

J. HOILAND & K. J. HALLELAND.
METHOD OF SEAMING CAN HEADS TO CAN BODIES.
APPLICATION FILED JUNE 19, 1909.

Patented Nov. 22, 1910.

976,739.

2 SHEETS—SHEET 1.

Fig. 1

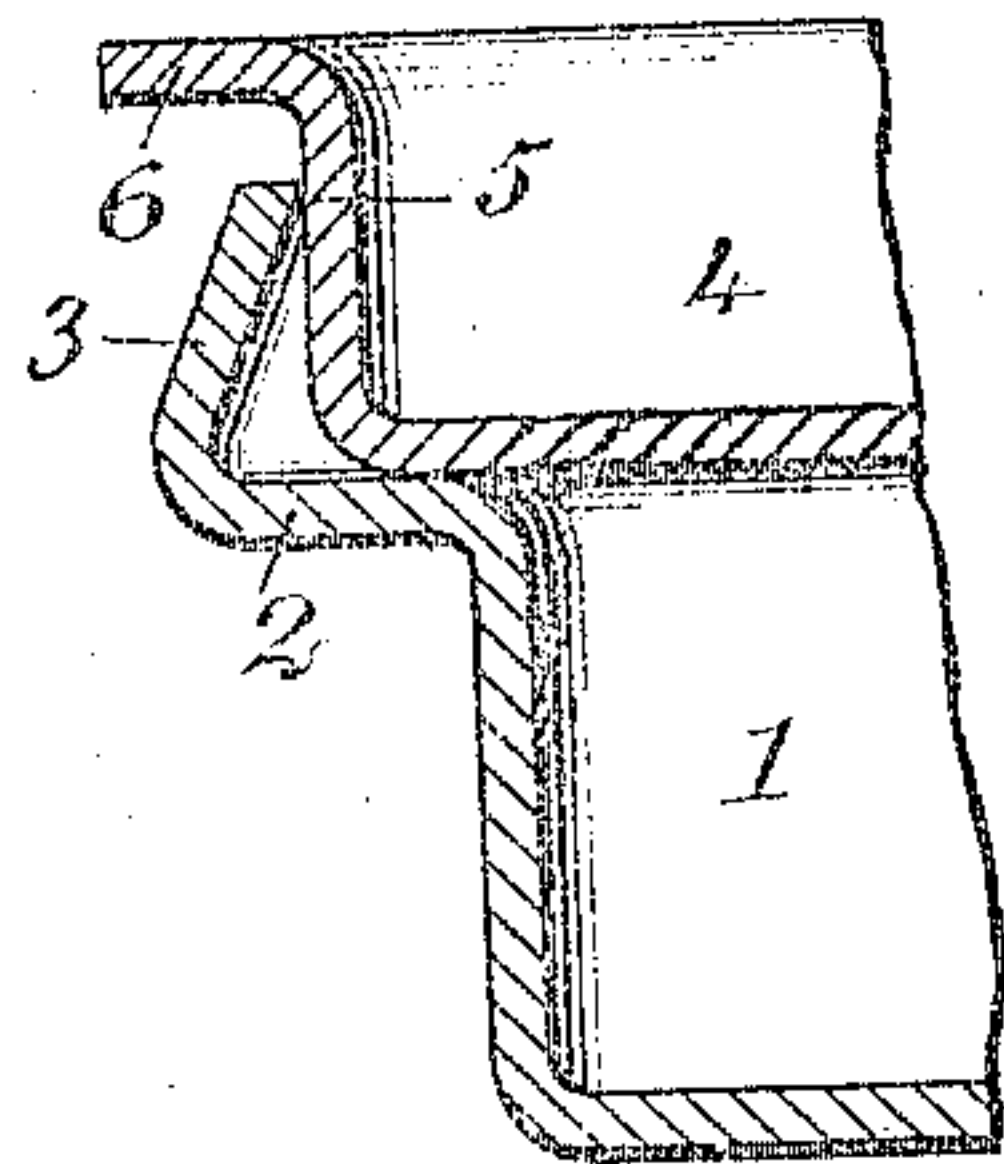


Fig. 4

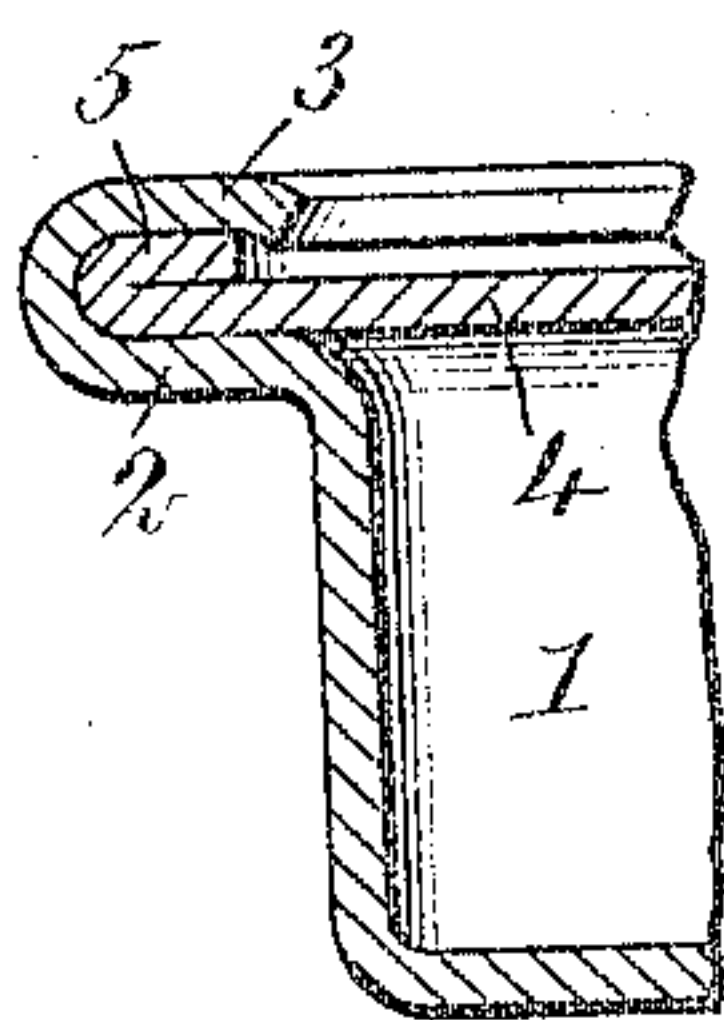


Fig. 2

