stand comprising a pair of rigid side frame members arranged in laterally spaced relation, said frame members having means thereon for selectively attaching the same to a support in upright, inverted or laterally directed relation to said support, a roll supporting rod, a paper guide rod, a tear-off bar, and a paper holding bar, a bearing bracket on said frame members arranged to provide separate bearing formations for supporting said roll supporting rod in each selected position of said frame members, a bearing formation spaced from said bearing bracket for supporting said paper guide rod, bar supporting means spaced from said bearing bracket and cooperating with means on the end of said tear-off bar for selectively supporting said tear-off bar in either upright or inverted position, and bearing means on opposite sides of said last mentioned bar supporting means for cooperating with means on the end of said paper holding bar to pivotally support said holding bar

5

with said holding bar biased to engage the bottom surface of the paper and hold it against said tear-off bar in the selected position of said tear-off bar.

3. In a device of the character described, a supporting stand comprising a pair of rigid side frame members arranged in laterally spaced relation, said frame members having means thereon for selectively attaching the same to a support in upright, inverted or laterally directed relation to said support, a roll supporting rod, a paper guide rod, a tear-off bar, and a paper holding bar, each of said frame members having a bearing bracket arranged to provide three outwardly openings bearing sockets for selectively supporting an end of said roll supporting rod when said frame member is in the selected position, each of said frame members having a bearing socket spaced from said bearing bracket for supporting an end of said paper guide rod, each of said frame members having means including inwardly extending positioning lugs cooperating with an end of said tear-off bar for selectively supporting said tear-off bar in either upright or inverted position, said last-mentioned means being spaced from said bearing bracket and said bearing socket, and each of said frame members having bearing sockets adjacent said last mentioned means for selectively supporting an end of said paper holding bar with said holding bar biased to engage the bottom surface of the paper and hold it against said tear-off bar in the selected position of said tear-off bar.

4. In a device of the character described, a supporting stand comprising laterally spaced one-piece generally triangular side frame members having means for selectively mounting the same in upright, inverted, or laterally extending position relative to the support, means for supporting thereon in parallel spaced relation a roll

6

supporting rod, a paper guide rod, a tear-off bar and a paper holding bar, respectively, said supporting means including a bearing bracket formation at one corner of each of said side frame members providing three bearing sockets for supporting said roll supporting rod in selected positions of said frame members, bearing formations adjacent another corner of said side frame members for supporting said paper guide rod, socket forming lug elements adjacent the third corner of said side frame members cooperating with said tear-off bar to support the same in upright or inverted position thereon corresponding to the position of said side frame members relative to their support and bearing formations on said side frame members adjacent said lug elements for selectively supporting said paper holding bar so that said paper holding bar is tilted to engage the bottom surface of the paper and hold it in position against the tear-off bar in the selected position of said side frame members.

HERBERT W. PUSHECK.

References Cited in the file of this patent UNITED STATES PATENTS

Number	Name	Date
440,928	Schenck	Nov. 18, 1890
1,174,871	Johnson	Mar. 7, 1916
1,605,030	Hurley	Nov. 2, 1926
1,765,317	Ungar	June 17, 1930
1,859,303	Lenhart	May 24, 1932
1,941,957	Stegmann	Jan. 2, 1934
2,032,643	Westbo	Mar. 3, 1936
2,149,869	Ringel	Mar. 7, 1939

FOREIGN PATENTS

Number	Country	Date
225,372	Great Britain	Nov. 22, 1923