

No. 636,475.

Patented Nov. 7, 1899.

C. WAGNER.
INSULATING JOINT.

(Application filed Oct. 12, 1898.)

(No Model.)

FIG. I.

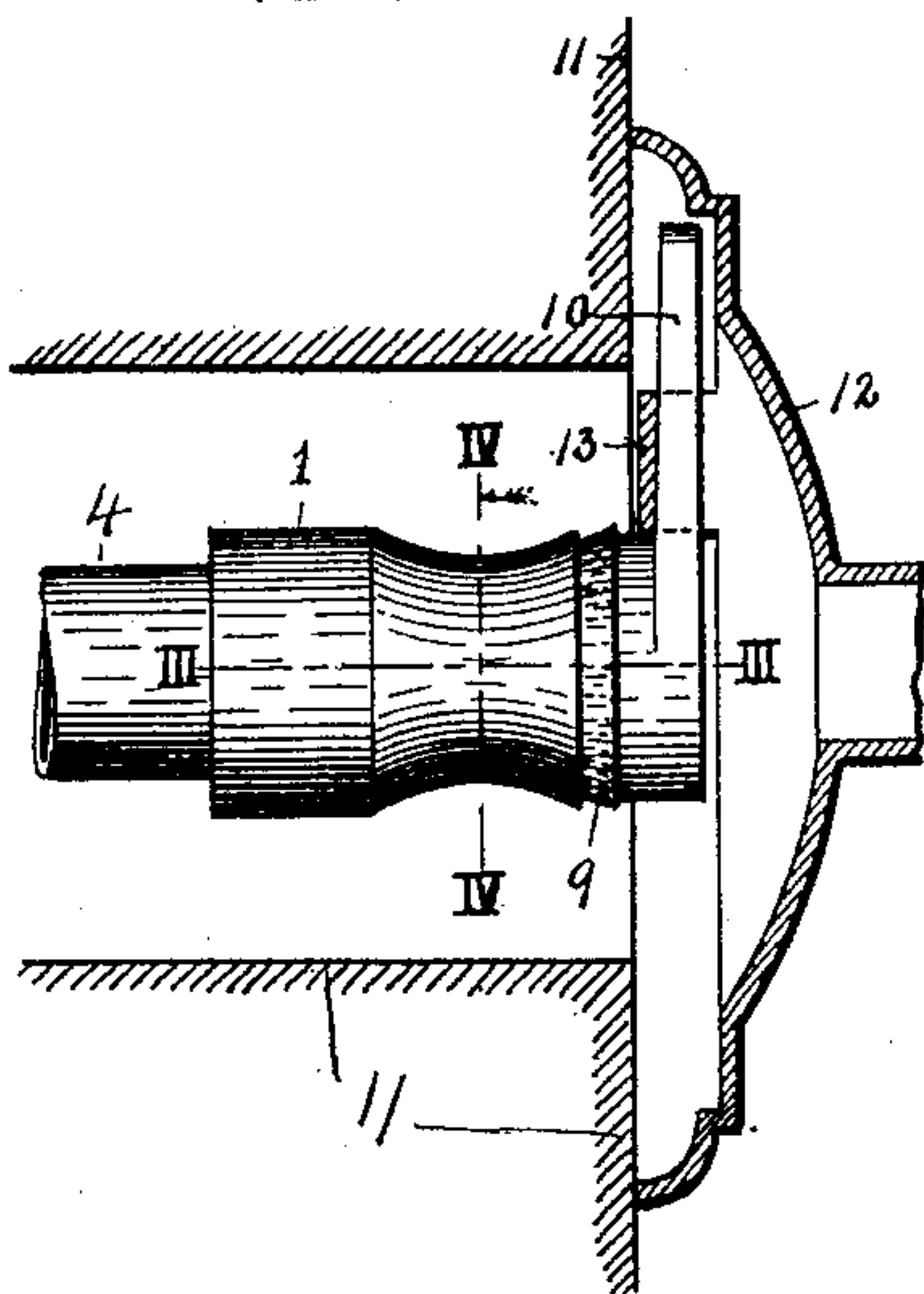


FIG. II.