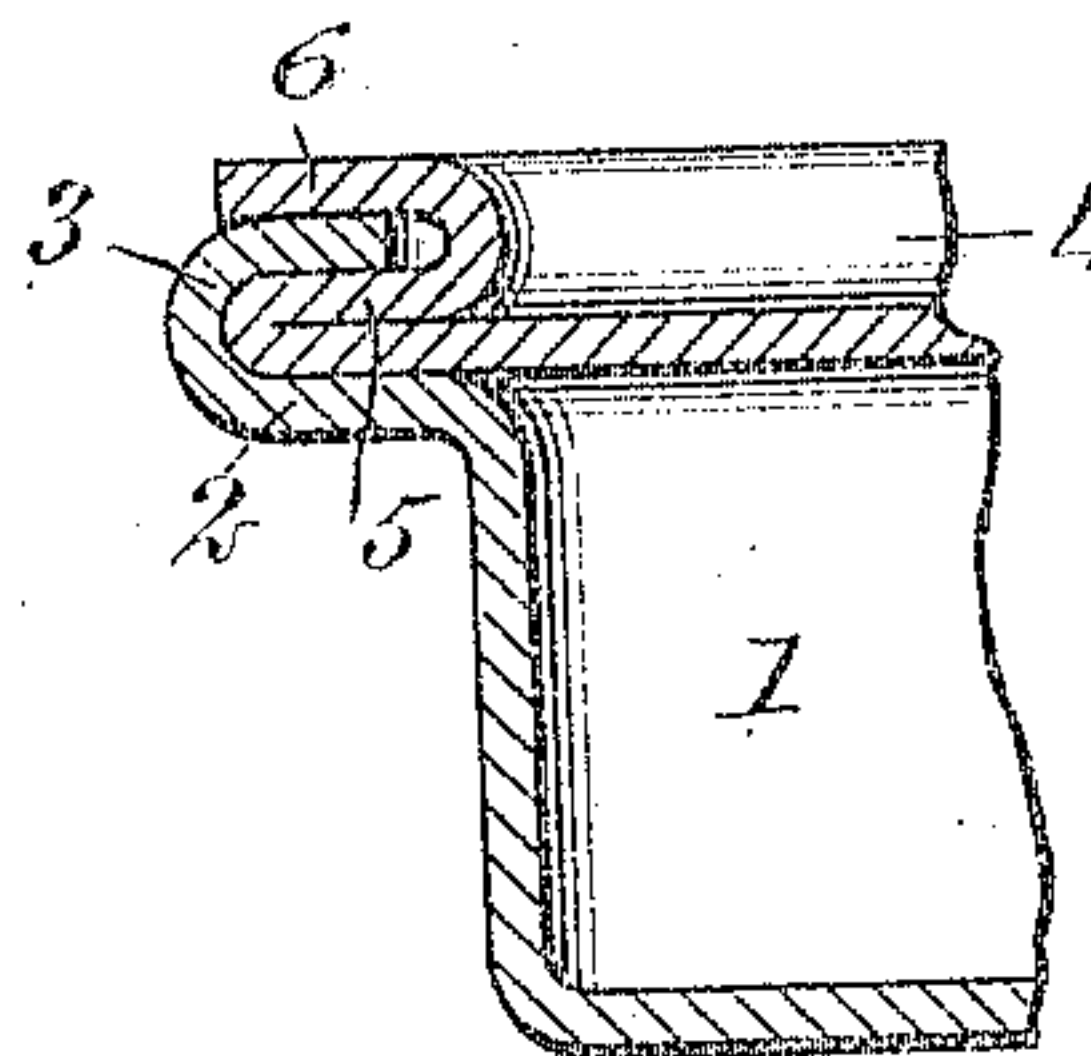


Fig. 3

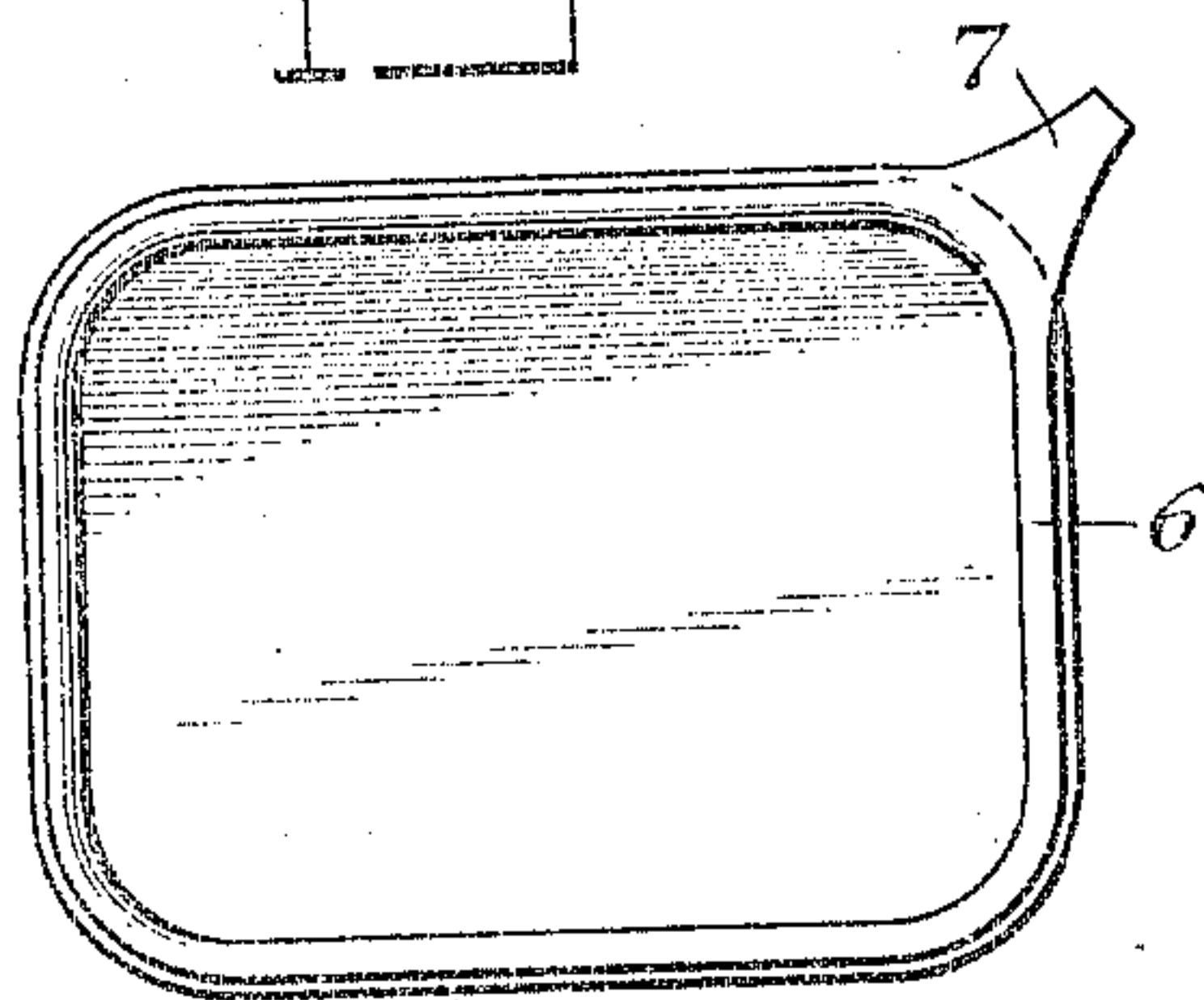


Fig. 5

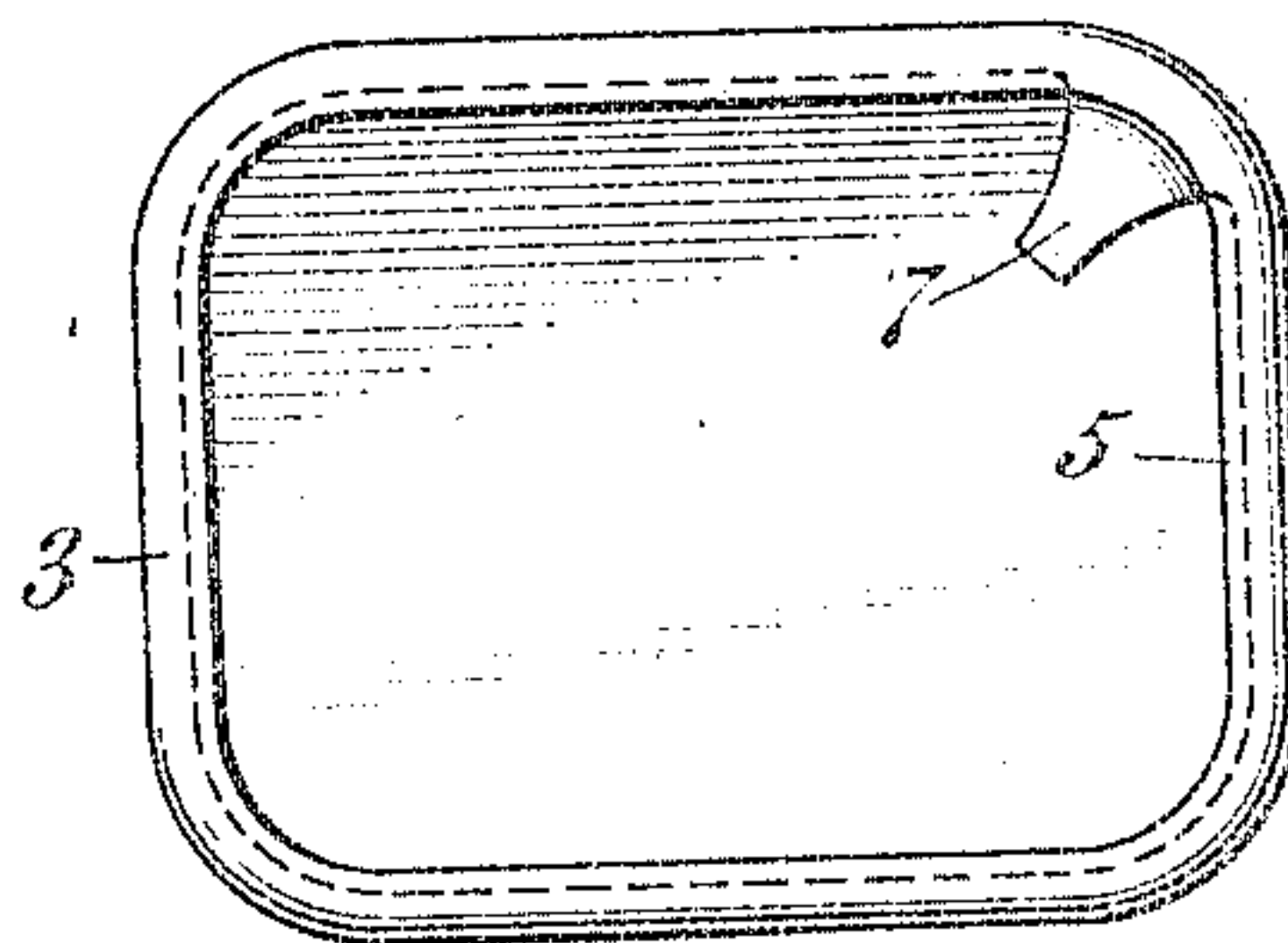
