M. H. JESTER.

BUILDING DEVICE.

APPLICATION FILED DEC. 11, 1919.

1,364,880. Patented Jan. 11, 1921.

2 SHEETS—SHEET 1.

Fig. 2.

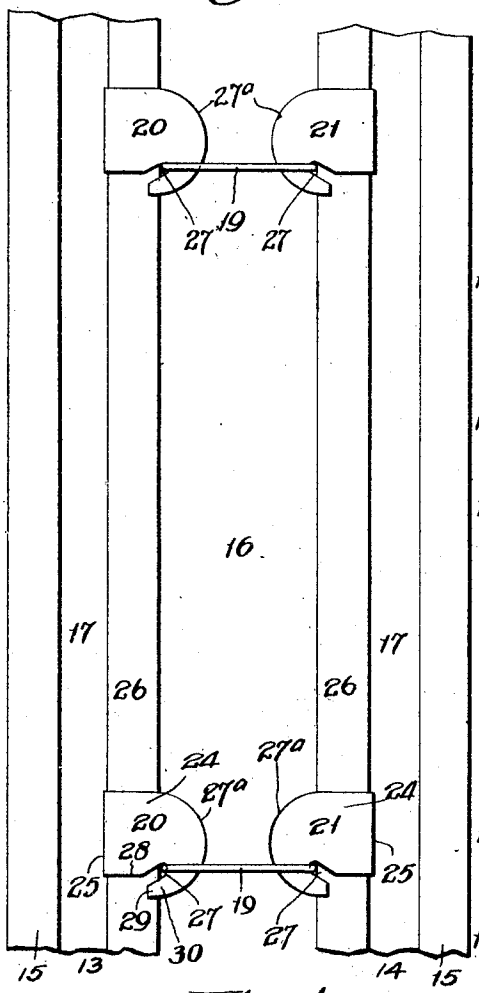


Fig. 3.

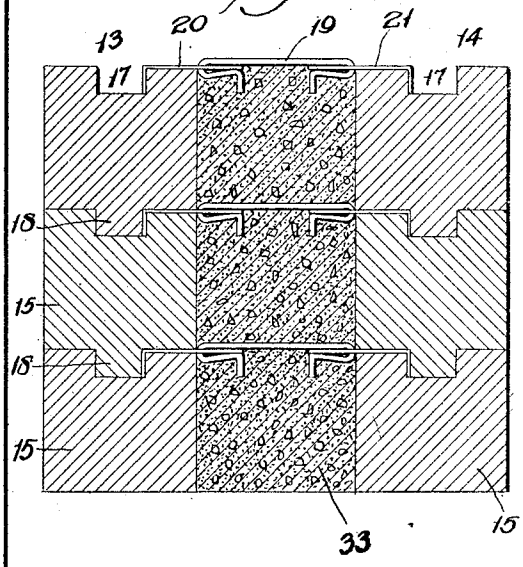


Fig. 4.

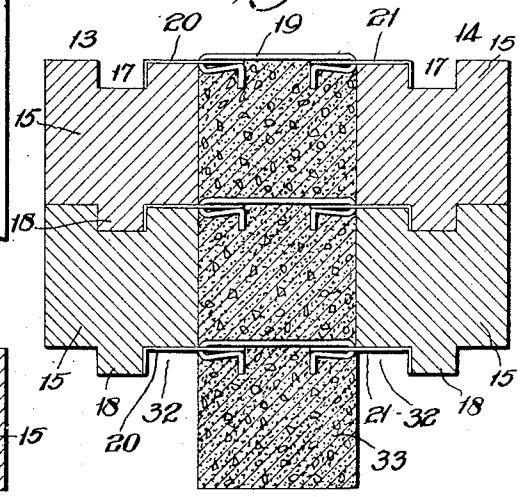
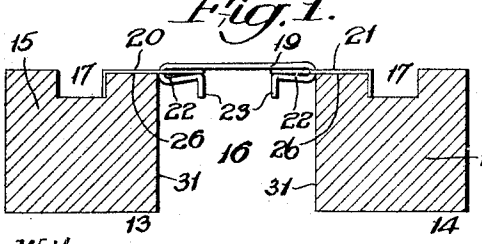


Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 5.

