

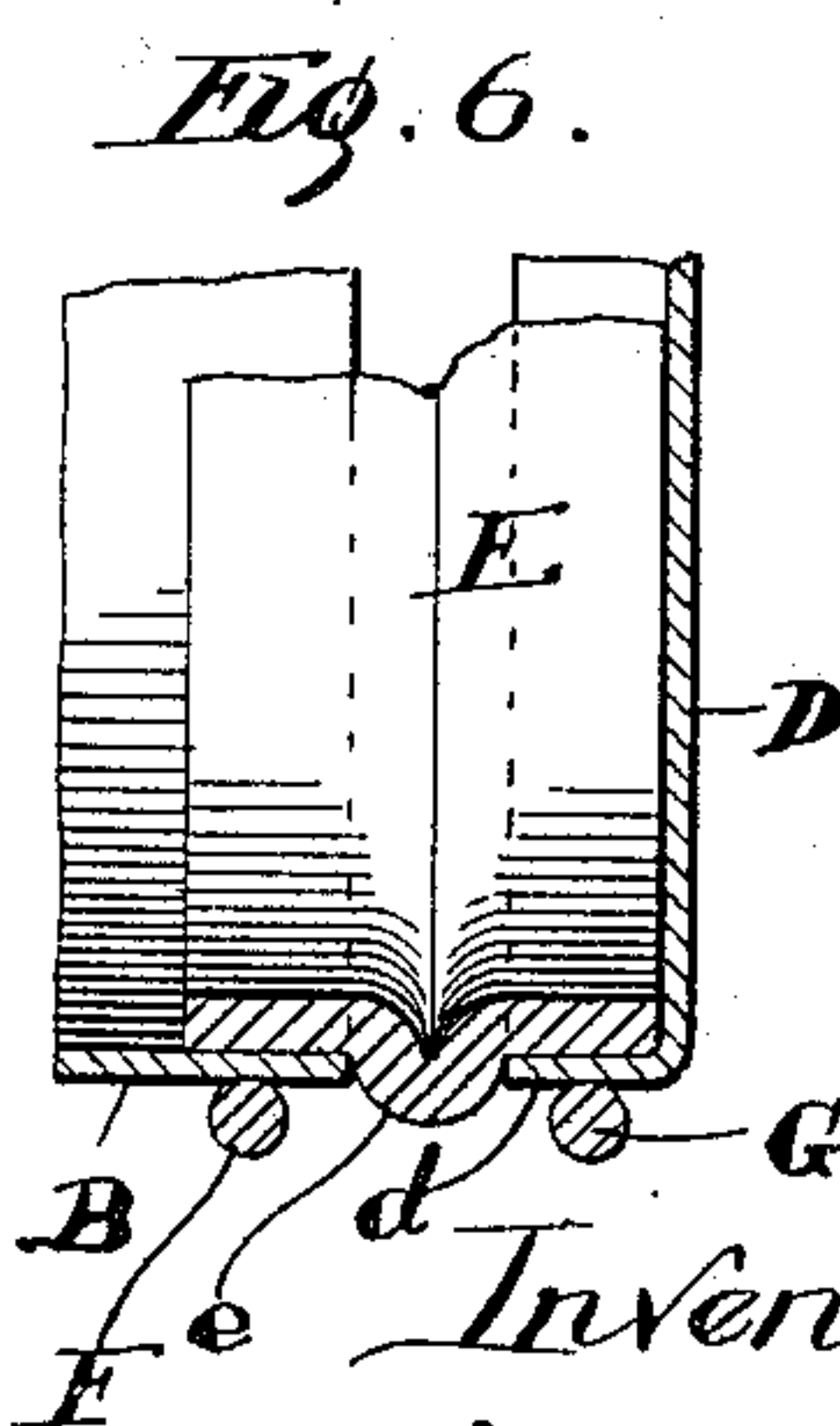
