

No. 607,594.

Patented July 19, 1898.

J. E. SHERIFF.

TUBULAR BODY.

(Application filed Aug. 24, 1897.)

(No Model.)

Fig. 1.

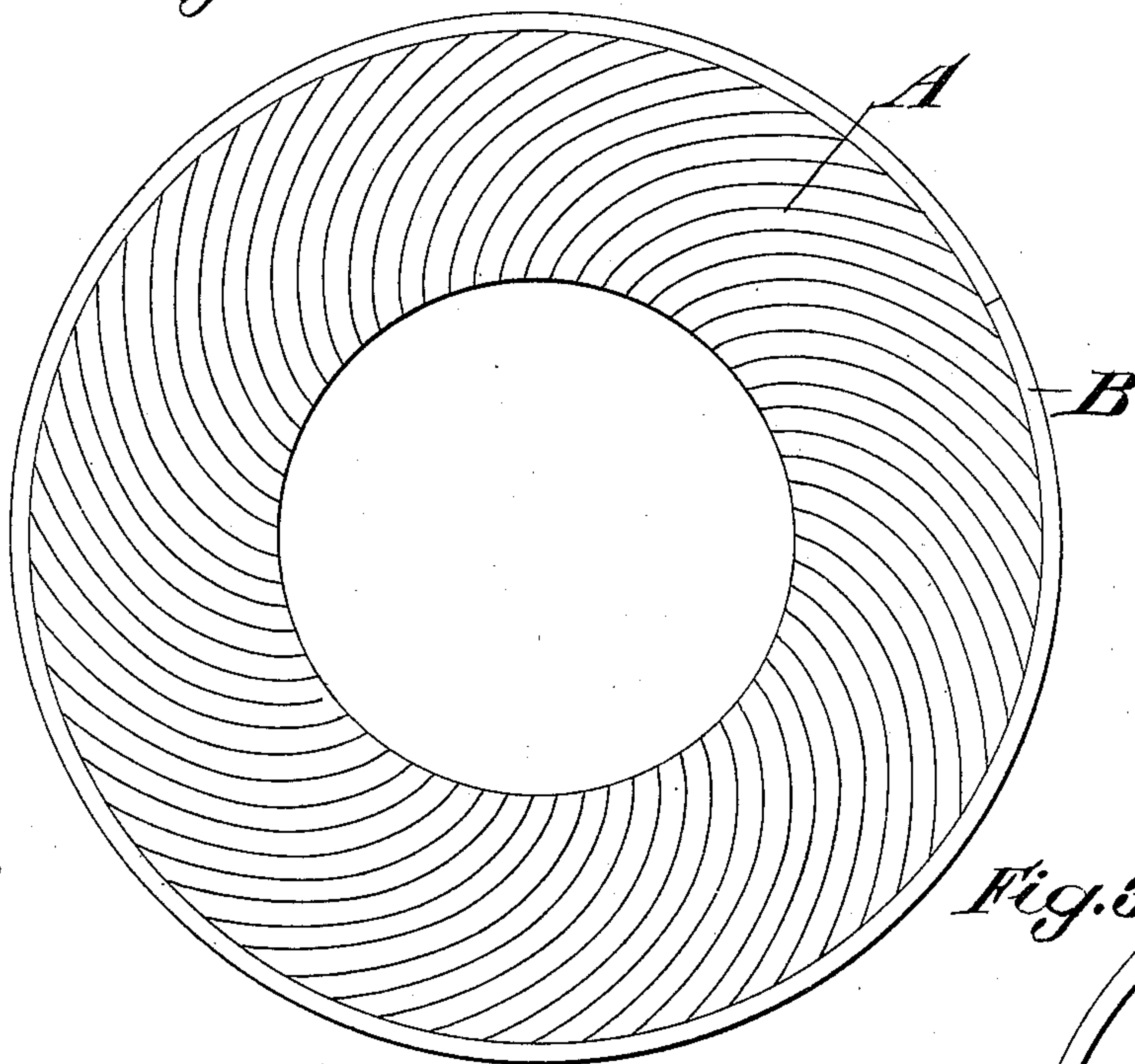


Fig. 2.



Fig. 4.