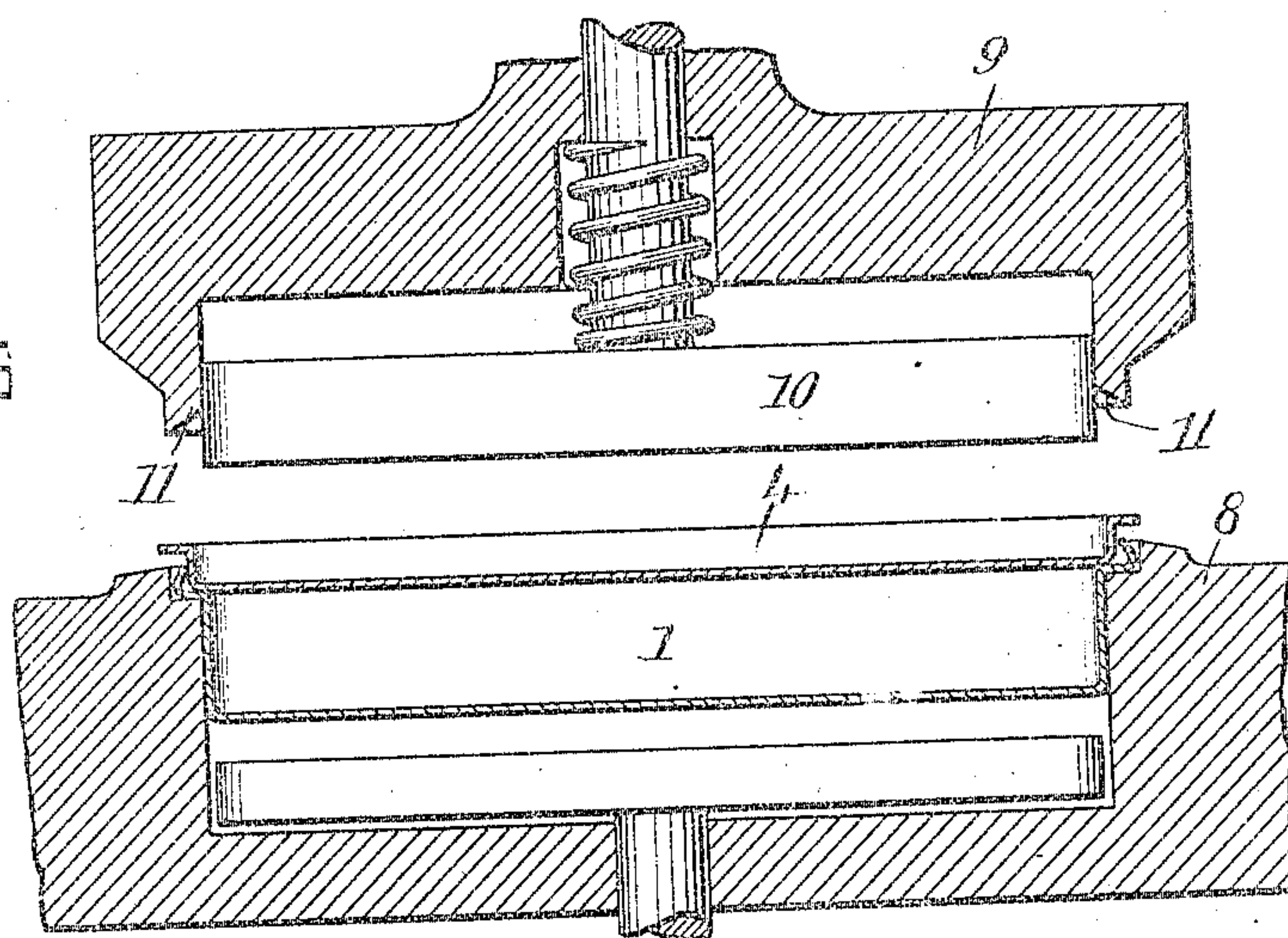


Fig. 6



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2 SHEETS—SHEET 2.

