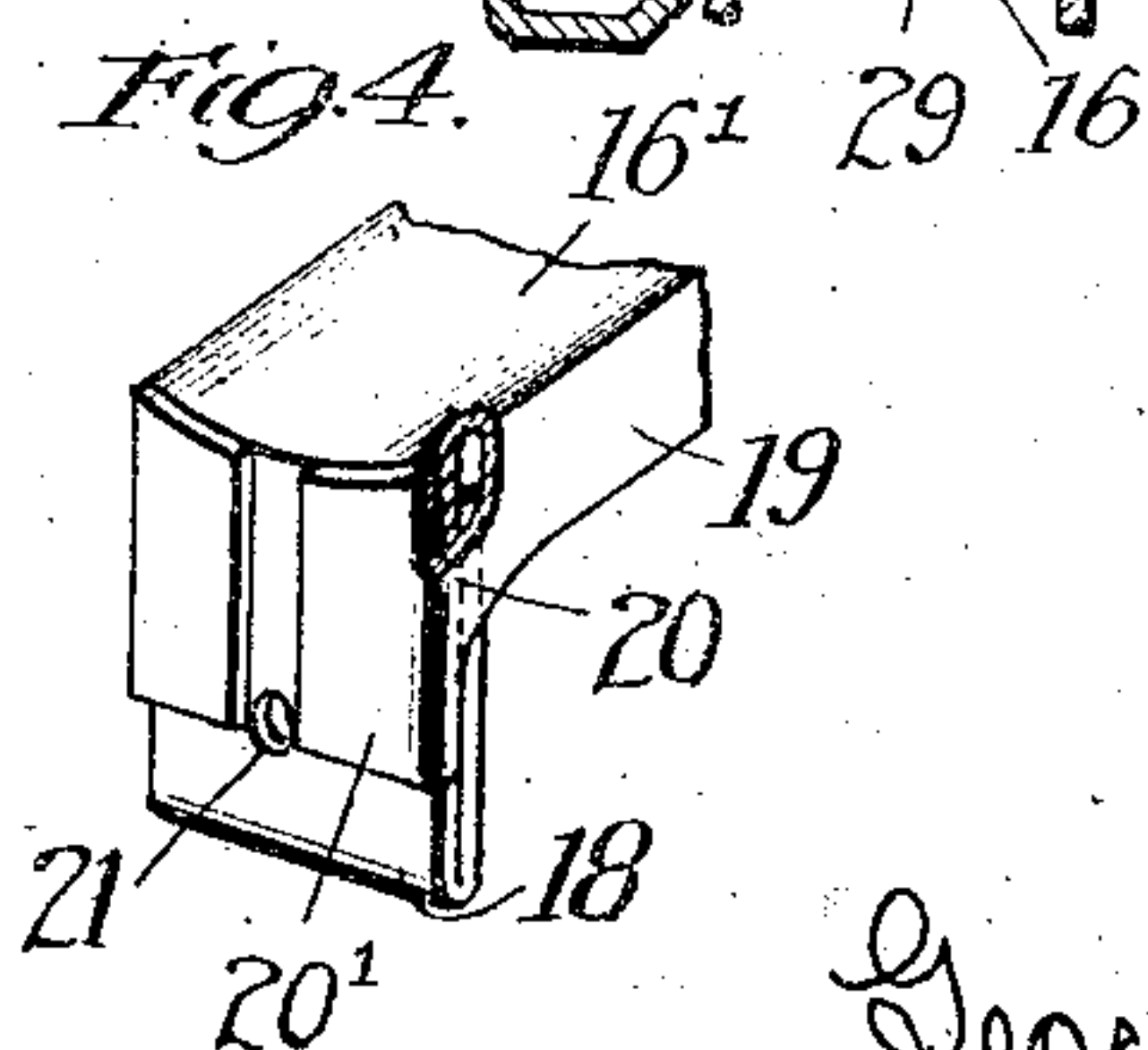
