Feb. 12, 1924. 1,483,714

E. J. BROOKS

METHOD AND MEANS FOR SEALING STRAPPING

Filed March 14, 1922 2 Sheets-Sheet 1

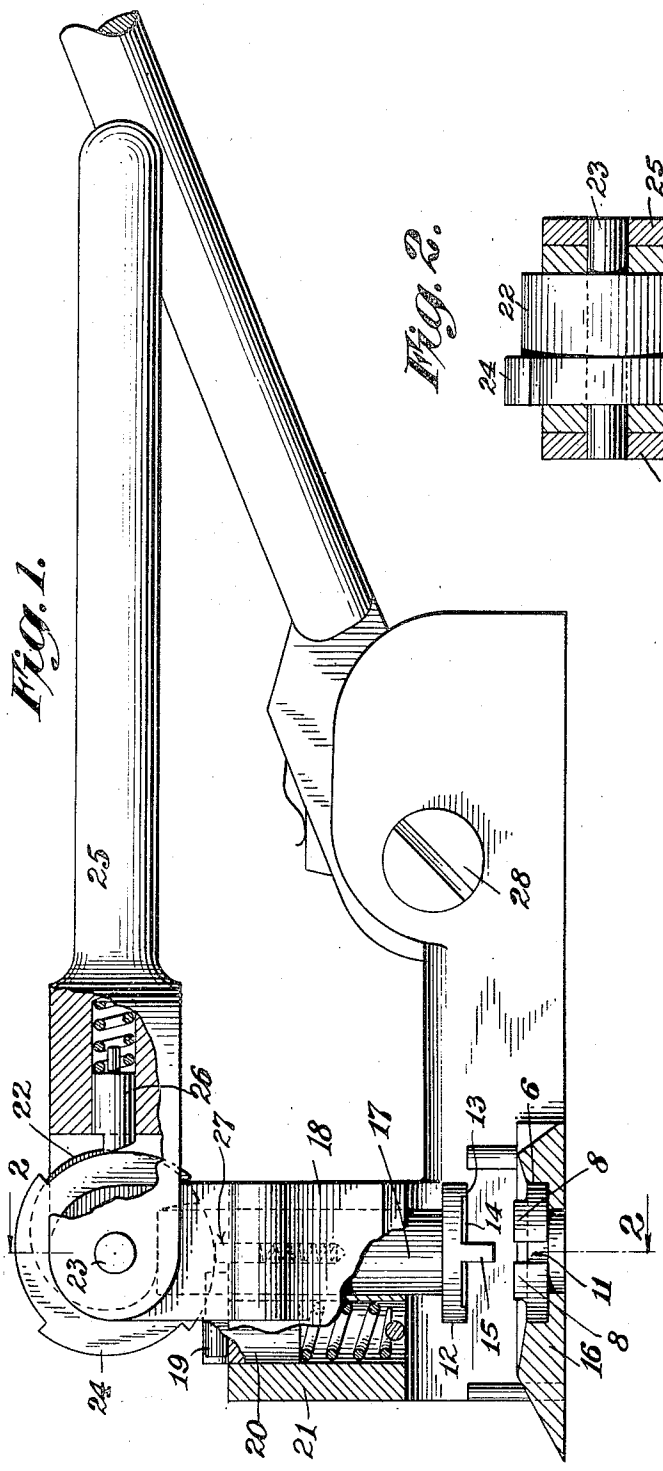


Fig. 1.

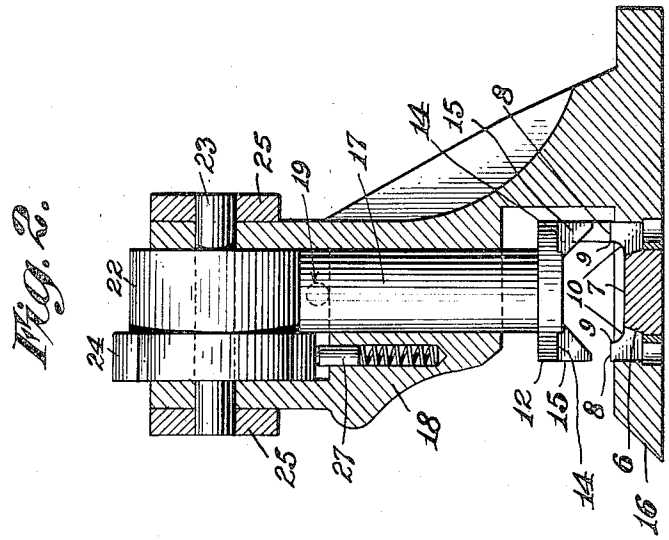


Fig. 2.

