

1,249,031.

Fig-1-

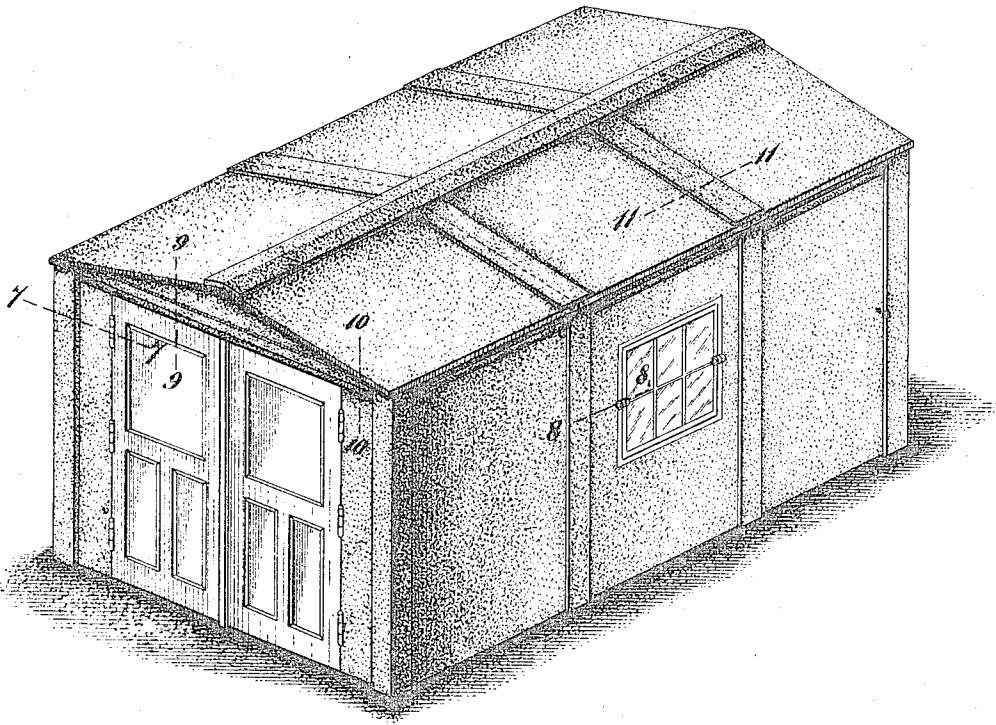
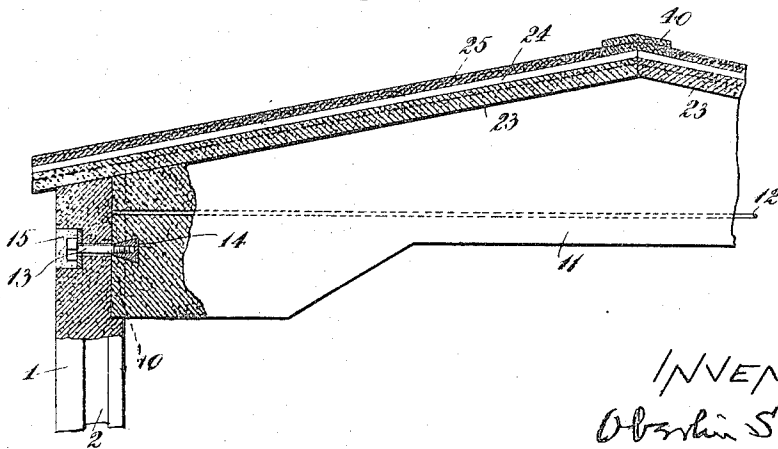


Fig-4.



