

April 29, 1941.

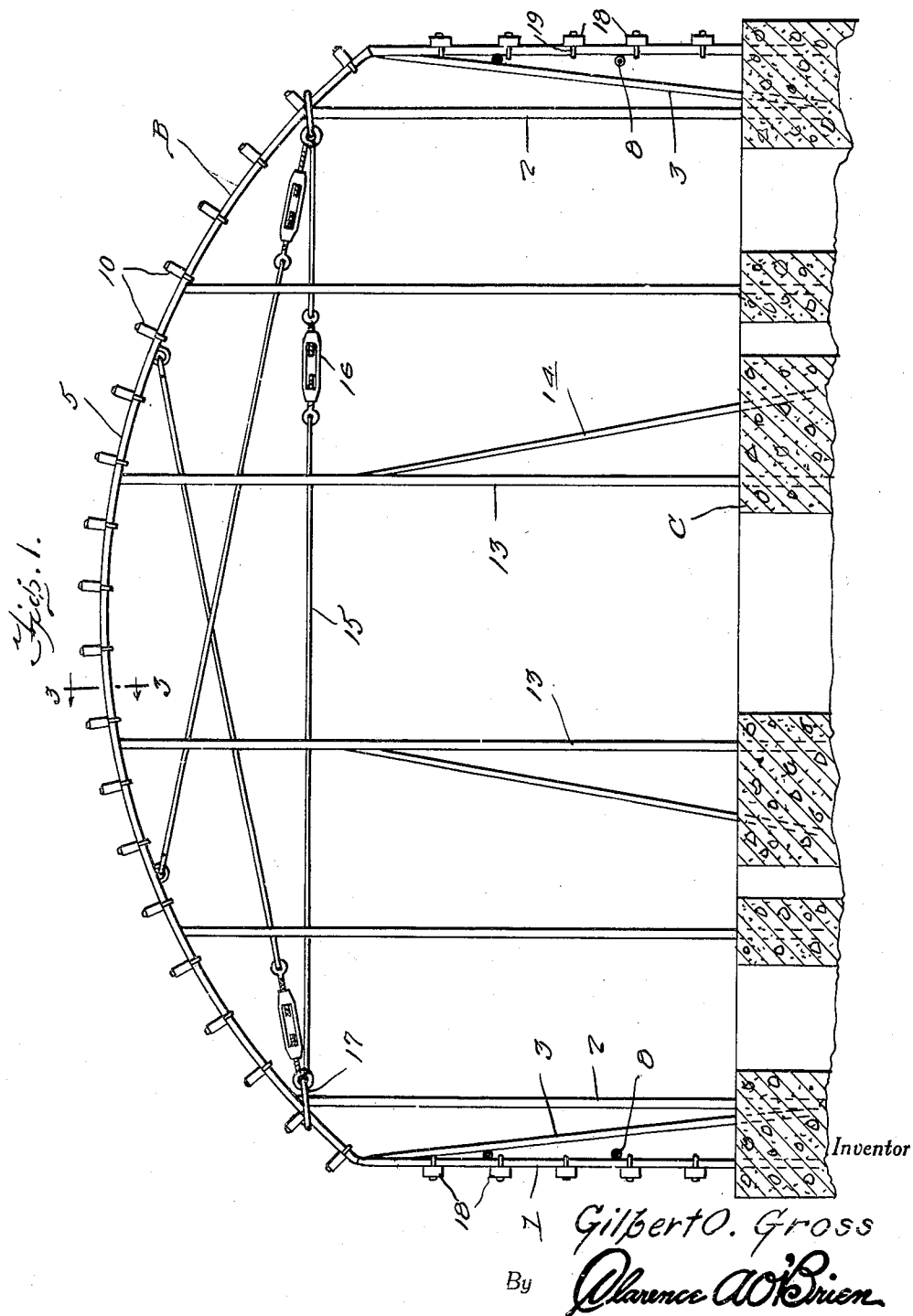
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2,239,817

BUILDING STRUCTURE

Filed March 11, 1940

4 Sheets-Sheet 1



Attorney

April 29, 1941.