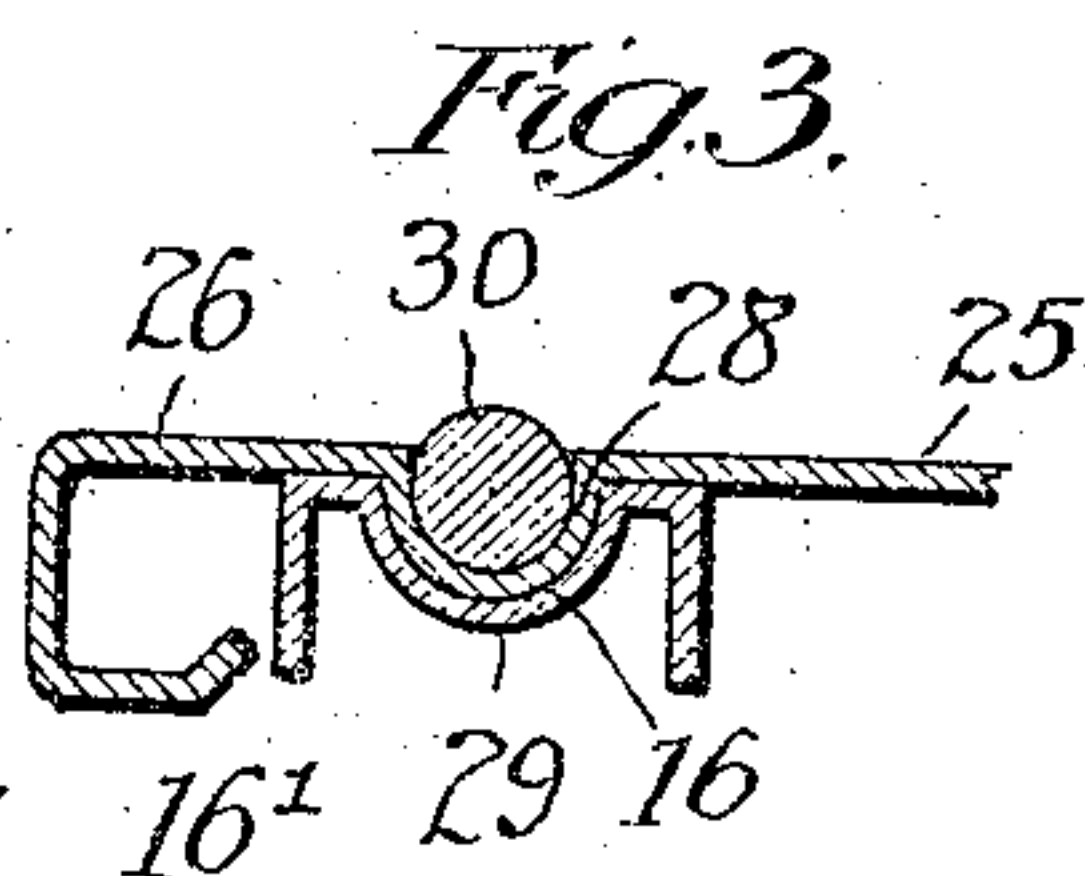
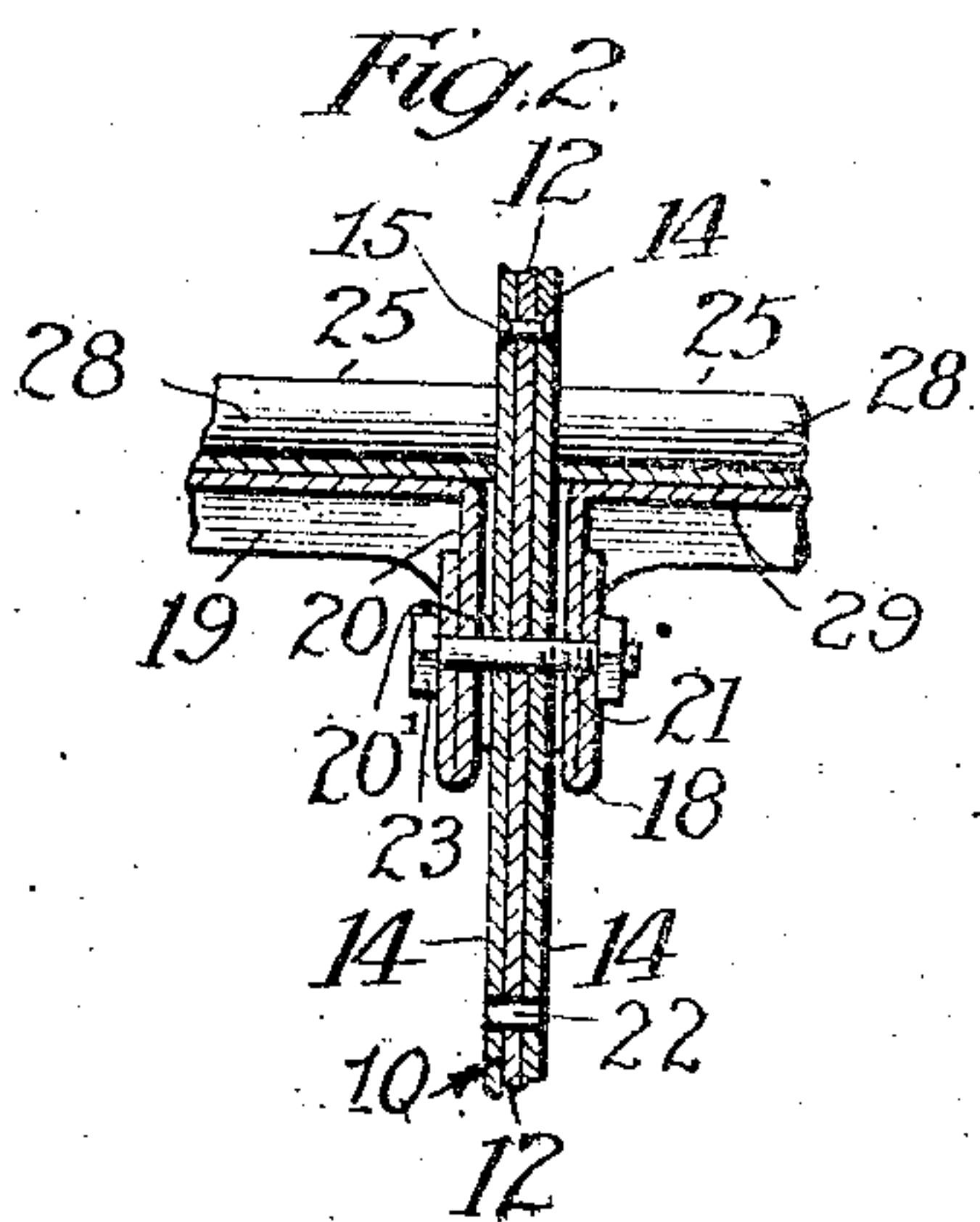