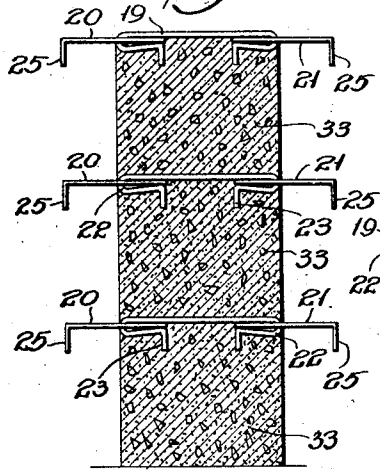


Fig. 6.

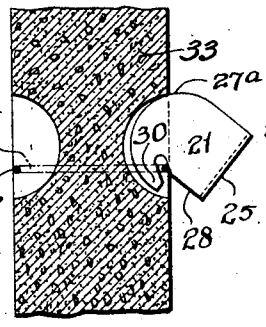


Fig. 7.

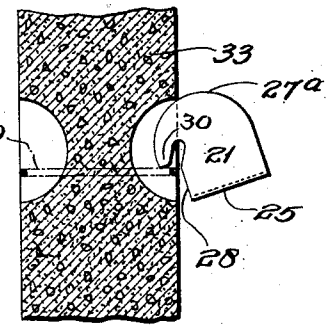


Fig. 8.

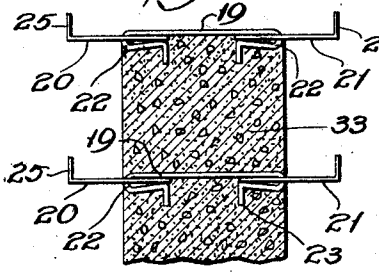


Fig. 9.

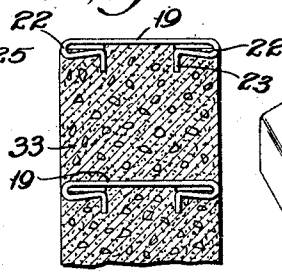


Fig. 10.

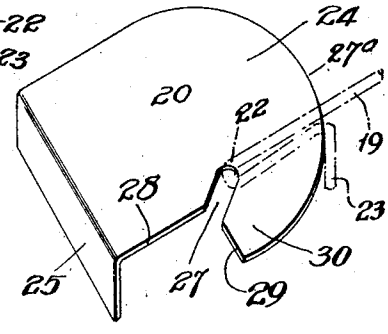


Fig. 11.

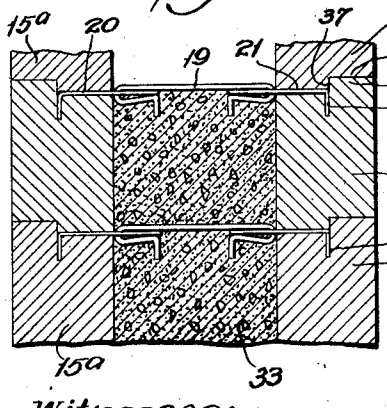
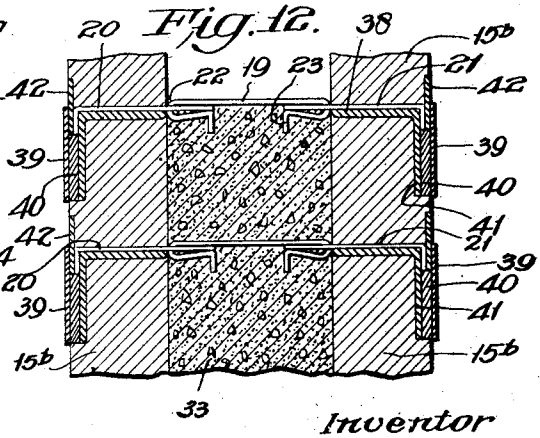


Fig. 12.



