

May 15, 1951

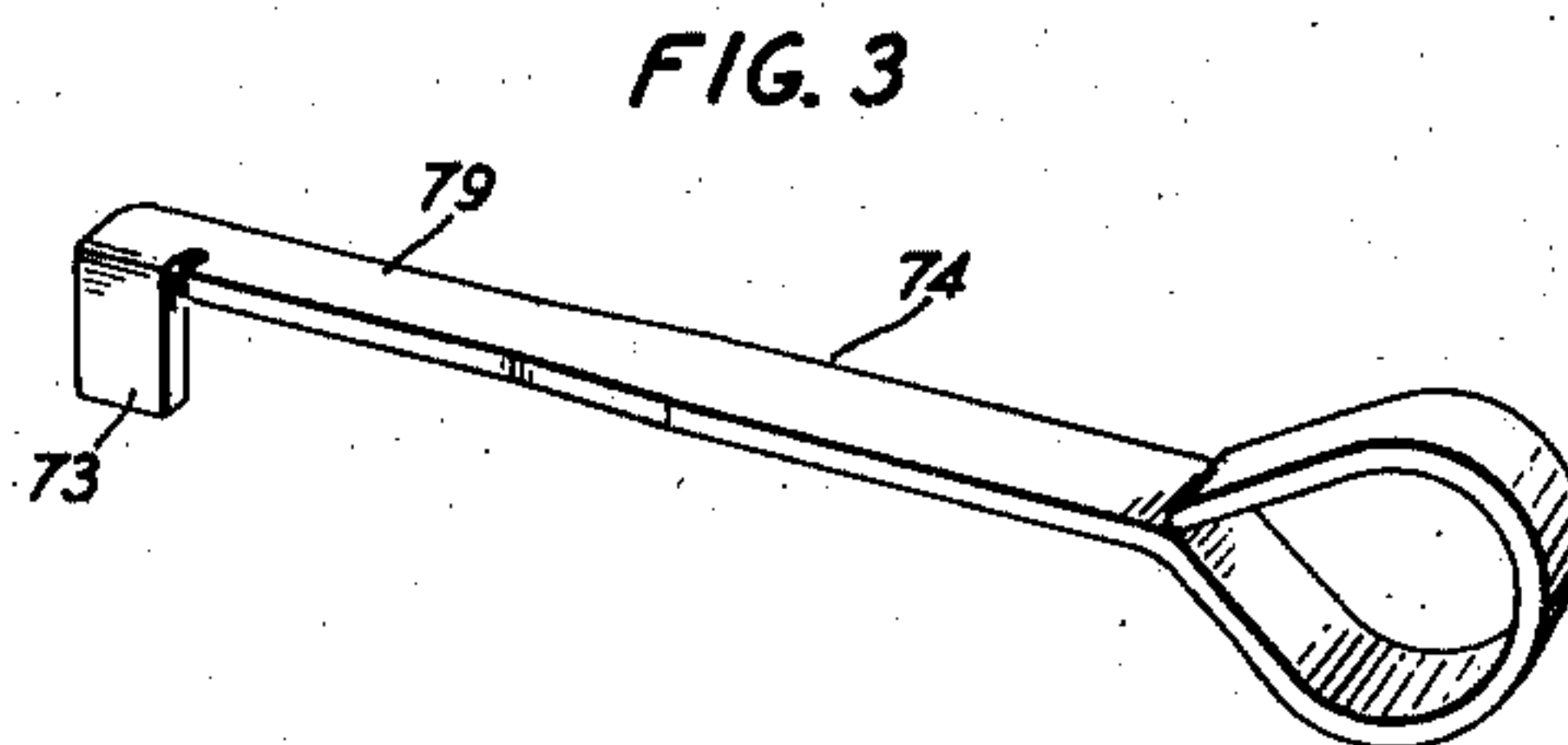
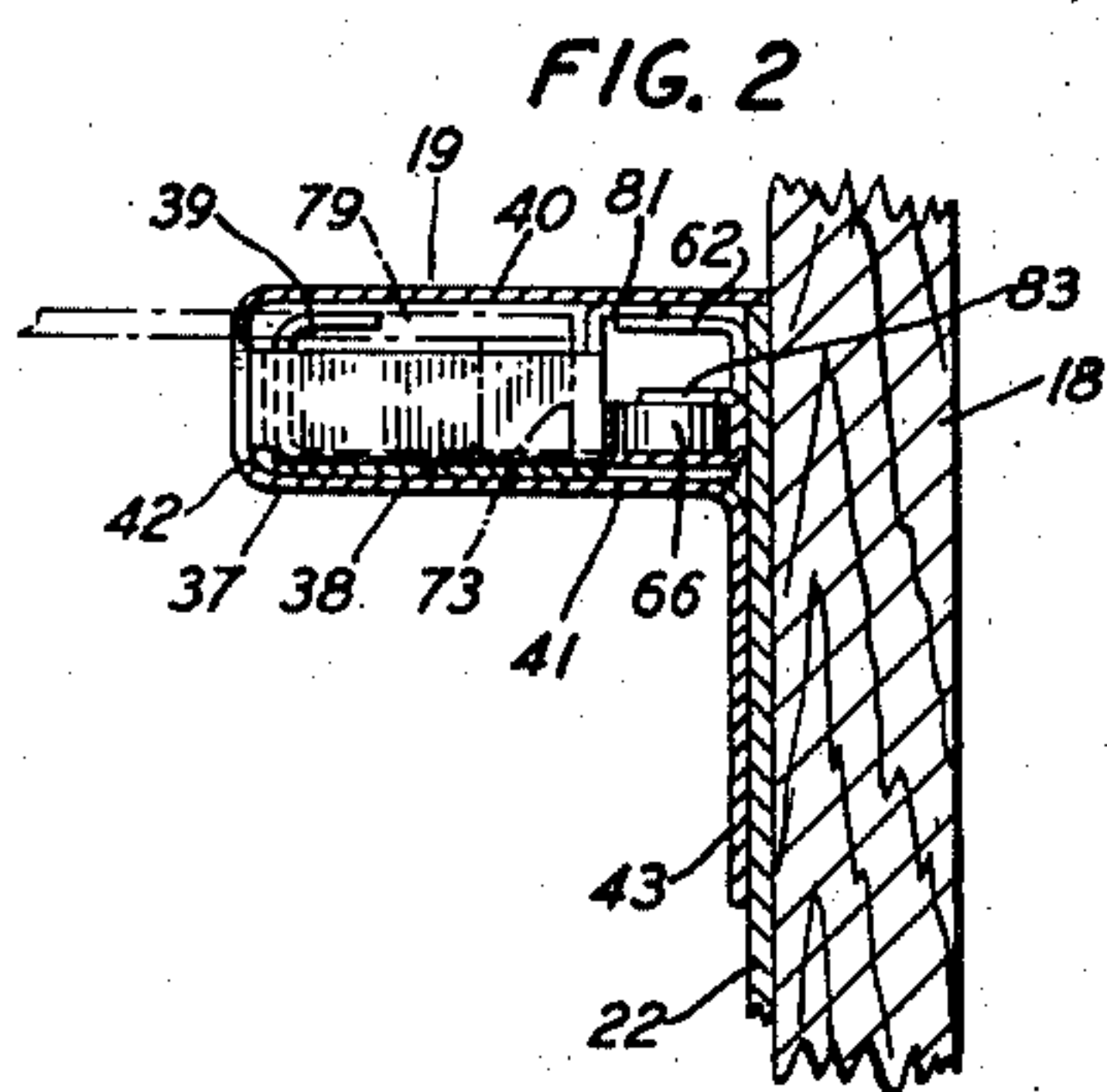
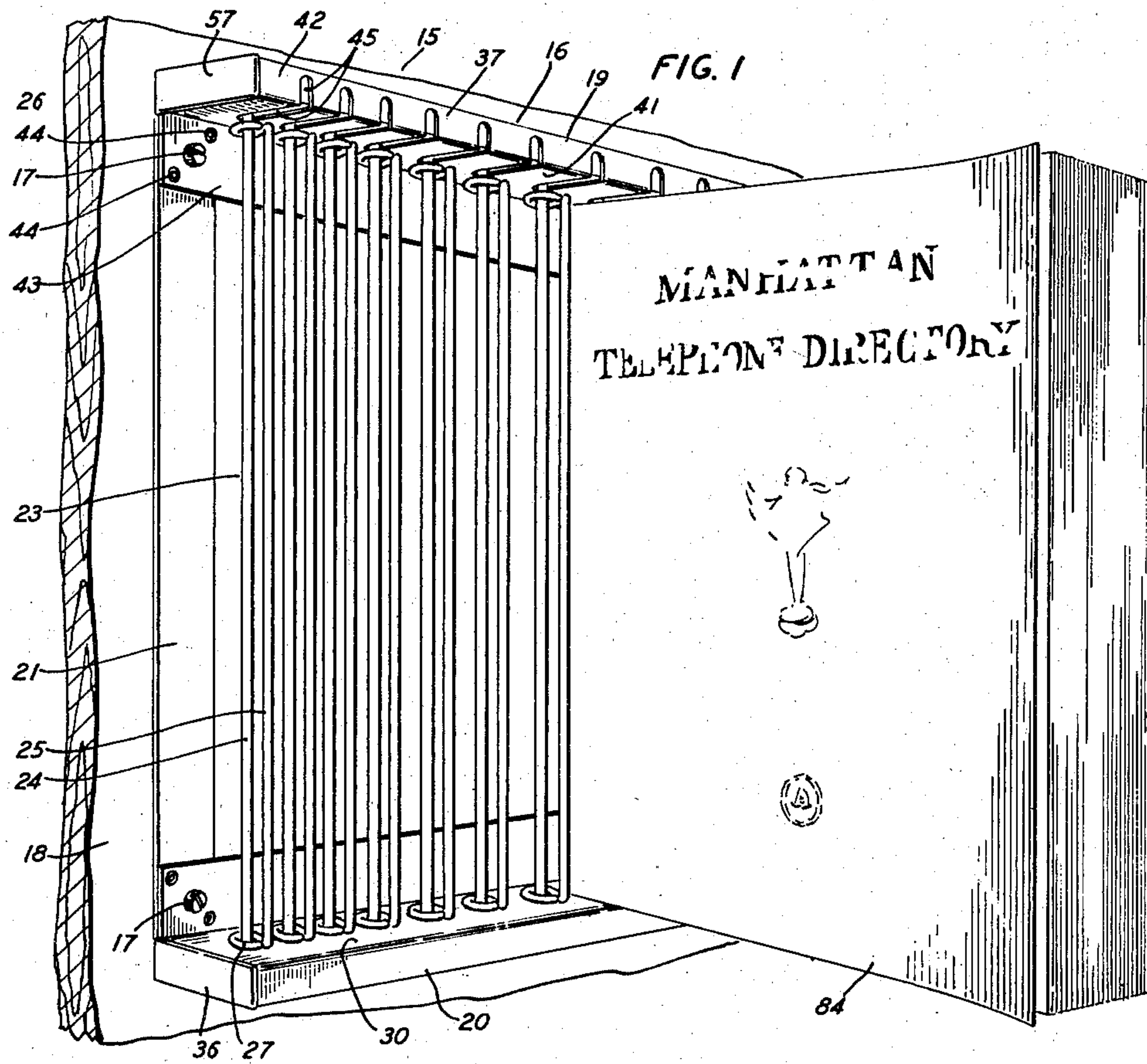
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2,552,704

