

No. 730,344.

PATENTED JUNE 9, 1903.

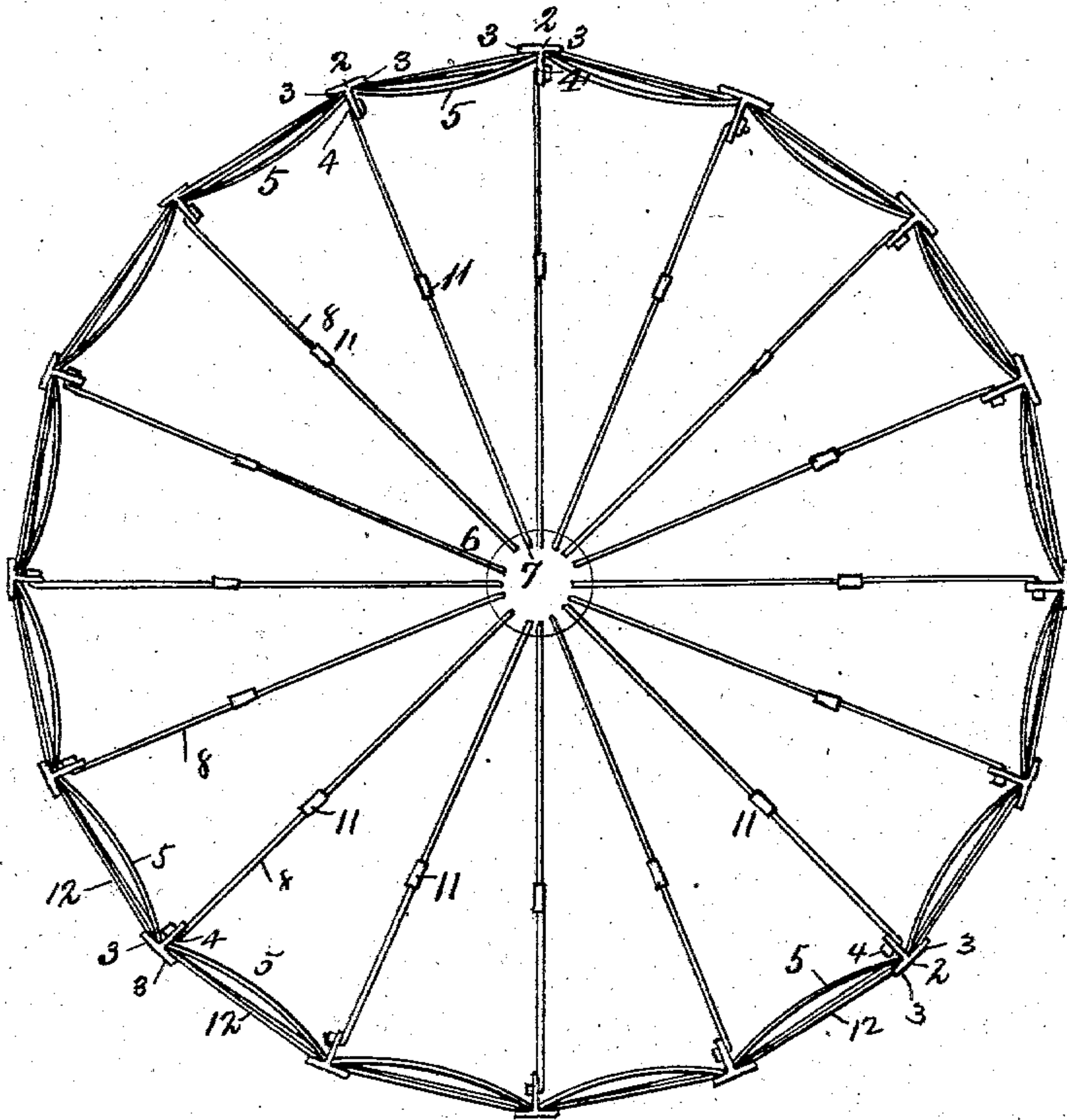
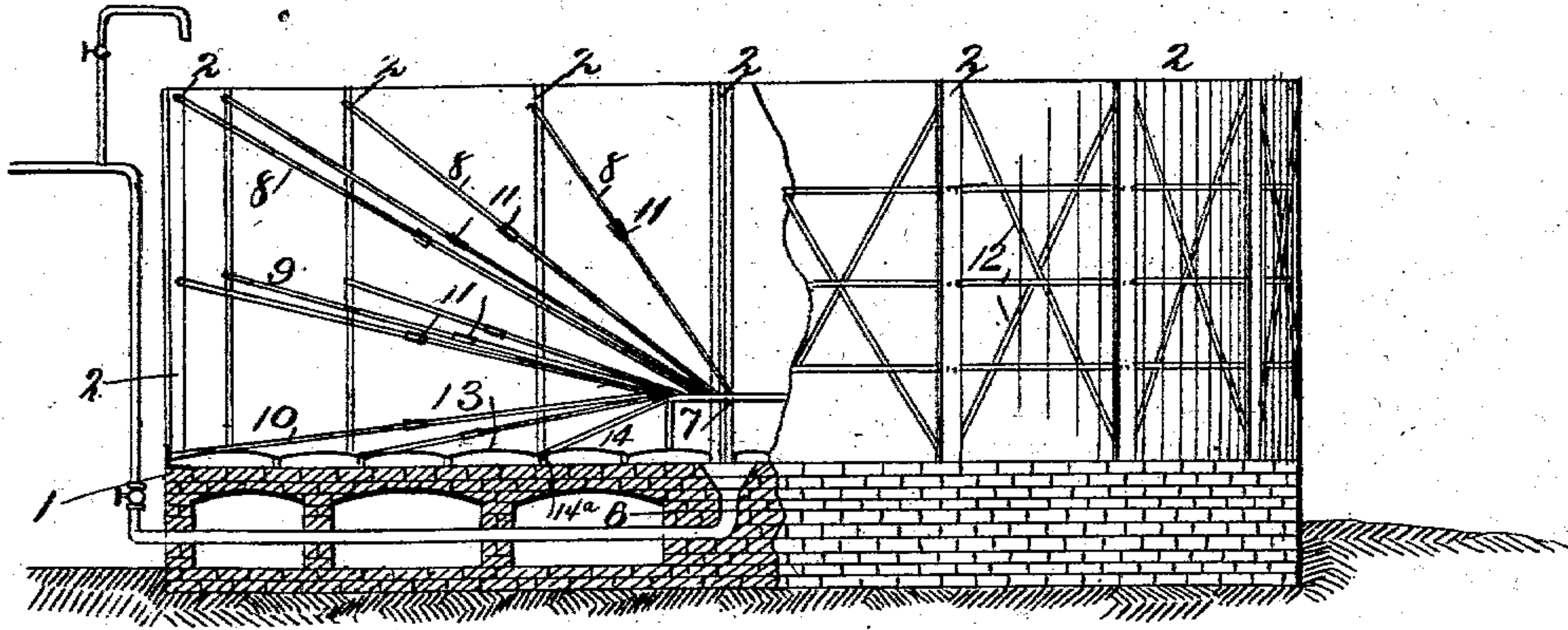
N. J. CLAYTON, SR.  
TANK.