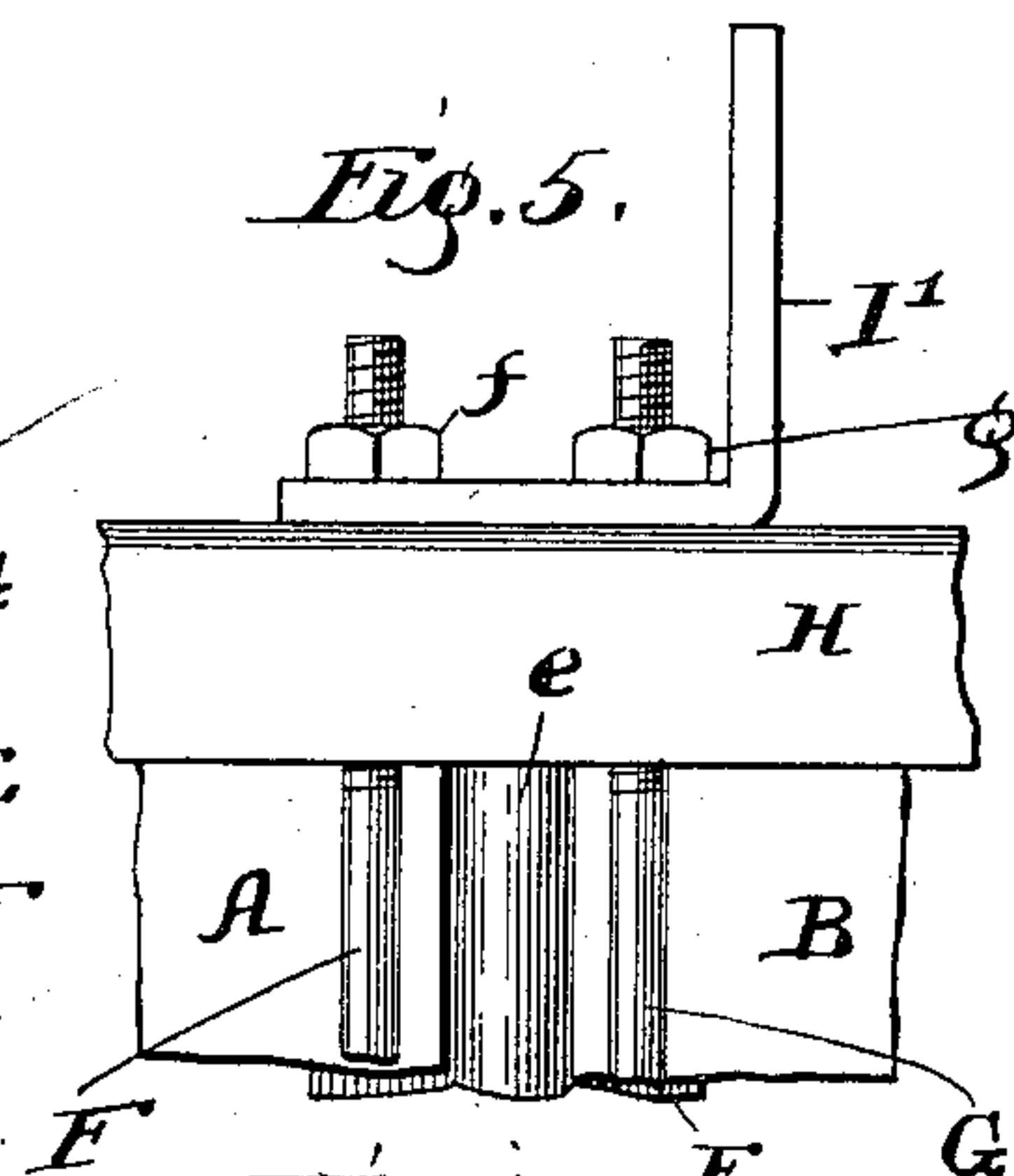
