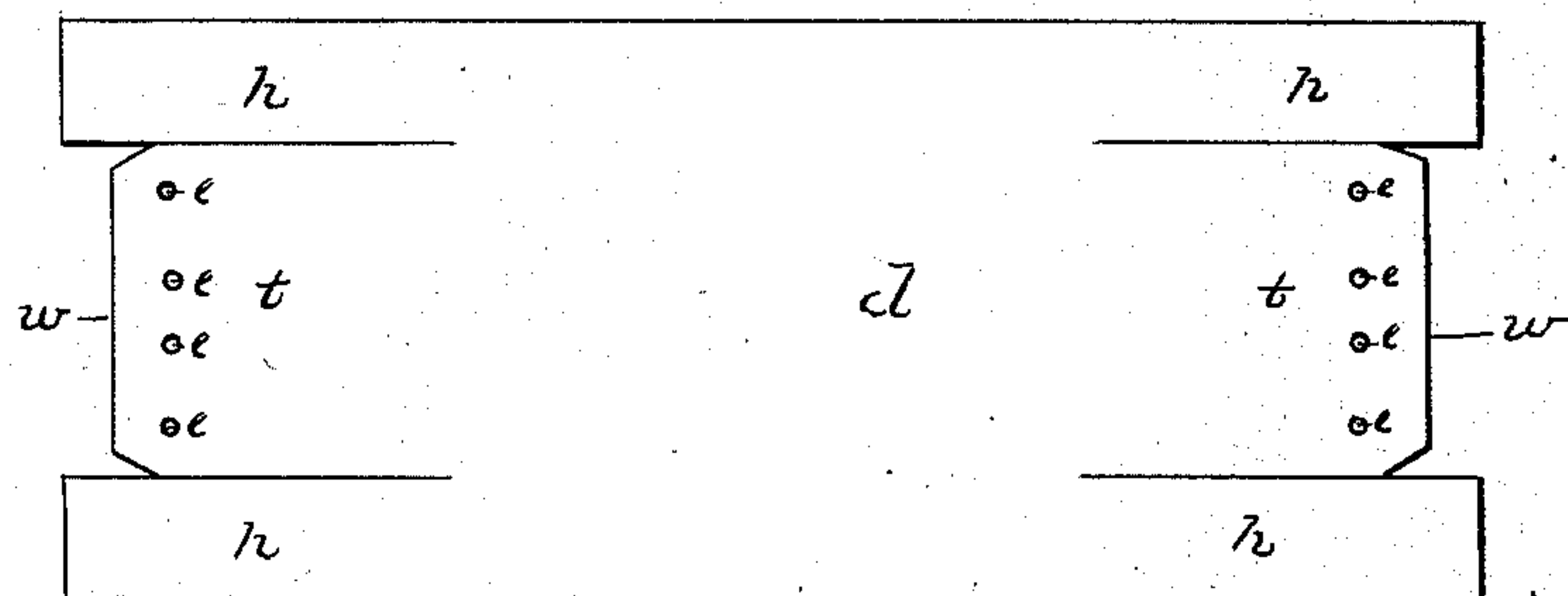
