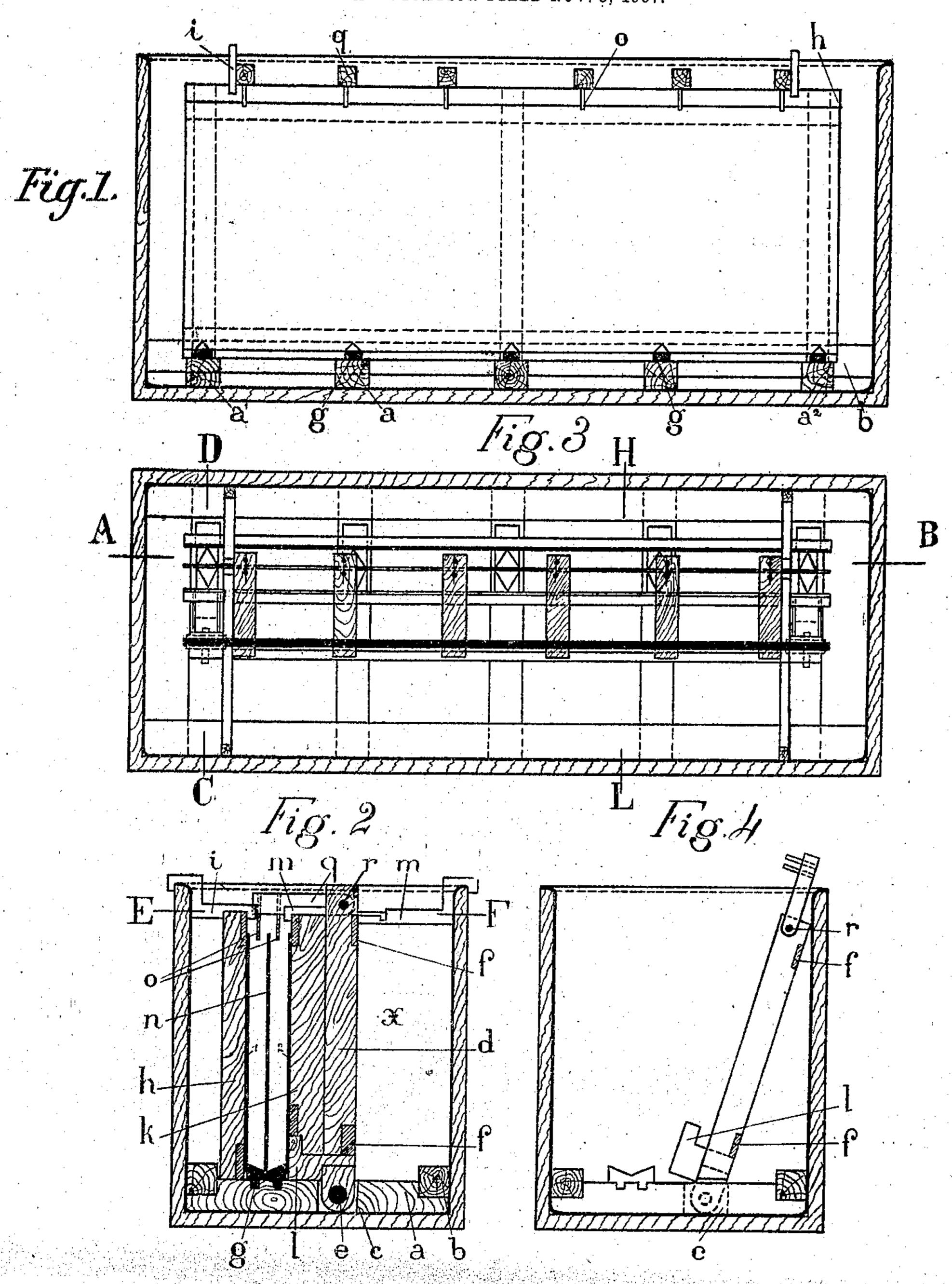
No. 894,741.

PATENTED JULY 28, 1908.

## C. LEBERT, E. ROSKOTHEN & K. WIRTH.

GALVANIZING SHEET METAL.

APPLICATION FILED NOV. 8, 1907.



Witnesses:

Lew Reliebs Innskrikens

## UNITED STATES PATENT OFFICE.

CARL LEBERT, ERNST ROSKOTHEN, AND KARL WIRTH, OF LUDWIGSHAFEN-ON-THE-RHINE, GERMANY.

## GALVANIZING SHEET METAL.

No. 894,741.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed November 8, 1907. Serial No. 401,254.