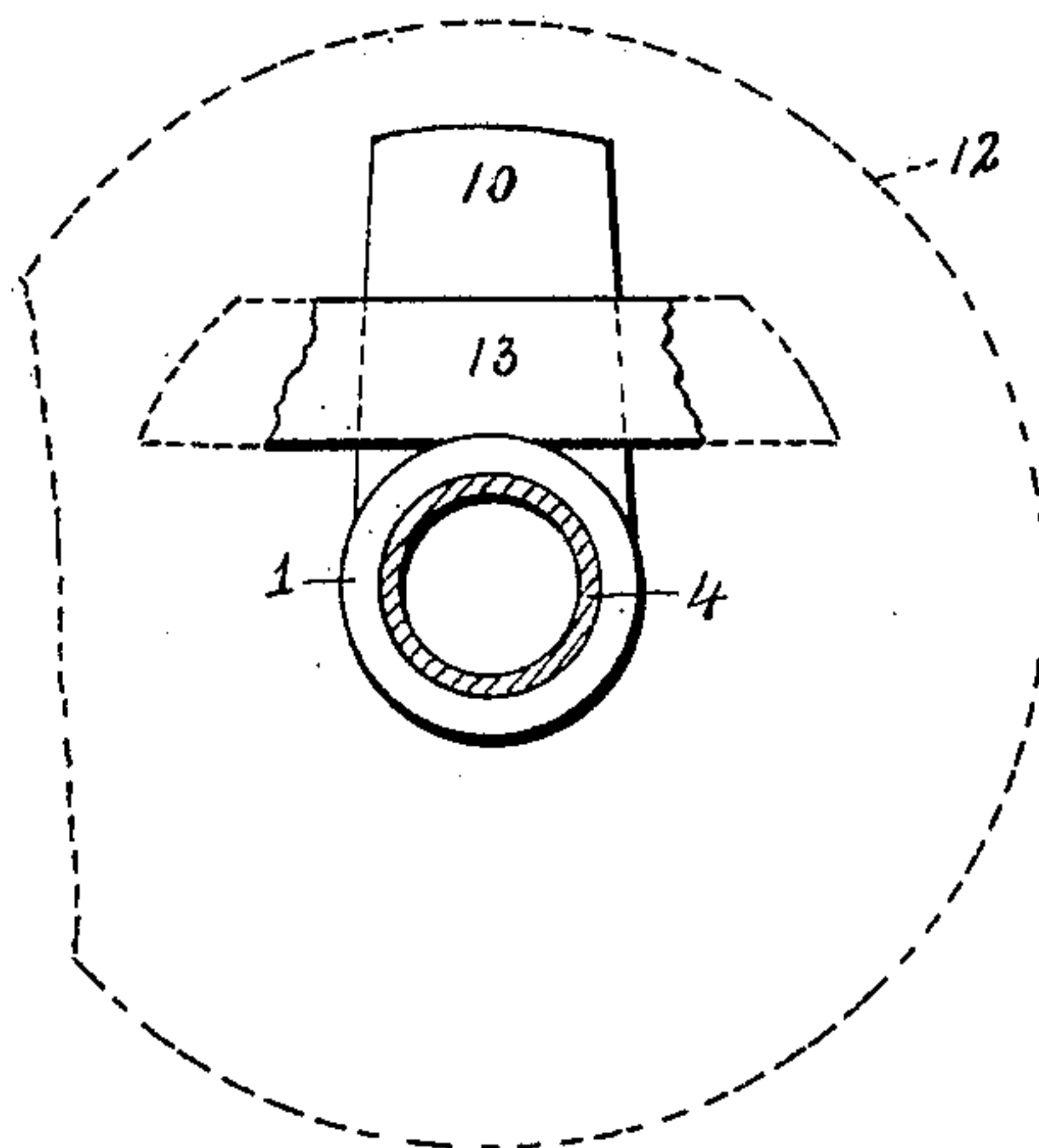


FIG. III.

