April 16, 1935. J. P. KIESECKER 1,998,138

FIREPROOF FURNITURE

Filed April 9, 1934 4 Sheets-Sheet 1

Fig. 1.

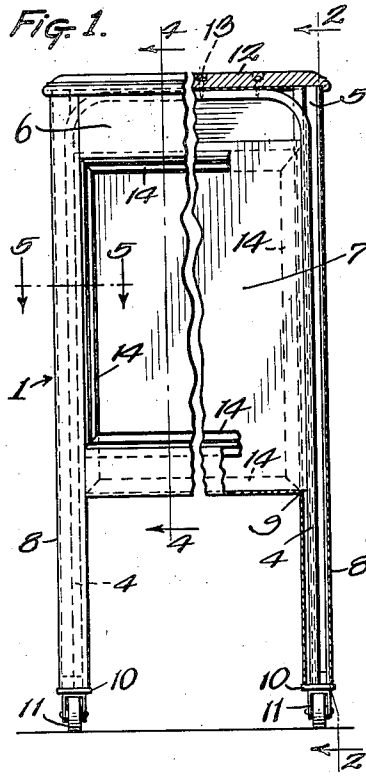


Fig. 2.

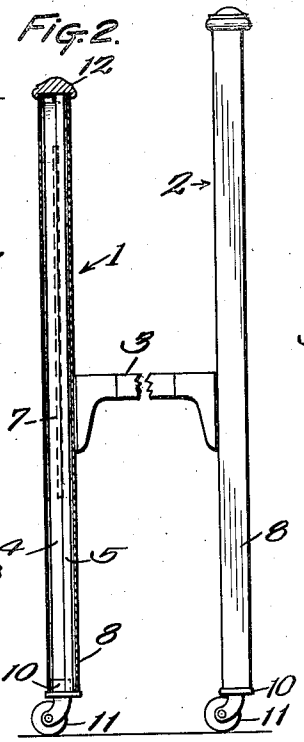


Fig. 3.

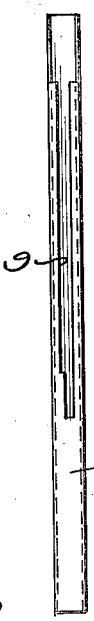


Fig. 4.

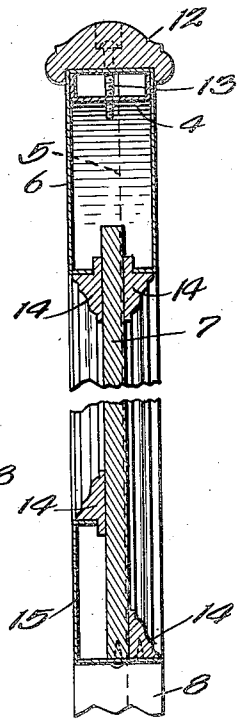


Fig. 6.

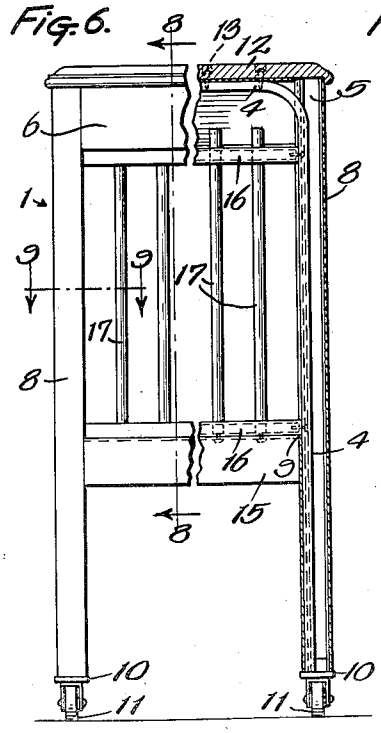


Fig. 7.



Fig. 8.

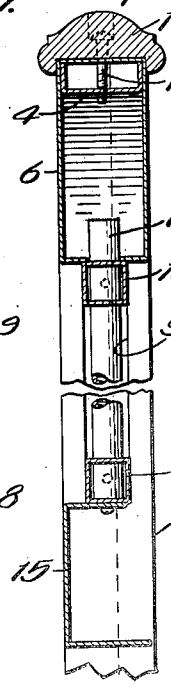


Fig. 5.

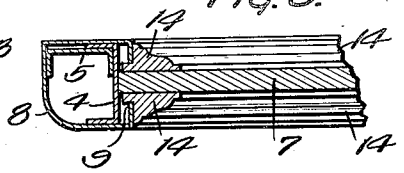
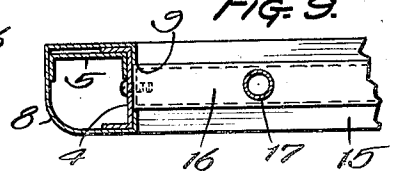


Fig. 9.



