

W. H. ROGERS.  
RACK FOR ELECTROPLATING DEVICES.  
APPLICATION FILED JULY 29, 1910.

990,200

Patented Apr. 18, 1911.

Fig. 1.

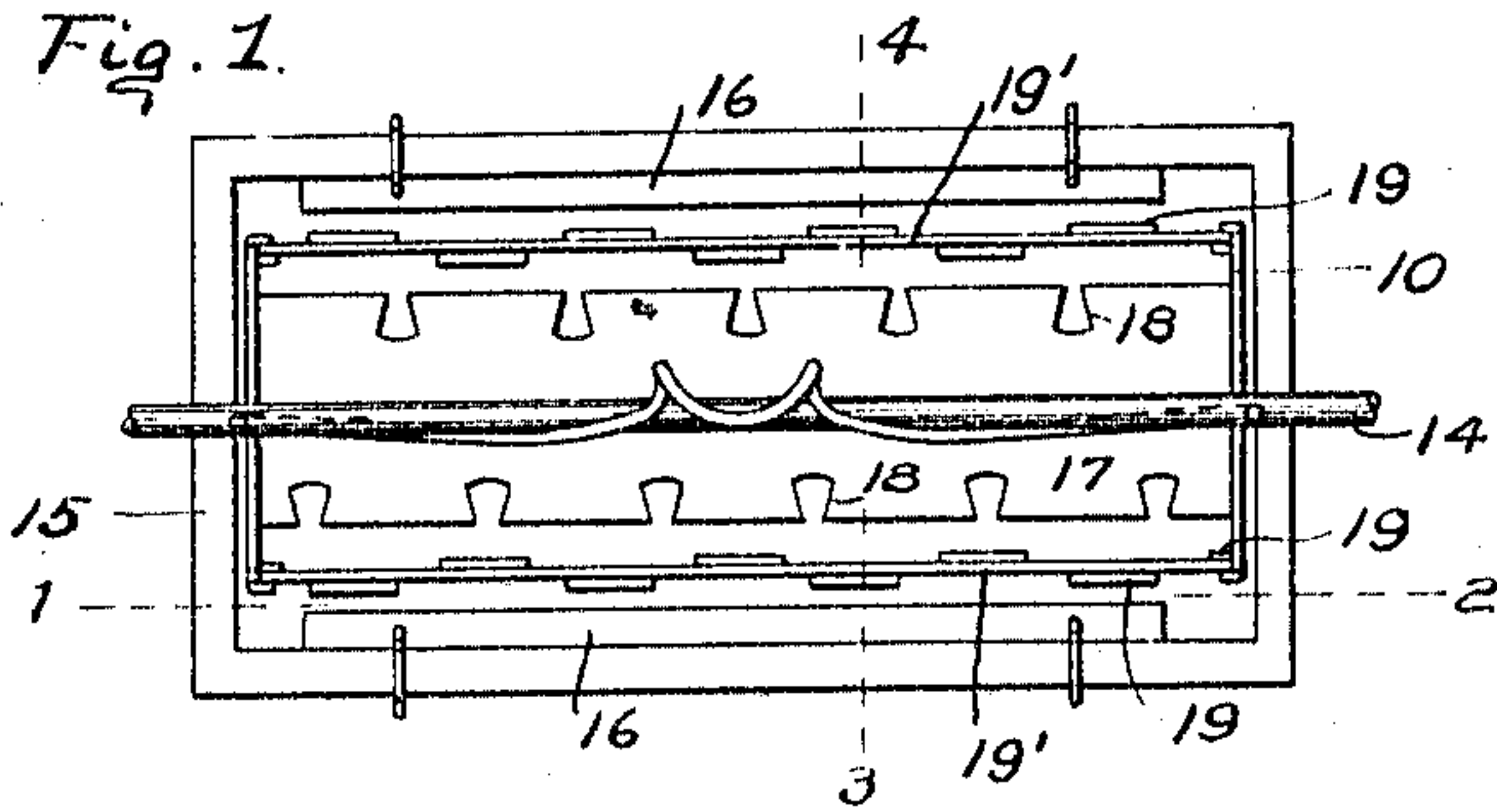


Fig. 2.