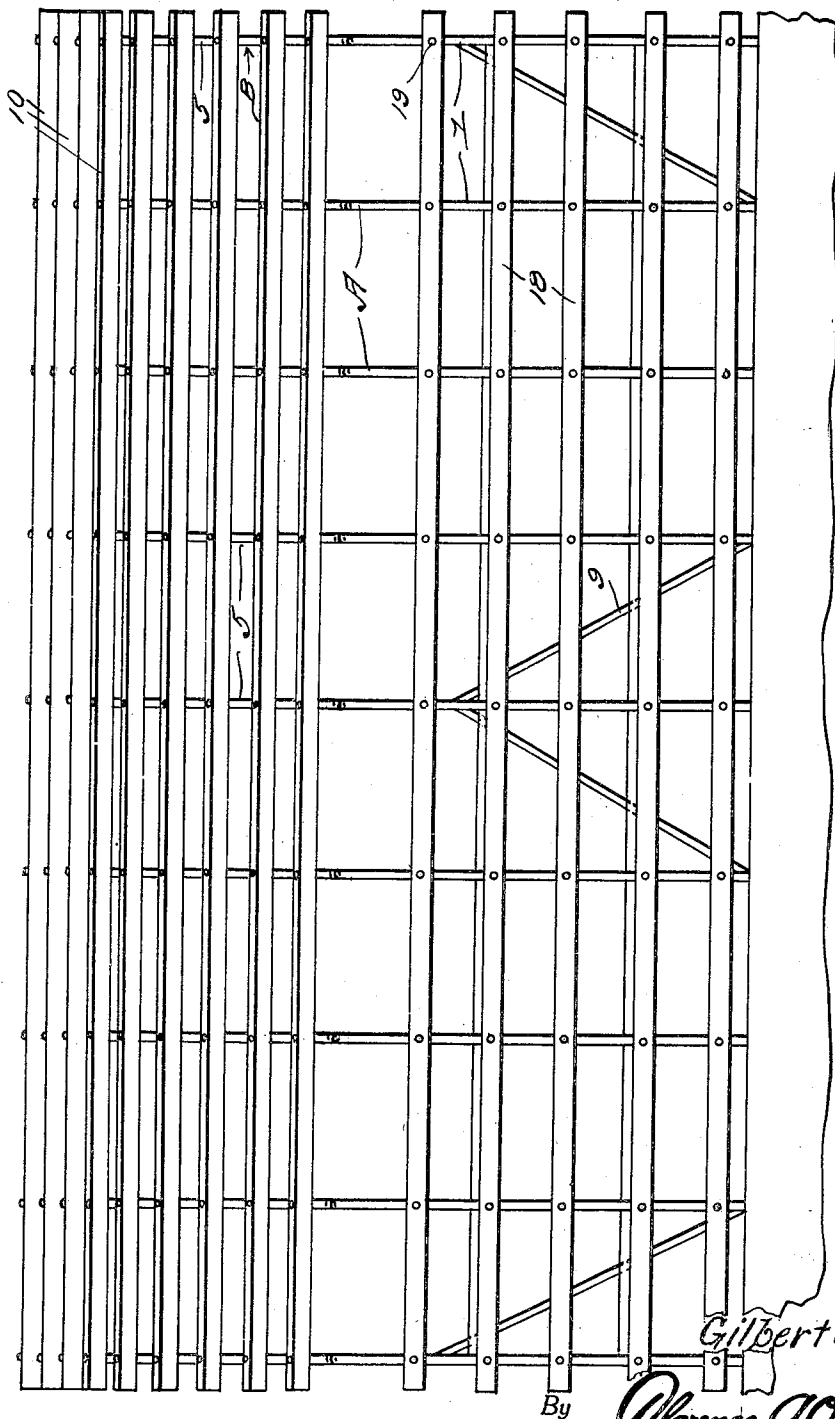
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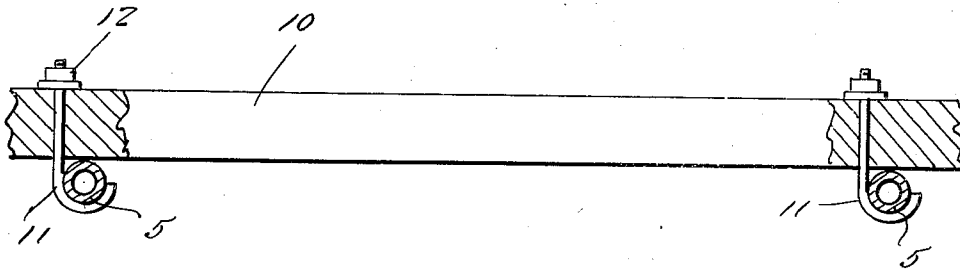
