

B. C. WHITE.
 THREAD PROTECTOR.
 APPLICATION FILED JAN. 9, 1909.

944,643.

Patented Dec. 28, 1909.

Fig. 1.

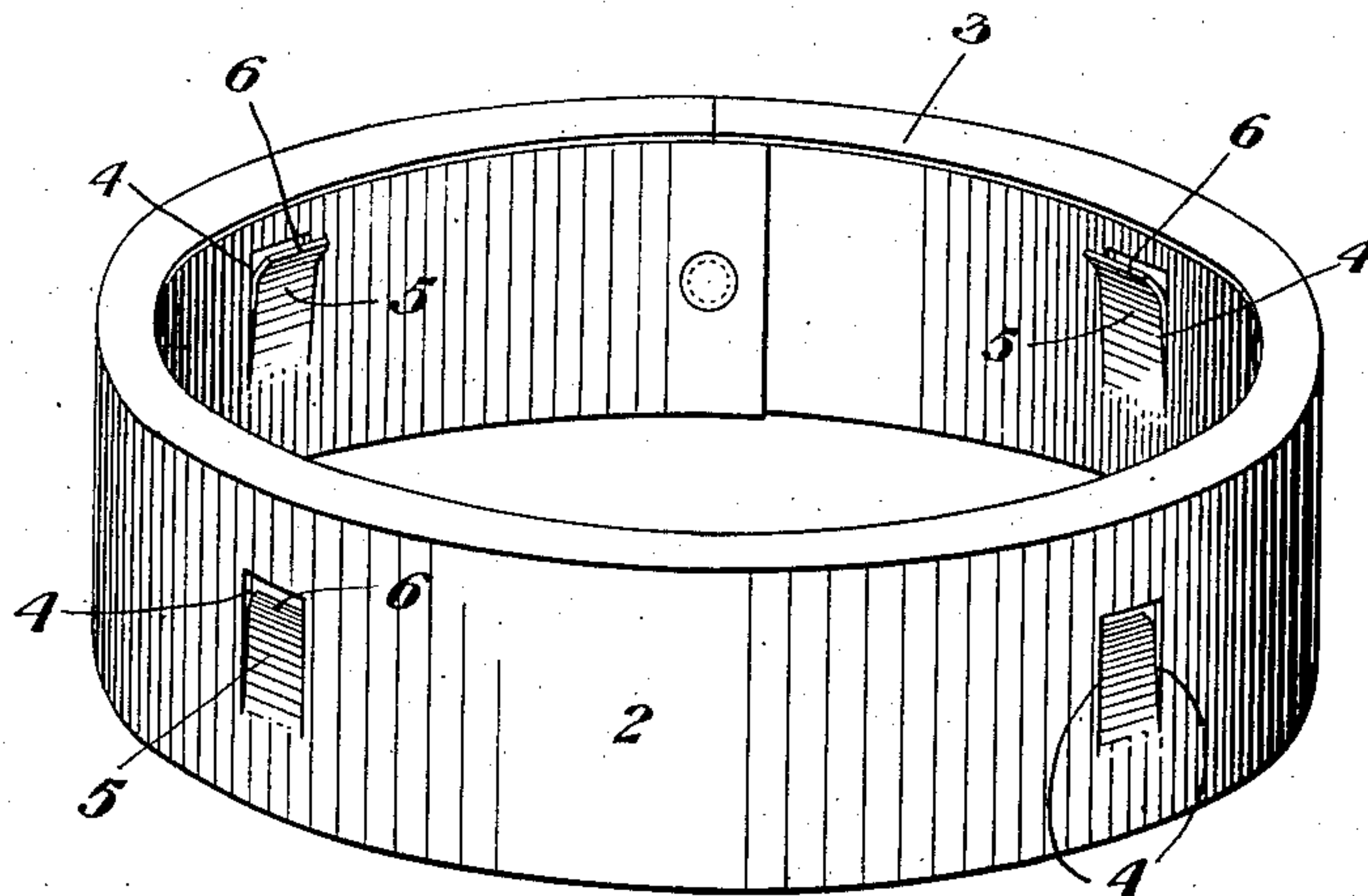


Fig. 2.