Fig. 6

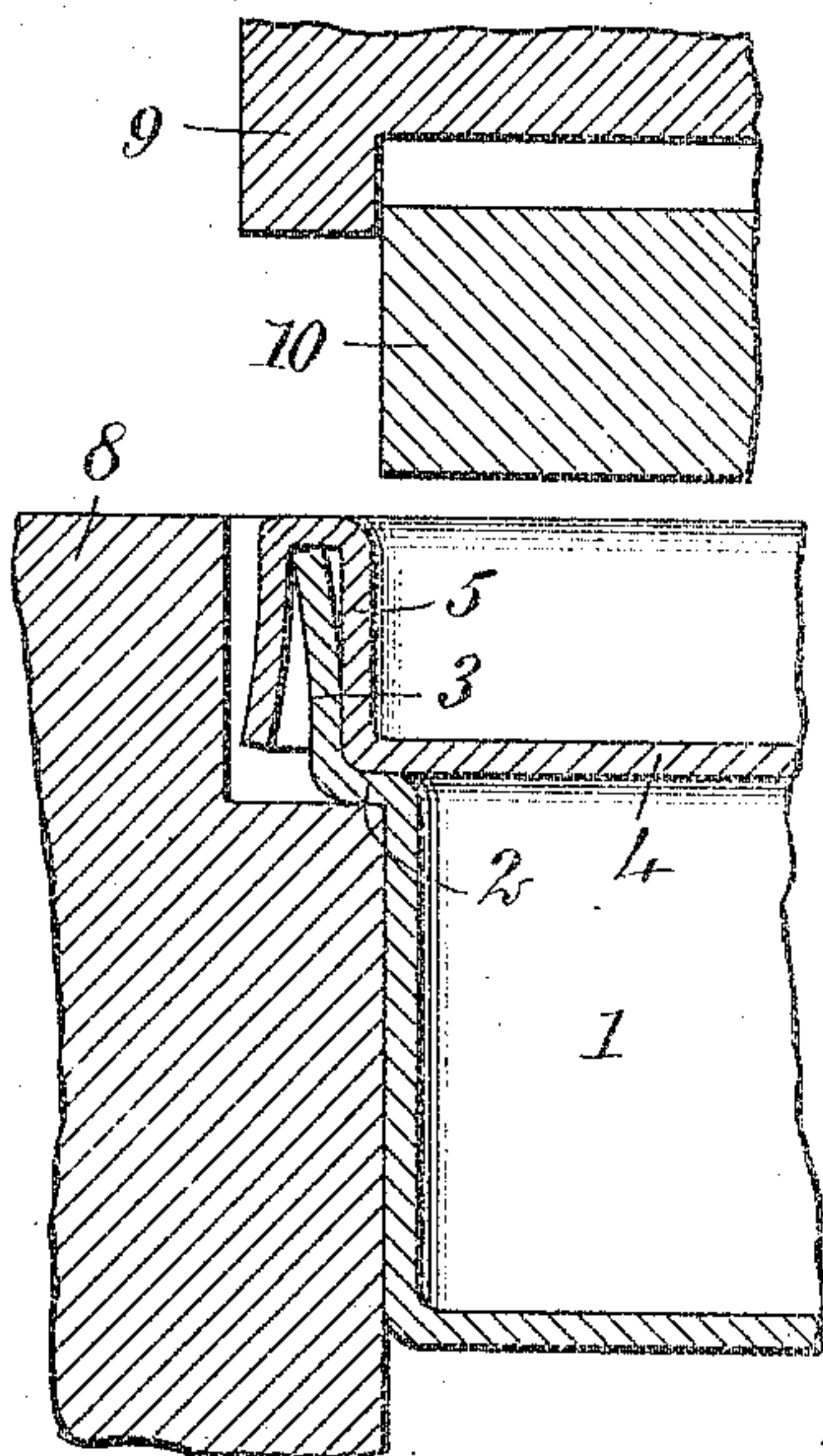


Fig. 7

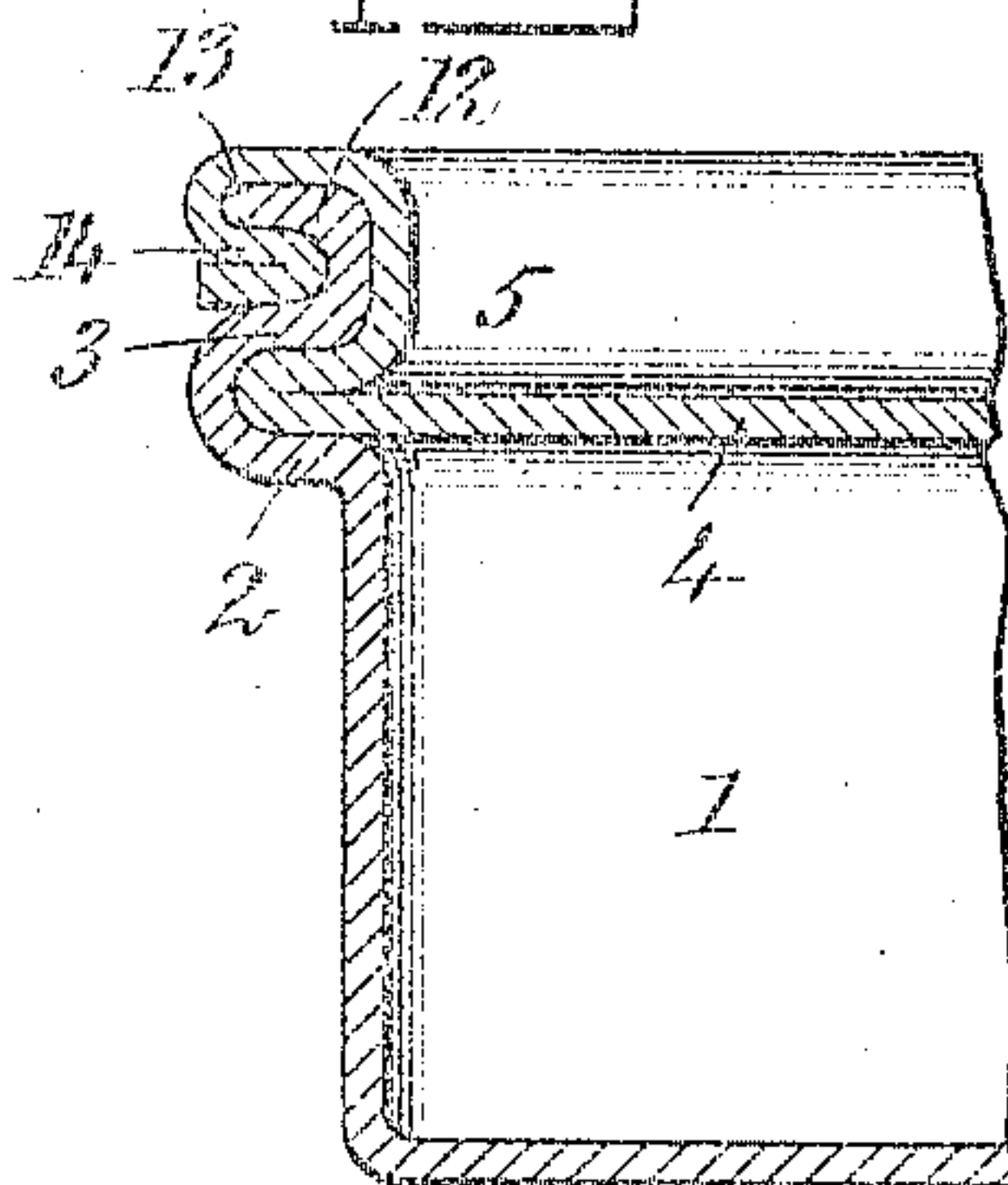


Fig. 10

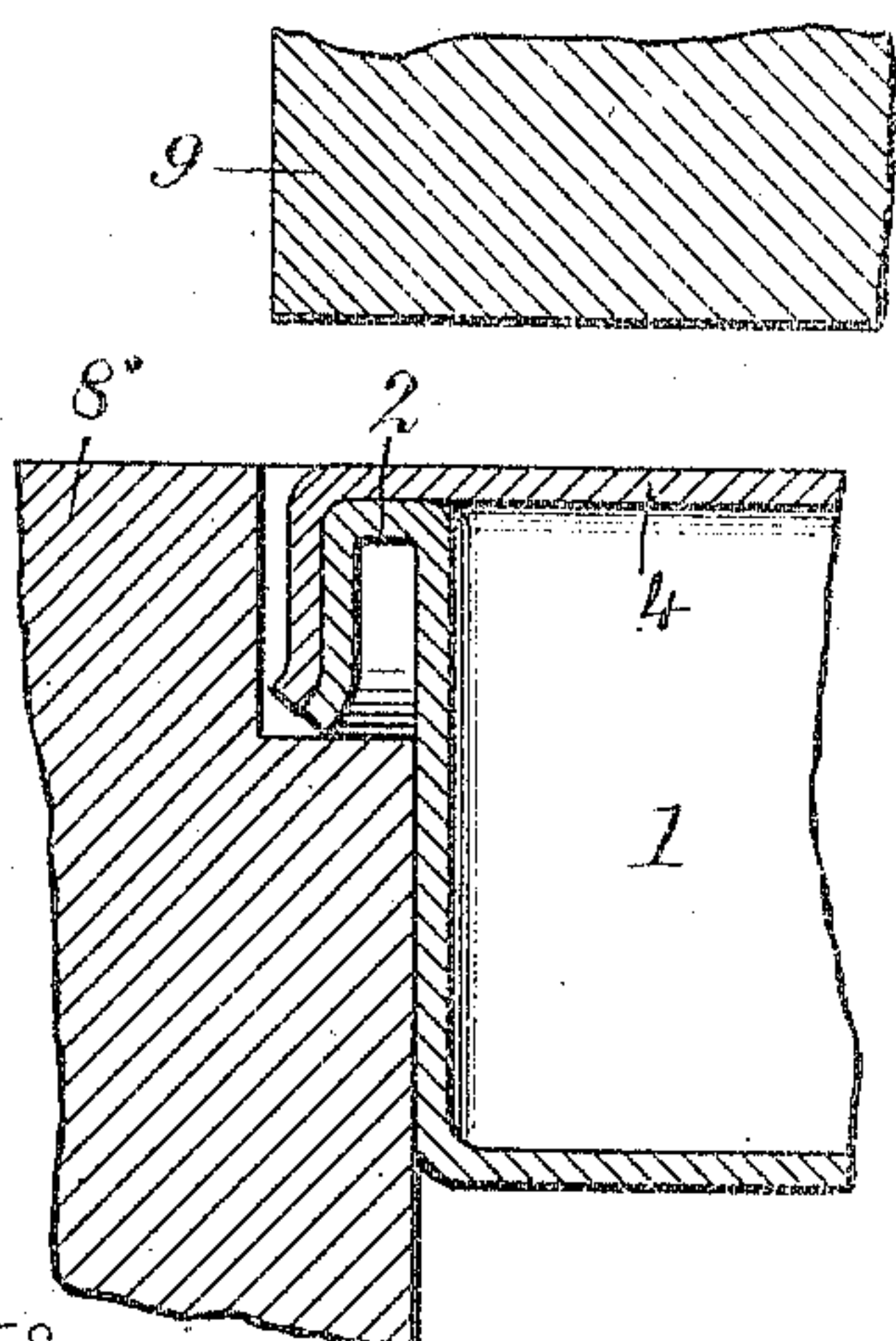
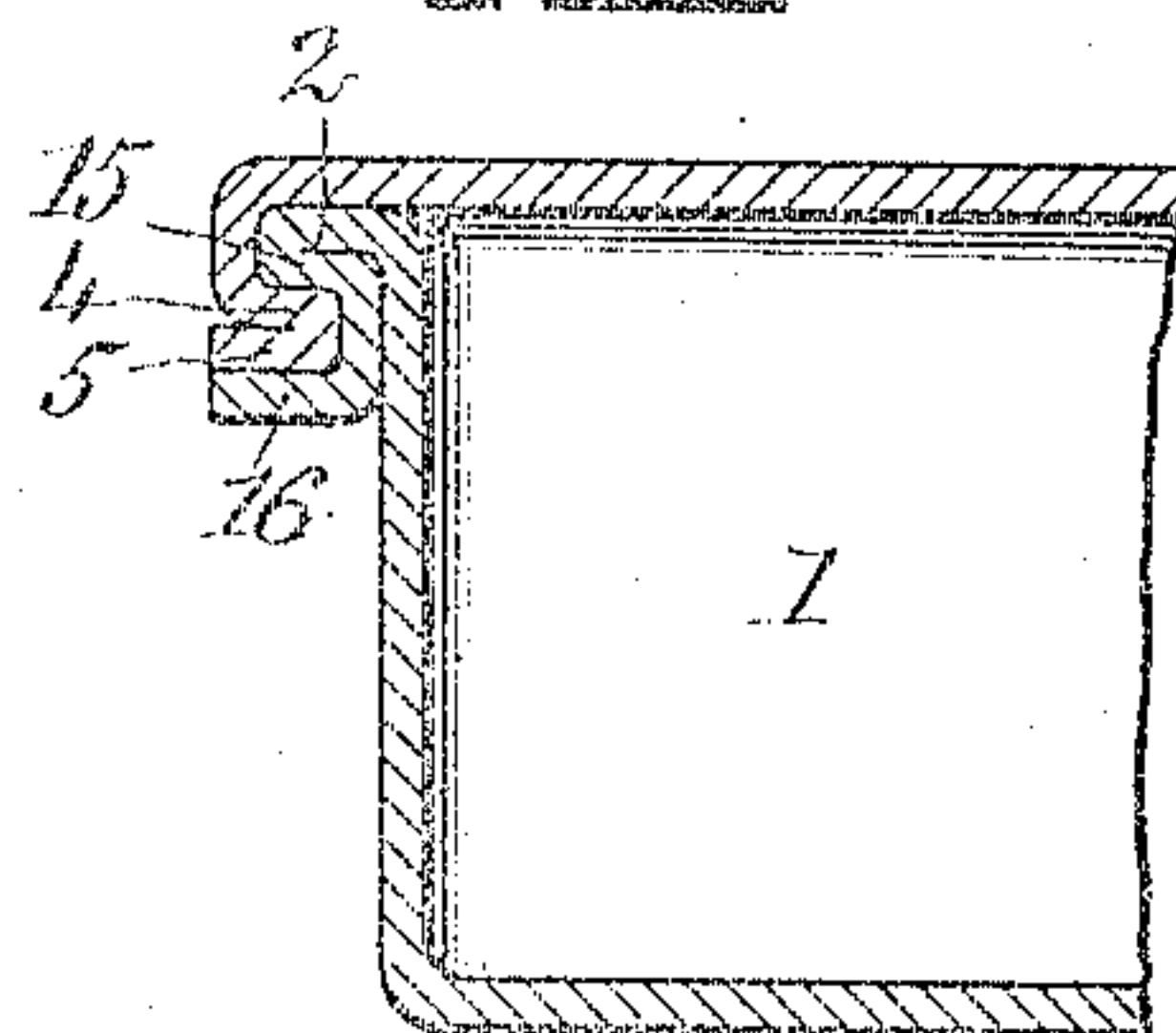


Fig. 8



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UNITED STATES PATENT OFFICE.

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TO ROSENSTEIN BROTHERS, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW
YORK.

METHOD OF SEAMING CAN-HEADS TO CAN-BODIES.

976,739.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Original application filed May 10, 1907, Serial No. 372,955. Divided and this application filed June 19,
1909. Serial No. 503,100.