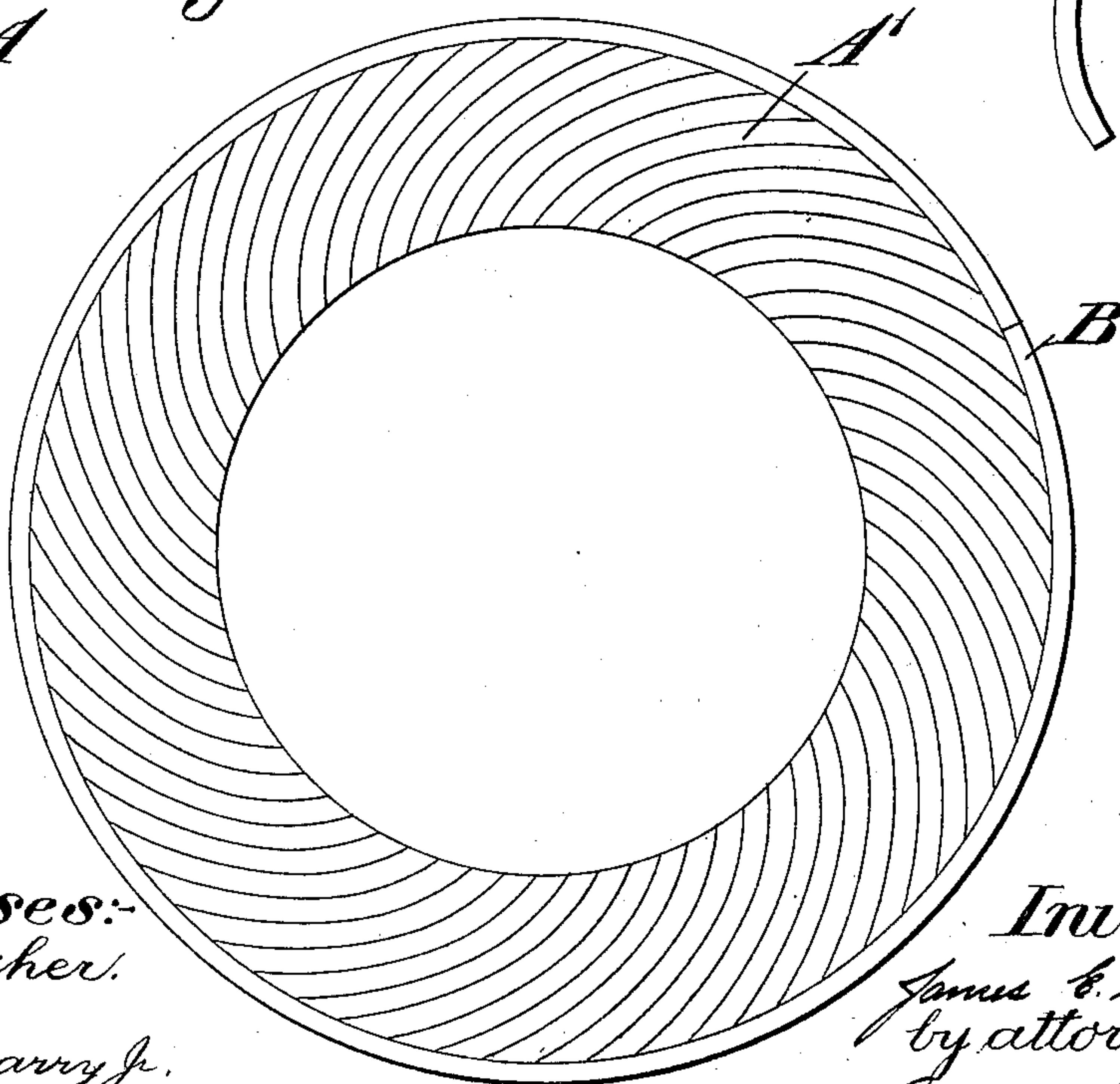
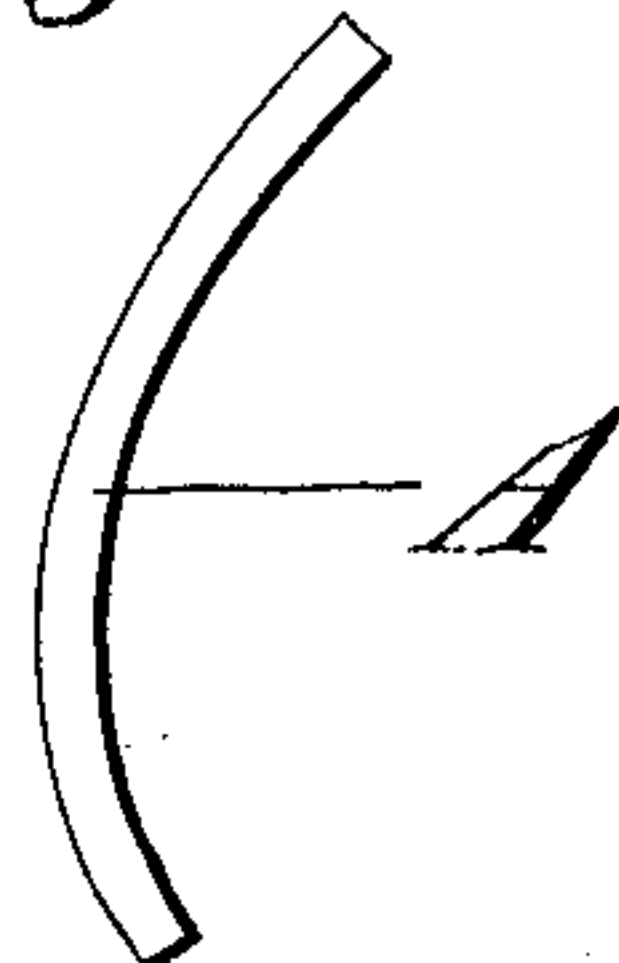


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES EDWIN SHERIFF, OF NEW YORK, N. Y., ASSIGNOR TO HARVEY M. MUNSELL AND JOHN H. BROWN, OF SAME PLACE.