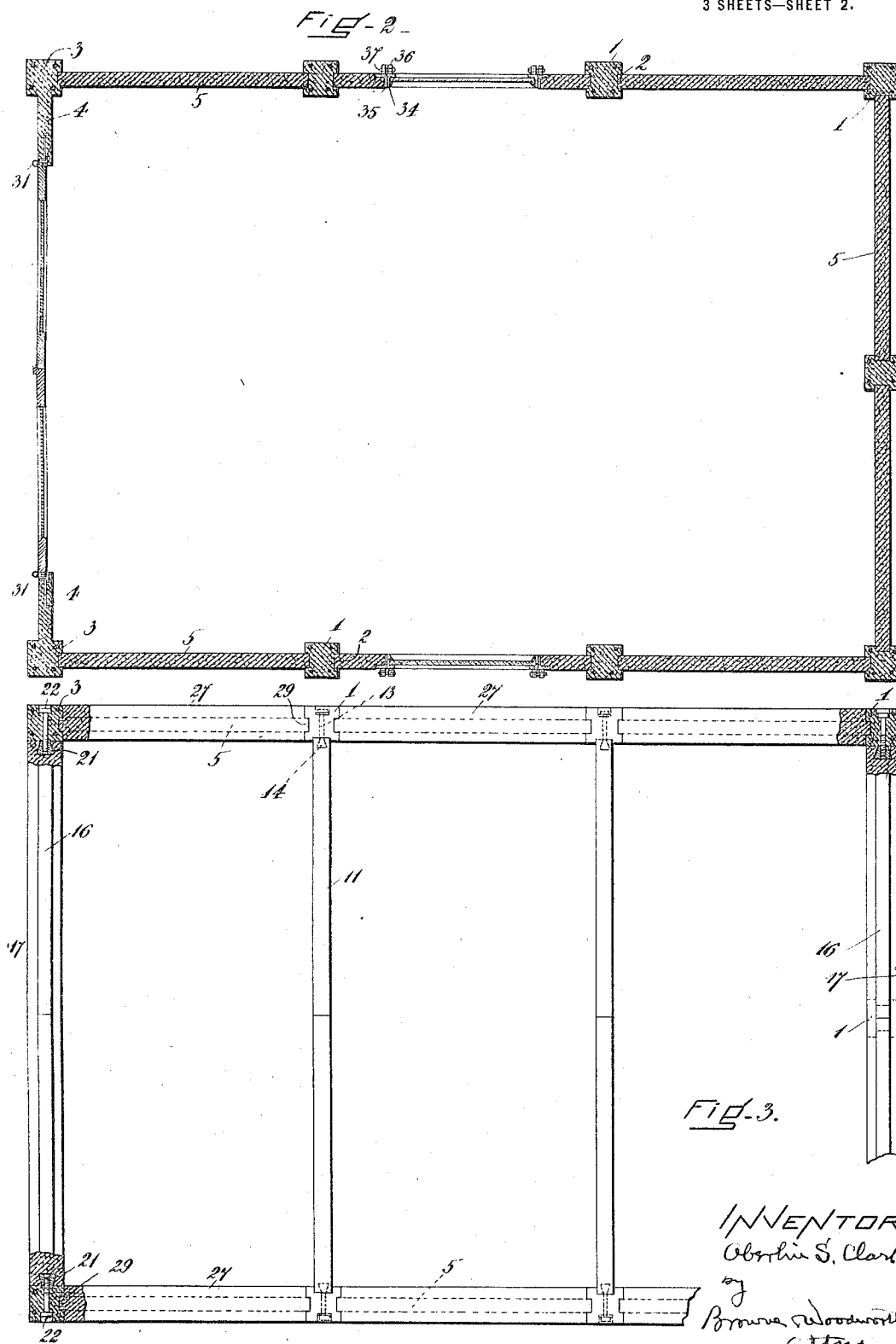
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O. S. CLARK.
 REINFORCED CONCRETE BUILDING CONSTRUCTION.
 APPLICATION FILED AUG. 21, 1916.

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3 SHEETS—SHEET 2.



