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A. REBICHON

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CLASPS FOR UNITING THE ENDS OF STRIP IRONS ENCIRCLING PARCELS

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FIG. 1

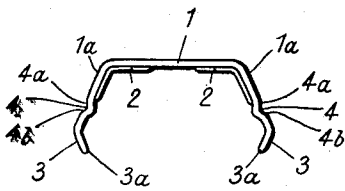


FIG. 2

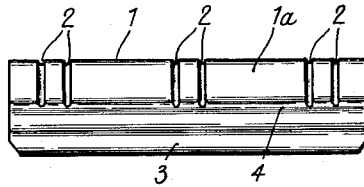
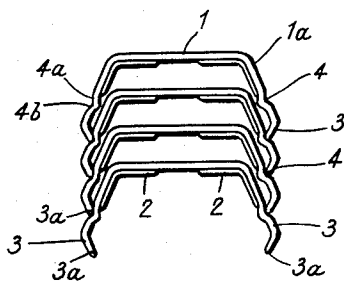


FIG. 3



INVENTOR
ANDRÉ REBICHON

BY

Wm. H. Shirley

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CLASPS FOR UNITING THE ENDS OF STRIP IRONS ENCIRCLING PARCELS

André Rebichon, Paris, France, assignor to Juliette Rebichon (born Meyronneinc), Paris, France

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8 Claims. (Cl. 206—65)

The present invention relates to the clasps which are used for uniting the ends of strip irons encircling parcels and more particularly to clasps used in packs, for feeding parcel binding apparatus which closes and seals the clasps upon the ends of said strip irons.

Up to the present, the clasps forming such packs have been connected together more or less perfectly by auxiliary means, that is to say by means which are independent of the clasps themselves, such as glue, wire, string, etc.

The present invention has for its object to do away with these auxiliary connecting means—whereby the cost of the manufacture of clasp packs for feeding parcel binding apparatus can be notably reduced—and to obtain nevertheless a perfectly coherent pack of clasps in which every clasp is effectively prevented from tilting laterally as well as longitudinally with respect to the other clasps of the pack and in which, moreover, the distance between the clasps is uniform and constant, although each clasp may easily be separated from the others by a longitudinal displacement imparted to it by the feeding member of the parcel binding apparatus.

With these objects in view, the invention relates to an improvement in clasps of the kind referred to which is chiefly characterised in that the lower portion of each of the lateral wings of each clasp has an intumed flange and is formed on its outer surface, above said flange, with a longitudinal groove or its equivalent, said flange and said groove being formed in such manner that when the clasps are put together to form a pack, each of said flanges engages the corresponding groove of the clasp which is located immediately below.

Advantageously, in the position of rest the distance between the intumed flanges of each clasp is slightly smaller than the distance between the grooves, so that when the clasps are put together to form a pack, the contact between the flanges of a clasp and the grooves of the subjacent clasp is made under resilient pressure.

The appended drawing shows by way of example an embodiment of a clasp according to the invention for uniting the ends of strip irons encircling parcels.

Fig. 1 is an end view of the clasp.

Fig. 2 is a side view thereof.

Fig. 3 is an end view of part of a pack of clasps according to Figs. 1 and 2.

On the drawing, 1 is the back or web of the clasp, 1a are the lateral wings thereof and 2 are stiffening corrugations.

According to one embodiment of the invention, which is shown on Figs. 1 to 3, the lower portion of each wing 1a has a longitudinal intumed flange 3 above which a groove 4 is formed in the outer surface of the wing. Said flange and said groove are formed in such manner that when the clasps are put together to form a pack, the edge 3a of each flange 3 enters the corresponding groove 4 of the immediately subjacent clasp (Fig. 3).

Advantageously, the initial distance between the inner

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edges 3a of the flanges 3 is slightly smaller than the distance between the grooves 4, so that when the clasps are put together to form a pack the flanges 3 exert a resilient pressure in the grooves 4 of the subjacent clasp. The flanges 3 may engage the bottom or either side of the grooves 4, or simultaneously the bottom and one side of said grooves.

It will be readily seen that when any number of clasps is put together to form a pack, none of the clasps is free to tilt to the right or left, as such a tilting movement is prevented by the upper sides 4a of the grooves 4. The clasps are also not free to tilt longitudinally, as such a tilting movement is prevented by the upper sides 4a as well as by the lower sides 4b of the grooves 4. For the same reasons, the clasps are also secured against vertical upward and downward displacements, so that the vertical distance between successive clasps is uniform and constant. Finally, the clasps cannot slide longitudinally with respect to each other without the intervention of an external force, by reason of the frictional engagement resulting from the above mentioned resilient pressure.

