March 24, 1964 J. L. POWELL 3,126,099

SHEET MATERIAL RACK

Filed Aug. 2, 1961 2 Sheets-Sheet 1

Fig. 1

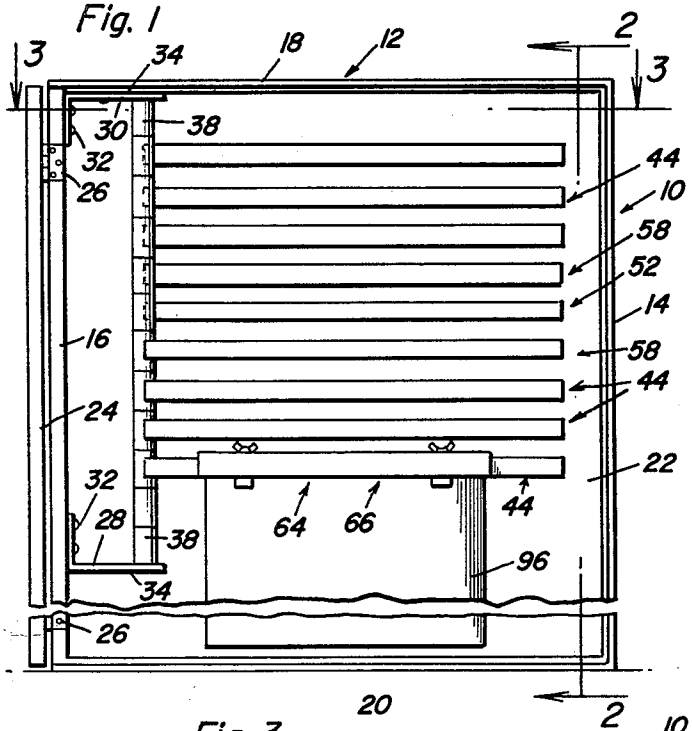


Fig. 2

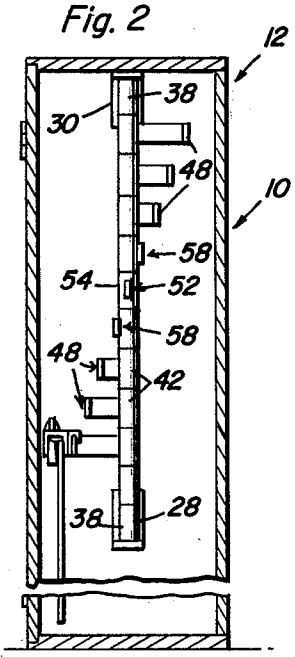
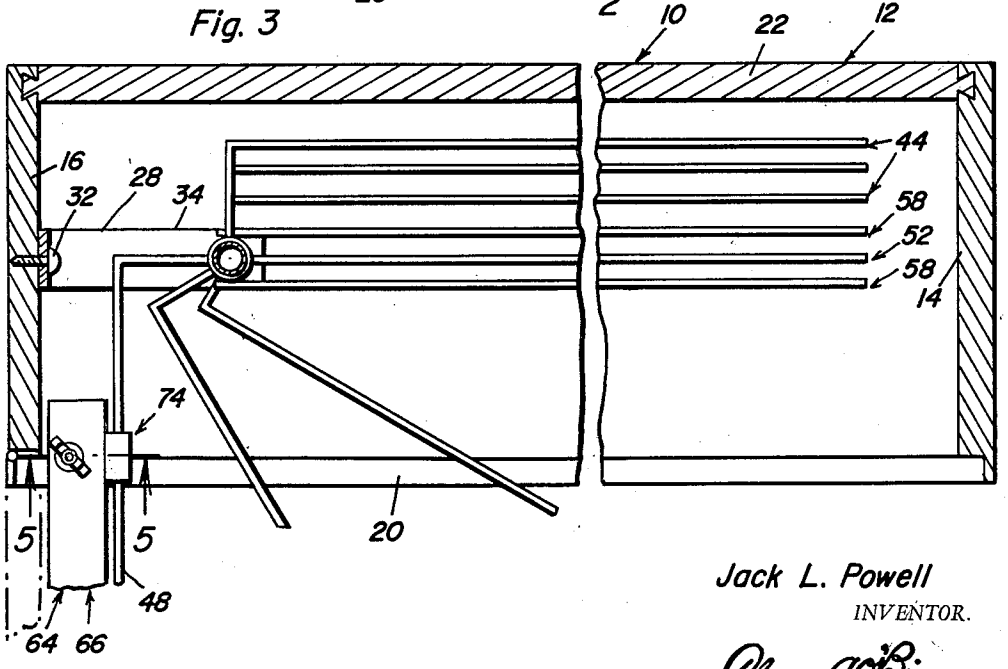