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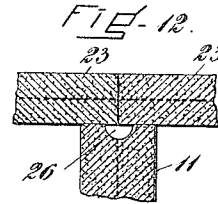
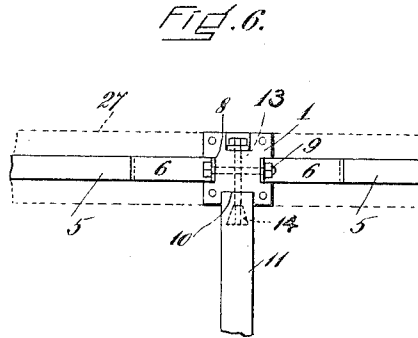
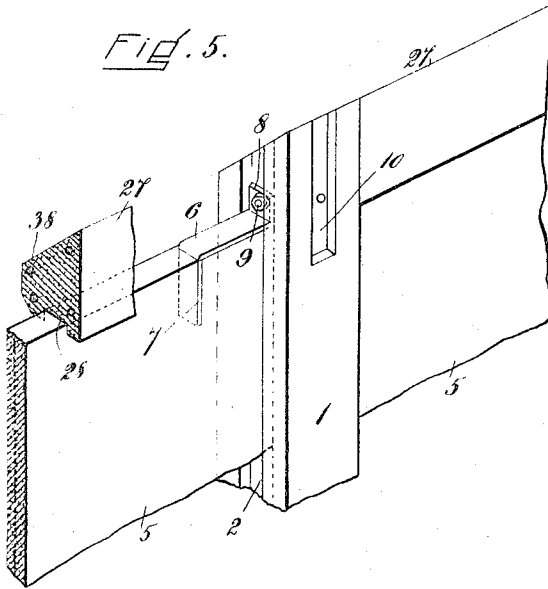


Fig. 7.

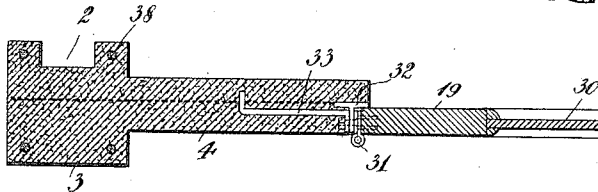


Fig. 8.

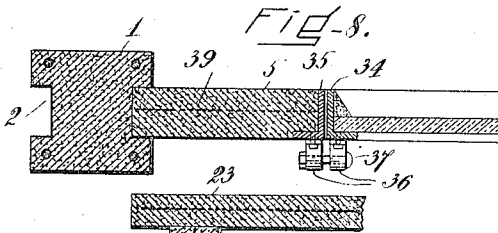


Fig. 10.

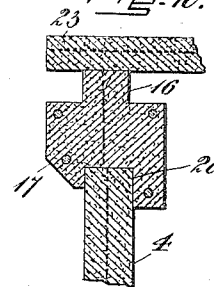


Fig. 9.

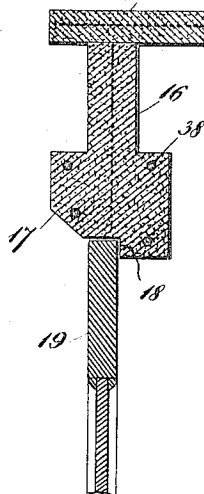
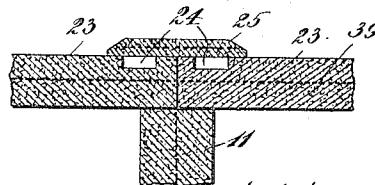


Fig. 11.



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UNITED STATES PATENT OFFICE.

OBERLIN S. CLARK, OF NORTH WEYMOUTH, MASSACHUSETTS.

REINFORCED-CONCRETE BUILDING CONSTRUCTION.

1,249,031.

Specification of Letters Patent.

Patented Dec. 4, 1917.

Application filed August 21, 1916. Serial No. 115,974.

To all whom it may concern:

Be it known that I, OBERLIN S. CLARK, a citizen of the United States, and a resident of North Weymouth, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Reinforced-Concrete Building Constructions, of which the following is a specification.