To all whom it may concern:

Be it known that we, JOHANNES HÖILAND
and KARL J. HALLELAND, subjects of the
King of Norway, and residents of Stavanger,
Norway, have invented a new and Improved
Method of Seaming Can-Heads to Can-Bodies,
of which the following is a full, clear, and exact description.

This invention relates to an improved
method of seaming can heads to can bodies,
as was disclosed in our copending application,
Serial Number 372,955, filed May 10,
1907, and of which this is a division.

The invention has for its purpose the
uniting or seaming of the can head to the
can body, especially cans which are to contain
preserved food, without the use of solder
and with the greatest possible facility
after the food has been placed in the can;
also to so form such a seam, that the can head
or cover may be easily stripped from the
body when the can is to be opened. With
this in view we first provide both the can
body and can head with edge flanges such
that they may be freely moved one within
the other with the flanges in substantial
contact, then, by a single operation, jamming
the flanges together to bind a double
layer of one flange between a fold in the
other flange.

Reference is to be had to the accompanying
drawings forming a part of this specification,
in which similar characters of reference indicate
corresponding parts in all the views.

Figure 1 is a sectional view through the
can body and can head preparatory to the
seaming operation; Fig. 2 is a similar view
showing the edge flanges of the can body
and can head folded to complete the seam;
Fig. 3 is a plan of the united body and head
shown in Fig. 2; Fig. 4 is a view similar
to Fig. 2, showing a slightly modified form
of seam; Fig. 5 is a plan of the united body
and head shown in Fig. 4; Fig. 6 is a sectional
view through the dies of a press as is
employed to form the seam shown in Fig.
2, and illustrating a can body and head in
position preparatory to the seaming operation;
Fig. 7 is a view similar to Figs. 2 and
4, showing a further modification of the
seam; Fig. 8 is a fragmentary sectional view
of the dies and the can body and can head
therein for producing the seam shown in Fig.

7; Fig. 9 is a still further modification of the
same; and Fig. 10 is a sectional view
through the dies and can members by which
the seam in Fig. 9 is produced.

In order to assure the folding or seaming
together of the can body and head, as shown
in Fig. 2, the can body 1 is provided at its
upper edge with a continuous outwardly-
extending flange 2, and connected to said
flange with an overhanging flange 3 extending
upwardly and obliquely inwardly, as
illustrated in Figs. 1 and 6. The head 4 is
provided with the upwardly-extending
flange 5 and with the outwardly-extending
flange 6, so that the head when placed in
position on the body rests with the edge or
flange of its under surface on the upper
face of the flange 2.

To seam the edges of the head and body
together, the die shown in Fig. 6 is preferably
employed, the can being so placed in
the lower die 8 of the press that the flanges
of the body rest in its upper rabbeted edge.
The head is seated on the body in the manner
shown, and in view of the form of its
edge flanges and the edge flanges of the can
body, the head and body may freely move
one within the other with the flanges in
substantial contact. As the upper die 9 of the
press descends, the spring-pressed piston 10
bears on the head and keeps it securely in
position, and the flange 6 of the head is engaged
by the upwardly and inwardly-inclined under
surface 11 of the upper die and presses the
flanges together as the piston 10 recedes.
It is thus seen that this junction of the
can body and can head is effected by a single
movement of the dies of the press together.
The seam thus completed assumes the form
shown in Fig. 2, in which the double layers
of the flange 5 of the cover of the head are
jammed in between the superposed and
subjacent layers 3 and 2 of the can body.
Moreover, the whole is covered by the outer
flange 6 of the cover, which is turned outward,
and increases the security of the seam.

Simultaneously with the folding together
of the edges of the can body and head, an
opening device may be provided, if the edge
of the head has at a convenient point an
extension, as a tongue 7. By winding this
tongue upon a key of known kind, the
jammed-in double edge of the head is torn

from between the folded layers 2 and 3 and the can is thereby opened. It is evident from Figs. 4 and 5 that the top layer 6 may be dispensed with, and the folds will then present the relations shown in Fig. 4, and the tongue 7 will form an inwardly-projecting part of the layer 5, as shown in Fig. 5. To make sure of the tightness of the joint, the fold may be doubled, as shown in Fig. 7, in which the head flange 6, as shown in Fig. 2, is replaced by a new fold. To assure the extra fold desired, the flange of the can body is extended upwardly, as shown in Fig. 8, between the inner and outer flanges of the cover.

The can body and head are made as shown in Fig. 8, and are placed upon each other in the lower die of the press, and the fold is formed as soon as the members 9 and 10, constituting the upper die, descend. The resulting seam has a layer 12 jammed in between the extended layers 13 and 14 of the layer 5. The layer 14 may be single or otherwise if desired.

In producing the seam shown in Fig. 9, the spring-pressed plunger of the press may be avoided and a solid male die 9 used. In this seam the double edge 4 and 5 of the

head is jammed in between the inner double layers 2 and 15 and the outer layer 16 of the folded edge of the can body. In this case the can body and head are formed with the edge flanges, as shown in Fig. 10, and the seam finished by the descent of the upper die 9 alone.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

The herein-described process of seaming a can body with a can head, which consists in providing both the body and head with edge flanges such that they may be freely moved one within the other and the flange of the head seated on the flange of the body, then by a single operation jamming the flanges together to bind a double layer of one flange between a fold in the other flange.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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KARL J. HALLELAND.

Witnesses:

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NENNA ROIMEBERG STANG.