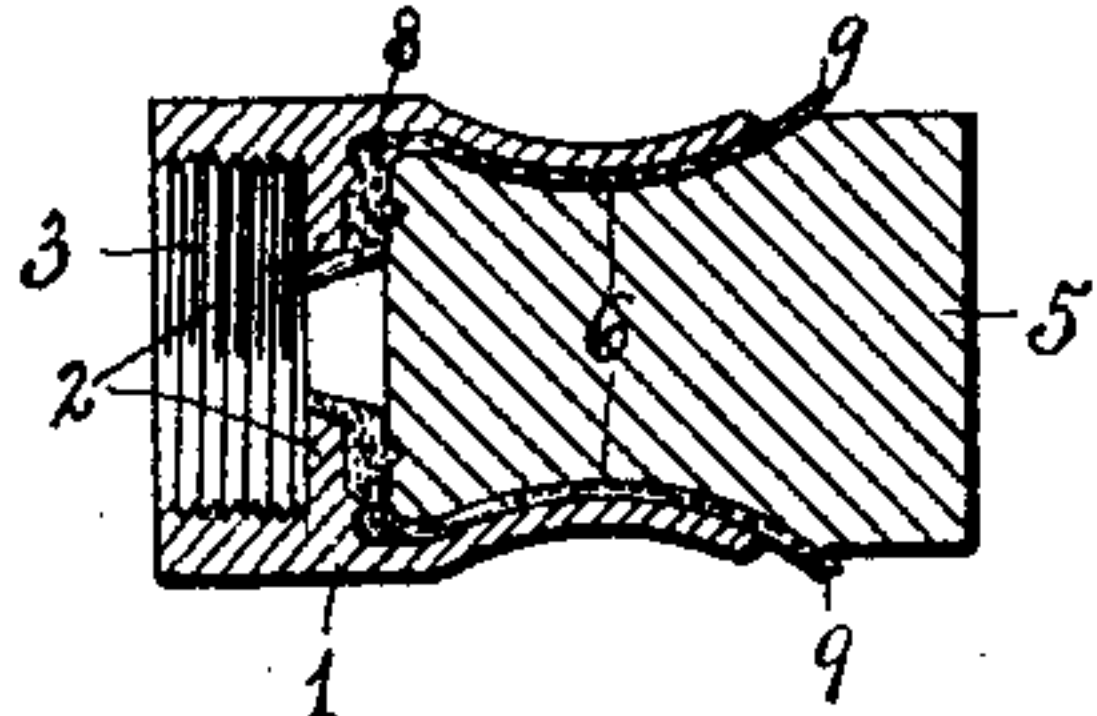


FIG. IV.

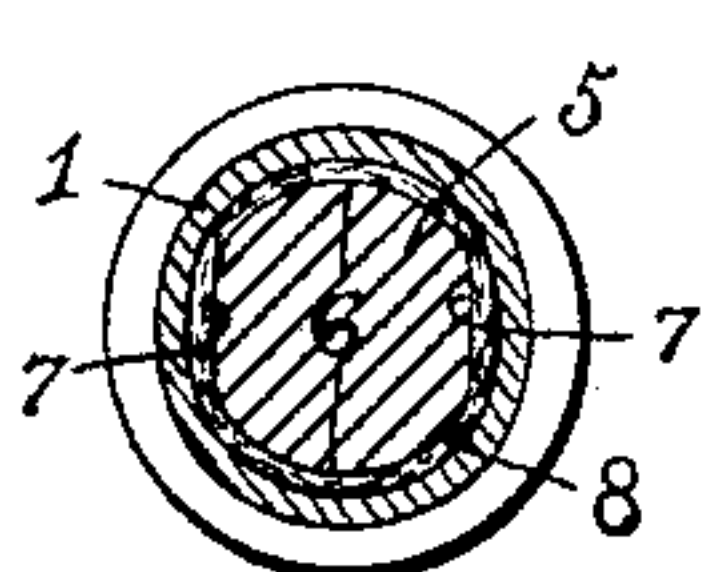


FIG. VIII.