Fig. 3



Jack L. Powell
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

March 24, 1964 J. L. POWELL 3,126,099

SHEET MATERIAL RACK

Filed Aug. 2, 1961 2 Sheets-Sheet 2

Fig. 4

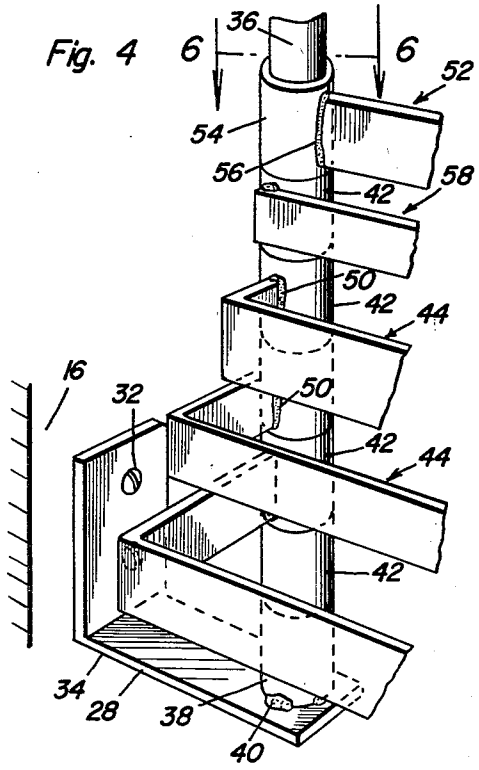


Fig. 5

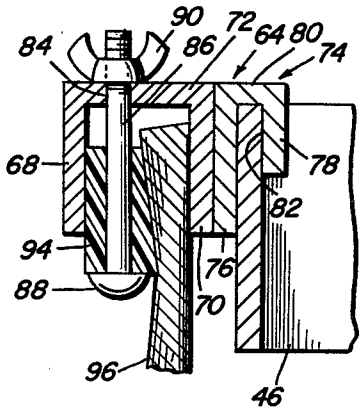


Fig. 6

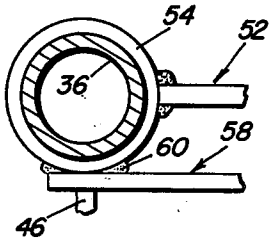


Fig. 7

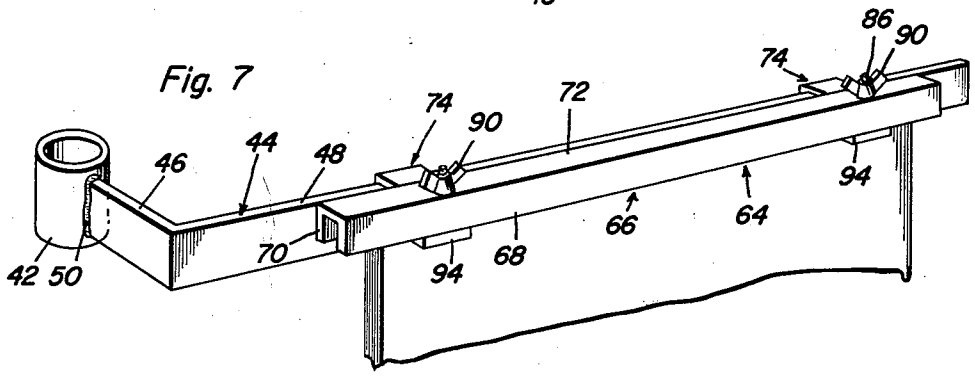
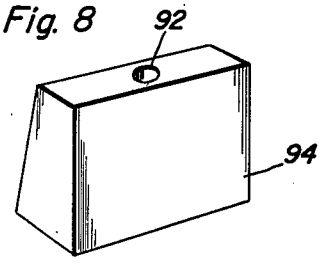


Fig. 8



Jack L. Powell
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office 3,126,099 Patented Mar. 24, 1964

3,126,099

SHEET MATERIAL RACK

Jack L. Powell, 212 24th St., NW., Minot, N. Dak.

Filed Aug. 2, 1961, Ser. No. 128,796
2 Claims. (Cl. 211—47)

This invention relates to a novel and useful sheet material rack and while being specifically adapted to support a plurality of groups of sheets of maps and plans, the sheet material rack of the instant invention may also be conveniently used to support other types of sheet material.

In construction work most of the plans and/or blueprints of a job are arranged in a plurality of groups of individual plans or blueprints. Quite often it is desirable to consult only one group of plans or blueprints and accordingly it is the main object of this invention to provide a means whereby a plurality of groups of individual plans and/or blueprints may be conveniently supported in a uniform manner and in a manner whereby each of the groups of plans and/or blueprints may be readily removed from the supporting rack.

A further object of this invention, in accordance with the immediately preceding object, is to provide a sheet material rack for supporting a plurality of groups of plans and/or blueprints in a manner whereby the identity of all of the groups of sheet material supported by the rack may be simultaneously ascertained without removing any of the groups of sheet material from the rack.

A further object of this invention, in accordance with the immediately preceding object, is to provide a sheet material rack which will support a plurality of groups of sheet material in a manner whereby access may be had to all of the groups of sheet material supported by the rack and yet in a manner whereby a selected group of sheet material may be readily chosen and removed from the supporting rack.