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UNITED STATES PATENT OFFICE.

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BUILDING DEVICE.

1,364,880. Specification of Letters Patent. Patented Jan. 11, 1921.

Application filed December 11, 1919. Serial No. 344,202.

To all whom it may concern:

Be it known that I, MARVIN H. JESTER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Building Devices, of which the following is a specification.

One object of my invention is to quicken and facilitate the building of structures such for example as concrete walls, floors or other partitions.

Another object of my invention is to provide improved mold forms and associated parts which are so constructed and arranged that structures such as above mentioned can be quickly, easily and strongly built, and so that said mold forms and certain of said parts can be repeatedly used or, if desired, certain of said parts can be permitted to remain attached to the built structure and can be used for the attachment of furring or other means to the structure.

A further object is to make the device of my invention in such form that it can be easily and quickly made.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a sectional elevation showing certain of the parts of my invention initially set ready to start the building of a concrete wall,

Fig. 2 is a fragmentary top plan view of Fig. 1,

Fig. 3 is a sectional elevation showing a number of units of my invention mounted one above another and illustrating a wall formed between mold sections which constitute a part of my invention,

Fig. 4 is a view of similar character to Fig. 3 with the lowermost mold sections removed,

Fig. 5 is a view of similar character to Figs. 3 and 4 showing all of the mold sections removed,

Fig. 6 is a fragmentary top plan view showing how certain locking members which form a part of my invention can be initially moved so as to be easily removed from the wall structure,

Fig. 7 is a view of similiar character to Fig. 6 showing said locking member having been completely released from means which is embedded within the wall,

Fig. 8 is a view of similar character to Fig. 5 showing a number of locking members having been reversed and reattached to the means which is embedded within the wall for a purpose hereinafter specified,

Fig. 9 is a fragmentary sectional elevation of the wall including means which are embedded therein in accordance with my invention and showing the same with the above mentioned members removed,

Fig. 10 is a perspective view showing one of my improved locking members together with a portion of one of the members which is adapted to be embedded in the wall and illustrating how said members are connected together, and

Figs. 11 and 12 are fragmentary sectional elevations showing two modifications of my invention.

Referring to Figs. 1 to 10 inclusive of the drawings, my invention includes a mold comprising two series 13 and 14 of mold sections 15. The mold sections of each series, as shown in Fig. 3, are adapted to be positioned one above the other so as to provide a space 16 in which concrete or other building material can be poured. The tops of the sections 15 have longitudinally extending channels or grooves 17 and the bottoms of the uppermost sections 15 have longitudinally extending ribs 18 which are adapted to extend into the channels 17 as will hereinafter be more fully described.

In building a wall the bottom mold sections are spaced apart as illustrated in Figs. 1 and 2 and this spacing is effected by means of spacers or separators 19 which are connected at opposite ends to locking members 20 and 21. The spacers or separators 19 are made up of heavy wire or bar metal and at their opposite ends are bent to provide loops 22. The free ends 23 are bent at an angle to the length of the separators.

The locking members 20 and 21 may be made of any suitable material, such as sheet metal, and include substantially flat portions 24 and straight flanges 25 which are bent substantially at right angles to the flat portions 24. The flat portions 24 are adapted to rest upon the upper surface 26 of the mold sections and the flanges 25 are adapted to be positioned within the channels 17 adjacent one side thereof. Each of the lock-

ing members includes a curved end 27ª and a notch 27 which extends inwardly at a slant to two edges 28 and 29; said edges 28 and 29 being substantially at right angles to each other and the edge 28 is substantially at right angles to the length of the flange 25. By this arrangement a tongue or hook 30 is produced which projects beyond the plane of the edge 28 on each of the locking members and these tongues can be slipped through the looped portions 22 of the separators 19 so that said looped portions 22 will enter the notches 27.

