

No. 675,603.

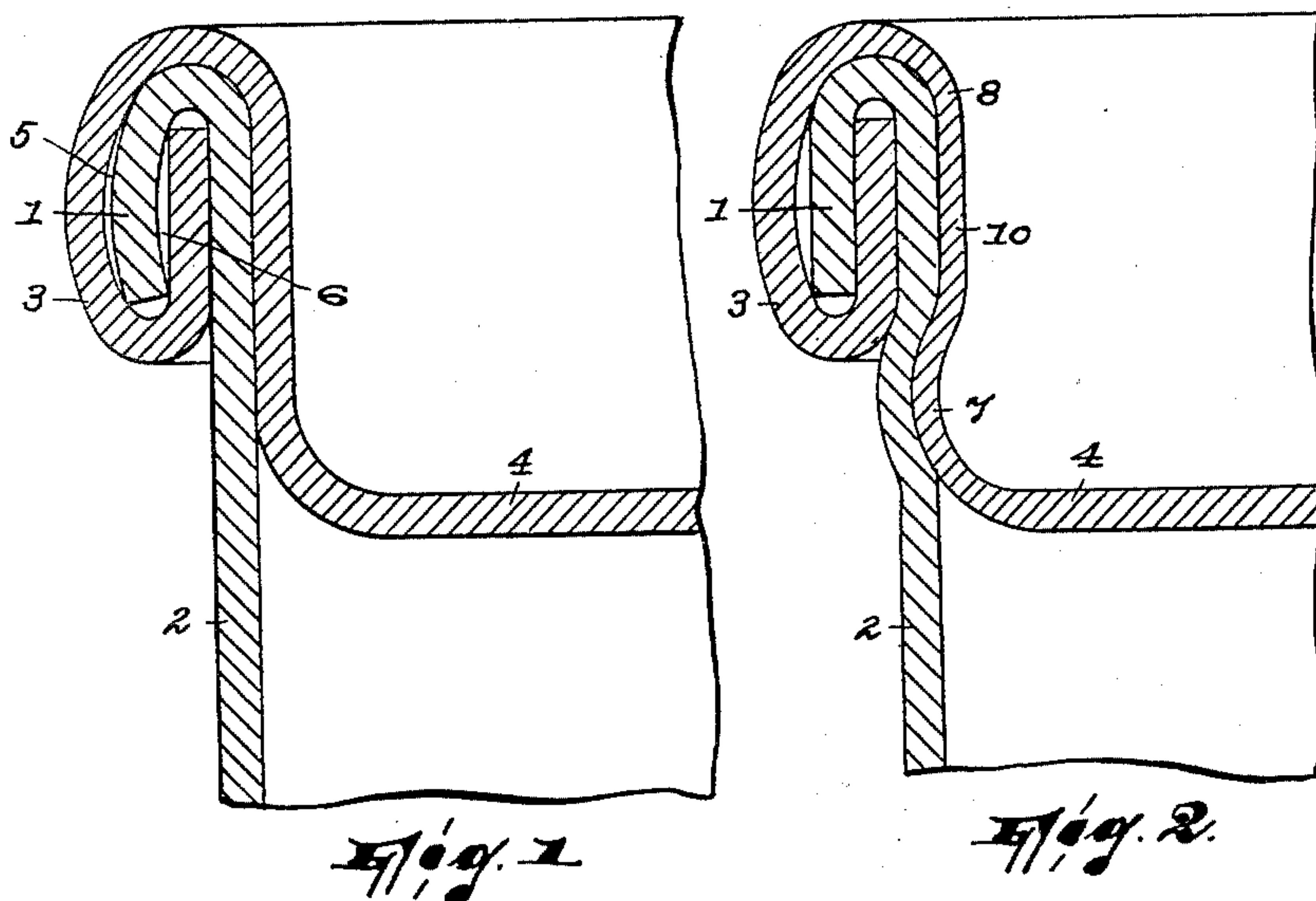
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C. F. MENDHAM, E. F. GRIFFIN & W. E. HIGGS.

JOINT OR SEAM FOR CIRCULAR SHEET METAL VESSELS, &c.

(Application filed Feb. 8, 1901.)

(No Model.)



WITNESSES:

Wm. D. Bell.
James B. Newton.

INVENTORS.

Conrad Field Mendham,
Ernest Featherstone Griffin,
and Walter Edward Higgs

BY

Garner Stewart,
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CONRAD FIELD MENDHAM, OF LONDON, ERNEST FEATHERSTONE GRIFFIN,
OF MIDDLESEX, AND WALTER EDWARD HIGGS, OF LONDON, ENGLAND.