HOLDER FOR BOOKS

Filed March 15, 1948

3 Sheets-Sheet 1



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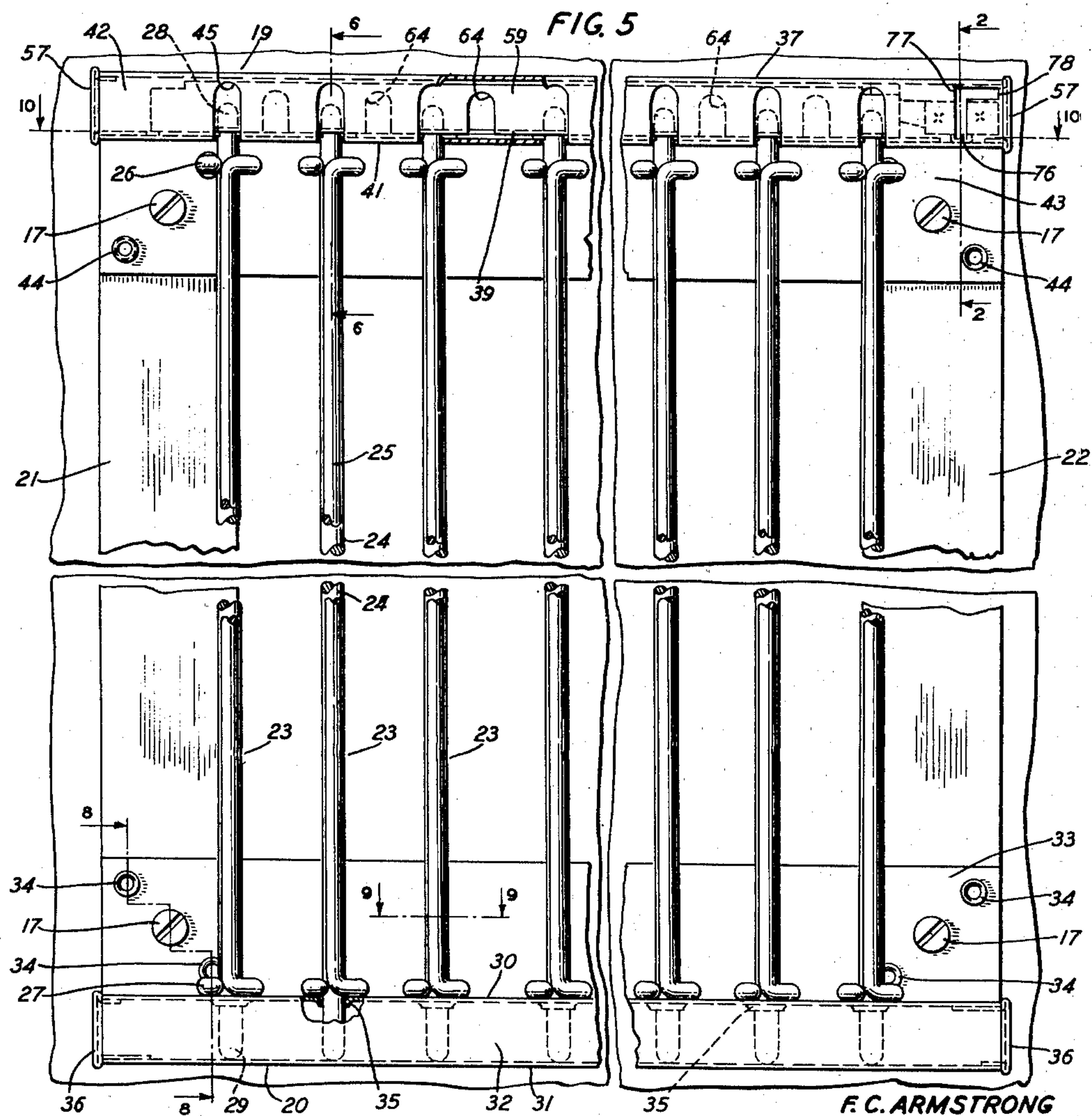
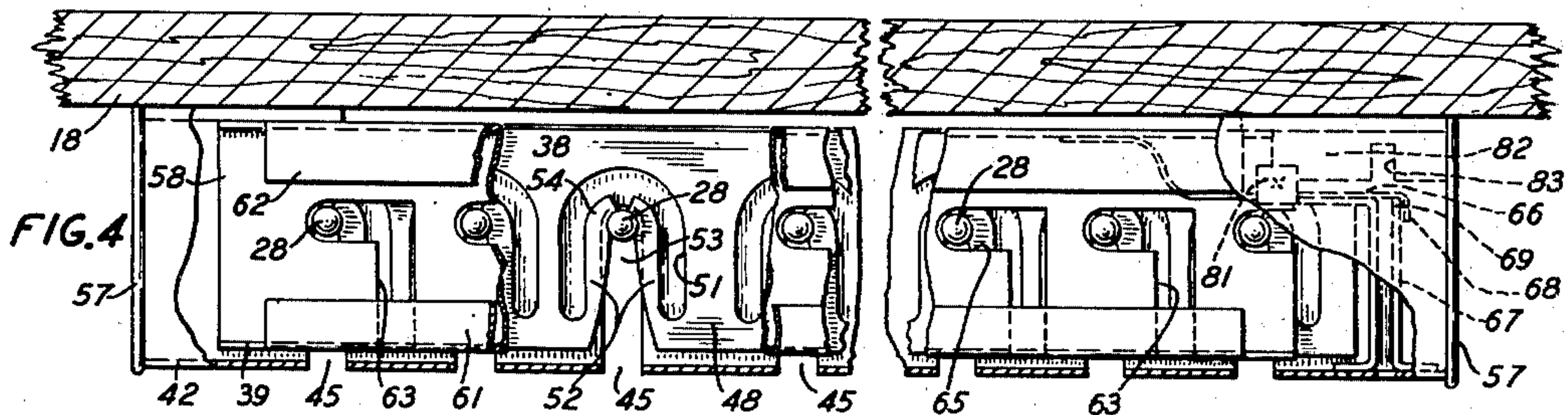
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3 Sheets-Sheet 2



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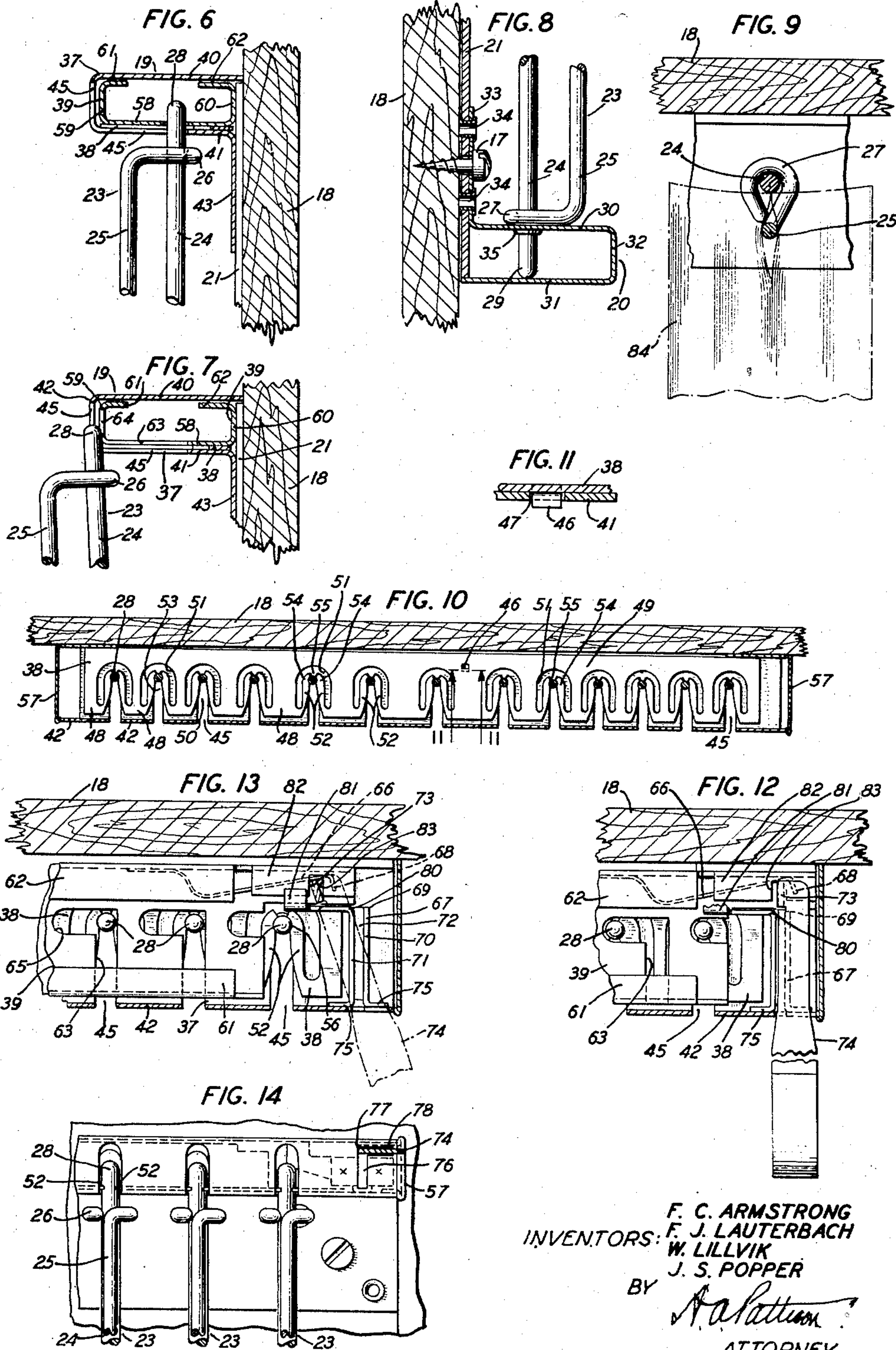
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HOLDER FOR BOOKS

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,552,704

HOLDER FOR BOOKS

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Application March 15, 1948, Serial No. 14,864

4 Claims. (Cl. 129—38)

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This invention relates to holders for books and more particularly to book holders of a type in which rod means attached to books are held in spaced bars of a support.

An object of the invention is to provide an improved book holder suitable for supporting a plurality of books in position for inspection of their contents without removal of the books from the book holder.

A feature of the invention resides in a set of bars constructed and arranged to hold the book rods in required place. One of the bars is comb-like in form and another of the bars is slidable relative to the comb-like bar.

Another feature resides in a key-operable lock means for the slide bar.

In the drawings:

Figure 1 is a view in perspective of the book holder of the invention and shows a book mounted in the book holder;

Fig. 2 is a view, partly in section, of a fragmentary portion of the book holder and with a key shown in dot-dash lines entered in place and is taken on the line 2—2 in Fig. 5;

Fig. 3 is a view in perspective of the key;

Fig. 4 is a top view of the book holder with certain portions broken away to disclose inner parts of the structure;

Fig. 5 is a front view of the book holder;

Fig. 6 is a view, partly in section, of a portion of the book holder and is taken on the line 6—6 in Fig. 5;

Fig. 7 is a view corresponding to Fig. 6 but showing a rod released from a bar portion;

Fig. 8 is a view, partly in section, of a lower bar of the book holder with a rod mounted therein and is taken on the line 8—8 in Fig. 5;

Fig. 9 is a view showing in dot-dash lines a portion of a book and in full lines rod means attached to the book and mounted in the lower bar of the book holder which is mounted on a board;

Fig. 10 is a view corresponding to Fig. 4 but with the slide bar and certain portions removed to more clearly disclose the comb-like bar;

Fig. 11 shows a retaining lug for the comb-like bar;

Fig. 12 shows a portion of the structure shown in Fig. 4 and with the key shown in Fig. 3 entered in the bar structure and unlocking the lock;

Fig. 13 shows the key operated to shift the slide bar to unlocked position; and

Fig. 14 is a front view of the portion of the structure shown in Fig. 13.

The book holder of the present invention pro-

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vides an improved means suitable for holding a plurality of telephone directories in place for use by the public in finding the telephone call numbers of substations in a telephone system.

Rod members provided in the book holder can be attached to books to be supported in the book holder and the rod members can be so mounted in a supporting frame that the books will be retained in place and held against unauthorized removal from the book holder.

As shown in Fig. 1 the book holder 15 comprises a support 16 that can be secured by means of screws 17 or other suitable means to a wall 18. The support 16 comprises an upper bar 19 and a lower bar 20 held in parallel spaced relation by spaced strips 21 and 22 shown in Fig. 5. The bars 19 and 20 are apertured at spaced points to receive rod assemblies 23, each of which can be attached to a book required to be mounted in the book holder 15.

Each rod assembly 23 comprises a straight rod 24 and a book-attaching rod 25, opposite end portions of the book-attaching rod 25 being angularly bent and formed into eyelet portions 26 and 27 through which the straight rod 24 can extend.

The book-attaching rod 25 is constructed for placement between leaves of a book and so that the eyelet portions 26 and 27 will be outside the book and extending rearwardly beyond the back of the book. In this position the straight rod 24 can be thrust through the eyelet portions 26 and 27 and disposed in parallel spaced relation with the outside surface of the back of the book, end portions 28 and 29 of the straight rod 24 being arranged to extend outwardly through and beyond the respective eyelet portions 26 and 27 of the book-attaching rod 25.

The bar 20 as shown in Fig. 8 is hollow and comprises upper and lower spaced walls 30 and 31 respectively, joined by a front wall 32 and the rear portion of the upper wall 30 terminates in an angularly extending and apertured flange 33 which is secured by rivets 34 or other suitable means to the strips 21 and 22. The upper wall 30 of the bar 20 is apertured at spaced points to receive end portions 29 of the straight rods 24, each aperture being defined by an annular and inwardly extending embossing 35 formed in the upper wall 30. End closures 36, as shown in Fig. 5, are provided at ends of the lower bar 20 to close the ends of the hollow structure, the end closures 36 being secured in place by suitable means such for instance as welds, not shown, but

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formed between the end closures 36 and the lower bar 20.

The upper bar 19 as clearly shown in Figs. 6 and 7 is a three-part structure comprising a hollow bar 37, a comb-like bar 38 and a slide bar 39. The hollow bar 37 comprises upper and lower spaced walls 40 and 41 respectively, joined by a front wall 42 and the rear portion of the lower wall 41 terminates in an angularly extending and apertured flange 43 which is secured by rivets 44 or other suitable means to the strips 21 and 22 shown in Fig. 5. Elongated apertures 45 are formed at spaced points in the hollow bar 37 to receive end portions 28 of the straight rods 24. Each aperture 45 extends into both the front wall 42 and the lower wall 41 of the hollow bar 37 to permit an end portion 28 of a straight rod 24 to be laterally thrust into the hollow bar 37.

Mounted within the hollow bar 37 and extending lengthwise thereof is the comb-like bar 38 which lies against the inner surface of the lower wall 41 of the hollow bar 37 and is held in place as shown in Figs. 10 and 11 by lugs 46 extending from the comb-like bar 38 and through apertures 47 in the wall 41.

The comb-like bar 38 as clearly shown in Fig. 10 has main teeth 48 which project from the back portion 49 and toward the inner surface of the front wall 42 of the hollow bar 37. The main teeth 48 cooperate to define openings 50 in register with the elongated apertures 45 in the hollow bar 37. Inverted U-shaped apertures 51 are formed in the comb-like bar 38 and so that one leg of each U-shaped aperture 51 extends into one of the main teeth 48 and the other leg of the U-shaped aperture 51 extends into the next main tooth 48. In forming the inverted U-shaped apertures 51 in the comb-like bar 38, reentrant teeth 52 are produced in the comb-like bar 38. The reentrant teeth 52 extend toward the back portion 49 of the comb-like bar 38 and two adjacent reentrant teeth 52 cooperate to define a continuation 53 of an opening 50 in the comb-like bar 38. The continuation 53 of the opening 50 extends between the inner end portions 54 of two adjacent reentrant teeth 52 and into the base portion 55 of the inverted U-shaped aperture 51 as shown in Fig. 10. As clearly shown in Fig. 13 two adjacent reentrant teeth 52 are so relatively spaced that an end portion 28 of a straight rod 24 can be laterally forced between them and the two reentrant teeth 52 will cooperate to closely grip the end portion 28 of the straight rod 24. In forcing the straight rod 24 between the reentrant teeth 52 some spring action is developed in the reentrant teeth 52, the free end portions of the two reentrant teeth 52 being normally closer together than the diametrical size of the straight rod 24. The free end portion of each reentrant tooth 52 has a curved recess 56 formed therein to allow the free end portions of the reentrant teeth 52 to cooperate to partially encircle the upper end portion 28 of the straight rod 24 when the straight rod 24 is laterally thrust to its final position between the two adjacent reentrant teeth 52.

The slide bar 39 as clearly shown in Figs. 6 and 7 is C-shaped in cross-section and is enclosed in the hollow bar 37. The slide bar 39 is shorter in length than the hollow bar 37 and is disposed lengthwise of and within the hollow bar 37. End closures 57, shown in Fig. 5, are provided at ends of the hollow bar 37 to close the ends of the hollow bar 37, the end closures 57 being secured in place by suitable means such for instance as welds, not

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shown, but formed between the end closures 57 and the hollow bar 37.

As shown in Figs. 4, 6 and 7 the slide bar 39 has a lower wall 58 arranged to slidably rest on the upper surface of the comb-like bar 38. The lower wall 58 terminates in upwardly extending side walls 59 and 60 which extend lengthwise of the slide bar 39. The side walls 59 and 60 terminate at their upper ends in angularly extending flanges 61 and 62 respectively, which are arranged to lie directly under the inner surface of the upper wall 40 of the hollow bar 37. L-shaped apertures 63 are formed at spaced points in the lower wall 58 of the slide bar 39 and the main leg of each L-shaped aperture 63 is continued into a continuation aperture 64 formed in the wall 59 as shown in Figs. 5 and 7. As shown in Figs. 4, 12 and 13 the main leg of the L-shaped aperture 63 is in communication with the horizontal leg 65 of the L-shaped aperture 63 and the slide bar 39 can be moved lengthwise from the position shown in Fig. 13, in which the main leg of the L-shaped aperture 63 is in register with an elongated aperture 45 in the hollow bar 37, to the position shown in Figs. 4 and 12 in which the main leg of the L-shaped aperture 63 is not in register with the elongated aperture 45 and the horizontal leg 65 extends about the end portion 28 of a straight rod 24 to entrap the upper end portion 28 of the straight rod 24 in the slide bar 39. When the slide bar 39 is in the position shown in Figs. 13 and 14 each L-shaped aperture 63 is in such position that its main leg is in register with an aperture 45 in the hollow bar 37. It will be seen, therefore, that in this position the end portions 28 of the straight rods 24 can be laterally moved into and out of the upper bar 19. It will also be seen that the upper end portions 28 of each straight rod 24 is gripped by two reentrant teeth 52 on the comb-like bar 38, the function of which is to prevent the straight rods 24 from falling out of the upper bar 19 when the slide bar 39 is in such position that the main leg portion of an L-shaped aperture 63 is in register with an aperture 45 in the hollow bar 37.

A lock is provided to hold the slide bar 39 against undue sliding from the position shown in Figs. 4 and 12 to the position shown in Fig. 13. The lock comprises a spring latch finger 66 and a keeper 67. The spring latch finger 66 is a leaf spring type member secured at one end to the slide bar 39 and having an angularly extending end portion 68 arranged to hook over an end portion 69 of the keeper 67 when the slide bar 39 is in the position shown in Figs. 4 and 12. The keeper 67 is channel-shaped in cross-section and has spaced side walls 70 and 71 cooperatively defining a passageway 72 for accommodation of a lug 73 on a key 74 shown in Fig. 3. The keeper 67 is provided with flanges 75 which are welded or otherwise secured to the inner surface of the wall 42 of the hollow bar 37 and so that the passageway 72 is in register with one leg 76 of an inverted L-shaped aperture 77 formed in the front wall 42 of the hollow bar 37. The other leg 78 of the L-shaped aperture 77 lies above the position of the keeper 67 and extends toward an end portion of the hollow bar 37 and is provided to accommodate a shank portion 79 of the key 74. The leg portion 78 of the L-shaped aperture 77 is longer than the width of the shank portion 79 of the key 74. The wall 71 of the keeper 67 terminates at its inner end in an angularly extending arm portion 80 equipped with a guide plate 81 which lies over a portion of a flange 82 on the slide bar

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39, the flange 82 being, in effect, an offset and broken continuation of the flange 62 and being narrower than the flange 62. A notch 83 is formed in the flange 82 to receive the lug 73 on the key 74, the notch 83 being considerably wider than the thickness of the lug 73 and being so located that the notch 83 will be in register with the passageway 72 in the keeper 67 when the slide bar 39 is in the position shown in Figs. 4 and 12 and will be out of register with the passageway 72 in the keeper 67 when the slide bar 39 is in the position shown in Fig. 13.

The slide bar 39 can be unlocked from the keeper 67 and can be moved longitudinally in the hollow bar 37 by means of the key 74 which can be thrust endwise into engagement with the latch finger 66 and pressed against the latch finger 66 to flex the latch finger to such extent that the end portion 68 is moved out of hooked engagement with the keeper 67. The key 74 can be thrust further to bring the lug 73 into the notch 83 and then be used as a lever to move the slide bar 39 to the position shown in Fig. 13 and then back to the position shown in Fig. 12. When the slide bar 39 has been moved by means of the key 74 to the position shown in Fig. 13 the key 74 cannot be withdrawn until the slide bar 39 is returned to the position shown in Fig. 12, in which case the key 74 can be withdrawn to allow the spring finger 66 to engage the keeper 67 to hold the slide bar 39 in locked condition.

The book holder shown in Fig. 1 can hold a plurality of books in convenient position for ready reference to the books without releasing the books from the book holder. Each book can be mounted in required place by attaching a rod assembly 23 to each book and placing the rod assembly 23 in required position in the support 16 which is secured to the wall 18.

Assuming that it is desired to mount a telephone directory in the book holder and that the key 74 is not in the book holder and the slide bar 39 is in locked condition. In order to mount the telephone directory in the book holder 15 the key 74 must be inserted in the upper bar structure 19 by way of the inverted L-shaped aperture 77 until the key 74 presses the latch finger 66 out of engagement with the keeper 67. With the latch finger 66 pressed out of engagement with the keeper 67 and with the lug 73 in the slot 83 the key 74 can be operated as a lever to the right of the position shown in Fig. 12 to the dot-dash line position shown in Fig. 13. In doing this the slide bar 39 is moved to the position shown in Fig. 13 and so that the slide bar 39 is in such position that the main leg portions of the inverted L-shaped apertures 63 in the slide bar 39 are in register with associated apertures 45 and 50 in the hollow bar 37 and the comb-like bar 38, respectively. In this case the comb-like bar 38 prevents the rod assemblies 23 from falling out of the upper bar 19 but a rod assembly 23 can be removed from the bars 19 and 20 simply by pulling the upper portion of the rod assembly 23 outwardly from between the reentrant teeth 52 and through the apertures 50 and 45 and then lifting the rod assembly 23 until the lower end portion 29 is out of the lower bar 20. The removed rod assembly 23 can be disassembled by withdrawing the straight rod 24 from the book-attaching rod 25. To mount the rod assembly 23 on the book the book is opened and the book-attaching rod 25 is placed between leaves of the book and so that the eyelet portions 26 and 27 extend rearwardly of the book 84 as shown in Fig. 9. The

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straight rod 24 is then placed along the outside of the back of the book 84 and through the eyelet portions 26 and 27 of the book-attaching rod 25.

With the rod assembly 23 attached to the book 84 as shown in Fig. 9 the book can be mounted in place by simply inserting the lower end 29 of the straight rod 24 in an aperture in the upper wall 30 of the lower bar 20 and then laterally thrusting the upper end portion 28 of the straight rod 24 through the apertures 45 and 50 of the hollow bar 37 and the comb-like bar 38 until the reentrant teeth 52 snap into gripping engagement with the upper end portion 28 of the straight rod 24. The length of the straight rod 24 and the spacing of the bars 19 and 20 is such that the straight rod 24 can be lifted out of the lower bar 20 only when the upper end portion 28 of the straight rod 24 is entirely clear of the upper bar 19. When the book 84 is properly supported in the book holder 15 the slide bar 39 can be moved by means of the key 74 from the position shown in Fig. 13 to the position shown in Fig. 12 to prevent lateral withdrawing of the straight rod 24 from the upper bar structure 19. In the position shown in Fig. 12 the key 74 can be withdrawn from engagement with the slide bar 39 and removed from the book holder 15 since the lug 73 on the key 74 is in register with the passageway 72 in the keeper 67. When the key 74 is withdrawn from the slide bar 39 the spring latch 66 under its own spring tension moves into engagement with the keeper 67 and so that the angularly extending end portion 68 of the spring latch finger 66 comes into hooked-over engagement with the edge portion 69 of the keeper 67 as shown in Fig. 4. In this position any straight rod 24 properly mounted in place in the support 16 is locked by means of the slide bar 39 against removal from the support 16.

When a book 84 is locked in the book holder 15 and it is desired to remove the book 84 the slide bar 39 must be moved to the position shown in Fig. 13. This can be done by inserting the key 74 in the book holder 15 until the spring latch finger 66 is pressed out of engagement with the keeper 67 and the lug 73 is in the slot 83 and then using the key 74 as a lever to move the slide bar 39 lengthwise to the position shown in Fig. 13. In this position the upper end of the straight rod 24 can be pulled laterally from between the reentrant teeth 52 and through the aperture 45 in the hollow bar 37 until the upper end of the straight rod 24 is clear of the bar structure 19. The straight rod 24 can then be lifted out of the lower bar 20 until the rod assembly 23 on the book 84 is released from the support 16. The rod assembly 23 can be released from the book 84 by withdrawing the straight rod 24 from the book-attaching rod 25 which can then be withdrawn from between pages of the book 84.

What is claimed is:

1. A book holder apparatus comprising a rod to be attached to a book, a support, an apertured bar secured in said support and constructed and arranged to receive one end portion of said rod, an apertured hollow bar secured in said support and in parallel spaced relation with said apertured bar and constructed and arranged so that an opposite end portion of said rod can be laterally moved into said apertured hollow bar, a comb-like bar secured in said apertured hollow bar and having teeth to cooperatively grip an end portion of said rod, the space between the teeth in said comb-like bar being in register with an aperture in said hollow bar, a slide bar movably

supported in said apertured hollow bar, said slide bar having an angular shaped aperture formed therein, one portion of which can be brought into and out of register with an aperture in said hollow bar by movement of said slide bar and another portion of the angular shaped aperture being arranged to receive an end portion of said rod when said slide bar is moved in one direction, lock means to hold said slide bar in one position and key means insertable in said hollow bar and into engagement with said lock means and said slide bar and operable as a means to unlock said lock means and slidably move said slide bar.

2. A book holder apparatus comprising two bars supported in parallel spaced relation, one of said bars having apertures formed therein at spaced points, the other of said bars being a hollow bar and having elongated apertures formed therein at spaced points and extending through an outer edge of the hollow bar, inner ends of the elongated apertures in the hollow bar being in register with the apertures in the first-mentioned bar, rod assemblies extending between and into said two bars and constructed to be attached to books, an end portion of each rod assembly being laterally thrustable into an elongated aperture in said hollow bar, a comb-like bar supported in said hollow bar and having its teeth arranged to closely grip end portions of said rod assemblies when said rod assemblies are mounted in place, a slide bar movably supported in said hollow bar and operable to slide lengthwise in said hollow bar, said slide bar having angular shaped apertures formed therein at spaced points and having portions of the angular shaped apertures extending through an edge of said slide bar and operable to be brought into and out of register with the elongated apertures in said hollow bar by suitable movements of said slide bar and said slide bar being effective in one of its positions to prevent withdrawal of said rod assemblies from said hollow bar and said comb-like bar, lock means to hold said slide bar in position to prevent removal of said rod assemblies and a key insertable in said hollow bar and into engagement with said lock means to release said lock means from holding said slide bar, said key being also operable as a lever to move said slide bar when said lock means is operated to release said slide bar for movement.

3. A book holder apparatus comprising rod assemblies to be attached to books, a frame to support said rod assemblies, upper and lower hollow bars on said frame and having spaced apertures formed therein into which end portions of said rod assemblies can be laterally thrust, a comb-like bar secured in said upper hollow bar and having its teeth constructed and arranged to grip end portions of said rod assemblies entered in said hollow bar, a slide bar supported for lengthwise movement in said upper hollow bar and hav-

ing L-shaped apertures formed therein at spaced points to accommodate end portions of said rod assemblies, the main leg portions of the L-shaped apertures being operable to receive end portions of said rod assemblies when said slide bar is in one position, the other leg portions of the L-shaped apertures being operable to receive end portions of said rod assemblies when said slide bar is moved to another position, said slide bar being operable in one position to permit insertion or withdrawal of said rod assemblies in said frame and being operable in another position to prevent withdrawal of said rod assemblies from said upper comb-like bar and said hollow bar and key-operable lock means to releasably hold said slide bar in position in said upper bar to prevent withdrawal of said rod assemblies from said upper and lower hollow bars on said frame.

4. A book holder apparatus comprising rod assemblies to be attached to books, a frame to support said rod assemblies, upper and lower apertured hollow bars in said frame constructed and arranged to permit lateral insertion of end portions of said rod assemblies in said frame, a comb-like bar secured in said upper hollow bar, reentrant teeth in said comb-like bar to grip end portions of said rod assemblies, a slide bar movably supported in said upper apertured hollow bar and having L-shaped apertures formed therein to receive end portions of said rod assemblies, said slide bar being operable in one position to hold said rod assemblies from removal from said frame and being operable in another position to permit removal of said rod assemblies, a spring latch finger secured to said slide bar, a keeper for said spring latch finger secured to said hollow bar, said spring latch finger being operable to engage said keeper to hold said slide bar against movement to a releasing position for said rod assemblies and key means insertable in said keeper and into engagement with said spring latch finger to release said spring latch finger from said keeper and also operable as a lever to engage and move said slide bar lengthwise in said upper hollow bar.

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