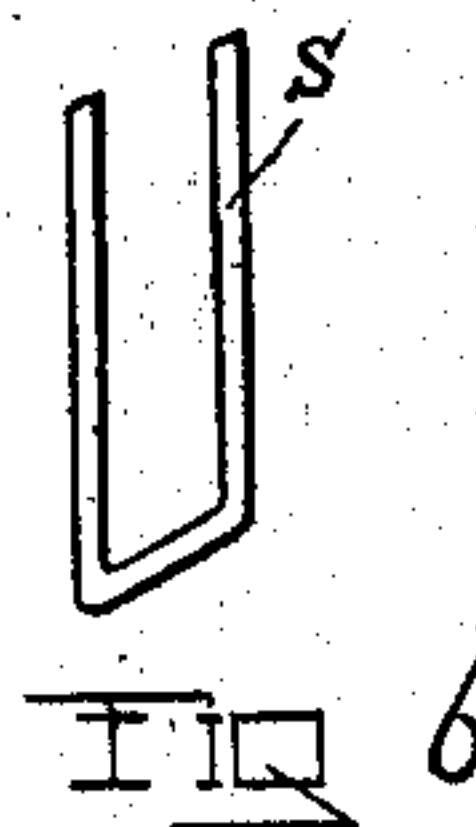