JOINT OR SEAM FOR CIRCULAR SHEET-METAL VESSELS, &c.

SPECIFICATION forming part of Letters Patent No. 675,603, dated June 4, 1901.

Application filed February 8, 1901. Serial No. 46,487. (No model.)

To all whom it may concern:

Be it known that we, CONRAD FIELD MENDHAM, residing at London, ERNEST FEATHERSTONE GRIFFIN, residing at Middlesex, and
5 WALTER EDWARD HIGGS, residing at London, England, subjects of the Queen of Great Britain, have invented a certain new and useful Improved Joint or Seam for Circular Sheet-Metal Vessels and the Like, of which the following is a specification.

This invention consists in an improved joint or seam for hermetically closing and sealing sheet-metal vessels, drums, and the like which are adapted to be filled with preserves, explosives, or easily-inflammable substances, &c.

The invention is fully illustrated in the accompanying drawings, wherein—

Figure 1 is a sectional view of the end of a receptacle of the kind above indicated, illustrating the present method of forming the joint between its cover and body portion; and
20 Fig. 2 is a view similar to Fig. 1, but illustrating our invention.

Heretofore vessels employed for this purpose have been closed, as shown by way of example in Fig. 1, by bending over the edge portion 1 of the body of the vessel 2 and the edge portion 3 of the rim of the cover or head 4 in the form of a roll. This is effected in
30 machines which by suitable means—for example, by rollers—produce a bending over or rolling and pressing together of the edges of the body of the vessel and the rim of its cover or head. In this pressing operation, however,
35 it is impossible to avoid leaving spaces between the several layers of the edge portions of the body and rim, especially at 5 and 6 in Fig. 1. Thus although the closure is tight enough to prevent the escape of small particles of the contents of the vessel, yet the vessel is not really hermetically sealed so as to prevent the access of air to its interior during long keeping. This is because the surfaces of the material forming the vessel, being, as usual, covered with zinc or consisting of galvanized iron, are consequently rough, and by reason of the irregularity of its surfaces openings to the air are left. Such openings cannot be avoided by simply pressing
40 the surfaces together.

The present invention is designed to obvi-

ate the disadvantage above indicated and to prevent as much as possible the hair-like passages left by reason of the irregularities referred to, as well as the formation of spaces
55 such as 5 and 6. The vessel with its cover applied is therefore introduced into a machine which as the work is properly guided effects a pressing of the members together and simultaneously a stretching of the rim portion of
60 the cover, so as to reduce its thickness—as, for instance, at 8, 7, and 10 in Fig. 2. In this manner the several layers of the rolled-over portions of the rim and body of the vessel are drawn or spun firmly and intimately together, so that a perfectly air-tight closure is obtained.

It will be seen from the drawings and from the foregoing that the part of the metal of the rim thinned out is between the head portion proper of the cover and the roll and that
70 said thinned-out portion is on one side of the wall of the body of the vessel, while said roll is on the other side, and thus the thinned-out portion is exposed to the immediate and direct
75 action of the pressing devices; also, that as the result of the stretching action above indicated said thinned-out portion of the rim assumes a greater area than that of the roll. As a consequence, therefore, of the metal of
80 the portion of the rim referred to being thinned out relatively to the metal of the other parts of the vessel, and especially relatively to the roll, and of the fact that it has greater area than the roll, it can be made by the pressing
85 devices to more closely fit itself to the shape of the roll. Moreover, while a portion of the metal of the cover is thinned out that of its extreme edge portion and also of the edge portion of the vessel are left at their original
90 thickness, so that the lock which is formed by said roll between the body and cover of the receptacle is of the firmest and most durable construction.

Having thus fully described our invention,
95 what we claim as new, and desire to secure by Letters Patent, is—

In a sheet-metal can or other similar receptacle, the combination of the body part and a closure or cover therefor fitted into the body
100 part and having an outwardly-extending rim lying in laminated disposition with said body

part, the edge portion of said rim and body
part being turned outwardly in a roll and being
compactly compressed together, and the por-
tion of the rim of said cover or closure which
5 is within the body part being appreciably
thinner and of greater area than that of the
roll, substantially as described.

In testimony whereof we have hereunto set

our hands in presence of two subscribing wit-
nesses.

CONRAD FIELD MENDHAM.

ERNEST FEATHERSTONE GRIFFIN.

WALTER EDWARD HIGGS.

Witnesses:

PHILIP CARL OSCAR KERNDORF,

JOHN EDWARD NEWTON.