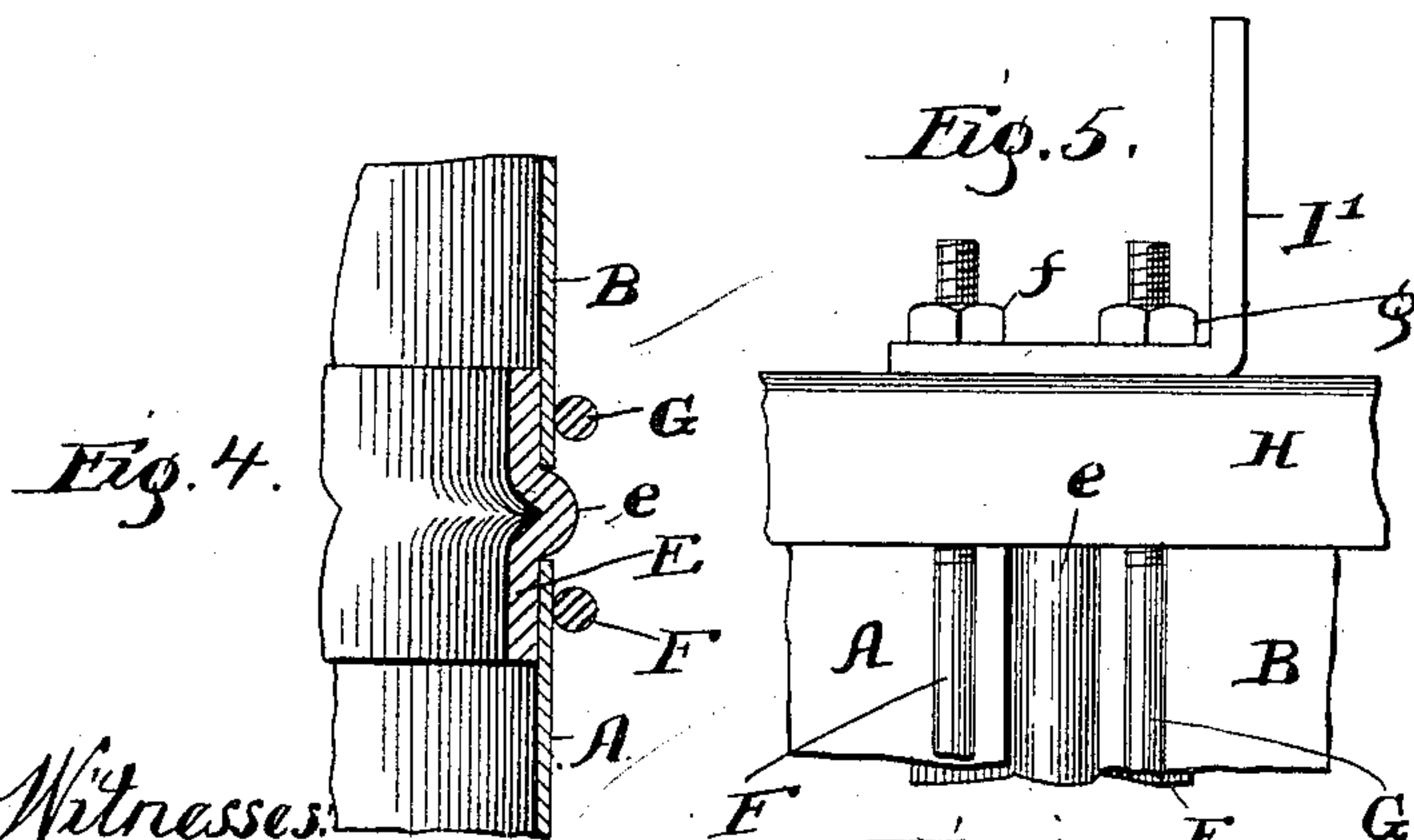
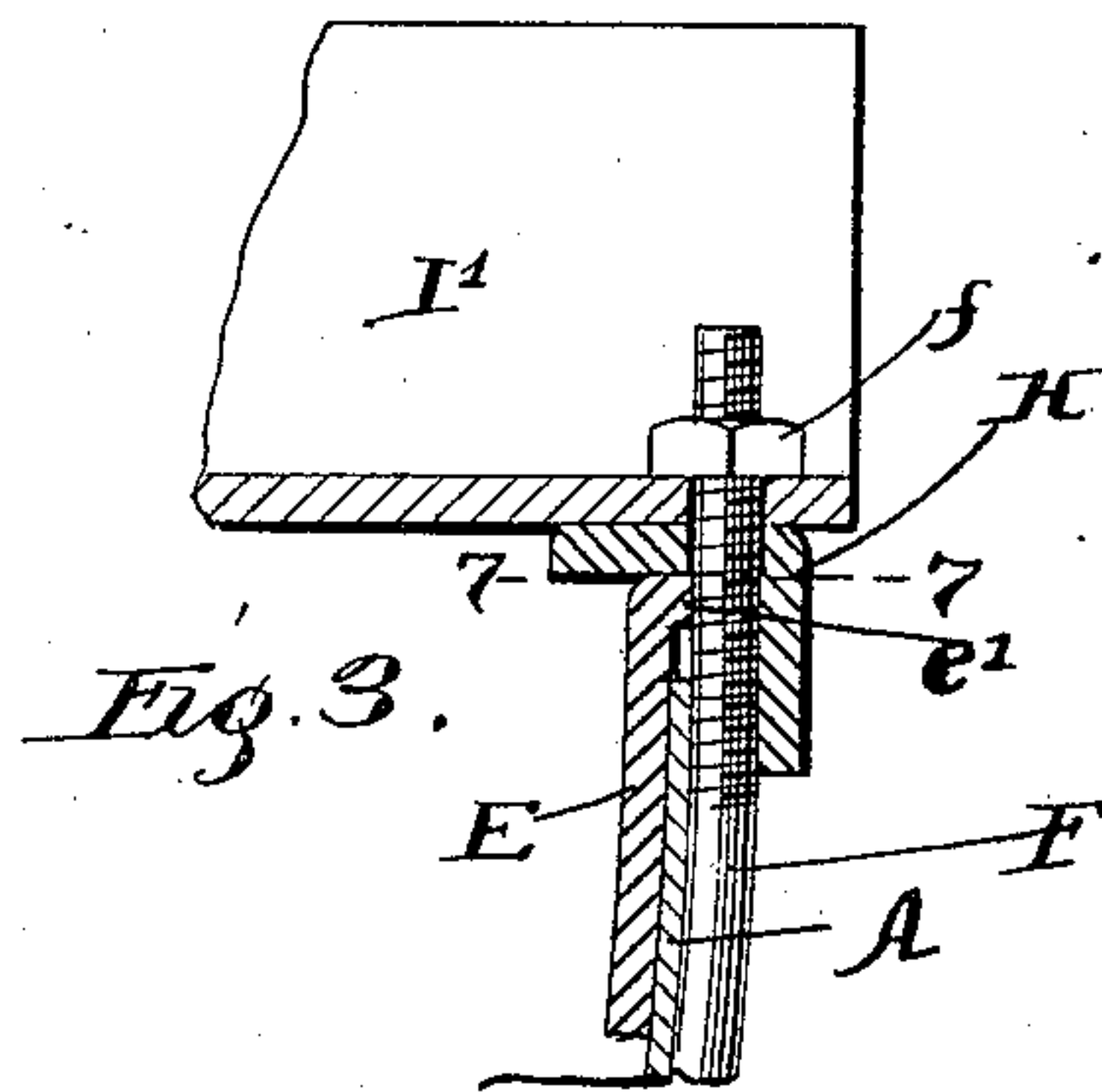
