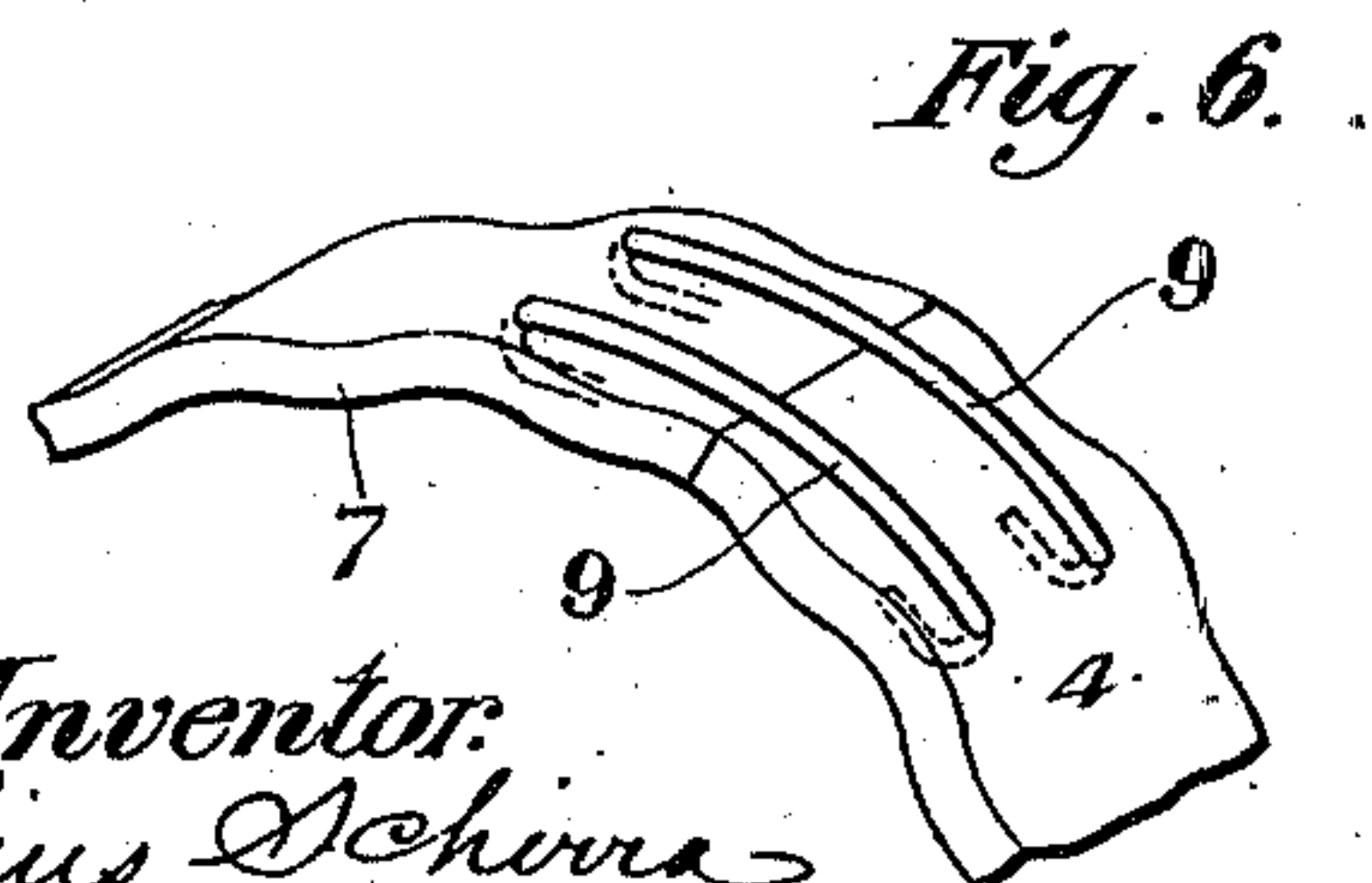
