Feb. 27, 1962 J. M. HILLIARD 3,023,049

KNEELER FOR A CHURCH PEW

Filed Aug. 17, 1959 2 Sheets-Sheet 1

FIG. 1

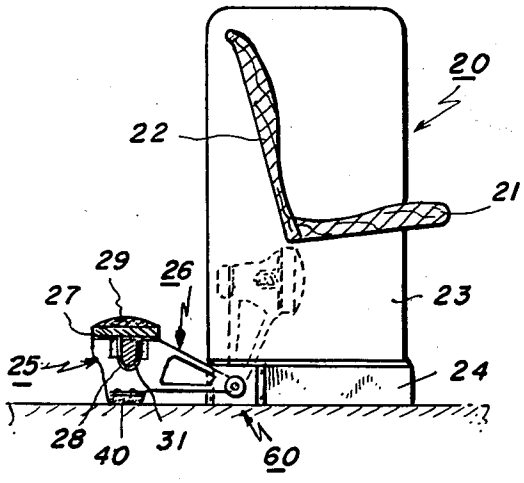


FIG. 2

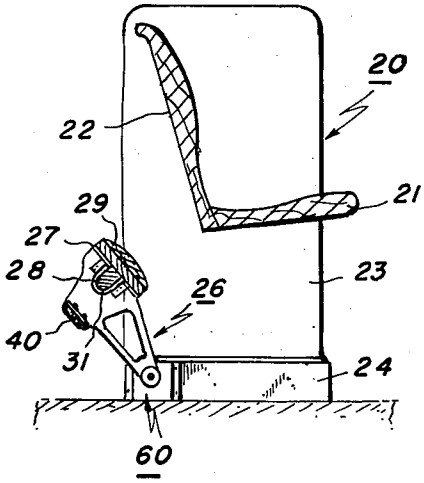


FIG. 3

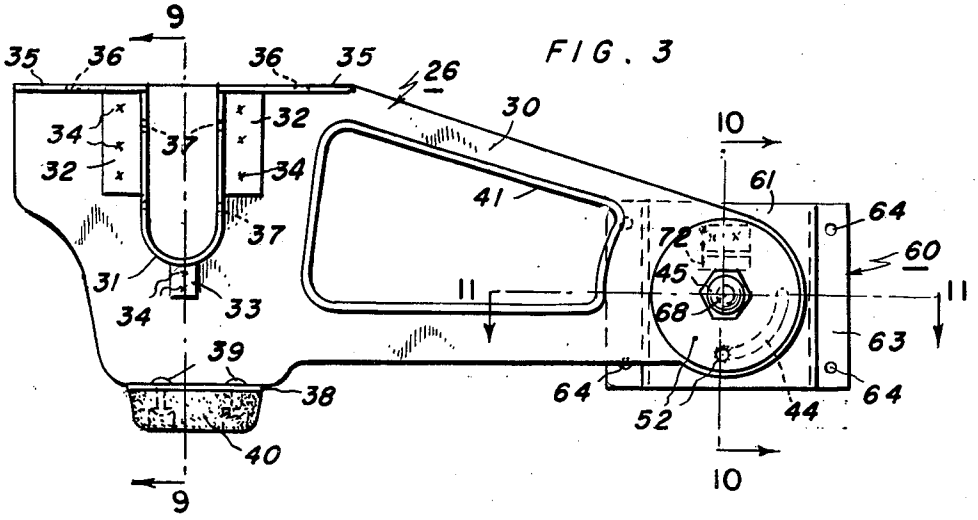


FIG. 4

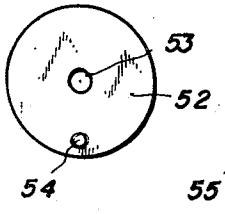


FIG. 5

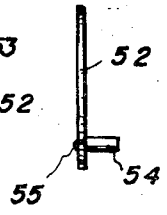
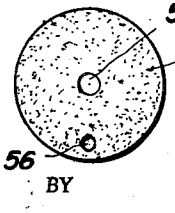


