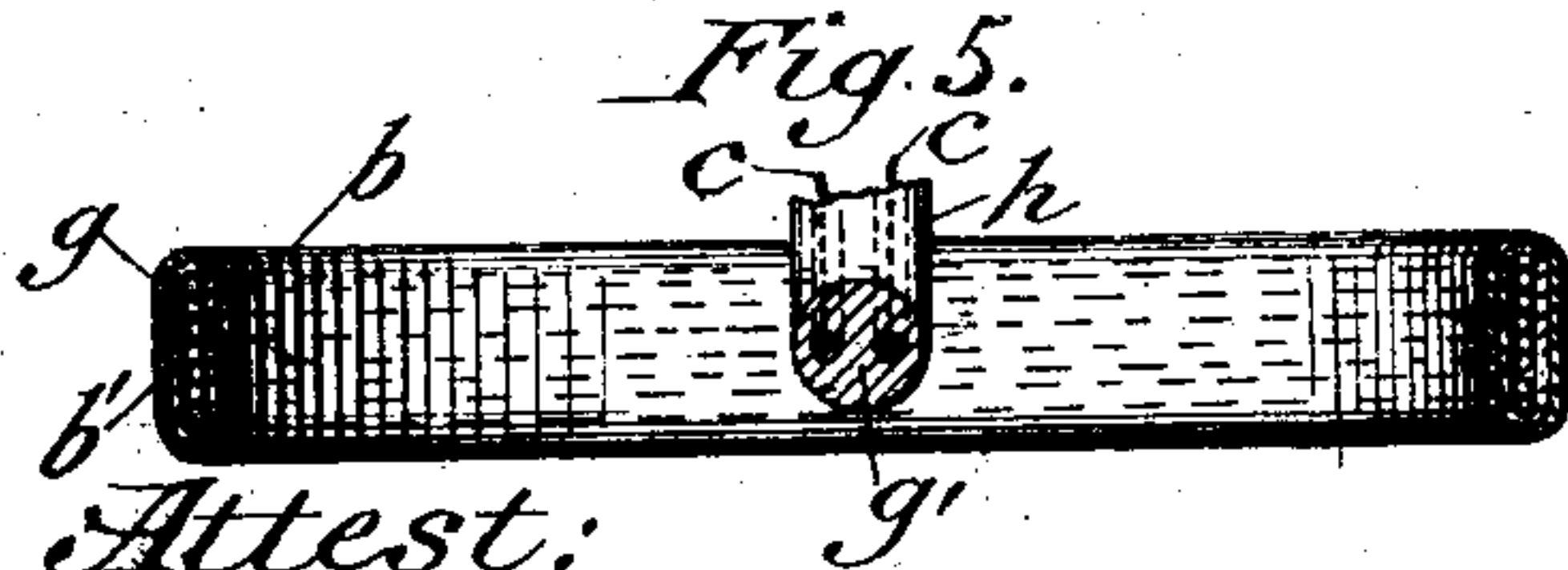