APPLICATION FILED JUNE 25, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2*

Witnesses:  
*F. L. Curran*

*Frank G. Radelfinger*

Inventor:  
*Nicholas J. Clayton, Sr.*

by *Law Saggard & Co.,*  
Attorneys.

N. J. CLAYTON, SR.  
TANK.

APPLICATION FILED JUNE 25, 1902.

NO MODEL.

4 SHEETS—SHEET 2.

Fig. 3

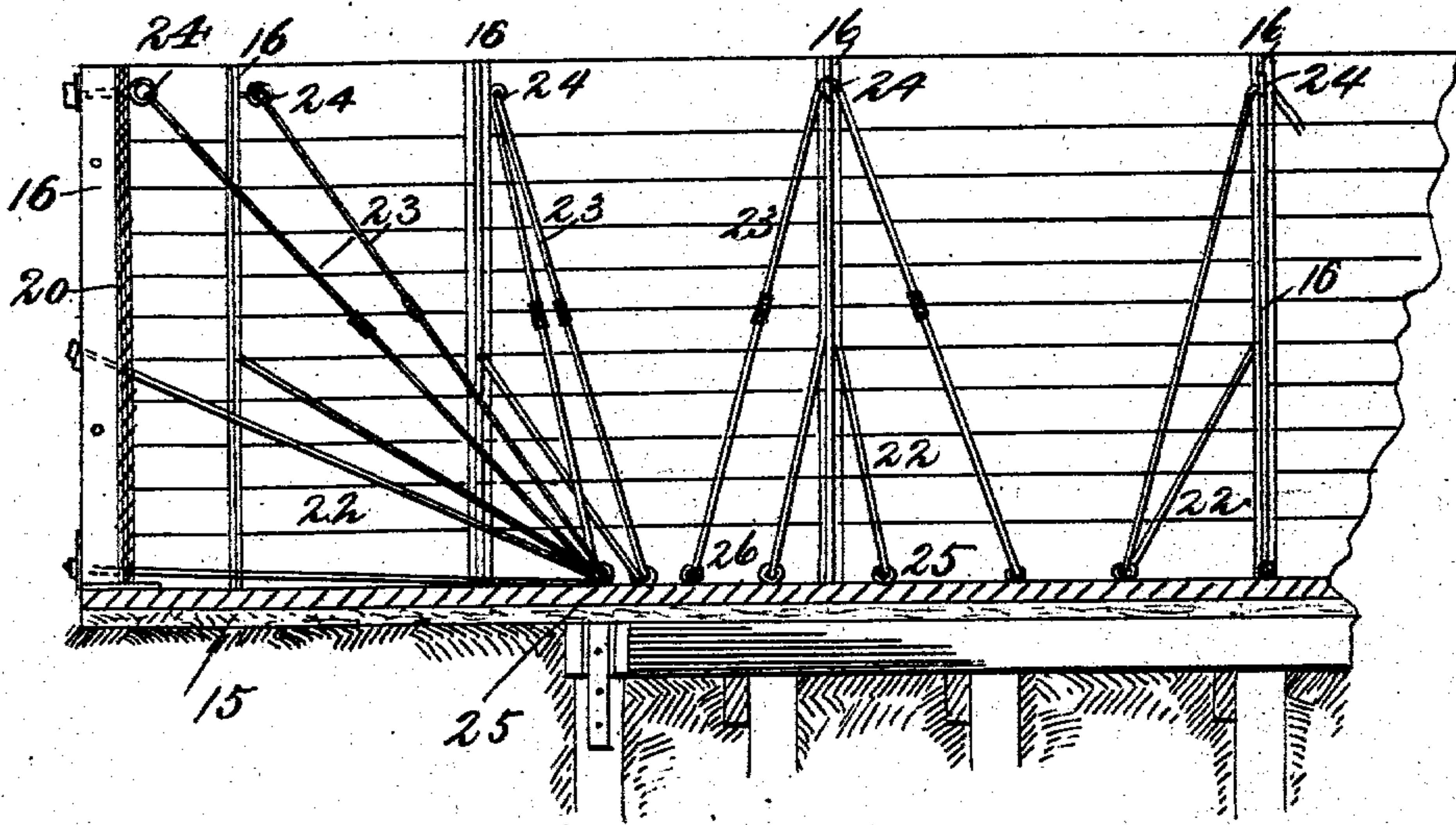
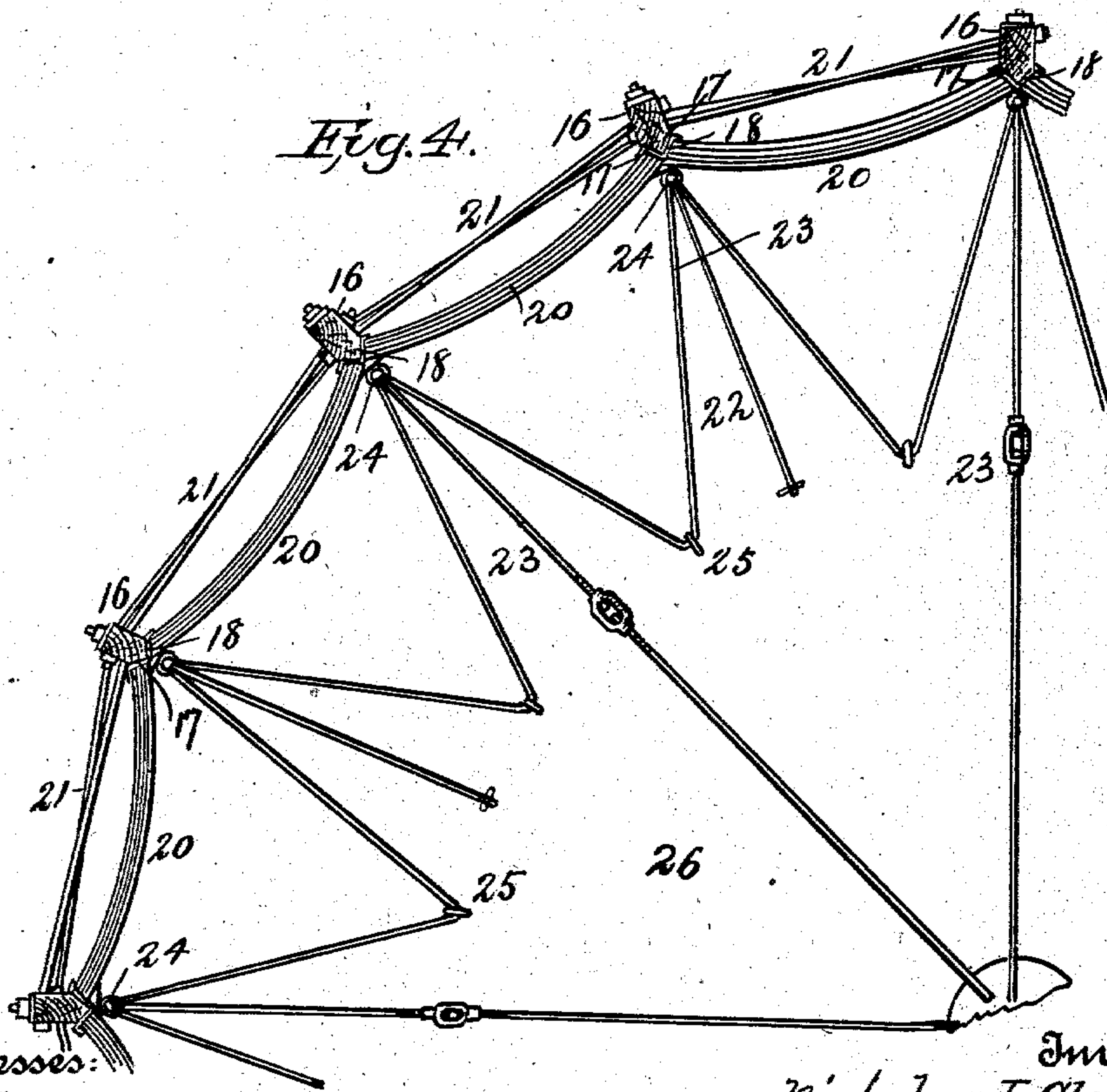


Fig. 4.



Witnesses:  
F. L. Orvand

Frank G. Radelfinger

Inventor:  
Nicholas J. Clayton, Sr.

By *Law Rager & Co.*  
Attorneys.



No. 730,344.