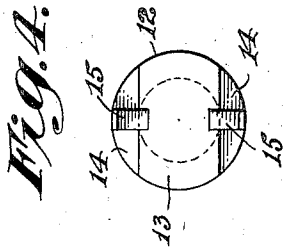


Fig. 4.

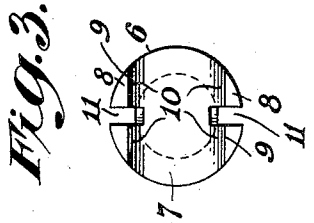


Fig. 3.

INVENTOR
EDWARD J. BROOKS
BY
ATTORNEY

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E. J. BROOKS

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Filed March 14, 1922 2 Sheets-Sheet 2

Fig. 5.

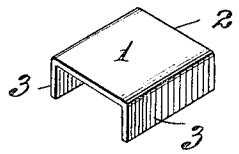


Fig. 6.

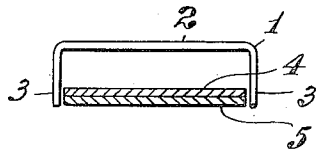


Fig. 7.

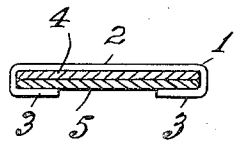


Fig. 8.

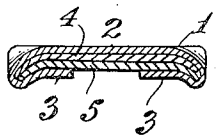
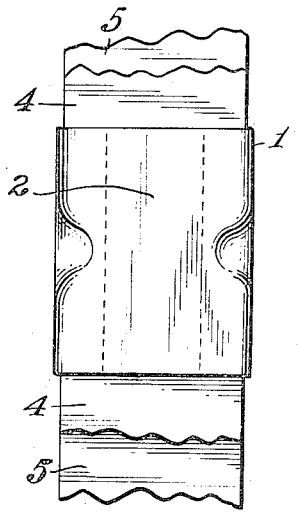


Fig. 9.



INVENTOR

EDWARD J. BROOKS

BY Fred V. Beeken

ATTORNEY

Patented Feb. 12, 1924. 1,483,714

UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY.

METHOD AND MEANS FOR SEALING STRAPPING.

Application filed March 14, 1922. Serial No. 543,769.

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Methods and Means for Sealing Strapping.

This invention relates to a method of and means for sealing the overlapped ends of metallic strapping passed around a container.

In the art as heretofore practiced it has been customary to use a metallic seal of the character shown in U. S. Letters Patent No. 925,451 of June 22, 1909, which discloses a seal consisting of a sheet metal member having a main portion and wings bent parallel with said main portions to form a flat sleeve. It will be understood that through this flat sleeve seal the strap ends must be threaded and that thereafter the seal and strap ends are interlocked by a suitable press or punch. This threading of the strap ends through the sleeve seal requires a certain amount of dexterity on the part of the operator, and the main object and feature of this invention is to render the assembling of the seal parts more easy and simple.

In the accompanying drawings the invention is disclosed in a concrete and preferred form in which—

Fig. 1 is a side elevation of a device embodying the invention.

Fig. 2 is a vertical sectional view through the dies showing one means for interlocking the metallic strapping and seal, taken on the plane of line 2—2 of Fig. 1.

Fig. 3 is a plan view of the bottom die face.

Fig. 4 is a plan view of the top die face.

Fig. 5 is a perspective view of the sealing member.

Fig. 6 is a sectional view showing overlapped strap ends and the sealing member in straddled position with respect thereto.

Fig. 7 is a sectional view showing the wings of the seal bent beneath the strap ends.

Fig. 8 is a sectional view showing the strap ends and seal interlocked.

Fig. 9 is a plan view of the finished seal.