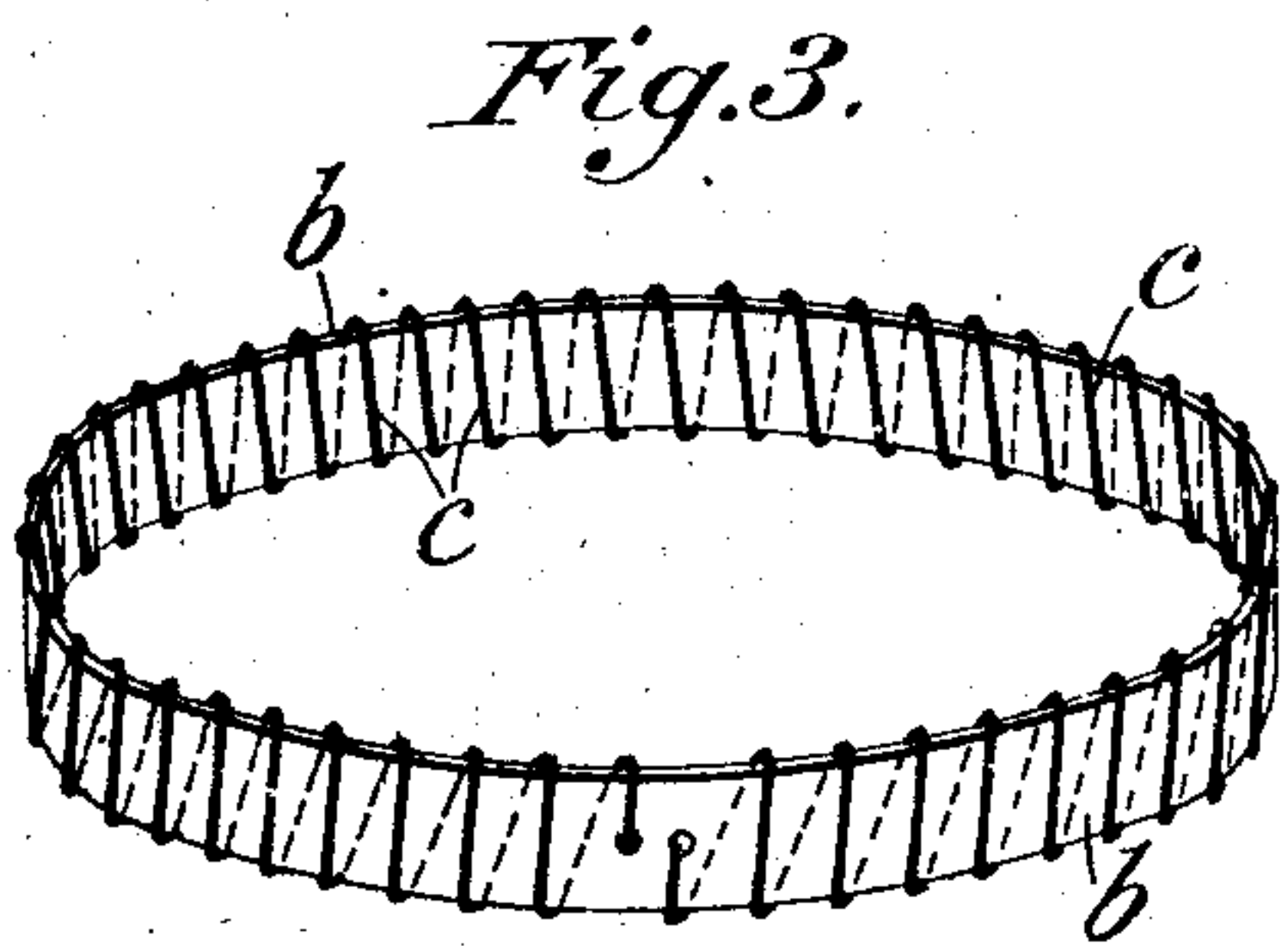
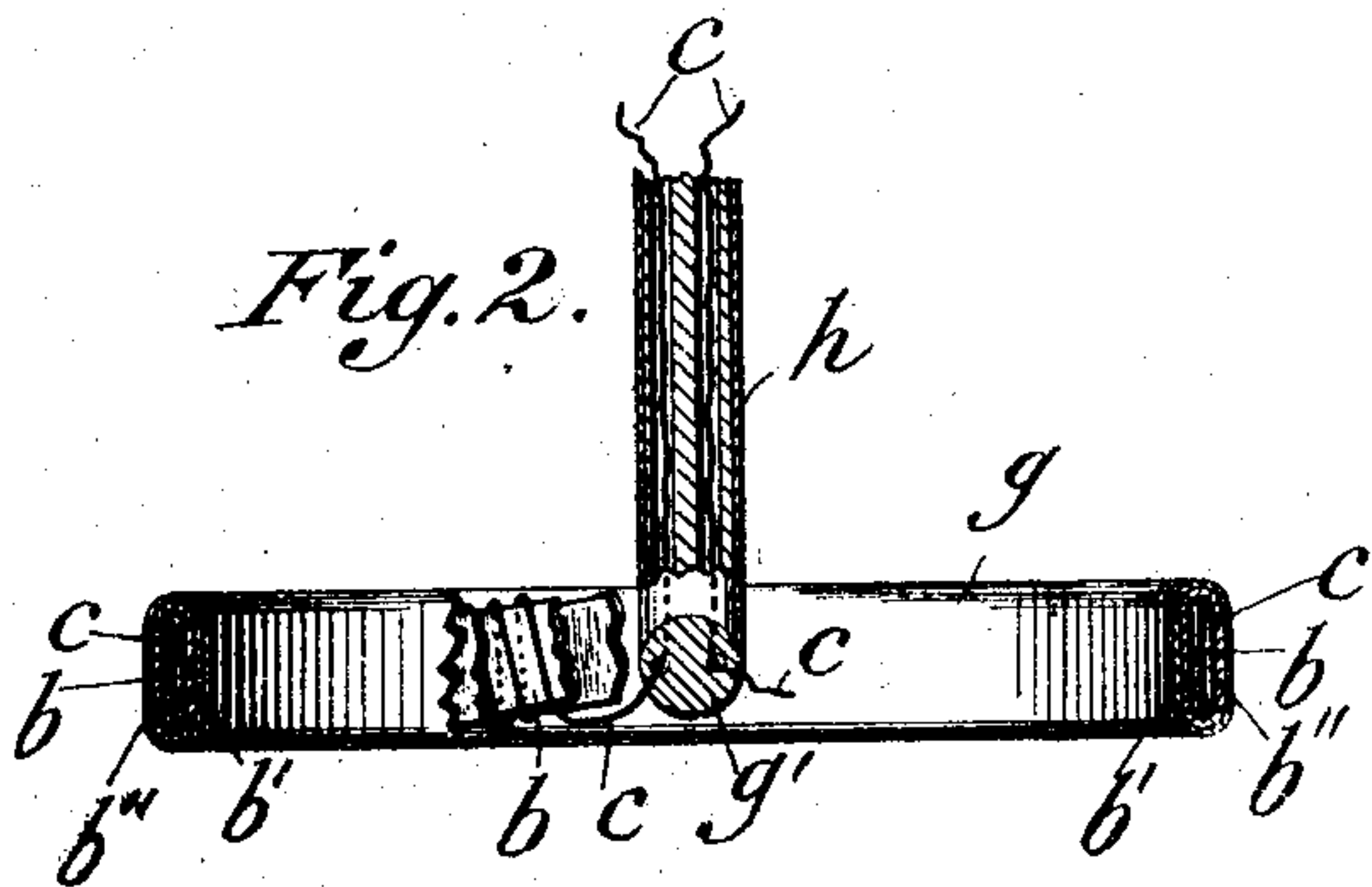