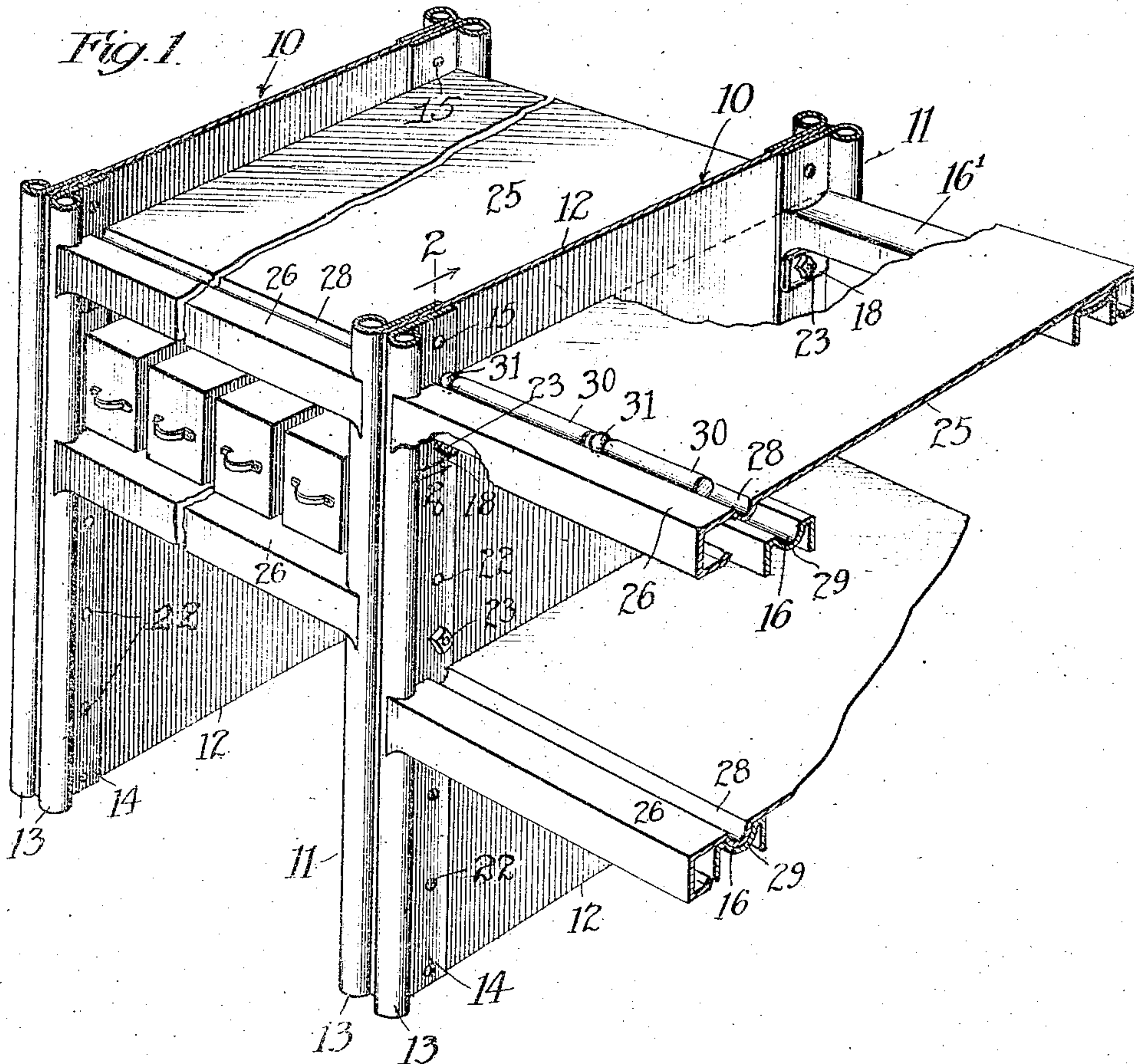