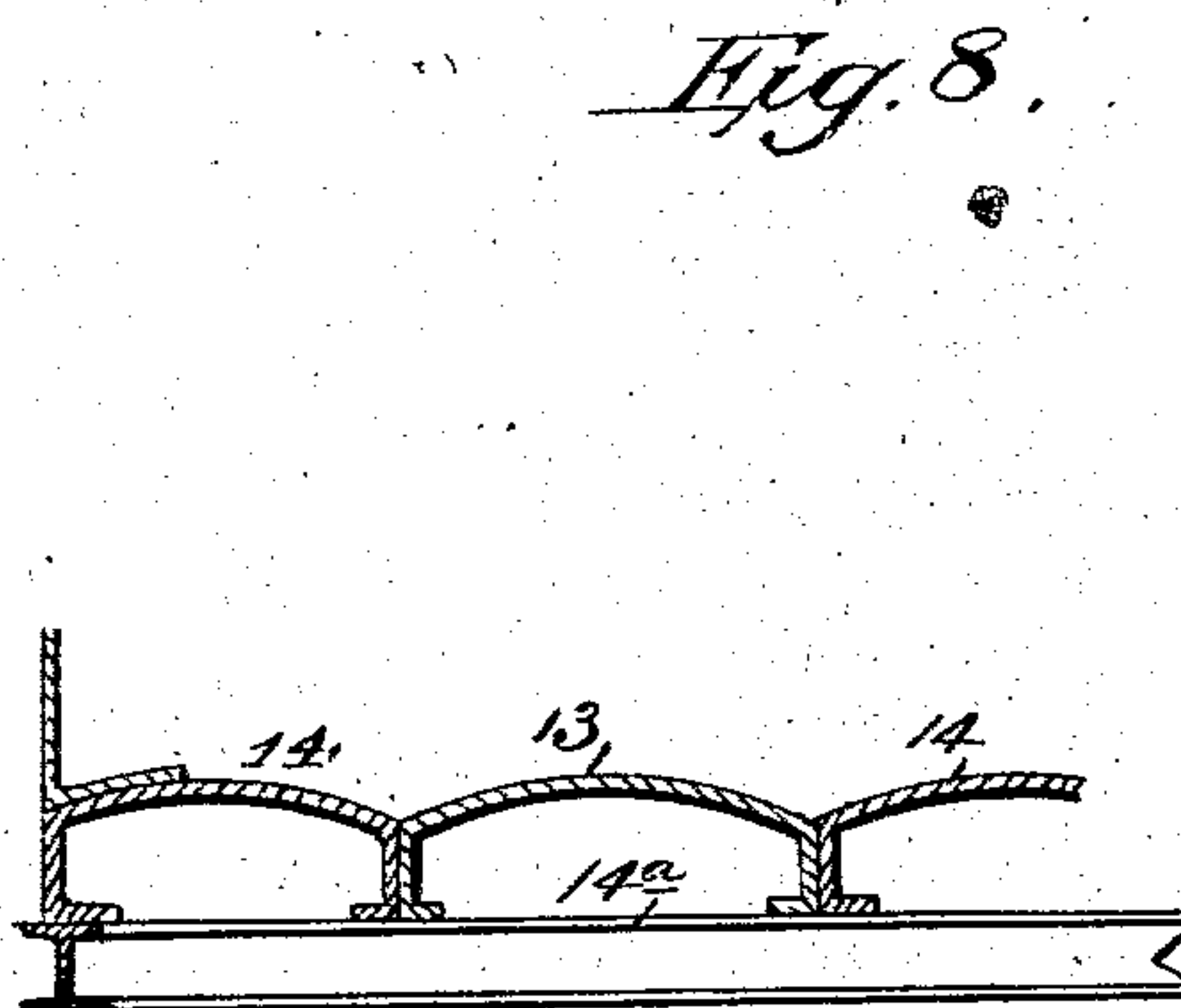
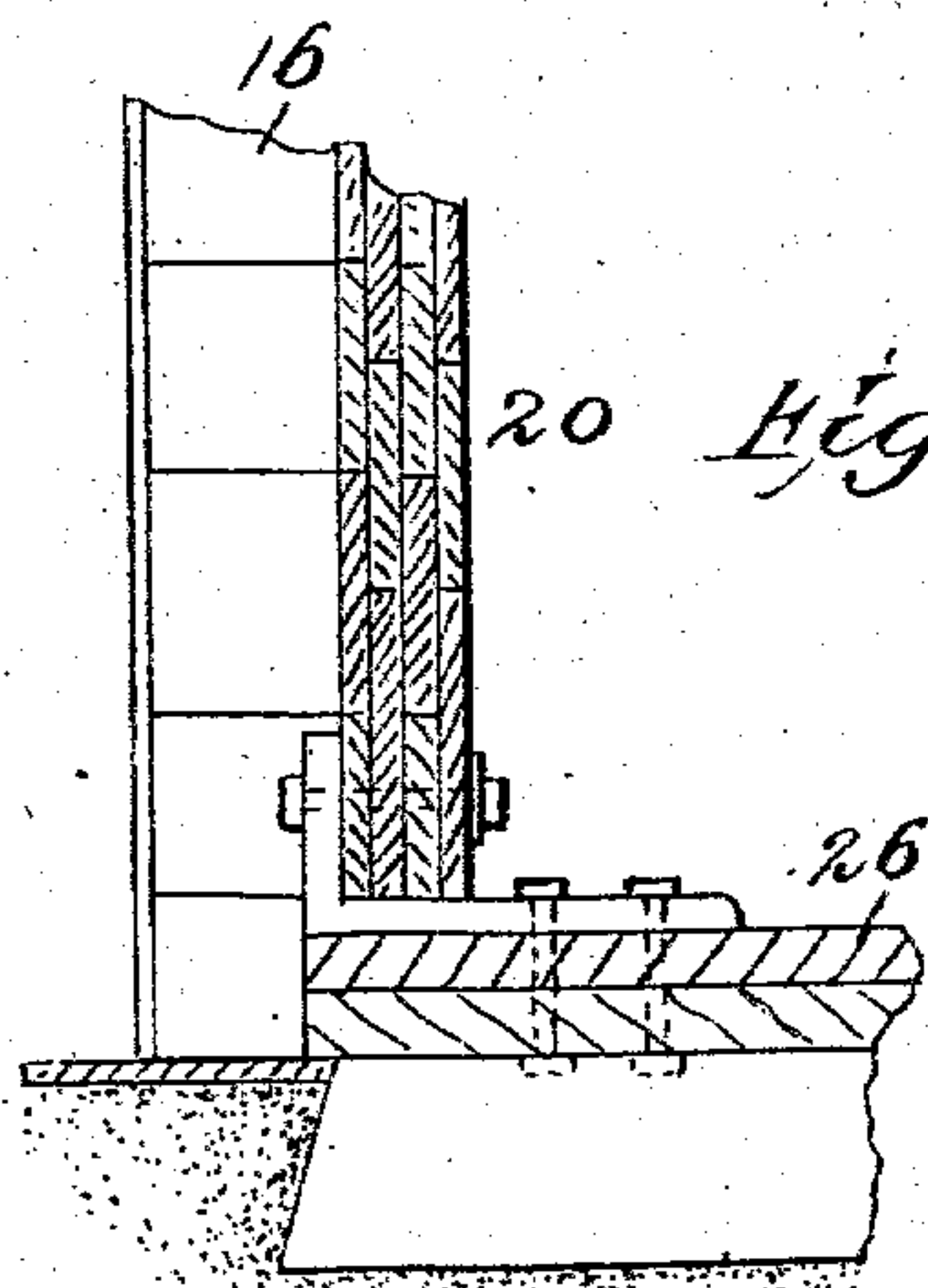