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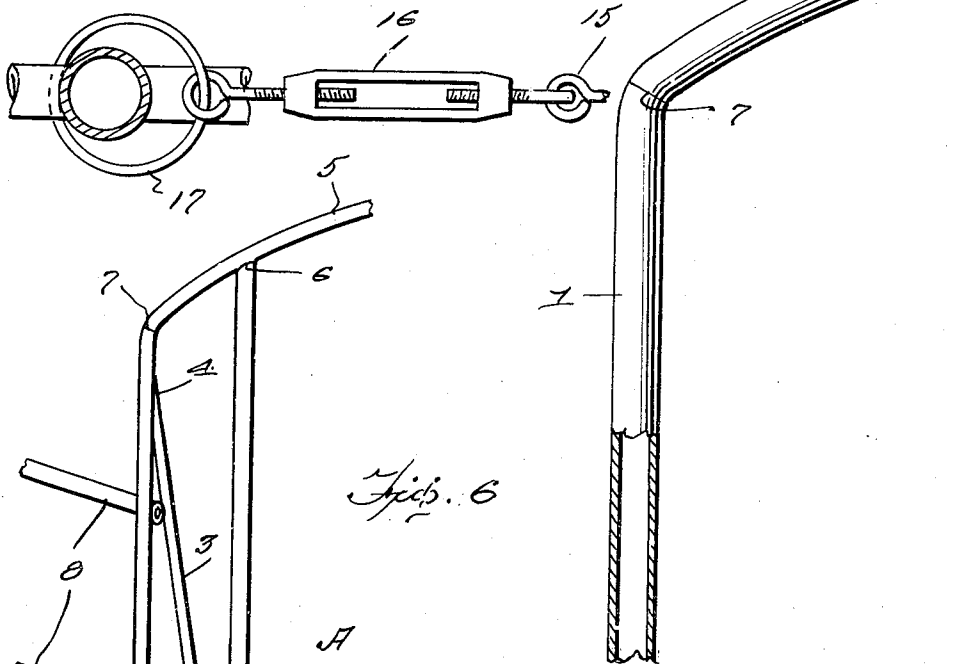
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Figs. 3.