By having the flat portions 24 of the locking members 20 and 21 resting upon the upper surface 26, the looped portions 22 will directly engage the outer side surfaces 31 of the mold sections and the ends 23 will depend into the space 16 between the mold sections, as clearly shown in Fig. 1. The distance between the flange 25 and the innermost portion of the notch 27 of each of the locking members is such that when the separator 19 is in the position shown in Fig. 1 that the flanges 25 of the locking members will snugly fit against the sides of the channels 17.

After the lowermost sections of the mold have been positioned as just described with the separators and locks in position and spaced apart within the length of the mold sections, as shown in Fig. 2, the upper mold sections can be applied so that the ribs 18 of the upper mold sections extend into the channels 17 of the lower sections and thus the locking members are firmly held between the lower and upper mold sections of each series. Other locking members and separators can then be applied to the upper sections and thus the series of mold sections can be built up with the separators 19 serving to space and hold together the two series of mold sections. It will be noted that the mold sections can be made of wood or other suitable material and can be made of any desired length. Also the separators with their locking members can be positioned at any desired distances apart according to the nature of the hook. In addition, the separators 19 can be made of various lengths to suit walls of various thicknesses.

After the mold sections have been arranged as above described, concrete or other building material can be poured in the space 16 between the series of mold sections and permitted to "set," such for example as illustrated in Fig. 3.

By arranging the channels and ribs as above described, lateral interlock is provided between the mold sections of each series and furthermore this arrangement permits the concrete from running out through the partings between the mold sections. Any desired number of superimposed sections can be built up and after the concrete has "set," the lowermost mold sections can be removed as shown in Fig. 4 and it will be noted that the locking members 20 and 21 will serve as shelves for supporting the upper mold sections. After the lowermost sections have been removed, it will be noted that spaces 32 are present due to the construction of the locking members 20 and 21, and these spaces permit a lever or pry to be inserted between the ribs of the upper mold sections and the wall so as to facilitate the removal of said upper sections.

After the mold sections have been released, it will be noted that the locking members 20 and 21 are still attached to the looped portions 22 of the separators 19 within the wall 33 and if desired these locking members can be permitted to remain attached to the wall where they will serve as shelves or supports for securing furring or other material to the wall; thereby leaving air space to prevent dampness from going through the wall to the inside of the building. If it is desired to remove these locking members they can be readily removed by bearing upwardly thereon so as to slightly loosen them and afterward swinging them as shown in Figs. 6 and 7 so that they can be easily detached. If desired, these locking members can be inverted and reapplied to the looped portions 22 of the separators with the flanges 25 extending upwardly as shown in Fig. 8 and as such they may be used for supporting or attaching material of any kind to the wall.

It will be noted that the members 19 in addition to forming separators for the mold sections in the process of the building of the wall, serve as reinforcing means for the concrete, as clearly shown in Fig. 9, and thereby tend to greatly strengthen the wall. The end portions 23, by being bent as above described, form anchoring means for the members 19 within the wall and if desired the looped portions 22 can be used for attachment of devices of any character and thus are of a great advantage since ordinarily it is difficult to attach devices to a concrete wall and by the use of my invention this can be done without the inclusion of any additional expansion bolts or other means usually employed where it is desired to attach devices to a wall of this character.

In the form of my invention shown in Fig. 11, I have shown practically the same construction with the exception that instead of providing the mold sections with the channels and ribs as above described, each of the mold sections 15ª has a slot 34 into which the flange of the adjacent locking member extends and the upper portion of each mold section has an extension 35 which fits in a recess 36 in the lowermost portion of the upper section. This provides a lap joint, such as shown at 37, which serves to prevent the

concrete flowing directly through the parting between the mold sections. In all other respects the construction of the parts is similar to that described in connection with Figs. 1 to 10 inclusive and I have therefore given corresponding parts similar reference numerals.

In the form of my invention shown in Fig. 12, the mold sections 15^b are cut away at their upper and outer portions and an angle 38 is inserted which forms a support at the top for the locking members between the sections. Plates 39 are secured to the outer surfaces of the mold sections and filling pieces 40 serve to space the plates 39 from the leg portions 41 of the angles 38. The lower parts of the mold sections 15^b have strips 42 which extend downwardly between the plates 39 and leg portions 41 of the angles 38. The flanges 25 of the locking members are adapted to fit between the strips 42 and the leg portions 41 of the angles 38. In this manner the strips 42 depend in such manner as to prevent the concrete from working its way out between the sections.

In the foregoing description and in the accompanying claims I have used the term "wall," however, it will be understood that wherever this term is employed it is meant to imply a wall, floor, partition or similar structure.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

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

1. A device of the character described including means having looped portions and adapted to be embedded in a wall which is molded between mold sections; and members having hooks detachably engaging said looped portions and having other parts for temporary locking connection with said mold sections; substantially as described.

2. A device of the character described including means having looped portions providing entrance openings at the side and adapted to be embedded in a wall which is molded between mold sections; and members having hooks with rounded outside edge portions, said hooks being adapted to enter said entrance openings from the sides, said members having other parts for temporary locking connection with said mold sections, said rounded edge of the hooks permitting the hooks to be swung out of engagement with said loop portions after said wall has been molded; substantially as described.

3. A device of the character described including means having looped portions providing entrance openings at the side and adapted to be embedded in a wall which is molded between mold sections; and members having hooks with rounded outside edge portions, said hooks being adapted to enter said entrance openings from the sides, said members having other parts for temporary locking connection with said mold sections, said rounded edge of the hooks permitting the hooks to be swung out of engagement with said loop portions after said wall has been molded, said members including flanges located outside of the wall line so that by removing said members and re-inserting them in an inverted position, the flanges can be reversed and used for attaching devices of various characters to the wall; substantially as described.

4. A device of the character described, adapted for use in connection with two series of mold sections spaced apart, in which each section has a portion interlocking laterally with an adjacent section in the series, including locking members having portions interposed between the sections in each series and being provided with flanges interposed between portions of the interlocking parts of the sections whereby said locking members are held against lateral movement; and separating members adapted to extend across the space between the two series of sections, said separating members having looped portions, said locking members having rounded end portions and notches extending therein whereby tongues are provided, said tongues being adapted to freely hook into the looped portions of said separating members; substantially as described.

5. A device of the character described, adapted for use in connection with two series of mold sections spaced apart in which each section has a portion interlocking laterally with an adjacent section in the series, including locking members having portions interposed between the sections in each series and being provided with flanges interposed between portions of the interlocking parts of the sections whereby said locking members are held against lateral movement; and separating members adapted to extend across the space between the two series of sections, said separating members having looped portions, said locking members having rounded end portions and notches extending therein whereby tongues are provided, said tongues being adapted to freely hook into the looped portions of said separating members, said notches extending at a slant to edge portions of said locking members and said tongues extending beyond the adjacent portion of said locking members whereby the locking members can

be freely swung in an arc substantially at right angles to their normal positions after the molding operation and thereby released from said spacing members and the molded material; substantially as described.

6. A device of the character described, adapted for use in connection with two series of mold sections spaced apart in which adjacent sections of each series having interlocking ribs and channels, including locking members having portions interposed between the sections in each series and being provided with flanges interposed between the ribs and the sides of the channels; and separating members adapted to extend across the space between the two series of sections, said separating members having looped portions, said locking members having parts adapted to enter said space and engage within said looped portions of the separating members; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARVIN H. JESTER.

Witnesses:
ANNA BENTON,
CHAS. E. POTTS.