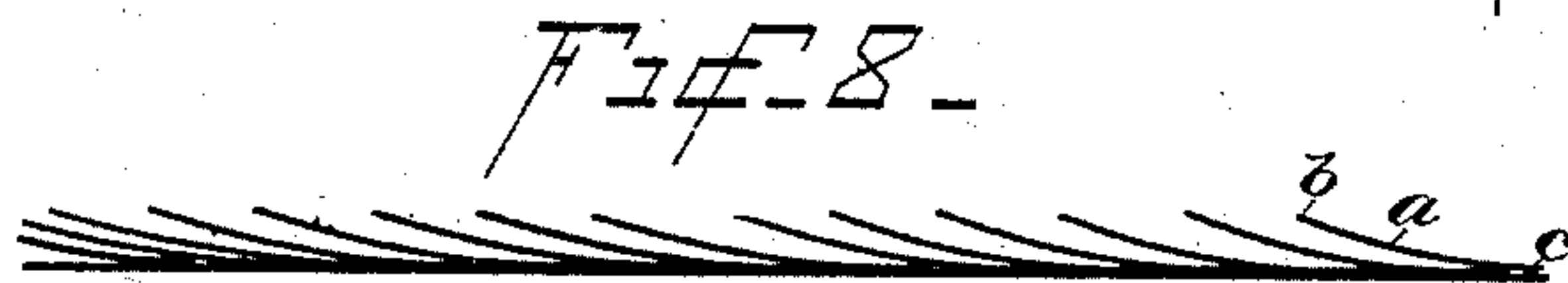