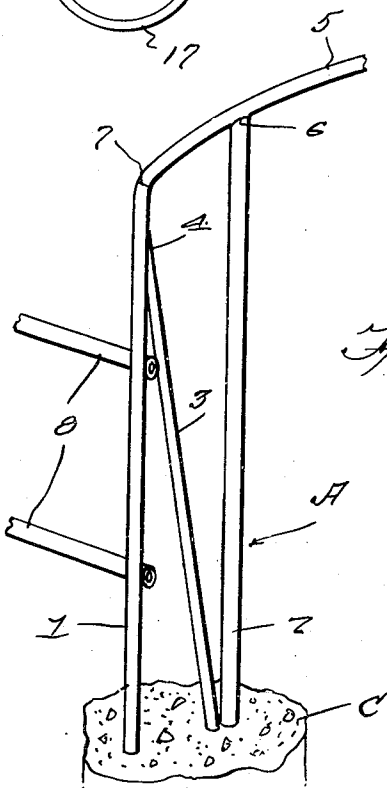


Figs. 5.

Figs. 4.



Figs. 6



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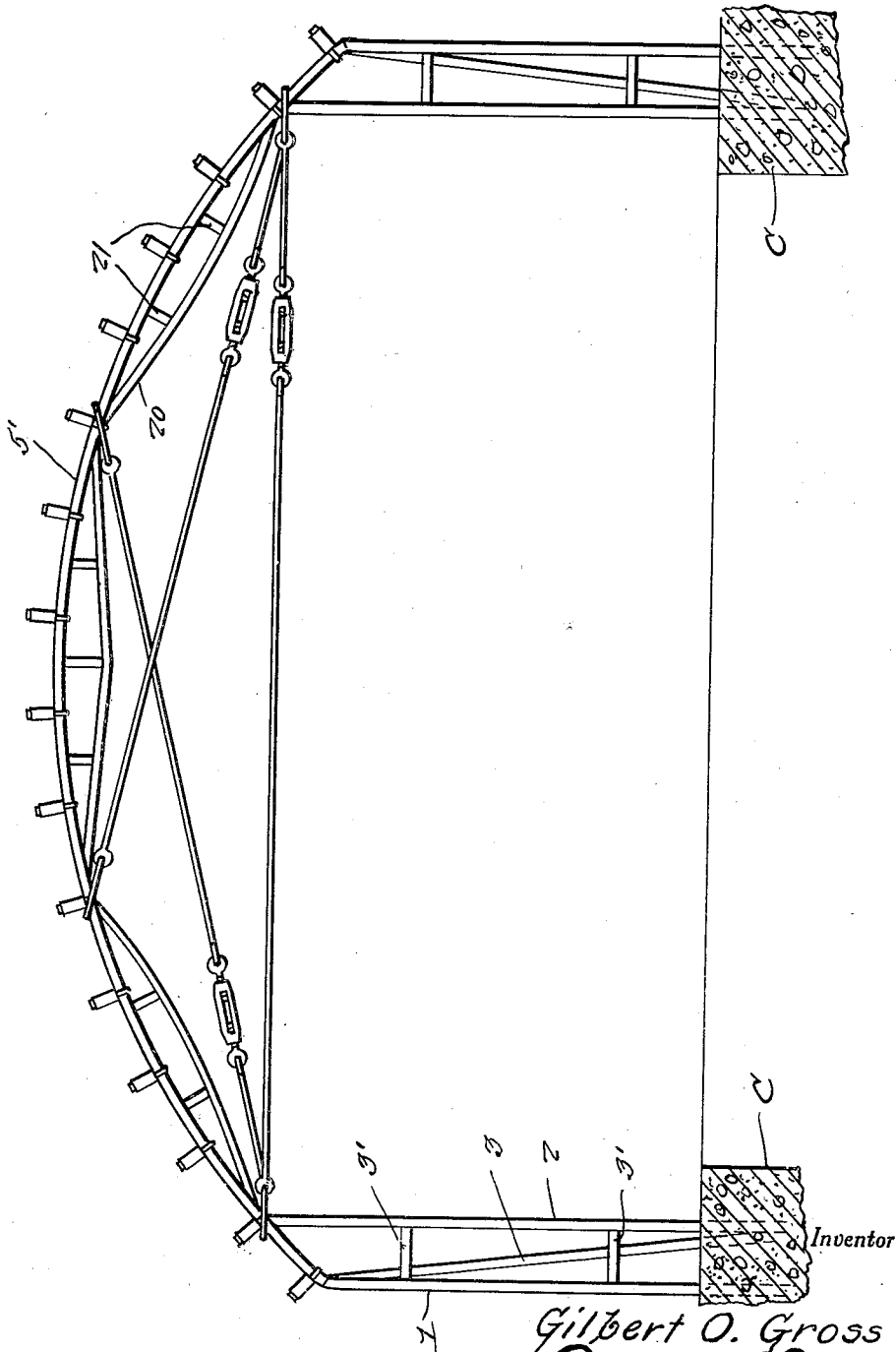
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Fig. 7



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UNITED STATES PATENT OFFICE

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BUILDING STRUCTURE

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2 Claims. (Cl. 189—1)

This invention relates to a building structure, the general object of the invention being to provide the framework of the structure of tubular members which are arranged to form uprights to which the siding is connected and an arcuate or arched roof to which wooden longitudinally extending beams are connected which, in turn, have connected therewith the roofing, with turnbuckle brace members for holding the parts in position.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which—

Figure 1 is an end view of a structure constructed in accordance with this invention, the concrete base being shown in section.

Figure 2 is a side view of the structure.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a view showing how a roof member is welded to an upright member.