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FIREPROOF FURNITURE

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FIG. 10.

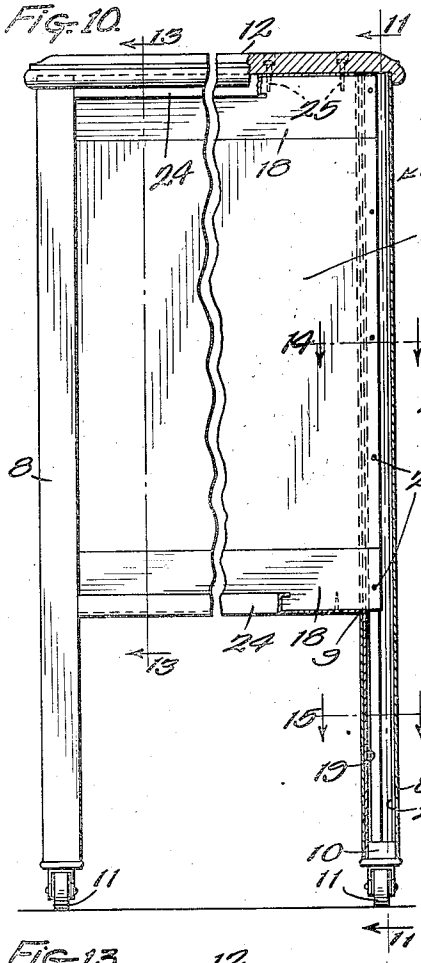


FIG. 11.

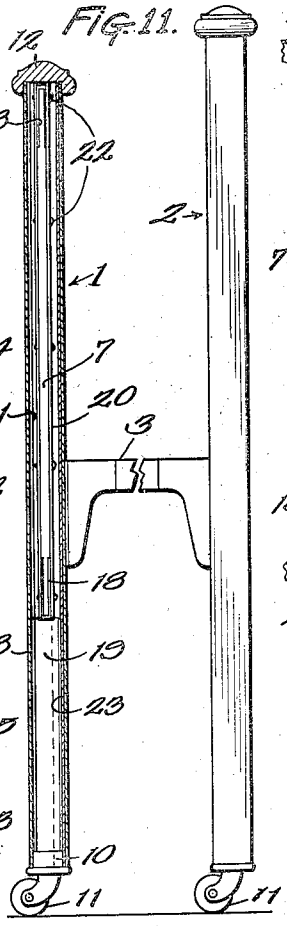


FIG. 12.

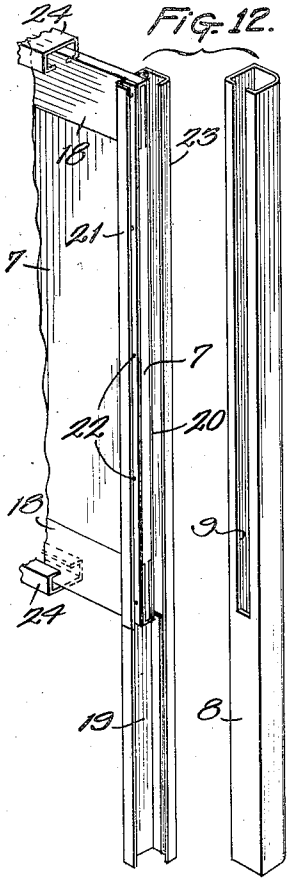


FIG. 13.

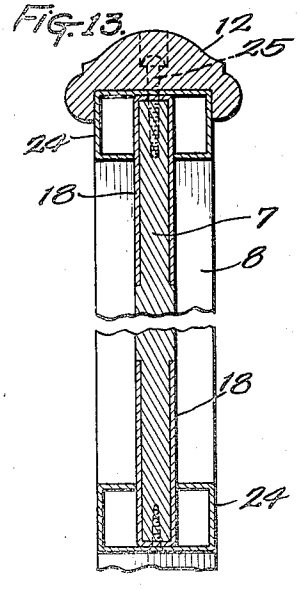


FIG. 14.

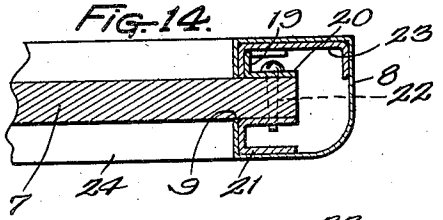
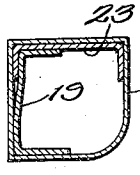


FIG. 15.



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FIREPROOF FURNITURE

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Fig. 16.