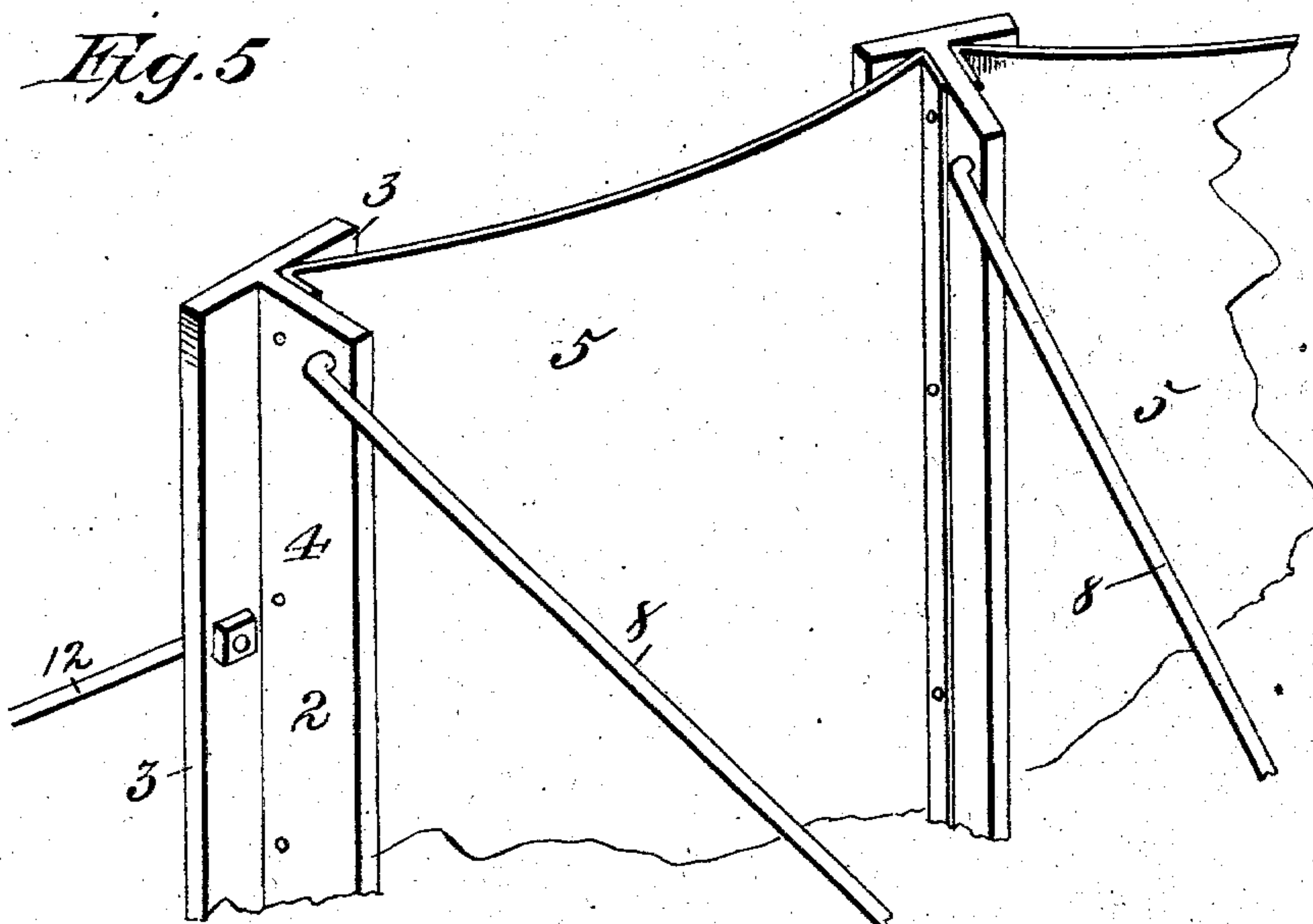
PATENTED JUNE 9, 1903.

N. J. CLAYTON, SR.  
TANK.

APPLICATION FILED JUNE 25, 1902

NO MODEL.

4 SHEETS—SHEET 3.



Witnesses:  
F. L. Curran

Frank G. Radelfinger.

Inventor  
Nicholas J. Clayton, Sr.  
by *Lam. Baggett & Co.,*  
Attorneys

No. 730,344.

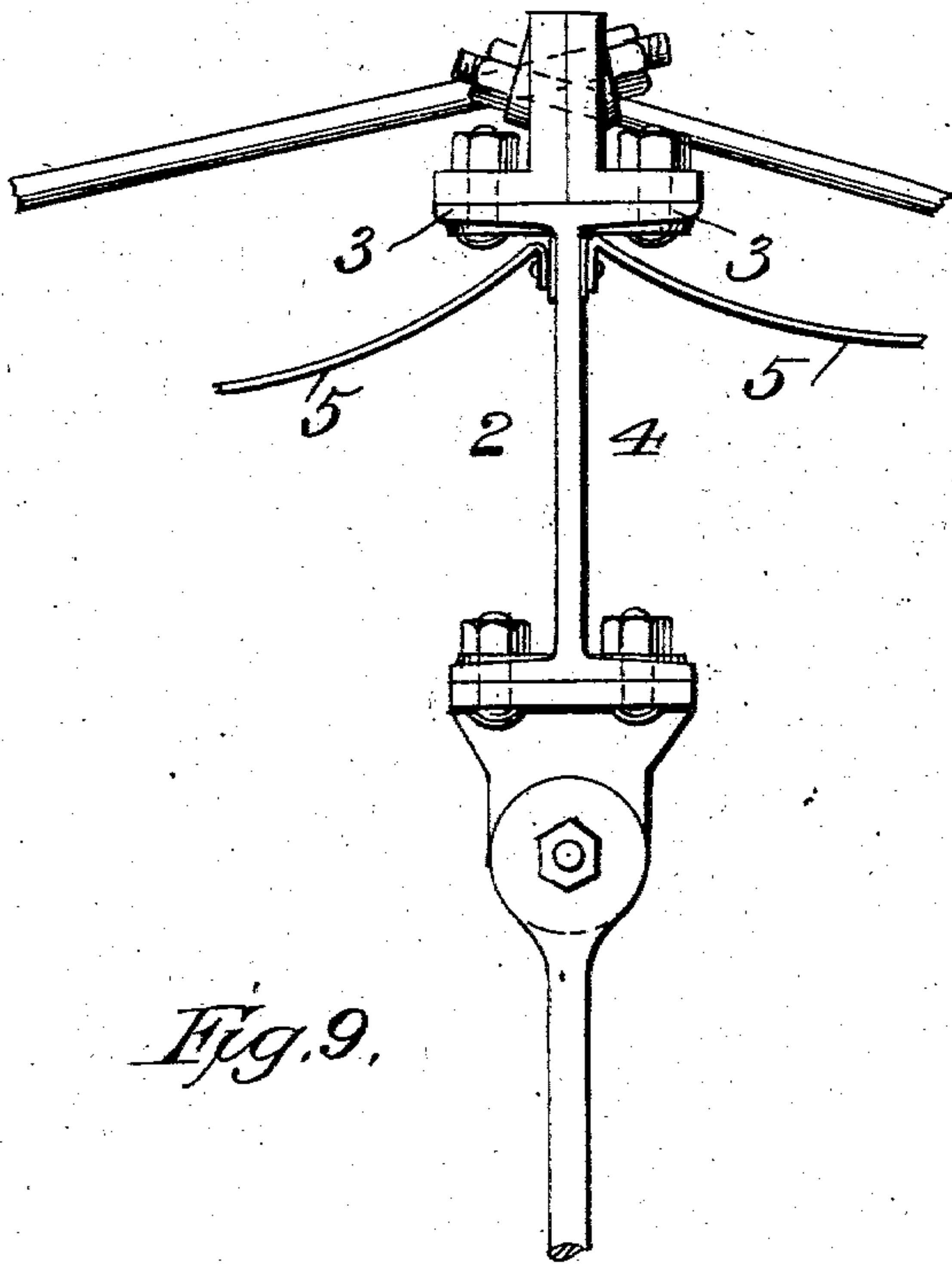
PATENTED JUNE 9, 1903.

N. J. CLAYTON, SR.  
TANK.

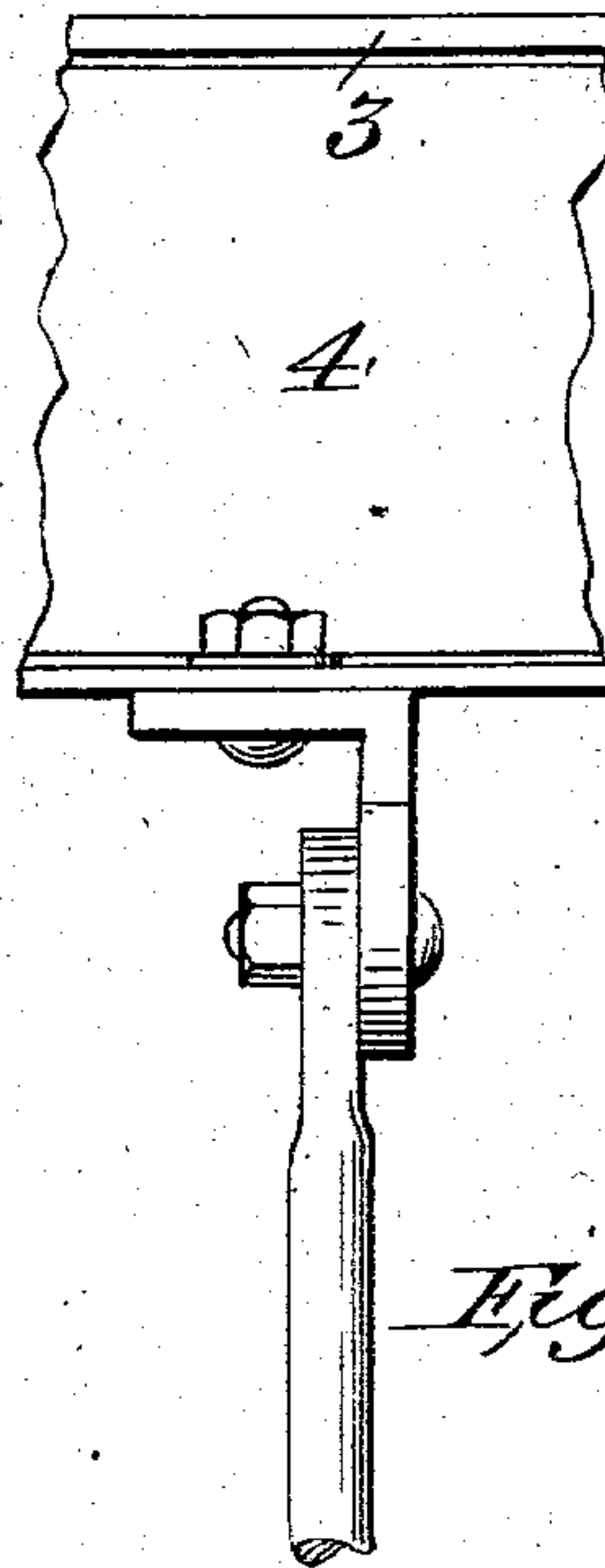
APPLICATION FILED JUNE 25, 1902.

NO MODEL.

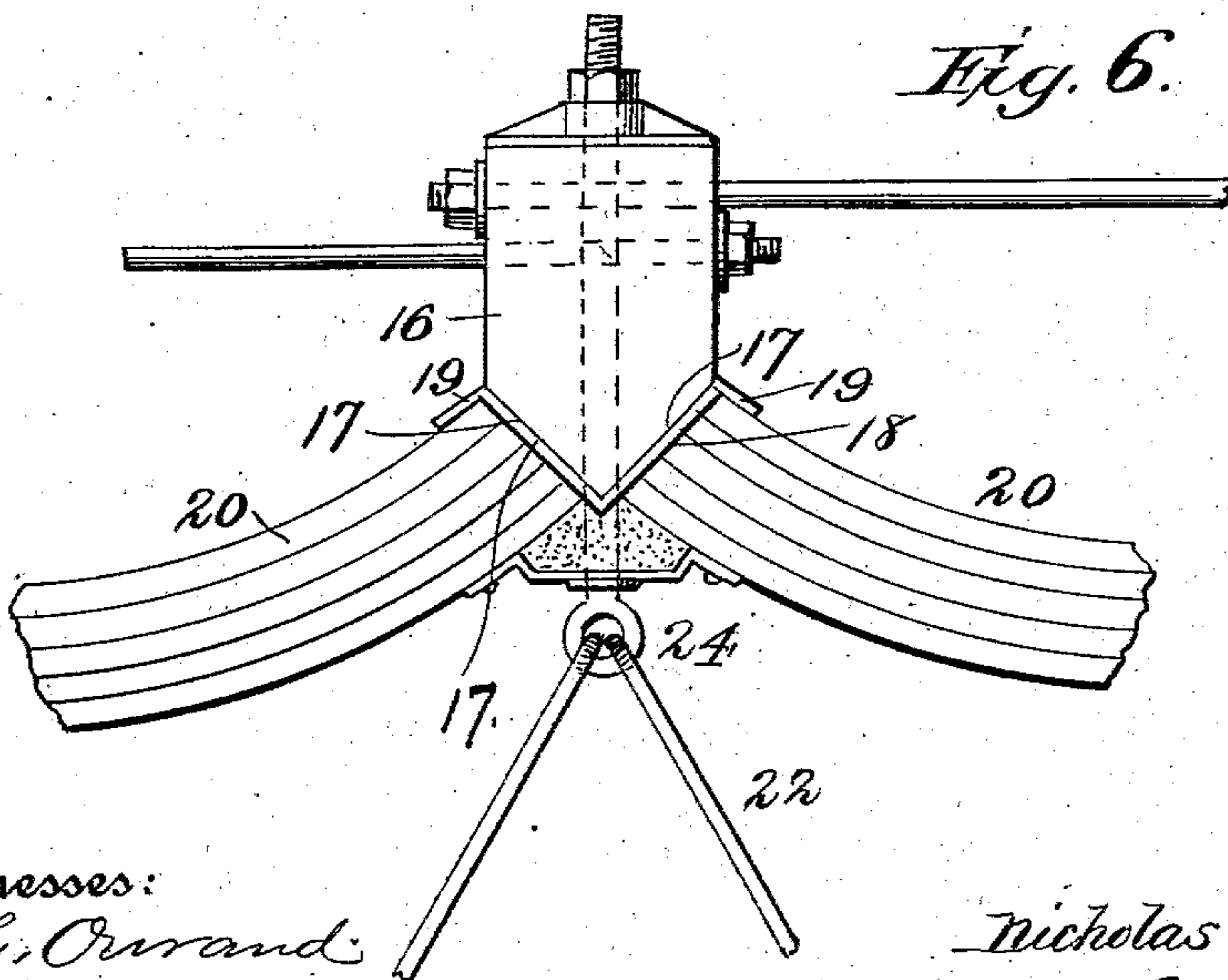
4 SHEETS—SHEET 4.



*Fig. 9.*



*Fig. 10.*



*Fig. 6.*

Witnesses:

*F. L. Orvand*

*Frank G. Radelfinger*

Inventor:

*Nicholas J. Clayton, Sr.*

By *Lawson & Co.*  
Attorneys.



# UNITED STATES PATENT OFFICE.

NICHOLAS J. CLAYTON, SR., OF GALVESTON, TEXAS.

## TANK.

SPECIFICATION forming part of Letters Patent No. 730,344, dated June 9, 1903.

Application filed June 25, 1902. Serial No. 113,142. (No model.)

### *To all whom it may concern:*

Be it known that I, NICHOLAS J. CLAYTON, Sr., a citizen of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented new and useful Improvements in Tanks, of which the following is a specification.

My invention relates to improvements in tanks; and the object of the same is to devise a system of construction which can be used in metal or wood or for either portable or permanent tanks.

The novel construction designed by me for carrying out my invention is fully described in this specification and claimed, and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a side elevation, partly in section, of a metal tank constructed in accordance with my invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal section of a wooden tank constructed in accordance with my invention. Fig. 4 is a fragmentary plan of the same. Fig. 5 is a detail perspective of a portion of the metal construction. Fig. 6 is a detail plan of one of the uprights for the wooden construction. Fig. 7 is a detail of the footing used in the metal construction. Fig. 8 is a detail section of the metal bottom. Fig. 9 is a detail plan of a modified form of upright for the metal construction. Fig. 10 is a side elevation of the same.

Like numerals of reference designate like parts in the different views of the drawings.

The numeral 1 designates a base upon which my tank is mounted. This base is preferably constructed of concrete, but may be of brick, stone, or even wood. Footed on the base 1 are upright T-shaped guides 2, having oppositely-extending flanges 3 and a web 4. Riveted to the web 4 are curved plates 5, which bow inwardly—that is, they are convex on their inner sides. This combination of plates 5 and guides 2 form a substantially circular casing, and located at the center of the said circle and formed integral with the base 1 is a pier 6, and rigidly secured to said pier is a ring 7. Connected to the ring 7 are three sets 8, 9, and 10 of inclined radially-extending tension-rods. The set 8 of rods

are connected to the upper ends of the webs 4, and set 9 are connected centrally to the uprights and to the webs 4, and the set 10 are connected to the lower ends of the webs 4. The tension-rods 8, 9, and 10 are formed in two sections, and turnbuckles 11 connect the ends of the said sections and serve to regulate the strain on said rods. It should be noted that the tension-rods 8, 9, and 10 serve both as tension and brace rods, and thereby secure the tank against all strains. To make the tank more secure, a double series of diagonal brace-rods 12 are connected to the diagonally opposite ends of the flanges 3 on the guides 2. These rods effectively hold the plates 5 against straightening out. A bottom 13, formed of arched plates 14, supported on circular T-girders 14<sup>a</sup>, is employed. (See Fig. 8.)

In the modified form illustrated in Figs. 3 and 4 a base 15 is used in which is footed a set of upright wooden posts 16, having beveled faces 17, on which are mounted angle-irons 18, having flanges 19. Arches 20, formed of boards disposed horizontally and secured together, are headed on the angle-irons 18. Diagonal braces 21 are employed, which are headed in diagonally opposite ends of the posts 16. Radial braces 22 and a double set of braces 23 are connected at one end to eyebolts 24, passing through the posts 16, and at their other ends to eyebolts 25, seated in a floor 26.

I wish to call particular attention to the principle involved in the use of woodwork applied in a horizontal manner in the segmental arches by which the greatest available strength of the wood—that of resisting compression—is utilized in the construction of tanks and which is not possible if used vertically in staves.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

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

1. In a tank the combination of uprights, curved plates convex on their inner sides secured to said uprights, a support located in



the interior of said tank, and tension-rods connected to said support and to said uprights, substantially as described.

2. In a tank the combination of a set of uprights, curved plates convex on their inner sides connected to said uprights, and diagonal brace-rods connecting the diagonally opposite ends of said uprights, substantially as described.

3. In a tank, a set of uprights, inwardly-curved plates connected to said uprights, tension-rods connected to the upper ends of said uprights, and to a support and tension-rods connected to the lower ends of said uprights, and to a support substantially as described.

4. In a cylindrical tank the combination of a set of uprights, curved plates connected to said uprights to form a tank-casing, a set of tension-rods connected to the upper ends of said uprights and to a point within said tank, and a set of tension-rods connected to the bottoms of said uprights and to a point within said tank, substantially as described.

5. In a tank, the combination of a set of uprights, transversely inwardly-curved plates

connected to said uprights, brace-rods connecting the diagonally opposite ends of said uprights, and tension-rods connected to said uprights and footed within the tank, substantially as described.

6. In a tank, the combination of inwardly and transversely curved plates connected at their edges to form the walls of the tank, and tension-rods connected to said plates at their points of junction and footed within said tank, substantially as described.

7. In a tank a set of uprights T-shaped in cross-section, inwardly transversely-curved plates connected to said uprights and forming the wall of the tank, and tension-rods connected to said uprights and to a support, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

NICHOLAS J. CLAYTON, SR.

Witnesses:

JOHN HANNA,

PHILIP ANDERSON.