(No Model.)

H. S. MUNSON.

BOX.

No. 390,307. Patented Oct. 2, 1888.

Fig. 1.

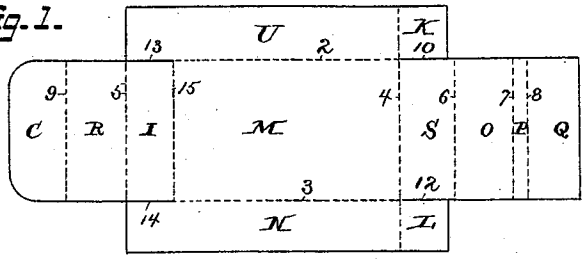


Fig. 2.

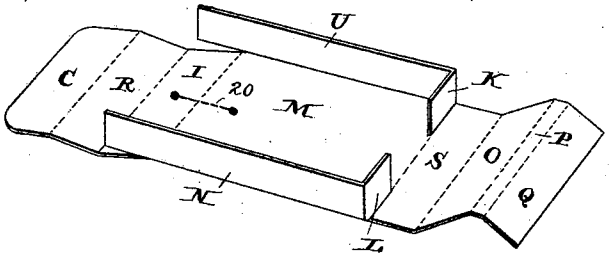


Fig. 4.

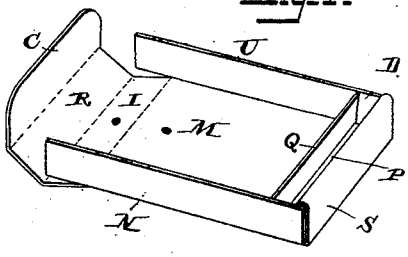


Fig. 5.

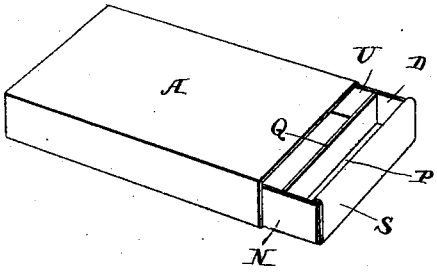


Fig. 6.

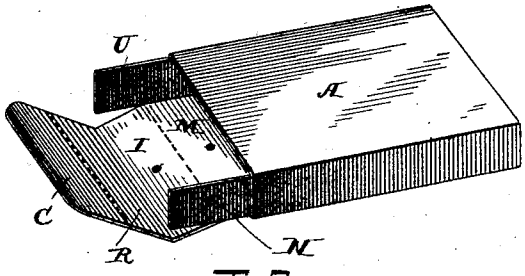


Fig. 3.

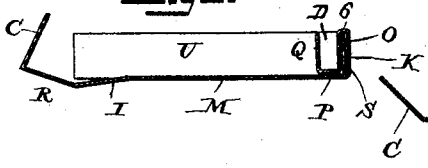


Fig. 7.

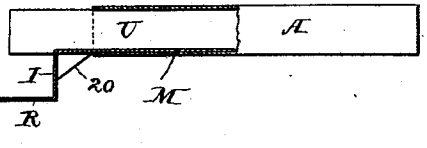
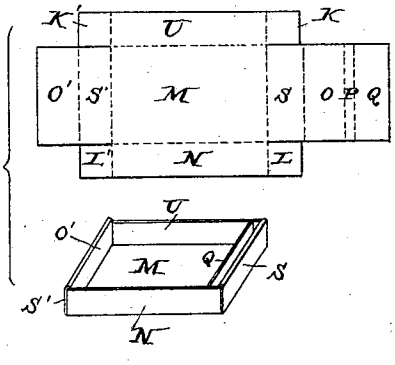


Fig. 8.



Witnesses
Jno. G. Hinkel Jr.
Charles A. Morris

Harvey S. Munson
Inventor

by Peter & Freeman
Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HARVEY S. MUNSON, OF NEW HAVEN, CONNECTICUT.

BOX.

SPECIFICATION forming part of Letters Patent No. 390,307, dated October 2, 1888.

Application filed December 24, 1887. Serial No. 258,861. (No model.)

To all whom it may concern:

Be it known that I, HARVEY S. MUNSON, a citizen of the United States, residing in New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

The present invention relates to that class of boxes known as "knockdown" boxes—that is to say, boxes that for convenience of packing, shipping, and storage are capable of lying flat, and which when to be used may be folded up into rectangular or other form adapted to form a receptacle for containing the article or articles or material to be inclosed thereby. The improvements constituting the present invention, however, are particularly applicable to that class of boxes known as "slide-boxes," wherein a trough-like receptacle is enveloped by a tubular open-ended cover, in which the receptacle may slide and be extended from either end of the cover to expose its contents.

The invention consists, essentially, in providing the blank from which the trough-like receptacle is formed with an extended end portion, in one piece therewith, cut and scored to form, when the receptacle is folded up into rectangular form, an end compartment adapted to separate the contents of the receptacle and compartment from each other.

It also consists in a trough-like receptacle provided with an end compartment forming a solid end to the receptacle, and in other more specific constructions hereinafter more fully set forth.

In the drawings, Figure 1 illustrates a blank from which the trough or slide portion of the box is made. Fig. 2 is a perspective view of the blank partially folded into rectangular form. Fig. 3 is a longitudinal section of the trough or slide portion of the box, and Fig. 4 is a perspective view of the same. Figs. 5 and 6 are perspective views of the trough or slide portion of the box and its tubular cover, the slide portion in different positions with respect to its cover. Fig. 7 is a central longitudinal section of the slide portion of the box and its tubular cover, showing the slide portion in the position shown in Fig. 6. Fig. 8 is a view of a modified form of the blank and a perspective view of the trough or slide formed thereby.