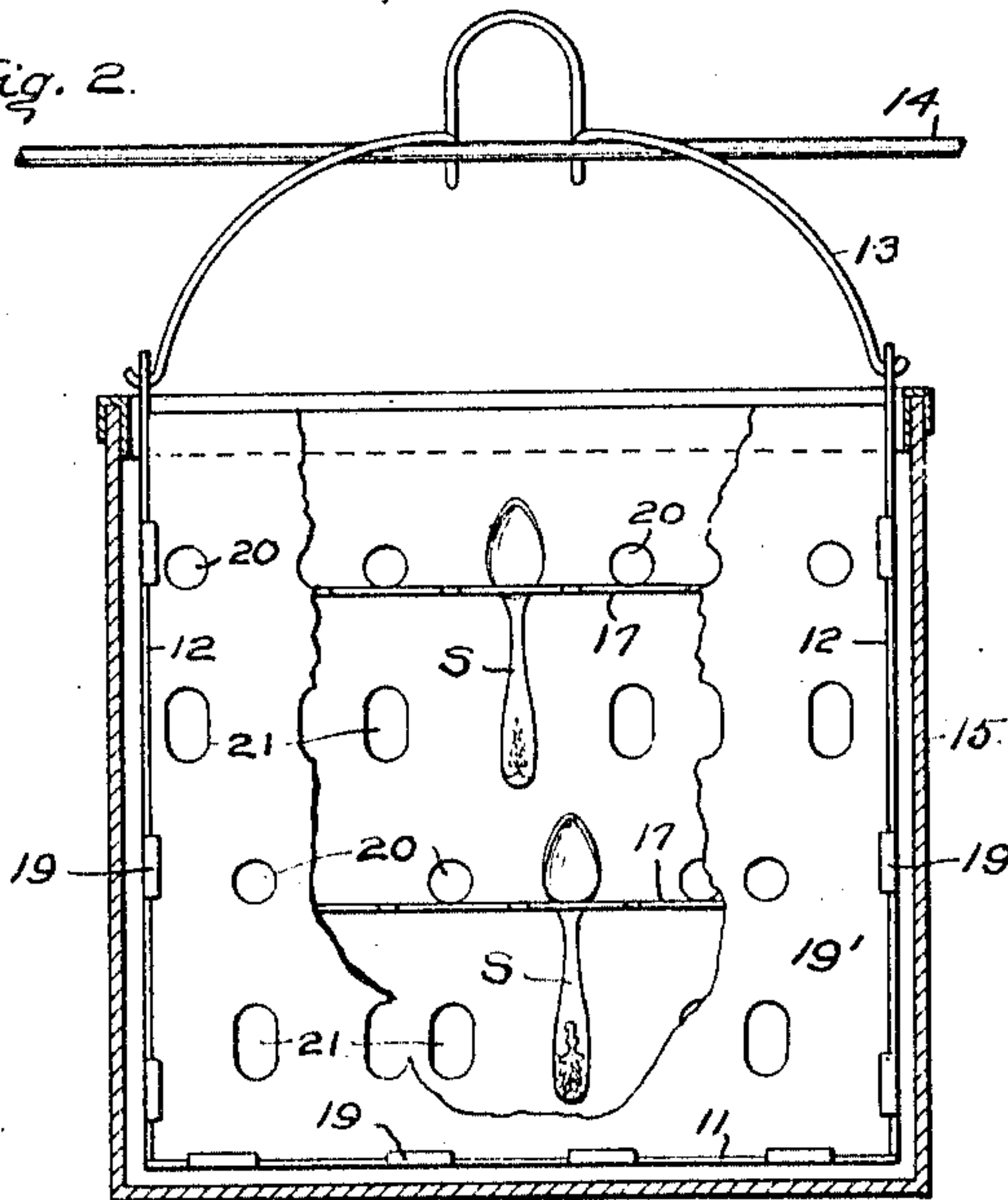


Fig. 3.