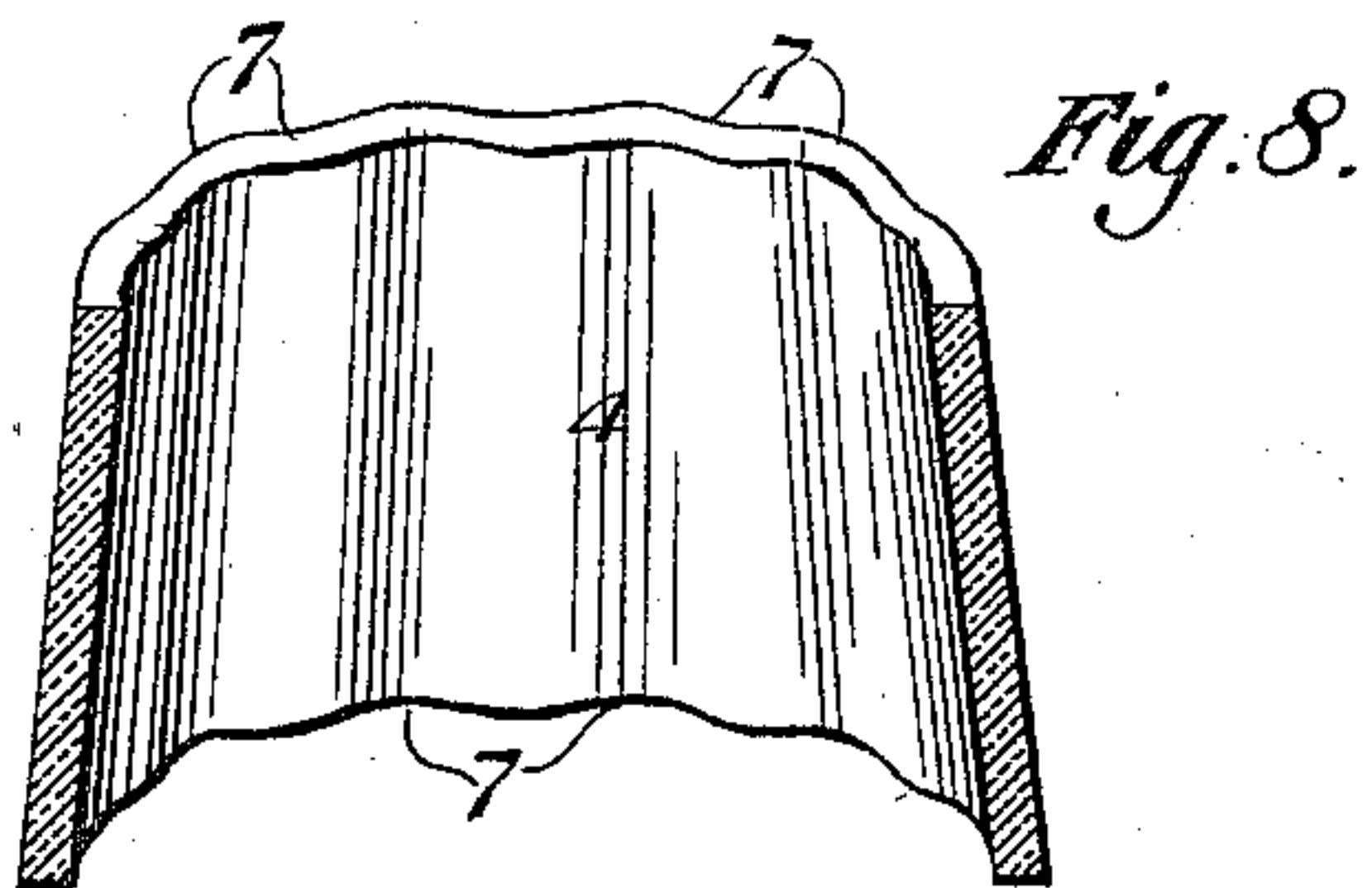