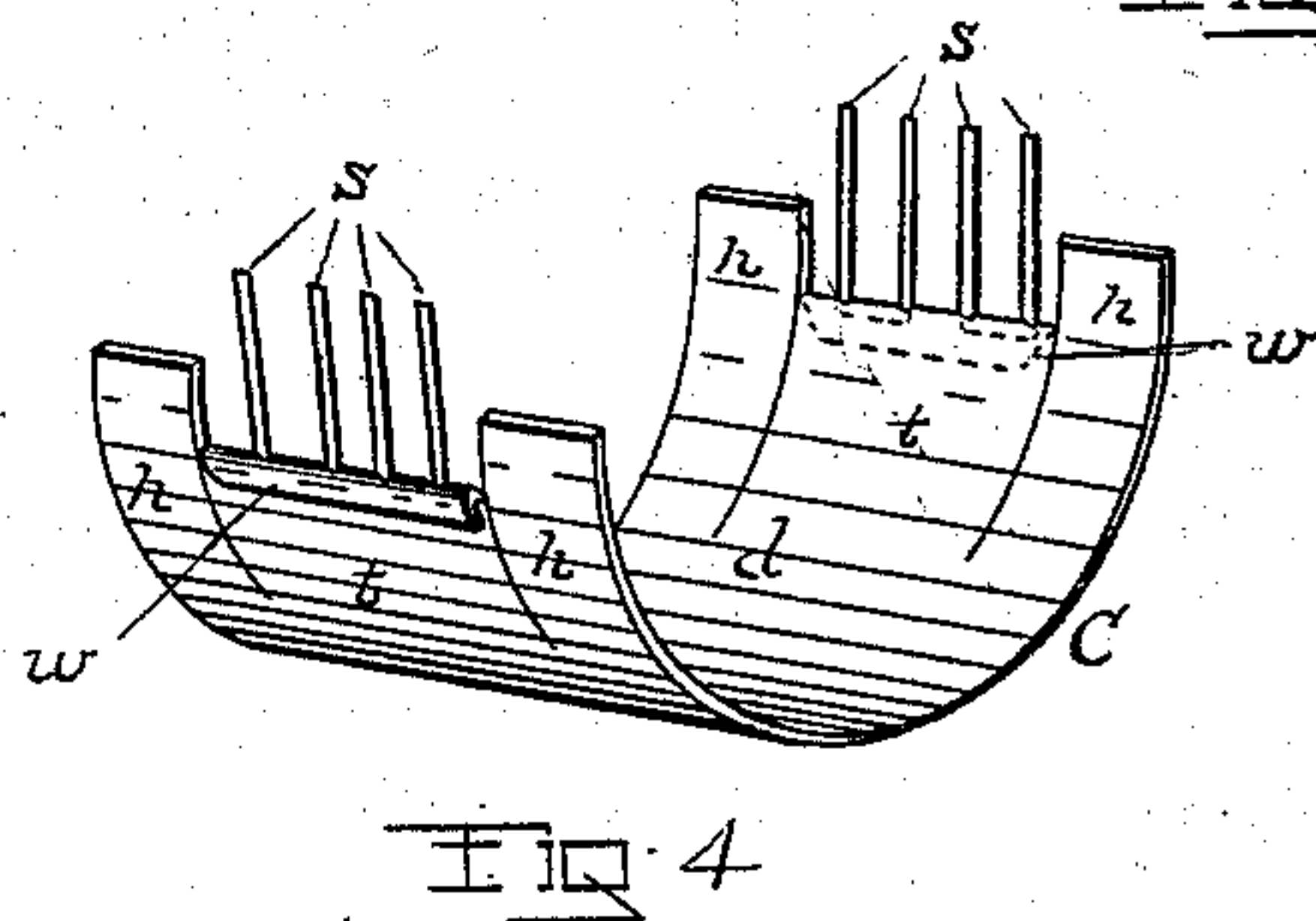
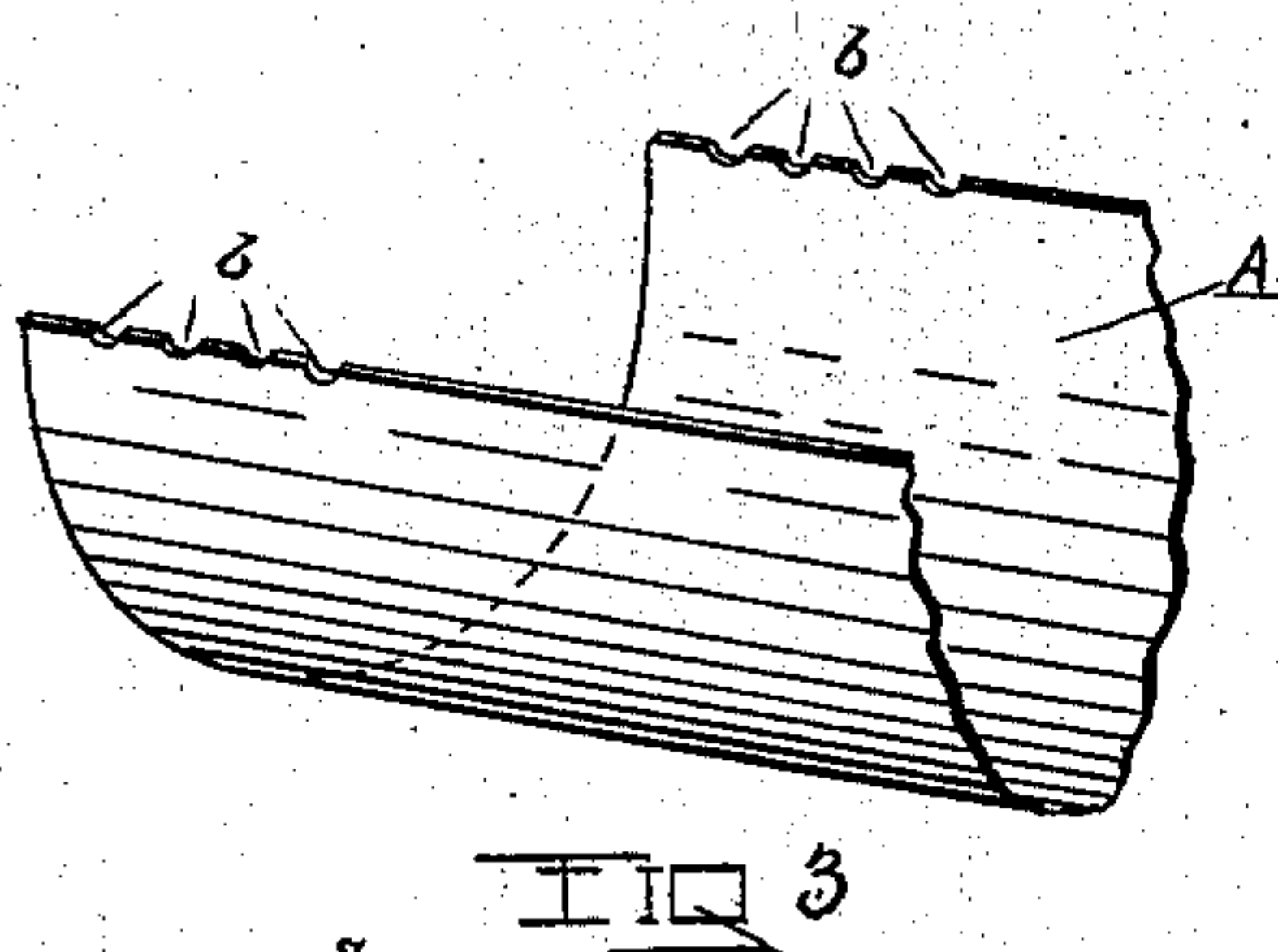