My invention relates to reinforced concrete building construction of the unit type and my object is to improve, simplify and cheapen the same in the manner hereinafter more fully set forth.

Obviously capable of more general application my invention will be described in connection with garage or small building construction.

The drawings which accompany and form a part of this specification show a garage embodying my invention, but it will be understood that various modifications may be made in the construction therein illustrated without departing from the principle of my invention as defined by the appended claims.

In the drawings—

Figure 1 is a perspective view of a reinforced concrete garage. Fig. 2 is a horizontal section of the same. Fig. 3 is a plan view with the roof removed, certain parts being shown in section. Fig. 4 is a fragmentary section of a portion of the roof and a roof beam. Fig. 5 is a perspective view of a pilaster as viewed from the inside of the building with certain adjacent parts shown in position. Fig. 6 is a plan view of said pilaster and adjacent parts, the position of the cornice 27 being indicated in dotted lines. Fig. 7 is a horizontal section on the line 7—7 of Fig. 1. Fig. 8 is a horizontal section on the line 8—8 of Fig. 1. Fig. 9 is a vertical section on the line 9—9 of Fig. 1. Fig. 10 is a vertical section on the line 10—10 of Fig. 1. Fig. 11 is a vertical section on the line 11—11 of Fig. 1. Fig. 12 is a vertical section corresponding to Fig. 11 of a modification.

In the particular drawings selected for more fully disclosing my invention 1, 1 represent pilasters of concrete preferably reinforced and having two opposite sides grooved throughout their entire length as

shown at 2. 3 is a pilaster formed integral of the door jamb 4 and provided with a groove extending throughout the length of one side only. The pilasters 1, 3 are suitably supported on the ground or on a foundation and the concrete wall panels 5 are secured in position between adjacent pilasters, the ends of said panels resting in the grooves 2 and the joints being made tight by cement as shown in Fig. 2. To further strengthen the construction anchor irons 6 having a portion 7 embedded in the panels and an upturned flange 8 flush with the outer edge of the panel may be employed as shown in Fig. 5, a bolt 9 passing through a hole in the pilaster binding two adjacent panels to their cooperating pilaster, as shown in Fig. 6.

On the inwardly facing sides of the intermediate pilasters are grooves 10 extending a short distance down from the top for receiving the ends of the roof beams 11, herein shown as two in number, each reinforced by a tension rod 12 located a short distance above its base, and said beams are further secured to their respective pilasters by means of the bolts 13 threaded to the inserts 14 which are embedded in the ends of the beams. The head of each bolt preferably is arranged in a recess 15 in the outward face of the pilasters and after the bolt is secured in position the head thereof is covered with cement mortar to hide and protect the same from rust. The long bearing of the roof beam against the pilaster insures rigid construction.

At either end of the building a gable end 16 provided with a cornice 17 is secured to the end pilasters by the bolts 22 which take into the inserts 21 embedded in the gable ends, the lower edge of which is provided with a groove 20 arranged to straddle the door jamb 4. Beyond the door jamb the lower edge of the gable end is rabbeted as shown at 18 to limit the inward swing of the door 19. The heads of said bolts 22 are covered with cement mortar in the manner above described in connection with the bolts 13.

Roof slabs 23 herein shown as six in number are suitably secured to the roof beams and gable ends, and in order to insure a watertight joint the adjacent ends of each

pair of roof beams are transversely grooved as shown at 24 and a cover strip 25 superimposed upon the grooved portion of the roof slabs, its edges extending slightly beyond the grooves. The grooves break the capillary passage between the slabs and cover strip and carry off any water which may work in under the strips. In Fig. 12 I have shown a modified construction for insuring a watertight joint between the roof slabs, wherein the top of the roof beam 11 is provided with a groove 26 extending throughout the length thereof and arranged immediately under the meeting edges of a pair of slabs. Obviously any water which is forced through the joint between the slabs will pass along said groove and not penetrate to the interior of the building. As shown in Figs. 1 and 4, a saddle-board 40 extending throughout the length of the roof covers the joints between the inner ends of each pair of roof slabs.