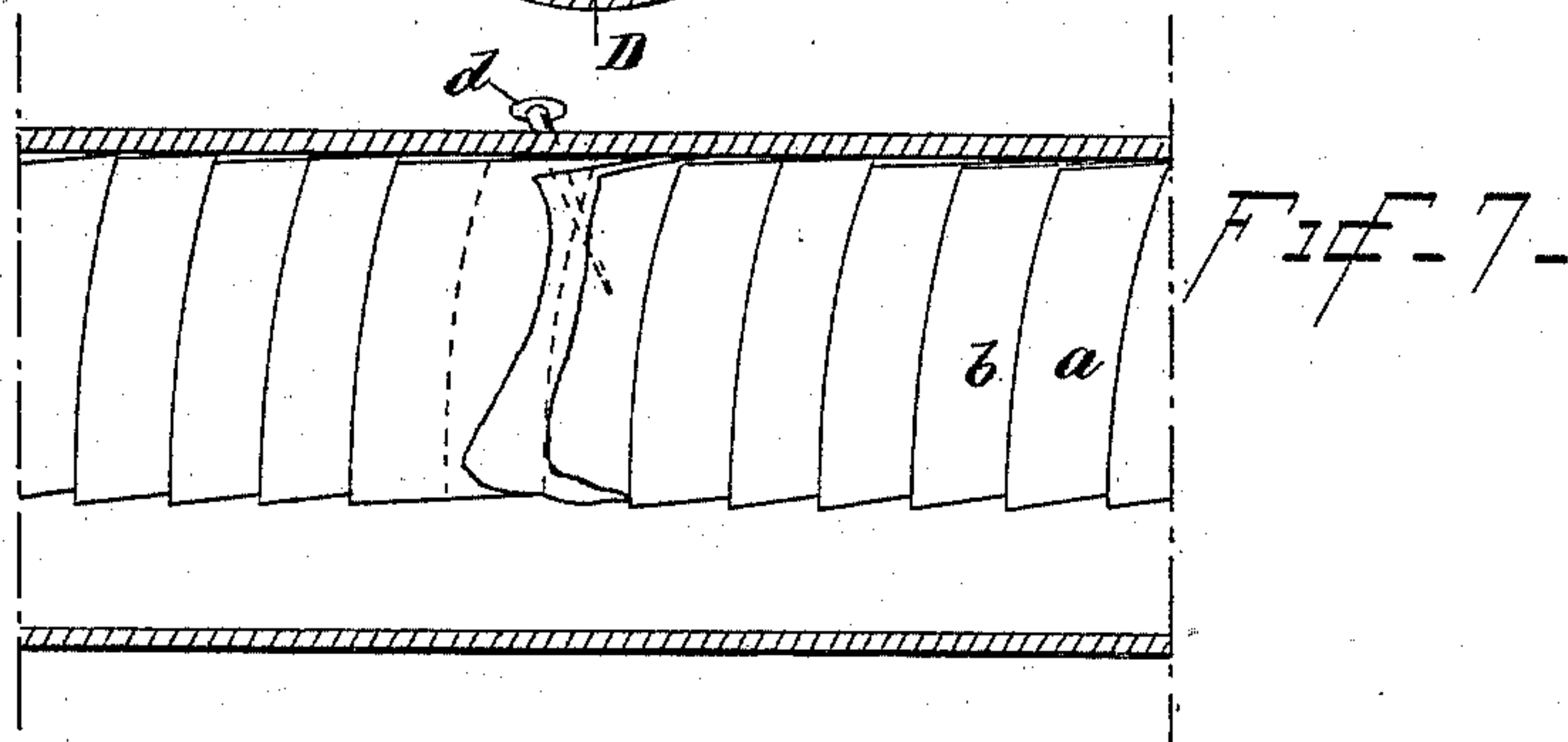
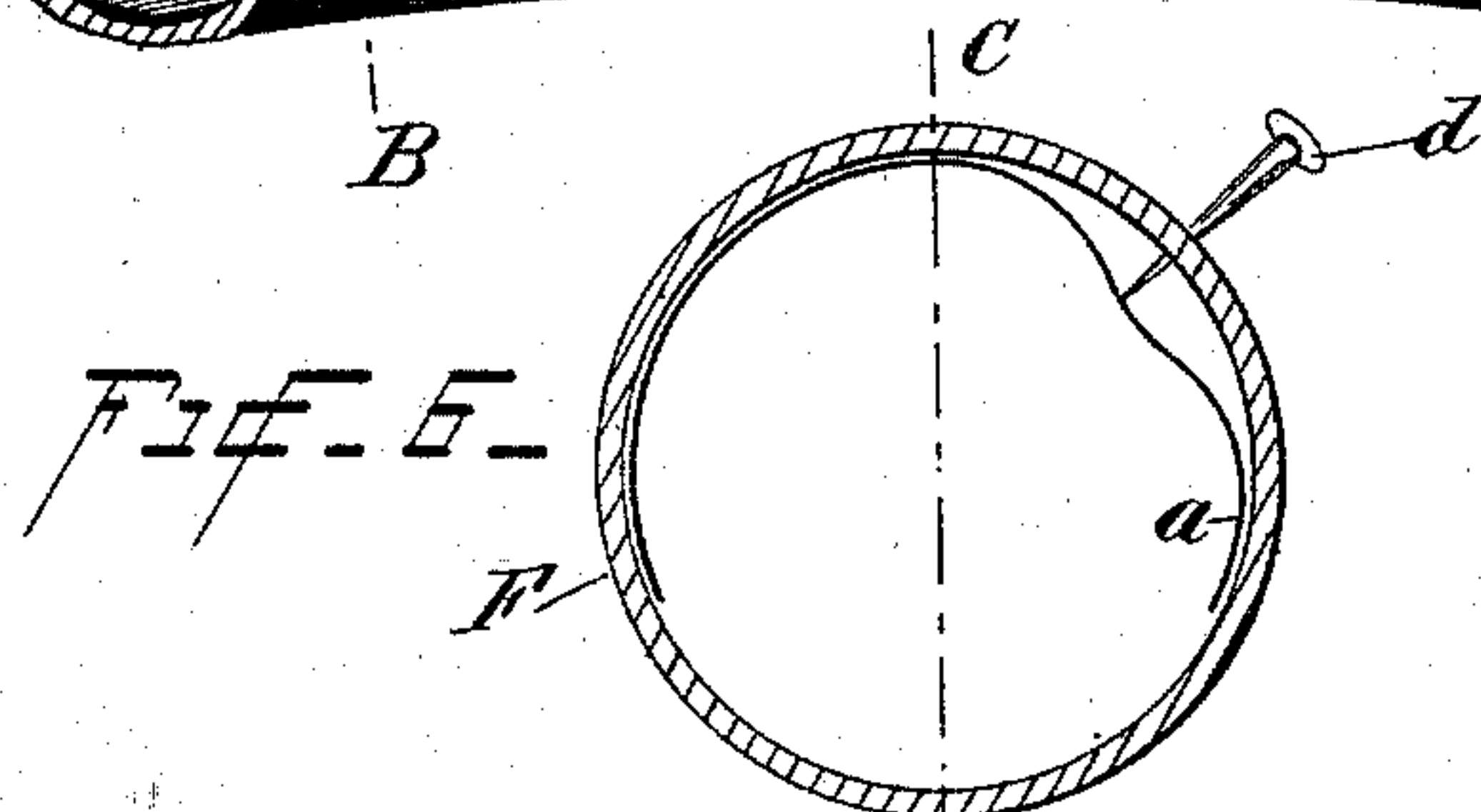