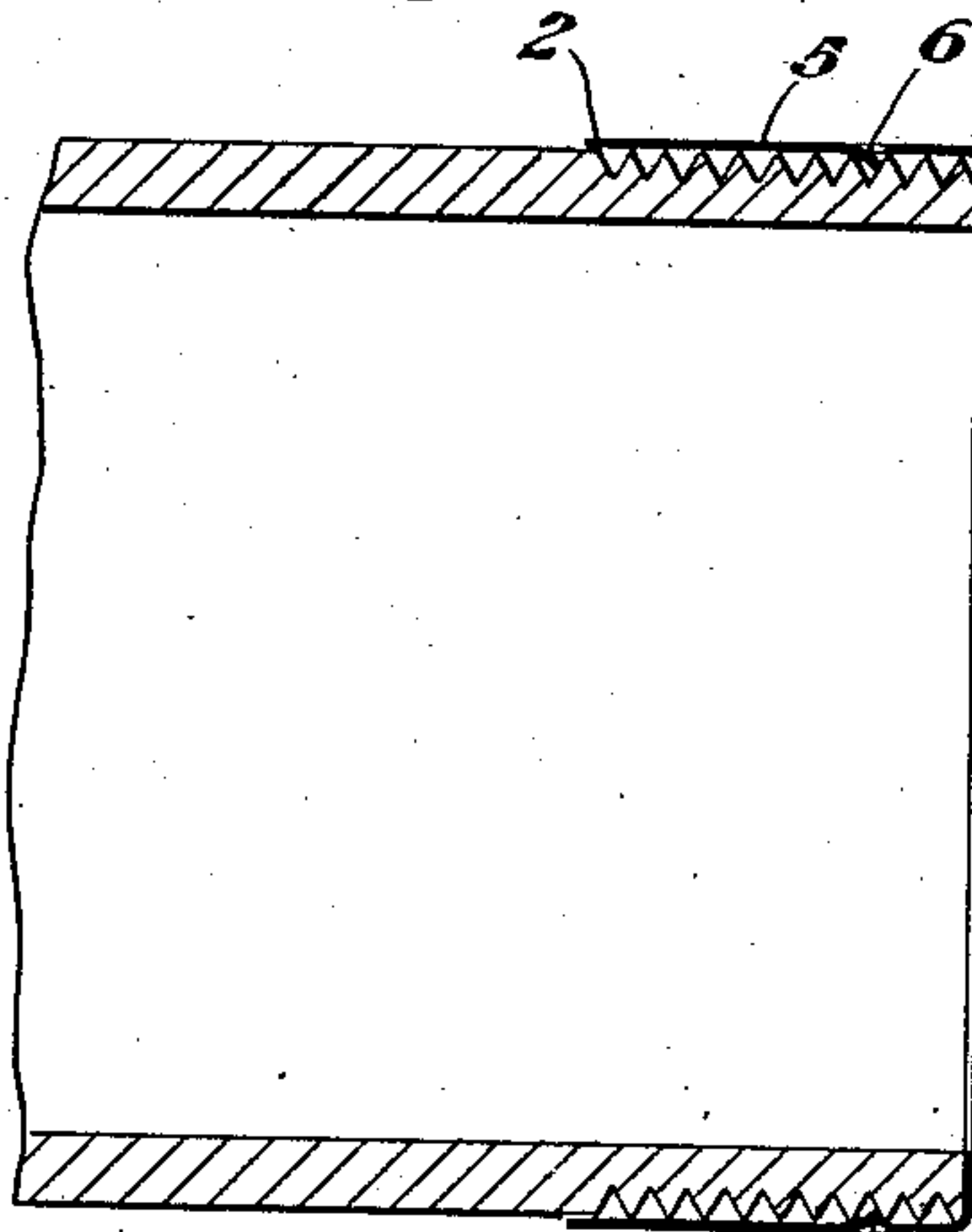


Fig. 5.

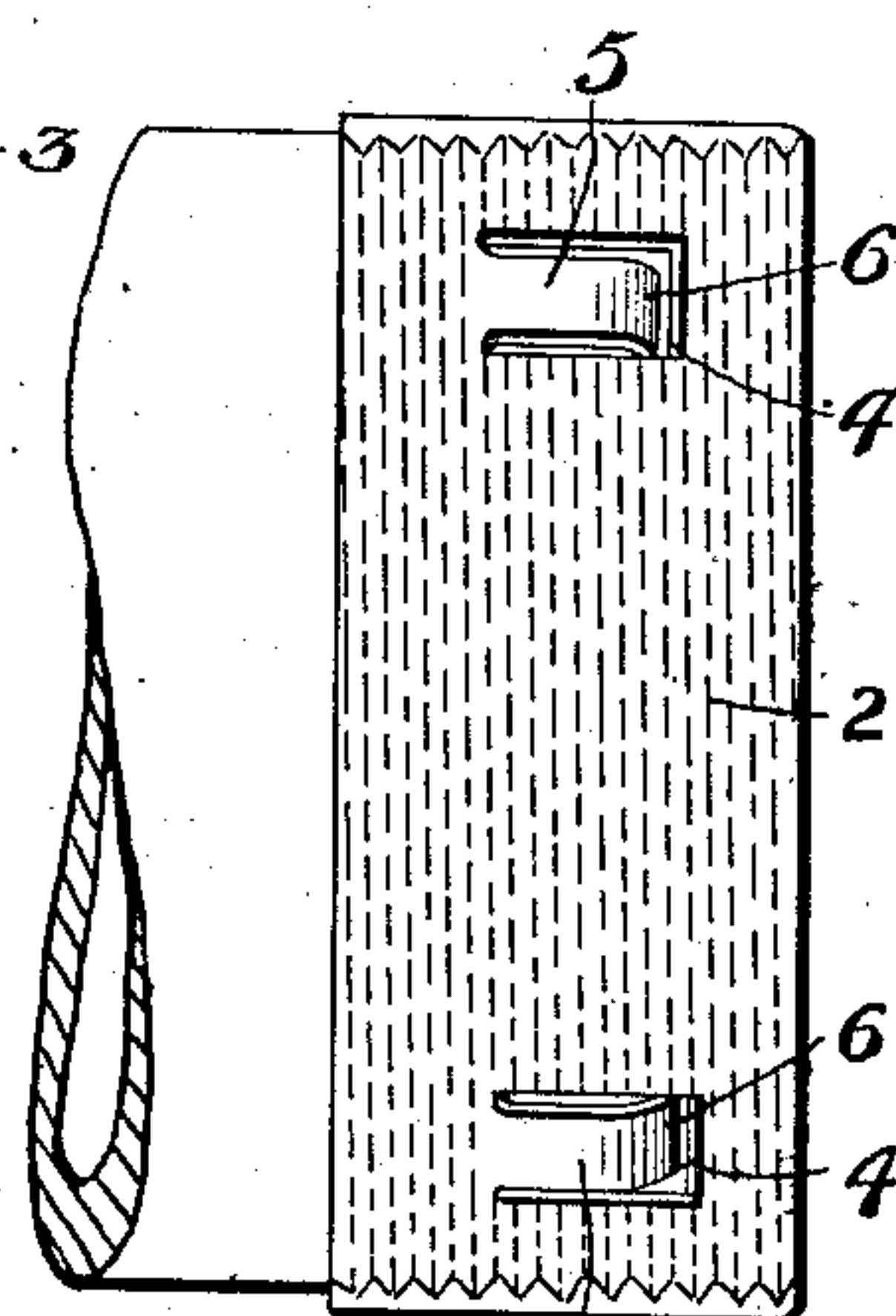


Fig. 3.