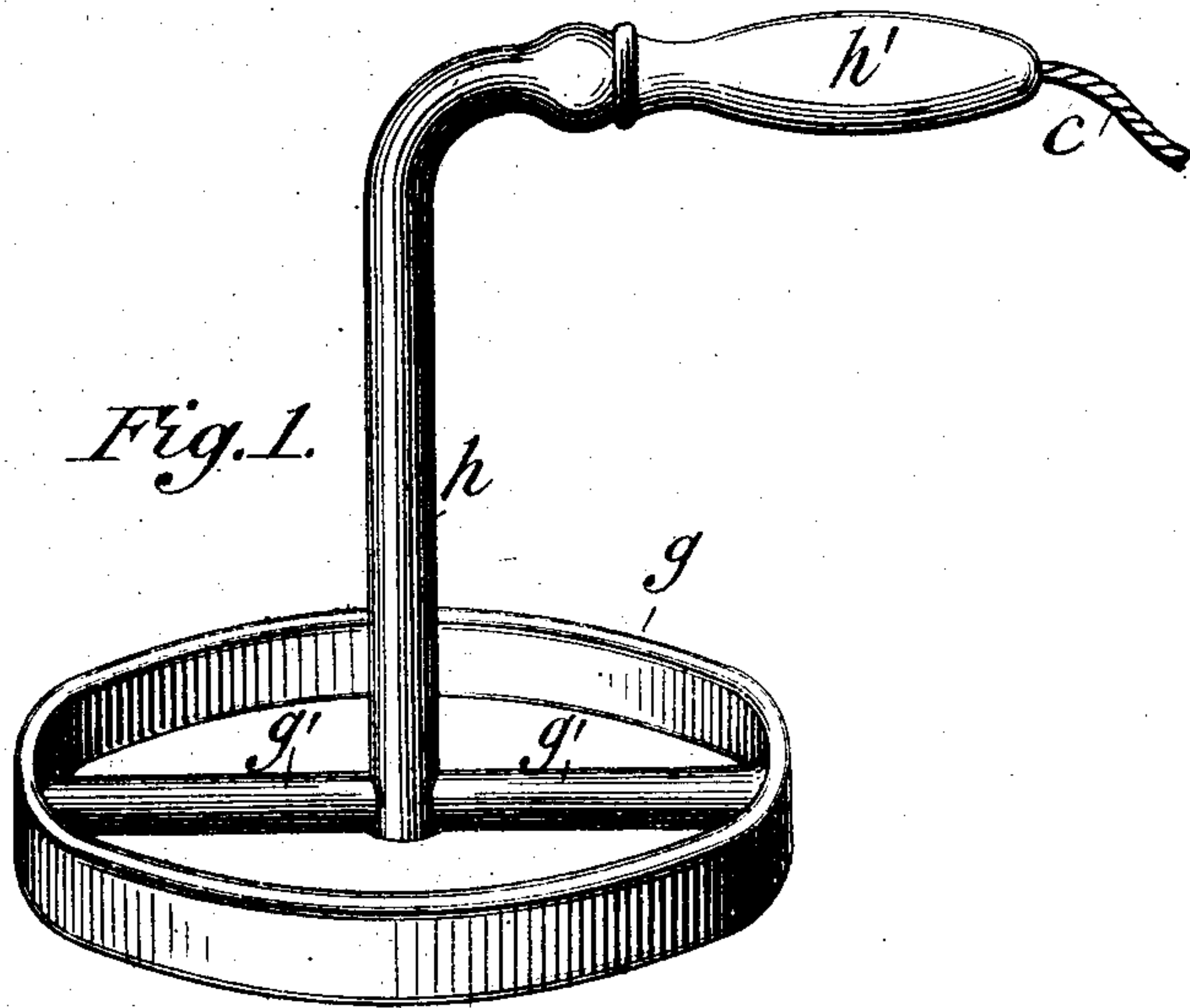


