

931,708.

F. STEVENS.
ELECTRIC GROUND CLAMP.
APPLICATION FILED JUNE 4, 1908.

Patented Aug. 17, 1909.

FIG. 1.

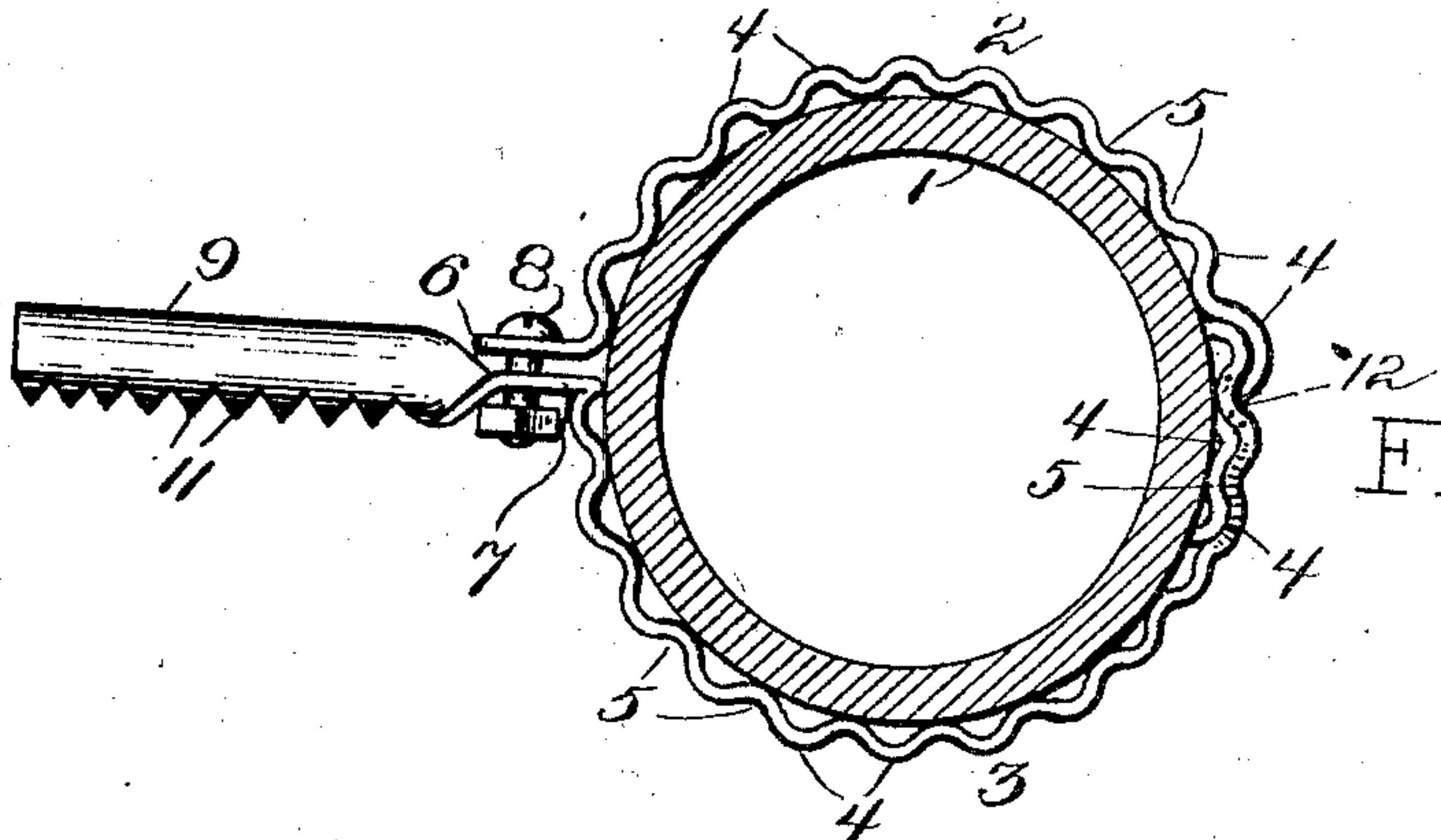