All the conditions are thus fulfilled for the formation of perfectly coherent packs of clasps from which the feeding member of a parcel binding apparatus can detach the clasps one by one, by a longitudinal movement. The clasp engaged by said feeding member will slide longitudinally out of engagement with the adjacent clasp without any risk of jamming, said feeding member having to overcome only the slight resistance due to the above mentioned frictional engagement.

It will be understood that the invention is not limited to the embodiment which has been described and shown, but extends also to all other embodiments lying within the scope of the appended claims. In particular, one side of the groove 4 or both sides thereof may be replaced by a row of small projections obtained for example by stamping.

I claim:

1. A channel-shaped clasp for uniting the ends of strip irons encircling parcels, comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an intumed flange at the lower end of each of said wings and a groove formed in the outer surface of each of said wings, said grooves being parallel to the flanges of the respective wings and adapted to receive and support the inner edges of the flanges of a similar clasp in stacked relation to form a pack, and the distance between the inner edges of said intumed flanges being substantially equal to the distance between said grooves to provide a snug fit of the flange edges of a stacked clasp in said grooves without materially deforming the flanges of the stacked clasp.

2. A channel-shaped clasp of resilient material for uniting the ends of strip irons encircling parcels, comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an intumed flange at the lower end of each of said wings and a groove formed in the outer surface of each of said wings, said grooves being parallel to the flanges of the respective wings and adapted to receive and support the inner edges of the flanges of a similar clasp in stacked relation to form a pack, and the distance between the inner edges of said intumed flanges being slightly less than the distance between said grooves to provide a snug fit of the flange edges of a stacked clasp in said grooves with a slight resilient deformation of the flanges of the stacked clasp.

3. A channel-shaped clasp for uniting the ends of strip irons encircling parcels, comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an intumed flange at the lower end of each of said wings and a pair of rows of projections on the

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outer surface of each of said wings, said pairs of rows of projections being parallel to said flanges of the respective wings and adapted to receive and support between them the inner edges of the flanges of a similar clasp in stacked relation to form a pack, and the distance between the inner edges of said flanges being substantially equal to the distance between the outer surfaces of said wings measured between said pairs of rows of projections to provide a snug fit of the flange edges of a stacked clasp between said rows of projections without materially deforming the flanges of the stacked clasp.

4. A channel-shaped clasp of resilient material for uniting the ends of strip irons encircling parcels, comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an inturned flange at the lower end of each of said wings and a pair of rows of projections on the outer surface of said wings, each of said pairs of rows of projections being parallel to said flanges of the respective wings and adapted to receive and support between them the inner edges of the flanges of a similar clasp in stacked relation to form a pack, and the distance between the inner edges of said flanges being slightly less than the distance between the outer surfaces of said wings measured between said pairs of rows of projections to provide a snug fit of the flange edges of a stacked clasp between said rows of projections with a slight resilient deformation of the flanges of the stacked clasp.

5. A pack of vertically superimposed channel-shaped clasps for uniting the ends of strip irons encircling parcels, each of said clasps comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an inturned flange at the lower end of each of said wings and a groove formed in the outer surface of each of said wings, each of said grooves being parallel to the flange of the respective wing, and the inner edges of said inturned flanges of each but the lowermost of said clasps being engaged into the grooves of the subjacent clasp.

6. A pack of vertically superimposed channel-shaped clasps of resilient material for uniting the ends of strip irons encircling parcels each of said clasps comprising a horizontal back portion, a wing depending from each

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lateral edge of said back portion, an inturned flange at the lower end of each of said wings and a groove formed in the outer surface of each of said wings, each of said grooves being parallel to the flange of the respective wing, and the inner edges of said inturned flanges of each but the lowermost of said clasps resiliently engaging the grooves of the subjacent clasp.

7. A pack of vertically superimposed channel-shaped clasps for uniting the ends of strip irons encircling parcels, each of said clasps comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an inturned flange at the lower end of each of said wings and a pair of rows of projections on the outer surface of each of said wings, each of said pairs of rows of projections being parallel to the flange of the respective wing, and the inner edge of each said inturned flange of each but the lowermost of said clasps being engaged between the rows of the respective pair of rows of projections of the subjacent clasp.

8. A pack of vertically superimposed channel-shaped clasps of resilient material for uniting the ends of strip irons encircling parcels, each of said clasps comprising a horizontal back portion, a wing depending from each lateral edge of said back portion, an inturned flange at the lower end of each of said wings and a pair of rows of projections on the outer surface of each of said wings, each of said pairs of rows of projections being parallel to the flange of the respective wing, and the inner edge of each said inturned flange of each but the lowermost of said clasps resiliently engaging between the rows of the respective pair of rows of projections of the subjacent clasp.

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