FIG. 6



INVENTOR
JAMES M. HILLIARD

BY E. F. Salter

ATTORNEY

Feb. 27, 1962 J. M. HILLIARD 3,023,049

KNEELER FOR A CHURCH PEW

Filed Aug. 17, 1959 2 Sheets-Sheet 2

FIG. 8

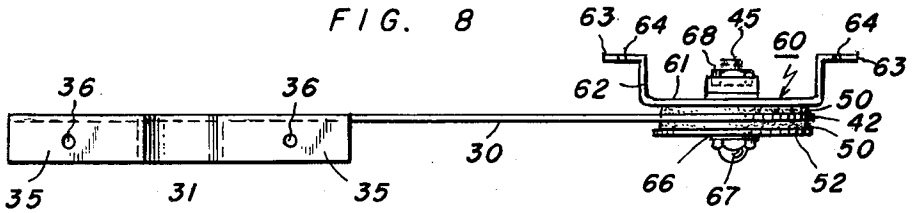


FIG. 9

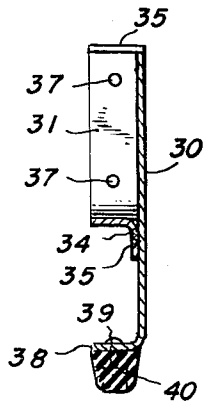


FIG. 7

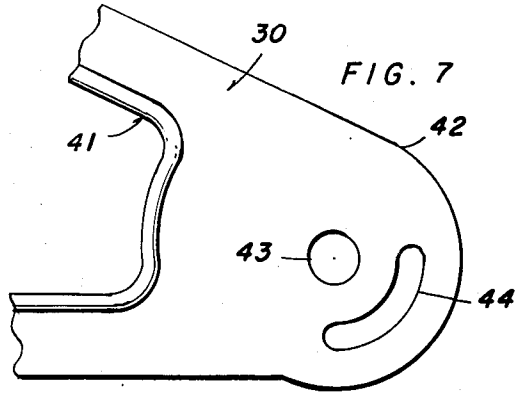


FIG. 11

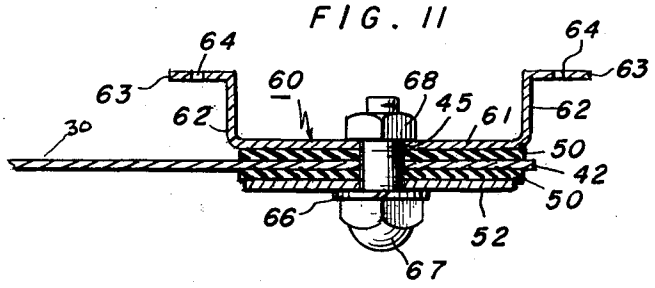
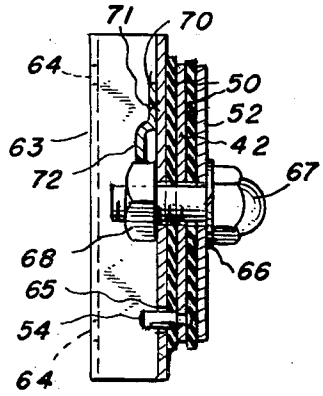


FIG. 10



INVENTOR
JAMES M. HILLIARD

BY E. F. Salter

ATTORNEY

United States Patent Office 3,023,049 Patented Feb. 27, 1962

3,023,049

KNEELER FOR A CHURCH PEW

James M. Hilliard, Waco, Tex., assignor to Cathedral Kneeler Company, Waco, Tex., a corporation of Texas

Filed Aug. 17, 1959, Ser. No. 834,295
2 Claims. (Cl. 297—426)

This invention relates to a kneeler particularly adapted for church pews or the like, and has as its primary object the provision of a hinged kneeler which is movable from a full up-position, which provides space for the parishioner to enter and be seated in the pew, to a full down-position, to provide a kneeling rail, characterized by means affording regulable resistance to both upward and downward movement so the kneeler may be raised and lowered quietly, thus eliminating the bumping noise accompanying the actuation of the pivoted kneelers now in general use on church pews.

Another object of the invention is the provision of such a kneeler which is adapted to be supported from the vertical supporting members of the pew.

An additional object of the invention is the provision of such a kneeler having pivoted end supports provided with adjustable friction means whereby the upward and downward movement of the kneeler is sufficiently resisted or retarded so as to prevent abrupt impact at either end of its path of travel to preclude the customary bumping noise associated with the unimpeded movement of the conventional kneeler.