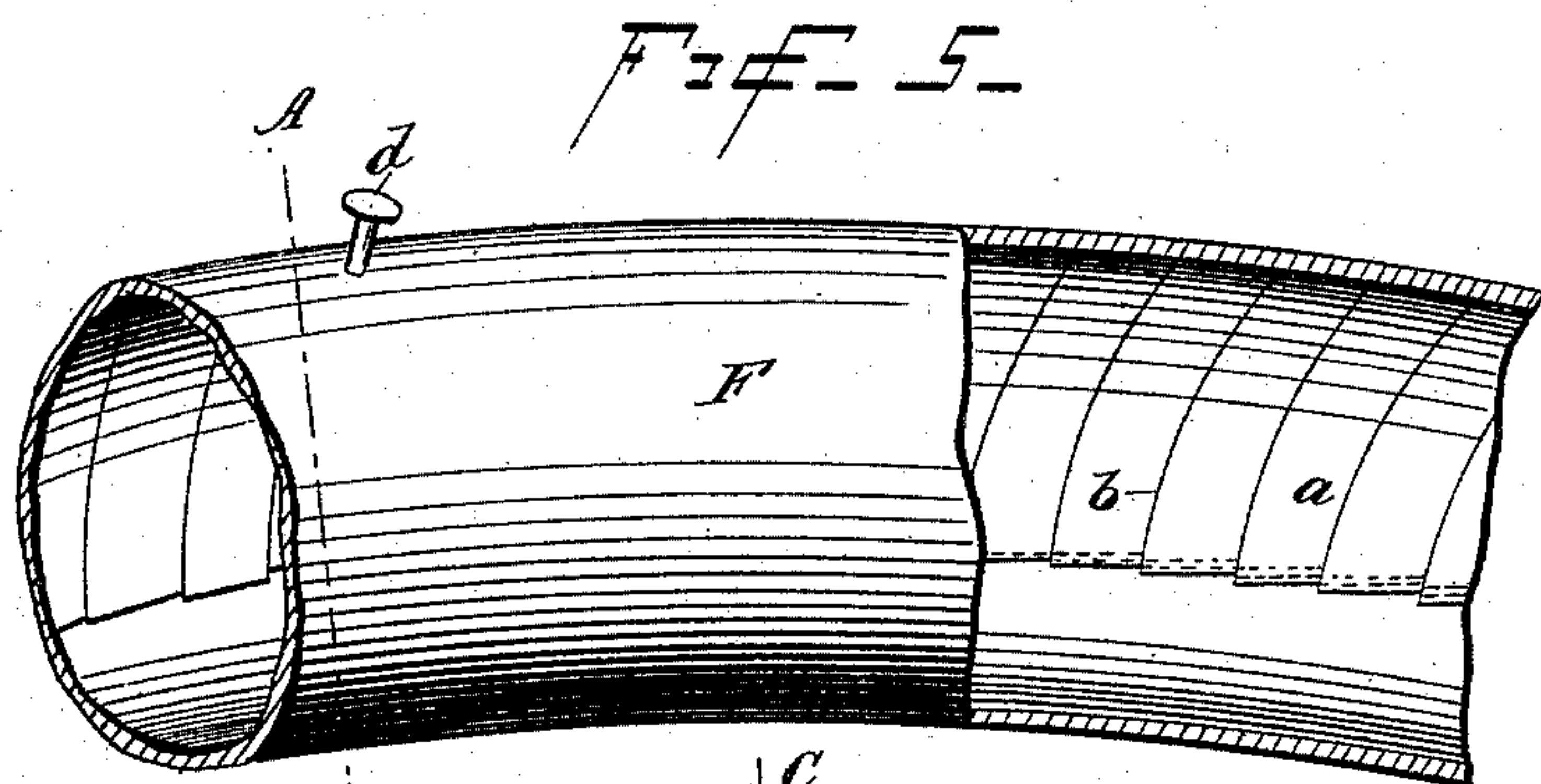