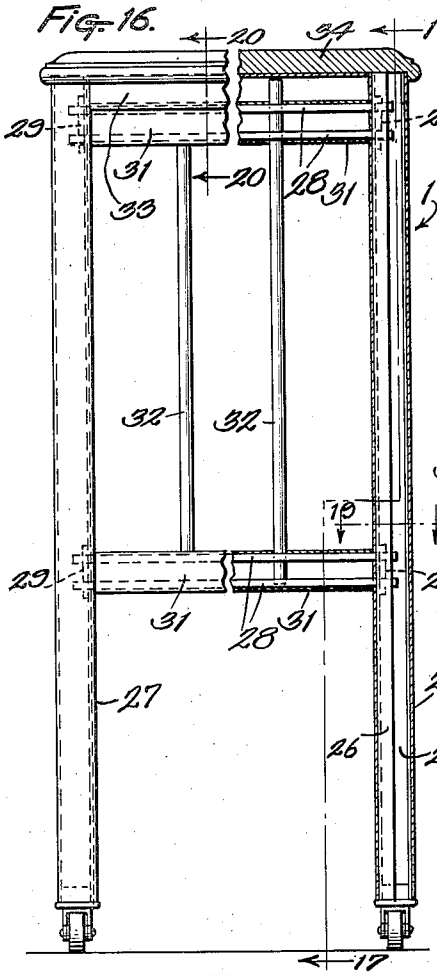


Fig. 17.

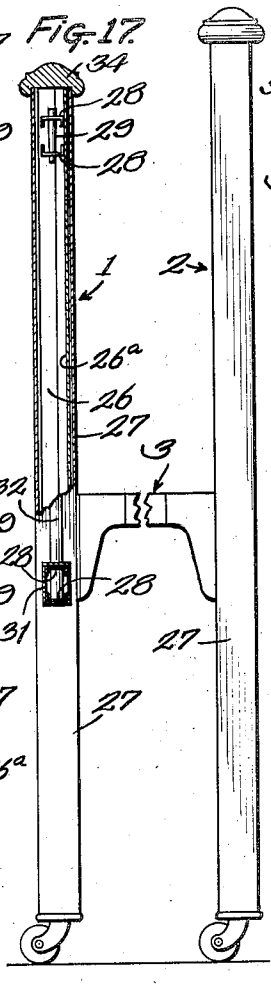


Fig. 18.

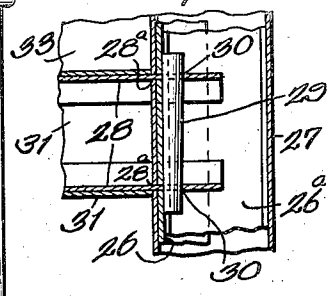


Fig. 19.

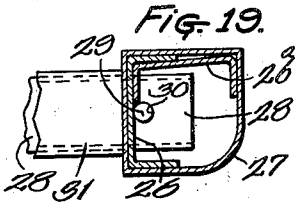


Fig. 20.

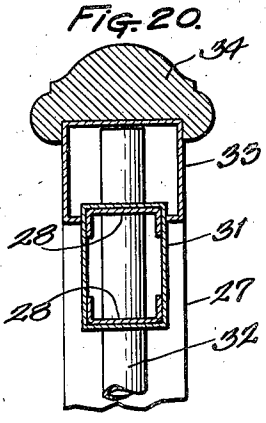


Fig. 22.

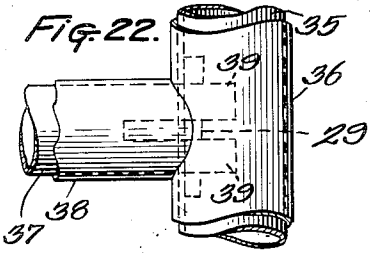


Fig. 23.

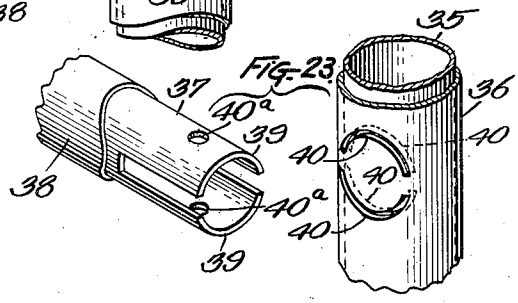
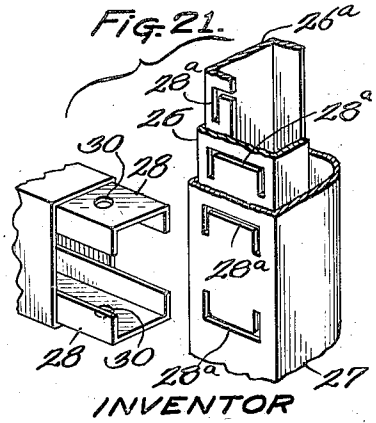


Fig. 21.



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Fig. 24.