Still another object of the invention is the provision of a kneeler having its pivoted supporting arms so constructed and arranged that the upward movement of the kneeler may be stopped at a desired intermediate point between full down and full up-position, and retained by the friction means in such an intermediate position. This is particularly desirable on the part of the parishioner when, during the service, it is convenient and comfortable partially to raise the kneeler to provide foot room at the floor level and still provide leg room in the standing position while the kneeler is still in a position readily accessible to the parishioner when it is desired to return the same to full down-position for devotional purposes.

A still further object of the invention is the provision of such a pivot arm arrangement for a kneeler characterized by stop means within the pivot structure which coincides substantially with the stoppage in full up or down-position so as to further reduce the resultant impact and consequent noise.

Still another object of the invention is the provision of means for adjusting the friction afforded by the supporting arms in order to maintain the necessary tension to hold the kneeler in adjusted position, while at the same time limiting the force required to move the kneeler so that it may be easily adjusted by a woman or a child.

Other objects and advantages will be apparent from the following description when considered in conjunction with the accompanying drawings, wherein:

FIGURE 1 is a side elevational view, partially in section, of a church pew showing a kneeler constructed in accordance with the instant invention attached thereto, the kneeler being shown in full lines in the down position and in dotted lines in the up position.

FIGURE 2 is a view similar to FIG. 1, but showing the kneeler retained in an intermediate position.

FIGURE 3 is an enlarged side elevational view of one of the supporting arm assemblies for the kneeler.

FIGURE 4 is a plan view of a pressure plate comprising a component of the assembly.

FIGURE 5 is a side elevational view of the pressure plate of FIGURE 4.

FIGURE 6 is a plan view of a friction disc comprising a component of the assembly.

FIGURE 7 is a fragmentary enlarged side elevational view of an end portion of the pivoted arm comprising a portion of the assembly.

FIGURE 8 is a top plan view of the construction of FIGURE 3.

FIGURE 9 is a sectional view taken substantially along the line 9—9 of FIGURE 3 as viewed in the direction indicated by the arrows.

FIGURE 10 is an enlarged sectional view taken substantially along the line 10—10 of FIGURE 3 as viewed in the direction indicated by the arrows, and

FIGURE 11 is an enlarged sectional view taken substantially along the line 11—11 of FIGURE 3 as viewed in the direction indicated by the arrows.

Similar reference characters refer to similar parts throughout the several views of the drawings.

With continued reference to the drawings, there is generally indicated at **20** a church pew which includes a seat **21**, a back rest **22**, and end supports **23**, having best portions **24**, all of conventional design.

The kneeler assembly of the instant invention, generally indicated at **25**, includes end supporting assemblies **26** which are pivotally mounted on the inner confronting sides of the base portions **24** of the pew vertical supports **23**. Extending between the spaced supporting assemblies **26** is a horizontal kneeling rail **27**, which is preferably provided with an underlying vertical reinforcing member **28**. The rail **27** may or may not be provided with upholstery or cushioning **29**, as desired.

Referring now to the supporting assemblies **26** in detail, each comprises an arm **30** of generally triangular configuration which is provided at one end with a U-shaped flange **31**, the legs of which carry lateral flanges **32** and the bottom of which is provided with a vertical flange **33**, the flanges **32** and **33** being suitably secured, as by spot welding **34** or the like, to the inner face of the supporting arm **30**. The U-shaped flanges **31** form channels for the reception of the vertical reinforcing member **28**, which is secured to the rail **27**, the ends of the latter being supported on horizontal flanges **35** extending along the top of the arms **30** on opposite sides of the upper extremities of the legs of flange **31**. Suitable openings **36** and **37** are provided in the flanges **35** and the flanges **31**, respectively, for the reception of screws or the like for securing the associated members **27** and **28** in assembled relation therewith. The lower edge portion of the end of each arm **30** below the flange **31** is provided with a horizontal flange **38** to the underside of which is secured, as by means of rivets **39**, a hard rubber bumper **40**.

The central portion of the arm **30** may be embossed, as indicated at **41**, to increase the strength thereof.