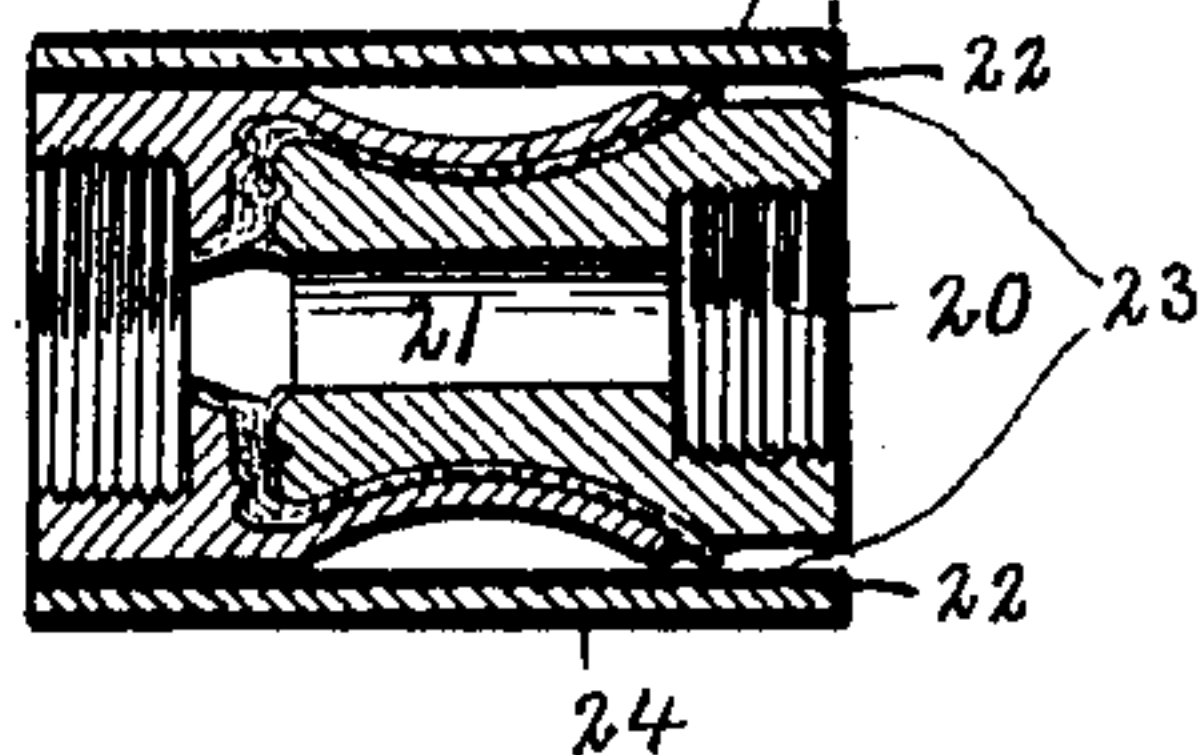


FIG. V.

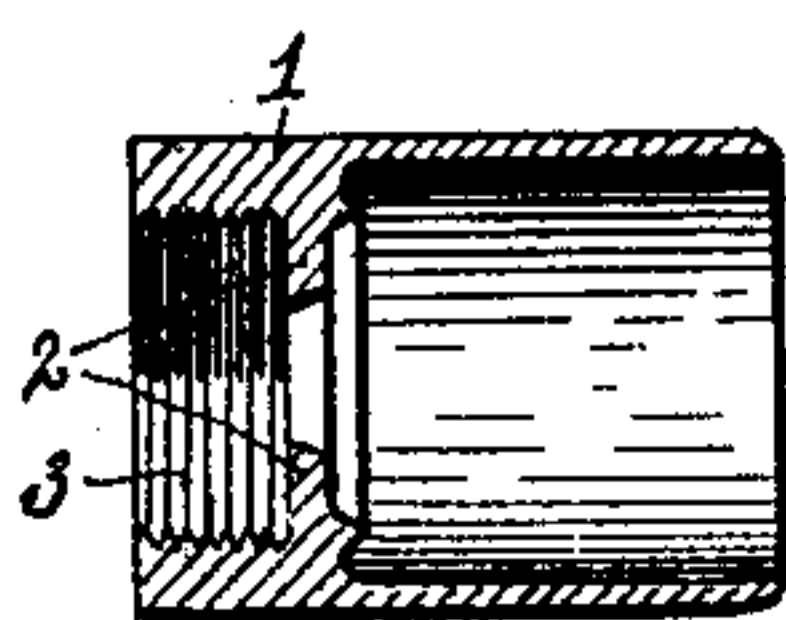


FIG. VII.

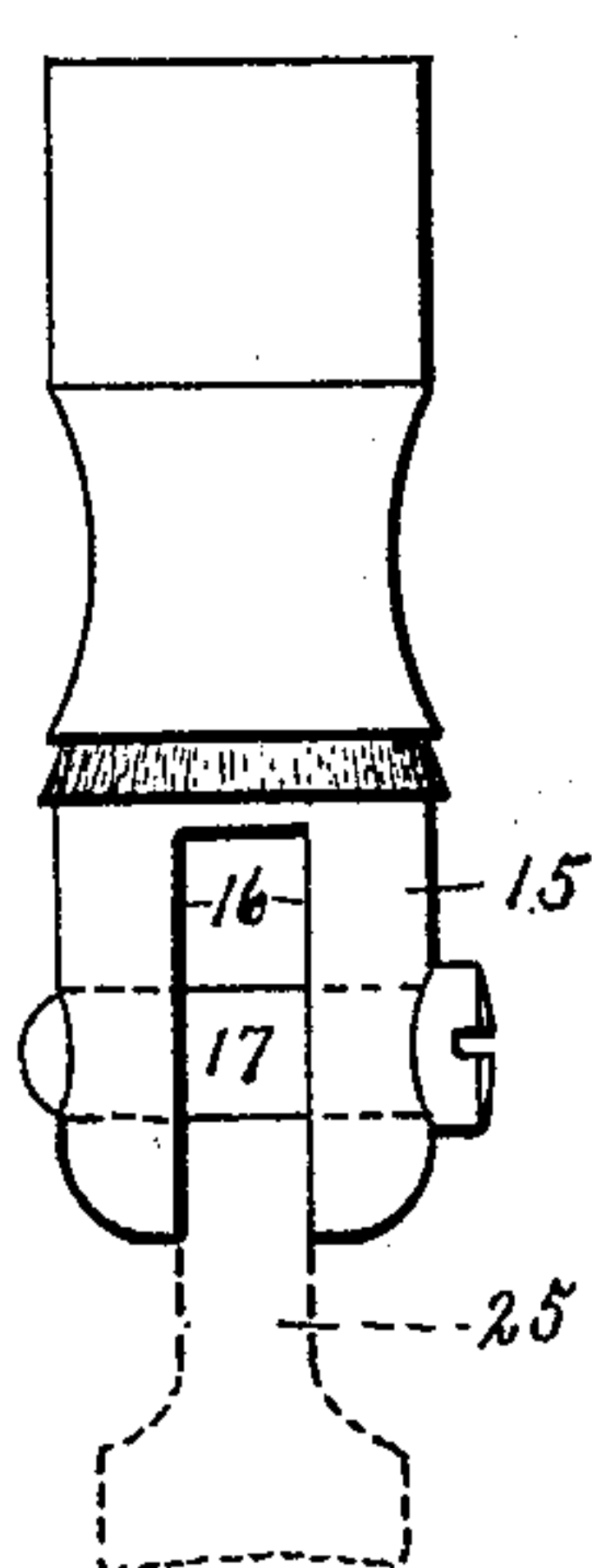
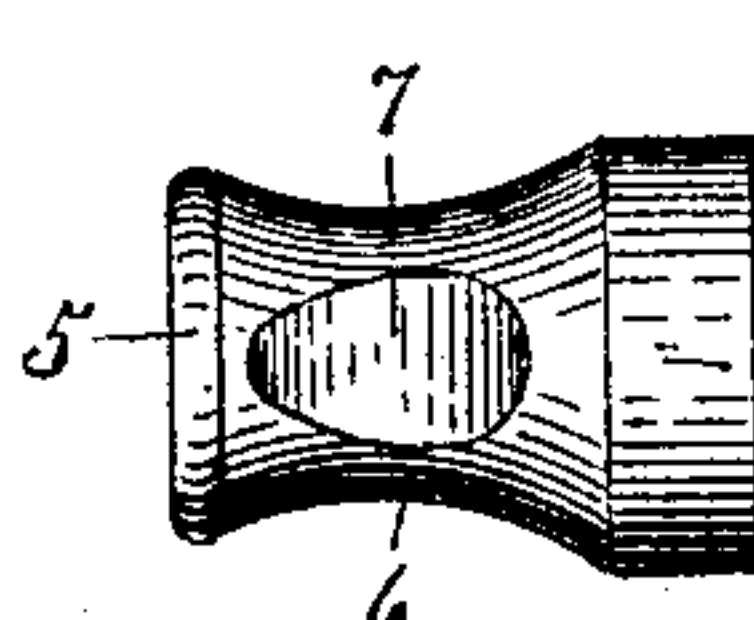


FIG. VI.



WITNESSES:

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INSULATING-JOINT.

SPECIFICATION forming part of Letters Patent No. 636,475, dated November 7, 1899.

Application filed October 12, 1898. Serial No. 693,297. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WAGNER, of New York city, in the county of New York, in the State of New York, have invented new and
5 useful Improvements in Insulating-Joints, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to insulating-joints
10 which are in common use as an intermediate connection between the ordinary gas-pipes of a building and the electric or combination fixtures secured thereon; and it consists in the construction of the joint by which its weight,
15 size, and cost are diminished, its appearance improved, its strength increased, and the fixture more conveniently attached thereto. The prior joints now in use which have the necessary strength are large unsightly bodies
20 having projecting flanges, which are inconvenient to use in many situations and necessitate a large canopy to cover and conceal them. This is not only ugly in itself, but
25 often most inharmonious with the design of the apartment, for in the best modern work the fixtures are adapted and often specially designed to harmonize with the entire decorations, and such a projection might ruin the scheme of the whole room. When it has
30 been attempted to diminish the size, the joint is thereby made weak. It should also be remembered in considering this matter that by the rules of the associated underwriters all rubber and fibrous compounds for insulating-
35 joints are forbidden. Therefore joints in which the metallic parts are held in position by the hardening or vulcanizing of the insulating material (it being softer at first) are forbidden. In fact, even if allowed, joints
40 of that construction which depend for their strength on the strength of the insulating material have been found to be undesirable, either on account of weakness or of large size.