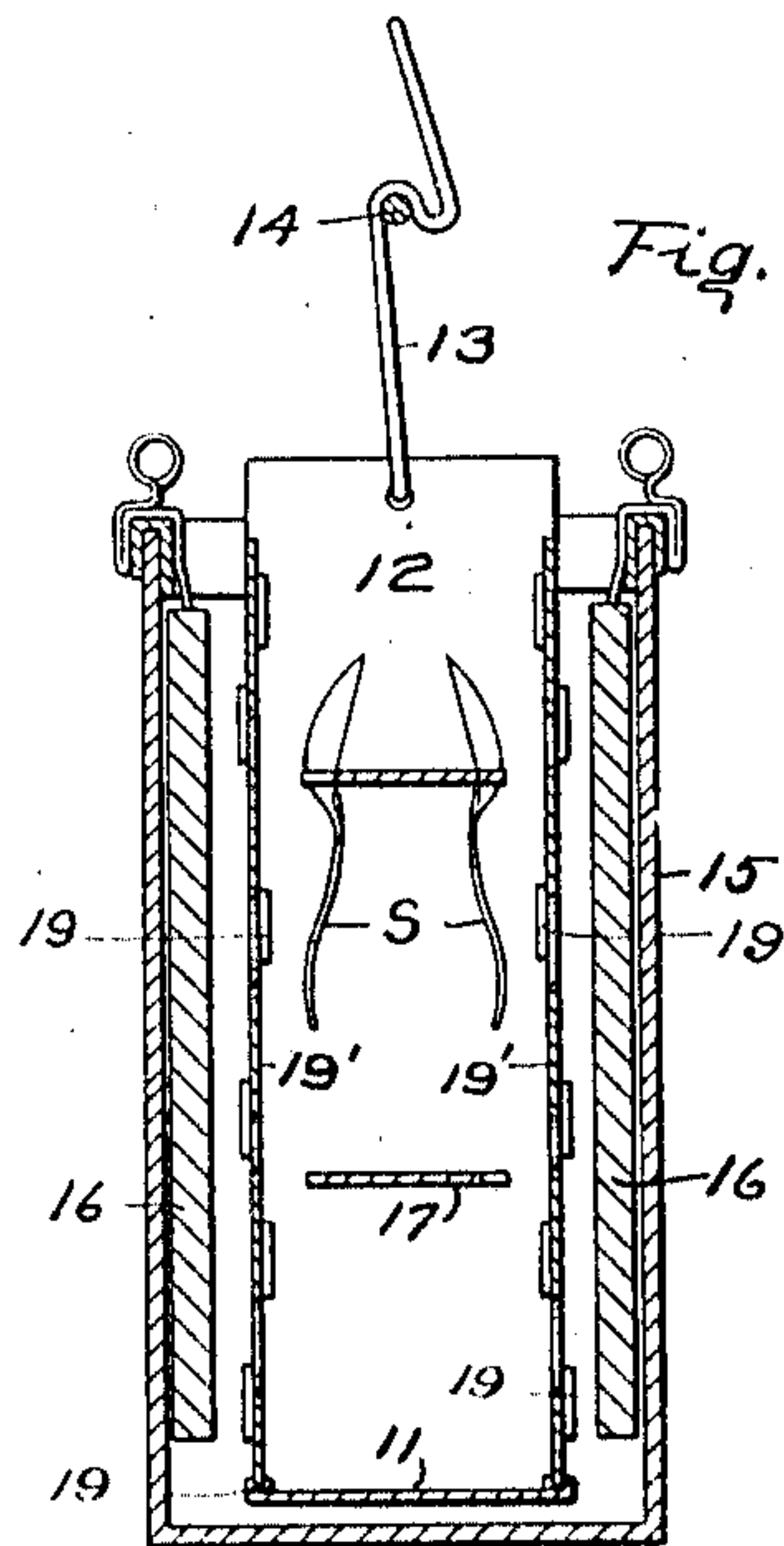


Fig. 4.