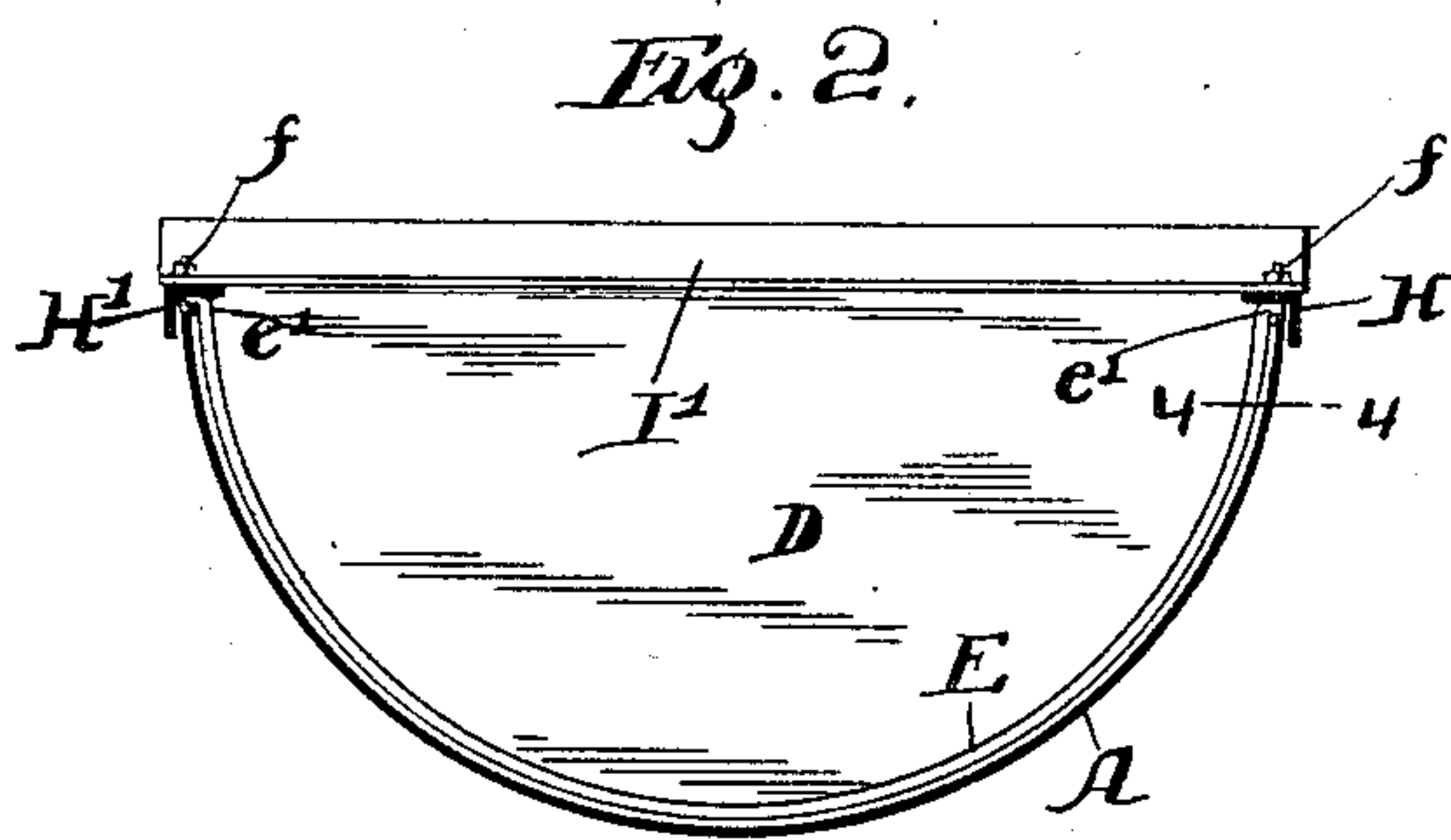