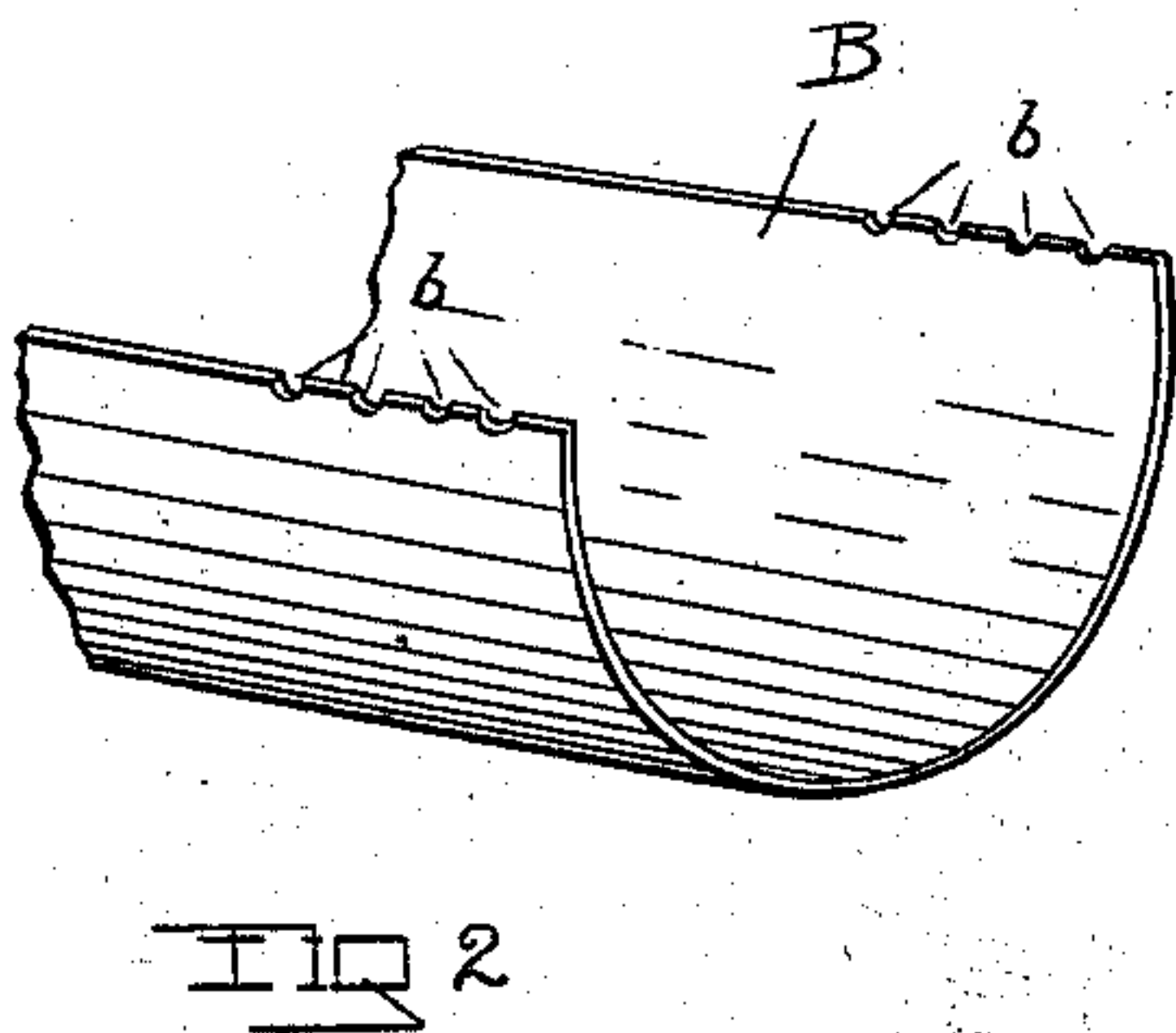