A further object of this invention is to provide a sheet material rack which may be conveniently enclosed in a housing so that the rack and the sheet material supported thereby may be readily moved from one location to another.

A still further object of this invention, in accordance with the preceding objects, is to provide a sheet material supporting rack which will provide a means for supporting a plurality of groups of sheet material in a manner whereby a selected group of sheet material may be removed from the supporting rack or may be positioned on the rack in a manner relative to the other groups of sheet material supported thereby whereby each individual sheet of material of a selected group of sheet material may be viewed without removing any of the sheet material from the supporting rack.

A final object to be specifically enumerated herein is to provide a sheet material rack in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side elevational view of the sheet material rack shown with the closure door thereof moved to the open position and with parts of the housing for the sheet material rack broken away;

FIGURE 2 is a vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of FIGURE 1;

FIGURE 3 is a fragmentary enlarged horizontal sectional view taken substantially upon the plane indicated by the section line 3—3 of FIGURE 1;

FIGURE 4 is a fragmentary enlarged perspective view of a portion of the sheet material rack;

FIGURE 5 is a fragmentary enlarged vertical sectional view taken substantially upon the plane indicated by the section line 5—5 of FIGURE 3;

FIGURE 6 is an enlarged fragmentary horizontal sectional view taken substantially upon the plane indicated by the section line 6—6 of FIGURE 4;

FIGURE 7 is a fragmentary perspective view of one of the support arms of the sheet material rack; and

FIGURE 8 is a perspective view of the clamping wedge member of the clamp assembly supported by each support arm of the sheet material rack.