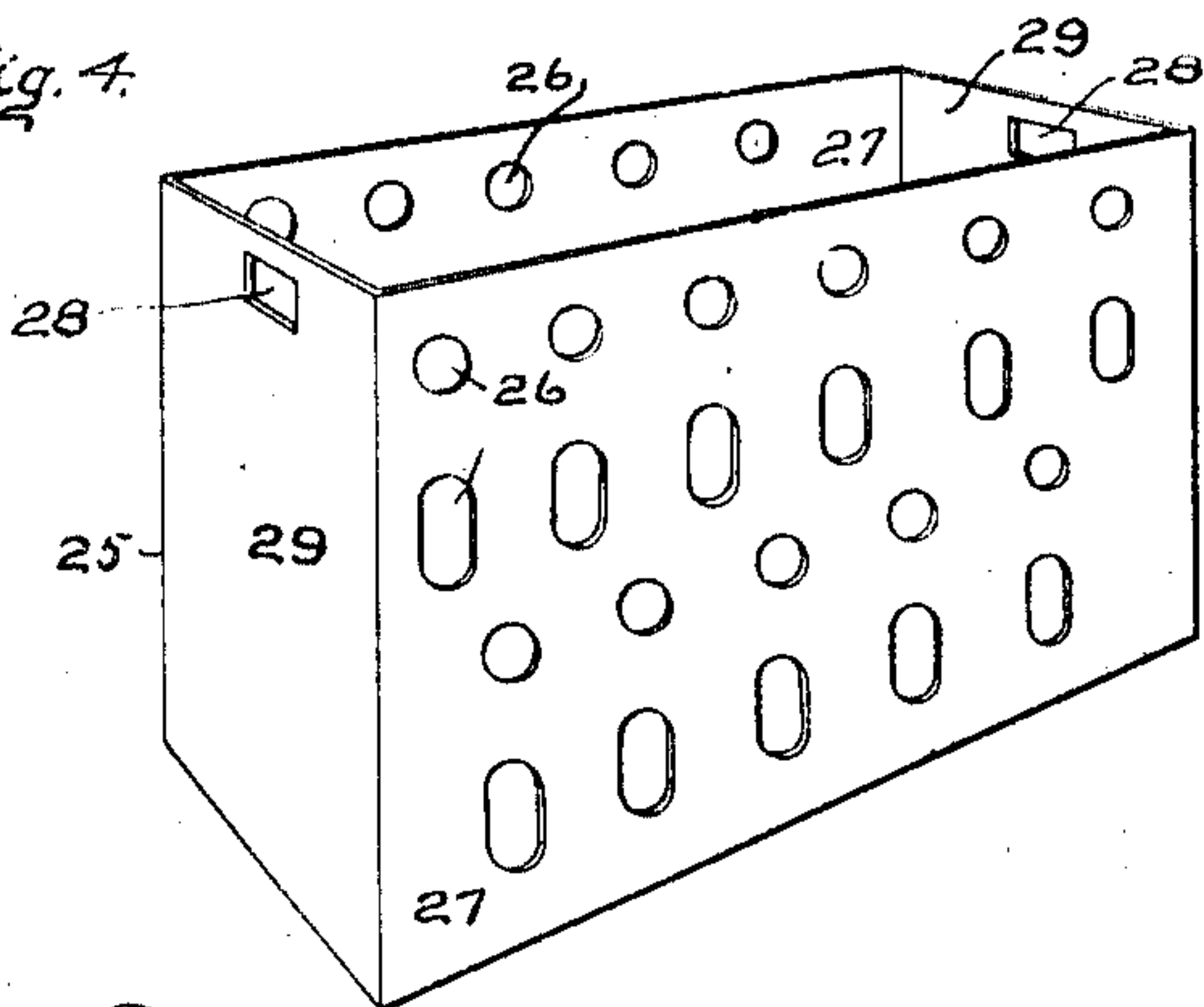