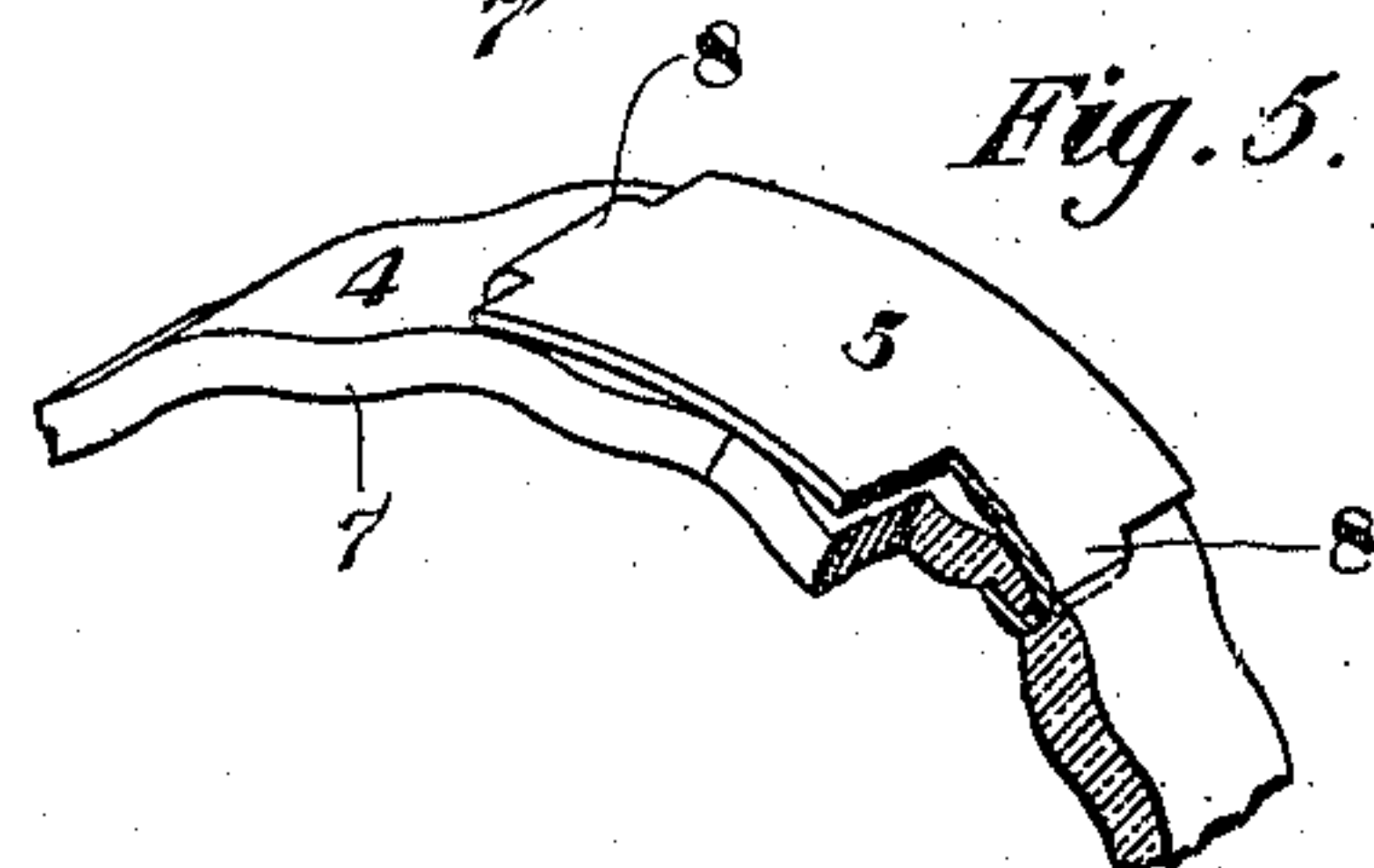