My invention consists of two metallic pieces
45 or shells, which may be made of the minimum size, the inner, adapted to fit within the other, being formed with a groove or depression. A cap or plate of mica or other suitable insulating material of sufficient thickness is then
50 set over this, and the two together are set

within the outer shell, which is tubular in form, with straight sides, without flanges or projections, and just large enough to receive the inner shell and mica cap. The tubular
outer shell is then spun or compressed in- 55 wardly against the inner shell, engaging therewith and compressing the mica with great force, by which the parts are secured together almost as though integral, and a strong gas-tight joint is made tubular in form 60 without projections, in fact, little larger than the gas-pipe which it is adapted to fit, so that it may be set in a small hole in the wall, and, if extending outwardly, is small and easily covered. 65

I have shown my joint with various means for attaching the fixture thereto, of which the form with the hook (illustrated in Figures I and II) has decided advantages. The com-
mon means now used (shown in Fig. VIII) of 70 a screw-thread to which the fixture is screwed cannot be used in many situations, the fixture often being large or so shaped that it cannot be rotated to engage with the screw-thread without difficulty and danger of dam- 75 age and must be put up in two or more separate parts. I have therefore constructed my joint with an arm or hook preferably wide, flat, and thin, as here shown, and extending outwardly a minimum distance from the wall, 80 it being necessary to leave behind it sufficient space only to receive the cross-strap secured to the fixture. The joint then having been secured to its gas-pipe, the fixture may be set on and lifted off therefrom with little 85 trouble.

My invention will be better understood by reference to the accompanying drawings, in which the same numerals of reference indi- 90 cate corresponding parts in all the figures.

Fig. I is a side elevation of my invention, showing the manner in which it sustains the bracket. Fig. II is an elevation taken from the inner end, portions being dotted. Fig. III is a longitudinal section of my joint, taken 95 on line III III of Fig. I. Fig. IV is a cross-section taken on line IV IV of Fig. I. Fig. V is a longitudinal section of the outer shell before being compressed into engagement with the inner. Fig. VI is a side elevation of the 100

inner shell detached. Fig. VII shows modified construction for sustaining a chandelier, and Fig. VIII another modification.

In the figures, 1 indicates the outer piece or shell, having the central partition 2 and at one end the internal thread 3 for engaging with thread on gas-pipe 4.

5 is the inner shell, having the groove 6 or depression or depressions of other form. This groove is preferably flattened, as at 7, on one or more sides, as may be desired, so that when the outer shell is spun into engagement therewith all possibility of one rotating on the other will be avoided.

8 is the mica cap or other insulation of suitable form extending outwardly, forming the rim 9 beyond the edge of the outer shell. The parts having been set in position, the outer shell is spun down on the inner, compressing the mica and making a strong union, as before described.

In Figs. I and II is shown the broad flat and rather thin arm or hook 10, secured integrally to the outer end of the inner shell for supporting the fixture.

In Fig. I, 11 indicates the wall with opening therein, 12 the escutcheon of the fixture, and 13 the cross-strap, secured thereto for engaging with the hook 10 and supporting the fixture thereon at the proper height.

In Fig. VII is illustrated a modification of my invention particularly adapted for overhead use, sustaining a chandelier, the inner shell being extended outwardly into a strong solid end or stud 15, slotted at 16 and provided with a cross bolt or screw 17. By means of a tongue 25 on the gas-fixture, fitted to the slot and perforated for the passage of the screw, it is held securely in position, may be easily set up, and easily removed therefrom.

In Fig. VIII is shown a further modification of my invention, in which the inner shell is screw-threaded at 20 in the common manner for the attachment of the fixture and the joint perforated at 21 for the passage of gas, where the joint is used with a combination-fixture.

It is evident that by a mere reversal the hook 10 may be secured to or made integral with the outer shell 1 and the inner shell provided with the screw-thread 3 for engaging with the gas-pipe or the cross-strap made integral with the joint and the hook with the fixture.

The two shells of my joint may be stamped, spun, or cast, though I do not propose to limit myself either to the manner in which they are made or to the material. However, I will say that in the drawings they are shown cast and then finished or "machined," which perhaps makes the best joint.

An outer shell or cylinder of insulating material may be fitted to the joint to cover it in place of the usual tape, or this outer shell 22 may be made of metal, as here indicated, with an insulating-lining 23 and outer skin 24.