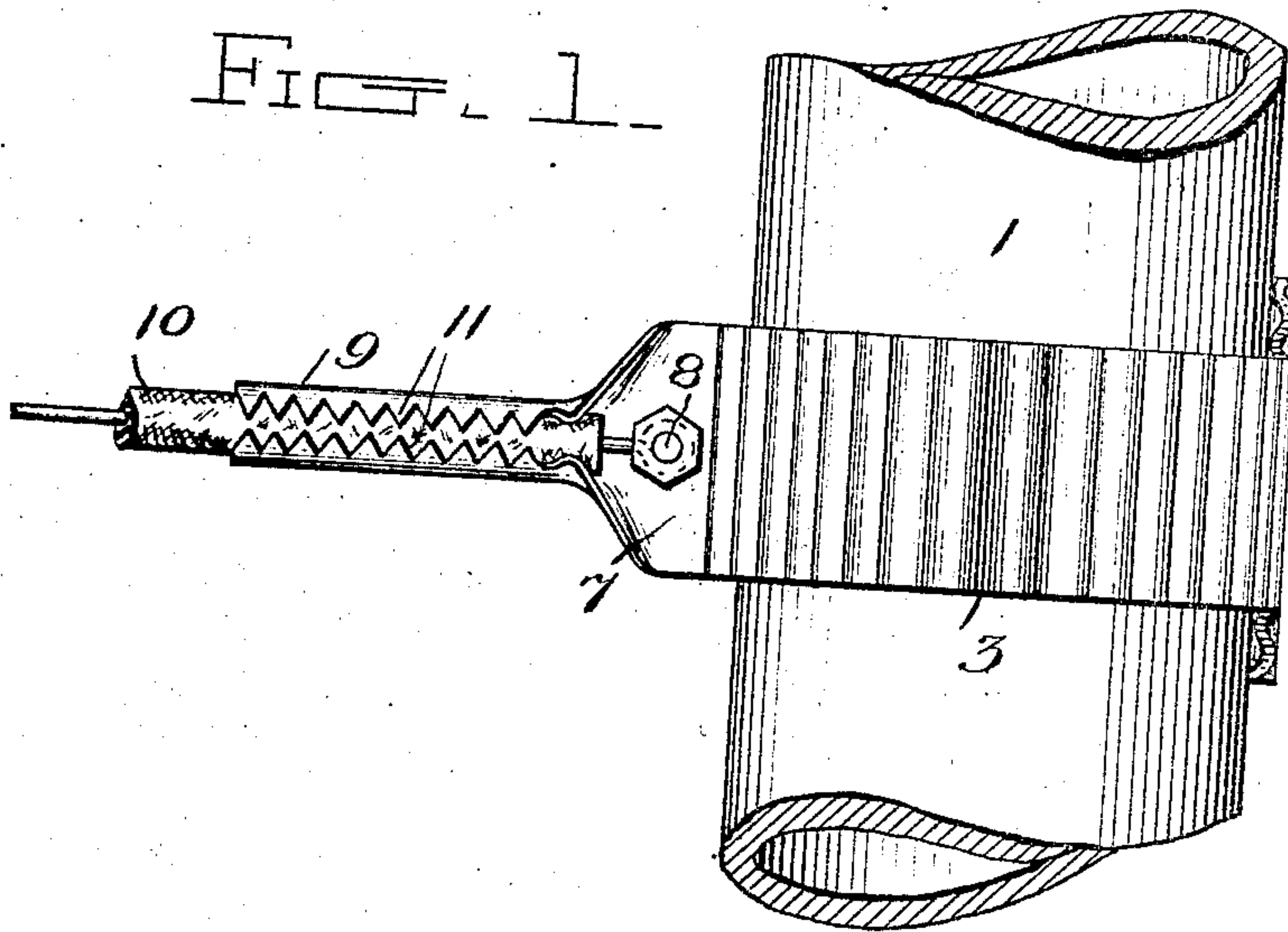
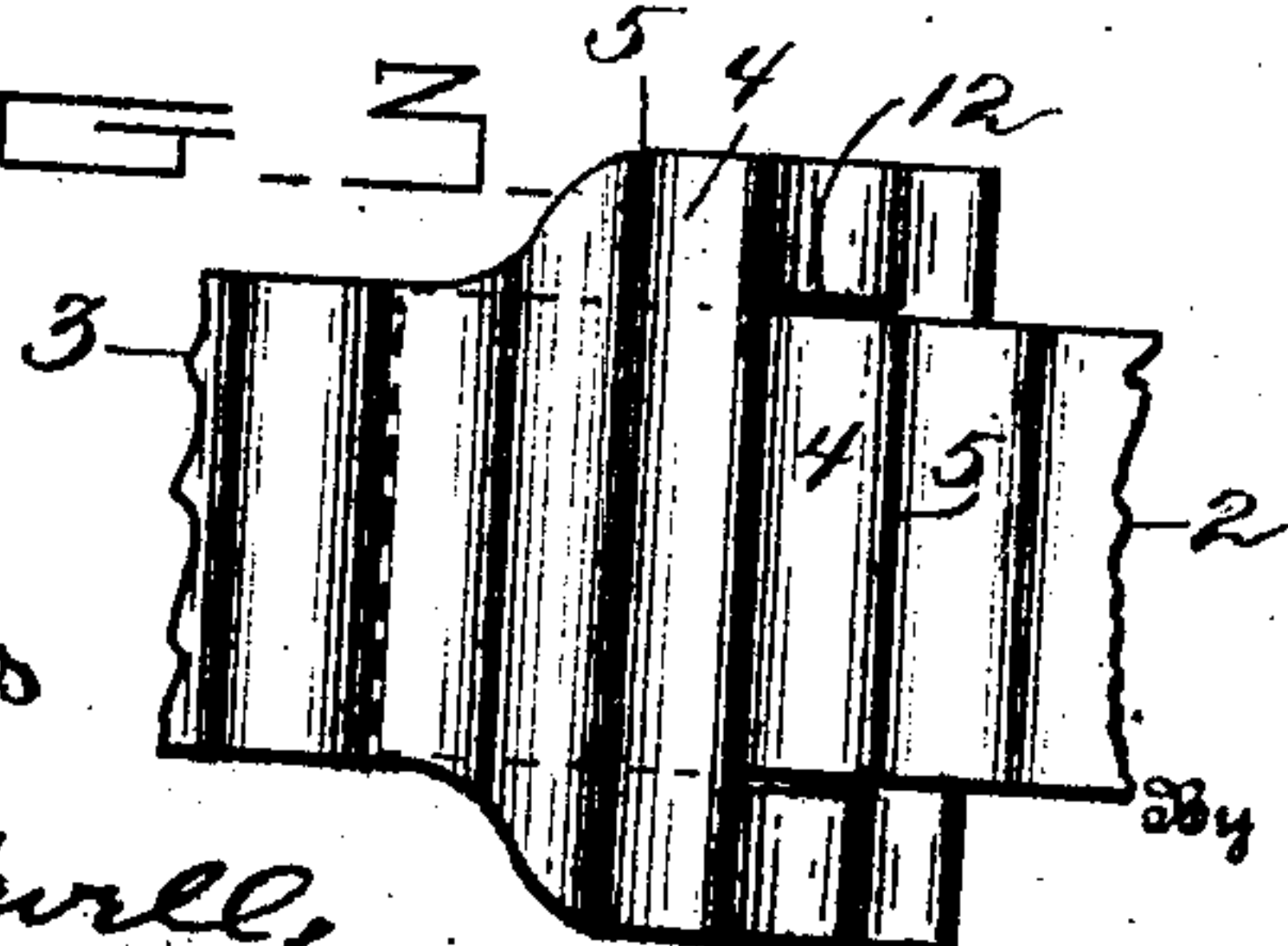