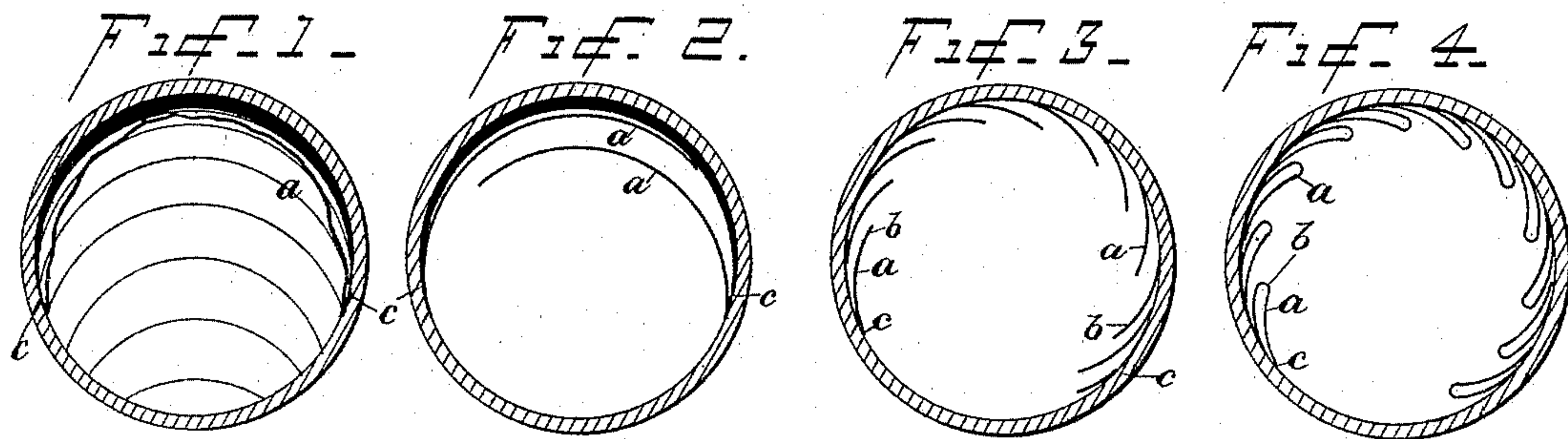


