

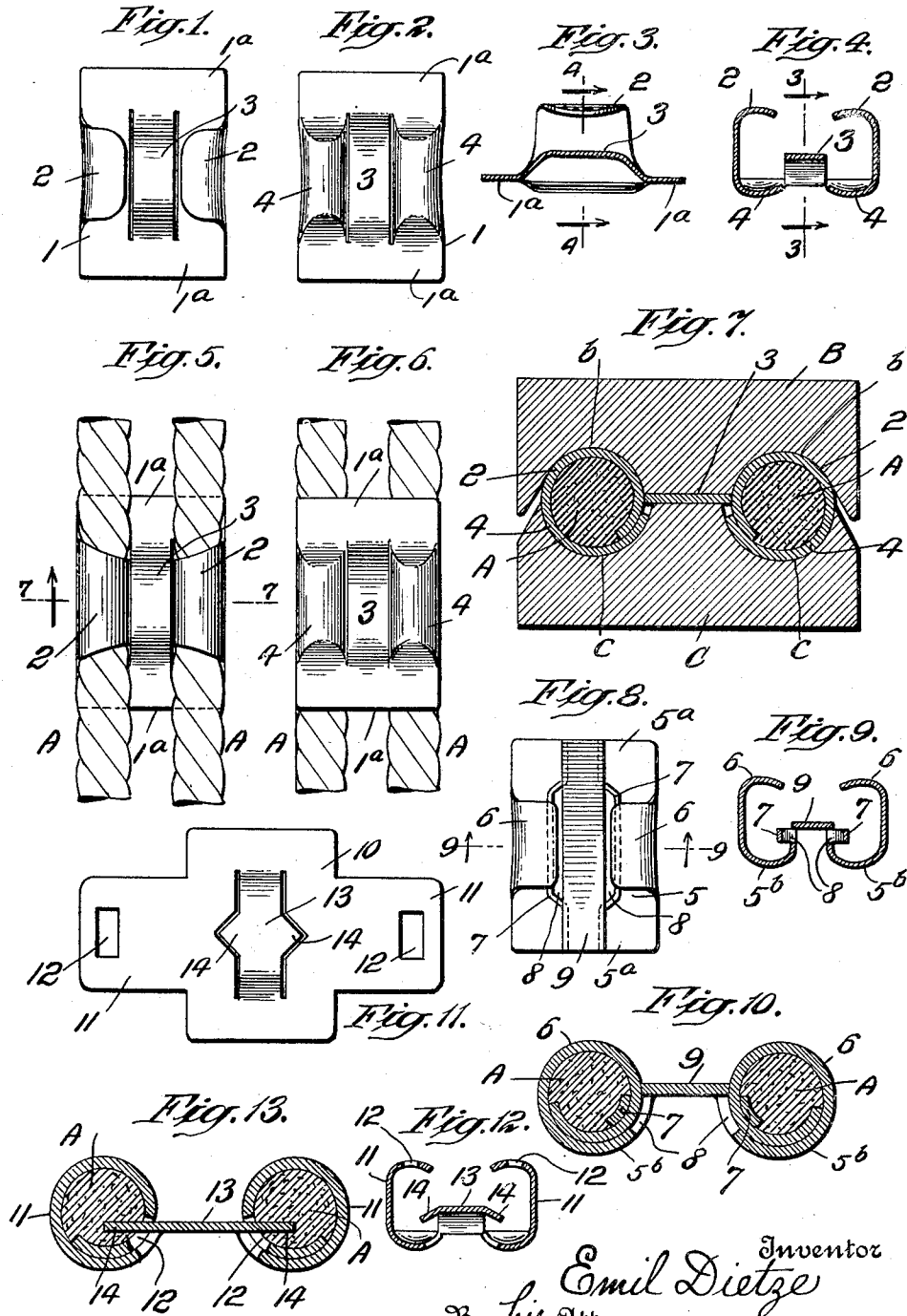
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SEAL FOR CORDING AND THE LIKE

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SEAL FOR CORDING AND THE LIKE.

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To all whom it may concern:

Be it known that I, EMIL DIETZE, a citizen of the United States, and resident of Richmond Hill, borough of Queens, in the county of Queens, city and State of New York, have invented certain new and useful Improvements in Seals for Cording and the like, of which the following is a specification, reference being had therein to the accompanying drawing.

Many and various kinds of packages, bundles and boxes, wrapped in paper, canvas, burlap, or other covering, or made of cardboard, pasteboard, wood, or the like, either stiff or flexible, and containing various kinds of merchandise, as tobacco and cigars, etc., are customarily secured by winding cords, wires, or flexible bands about the same. Sometimes this is merely for securing the package in a tightly closed condition; again it has for its object to carry and insure the contents in bond and the cording is to prevent any tampering with such contents. In the latter case a seal is often employed to secure the cords so that it will be impossible to remove them and extract any of the wrapped or covered articles without breaking the seal beyond repair and thus detecting the pilfering.

My present invention, therefore, relates to a seal used for cording, whatever be the material of the cord or strand or strap. This seal is usually of sheet metal, such as tin or steel, and after it is placed on the cord or cords, or the latter are passed through the enclosing and gripping flanges or members of the seal, the jaws of a suitable press are applied to the seal to compress and interlock its parts with each other upon the cord or cords in a very tight and non-removable engagement. The invention therefore has for its leading object among many that might be mentioned, to make a seal that can be very securely attached to the cords so that it cannot be removed without destroying its integrity by cutting or breaking. To this end therefore the invention consists essentially in the construction, arrangement and combination of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawing illustrating my invention,

Figure 1 is a top plan view of one form of my improved seal for cording, as the same appears after being shaped out of a

blank but before it is compressed on the cords.

Figure 2 is a bottom plan view of the same.

Figure 3 is a longitudinal section on the line 3, 3, of Figure 4.

Figure 4 is a transverse section on the line 4, 4, of Figure 3.

Figure 5 is a top plan view of the seal after the pressing operation has been performed thereon and compressed it tightly upon a number of parallel cords.

Figure 6 is a bottom plan view of the same.

Figure 7 is an enlarged cross section on the line 7, 7, of Figure 5, the same being cut through the seal, the cords and the two jaws of one form of press which may be used for the purpose of compressing the members of the seal together securely upon the cording members.

Figure 8 is a top plan view of an alternative form of seal having properties similar in many respects to the form shown in Figure 1 and showing the same as it appears after being shaped from a blank and in readiness to be placed on the cords, but before compression of the seal.

Figure 9 is a cross section of the same on the line 9, 9, of Figure 8.

Figure 10 is an enlarged cross section of this form of seal after the same has been compressed upon the cords and shows the change which takes place in the form and shape of the various parts due to the action of the press, being therefore similar in result to that indicated in Figure 7.

Figure 11 is a sheet-metal blank piece for shaping another alternate or modified form of seal, having similar properties to the seals shown in Figures 1 and 8 but different in some details.

Figure 12 is a cross section of a seal shaped from the blank shown in Figure 11 and indicating the same before its parts are compressed together.

Figure 13 is an enlarged cross section of this last form of seal after it has been compressed in the press, and shows the position of the various members and their relation to each other and to the cords due to the compression, the result in these respects being more or less similar to that indicated in Figure 10.

Similar characters of reference designate

corresponding parts throughout the different figures of the drawing.

I will first describe the leading or preferred form or embodiment of my invention in a seal as it appears in Figures 1 to 7 inclusive. Here the seal is made out of a single piece of sheet metal, the blank for which is shaped by suitable means to form the device clearly indicated in these figures, having an elongated flat plate 1 provided with projecting flat ends 1^a. Between the ends 1^a are the lateral upturned and inturned parallel lips 2, 2, which may be of greater or less length and accordingly as they are longer or shorter the flat ends 1^a will obviously be wider or narrower and said lips 2, 2, will fold over the plate 1 so as to leave channels between them and the plate as indicated in Figure 4 sufficiently large to accommodate the reception of suitable cords, wires, straps or other binders with which the seal is to be employed. Intermediate of the lips 2, 2, the flat main portion 1 is cut with parallel slits to permit a bridge piece 3 to be struck up from the material of the plate 1 to a proper elevation between these slits, which bridge 3 is parallel to the inner edges of the lips 2 but below the same before the edges are compressed, and said bridge will be about the same length as said lips or perhaps somewhat longer and will extend between the two ends 1^a. Furthermore the portions of the plate 1 directly opposite and under the inturned lips 2 have their substance depressed or extruded to form the bottom parallel ridges or ribs 4, 4, which parallel ribs have about the same length as the lips 2, 2, being clearly shown in Figures 2 and 6 as also in Figures 3 and 4.

In Figures 5 and 6 the initial or preferred form of the seal now being described is shown applied to two parallel cords A, A, of some suitable kind within the purview of this invention. These cords are first passed beneath the lips 2, 2, or said lips 2, 2, are caused to engage the cords so that the latter will lie between the lips and the depressed ridges 4, 4, of plate 1, such being a preliminary grasping of the cords by the seal which will be effective until the press is applied to the same because said cords A lie alongside the raised bridge 3 and are covered by lips 2. Then the press will be applied in order to compress the parts of the seal and clamp it firmly upon the cords. The press may be of many and various forms. One form is shown in Figure 7 where it consists of one jaw B provided with curved dies or recesses *b, b*, and another jaw C provided also with curved dies or recesses *c, c*, opposite to the dies *b, b*. When this press is applied to the seal and the jaws B and C of the press are brought together firmly upon the seal, the same being then as it appears in Figures 5 and 6, the result upon the seal will be as

shown in Figure 7, where it will be seen that the lips 2 are depressed and curved around with their inner edges below the bridge piece 3, and the ridges 4 on the bottom of the seal have a curvature imparted thereto in the dies *c, c*, so that the action of the press on the seal causes the seal to be converted substantially into the form of a pair of parallel tubes containing the cords A, A, and holding the same with a very tenacious grip. the wall of the tubes rolling together and overlapping so long as the pressing operation is kept up by the action of the jaws, while at the same time the bridge piece 3 is depressed by the action of the jaws from its previously elevated position, but it will be noted that the bridge 3 always after the compressing operation of the press will occupy a position opposite to the edges of the lips 2 and above and covering the same, so that they will never be accessible from above the bridge by any tool which might be used for tampering with the same in an attempt to lift these inturned lips 2 and remove them from the cords A. In other words the effect of compressing the seal is to drive the lips 2, 2, down below the bridge piece and even though the bridge piece may also be depressed yet it will be no less a complete covering for these lips and in fact I reserve the liberty of allowing this bridge piece 3 to occupy either the position shown in Figure 7, or one somewhat higher, or one somewhat lower.

The bridge piece forms a very important feature of my invention because of the fact that it furnishes an insurmountable obstacle to any approach to the infolded lips 2 which might be made for the purpose of endeavoring to lift the same and uncoil or unroll the edges so as to release the seal from the cords. This bridge 3 makes it impossible to insert a tool between the lateral edges thereof and the compressed lips 2. In the compression of the parts, therefore, it is desirable that a bridge 3 in a seal of this type should be more or less compressed in order to bind it more tightly between the compressed lips 2 and make the edges of the bridge bind more effectively against said lips.

Referring next to an alternative or modified form of seal as the same is illustrated in Figures 8 to 10 inclusive, it will be seen that this seal is also of sheet metal and has a main flat elongated portion 5 terminating in the flat projecting ends 5^a. Between the ends 5^a are the lateral upturned and inturned parallel lips 6, 6, similar to the lips 2, 2, of the form of the invention shown in Figure 1 and intermediate of the lips 6, 6, is a longitudinal bridge piece 9 running from end to end of the device, that is to say from the end of one projecting portion 5^a to the end of the other projecting portion 5^a, said bridge piece being struck up from

the material of the blank and formed with parallel lateral flanges 7, 7, which extend for a certain distance along the sides of the bridge piece directly opposite the lips 6, 6, said flanges 7 being formed with slots 8 which are adapted to receive the opposite inner edges of the lips 6, 6, when the latter are compressed by the press in the operation of attaching the seal to the cords. The flat portion 5 of this form of seal is also shaped with depressed ridges or ribs 5^b which are directly opposite to the lips 6.

In Figure 10 I show how the parts of the seal indicated in Figures 8 and 9 are compressed together during the pressing operation and how the seal is thereby clamped on the cords A, though in this figure the representation of the press itself is omitted as unnecessary inasmuch as a form of press is shown in Figure 7. When the jaws of the press receive and act upon the seal, the latter having first been applied to a number of parallel cords A, A, as shown in Figure 10, the effect is to compress the lips 6, 6, and cause their inner edge to enter the slots 8, 8, while at the same time the depressed ridges 5^b in the blank out of which the seal is made, which ridges are directly opposite the lips 6 and correspond to the ridges 4 in the form of the invention shown in Figure 1, are themselves shaped in a curve or cylindrical form and the lips 6 roll around inside of these cylindrical forms, overlapping the same and clinging very tightly to the cords A, while the flanges 7 have something of an arc shape imparted thereto as a result of the straining action thereon of the pressing of the lips 6 through the slots 8. In this operation the raised bridge piece 9 will ordinarily not be depressed by the action of the press, though it may be if desired, but I leave that for determination in individual cases inasmuch as the press may partake of a variety of different forms but it would generally be found that the action of the press in rolling the lips 6 through the slots 8 will bend them sufficiently against the bridge piece 9 to make it desirable to leave the bridge as elevated as it was at the beginning and not to depress it as I have suggested may be commonly desirable in the form of the invention shown in Figure 1.

Another form of the invention is indicated in Figures 11 to 13 inclusive and consists of substantially the same mechanical features as the two forms I have described with some additions and modifications. In this form I have shown in Figure 11 a blank when spread out flat and before it has been bent. This blank consists of a main flat portion 10 having right-angled extensions 11 provided with slots 12, said extensions 11 being adapted to be bent around into the form of inturned lips as shown in Figure 12. The main portion of

the blank is provided with parallel slits having V-shapes in order that the bridge piece 13 may be struck up therefrom, having lateral angular V-shaped projections 14 which extend out in opposite directions underneath the lips 11 after the device has been shaped and the bridge piece struck up. The projections 14 may, if desired, be caused to occupy a somewhat slanting or inclined position as they are shown in Figure 12 in order to enable them to engage more readily with the lips 11 when the latter are depressed, but it is quite obvious that the shape and proportions of the various parts of the blank and the seal as it is bent out of the same may vary within considerable limits without changing the effect.

In Figure 13 I show the form of seal indicated in Figures 11 and 12 when applied to the cords A and with its members compressed together. The action of the press on the seal is to depress the inturned lips 11 until their inner edges strike and pass the V-shaped projections 14 and as they pass said projections the latter will take into the slots 12 in the lips 11 and at the same time the action of the press will be to depress the bridge piece 13 with the result that the V-shaped projections 14, being compressed against the sides of the slots 12, will be elevated into a position of horizontality with respect to the bridge piece 13, all as indicated in Figure 13. These prongs 14 will pierce the cords A and intimately bind therein and cause a much closer engagement of the various parts. The bridge piece 13 in this case, after the lips have been compressed so as to pass the prongs 14 and form the tubes that enclose the cords, will effectually prevent any communication from the outside with the inner ends of the lips 11 for the purpose of lifting the same, because it will be seen that the parts will all be inextricably compressed together and interengaged, so that it will not be possible to disconnect them without breaking or rupturing the parts beyond any possible repair, which breaking would of course indicate at once that the contents of the package had been broken and tampered with.