FIG. 3.



Witnesses
L. B. James
C. M. Harell.

Inventor
Frank Stevens
Walter H. Calmore
Attorney

UNITED STATES PATENT OFFICE.

FRANK STEVENS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO GEORGE F. STEVENS,
OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC GROUND-CLAMP.

No. 931,706.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed June 4, 1908. Serial No. 236,550.

To all whom it may concern:

Be it known that I, FRANK STEVENS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Ground-Clamps, of which the following is a specification.

This invention relates to certain new and useful improvements in ground clamps for electric conductor terminals.

The invention has particular reference to that class of ground clamps which are for attachment to water, gas or other pipes and metal structure of a building.

The particular object of the invention is to provide an adjustable clamp which will engage the water or other pipe at a number of points in a yielding manner and with considerable pressure to insure a perfect grounding of the electric current.

Reference will be had to the accompanying drawings forming a part of this specification and wherein like numerals of reference designate corresponding parts throughout the several views, in which:

Figure 1, is a view in side elevation of the clamp attached to a fragment of the pipe, Fig. 2, is a horizontal sectional view thereof, showing the clamp in top plan, and Fig. 3, is a view in side elevation of the adjusting portion of the clamp.

Reference numeral 1 designates a water, gas or other pipe of a building or plant and encircling the same is a two part clamp, the said parts being indicated by numerals 2 and 3. Both of these clamping parts are corrugated throughout their entire length or, in other words, throughout the portions encircling the said pipe, the said corrugations being indicated by numerals 4 and 5; those 5 engaging the outer face of pipe 1. Adjacent ends of the parts 2 and 3 are bent outwardly to form clamping ears 6 and 7 respectively, disposed substantially radially of the pipe and through these ears passes a screw or bolt 8. The clamping ear 7 is extended beyond the ear 6 for a considerable distance to form a tubular portion 9 to receive the terminal or electric conductor wire 10. The said conductor wire 10 is secured in place within the tubular extension 9 by means of serrated edges 11 of the latter biting into the insulation of the former in an obvious manner, and by coiling the extreme

end of the wire proper around the said screw or bolt 8 as illustrated in Fig. 1. The diametrically opposite ends of the encircling parts 2 and 3 are constructed to interlock by means of their corrugations, the end of the part 3 being enlarged and provided with an opening 12 through which the end of the other part 2 passes.

In applying the clamp to a pipe, the end of the clamping part 2 is passed through the said opening in the complement clamping part 3 and the opposite ends of the two parts are then secured together by the said bolt or screw 8. The lapping portions of the interlocking ends will assume the position illustrated in Fig. 2, that is, the outer corrugations 4 of the clamping part 2 will interfit the corresponding corrugations of the clamping part 3, and the same is true of the inner corrugations 5. In this manner the clamp may be made to fit various sizes of pipes according to the distance or number of corrugations of the member 2 that are passed through the opening 12 of the other member 3. It will also be obvious that should the ears 6 and 7 not come together when the other ends of the parts 2 and 3 are engaged or interlocked, that by drawing the said ears toward each other manually or by means of the bolt 8 the corrugations will stretch or give sufficiently to permit the ears to be secured in contact with each other. In fact, it is desirable to have a certain amount of tension upon the corrugated encircling portions to cause the inner corrugations thereof to firmly bite or engage the pipe.

Having fully described the invention, what is claimed as new and useful and desired to be secured by Letters Patent, is:

1. A ground clamp for attachment to pipes and the like, comprising corrugated sections, the corrugations of one section interlocking with the corrugations of the other.

2. A ground clamp for attachment to pipes and the like, comprising two inter-fitting corrugated sections, and being adjustable by interlocking certain ones of the corrugations of one section with those of the other section.

3. A ground clamp for attachment to pipes and the like, comprising two corrugated sections and being adjustable by interlocking certain corrugations of one section with those of the other section, said

sections being capable of extension independently of the interlocking portions thereof.

4. A ground clamp for attachment to
5 pipes and the like comprising sections, a
bolt securing the ends of said sections together, a tubular socket on one of said sections for the reception of the conductor wire, and teeth on said socket member for biting
10 the wire.

5. In combination with a water or other pipe and a terminal conductor wire, of a

clamp secured to said pipe and having its ends closed by means of a bolt or screw, an extension on said clamp receiving the terminal wire, the free end of said wire being coiled around and secured by said bolt or screw. 15

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

FRANK STEVENS.

Witnesses:

WALTER I. RAYMOND,
WALTER W. CALMORE.