(No Model.)

P. BOUÉRY.  
PNEUMATIC TIRE.

No. 495,777.

Patented Apr. 18, 1893.



Attest:  
Geo. T. Smallwood.  
Rene Lewis.

Inventor:  
Pierre Bouéry,  
by Max Mauro,  
his attorney.



# UNITED STATES PATENT OFFICE.

PIERRE BOUÉRY, OF CLERMONT-FERRAND, FRANCE.

## PNEUMATIC TIRE.

SPECIFICATION forming part of Letters Patent No. 495,777, dated April 18, 1893.

Application filed November 26, 1892. Serial No. 453,218. (No model.) Patented in France December 30, 1891, No. 218,297; in Belgium March 19, 1892, No. 9,883; in England March 21, 1892, No. 5,545, and in Germany May 13, 1892, No. 65,325.

*To all whom it may concern:*

Be it known that I, PIERRE BOUÉRY, of Clermont-Ferrand, Department of Puy-de-Dôme, in the Republic of France, have invented a new and useful Improvement in Inflated Tires, (for which Letters Patent have been granted in Belgium, No. 9,883, dated March 19, 1892; in Germany, No. 65,325, dated May 13, 1892; in England, No. 5,545, dated March 21, 1892, and in France, No. 218,297, dated December 30, 1891,) which improvement is fully set forth in the following specification.

The present invention relates to the construction of pneumatic, or inflatable tires for bicycles or other vehicles, and has for its object to provide obturating devices, or means for automatically closing ruptures or perforations in the wall of the tire.

My invention consists of an air-chamber made of rubber provided internally with a system of self-closing valves, each capable of operating independently of the others. These valves are formed by flaps or leaves of rubber-coated tissue, or other impervious material, fixed to the air chamber along one edge, either transversely or lengthwise of the tire. The effect of these flaps or leaves is as follows: The air chamber being inflated upon the rim of the wheel, if a nail or any pointed obstacle should pierce or rupture the wall of the chamber, the flap opposite such rupture would yield and act like a hinge (one side being cemented to the chamber and the other free) being pushed aside by the nail or other obstacle. When the latter is withdrawn the flap is forced by the air-pressure against the hole, closing the latter. Obturation is therefore effected by the internal pressure. The principle of the invention may be embodied in a single flap or valve when the latter is of such width, and so applied as to cover the whole exposed portion of the tire, and to yield readily to any object piercing the wall.

In the accompanying drawings, I have shown different modes of carrying out this invention.

Figures I, II, III and IV are transverse sections illustrating different embodiments of the invention. Fig. V is a side view, partly in section. Fig. VI, is a transverse section on line A—B. Fig. VII, is a longitudinal section

on line C—D. Fig. VIII, is a diagram illustrating the manner in which the leaves or flaps are applied to the wall of the chamber.

Referring first to Figs. V, VI and VII, F represents the wall of the inflatable tire of any suitable construction, to which is applied internally a series of flaps *a*, cemented transversely to the wall F along one edge *c* (Fig. VIII) and free at the edges *b*. The dotted line (Fig. VI) shows the position of the flap when the tire is pierced by a nail *d*. The flaps *a*, are of course pressed by the internal pressure against wall F, but will readily yield to the counter pressure of a nail, or other sharp object, being free at one edge.

In Fig. I, the principle of the invention is shown applied in a single valve or flap covering internally the entire exposed portion of the tire. In this figure as in Figs. II, III and IV, the flaps are cemented along lines lengthwise of the tire. In Fig. IV, the flaps *a* are made of collapsed or flattened tubes, overlapping one another. In Fig. III the valves are made of single strips, and in Fig. II, there are but two flaps or valves, and they are arranged to overlap each other for a considerable distance.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A pneumatic or inflatable tire provided internally with a flap or series of flaps covering the exposed portion of the tire, and arranged to close a perforation or rupture of the tire by the internal pressure, substantially as described.

2. A pneumatic or inflatable tire, provided with a series of multiple valves or flaps, attached at one edge to the interior of the air chamber, substantially as described.

3. A pneumatic or inflatable tire, provided with a series of flaps or valves, attached at one edge to the interior of the tire, and overlapping each other, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PIERRE BOUÉRY.

Witnesses:

A. POLLOK,  
HART. V. BERG.