G. H. HURTEAU.  
METALLIC SHELVING.  
APPLICATION FILED NOV. 25, 1908.

929,308

Patented July 27, 1909.



Witnesses  
R. A. White  
Henry R. Lechite

Inventor  
George H. Hurteau  
By *Forrest Bainbridge*  
*Attys*



# UNITED STATES PATENT OFFICE.

GEORGE H. HURTEAU, OF MONTGOMERY, ILLINOIS.

## METALLIC SHELVING.

No. 929,308.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed November 25, 1908. Serial No. 464,473.

*To all whom it may concern:*

Be it known that I, GEORGE H. HURTEAU, a citizen of the United States, residing at Montgomery, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Metallic Shelving, of which the following is a specification.

My invention relates to improvements in metallic shelving, and has among its salient objects to provide a knockdown metallic shelving construction, constituted of interchangeable or counterpart elements which may be readily erected in sections of suitable number to provide desired length of shelf room, and which may be increased or decreased by addition or removal of unit sections.

A further object of my invention is to provide a sectional shelving structure wherein the shelves and supporting rails of each section are local to such section unit and may be vertically adjusted to suitable elevations without regard to the elevation of the shelves in adjoining sections and irrespective of the location of the section in its row, that is, whether such section is in an end or middle position.

Another object of my invention is to provide structural elements which are few in number, strong, light, cheap, economical in space requirement and adapted for assembling with ease in relation insuring rigidity and durability.

Yet a further object of my invention is to provide a shelf structure facilitating removal therefrom and restoration thereto of boxes and the like.

Other and further objects of my invention will become apparent to those skilled in the art from the following description taken in conjunction with the accompanying drawings, in which:

Figure 1 is a perspective view of a fragment of a shelving installation embodying my invention; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a transverse section through a rail, roller and shelf, and; Fig. 4 is a perspective detail of one end of a sheet metal rail.

In the embodiment of my invention I provide in general suitable upright structures constituting section ends, pairs of rails connecting said section ends at the front and rear of the shelving, each preferably local to its section, and shelves supported upon said rails likewise each preferably local to a sec-

tion. More specifically I prefer that all section ends shall be counterparts and that each shall comprise a pair of upright posts, connected transversely of the shelving stack by sheet metal strips or a plate. In the specific construction shown each section-end, generally indicated at 10, consists of two upright post members 11—11, connected together transversely of the shelving stack by a sheet-metal plate 12. The post members 11 may be of various structural designs, but I prefer that each such post shall comprise two parallel tubular uprights, or beads 13, 13, formed by rolling sheet metal in a tubular form, each said upright having projecting tangentially therefrom a vertical web 14, said webs being arranged in opposing relation to embrace between them the sheet or plate 12, and secured to said plate as by counter-sunk rivets 15. Thus it will be apparent that in the specific construction described each section end takes the form of a vertical plate strengthened at its vertical edges by reinforcing webs 14, and further by connection thereto of the tubular beads or uprights 13. Such construction requires no extended feet or bases, as the bearing afforded by the posts and plate is generally ample.