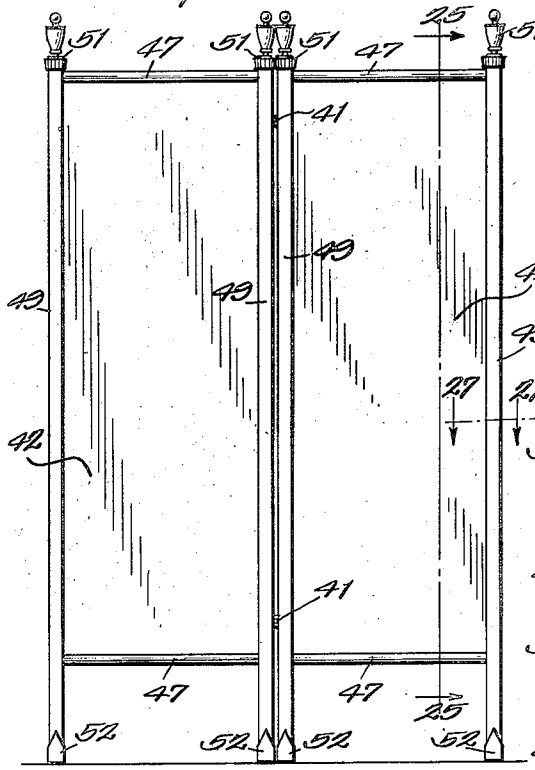


Fig. 25.

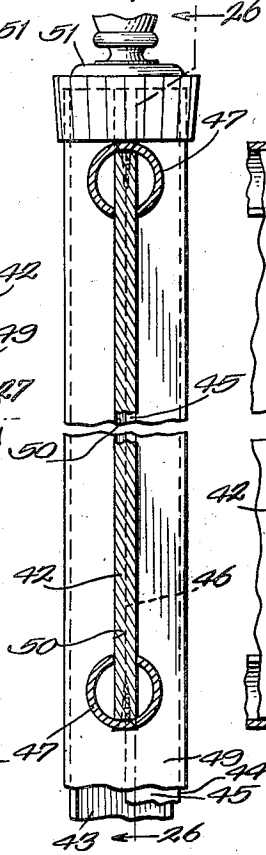


Fig. 26.

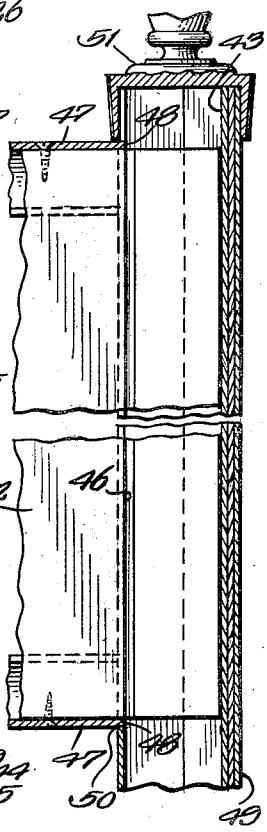


Fig. 28.

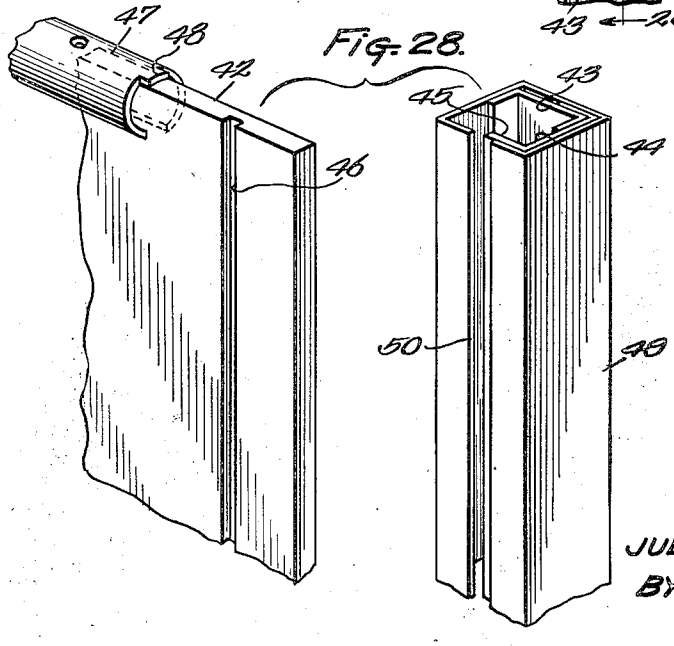
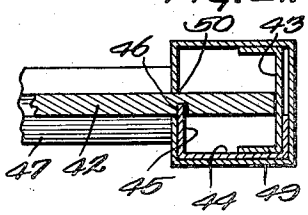


Fig. 27.



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UNITED STATES PATENT OFFICE

1,998,138

FIREPROOF FURNITURE

Jules P. Kiesecker, New York, N. Y.

Application April 9, 1934, Serial No. 719,726

10 Claims. (Cl. 5—279)

This invention relates to fireproof furniture which may be of an entire metal construction or may be a combination of metal with commercial fireproofing material, and relates more particularly to such a construction as applied to beds.