The end of each arm **30** remote from the previously described flanges is generally arcuate in configuration as indicated at **42** and is provided with a central opening **43** and an arcuate slot **44**, as best shown in FIGS. 3 and 7. The opening **43** is adapted for the reception of a bolt **45** which serves as a pivot for the arm **30**. Positioned on each side of the arcuate end **42** of the arm **30** is a friction disc **50**. Each of the discs **50** is comprised of a suitable vulcanized lubricated fiber and has a central aperture **51** through which the bolt **45** is adapted to extend. A metal pressure plate **52** is positioned on one side of one of the discs **50** and includes a central opening **53** and an offset elongated pin **54** which is suitably fixed thereon in any desired manner as by peening the head thereof. The pin **54** is adapted to extend through suitably aligned openings **56** in the discs **50** and through the arcuate slot **44** in the end **42** of the arm **30**. A channel-shaped mounting bracket **60** includes a central front wall portion **61** having a central aperture for the reception of bolt **45** and side wall portions **62** which

terminate in apertured offset lateral flanges **63**, through the apertures **64** in which are adapted to be passed suitable screws or bolts for securing the mounting bracket to the inner side of the base portions **24** of the pew vertical supports **23**. The front wall **61** is also provided with an opening **65** into which the pin **54** extends. The end of pin **54** may, if desired, be suitably fixed in opening **65**, as by peening or the like.

A lock washer **66** is disposed between the head **67** of the bolt **45** and the pressure plate **52**, and a polygonal nut **68** is threaded on the inner end of the bolt **45** interiorly of the channel-shaped bracket **60**. A suitable nut lock is provided and comprises a plate **70** spot welded as at **71** to the inner side of the front wall **61**, and includes an offset flange **72** bearing against one edge surface or flat of the polygonal nut **68**.

In assembling the device, the bolt **45** is tightened to a desired degree clampingly to engage the arcuate end **42** of the arm **30** between the vulcanized lubricated fiber discs **50**, which latter are clamped between the front wall **61** of mounting bracket **60** and the pressure plate **52**, to impart sufficient frictional resistance to movement of the arms **30** to prevent noisy impact at either end of the path of travel of the kneeler, and at the same time to afford sufficient resistance to hold the kneeler in any intermediate or partially raised or lowered position. Since the position of the pin **54** is fixed, it cooperates with the ends of the arcuate slot **44** to limit or arrest movement of the arms **30** at either end of the path of travel of the kneeler.

What is claimed is:

1. In combination with a church pew having spaced vertical supports, a kneeler comprising a longitudinally extending kneeling rail disposed between said supports, a pair of spaced oppositely disposed supporting arms, each secured at one of its ends to the complementary end of said rail, means pivotally securing the other end of each supporting arm to the complementary vertical support of said pew, means associated with said pivot means frictionally resisting pivotal movement of said supporting arms and said rail in both directions of movement thereof, said means pivotally securing said other end of each of said supporting arms to the complementary pew vertical support comprising a channel-shaped mounting bracket fixedly secured to said pew support, a pivot extending through the other end of said supporting arm and into the channel of said mounting bracket, said frictionally resisting means comprising a friction disc on either side of said other end of said supporting arm, and a pressure plate on the outer side of the disc opposite said mounting bracket, said pivot extending through said disc and said pressure plate, said pivot comprising a bolt having a nut on the inner side of the channel of said mounting bracket whereby pressure one said other end of said supporting arm may be regulated by adjusting said bolt, and a nut lock on the inner side of the channel of said mounting bracket, and means limiting pivotal movement of said supporting arm, said last-mentioned means comprising aligned apertures in said mounting bracket and said friction discs, each supporting arm having an arcuate slot therein, and a pin fixed to said pressure plate extending through said aligned openings and said slot.

2. The structure of claim 1 wherein the longitudinally extending rail is provided with a perpendicular reinforcing member and said one end of each supporting arm is provided with a supporting flange for said longitudinally extending rail and a depending U-shaped flange for said reinforcing member.

References Cited in the file of this patent

UNITED STATES PATENTS

358,702	Shriver et al.	Mar. 1, 1887
1,856,297	St. Marie	May 3, 1932
2,350,441	Anderson	June 6, 1944
2,622,951	Sautereau	Dec. 23, 1952
2,682,077	Vikre	June 29, 1954