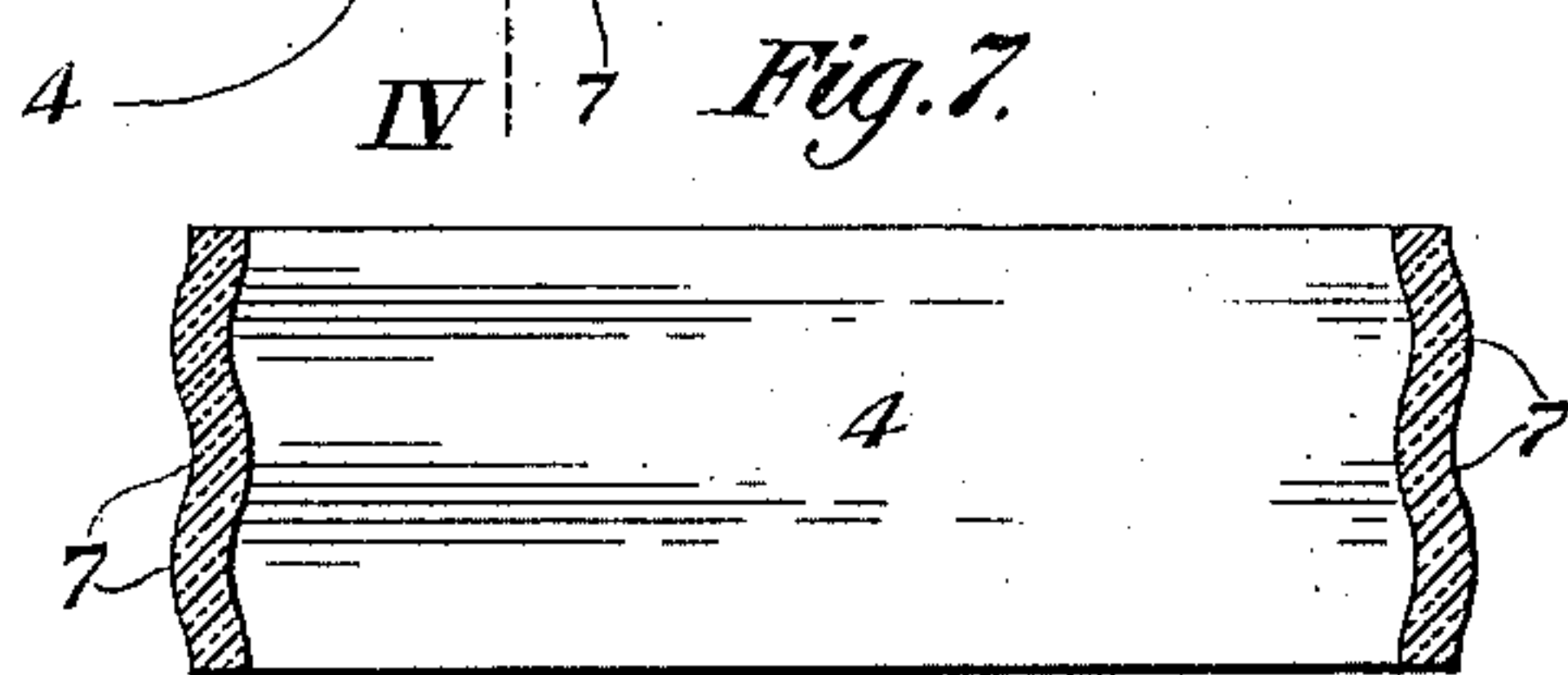
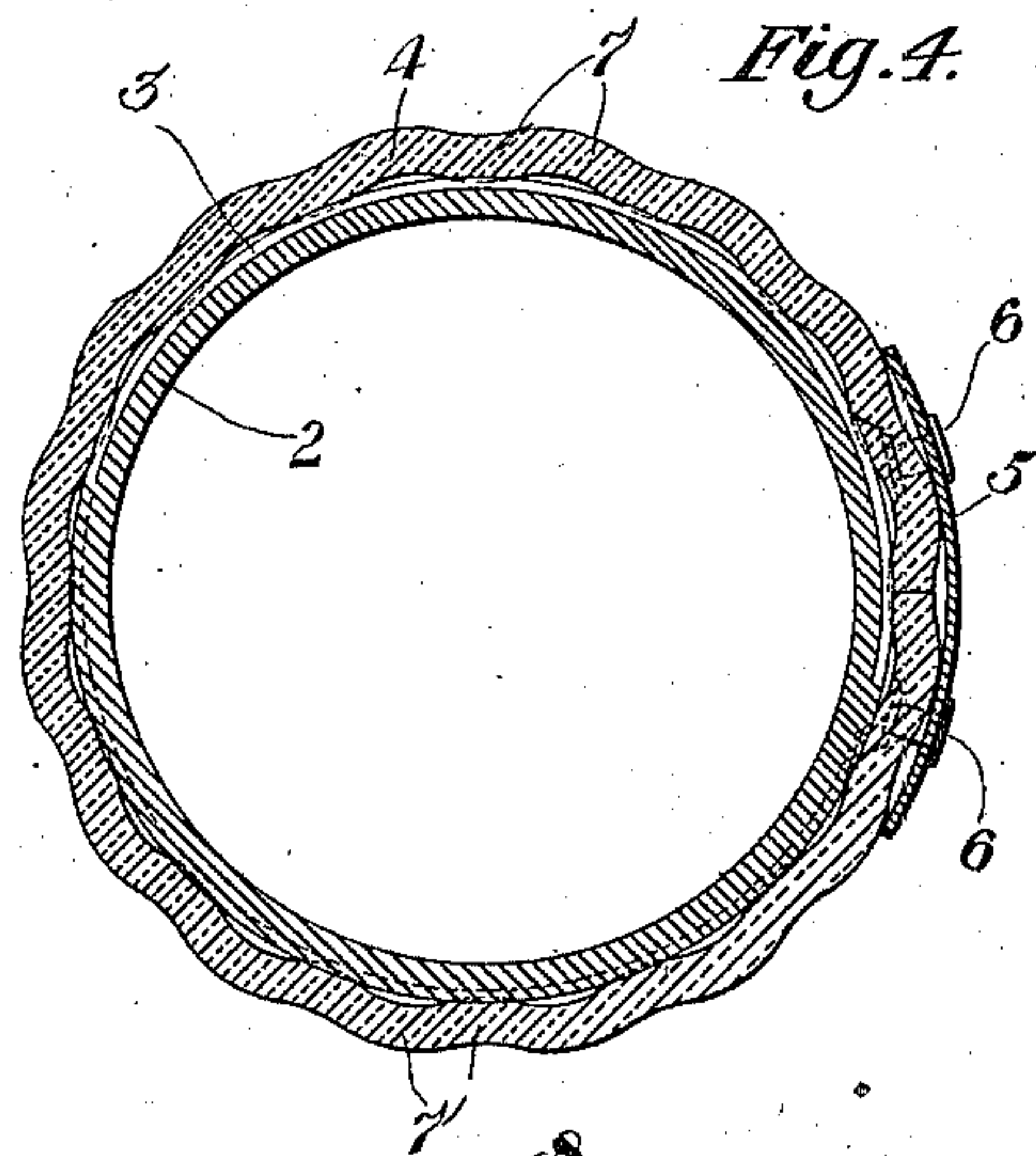
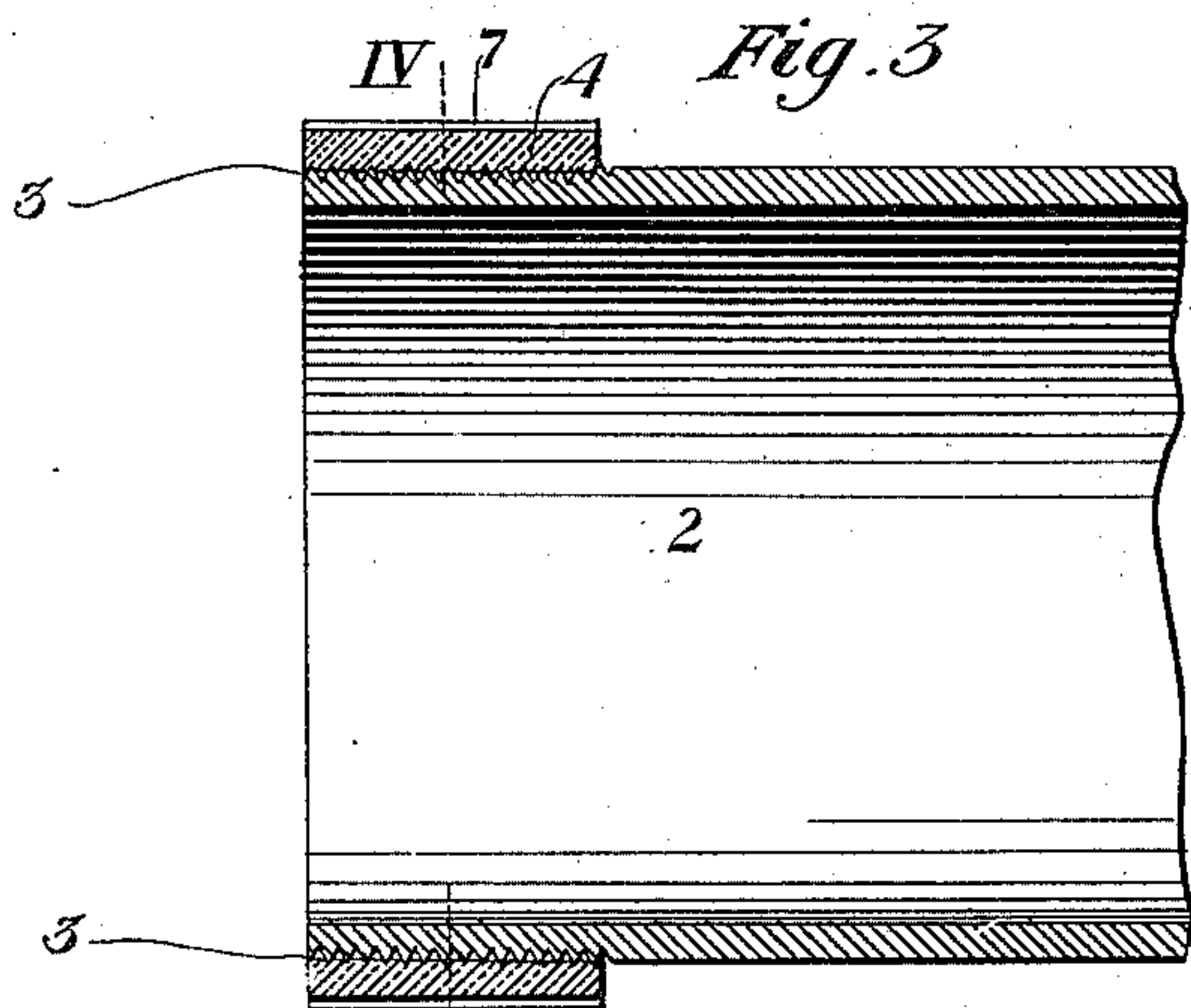
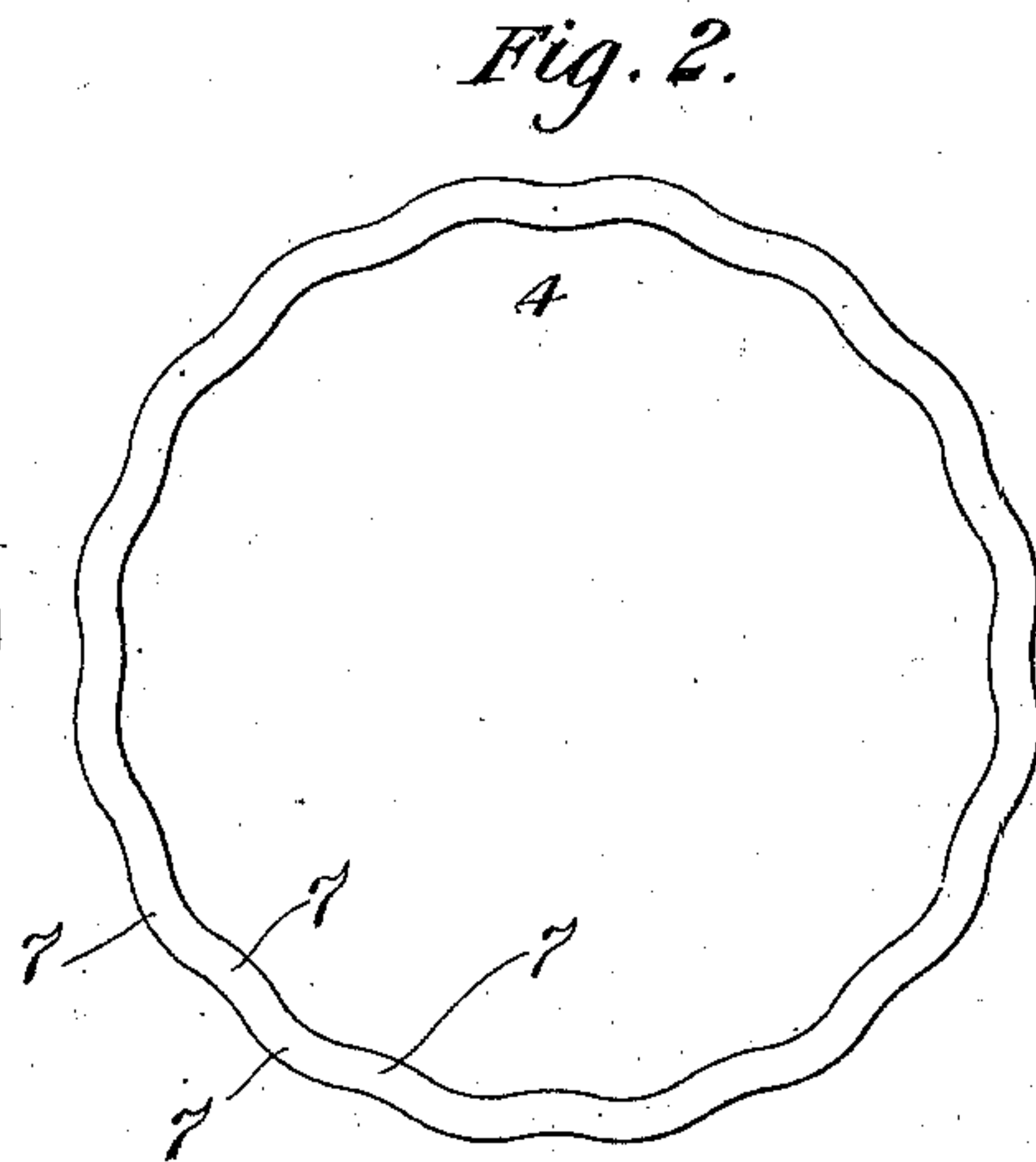
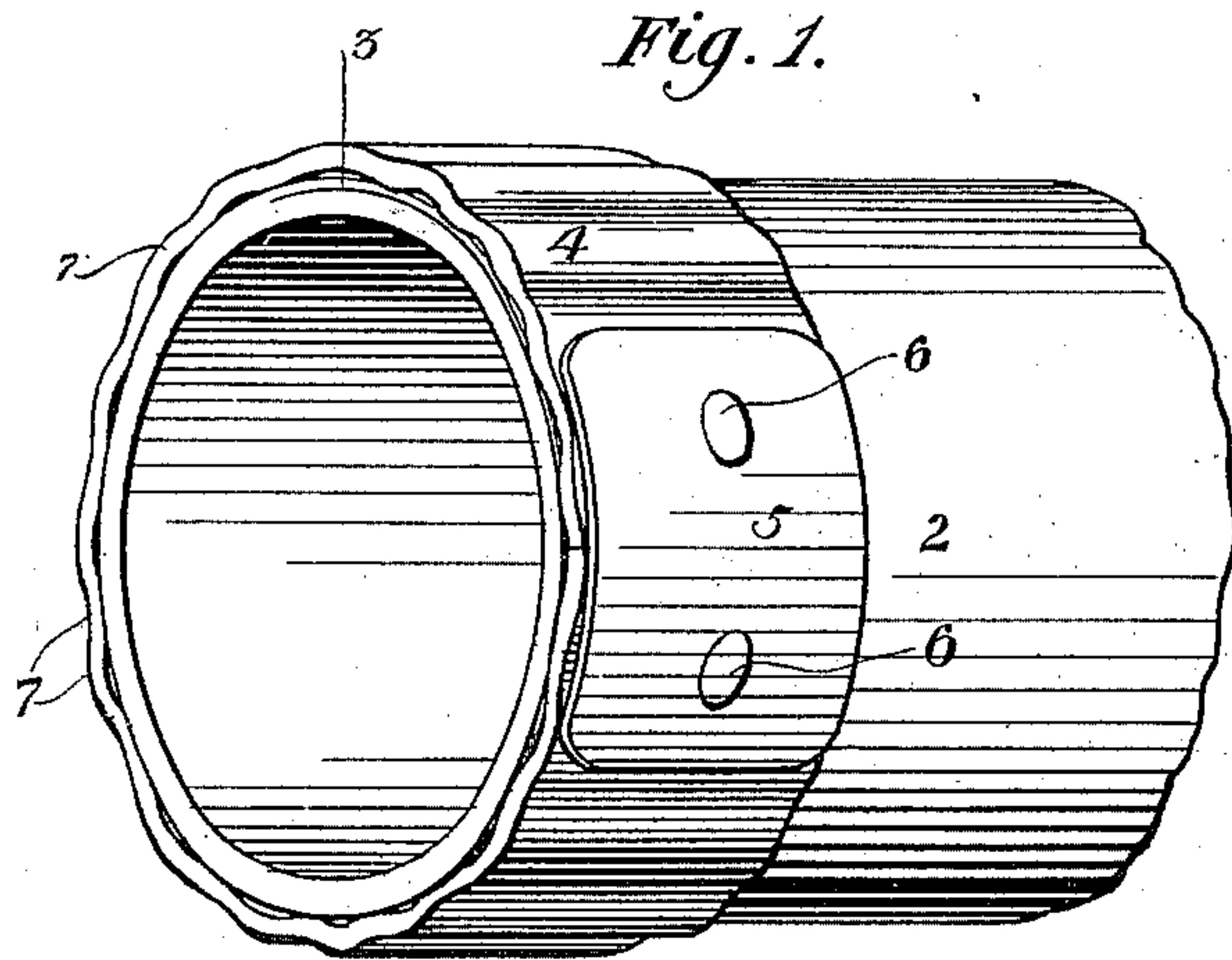