To all whom it may concern:

Be it known that we, CARL LEBERT, ERNST ROSKOTHEN, and KARL WIRTH, subjects of the German Emperor, and residents of Lud-5 wigshafen-on-the-Rhine, Germany, have invented an Improved Device for Galvanizing Sheet Metal, of which the following is a specification.

It is well known how sheet metal is galvan-10 ized vertically in baths. Hitherto for carrying out this process separators were necessary between the anodes and cathodes. This has, besides other disadvantages that parts of the anodes are covered. By pressing the 15 points of the separators on the cathodes, there are on the whole surface places which are not galvanized, so that on account of forgetting the necessary displacing of the sheet metal, a number of refuse goods are turned 20 out. The points of the known separators generally break off or become defective which

makes this kind of working very expensive. The present invention relates to a device for galvanizing sheet metal on the whole sur-25 face without the use of separators, so that the cathodes and anodes are free over their whole surface which for the anodes causes an equal displacing and entire use and the cathodes are equally galvanized on both sides. In 30 order to make this possible angular pieces of non-conducting material such as glass, porcelain or earthenware are placed on the wooden beams which lie across the bottom of the bath. The cathode is at the bottom 35 supported in cuttings in the angular pieces of glass or the like and at the top between two glass pins fixed to a movable wooden arm. In this manner the cathodes are held in a vertical position. The cathodes which can to be of any uneven shape can conveniently be held with the hands until the glass pins are placed in position to hold them. The two anodes are screwed to wooden frames and can separately be taken out. One of the 45 frames with one anode rests at the bottom of the wooden beams, and held in a vertical position at the top by two wooden holders. The frame with the second anode is pivoted to the wooden beams and held in a vertical 50 position by two wooden holders at the top.

In the accompanying drawing is shown a constructional form of the object of the pres-

ent invention.

Figure 1 is a longitudinal section on A.B.

3. Fig. 3 is a section E. F. Fig. 2. Fig. 4 is a cross section H. L. Fig. 3.

Across the bottom of the bath are wooden beams a,  $a^1$ ,  $a^2$ , which are connected together by two wooden beams b. The two other co beams  $a^1$ ,  $a^2$ , are provided with slots c in which are pivoted the frame d on glass or wooden pins e. The frame sides d are connected by wooden laths f. Fixed to the wooden beams a, a1, a2, are non-conducting 65 angular pieces g of glass, porcelain or earthenware provided with cuttings. Between these angular pieces g and the beam b is placed the frame h to which is screwed the anode 1. This frame h is held at the top by 70 two wooden holders i; the frame k with the anode 2 constructed of frame sides and laths being mounted at the bottom, on the toothed pieces l which are fixed to the frame sides d. At the top the frame k is held by two wooden 75 holders m or by the prolonged holder i. The bottom of the cathode n rests on the cuttings in the angular pieces g and at the top is held by two strong glass pins o which project from the wooden arm q. The wooden arms q are 80 mounted on a circular iron rod r between the frame sides d so that they can simultaneously be raised and lowered. The arrangement of the movable frame formed of the pivoted frame sides d is for the purpose of uf- 85 fording a larger working space when placing the cathode in position. If in the hereinbefore described invention, the frame h is of the other side provided with a second anode and a movable frame is also arranged oppo- 90 site thereto, then two plates can simultaneously be galvanized in the same bath without the use of separators between the anodes and cathodes.

Havingfully described our invention, what 95 we do claim and desire to secure by Letters Patent is:

A device for galvanizing sheet metal, comprising in combination, a bath across the bottom of which are placed wooden beams (a, a1, 100 (a2) two wooden beams (b) connecting the cross beams, angular non-conducting pieces (g) provided with cuttings are fixed to the wooden beams  $(a, a^1, a^2)$  a frame (h) for one. anode supported on the cross beams (a, a1, a2) 105 between connecting beams (b) and the angular pieces (g), two wooden holders (i) for holding the frame (h) in a vertical position, a second frame (k) for the second anode (2), 55 Fig. 3. Fig. 2 is a cross section on C.D. Fig. I the said frame connected to two frame sides 110

(d) hinged in slots (c) in the cross beams  $(a^1,$  $a^2$ ), two holders (m) for holding the frame (k)in a vertical position, and wooden arms, each provided with two glass pins, mounted on a circular rod between the two frame sides (d), substantially as described and shown and for the purpose set forth.

S. H. Shank,

In testimony whereof we have hereunto set Jos. H. LEUTE.

our hands, in the presence of two subscribing witnesses.

CARL LEBERT. ERNST ROSKOTHEN. KARL WIRTH.

Witnesses: