R. R. RICHARDSON.

CONTAINER.

APPLICATION FILED FEB. 28, 1914.

1,141,489. **Patented June 1, 1915.**

Fig. 1.

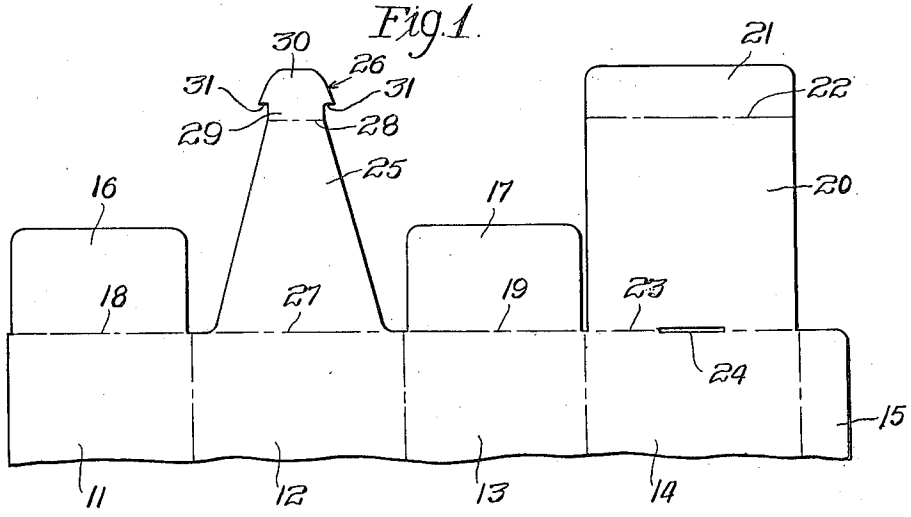


Fig. 2.

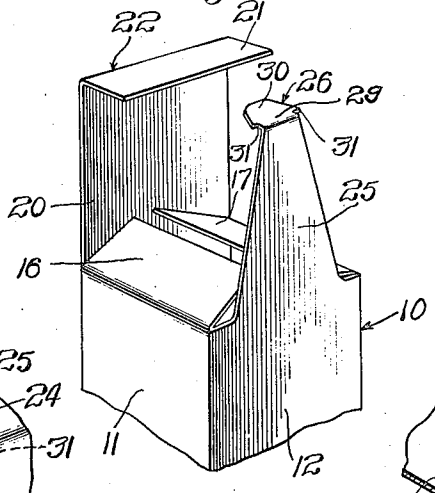


Fig. 4.

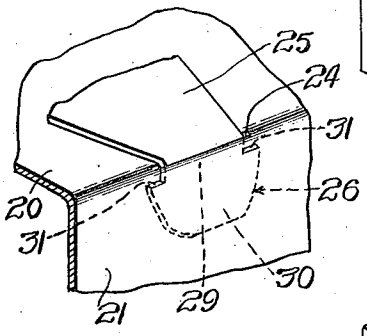


Fig. 5.

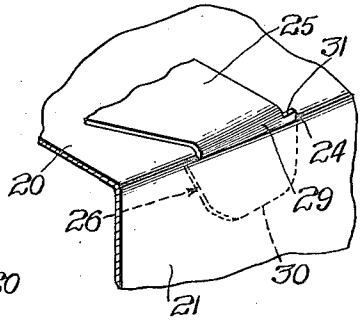
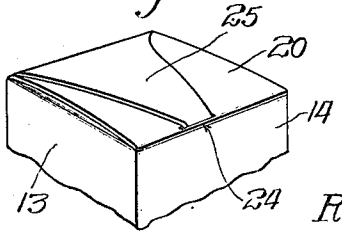


Fig. 3.



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UNITED STATES PATENT OFFICE.

RALPH R. RICHARDSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO CARTON COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CONTAINER.

1,141,489. Specification of Letters Patent. Patented June 1, 1915.

Application filed February 28, 1914. Serial No. 821,625.

To all whom it may concern:

Be it known that I, RALPH R. RICHARDSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Containers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in containers or cartons of that kind made of heavy paper or fiber board, and more particularly to a novel means of closure for such containers or cartons, whereby articles placed within the same may be securely confined therein for the purpose of shipment without the use of any fastening means other than that provided in the construction of the carton.

The principal object of my invention is to provide a container or carton having an opening for the admission of goods and flaps surrounding the opening, said flaps being adapted to be folded into overlapped relation for closing the opening, there being provided locking means for said flaps adapted to be easily manipulated to effect a secure closure as necessary for protecting the contents against ordinary handling and movement during shipment, but so constructed so as to permit the carton to be easily opened and closed for the purpose of inspecting the contents thereof without mutilating the carton or otherwise rendering the same less secure during the period of transit.

A carton constructed in accordance with the features of my invention is particularly advantageous for use in shipping goods by parcel post. This mode of shipment is restricted as to the nature and weight of the article shipped and is further subject to the requirement that said articles be always accessible for inspection. This latter provision obviously requires that the package be unsealed and a carton embodying my invention is adapted to meet this requirement, and it is at the same time so constructed as to avoid liability of the opening of the flaps in rough handling, and to thereby insure the safe transportation and delivery of the contents of the container, with the manifest advantage of enabling shippers to more fully utilize this branch of the postal service.

My invention therefore consists of the matters hereinafter described, more particularly pointed out in the appended claims and fully illustrated in the accompanying drawings in which,

Figure 1 is a fragmentary plan view of one end of the carton as it would appear in the blank; Fig. 2 is a perspective view of one end of the carton with the closure members in open position; Fig. 3 is a similar view with the end of the carton closed and locked; Fig. 4 is a fragmentary view showing locking member in locked position; Fig. 5 is a similar view showing manner of unlocking the carton.

Referring to the drawings, the carton 10 consists of a tubular body portion preferably formed of a single blank, cut from a sheet of material such as card-board, strawboard or the like. The blank, (Fig. 1) is bent into rectangular shape so as to form the four connected side walls 11, 12, 13, 14. Said blank may be provided with a narrow flap 15 extending along the side margin of one of the side-wall sections 14; said flap being secured to the side wall section 11 in any suitable manner so as to form a tubular body open at both ends. On the end margins of the side wall sections of the blank are formed four flaps, which are folded together to form an end wall for the tubular body. Two of said flaps 16 and 17 are alike in size and shape and are attached to opposite side-wall sections 11 and 13. The said flaps 16 and 17 are adapted to be folded inwardly toward each other, and downwardly along the folding lines 18 and 19, to form the primary closure of the carton as shown in Fig. 2.

In connection with the flaps 16 and 17, the tubular body is provided with two outer flaps 20 and 25 adapted to be held in closed position, when folded inwardly over the said flaps 16 and 17 by detachable interlocking means. The flap 20 is connected with the upper end margin of the side-wall sections 14, and is of rectangular shape and provided at its outer marginal portion with a narrow flap 21 adapted to be folded at right angles to the main portion of the flap along the folding line 22, (Fig. 2). At the base of the flap 20, and preferably upon the folding line 23, dividing the said wall

portion 14 and said flap, is provided a locking slip 24 extending along the central portion of the said folding line, and of a length considerably less than the width of the flap 20. The flap 25 is located at the side of the tubular body opposite the flap 20, and is attached to the end margin of the side-wall section 12; said flap, in the blank shown in Fig. 1, being located between the flaps 16 and 17. The width of said flap 25, at its base, is substantially equal to the width of the side-wall section 12, and its lateral margins converge toward each other, so that the outer end of the flap is much narrower than its main end or base. On said narrow, outer end of the flap 25 is formed a locking member 26, embracing a head 30, which is joined to the flap 25 by a short neck portion 29, at opposite sides of which are formed transverse locking shoulders 31, 31, which form the inner margins of the locking head. The length of the said flap 25, exclusive of the locking head and neck 29 is equal to the width of the carton, and comprises the portion thereof between the folding line 27, at its base and the folding line 28, which is located adjacent to but a short distance inwardly from the shoulder 31, 31 of the locking head 30; said latter folding line being provided to permit the locking member 26, as a whole to assume a final position at right angles to the body of the flap, as shown in Fig. 2. The neck portion 29 has parallel side margins located between the shoulders 31, 31 of the head and the transverse folding line 28. The locking head 30 is preferably of arrow-shape, having a blunt or rounded extremity, and the locking edges or transverse shoulders 31, 31 are located at the base of the locking head and extend at right angles. The extreme width of the locking head, measured from the outer extremities of the locking shoulders 31, 31 is slightly greater than the length of the locking slit 24.

To effect the closure of the carton or container by the flaps described, the flaps 16 and 17 are first folded inwardly and downwardly into the same plane with each other. The flap 20 is next folded inwardly and downwardly upon the first mentioned flaps, the narrow marginal flap 21 thereof is inserted between the side-wall 12 and the adjacent end margins of the said flaps 16 and 17. The exterior or locking flap 25 is finally folded over upon or adjacent the flap 20, and the locking head 30 thereof inserted within the locking slit 24. The width of the slit being slightly less than the extreme width of the locking head 30, said locking head, if forced directly into and through the slot will be slightly compressed or distorted at the side edges, but an effort to directly withdraw the head from the slit will be resisted by the contact of the locking shoulder with the ends of the slot. The head may, however be introduced into the slit by inserting one side of the head in advance of the other, in which case, after one of the shoulders 31 passes below the end margin of the slot the head will be shifted laterally to allow the opposite side of the head to enter and also engage the slit by following a similar procedure; that is to say, the flap may be moved laterally to permit one side of the head to be withdrawn from the slit, after which by moving or shifting the head sidewise in the opposite direction, it is readily released.

By this construction and arrangement of locking members described it is apparent that the carton may be easily closed or opened by a single manipulation of the locking member, while the parts are so interlocked as to prevent their disarrangement in the ordinary handling of the container during transit, or even by a direct outward pull on the locking flap.

It is to be understood that a carton made in accordance with my invention may have its body portion made in any desired or preferred way, and if it has a tubular body portion, as in the instance illustrated, it may be provided at both ends of its tubular body with the form of locking flaps described or it may have such flaps at one end only and that, in the latter instance, the other end of the body will be provided with a permanently closed end wall, or with any desired form of interlocked end flaps.

The device embodying my invention may be variously modified in its details of construction without departing from the spirit of the invention and for that reason I do not wish to be limited except in so far as pointed out in the appended claims.

I claim:—

1. A container, having side walls and provided at one end with inner and outer overlapping flaps, one of said flaps being provided at its free end with a locking head joined to said flap by a relatively short neck portion, the latter being divided from said flap by a fold line by which said locking head and said flap may be placed in a position substantially at right angles to said flap, said locking head having its inner margin extending laterally from said neck portion and forming a rearwardly facing locking shoulder, and a locking slit in the other of said flaps and so arranged that said locking head and said neck portion must be placed in a position substantially parallel to the sides of said locking slit in order to be inserted into the latter, said locking slit having a length less than the extreme width of said locking head, and said locking shoulder extending beyond the adjacent end of said locking slit, when said flaps are interlocked.

2. A container, having side walls and provided at one end with inner and outer overlapping flaps, one of said flaps being provided at its free end with a locking head joined to said flap by a relatively short neck portion, the latter being divided from said flap by a fold line by means of which said locking head and said neck portion may be placed in a position substantially at right angles to said flap, said locking head having its inner margins extending laterally from and upon opposite sides of said neck portion and forming rearwardly facing locking shoulders, and a locking slit in the other of said flaps and so arranged that said locking head and said neck portion must be placed in a position substantially parallel to the sides of said locking slit in order to be inserted into the latter, said locking slit having a length less than the extreme width of said locking head, and said locking shoulders extending beyond the ends of said locking slit, when said flaps are interlocked.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 25th day of February A. D. 1914.

RALPH R. RICHARDSON.

Witnesses:
EUGENE C. WANN,
MAURICE D. HERMAN.