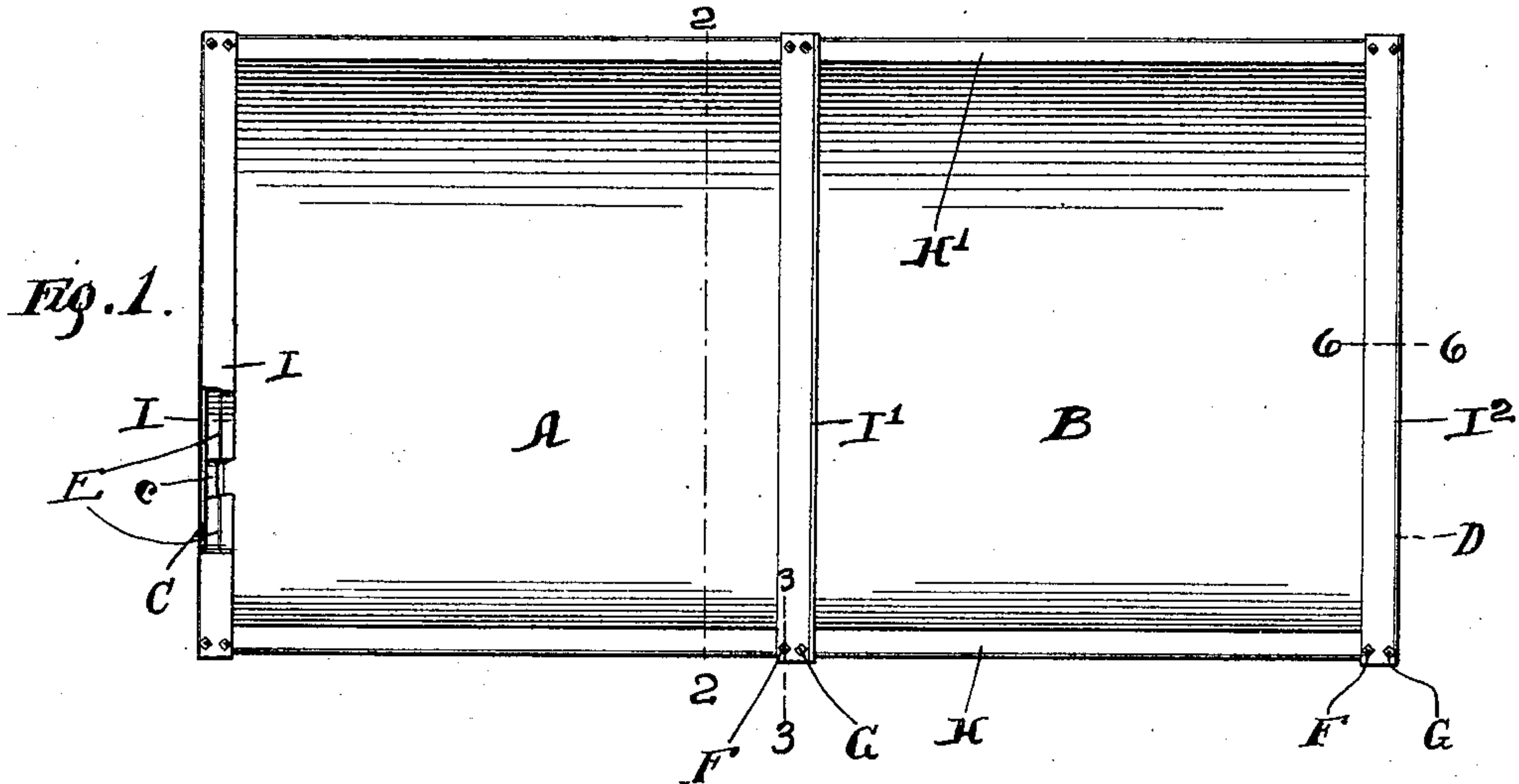
No. 610,574.

