Dec. 14, 1948. T. CARROZZA 2,456,049

INTERLOCKING PARTITION STRUCTURE

Filed Jan. 11, 1946

Fig. 1

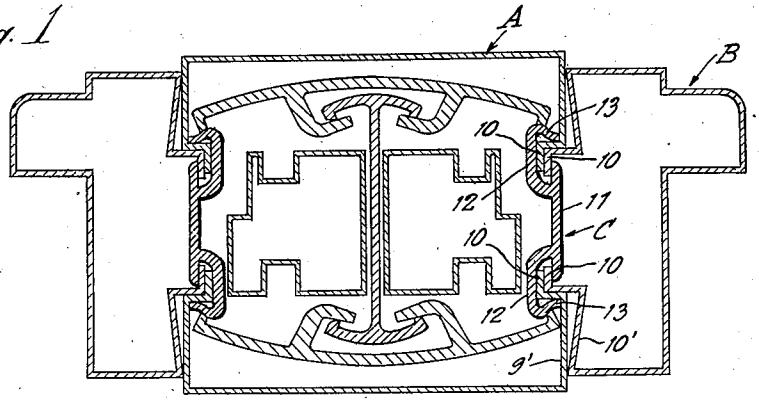


Fig. 2

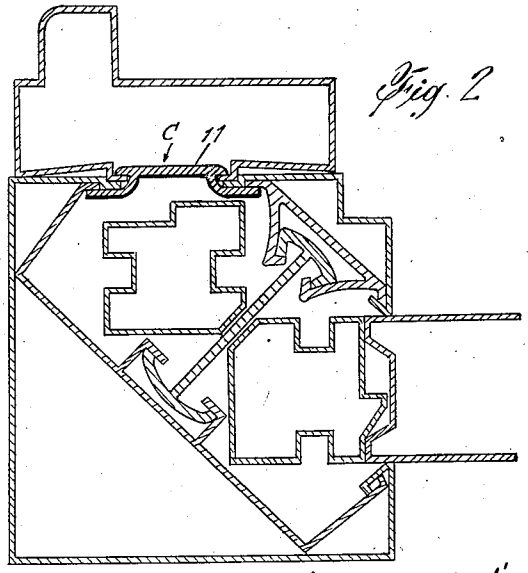


Fig. 4

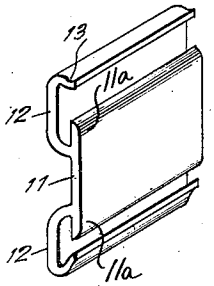
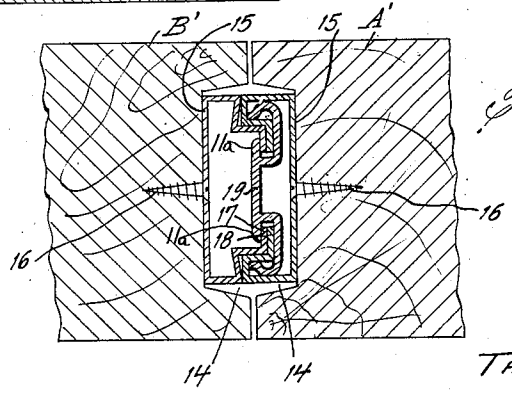


Fig. 3



INVENTOR
THEODORE CARROZZA.

BY Ely & Pattison
ATTORNEYS

Patented Dec. 14, 1948 2,456,049

UNITED STATES PATENT OFFICE

2,456,049

INTERLOCKING PARTITION STRUCTURE

Theodore Carrozza, New York, N. Y.

Application January 11, 1946, Serial No. 640,575

1 Claim. (Cl. 20—92)

1

This invention relates to new and useful improvements in means for constructing interlocking structures, and more particularly for use in the manufacture and installation of building partitions and light knock-down wall structures.

An object of the invention is to provide a structure, to be made preferably of pressed metal, which comprises a plurality of interlocking members so arranged that when they are all assembled they will be so held by their interlocking forms and without resort to other fastening means.

Further and more specific objects, features, and advantages will more clearly appear from a consideration of the specification hereinafter especially when taken in connection with the accompanying drawings which illustrate a present preferred form which the invention may assume and which form part of the specification.