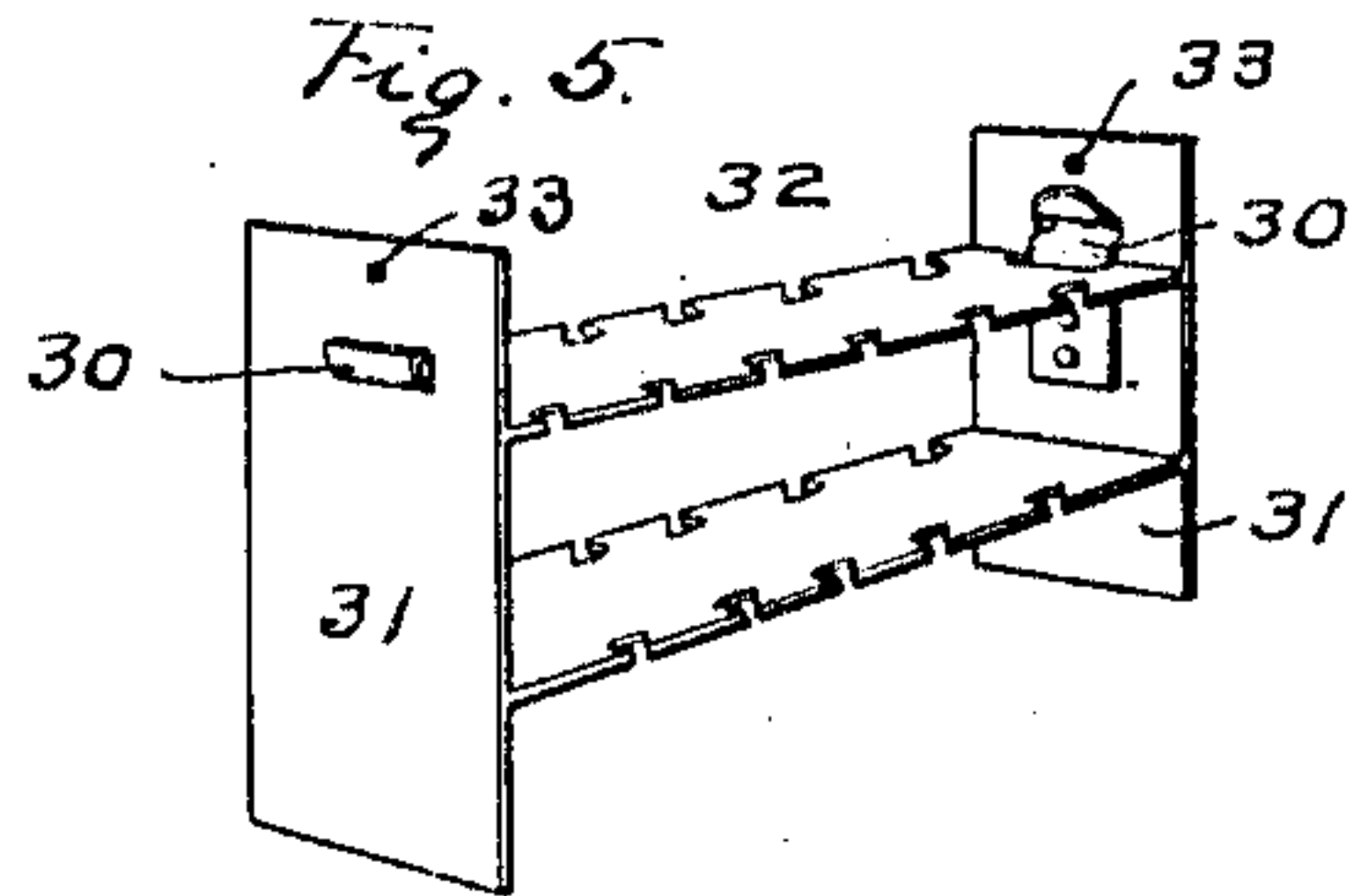