Referring now more specifically to the drawings the numeral 10 generally designates the sheet material rack of the instant invention. The sheet material rack includes a housing generally referred to by the reference numeral 12 including opposite end walls 14 and 16, and bottom walls 18 and 20 and a rear side wall 22. The rear side wall 22 interconnects the opposite side and top and bottom walls and the housing 12 is provided with a hinged front side wall 24 which is swingably mounted on the housing 12 at one edge by means of a pair of hinge assemblies 26.

The support rack 10 has a pair of L-shaped brackets 28 and 30 secured to the wall 16 by means of suitable fasteners 32 and each of the L-shaped brackets 28 and 30 includes a horizontal leg 34. The horizontal legs 34 are substantially parallel and a cylindrical elongated and upstanding support member 36 has its opposite ends disposed in axially aligned mounting sleeves 38 which are secured to the horizontal legs 34 in any convenient manner such as by welding 40. The support member 36 has a plurality of additional sleeve members 42 which are spaced longitudinally thereon and are rotatably journalled on the support member 36.

A plurality of generally L-shaped support arms are referred to in general by the reference numeral 44 and each includes a short mounting leg 46 and a longer support leg 48. The legs 46 and 48 of each support arm 44 are disposed at substantially right angles to each other and each comprises a generally strap-like member disposed on one edge. The free ends of each of the mounting legs 46 are secured to a corresponding sleeve member 42 in any convenient manner such as by welding 50 and thus it may be seen that each support arm 44 is mounted on the support member 36 for swinging movement about the longitudinal axis of the support member 36.

With attention now directed to FIGURES 3 and 4 of the drawings it will be noted that one additional support arm is referred to in general by the reference numeral 52 and is substantially straight. The support arm 52 is secured to a corresponding mounting sleeve 54 in any convenient manner such as by welding 56 and it will be noted that the mounting sleeve 54 is disposed between a pair of mounting sleeves 42 and is also rotatably journalled on the elongated support member 36.

With attention now invited to FIGURES 4 and 6 of the drawings it will be noted that a still further support arm generally referred to by the reference numeral 58 is provided which is also straight and in this respect similar to the support arm 52. However, the support arm 52 is substantially aligned with the longitudinal axis of the support member 36 whereas the support arm 58 is secured to the corresponding mounting sleeve 42 in any convenient manner such as by welding 60 and is disposed

with one side face thereof in abutting relation with the corresponding mounting sleeve 42. It is to be noted that a pair of support arms 58 are provided and are disposed above and below the support arm 52. The pair of support arms 58 are secured to opposite sides of their corresponding sleeve members 42 and the L-shaped support arms 44 disposed above the support arm 52 are spaced to one side of the support member 36 while the support arms 44 disposed below the support arm 52 are spaced to the other side of the support member 36. From FIGURE 4 of the drawings it will be noted that the support arms above and below the support arm 52 are spaced sucessively further away from the longitudinal axis of the support member 36. Inasmuch as the support arms 44 disposed below the support arm 52 project to one side of the support member 36 and the support arms 44 disposed above the support arm 52 are disposed to the other side of the support member 36, all of the support arms, when disposed in substantially parallel planes paralleling the longitudinal axis of the support member 36, such as when positioned as shown in FIGURE 2, are disposed in parallel planes spaced substantially equal distances apart.

With attention now invited to FIGURES 5, 7 and 8 of the drawings there will be seen an elongated clamp assembly generally designated by the reference numeral 64. Each of the support arms 44, 52 and 58 is provided with a clamp assembly 64 and it will be noted that each clamp assembly 64 includes a generally inverted U-shaped channel member referred to in general by the reference numeral 66 and including a pair of depending legs 68 and 70 interconnected at their upper ends by means of a bight portion 72.

Each of the channel members 66 also includes a pair of inverted and generally J-shaped slide support members referred to in general by the reference numeral 74. As can best be seen in FIGURE 5 of the drawings each J-shaped member 74 includes a long leg 76 and a short leg 78 which are interconnected at their upper ends by means of a bight portion 80. The legs 76 and 78 of each support slide 74 define a pocket 82 in which the upper longitudinal edge of the corresponding support arm is receivable. In this manner, each of the clamp assemblies 64 is removably mounted on the corresponding support arm and is mounted for movement longitudinally of the support arm.

Each of the bight portions 72 includes a pair of longitudinally spaced apertures 84 through which the shank portion 86 of a headed fastener 88 is secured by means of a wing nut 90. The shank portion 86 of each fastener 88 is passed through a bore 92 formed in a wedge block 94 and it will be noted that the confronting surfaces of the wedge blocks 94 and the corresponding legs 70 are upwardly divergent and that upon manipulation of each wing nut 90 the corresponding wedge block may be moved into position between the legs 68 and 70 in order to clampingly secure a plurality of sheets 96 of sheet material to the corresponding clamp assembly 64.

Accordingly, it may be seen that a plurality of groups of individual sheets of sheet material may be supported by the support arms 44, 52 and 58 and that the support arms may be swung so as to provide access to any one of the groups of sheet material supported by the sheet material rack. In addition, it will be noted from FIGURE 3 of the drawings that the support member 36 is spaced a distance from the wall 16 sufficient to enable the lowermost of the support arms 44 to be pivoted to a position with its support leg 48 disposed at substantially right angles to the rear side wall 22 of the housing 12 while still providing the necessary clearance between the corresponding clamp assembly 64 and the wall 16.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A rack structure comprising, in combination, a housing having an open front and closure means therefor permitting access to be had to the interior of the housing, a pair of upper and lower aligned brackets mounted in said housing and secured to one wall thereof one above the other, a vertical support member fixed between the respective brackets and circular in cross-section, at least one sleeve mounted for free turning movement on said support member, a support arm substantially L-shaped in plan and embodying long and short limbs, the short limb having an end thereof attached to and extending radially from said sleeve, the long limb being supported in a horizontal plane at right angles to the lengthwise axis of said support member, an elongated member substantially channel-shaped in cross-section and opposed to and generally parallel with said long limb of said support arm and provided with clips detachably and adjustably mounted on said long limb, said channel being adapted for reception of a stack of blueprints or the like, at least a pair of wedge-shaped blocks fitting into the channel portion of said channel member and detachably and adjustably bolted in place therein in a manner to cooperatively engage and retain coacting edge portions of the blueprints in said channel.

2. A rack structure comprising, in combination, a stationary support surface, a support rod parallel to and spaced from said support surface, a sleeve mounted for free turning movement on said rod, an arm substantially L-shaped in edge elevation and embodying interconnected long and short limbs, one end of said short limb being attached to and extending radially from a peripheral surface of said sleeve, said long limb being adapted when in use to occupy a plane which is at approximate right angles to the lengthwise axis of said rod, an elongated channel-shaped member having one channel wall thereof opposed to and generally parallel with said long limb, inverted J-shaped attaching and retaining clips carried by and joined to said one channel wall and defining hooks, said hooks being releasably hung over and thus detachably connected with said long limb, the channel portion of said channel-shaped member being adapted for insertable and removable reception of edge portions of a stack of blueprints, and clamping and retaining means for said blueprints in said channel and carried by a web portion of the channel-shaped member and readily accessible for expedient use, said clamping and retaining means embodying at least one pair of wedge-shaped blocks fitting telescopically into the channel portion, detachably and adjustably secured to said web portion by readily accessible bolt and nut means whereby said blocks are thus adapted to cooperatively engage and clampingly retain edge portions of the blueprints in said channel.

References Cited in the file of this patent

UNITED STATES PATENTS

866,299	Parrill	Sept. 17, 1907
1,599,888	Haskell	Sept. 14, 1926
1,752,428	Farver	Apr. 1, 1930
2,869,210	Schneider	Jan. 20, 1959