The section ends 10 of each section are connected together at their front and rear edges by pairs of rails 16, 16', respectively, local to such section, and the connection of each said rail with its section ends, is detachable and vertically adjustable. Each rail, 16 and 16', is preferably formed of sheet metal bent into channel form, preferably shaped to provide a more or less concave top surface, depending sides and integral closed ends, so that each rail is light and strong, and provides a good end bearing surface. In the construction of the rail ends I preferably provide the top of the rail with an extension 18 which is bent down and then folded back upon itself, as shown, and provide the sides 19 with enlarged extremities 20 terminating in extensions 20', which are bent inward toward each other beyond the down-turned web 18, thereby to completely close the end of the channel and provide extended vertical end bearing faces. For attaching each rail to its section ends I provide in the closed end of the rail one or more apertures 21 for bolts, and in the reinforced web-portion 14 of each end section I provide a series of bolt-holes 22, extending through the webs 14 of the uprights 13, and through the plate 12. By



this construction rails of adjoining sections may be brought into horizontal alinement and the two rails secured in common by a single bolt 23 passing through the rail ends and the intervening section end, or as shown in Fig. 1, shelves may be arranged at different elevations in adjoining sections and each shelf independently secured by bolts 23 taking through the appropriate holes in the end sections. Thus it will be apparent that I have provided a shelving structure wherein the attachment and detachment of the shelves is easily accomplished, and the shelves of each section may be adjusted vertically without reference to the height of the shelves in the adjoining sections.

The shelves 25, I prefer shall be of sheet metal, and each local to its section. Each such shelf preferably has its edge bent downwardly, inwardly and then slightly upwardly to form a strengthening bead 26. It is my preference to construct the shelves 25 and their front rails, or such of them as carry heavy objects comparatively difficult to move, with rollers adjacent their front edges, to facilitate the slipping of the weighty object onto or from the shelves. To this end I provide near the front edge of the shelf, as shown to the right in Fig. 1, a roller channel 28, in the form of a deep depression, preferably at its under side interfitting in a similar depression 29, in the front rail 16, said groove or depression 28 being deep enough to receive and retain one or more rollers 30 so that only their upper surfaces project. For some purposes it is convenient to provide a number of independent rollers, each of a length substantially corresponding with a box or other body to be shelved, and in such instances I preferably provide between adjoining rollers and between the end rollers and the section ends, balls 31, of diameter substantially corresponding with that of the rollers.

While I have herein described in some detail a specific construction embodying my invention, it will be apparent to those skilled in the art that numerous changes in the structure might be made without departure from the spirit of my invention, within the scope of the appended claims.

Having described my invention, what I claim is;

1. Metallic shelving, comprising section ends, channel rails having closed ends formed by down-folding the top and in-folding the side of the channel, bearing against and connected to the section ends, and shelves supported on said rails.

2. Knock-down shelving consisting of section ends each comprising a vertical plate reinforced at its vertical edges, metallic side rails, each local to a section, means for connecting the rails to the reinforced edges of the section ends, permitting vertical adjustment of the side rails of each section independently of the remaining sections, and shelving carried by said rails.

3. In a shelving structure, section ends each comprising two vertical posts each formed of sheet metal, providing a tubular part and an integral projecting strip, and means uniting the strips of the two posts; side rails carried by said section ends and shelving supported on said side rails.

4. In a shelving structure, section ends, front and rear side rails formed of sheet metal bent to channel configuration with both sides in-bent at their extremities to abut against the section end and shelving supported on said side rails.

5. In a shelving structure, section ends, front and rear side rails formed of sheet metal bent to channel configuration and having their upper surfaces concaved and shelving supported on said side rails.

6. In a shelving structure, section ends each composed of a vertical plate, to each edge whereof are secured companion post members, each said post member being formed of sheet metal bent into tubular formation with a tangentially projecting web, said webs of the companion post members being arranged on opposite sides of the plate, and secured thereto, side rails supported by the section ends and shelving supported by the said rails.

7. In a sectional shelving structure, section ends, side rails connecting said section ends, each formed of sheet metal bent to channel configuration throughout its length, and providing relatively deep end walls formed by doubling and down-bending the central element of the channel and in-folding the sides, and means connecting the end walls of said rails to the section ends.

8. In a shelving structure, shelf supporting means comprising a rail with a top depression therein, a shelf thereon having a similar depression, and a roller in the depression of the shelf.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

GEORGE H. HURTEAU.

In the presence of—  
GEO. T. MAY, Jr.,  
MARY F. ALLEN.