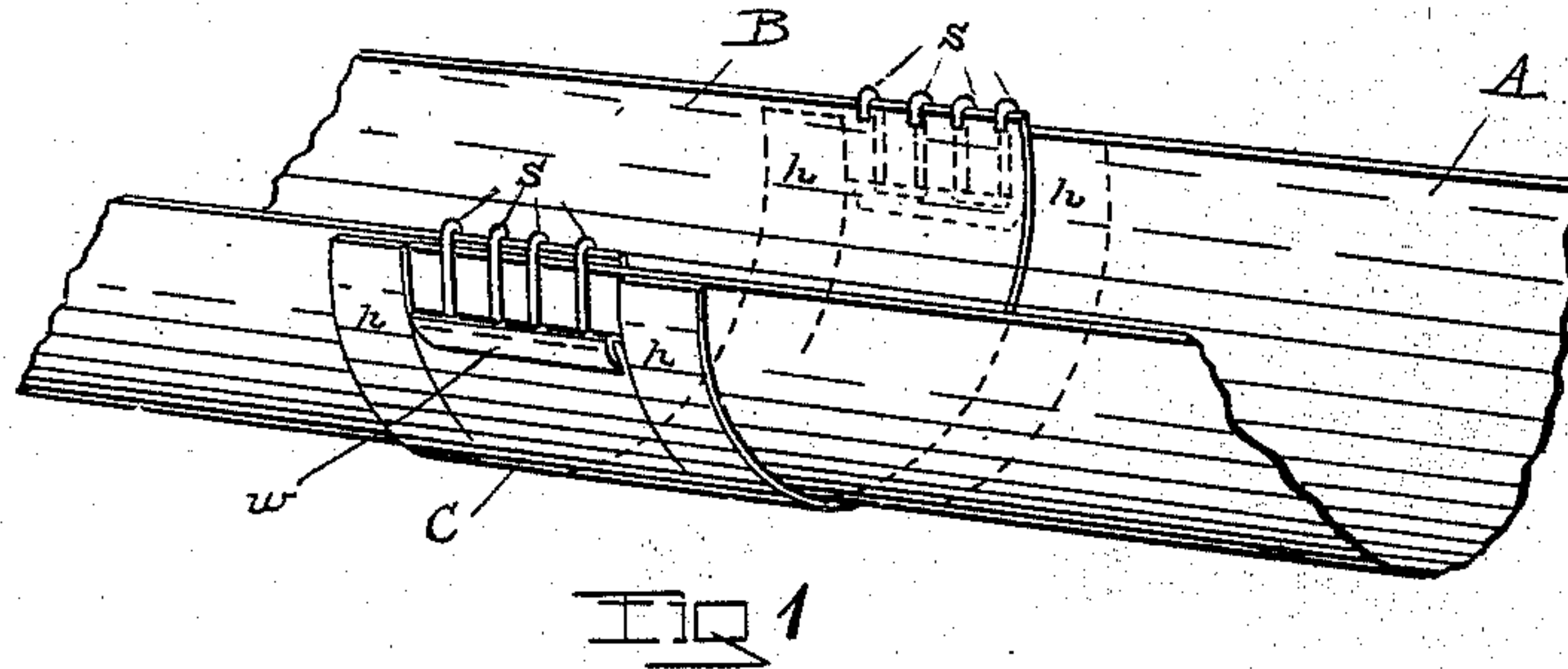