It is an object of this invention to provide an attractive and ornamental fireproof construction particularly designed and readily adapted to be joined together in the usual manner to form the ends or head and foot of a bed. It is a further object of this invention to provide such a construction, which is readily adaptable for other uses, such as joining together in the usual manner to form a panel screen.

It is to be understood that this improved construction is not limited to its use in beds and screens as it is readily adaptable for other purposes by making obvious detail changes from the forms illustrated herein.

With these and other objects in view, reference is made to the accompanying sheets of drawings which illustrate preferred embodiments of this invention, with the understanding that detail changes may be made therein without departing from the scope thereof.

In the drawings—

Figure 1 is a view of an embodiment of this invention as applied to the foot of a bed broken away at the center and contracted, partly in end elevation and partly in section.

Figure 2 is a view in side elevation of the frame of the bed with the foot and head constructed in accordance with this invention, with the connecting bars broken away in the center and contracted, and in which the foot is shown in section, taken on the line 2—2, Figure 1, looking in the direction of the arrows.

Figure 3 is a view in side elevation of the member enveloping a corner post as cut out to engage the panel or end board of the foot of the bed shown in Figure 1.

Figure 4 is an enlarged detail view in transverse vertical section taken on the line 4—4, Figure 1, with parts broken away.

Figure 5 is an enlarged detail fragmentary view in transverse horizontal section taken on the line 5—5, Figure 1.

Figure 6 is a view similar to Figure 1 of a modified form of this invention.

Figure 7 is a view similar to Figure 3 illustrating the member enveloping the corner post shown in Figure 6.

Figure 8 is an enlarged detail view in vertical transverse section taken on the line 8—8, Figure 6, with parts broken away.

Figure 9 is an enlarged detail view in transverse horizontal section taken on the line 9—9, Figure 6.

Figure 10 is a view similar to Figure 1 illustrating a further modification of this invention.

Figure 11 is a view similar to Figure 2 illustrating the application and structure shown in Figure 10.

Figure 12 is a projected view in perspective illustrating the end post construction and enveloping member therefor of the form shown in Figure 10.

Figure 13 is an enlarged detail view in vertical transverse section taken on the line 13—13, Figure 10, with parts broken away.

Figure 14 is a fragmentary enlarged detail view in transverse horizontal section taken on the line 14—14, Figure 10.

Figure 15 is an enlarged detail view in transverse horizontal section taken on the line 15—15, Figure 10.

Figure 16 is a view similar to Figure 1 of another modified form of this invention.

Figure 17 is a view similar to Figure 2 illustrating the modification shown in Figure 16.

Figure 18 is an enlarged fragmentary detail view in vertical section showing the means of attaching the end posts in place.

Figure 19 is an enlarged fragmentary detail view in transverse horizontal section taken on the line 19—19, Figure 16.

Figure 20 is an enlarged fragmentary view taken in transverse vertical section on the line 20—20, Figure 16.

Figure 21 is a projected view in perspective illustrating the means of attaching the end posts in place as shown in Figure 16.

Figure 22 is a fragmentary enlarged detail view in end elevation similar to Figure 18, illustrating a modification of the construction shown in Figure 16.

Figure 23 is a projected view in perspective illustrating the means of attaching the corner post of the construction shown in Figure 22.

Figure 24 is a view in front elevation of an application of this invention to a two panel screen.

Figure 25 is an enlarged view in transverse vertical section taken on the line 25—25, Figure 24, with parts broken away.

Figure 26 is a view in section taken on the line 26—26 of Figure 25, looking in the direction of the arrows.

Figure 27 is an enlarged detail fragmentary view

in the section taken on the line 27—27, Figure 24, looking in the direction of the arrows.

Figure 28 is a projected view in perspective illustrating the means of attaching the end members to the panels.

This invention is a further development or a carrying on of the principle of producing light weight extremely strong fireproof furniture as disclosed in this applicant's Reissue Patent No. 19,112 of March 13, 1934. While said patent relates to fireproof chairs per se, Patent No. 1,953,513 of April 3, 1934, a division of the earlier application, relates to chests of drawers, highboys or commodes, and this invention has applied the broad novel principles so disclosed to the production of reinforced fireproof panels which may be most advantageously employed in constructing beds and screens as well as other obvious uses without departing from the scope of the invention.

In carrying out this invention, it is contemplated to employ commercial metal structural forms or shapes, preferably of aluminum, for the main supporting members which are interlocking in character and preferably spot-welded together with other commercial metal structural forms or shapes for spacing and connecting members between said main supporting members and, when desired, to mount commercial metal structural forms or shapes, commercial metal covered panels, or commercial panels of compressed fireproof material therebetween.

Several different forms and applications of this invention are illustrated upon the accompanying drawings.

Figures 1 to 4, inclusive, illustrate an embodiment of this invention as applied to structures forming the ends of beds of the usual metal type. The feet board or panel 1 is of the same construction as the head board or panel 2 and the two are provided with any preferred means for attachment to the usual side bars 3, as shown in Figure 2. As shown in Figures 1 and 5, the main supporting members are formed by a channel 4 bent in the form of a flat arch, having its flanges extending upwardly and outwardly providing a rigid top spacing member with rigid depending legs. Each leg is reinforced throughout its length by a channel 5 interlocked with the leg channel, as shown in Figure 5, and may be spot-welded thereto. It is preferable to extend the upper end of each reinforcing member 5 beyond the curve of the main member to terminate in a plane passing through the top of the flat arch spacing member.

A rectangular metallic split sleeve 6 of such dimensions as to embrace the channel 4 forming the flat arch is placed thereover with its sides depending below the curved portions and extending from one member 5 to the other, with its lower split edges spaced apart sufficiently to embrace the top of a panel 7 of commercial compressed fireproof material. The panel 7 is formed so that its sides are snugly received between the members 5. A metallic sleeve or envelope 8 of a length equal to the reinforcing member 5 and of such a shape as to embrace the interlocked channels 4 and 5 provided with a longitudinal slot 9 of such shape as to receive the sides of the split sleeve 6 and panel 7 is then forced over the lower end of each reinforced leg with the split sleeve 6 and panel 7 assembled upon the main supporting channel member 4. The enveloping sleeve 8 may be rectangular in shape to snugly receive the interlocked channels 4 and 5, may be of sufficient dimension to be spaced apart from the main supporting channel 4, and the corner out of contact with the embraced channels may be rounded, as shown in Figure 5. The envelope 8 may be secured in position, as by spot-welding.

It is preferable to close the bottom of the envelope 8 with a metallic foot 10, which may support a caster 11. It is also preferable to provide an ornamental top rail 12 across the top, which may be of metal, fireproofed woods or the like, under cut to embrace the top of the split sleeve 6, ends of the reinforcing member 5 and ends of the envelope 8 surrounding them, as shown in Figures 1 and 4. The top rail, if of metal, may be spot-welded or may be secured to the flat portion of the main channel 4 by tap screws 13, threaded through the top of the split sleeve 6 and web of the channel 4, as shown in Figure 4. The bottom of the slot 9 in the envelopes 8 supports the panel 7 in place with its upper end embraced by the split sleeve 6 and its sides embraced by the sides of the slot 9. If desired a beading 14 of metal, fireproofed wood or the like may be applied about the edges of the panel 7 by extending the flat side of the panel engaging surface of the beading to enter between the spaced apart portions of the split sleeve 6, as shown in Figure 5, and between the edges of the groove 9. Also, if desired, the beading may be supported at different heights across the bottom of the panel by providing an L-shaped metallic support 15 extending from envelope 8 to envelope 8 being welded or screwed thereto and having its upper end flanged inward to engage the beading 14 on one side and its lower arm in engagement with the bottom of the panel 7 and extended therebeyond sufficiently to support the beading 14 on the opposite side. The support 15 and lower beading may be secured in any desired manner, as by screws passing through the bottom of the support to engage the body of the panel 7 and said beading, as shown in Figure 4.

In the form illustrated in Figures 1 to 5, inclusive, the panel 7 forms a continuous flat surface between the top rail 12 and corner posts formed by the envelopes 8. It may be desired to substitute a plurality of equally spaced apart vertical rods in place of the said continuous surface, and such a construction is shown in Figures 6 to 9, inclusive.

In this form two rectangular metallic rod supporting and spacing members 16 having closed ends are placed the desired distance apart and secured to the respective main channel 4, as by passing tap screws through the web of the channel to engage the end of the support 16, as shown in Figure 9, with the upper support in engagement with the spaced apart bottom portions of the split sleeve 6, as shown in Figure 8. A plurality of rods 17 are passed through equally spaced apart apertures provided in the opposite sides of the upper support 16 with their upper ends entering between the spaced apart portions of the split sleeve 6 and their lower ends passed through similar apertures provided in the upper side of the lower support 16 to rest upon and be supported upon the bottom or lower side thereof. Also, if desired, an L-shaped bracket similar to that disclosed in Figure 4, but having the flanges on its upper end continued under the lower support 16 and received thereto may be provided to balance the split sleeve 6, for the sake of appearance.

Another form of furniture panel as contem-

plated by this invention and adaptable for the ends of beds is shown in Figures 10 to 15, inclusive, in which the panel 7 of fireproofing material is employed as the spacing member between the corner posts.