Cornices 27, the lower edges of which are provided with grooves 28 straddle the wall panels 5 and the ends thereof are provided with tongues 29 which take into the grooves 2 of the pilasters, the upper ends of said cornices and pilasters being beveled as shown in Fig. 5 to conform to the slant of the roof.

The front of the garage is provided with a door 19 of any suitable construction, the same being shown in the present instance as having panels 30, and the door butts 31 are bolted respectively to the side rail 19 and the T-iron door frame 32, the latter being firmly held to the jamb 4 by the tie 33 which is embedded in the jamb.

One or more windows may be provided and preferably, as shown in Fig. 8, consist of an iron sash 34 carrying one or more lights hinged to the iron window frame 35 by means of the lugs 36 bolted respectively to said rail and frame and the pintle 37 which passes through holes in said lugs.

Every member of the construction preferably is reinforced, the square members by rods 38 and the flat members by expanded metal 39 or wire mesh or other suitable foraminous material.

By means of the foregoing construction I am enabled to provide a garage or other small building made up of thirty-six pieces of reinforced concrete constructed and cured at the pit and shipped to the place at which the building is to be erected. A building suitable for a garage will weigh only about twelve tons and the construction therefore is relatively cheap because it contains a small amount of stock in proportion to its size and a small number of metallic members, and can be easily put together by unskilled labor. The construction is durable for the reason that all metallic members except the window parts are

covered with concrete or cement mortar, and is watertight because on account of the tongue and groove joints there is no straight joint from the exterior to the interior of the building.

Having thus described an illustrative embodiment of my invention without either limiting the same thereto, what I claim and desire to secure by Letters Patent is:

1. A reinforced concrete construction of the unit type, comprising in combination a plurality of side pilasters, the opposite faces of said pilasters being provided with grooves extending throughout the length thereof, two rear end pilasters each having their adjoining faces provided with grooves extending throughout the length thereof, two front end pilasters each integral with a door jamb and each having its rearward face provided with a groove extending throughout the length thereof, a plurality of wall panels each arranged between a pair of pilasters and having its edges secured in said grooves respectively, the inner faces of each side pilaster being provided with a groove extending a short distance from the top thereof, and a plurality of roof beams arranged between each pair of side pilasters at right angles to said wall panels, and each having its ends secured in the last mentioned grooves of said side pilasters.

2. A reinforced concrete construction of a unit type, comprising in combination two front end pilasters each integral with a door jamb, a gable end having a groove in its lower edge and straddling the top of said door jambs, the lower edge of said gable end extending beyond said door jambs being rabbeted to limit the inward swing of the door, and means for bolting said gable end to said pilasters.

3. A reinforced concrete construction, comprising in combination a side pilaster having its sides provided with grooves, a pair of wall panels having their edges arranged in said grooves, an anchor iron having a portion thereof embedded in each panel and an upwardly extending flange flush with the edge of said panel, and means passing through said pilaster for securing said panels to said pilaster.

4. A reinforced concrete construction of the unit type, comprising in combination a plurality of side pilasters, the opposite faces of said pilasters being provided with grooves extending throughout the length thereof, two rear end pilasters each having their adjoining faces provided with grooves extending throughout the length thereof, two front end pilasters each integral with a door jamb and each having its rearward face provided with a groove extending throughout the length thereof, a plurality of wall panels each arranged between a pair

of pilasters and having its edges secured in said grooves respectively, a gable end having a groove in its lower edge and straddling the top of said door jambs, the lower edge of said gable end extending beyond said door jambs being rabbeted to limit the inward swing of the door, and a plurality

of roof beams arranged between and supported by each pair of side pilasters at right angles to said wall panels.

In testimony whereof, I have hereunto subscribed my name this 18th day of August, 1916.

OBERLIN S. CLARK.

Copies of