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM H. ROGERS, OF MUNCIE, INDIANA.

RACK FOR ELECTROPLATING DEVICES.

990,200.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed July 29, 1910. Serial No. 574,423.

*To all whom it may concern:*

Be it known that I, WILLIAM H. ROGERS, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented new and useful Improvements in Racks for Electroplating Devices, of which the following is a specification.

My invention relates to improvements in racks for electroplating devices. Its object is to provide means for suspending the article to be electroplated in the bath so that selected parts of the article shall receive a heavier plate of the metal than the remainder of the article.

It consists in a cheap, efficient and novel form and construction of rack for suspending the articles to be plated in the bath all as hereinafter described and illustrated in the drawings, in which—

Figure 1 is a plan view of the device in a plating bath; Fig. 2, a vertical section of the device on line 1—2 of Fig. 1; Fig. 3, a vertical section of the same on line 3—4 of Fig. 1; Fig. 4, an elevation in perspective of a modified form of insulating case, and Fig. 5, an elevation in perspective of a modified form of the suspending rack to be used in connection with the case shown in Fig. 4.

Referring to the drawings, in which like reference characters indicate like parts, I provide frame 10 formed of suitable electroconducting material, the frame having a bottom 11 and upright end pieces 12, a hanger or handle 13 being engaged in the upper portions of the two ends 12, by which the rack is supported from a conductor 14, which conductor is supported above a tank 15, in which the rack is submerged in operation. The conductor 14 is connected to an electric circuit in the usual manner and handle or hanger 13 is also a conductor of electricity so that frame 10 becomes the cathode of the circuit. Suitable anodes 16 are suitably suspended within the tank on opposite sides of the rack 10 and are also connected to the electric circuit.

Extending transversely between ends 12 and secured thereto are any number of supports or shelves 17 of suitable electroconducting material. The side edges of these shelves are notched at suitable intervals to receive and retain the articles to be plated. In the drawings I show the notches 18 of tapering formation so as to support spoons S, and the notches on one edge of the shelf

are staggered relative to those on the opposite edge. The bowls of the spoons preferably face inwardly, thereby presenting the backs of the spoons toward the anodes 16. 60

The sides of the rack 10 are open, but the edges of the ends 12 and bottom 11 are provided with suitable guides or cleats 19, between which are slidably arranged two side plates 19' which are formed of a suitable insulating material such as rubber or fiber, or any other material which will tend to protect the interior of the rack from the electric current passing from the anodes to the articles suspended on shelves 17. These side plates 19' are provided with suitable openings 20 opposite the points on the articles where the greatest amount of metal is desired to be deposited on the articles which are suspended on the shelves 17. In the drawings, since spoons are the articles shown, the openings 20 are opposite the back of the bowls of the spoons and openings 21 are opposite the backs or such portions thereof as it is desired to expose to the anodes. It is evident that the openings in sides 19' may be of any form and located therein at any desired points and that any number of shelves or supports 17 of any suitable form may be attached to ends 12 and that the notches in the shelves may have any form suitable to support the article to be plated. In practice rack 10 and the portions of the hanger 13 which may be within the bath will be provided with an insulating coat of suitable material, so as to prevent the deposit of the metal on those parts. 85 90

It is now apparent that the current of electricity will pass from the anodes through the liquid to the articles supported on rack 10, but since the insulating plates 19' are between the anodes and the articles the portions of the articles opposite the openings receive the full force of the current while the remaining portions of the articles receive less force; consequently a heavier deposit of the metal in the bath will be made on the exposed portions of the articles than that received by the insulated portions. It is further apparent that the rack is easily loaded with the articles by simply withdrawing the insulating sides 19', whereupon the articles may be easily inserted in the notches of the supports 17. 100 105

For convenience of illustration the tank is shown of a size sufficient to receive one rack 10, but in practice a large tank is used



and a number of racks will be suspended in it—preferably submerged in the liquid in the tank.

5 In Figs. 4 and 5, I illustrate a modification of insulation in which instead of remov-  
ably securing insulating sides 19' to rack  
10, I provide a case 25 formed of similar insulation to that of sides 19' and having open-  
ings 26 in the sides 27 corresponding to  
15 openings 20, 21 in sides 19'. Suitable open-  
ings 28 are formed in the upper portion of  
ends 29 of case 25 into which are adapted  
to project catches 30 on ends 31 of frame 32,  
which frame is inserted into case 25. This  
15 frame 32 is similar in all respects to rack  
10 except that it has no bottom or sides.  
Openings 33 in the upper portion of ends  
31 of frame 32 are adapted to receive the  
extremities of a suitable hanger such as  
20 hanger 13 (Fig. 2), by which the frame and  
case are suspended in the liquid in the tank.  
By means of catches 30 which engage in

openings 28 in case 25 the case is also sus-  
pended with the frame.

What I claim is:

25 In a device of the character described,  
the combination with an electroconducting  
frame having horizontally disposed shelves  
extending longitudinally thereof, said shelves  
having article receiving notches in their op- 30  
posite edges, the notches of one edge being  
staggered with relation to the notches of the  
opposite edge of each of said shelves, guides  
upon said frame, perforated plates of insu-  
lating material slidably mounted in said 35  
guides, said shelves supporting the articles  
carried thereby in the same horizontal but  
different transverse planes.

In witness whereof, I hereunto sign my  
name this 16th day of June, 1910.

WILLIAM H. ROGERS.

Witnesses:

MILDRED BOOTH,  
MYRON H. GRAY.