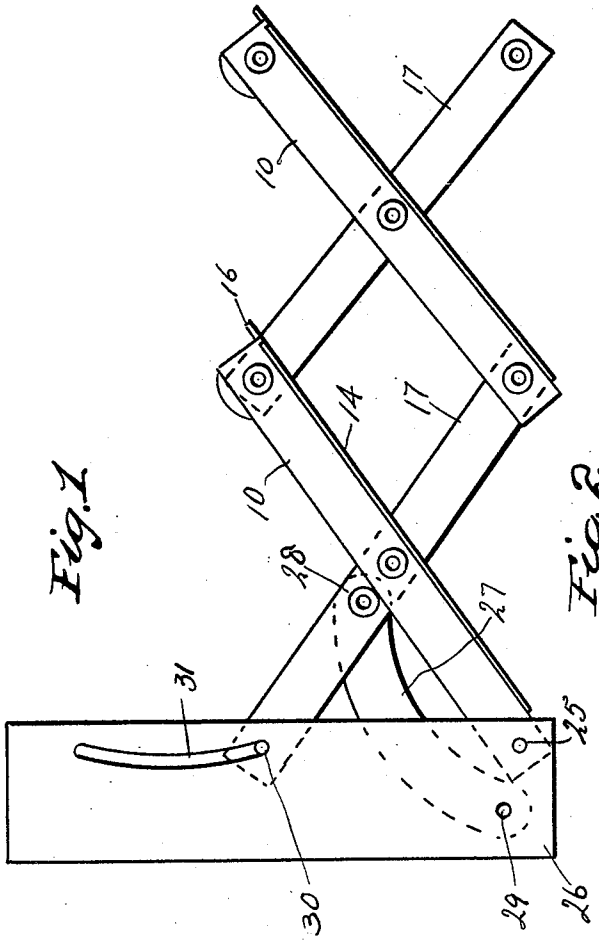
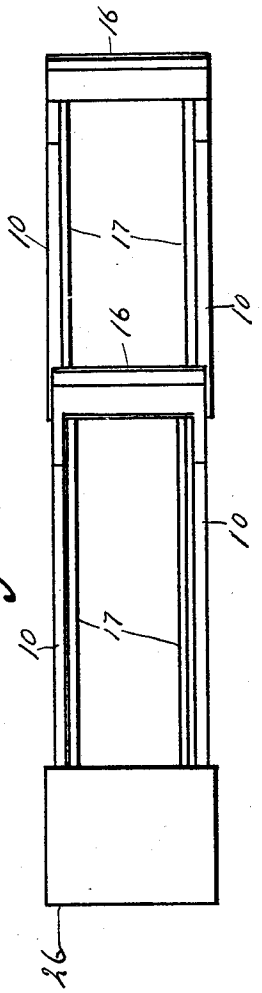
Jan. 12, 1932. J. M. DALLAS 1,841,278

EXTENSION DEVICE

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EXTENSION DEVICE

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Fig. 3.

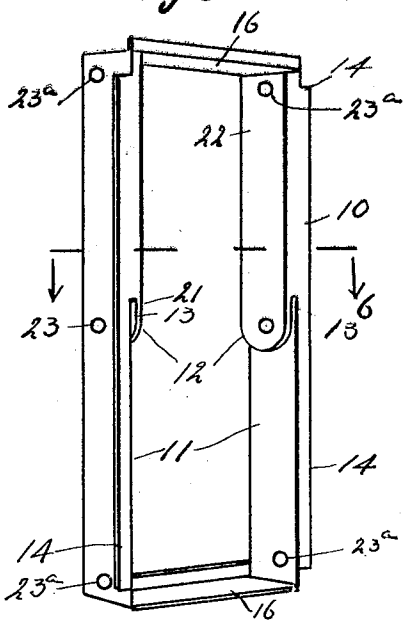


Fig. 4.

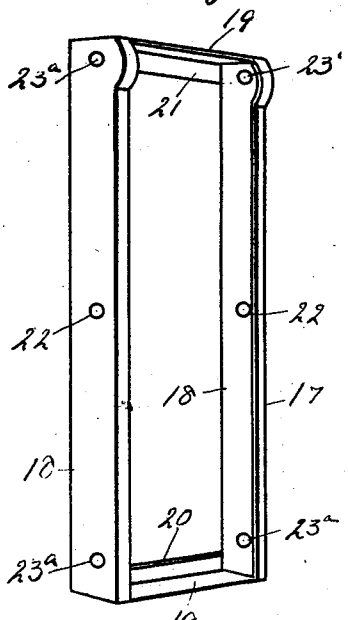


Fig. 6

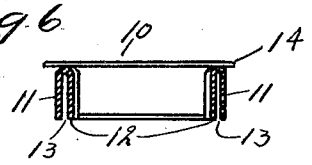


Fig. 7.

