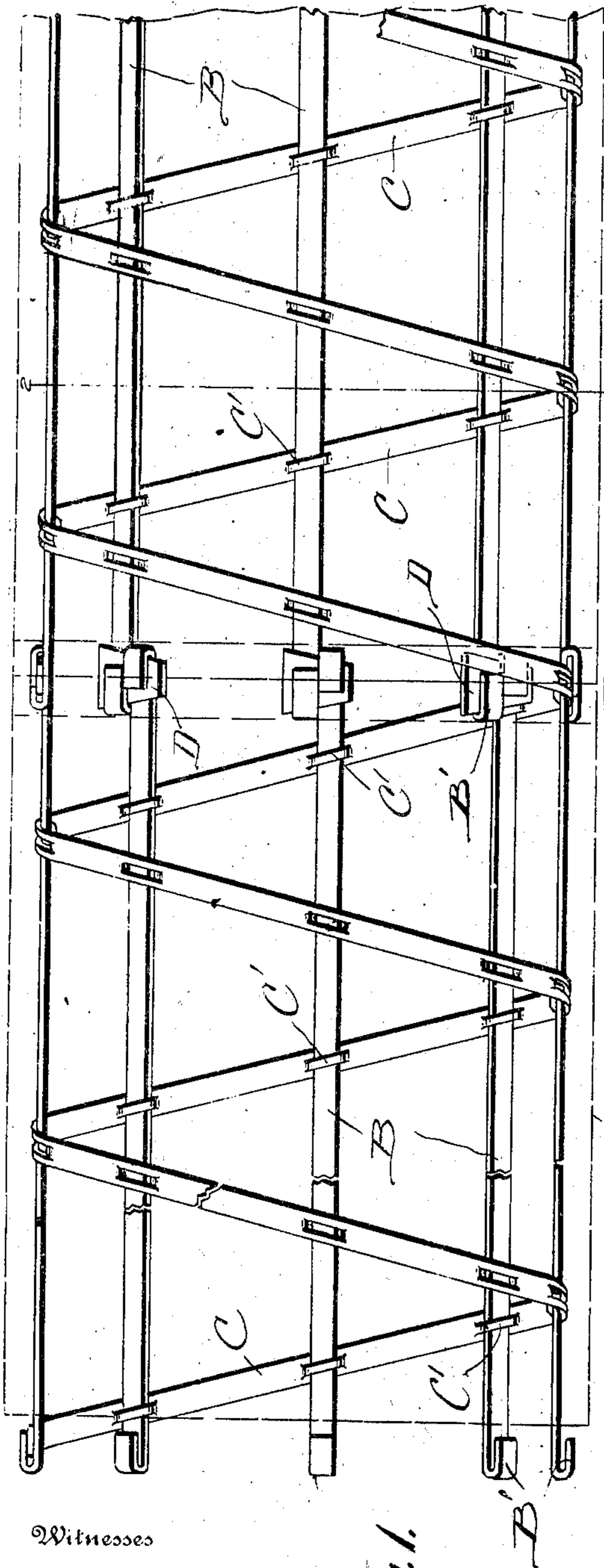


J. M. PHELAN.  
 REINFORCED CONCRETE PIPE.  
 APPLICATION FILED AUG. 5, 1907.

967,427.