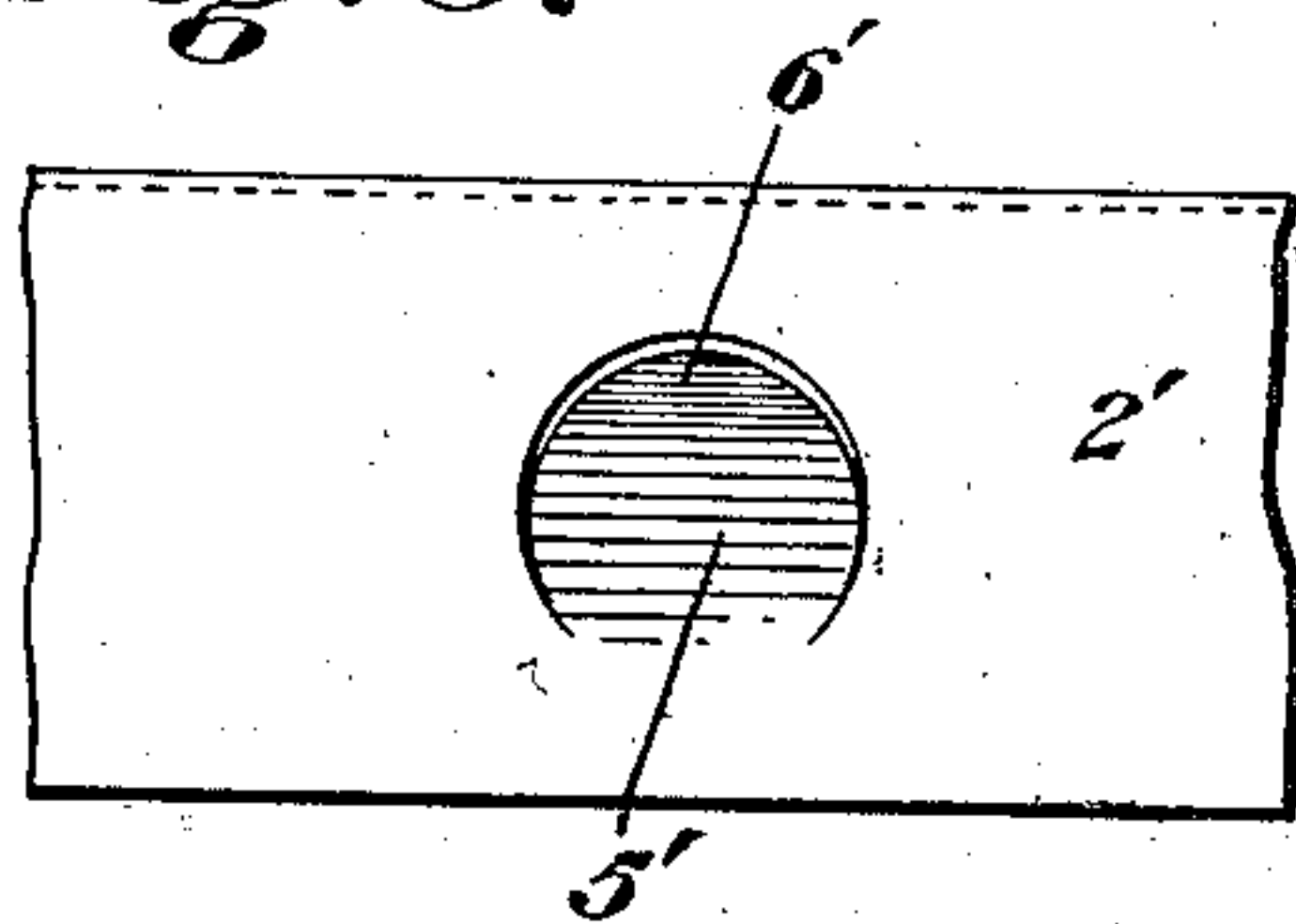
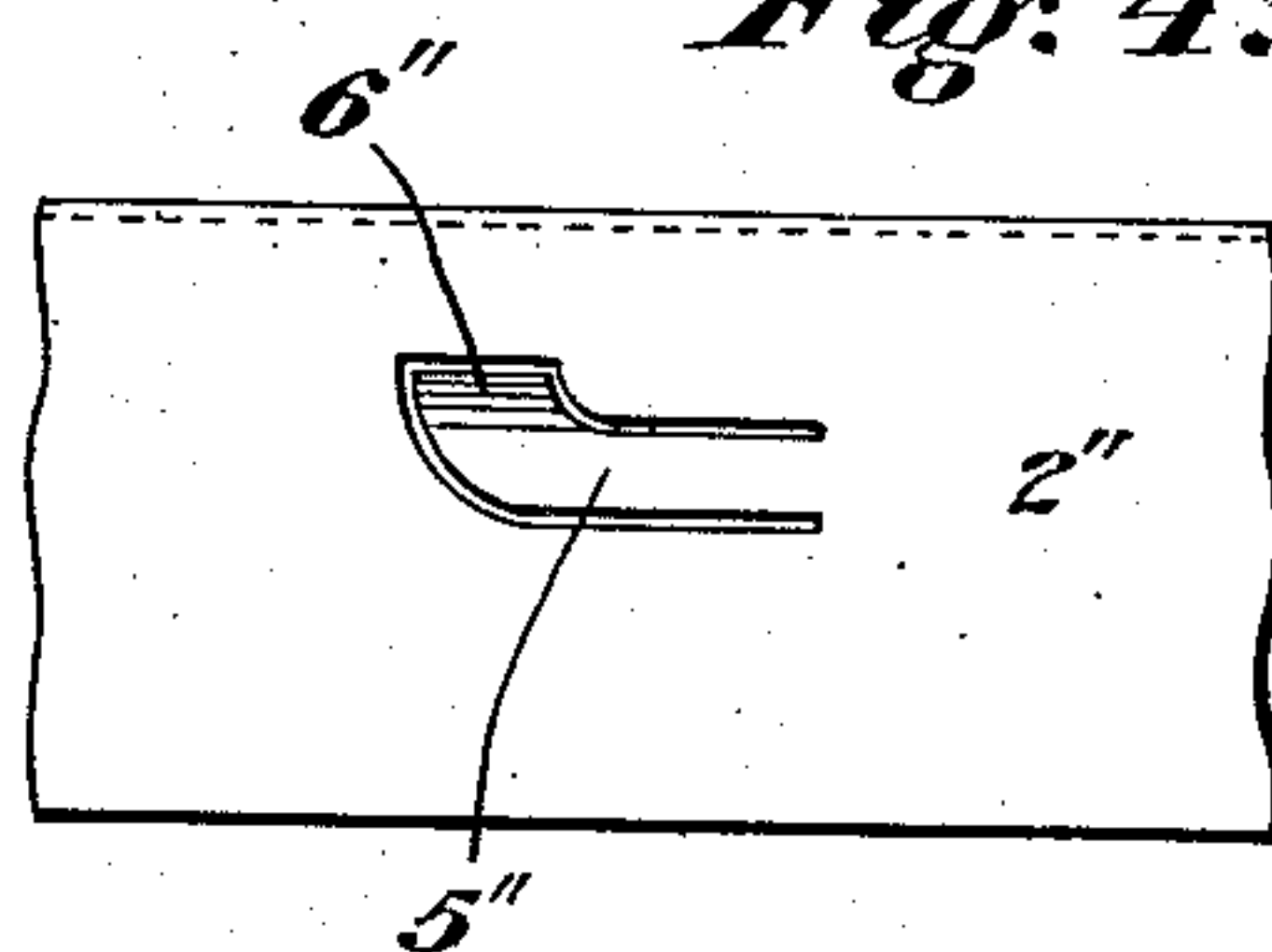


Fig. 4.



Witnesses:
 Chas. S. Lefley.
 Henry Jones.

Inventor:
 Bruce Clark White
 by C. M. Clark
 his attorney

UNITED STATES PATENT OFFICE.

BRUCE CLARK WHITE, OF ROCHESTER, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO COLONA MANUFACTURING COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

THREAD-PROTECTOR.

944,643.

Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, BRUCE CLARK WHITE, a citizen of the United States, residing at Rochester, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Thread-Protectors, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention consists in an improvement in thread protectors for the threaded ends of pipes, tubing, rods, etc., and has for its object to provide a simple, cheap and easily adjusted device which may be directly inserted by pushing over the end of the pipe or other article and then if desired, partially turned to bind it in position by engagement with the threads, to hold it in place until forcibly removed.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the device detached. Fig. 2 is a central sectional view through the threaded portion of a pipe showing the device in place. Figs. 3 and 4 are detail views showing modifications. Fig. 5 is a view in elevation showing the device applied to the end of a tube and illustrating the spiral arrangement of the tongues.

The protector is formed of a band 2 of sheet metal in circular form, connected together by rivets as shown, or in any other suitable way, preferably having a terminal flange 3 adapted to cover the end or a portion of the end of the pipe or other article when in position, as indicated in Fig. 2.

For the purpose of providing locking devices for engagement with the threads of the protected article, the body portion of the ring is partially cut or slotted through as at 4 and elongated tongues 5 are provided, having their terminals 6 bent inwardly, as indicated in Fig. 1, said tongue terminals constituting rearwardly extending resilient elements adapted to interlock with the threads.

Upon inserting the protector over the end of the article it is pushed directly thereon, the terminals 6 of tongues 5 springing over each successive thread and downwardly into the recesses between adjacent threads, until the flange 3 makes contact or until no more

threads can be passed. The ring upon being turned may then further feed itself by engagement of the terminals of the tongues with the threads into tight engagement and will there remain until forcibly removed.

It will be observed that the free rear deflected terminals of the tongues are comparatively close to the flange 3 so that when it is desired to remove the device, this may readily be done by merely un-screwing it a few times to release the tongues from engagement, and the device may then be discarded, or if desired may be used over again.

It will be understood that any desired number of the tongues 5 may be employed and that in forming them from the blank, their terminals may be located to approximate the spiral arrangement of the threads so that all of the tongue terminals will be in engagement, thereby insuring the device in fixed position.

Various forms of the resilient tongues of ring 2' may be employed, of partly circular form 5' with deflected terminals 6' as in Fig. 3, or the tongues 5'' may extend longitudinally of the ring 2'' and have its end deflected to aline with the threads by its inwardly turned terminal 6'' as in Fig. 4. With either of the various constructions the terminals may have rounded or arched edges for engagement with the teeth, as desired, to suit different conditions of use.

As thus applied, the shell or body portion of the protector completely incloses the entire length of threads and envelops and protects them against injury in transit or from any possible cause.

The device may be made in any suitable size or proportions; the formation of the tongue terminals may be designed to suit the character of the threads, as by abruptly bending them inwardly as shown; or the device may be otherwise variously changed or modified in different details, but all such changes are to be considered as within the scope of the following claims:

What I claim is:—

1. A thread protector consisting of a ring of sheet metal having inwardly extending spring abutments adapted to spring over and engage the threads.

2. A thread protector consisting of a ring of sheet metal having inwardly extending

spring abutments adapted to move radially with relation to the axial center of the ring.

3. A thread protector consisting of a ring of sheet metal provided with inwardly extending spring abutments having freely movable terminals adjacent to the outer end of the ring to pass over the threads in applying the protector thereto.

4. A thread protector consisting of a ring of sheet metal having inwardly extending freely resilient abutments adapted to spring over and engage against the threads, and a terminal inwardly extending flange.

5. A thread protector consisting of a ring of sheet metal having one or more elongated elastic tongues partially severed from

the metal and bent inwardly beyond the inner face of the ring.

6. A thread protector consisting of a ring of sheet metal having a plurality of resilient tongues partially severed from the metal and bent inwardly beyond the inner face of the ring, said tongues having their terminals located in spiral arrangement to conform to the spiral of a thread.

In testimony whereof I affix my signature in presence of two witnesses.

BRUCE CLARK WHITE.

Witnesses:

C. M. CLARKE,
CHAS. S. LEPLEY.