Instead of making the seal member 1 (Fig. 5) a sleeve member before associating the strap ends and seal, I form said seal member with a main horizontal portion 2 and vertically upstanding wings 3 and after the strap ends are brought between the die members the seal is placed in straddled position (Fig. 6) over the strap ends 4 and 5. It will be seen that this avoids laborious threading of the strap ends through the seal. The die members are then partly closed thereby bending wings 3 more or less beneath the strap ends (Fig. 7) and substantially parallel to main portion 2 thereby forming substantially a flat sleeve. The die members are then closed entirely, thereby interlocking the strap ends and seal by crimping or otherwise, (Figs. 8 and 9). In the interval between the two operations of the dies, that is between operations shown in Figs. 7 and 8, the strap ends are preferably tightened with respect to each other longitudinally and to this end the die operating mechanism is preferably so arranged that it may be operated by stages.

The die mechanism may be of any suitable construction and is in the present case as follows: The lower die face 6 is provided with a bottom member 7 having raised side portions 8, parallel to the wings of the seal, the sidewalls 9 of which are connected by curved surfaces 10 to the bottom member said raised side portions having each a recess 11 extending partly into the bottom member. The upper die face 12 is provided with a top portion 13 having depressions 14 corresponding to raised portions 8 of the lower member, and having also tapering projections 15 to enter recesses 11. When the dies are partly closed upon the strapping and seal, arranged as shown in Fig. 6, projections 15 act to press wings 3 of the seal inward, said wings sliding along curved faces 10 until they are brought beneath the strap ends as shown in Fig. 7. Complete closing of the dies then cause projections 15 and recesses 11 to interlock the strapping as shown in Figs. 8 and 9.

In this instance the lower die member is carried by a pedestal 16 interposed between the strapping and container as shown in U. S. Letters Patent No. 1,273,115 of July 16, 1918. The upper die member is carried by a plunger 17 sliding in the frame 18 and having a pin 19 engaging top of spring pressed plunger 20 contained in barrel 21. 22 is a cam the rotation of which depresses plunger 17 and when the high spot thereof passes by, allows spring plunger 20 to elevate it. Cam 22 is mounted on pintle 23 and moving with it is a ratchet 24. 25 indicates

a handle loose on pintle 23 and having a spring seated pawl 26 whereby the ratchet may be rotated in one direction only. 27 is a spring seated stop pawl seated in the framework for retaining the ratchet in the position to which it has been advanced. It will therefore be seen that the upper die member can be lowered by stages.

The tightening means may be of any suitable character and may be an implement or a device independent of the sealing means. In such case they may be of the character shown in U. S. Letters Patents Nos. 907,008 of Dec. 15, 1908 or 925,990 of June 22, 1909. If desired, and as indicated here diagrammatically at 28 the tightening device for the strap ends may be mounted in the same frame in a manner similar to the disclosure of U. S. Letters Patent No. 1,273,115 of July 16, 1918.

I claim:

1. Sealing means comprising: a die member for supporting strap ends in overlapped relation and an open-face sheet metal seal consisting of a main horizontal portion provided with vertically upstanding wings, said wings straddling the strapping, a second die member, means for closing said die members by stages, and complementary die faces on said die members which when brought together act first to bend the wings beneath the strap ends into a position substantially parallel to the main portion to form substantially a flat sleeve and thereafter to interlock the sleeve and overlapped strap ends.

2. The method of forming a seal which consists of associating with overlapped strap ends, by straddling it with respect thereto, an open-face sheet metal seal consisting of a main horizontal portion provided with vertically upstanding wings, then bending the wings beneath the strap ends into a position parallel to the main portion to form substantially a flat sleeve, then tightening the strap ends lengthwise with respect to each other, and then interlocking the sleeve and overlapped strap ends.

3. Two die members to receive between them overlapped strap ends and an open face seal of sheet material consisting of a main horizontal portion and vertically upstanding wings in straddled relation to the strap ends, a die face for one of said members including a bottom member having raised side portions, parallel to the wings aforesaid the side walls of which are connected by curved surfaces to the bottom member, said raised side portions having each a recess extending partly into the bottom member, a die face for the other of said members including a top portion having depressions, corresponding to the raised portions of the first die face, and tapering projections to enter the recesses of the first die face.

4. The method of forming a seal which consists in associating with overlapped strap ends, by straddling it with respect thereto, an open face sheet metal seal consisting of a main horizontal portion provided with vertically upstanding wings, in bending the upstanding wings of the sleeve substantially parallel with the main portion thereof and in interlocking the sleeve and overlapped strap ends in two stages, and in tightening the strap ends lengthwise with respect to each other intermediate the bending and interlocking stages.

Signed at New York city, in the borough of Manhattan, county and State of New York, this 8 day of March, 1922.

EDWARD J. BROOKS.