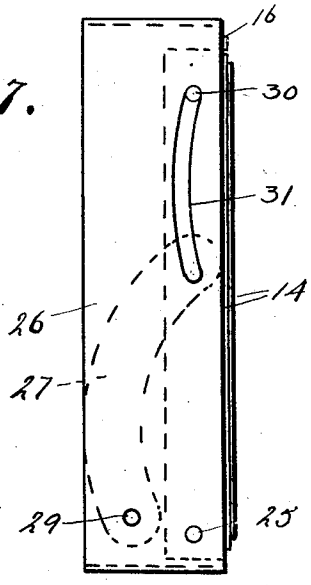
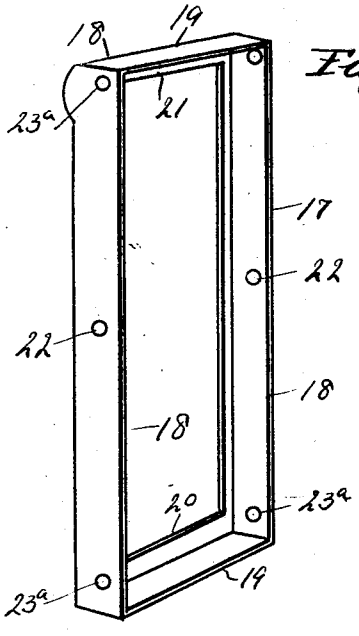


Fig. 5.



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UNITED STATES PATENT OFFICE

JOHN M. DALLAS, OF PHILADELPHIA, PENNSYLVANIA

EXTENSION DEVICE

Application filed May 4, 1929. Serial No. 360,553.

My invention relates to a new and useful improvement in extension devices and has for its object to so construct such a device as to provide for sustaining strains from every direction thereby producing a rigid structure at every point of extension.

A further object of my invention is to provide for the nesting of the levers composing the device so that said device may collapse within the space occupied by the outer lever.

With these and other objects in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:—

Fig. 1 is a side elevation of the device shown distended.

Fig. 2 is a plan view of Fig. 1.

Fig. 3 is a perspective of one of the female levers entering into the structure of the device.

Fig. 4 is a perspective of one of the male levers.

Fig. 5 is a view similar to Fig. 4 looking from the opposite side.

Fig. 6 is a section at the line 6—6 of Fig. 3.

Fig. 7 is a side elevation of the device in its collapsed position.

In carrying out my invention as herein embodied, 10 represents the female levers, each of which is rectangular in form and comprising the outer side bars 11 and the inner side bars 12, so as to provide the spaces 13 into which the side bars of the corresponding male lever swing as hereinafter explained.

The bars 11 terminate below the vertical center of the female levers for the purpose hereinafter explained.

In order that these female levers may be properly strengthened to resist strains from various directions, they are provided with the lengthwise flanges 14 and the crosswise bars 16, the latter connecting the side bars 11.

Each of the male levers 17 consists of the side bars 18 and cross bars 19 having the flanges 20 and 21 formed therewith so as to make this member also capable of resisting strains from various directions and the side bars of these male levers have central pivot holes 22 in order that they may be pivoted to the female levers at 23 and to the upper and lower portions of the last named levers as at 23^a so that when the device is collapsed the side bars of the levers 17 will pass into the spaces 13 between the two sets of side bars of the levers 10, while the upper and lower cross bars of the levers 17 will pass inside of the cross bars of these levers 10, thus permitting all the levers to nest, assuming the position shown in Fig. 7.

When the device is to be used for holding a telephone instrument or the like, the lower ends of one of the female levers are pivoted as indicated at 25 within the box or casing 26, while the inner portions of the inner male levers are pivoted to the links 27 as at 28, which link is pivoted within said casing as at 29 and the distance of the pivot point 28 from the pivot point 29 relative to the length of the link 27, and the pivot points 29 are such as to cause the device in collapsing or in being extended, to move on parallel lines or remain in a horizontal position. When the device is used for this purpose, one of its great advantages is that it may be collapsed into a small space or within the casing and therefore sufficient levers may be included in its construction to permit the telephone instrument to be moved to a considerable distance from the casing 26 and yet prevent undue swinging or vibration of such instrument, which is of great advantage in this field.

The inner ends of the inner male lever carries the studs 30 adapted to slide in the slots 31 which serve to limit the extension of the device and also to add rigidity to the device when distended.

The rigid construction of my improved extension device renders it especially adaptable

for fire apparatus, such as extension ladders and hose towers and I have also designed this device with special reference to its use for dredging booms and landing masts for dirigible flying machines, and it may also be used with great advantage in launching life saving boats and rafts from ships at sea in distress, since in such cases, boats suspended from the outer end of the device may be extended considerably beyond the hull of the vessel before being lowered, and thus overcome the serious disadvantage attending such launchings, and therefore, of course I do not wish to be limited to the exact details of construction as herein shown, as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:—

An extension device comprising a series of male and a series of female levers, each of rectangular form, each female member consisting of two pairs of bars, so related as to form spaces, each male member consisting of two side bars, each of which bars is pivoted between a pair of bars of the female member to permit the nesting of the members when the device is collapsed.

In testimony whereof, I have hereunto affixed my signature.

JOHN M. DALLAS.