TUBULAR BODY.

SPECIFICATION forming part of Letters Patent No. 607,594, dated July 19, 1898.

Application filed August 24, 1897. Serial No. 649,359. (No model.)

To all whom it may concern:

Be it known that I, JAMES EDWIN SHERIFF, of New York, in the county and State of New York, have invented a new and useful Improvement in Tubular Bodies, of which the following is a specification.

My invention relates to an improvement in tubular bodies, and more particularly to tubular bodies made up of longitudinal pieces and held together by pressure within the bore and by an exterior binding, one or both.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents the tubular body in end elevation, the pieces which form it being shown in assembled adjustment and surrounded by a layer of wire wound thereon. Fig. 2 is a view in detail of one of the pieces before it is curved. Fig. 3 is a view of the same after the pieces have been bent substantially into the curved form which it is to assume in the completed structure, and Fig. 4 is an end elevation of a modified form of tubular body.

The pieces which make up the body of the tube in my present invention may be made of steel or other suitable metal, although I do not wish to limit myself to any particular substance. As distinguished from pieces the opposite sides of which follow radial lines from the central axis of the tubular body to its circumference the pieces herein shown and to which my present invention is directed have such widths that the sum total of their thicknesses on transverse lines will be substantially equal to a circumference described from the axis of the tubular body as a center and with a radius equal to the distance from said axis to the interior wall of the bore, while at points exterior to the inner wall of the bore the sum total of the thicknesses of the pieces along such transverse lines would be less than the length of a circumference drawn from the axis of the tubular body as a center and with a radius equal to the distance of such point or points from the axis. In short, the structure is such that in order to close the segments one to another throughout their depth it will be necessary to curve them in the same

direction, so that when closed one upon another to form a substantially solid wall a circumference drawn from the axis of the tubular body as a center and with a radius greater than the distance from the said axis to the interior of the wall would cut the pieces in a diagonal direction.

Each of the pieces in the form shown in Figs. 1, 2, and 3 is denoted by A and may be made of any thickness desired or of any thickness which can be practically utilized in its bent condition. The several pieces A are intended to rest, with their inner edges adjacent to each other, around the wall of the bore, and as they extend outwardly from the bore they become deflected from radial lines, the angle of deflection gradually increasing as they approach the exterior surface of the tubular body and as the surfaces of the adjacent pieces are brought into contact throughout their entire depth.

Instead of starting the pieces at the periphery of the bore on substantially radial lines, as represented in Fig. 1, they may be started on lines oblique to the radial lines, as represented in Fig. 4, where the pieces are denoted by A'. The curve which the pieces A' assume in the form shown in Fig. 4 is substantially the same as the curve which the pieces A assume in Fig. 1. In fact, Fig. 4 may be considered as a part of the structure shown in Fig. 1, the wall of the bore in Fig. 1 being extended by removing the inner edges of the sections A for a distance which will bring their inner edges on a circumference drawn from the axis of a tubular body as a center and a radius equal to the radius of a bore represented in Fig. 4.

It will be observed that a radial pressure, particularly in the form shown in Fig. 4, exerting its force outwardly from within the bore will tend to cause the pieces A' to tightly bind against one another, and thereby close more tightly together the adjacent sides of the pieces.

The subdivisions or pieces A may either be made in plain form, as represented in Fig. 2, and forced into the curved form and held therein by a binding-layer B of wire, straps, or a casing, or they may bend into the shape

which they are finally to assume before being assembled and a binding-layer then applied to hold them in their assembled adjustment.

While I have shown the subdivisions or pieces 5 enwrapped by a layer of wire, I wish it to be understood that I do not limit myself to this particular form of binder, as I might employ in its stead a continuous casing or a series of straps or might dispense with it altogether. 10

What I claim is—

1. A tubular body composed of subdivisions or pieces extending longitudinally of the body and having substantially the same 15 thickness throughout their width, the said pieces being curved laterally to bring their adjacent sides into proximity to one another, substantially as set forth.

2. A tubular body composed of subdivisions or pieces extending longitudinally thereof and curved laterally, the sum total of the 20 thicknesses of the said pieces on transverse lines along a circumferential line exterior to the wall of the bore being less than the length of said circumferential line and means for 25 holding the said subdivisions or pieces in

assembled adjustment, substantially as set forth.

3. A tubular body composed of subdivisions extending longitudinally of the body 30 and from the periphery of the bore to the exterior of the body, the said subdivisions being curved laterally and said subdivisions being curved continuously in the same direction from the periphery of the bore to the exterior of the body and means for holding the 35 subdivisions in assembled adjustment, substantially as set forth.

4. A tubular body composed of subdivisions extending longitudinally of the body 40 and from the bore to the periphery of the body, said subdivisions being of substantially uniform thicknesses throughout and curved laterally, the curve being such that the subdivisions will rest with their adjacent faces 45 in contact and means for holding the subdivisions in assembled adjustment, substantially as set forth.

JAMES EDWIN SHERIFF.

Witnesses:

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