Patented Sept. 13, 1898.

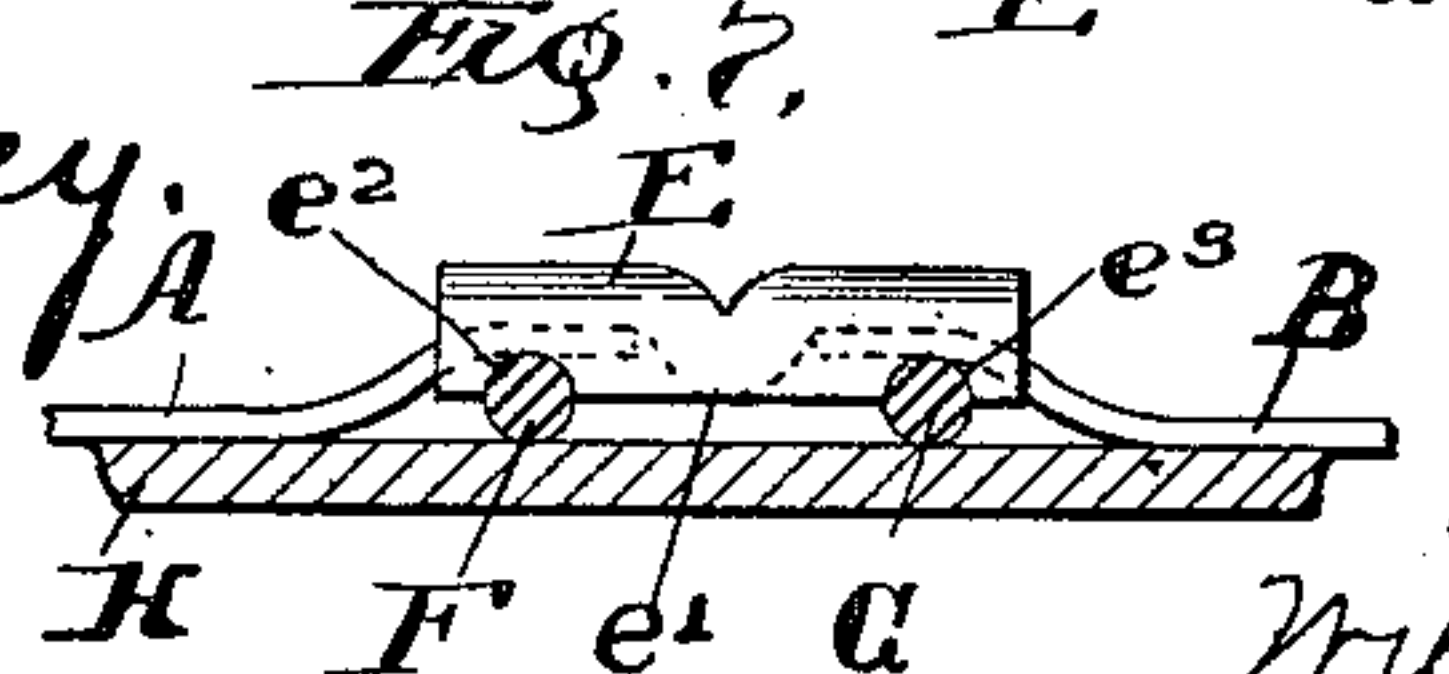
O. J. ZIEGLER.
SHEET METAL TANK.