In this form, it is preferable to enclose the top and bottom of the panel 7 with a metallic casing 18 with the sides inset to be flush with the outer surfaces of the panel. The sides of the panel are preferably secured to the supporting members of the corner posts by providing a metallic member 19 having a flange 20 adapted to engage one side of the panel and a U-shaped or deep channel member 21 with one of its flanges engaging the opposite side of the panel and the two secured therein by tap screws 22 passed through the flange 20 of the member 19, body of the panel and flange of the channel 21. If desired the member 19 may be in the form of a channel with the flanges cut out and the web bent to form the flange 20 and so formed that the normal flange below the cutout portion provides a continuation of the outer flange of the channel 21 secured to the panel. The other support member includes a metallic channel 23 interlocking with the member 19 and is placed thereon after the tap screws 22 have secured the members 20 and 21 upon the panel and may be secured thereto as by spot welding. The members 19 and 23 extend throughout the entire length of the corner posts while the members 20 and 21 extend only throughout the length of the panel 7.

After the supporting members 19, 21 and 23 have been secured to the sides of the panel 7 a rectangular metallic sleeve 8 for enveloping the supporting member, in the same manner as disclosed in relation to the preceding forms, and having a longitudinal slot 9 for receiving the panel 7 is forced over the bottom of the supporting member to completely envelop the same and engage the bottom of the panel. It is preferable to provide rectangular metallic split sleeves 24 of substantially the same width as the envelope 8 with the spaced apart portions embracing the sides of the panel. A top rail 12, similar to that described in the preceding forms, cut out on the underside to embrace the tops of the enveloped corner posts and top of the split sleeve 24 is secured thereon, as by screws 25 passing through the top of the split sleeve 24 to be engaged by the body of the panel 7. The lower split sleeve 24 may be secured also by similar screws. The split sleeves 24 fit snugly between the adjacent sides of the envelope 8. Feet 10 and support caster 11 may be secured to the bottoms of the corner posts as hereinafter described.

The form of this invention illustrated in Figures 16 to 21, inclusive, show another manner of spacing the corner posts and supporting therebetween a plurality of spaced apart rods to form a panel similar to that shown in Figure 6.

In this type the corner posts are formed of interlocking channels 26 and 26a extending throughout the entire length of each part and may be spot-welded. The interlocked channels are encased in a rectangular metallic envelope 27 throughout their entire length, the corner free of the channels may be rounded, as shown in Figure 19. The spacing members each include a pair of metallic channels 28 spaced apart with their flanges extending toward each other. The opposite ends of the spacing channels are passed through similarly shaped aligned apertures 28a in the assembled corner post channels 26 and 26a and envelopes 27, as shown in the projected view, Figure 21. The spacing channels 28 are secured upon the interior of the corner posts by drift pins 29 passed through apertures 30 provided therefore in the end of each web of each channel 28, as shown in Figures 18 and 19. Each pair of spacing channels 28 are encased in a rectangular envelope 31, the ends of which engage the adjacent surfaces of the envelopes 27 of the corner posts and hold the drift pins 29 in engagement with the interior of each post.

A plurality of spaced apart vertical rods 32 are supported in the spacing member by providing a plurality of apertures passing through the channels 28 and both top and bottom of the spacing envelope 31 about the upper spacing and supporting member through which the upper ends of the rods 32 may pass, and by providing similar apertures in the top of the envelope 31 and upper channel 28 of the lower supporting and spacing member through which the lower ends of the rods 32 may pass with their terminations resting and supported upon the upper surface of the lower channel 28, as shown in Figure 16. It is preferable to provide a rectangular metallic split sleeve 33 extending from corner post to corner post embracing the sides of the upper spacing and rod supporting member, the top of which is received in the under cut portion of a top rail 34, similar to those hereinbefore described, which undercut portion also embraces the tops of the corner posts.

Figures 22 and 23 illustrate the above described construction as applied when it is desired to use hollow cylindrical members 35 and 36 for the corner posts and a cylindrical supporting member 37 encased in a cylindrical spacing member 38. As shown, the ends of the member 37 are transversely slotted to form projecting tongues 39 which are received in arcuate aligned apertures 40 in the assembled corner posts and secured by drift pins passed through apertures 40a provided in the tongues, in the same manner as hereinbefore described.

The forms above described have rectangular corner posts and in these forms including a panel of insulating material are adapted as well as the one described to be united by the commercial screen hinges to form a multi-panel screen as the bottoms of the panels may be supported as near the floor as desired. Figures 24 to 28, inclusive, illustrate another modification of this invention which may be used as a bed end but is particularly designed for use as a screen panel.

Figure 24 illustrates a two panel screen in which the panels are joined to each other by commercial screen hinges 41 so that they may be folded in either direction, if desired. Each panel includes a rectangular sheet 42 of commercial compressed fireproof material engaging on each side with corner posts or supports. Each support includes two interlocking channels 43 and 44 extending throughout their length and secured to each other as by spot welding. The disengaged flange of one of the channels, such as the flange 45 of the channel 44, is extended to the transverse center line perpendicular to the web of the other channel. Each side of sheet or panel 42 adjacent each edge is provided with a groove 46 parallel to and coextensive with said side edge adapted to receive and be engaged by the end of the flange 45 with the edge of the side engaging the center of the web of the other channel, if desired, as shown in Figure 27. It is preferable to cover the top and

bottom exposed edges of the sheet or panel **42** with a split metallic sleeve **47** which may be rectangular in cross section or of tubular form, as shown. The end of the panel **42** is inserted between the spaced apart portions of the split sleeve **47** until the opposite portion is engaged and the contacting end may be secured thereto, as by countersunk screws, if desired. Each end of each sleeve **47** in engagement with an end of the panel **42** is provided with a longitudinal tongue **48** projecting slightly therebeyond and adapted to engage the flange entering into the groove **46**.

When the supporting members **43** and **44** have been assembled with the spacing sleeve **47** on the panel ends and the panel grooves **46** in engagement with the flange **45**, a rectangular metallic sleeve **49** having a longitudinal slot **50** of sufficient width to snugly receive the panel **42** is forced over the bottom of each supporting member to completely envelop the same with the bodies of the spacing split sleeves **47** in engagement with the envelope **49** and the tongues **48** entering into the slot **50** thereof. It is preferable to close the top opening in the slot **50** by a cap **51** having a recess upon the underside to receive the top of the supporting member and extend downwardly thereover to engage the top of the upper spacing sleeve **47**. The bottom of the slot **50** engages and supports the lower spacing member **47** through its tongue **48**. The bottoms of the supporting member may be provided with metallic feet **52** embracing the same, if desired, and the feet may support casters or not, as the case may be.

It is preferable to employ aluminum or duraluminum throughout for the metal construction and sheets of commercial compressed fireproof material or sheets of fire resisting material with a thin sheet of metal secured to each side for the panels.

This construction is therefore not only of light weight and fireproof, but is also inexpensive and possesses great strength.

What I claim is:

1. A metallic furniture panel including a plurality of structural metal shapes interlocked to form side supports, a plurality of structural metal shapes arranged between and secured to said side supports to form spacing members therefor, and means forming a part of said spacing members coacting to support and secure a closure for the space therebetween including a split sleeve, embracing the upper spacing member and a top rail embracing the tops of the side supports and top of the split sleeve and secured thereto.

2. A metallic furniture panel including a plurality of structural metal shapes interlocked to form side supports, a plurality of structural metal shapes arranged between and secured to said supports to form spacing members therefor, a panel of fireproofing material, means forming a part of said spacing members for engaging the respective top and bottom of said panel, and means forming a part of said side supports for engaging the respective sides of said panel by providing slots in the interlocking portions of the side supports to receive said side edges of said panel with one side of each slot having an inturned flange, means to secure the edges of the panel to said flanges, and a metallic envelope surrounding said side supports slotted longitudinally to engage the bottom and contiguous sides of said panel and hold the same in place.

3. A fireproof bed end including a metal structural shape bent in the form of a flat arch with the side portions depending perpendicular to the flat portions to form corner posts, additional metal structural shapes interlocked with each side portion and extended to the plane of the flat arch, a split sleeve embracing the flat arch portions, a panel embraced at its top by the split sleeve with its sides in engagement with the depending perpendicular portion of the arch, and a continuous metallic envelope slotted to receive the sides of the panel and ends of the split sleeve passed over each corner post to hold the panel in position.

4. The structure of claim 3 including a top rail recessed upon the underside to embrace both corner posts and split sleeve, and means securing the top rail to the flat portions of the arch.

5. A fireproof bed end including corner posts formed of interlocking structural metal channels with the corresponding adjacent channels in each corner post cut out and bent back for a portion of its height, a panel interposed between the corner posts with its opposite edges passing through cut out channels and in engagement with the bent back portion, an angle iron arranged on the opposite sides of the panel, means securing the angle iron and bent back channel portion to the panel, and a continuous metal envelope about each corner post slotted longitudinally to receive and embrace the sides of the panel and hold it in position.

6. The structure of claim 5, including split sleeves embracing the top and bottom of the panel and engaging said envelopes.

7. The structure of claim 5, including split sleeves embracing the top and bottom of the panel and engaging said envelopes, and a top rail embracing the tops of the corner posts and upper split sleeve and means for securing the top rail to the panel.

8. A fireproof bed end including a plurality of structural metal shapes interlocked to form side supports, a continuous metallic envelope surrounding the interlocked members of each support to form a corner post, spacing members between the corner posts each including spaced apart channels passing through individual openings in each corner post to receive the adjacent end of the spacing members, and a continuous metallic envelope surrounding each spacing member and engaging the opposite corner posts, the ends of each channel passing through the envelope and each interlocked supporting members therein and secured therein with the spacing envelope in contact with the corner post envelope.

9. The structure of claim 8 including a top rail embracing the tops of the respective corner posts.

10. The structure of claim 8 including a recessed top rail embracing each corner post and the top of a split sleeve embracing the upper portion of the upper supporting member.

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