(No Model.)

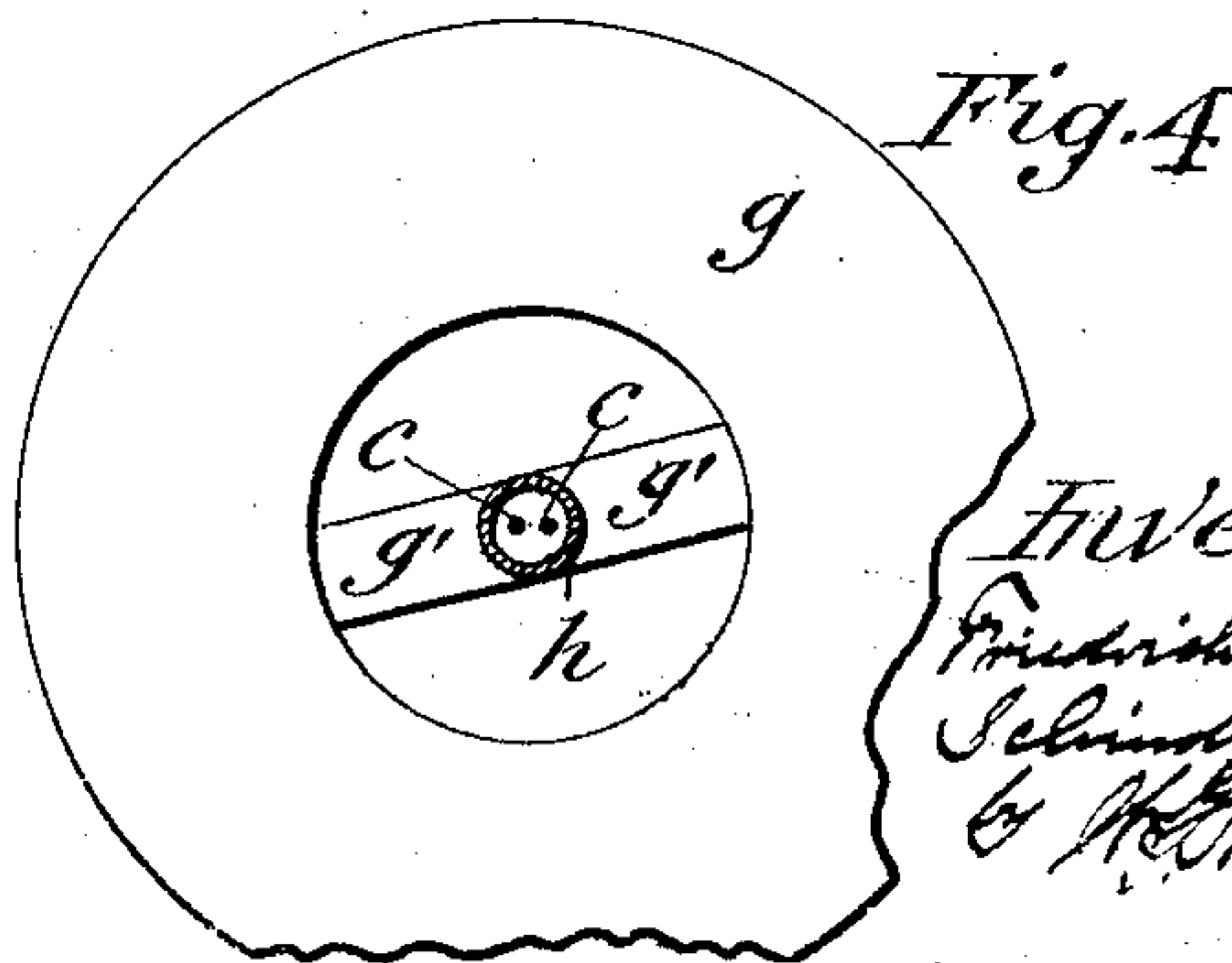
F. W. SCHINDLER-JENNY.
ELECTRIC BOILING APPARATUS.

No. 573,042.

Patented Dec. 15, 1896.



Attest:
J. H. Schott
Alfred T. Gage.



Inventor:
Friedrich Wilhelm
Schindler-Jenny
by H. H. Kuntzmann,
Att'y.

UNITED STATES PATENT OFFICE.

FRIEDRICH WILHELM SCHINDLER-JENNY, OF KENNELBACH, AUSTRIA-HUNGARY.

ELECTRIC BOILING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 573,042, dated December 15, 1896.

Application filed February 27, 1894. Serial No. 501,702. (No model.) Patented in Austria-Hungary August 22, 1891, No. 37,527 and No. 13,686; in Switzerland August 29, 1891, No. 4,180; in France September 3, 1891, No. 215,905; in Belgium September 4, 1891, No. 96,270; in England October 2, 1891, No. 16,767, and in Italy December 31, 1891, CCCI, 30,685.

To all whom it may concern:

Be it known that I, FRIEDRICH WILHELM SCHINDLER-JENNY, a citizen of Switzerland, residing at the city of Kennelbach, near Brengenz, Austria-Hungary, have invented certain new and useful Improvements in Electric Boiling Apparatuses, (for which I have obtained Letters Patent in Austria-Hungary, No. 37,527 and No. 13,686, dated August 22, 1891; in Switzerland, No. 4,180, dated August 29, 1891; in Italy, No. 30,685/301, dated December 31, 1891; in France, No. 215,905, dated September 3, 1891; in Belgium, No. 96,270, dated September 4, 1891, and in England, No. 16,767, dated October 2, 1891;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

The object of the present invention is the construction of a device for heating and boiling fluids for cooking and similar purposes by means of electricity.

The device consists of a water-tight hollow metal body or vessel in which a wire or wires, as electric conductors, are inclosed between rings or disks of non-conducting fireproof material.

The wires communicate with the outer conductor by means of a handle or stem attached to the boiler.

In the accompanying drawings is represented a boiler of the kind in different views and modifications, in which—

Figure 1 shows the boiler in perspective. Fig. 2 shows the same boiler, partly in vertical section and partly broken away in order to show the interior. Fig. 3 shows the inner insulation of this boiler with the thereon-wound conductor-wire. Fig. 4 is a plan, with part broken away, of a modification. Fig. 5 is a vertical section through another modification.

In all the figures like letters indicate corresponding parts

The boiler consists of a hollow metal body or ring, annular or disk shape, in which one or more electric conductors are insulatedly and water-tightly inclosed. I make this boiler preferably ring-shaped, as shown in Figs. 1 and 2. This boiler consists of a hollow ring *g*, in which one or more mica rings are inclosed, upon which the electric conductor *c* is wound. On the inside as well as on the outside of the mica ring *b*, on which the conductor *c* is wound, there is secured another mica ring *b'* and likewise *b''* in order to attain a full or complete insulation of the conductor-wire *c*.

The whole is, as already remarked, inclosed in a water-tight case or ring *g*. For this purpose the case or ring *g* is preferably made of two halves or parts, which, after the mica rings are brought to the proper position, are closely connected with each other, which is best accomplished by means of soldering. Ring *g* is provided, preferably, with one or more braces *g'*, as shown, to which the hollow stem or handle *h* is attached.

One or both of the braces *g'* is hollow in order to receive the insulated ends of the wires *c*, which are conducted through this brace or braces and the stem or handle to the outside, where they are connected, as desired, with the conductor or circuit wires when the boiler is to be used. Handle or stem *h* can be straight or bent, as shown, and be provided with a handle *h'*, as shown.

Instead of leading both ends of the wires through one and the same brace *g'* each single wire end can be led through a different brace, if desired. The braces can be radial, as shown, or arranged in any other desired way and number.

A flat or plate-shaped boiler can, however, also be made in an annular form, that is, open in the center, as shown in Fig. 4. In the latter case, if the handle *h* is desired to be in the center of the boiler, of course the braces *g'* are again necessary, and it will be understood that the wire will be insulated from the metallic portions of the boiler. Instead of winding the wire across or crosswise, as shown in Figs. 2 and 3, the same can of course also be

wound parallel around the circumference of the inner mica ring, as shown in Fig. 5. In this case two mica rings *b* and *b'* are sufficient.

5 In all cases, of course, any other fireproof insulation material can be applied in place of mica. I have, however, already ascertained or become assured that mica gives the best results, as the same is obtainable in thinner leaves or sheets than any other suitable material. This allows the boiler to be manufactured of very small dimensions and affords at the same time almost no resistance to the direct radiation of the heat by the electric conductor.

15 The herein-described boiler is so used that the same is immersed or dipped into the fluid to be heated or boiled and then connected with the electric circuit. The great advantage which this boiler offers is this: that no heat whatever is lost, since the entire body of the boiler is surrounded by the fluid to be heated.

20 Although I have shown and described dif-

ferent forms of boiler, I do not limit myself to these particular forms, for the boiler can, 25 without departing from my invention, be manufactured in any other desired form, as oval, rectangular, polygonal, or in any other regular or irregular form.

Having described my invention and set 30 forth its merits, what I claim is—

An electric boiler comprising a hollow ring or annular water-tight body, a base of insulating material therein, one or more electric conductors secured to said base, a handle, and 35 a brace connecting said handle and annular body, the electric conductors passing through said brace and handle, substantially as and for the purposes described.

In witness whereof I have hereunto set my 40 hand in presence of two witnesses.

FRIEDRICH WILHELM SCHINDLER-JENNY.

Witnesses:

JULIUS A. BOURRY,
II. RABHART.