Even without this outer shell the outer rim of insulation prevents a short circuit being formed between the shells by dust or moisture.

The essential features of my invention are two shells substantially cylindrical in form, of minimum size, without flanges or projections, the inner, either tubular or solid, fitting the outer with an interposed cap, plate, or band of insulating material, and the outer compressed with the insulation to engage with depressions in the inner, making an air and gas tight joint small, simple, strong, and cheap, of the fewest parts, depending for its strength on the positive engagement of the metal and not on the insulation nor screw-threads in the various parts for screwing one into the other. The inner shell could be expanded to fit depressions in the outer; but this would evidently be undesirable.

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

1. An insulating-joint, substantially tubular in form, composed of an inner metallic shell formed with a wide groove, a hollow outer shell formed to receive the inner shell within its end, and having its tubular wall compressed to engage with said groove and said inner shell, with a wide surface of contact, and insulating material arranged between the shells to insulate one from the other.

2. An insulating-joint, substantially tubular in form, composed of an inner shell having a wide groove or depression, a hollow outer shell adapted to receive the inner within its end and having its wide, comparatively thin, tubular wall spun into close engagement with said groove or depression and said inner shell, with a wide surface of contact, one shell being formed to engage with the house-piping or other support and the other shell to be connected to and to support the fixture, and insulating material arranged between the shells to insulate one from the other.

3. An insulating-joint, substantially tubular in form, composed of an inner metallic shell formed with a wide groove flattened at one or more points, a hollow, outer shell formed to receive the inner within its end and having its tubular wall compressed to engage with said flattened groove and said inner shell, with a wide surface of contact, and insulating material arranged between the shells to insulate one from the other.

4. In an insulating-joint, the combination of an inner shell formed with a circumferential groove flattened at one or more points to prevent the rotation of the shells one on the other, when the outer shell is spun into engagement with the inner, a hollow, outer shell formed with a partition dividing its interior into two parts, said outer shell being screw-threaded at one end to engage with the gas-pipe of the house system and of sufficient size at the other end to receive said inner shell, and a mica cap interposed between said shells extending outwardly beyond the

edge of the outer shell to secure perfect insulation of the parts, said parts being secured together by spinning inwardly the material of the outer shell to engage with said groove 5 or depression in the inner shell.

5. For supporting an electric-light bracket close to the wall, a hook extending upwardly, parallel and adjacent thereto, means for securing the hook on the house-piping or similar support, and means for insulating the 10 hook therefrom.

6. In an insulating-joint two metallic pieces or shells, one formed with a screw-thread to engage with a gas-pipe or similar support, 15 the other with a hook to support the fixture close to the wall, means for securing the shells together, and insulating material to insulate them from each other.

7. In an insulating-joint, the combination 20 of an inner shell formed with a groove or depression, an insulating mica cap fitted thereto, a hollow outer shell of sufficient size to receive the inner shell and the mica cap in one end, a screw-thread formed in one of said 25 shells to engage with the gas-pipe of the house system, a hook secured to, or integral

with the other shell for receiving and supporting a fixture, the parts being secured together by spinning inwardly the outer shell to engage with and fit the groove or depression in 30 the inner shell.

8. In an insulating-joint, the combination of an inner shell formed with a groove or depression, an insulating, mica cap fitted thereto, a hollow outer shell of sufficient size to receive the inner shell and the mica cap in one 35 end thereof, a screw-thread formed in one of said shells adapted to engage with the gas-pipe of the house system and support the joint thereon, a flattened hook integral with 40 or secured to the other shell and extending outwardly therefrom substantially at right angles for receiving and supporting an electric fixture, said parts being secured together by spinning in the outer shell to engage with 45 the grooves or depressions of the inner shell.

In testimony whereof I have hereunto signed my name.

CHARLES WAGNER. [L. S.]

Witnesses:

E. H. MOORE,
R. MEYER.