(Application filed Apr. 29, 1897.)

(No Model.)



Witnesses:
Chas. O. Sherway
R. A. Bailey



Inventor:
Oscar J. Ziegler
Wm. H. Bitter
His Attys.

UNITED STATES PATENT OFFICE.

OSCAR J. ZIEGLER, OF FREEPORT, ILLINOIS, ASSIGNOR TO THE STOVER
MANUFACTURING COMPANY, OF SAME PLACE.

SHEET-METAL TANK.

SPECIFICATION forming part of Letters Patent No. 610,574, dated September 13, 1898.

Application filed April 29, 1897. Serial No. 634,380. (No model.)

To all whom it may concern:

Be it known that I, OSCAR J. ZIEGLER, a citizen of the United States of America, residing at Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Sheet-Metal Tanks, of which the following is a specification.

My invention relates to certain improvements in metal tanks, the object of which is to make up a tank out of flexible material held in place by a knockdown framework, all of which will pack together in a compact way, so as to take up little space in transportation.

To such end the invention consists in certain features of construction which are fully described below, and pointed out in the appended claims.

In the drawings presented herewith, Figure 1 is a plan of my improved tank. Fig. 2 is a vertical section in line 2 2, Fig. 1. Fig. 3 is an enlargement of a partial section in line 3 3, Fig. 1. Fig. 4 is a horizontal section in line 4 4, Fig. 2. Fig. 5 is a broken side elevation. Fig. 6 is a broken vertical section in line 6 6, Fig. 1; and Fig. 7 is a horizontal section in line 7 7, Fig. 3.

The main portion of the walls of the tank shown in the drawings is made up of two plates of sheet metal A B, thin enough and elastic enough to be shipped flat and bent up into the desired form. The end pieces C D are made up of flat sheets of similar thickness, having their semicircular margins turned up to form inturned flanges *c d*.

In the form of the invention shown in said drawings the manner of securing the sides to the ends is the same as that of securing the two sections of the sides together, so that the description of one joint will apply to all three.

Looking at the center joint, which is shown in section in Fig. 4, an inner hoop E will be seen shaped to the contour of the tank and preferably corrugated to form an outwardly-extending rib *e*. The plates A B are lapped over this hoop to the middle corrugation, and each plate is tightly bound to the hoop by means of a tie-rod F G. The opposite ends of the hoop are bent outward, as seen in Figs. 3 and 7, at *e'*, and the horizontal portions thus

formed are shown as notched at *e² e³* to receive and hold in place the two tie-rods. On each side of the tank an angle-iron H H' extends longitudinally thereof, resting upon the portions *e* of the hoops, and across the top extend three angle-irons I I' I², resting at their ends upon the angle-irons H H', the angle-irons I I' I² being perforated to receive the tie-rods F G and nuts *f g* being threaded upon the tie-rods to tighten them upon the tank.

The number of sections of the tank I consider to be immaterial to my invention, as also do I the particular size, form, or arrangement of the various parts. The width of any of the hoops E may be varied indefinitely, as well as the thickness and stiffness thereof, so as to make up a great variety of constructions and accommodate the invention to any of the various uses to which it may be applied.

It should be noticed that in each of the joints the ends of the two adjacent sheets are each secured to the uniting hoop by means of an independent tie-rod, so that each sheet of metal is independently separable from the hoop. This is of great importance in assembling and repairing the tank, inasmuch as a section can be taken out without loosening any parts except the two tie-rods at its opposite ends.

I claim as new and desire to secure by Letters Patent—

1. In a sheet-metal tank, the combination of two sections of comparatively thin and flexible sheet metal having their ends contiguous to each other, an inner section of comparatively thick stiff metal overlapping the contiguous ends of the thin sections and two tie-rods encircling the ends of said thin sections, respectively, and adapted to bind them independently against said inner thick section, thereby forming two independent and independently-separable joints; substantially as described.

2. In a sheet-metal tank, a joint made up of a stiff hoop, E, arc-shaped in form and having outturned ends each provided with a pair of notches, flexible metal sheets, A, B, overlapping the hoop, and tie-rods, F, upon the outside of the sheets and resting in the notches, said tie-rods being provided with means for

tightening them upon the tank and jamming the metal sheets directly against the hoop; substantially as described.

3. A joint for metal tanks made up of a
5 stiff arc-shaped hoop, E, corrugated to form
an outwardly-extending rib, e, and having
outturned ends notched at, e^2 , e^3 , flexible metal
sheets overlapping said hoop from the oppo-
site edges and tie-rods resting against the
10 outside of the sheets and in the notches and
provided with means for clamping them

tightly against the same to crowd the sheets
firmly and directly against the hoop; sub-
stantially as described.

In witness whereof I have hereunto set my 15
hand, at Freeport, in the county of Stephen-
son and State of Illinois, this 22d day of April,
A. D. 1897.

OSCAR J. ZIEGLER.

Witnesses:

W. A. MERRIFIELD,

W. H. J. STRATTON.