(No Model.)

W. H. HAWKINS.
GUTTER SECTION AND FASTENER.

No. 416,914.

Patented Dec. 10, 1889.



WITNESSES
William A. Sweet
John Simon

FIG 5

INVENTOR

William H. Hawkins

UNITED STATES PATENT OFFICE.

WILLIAM H. HAWKINS, OF SCHAGHTICOKE, NEW YORK.

GUTTER SECTION AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 416,914, dated December 10, 1889.

Application filed July 17, 1889. Serial No. 317,782. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HAWKINS, of Schaghticoke, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Gutter-Section Couplings and Gutter-Fasteners, of which the following description and claims constitute the specification, and which is illustrated by the accompanying sheet of drawings.

10 This invention is a mechanism for coupling together trough and gutter sections and for use in fastening the gutter to the thing by or upon which it is to be supported.

The objects of my improvement are to provide a coupling by means of which the sections of a trough or gutter are rapidly and securely fastened together without the use of bolts, rivets, or solder, which insures great strength, rigidity, and non-leakage at the lapping-point of the sections, provides fasteners for attaching the gutter to suitable supports, and which may be quickly removed from the gutter, thereby allowing of the redistribution of its sections, their compact storage, and shipment.

Figure 1 of the drawings is a perspective view of the gutter-section coupling and gutter-fastener in position on the gutter. Fig. 2 is an end view of the gutter-section B. Fig. 3 is an end view of the gutter-section A. Fig. 4 is a general view of the gutter-section coupling and gutter-fastener. Fig. 5 is the blank of metal from which the section-coupling and gutter-fasteners are formed. Fig. 6 is the wire device which secures the blank of metal illustrated by Fig. 5 to the gutter-sections A and B and binds those sections together.

Similar letters refer to similar parts throughout the several views.

40 The sections A and B are made of metal usually used in the construction of gutters, and are of uniform dimensions. The indentations *b* are made in the top edges of each section at each of its corners, Figs. 2 and 3.

45 The gutter-section coupling and gutter-fastener C is formed of the flexible plate *d* and wires *s*, Fig. 4. The plate *d* is of uniform width. The ends of that plate are respectively divided into three parts by making two cuttings in each of those ends on lines parallel with the sides of that plate,

Fig. 5. The length of those cuttings is governed by the size of the coupling C to be formed.

Through the middle part *t* of each of the ends of the plate *d*, and near their outer edges, the holes *e* are made. Into those holes the wires *s*, Fig. 6, are inserted. Each of those wires occupies two of those holes. Between the two holes occupied by it each of those wires has a bearing upon the plate *d*, Figs. 4 and 5. Two of those wires being thus inserted in each end of the part *t* of the plate *d*, they are secured thereto by bending down upon them the ends of the part *t*, so as to form the lip *w* upon each of those ends, Figs. 5 and 4. As thus adjusted the free ends of those wires project from the outer edges of the middle part *t* of the plate *d*, Fig. 4.

The parts *h* of the plate *d*, Fig. 5, complete the mechanism of the coupling and fastener C, Fig. 4. Those parts are used in fastening the gutter to the thing by or upon which it is to be supported.

In constructing a trough or gutter the sections B and A are lapped, the one upon the other, so that the indentations *b* in the end of the one are brought opposite like indentations in the end of the other. The coupling and fastener C, having been formed to correspond with those sections in shape, receive their lapped ends. The ends of the wires *s* project above the lapped ends of those sections and at intervals corresponding with the spaces between those indentations. Those wires are bent inward and down upon the upper lapped edges of sections A and B, the dimensions of those sections being uniformly the same throughout. The upper edges of section B project slightly above those of section A. At the lapping-point of those sections, Fig. 1, the wires *s*, Fig. 4, as they are bent downward come first in contact with the upper edges of section B at the indentations *b* of its lapped end and force that section tightly down into section A, to which it is firmly bound by bending the ends of those wires against the inner surface of section B. The flexible plate *d*, by the operation of drawing those wires separately over those edges and bending them down by means of pinchers, is at the same time bound tightly

around the outer surface of section A, making a tight and rigid lap of those sections, Fig. 1. A third section, of the exact dimensions and construction of sections A and B, is fastened
5 to the free end of section B, in the manner above described, and so on until a gutter or trough of the length required is constructed.

The binding force and perfect stability of each of the wires *s*, Fig. 6, independently of
10 the others, when fastened to the sections in the manner above described, make of my invention a simple, reliable, and inexpensive coupling, which may be quickly adjusted upon or removed from the gutter-sections,
15 and the latter shipped or stored in a compact form.

In adjusting the gutter in many places where its use is required it is made fast by bending down the fasteners *h*, Figs. 1 and 5,
20 at required intervals and nailing those fasteners to the thing supporting the gutter.

I claim as my invention—

1. The combination of the wire device *s* with the plate *d*, for the purpose set forth.

2. The combination, with the sections of metal forming the gutter, of the independently-
25 acting devices *s*, attached to the flexible plate *d*, and operating with that plate to fasten those sections together, substantially as described.

3. As a new article of manufacture, the coupling C, having the independently-acting devices *s*, for attaching that coupling to the gutter-sections A and B and binding those
35 sections together, and having the independently-acting devices *h*, for fastening the gutter in position for use, substantially as described.

WILLIAM H. HAWKINS.

Witnesses:

JOHN SIMSON,

EDWARD E. PARKHAM.