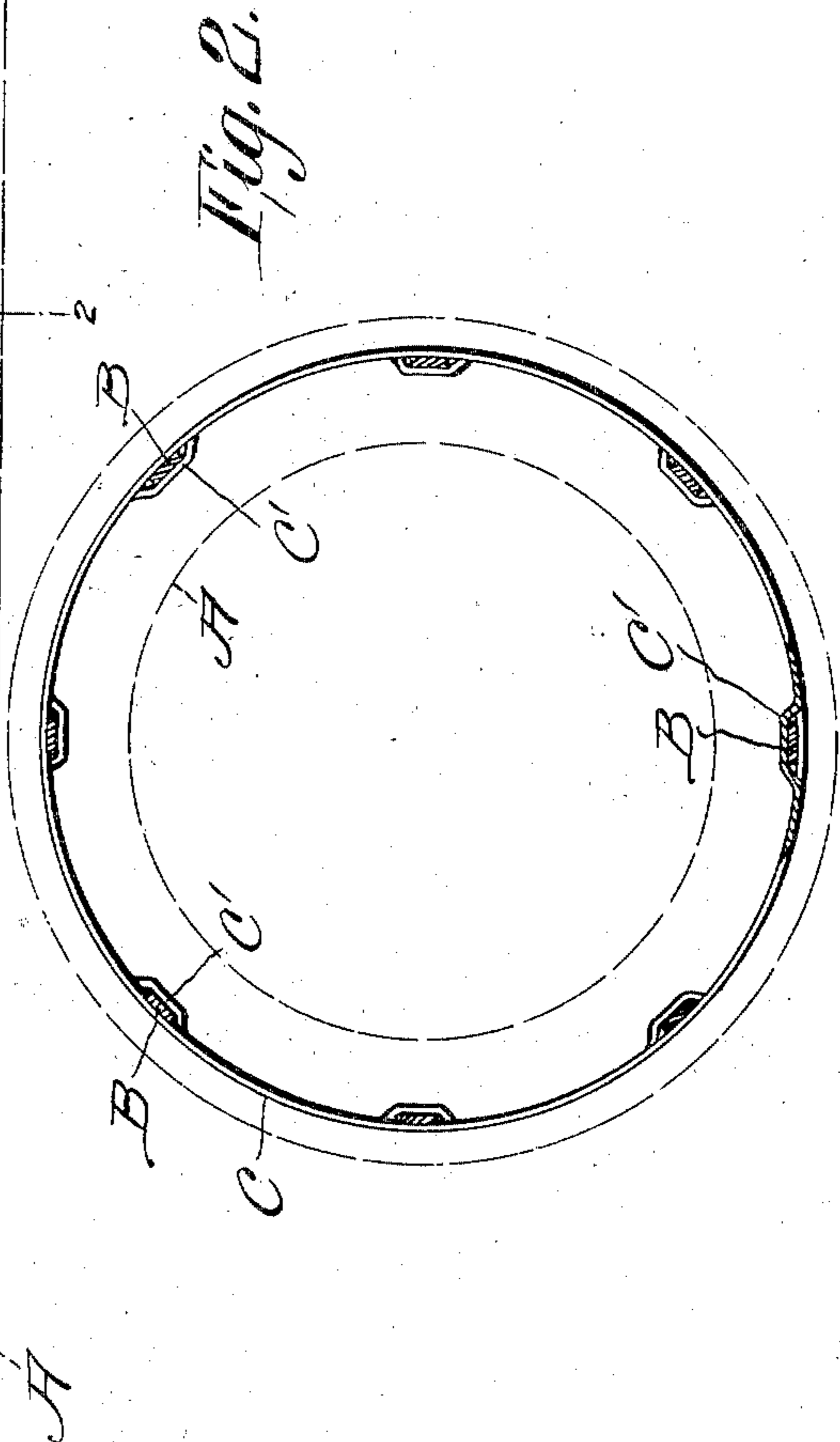
Patented Aug. 16, 1910.



Witnesses

*Oliver H. Holmes*  
*Rea P. Wright*

*Fig. 1.*



*Fig. 2.*

Inventor

*John M. Phelan,*

By

*Simon A. Brock*

Attorney

# UNITED STATES PATENT OFFICE.

JOHN M. PHELAN, OF JACKSON, MICHIGAN, ASSIGNOR TO REINFORCED CONCRETE PIPE COMPANY, A CORPORATION OF WEST VIRGINIA.

REINFORCED-CONCRETE PIPE.

967,427.

Specification of Letters Patent. Patented Aug. 16, 1910.

Application filed August 5, 1907. Serial No. 387,105.

*To all whom it may concern:*

Be it known that I, JOHN M. PHELAN, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in Reinforced-Concrete Pipes, of which the following is a specification.

This invention relates generally to reinforced concrete pipes and more particularly to the reinforcing construction the object being to provide a simple and efficient form of reinforcement whereby an economical and durable construction of pipe is provided.

The invention consists of the novel features of construction hereinafter fully described and pointed out in the claim.

In the drawings forming a part of this specification, Figure 1 is a side elevation illustrating my improved construction of concrete pipe reinforcements. Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1, pipe being shown in dotted lines.

In carrying out my invention, I employ a concrete pipe section A which is provided with longitudinal reinforcing bars B which are preferably arranged at regular intervals and are of such length as to project beyond the ends of the pipe sections, said projecting ends being bent back providing hooks as shown at B'. Connected with the longitudinal reinforcing bars is a spirally arranged band C which extends from one end of the pipe section to the other, passing around the same a number of times in spiral formation

as shown, said spiral reinforcing bands having a plurality of loops C' punched therefrom and through which the longitudinal strips are threaded as most clearly shown in Figs. 1 and 2, and it will be understood that these spiral bands with the longitudinal bars connected thereto constitutes a reinforcing frame which is arranged properly within the mold when the concrete pipe is molded and with the finished pipe when the projecting ends of the bars are visible and when two pipe sections are brought together the hooked ends of the bars are locked together by means of suitable wedges D.

A reinforcing frame constructed as herein shown and described renders the pipe section exceedingly strong and durable and by utilizing the spiral bands each and every portion of the pipe section is braced both longitudinally and transversely.

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

In a concrete pipe section, a continuous spiral band embedded in said section, said band having loops punched therefrom at regular intervals, and longitudinally arranged bars also embedded in the concrete, each bar passing through a number of said loops.

JOHN M. PHELAN.

Witnesses:

E. F. LOWERY,  
P. P. LOOMIS.