Figure 5 is a detail view showing how a turnbuckle brace member is connected to a part of the roof structure.

Figure 6 is a fragmentary elevation of a side portion of the structure.

Figure 7 is an end view showing a modification.

As shown in these drawings the building structure includes a plurality of uprights A at the sides thereof and the upwardly bowed or arcuate-shaped roof forming members or rafters B, these parts being formed of tubing or pipes. Each upright member includes an outer pipe 1 and an inner pipe 2 laterally spaced apart and a bracing pipe 3 extends from the lower part of the inner pipe 2 upwardly and outwardly to an upper portion of the outer pipe 1 to which it is welded as shown at 4. A rafter or roof forming pipe 5 is welded to the upper end of the pipe 2 as shown at 6 and its end is welded to the upper end of the pipe 1 as shown at 7. All the uprights are supported in concrete C and the outer pipes 1 of the upright members A at each side of the building are connected together by the longitudinally extending pipes 8 which are welded to the inner portions of the pipes 1 as shown more particularly in Figure 6. Wherever desired or necessary diagonal brace members 9 can be used for bracing the up-

rights A and these members are also of tubular form. Spaced and longitudinally extending wooden beams 10 are connected with the pipes 5 by the hooks 11 which have the hook parts engaging the pipes 5 and shanks pass through the beams 10 and are held thereto by the nut 11. If desired U-shaped bolts can be used for connecting the beams to the pipes 5. Of course, the covering parts of the roofing are attached to these beams 10.

Each end of the structure is formed by the upright pipes 13 which extend from the concrete to the pipe 5 and are welded to the pipe and some of these members or all of them are braced by the bracing members 14 as shown in Figure 1. The pipes 5 are adjusted into a true arc of a circle and held in such position by the brace members 15 each of which includes a pair of sections connected together by a turnbuckle 16, these brace members being connected with the pipes 5 by the rings 17. Longitudinally extending wooden bars or beams 18 are also connected with the outer pipes 1 of the uprights by the hooks 19 and the siding is attached to these bars or beams.

Wherever desired or necessary the pipes 5' can be further braced by the short and downwardly bowed pipes 20 as shown in Figure 7, this figure showing three of these short pipes 20 for a pipe 5'. The ends of each pipe 20 are welded to the pipe 5' and short pipes 21 extend from the pipe 20 to the pipe 5' and are welded to the pipes.

This type of frame for a building enables the building to be constructed at relatively low cost and makes the frame of great strength and by using the tie rods with the turnbuckles the roofing pipes are held in a perfect arc of a circle.

Also shown in Figure 7 each pipe 1 is connected to a pipe 2 by the short horizontally extending pipes 3'.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A building structure of the class described comprising a concrete base, upright members extending longitudinally on the base at each side thereof and each including an inner pipe and an outer pipe and a diagonally arranged bracing

pipe connecting the inner and outer pipes together, upwardly bowed pipes forming a roofing frame and having their ends welded to the upper ends of the outer pipes of the uprights and end portions welded to the inner pipes of the uprights, 5 upright pipes at the ends of the structure having their upper ends welded to the outermost arcuate pipes, tie rods each including sections connected together by a turnbuckle, one end of each tie rod being connected to one part of a roofing pipe and the other end to another part thereof, said tie rods holding the roofing pipes in a true arc, and longitudinally extending pipes connected with the outer pipes of the uprights.

2. A building structure of the class described 15 comprising a concrete base, upright members extending longitudinally on the base at each side thereof and each including an inner pipe and an outer pipe and a diagonally arranged bracing

pipe connecting the inner and outer pipes together, upwardly bowed pipes forming roofing frame and having their ends welded to the upper ends of the outer pipes of the uprights and end portions welded to the inner pipes of the uprights, upright pipes at the ends of the structure having their upper ends welded to the outermost arcuate pipes, tie rods each including sections connected together by a turnbuckle, one end of 10 each tie rod being connected to one part of a roofing pipe and the other end to another part thereof, said tie rods holding the roofing pipes in a true arc, and longitudinally extending pipes connected with the outer pipes of the uprights, and means for attaching wooden beams to the outer pipes of the uprights and to the pipes of the roof forming frame.

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