(No Model.)

J. SCHIRRA.  
THREAD PROTECTOR.

No. 600,892.

Patented Mar. 22, 1898.



Witnesses:  
Watson Large  
J. Edwards

Inventor:  
Julius Schirra  
by C. M. Clarke  
his Attorney.



# UNITED STATES PATENT OFFICE.

JULIUS SCHIRRA, OF PITTSBURG, PENNSYLVANIA.

## THREAD-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 600,892, dated March 22, 1898.

Application filed September 30, 1897. Serial No. 653,566. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS SCHIRRA, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented or discovered a new and useful Improvement in Thread-Protectors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this application, in which—

Figure 1 is a perspective view illustrating my device applied to a pipe. Fig. 2 is an edge view of a complete ring in one piece. Fig. 3 is a central longitudinal section through Fig. 1. Fig. 4 is a cross-sectional view taken on the line IV IV of Fig. 3. Fig. 5 is a perspective detail view showing the ends joined by a connecting hooked plate. Fig. 6 is a similar view showing the ends joined by connecting hooked wires. Fig. 7 is a cross-section through a ring having circumferential corrugations. Fig. 8 is a similar section through a ring made for tapered threads.

My invention consists of a device for protecting the threads of pipes, rods, or any threaded articles from mutilation or injury in transit or in handling and is composed of a band of fibrous material preferably corrugated and joined to form a ring which is adapted to be forced over or screwed upon the threads of the pipe.

The material employed in the manufacture of my device is of a tough fibrous nature and of light weight, and it is adapted to be quickly and easily applied to and removed from a pipe, the character of the material employed allowing the threads to embed themselves in the body of the band, whereby it may be readily screwed on by comparatively little force and will be securely retained in position.

In the practice of making and using my invention I have employed sheets of vegetable fiber which have been subjected to heavy pressure, thus closely condensing and solidifying the material, and in the manufacture of the raw material for use in making my thread-protector such pressure and condensation may be regulated and adjusted to the purpose in view in the manner well understood in the art of manufacturing such fiber.

Ordinarily the sheet fiber of commerce

widely known and used in the art of electric insulation is found to give very satisfactory results, although I do not desire to be limited to such, as any suitable fiber may be used, either in sheets or it may be molded in a ring with proper dies.

Referring now to the drawings, 2 represents the end of a pipe or any exteriorly-threaded circular article having at the outer end the usual threads 3.

4 represents the body of the ring, made of a strip of fibrous material or in one continuous circle and joined by a connecting overlapping plate 5, held to the ends of the ring by rivets 6 or otherwise. The strip forming the body of the ring is preferably previously corrugated, whereby alternating oppositely-disposed undulations 7 are formed, and when formed into the shape of a ring and applied to a threaded pipe the inwardly-rounding faces of such undulations come into contact with the threads and will adapt themselves thereto, the thread of the pipe cutting or forcing a corresponding thread in the inner face of the ring. This is rendered comparatively easy by reason of the limited area thus brought into contact with the threads, while the corrugations allow of a certain expansion of the ring, whereby it will be made to firmly embrace the pipe when applied. It will be understood that the rings are to be made of proper sizes for the various sizes of pipe, and the diameter can easily be so regulated as to insure a tight close fit.

If desired, the rings may be simply driven on and will be retained in position when so applied with equal certainty.

When it is desired to remove the protectors, they may be either unscrewed or the connecting-rivets may be severed, when the ring will fly open, and it may be thrown away, as the extreme cheapness of the material employed will permit of such use with economy.

While I have described the ring as made of a corrugated strip, it is not absolutely necessary that the corrugations be made, and a plain flat strip may be used to advantage, as I have found such a ring to give good results in practice, while being cheaper and simpler in construction.

While the best and most efficient form of ring is made in one unbroken circle, such as



is shown in Fig. 2, by means of suitably-shaped molds, I have found that it is more economical to make the protector of strips of fiber joined together at their meeting ends in any suitable manner, such as has been already described, or as shown in Figs. 5 and 6, wherein the connecting-plate 5 is formed with laterally-reduced extensions 8, adapted to be inserted through the body portion of the ring and turned under in the form of a hook. Wires 9 may also be used to advantage, turned inwardly at the ends in a similar manner. In Fig. 7 the corrugations are shown running around the ring circumferentially, such construction having the advantage of presenting but a limited area for contact with the threads.

For covering taper-threads, such as oil-well sockets, &c., a tapering ring, such as is shown in Fig. 8, is used, and the degree of taper, length, and diameter may be made to suit the particular article for which it is intended.

It will be understood that any form of inwardly-projecting thread-engaging projec-

tions may be made on the inner face of the ring, such as buttons or knobs of varying shape, the sole purpose of such being to engage the thread and relieve the rest of the surface from frictional contact.

Having described my invention, what I claim is—

1. A thread-protector consisting of a corrugated ring of fibrous material adapted to engage the threads of the pipe, substantially as set forth.

2. A thread-protector consisting of a circumferentially-corrugated ring of fibrous material, substantially as set forth.

3. A thread-protector made of a strip of fibrous material formed into a ring and joined by a metal clip passed through the meeting ends of the strip, substantially as set forth.

In testimony whereof I have hereunto set my hand this 23d day of July, 1897.

JULIUS SCHIRRA.

Witnesses:

PETER J. EDWARDS,  
C. M. CLARKE.