Generally and broadly speaking, the invention relates to wall or partition, or other similar structures, which are adapted to be disposed in relation to be fastened in their operative relation with flanges on the adjacent members being normally spaced apart on flexibly related members and to be disposed in parallel abutting relation by a locking key. There is provided a locking member in the form of a plate to be advanced or driven into locking position with respect to these flanges to force them into abutting relation and this member comprises a main plate portion adapted to lie in contact with one side of these flanges and also with spaced extending wing-means adapted to extend out from the main plate and lie in positioning relation with the other sides of the flanges to press them into their operation abutting relation.

The present preferred form of the invention is illustrated in the drawings of which,

Figure 1 is a horizontal cross sectional view of abutting sections with the intermediate locking member in operative position.

Figure 2 is a similar view of a construction for partitions which are disposed at right angles to each other.

Figure 3 is a partial section through a construction in which the adjacent wall members are of wood and provided with suitable interlocking elements of metal in accordance with the invention.

Figure 4 is a detail perspective view of the locking element.

As shown in the drawing, the invention, which is extremely simple, relates to partitions of metal but also of wood, as well as to sheet metal door

2

and wall sections which are adjacently related and these sections such as A and B are each provided with inwardly extending post resilient flanges 10 which are disposed so as to be nested one within the other when locked in spaced abutting relation as indicated. These flanges 10 have webs joined along one edge and making an angle with each other, and are an integral part of the wall and partition sections with which they are respectively associated. These flanges are mounted on the ends of the section end wall plates 9' and 10' at least one of which is disposed at an angle to the other to normally hold the flanges apart. When disposed in this abutting relation the sections A and B to which they are respectively connected are then alined in the proper relation for connection. It therefore becomes necessary to lock them in this position by some simple and effective means which can be driven into position from the top and/or bottom.

This simple locking means comprises a key member C in the form of a plate having a main body portion 11 the ends of which are adapted to extend and lie on one side of the angle-shaped flanges 10—10 as shown. The plate 11 is also provided with spaced extending elements such as wings 12 which are integrally connected to the plate inwardly of its side edges and which extend around to press closely against the opposite sides of the flanges 10—10, each of which has two webs along the edge, and preferably are provided with bent over terminal end portions 13 to engage the flanges at spaced points to prevent sidewise movement. The side edges of the plate project beyond the junction of the wings 12 therewith, as indicated at 11a.

The invention also is shown in modified form in Figure 3 in which the adjacently related sections in a common plane are of wood and lettered A' and B'. The abutting ends of these sections are hollowed out as at 14 and channel-shaped metal plates 15 are fastened by screws 16 against the bottoms of these hollowed recesses as cavities. These plates are provided with flanges 17 and 18 in pairs disposed to lie in relation just as the flanges 10—10 previously mentioned are supposed to lie. A locking plate 19 of the same general shape as that already described is then driven into position to press against opposite sides of these flanges and thus the wooden partitions sections are firmly held together in the same manner as hereinbefore explained.

The invention therefore comprises sections or members such as A and B of metal or wood disposed in operative relation with parallel metal

normally separated flanges such as 10—10 in combination with a locking key member C having faces to lie on one side of the flanges and with wing elements 12—12 to extend to and press against the opposite sides of said flanges to force them together and to hold them against movement in one direction and having end portions such as 13—13 extending to engage with the flange portions to prevent movement in a direction at right angles to the first mentioned movement.

While the invention has been described in detail and with respect to present preferred forms which the invention may assume it is not to be limited to such details and forms since many changes and modifications may be made in the invention without departing from the spirit and scope of the invention in its broadest aspects. Hence it is intended to cover any and all forms and modifications of the invention which may come within the language or scope of the appended claim.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

The combination of a pair of coplanar structural elements each having a groove in an edge, said elements having their edges disposed in opposed relation with the grooves defining a recess, a channel member for each of said elements secured within the groove thereof and having opposed edges, said edges having an inwardly extending portion and an intermediate portion extending at an angle thereto and a terminal portion extending at an angle with the intermediate portion, the intermediate and terminal portions of one channel being parallel to and in nesting relation with the corresponding portions of the other channel, and a plate having portions substantially of C-shape extending along opposite edges, the C having an edge portion coplanar with the main body of the plate and engaging a terminal portion of a channel, the C including a wing portion extending away from the main body of the plate and outwardly in engagement with a terminal portion of a channel and extending backwardly into engagement with the intermediate portion of the edge of the last mentioned channel.

THEODORE CARROZZA.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,625,612	Jensen	Apr. 19, 1927
1,849,852	Smiley	Mar. 15, 1932
2,009,268	Kotrbaty	July 23, 1935
2,414,628	Battin	Jan. 21, 1937