Many changes in the various features of my invention, as also in the characteristics of the special forms which I have herein described, may be made without going outside of the invention or exceeding the scope of the appended claims and I reserve the liberty of modifying and reconstructing the invention as far as may be found necessary.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A seal to be pressed on cords, and the like, comprising a main member having lateral opposite inturned lips, and intermediate the lips a raised bridge formed by

striking up a piece between slits in the main member, below the edges of which bridge the lips are compressed when the seal is fastened on the cords, so that the bridge may be seated closely against and over said lips.

2. A seal to be pressed on cords, and the like, comprising a main member having lateral opposite inturned lips, and intermediate the lips a raised bridge formed by a section between slits in the main member, the edges of which bridge are engaged by the edges of the lips with the latter below the same, when the seal is fastened on the cords, so that the bridge may be seated closely against and over said lips.

3. A seal to be pressed on cords, and the like, comprising a main member having lateral opposite inturned lips, depressions opposite thereto in the main member, between which lips and depressions the cords are adapted to lie, and intermediate the lips a raised bridge formed by striking up a longitudinal piece between a pair of slits in the main member, below the edges of which bridge the lips are compressed when the seal is fastened on the cords, so that the bridge may be seated closely against and over said lips.

4. A seal to be pressed on cords, or the like, comprising a main member having depressed ridges and lateral inturned lips over the ridges, between which depressed ridges and lips the cords are adapted to lie, a bridge piece intermediate the lips struck-up between openings in the main member, all constructed when the press is applied so as to form tubular fastenings on the cords, the overlapping rolling edges of which are inaccessible under the bridge piece.

5. A seal to be pressed on cords, and the like, comprising a slotted main member having a pair of lips and an intermediate bridge between the slots in the main member, all adapted when pressed to provide a pair of tubular clamping holders for the cords, the overlapping edges of the holders being below the bridge and protected thereby.

6. A seal to be pressed on cords, and the like, comprising a slotted main member having lateral opposite inturned lips, end projections, and intermediate the lips a raised bridge between the slots of the main mem-

ber, below the edges of which bridge the lips are compressed when the seal is fastened on the cords, so that the bridge may be seated closely against and over said lips.

7. A seal to be pressed on cords, and the like, comprising a rectangular elongated frame having end projections, lateral opposite inturned lips, a struck-up bridge between the lips formed by elevating a piece between slits in the frame, the edges of which bridge are engaged by the lips when the seal is fastened on the cords, so that the bridge may be seated closely against and over said lips.

8. A cording seal comprising a main flat plate or member having end projections and lateral lips raised from the surface of the plate and bent over towards each other, a bridge formed by striking up a longitudinal piece between a pair of slits in the main plate, all arranged so that when the press is applied the edges of the lips will pass below the bridge and be covered thereby and the main plate and lips will form into tubular receptacles that will grip the cords.

9. A cording seal comprising a main flat plate or member having end projections and lateral lips raised from the surface of the plate and bent over towards each other, depressions in the main plate below the lips, a bridge formed by striking up a longitudinal piece between a pair of slits in the main plate, all arranged so that when the press is applied the edges of the lips will pass below the bridge and be covered thereby and the main plate and lips will form into tubular receptacles that will grip the cords.

10. A seal for cording and the like, consisting of a single elongated sheet of metal providing a main member having slits and a central bridge struck up between them, said main member having inturned ends and depressions under the latter, said ends and depressed portions receiving the cords between them and said bridge, and the inturned ends being adapted for press fastening on the cords so that the bridge may be clamped firmly over the inturned ends.

In testimony whereof I hereunto affix my signature.

EMIL DIETZE.

Witness:

GEO. J. WENK.