In a practical embodiment of this invention a blank is cut, creased or scored, and incised, as seen in Fig. 1, whereby is provided a bottom, M, formed by the creased or scored lines 2 3 and 4 5, and sides U N, and having at one end an end piece, S, formed by the creased lines 4 6, and portions O P Q, formed by the creased lines 6, 7, and 8, which portions O P Q form the end compartment, hereinafter referred to. At the opposite end of the bottom M the blank is provided with an end, R, and closing-flap C, formed by the creased lines 5 and 9. The blank is furthermore provided with incisions 10 12 on the lines 2 and 3, to form corner-pieces K L, free from the end piece, S, on the end of the sides U N, and with incisions 13 14 at the opposite end of the blank on said creased lines 2 3, and with a creased line, 15, across the bottom M, to form a hinged bottom portion, I, free from the sides U N. A blank thus provided with lines of creasing and incisions which permit the several portions thereof to be bent or folded upon each other to form the trough or slide, in the manner hereinafter set forth, may be produced by any of the well-known dies, or it may be made by hand or by any other method found desirable in practice.

The blank formed in either of these ways may be converted into trough or slide form in the following manner: The sides U and N are bent up at right angle to the bottom M on their respective creased lines 2 and 3, as in Fig. 2, simultaneously bending up the corner-pieces K and L in line therewith, which are then bent at right angles to their respective sides, so as to extend toward each other, as shown. The end piece, S, is now bent up on the creased line 4 at right angles to the bottom, so as to lie against the corner-pieces K and L. The portion O is bent downward on the creased line 6, so as to inclose and lie upon the inner side of said corner-pieces between the sides U and N, and thus bring the portion P, which is bent on the creased line 7 at right angles to the portion O, into contact with and upon the bottom M, as in Fig. 3, from which the portion Q is bent up at right angles on the creased line 8 parallel with the portion O. This disposition of the portions O P Q within the trough or slide structure forms a compartment, D, bounded by the end of the structure, the portion Q, and the sides U and N, and separated

from the remainder of the structure by said portion Q. Of course the extent or width of this compartment D may be changed to suit the exigencies of its use by varying the width of the bottom-forming portion P, and the said compartment may be partially opened to the remainder of the structure by decreasing the height of the partition forming portion Q; but this will be seldom resorted to. Thus the opposite portions, O Q, and the intermediate portion, P, forming the end compartment, D, are formed by an extension of the same portion of the blank that forms one of the sides or ends, as S, of the body of the completed box. To close the opposite end of the slide, the end R will be bent up at right angles to the bottom M on the creased line 5, and the closing-flap C will be bent at right angles thereto on the creased line 9, so as to extend toward the interior of the structure in a manner well known. The slide thus bent into shape is slipped into a tubular cover, A, of sufficient length to inclose the slide and form a cover for its open top and for its compartment D.

In the practical use of the box thus completed the slide is adapted to be projected from either end of its tubular cover, so as to uncover and expose its compartment D at one end, as in Fig. 5, or to expose its other end by freeing the closing-flap C and permitting its end R to fall or be turned away from the end of the slide, and by reason of the incisions 13 14 be still further bent away to open the portion I of the bottom, and thus entirely open the end of the slide, as in Fig. 6, so as to expose the ends of the articles it contains and permit them to be readily withdrawn. This desirable opening feature of the closing end of the slide *per se* is not, however, herein claimed, as the same is patented to one Theodore Marburg, January 8, 1884.

In the structure illustrated there is provided means by which when the slide portion of the box is moved out into the position shown in Fig. 6 the closing end thereof will be automatically opened, so as to expose the interior of the box. This is effected by providing a flexible strip of material, 20—such as rubber—and secured at each of its ends when under tension, one to about the center of the portion I and the other to the bottom itself, at some short distance removed from the hinge of said portion I, as seen in Fig. 2. Thus when the slide portion of the box is extended beyond the tubular cover, as in Figs. 6 and 7, so as to free the flap C, the flexible strip of material, 20, will draw upon the portion I and cause it and the portion R and flap C to draw away from the end of the slide portion and expose its interior.

So far as the slide is concerned, provided with the end compartment, D, the closing-flap C may be omitted entirely—as, for instance, in the example shown in Fig. 8. The blank in this case is provided with corner-pieces K′ L′ and with end portions, S′ O′, similar in all respects to the corner-pieces K and L and end portions, S and O, on the opposite end of the blank, the end being secured by enveloping the corner-pieces K′ L′ by the end portions, S′ and O′, in the same manner, providing a solid end to the slide. So, too, instead of providing an end-closing flap having the hinged bottom portion, I, such bottom portion may be omitted.

It may be remarked in passing that the portions S and O may be secured together and to the corner-pieces K L by cement, if desired. It may also be observed that in packing the blanks made in accordance with this invention for storage or shipment the compartment portions O P Q may be folded over flat onto the bottom on the creased line 6, and thus not make the package of any larger dimensions than usual.

What I claim is—

1. A blank for slide boxes for tubular covers, consisting of the bottom portion, the two side portions, a closing-flap at one end, and at the opposite end portions S, O, P, and Q, substantially as described.

2. A box having a transverse end compartment, the opposite and one intermediate portions of which are formed by the folds of the same portion of the blank that forms one side of the body of the box, substantially as described.

3. A box provided with an end permanently closed by an extension of the blank, also folded to form a transverse partition, Q, substantially as described.

4. A slide-box for tubular covers, provided with an end portion having portions P and Q, forming an end compartment within the slide-box, substantially as described.

5. A slide-box blank for tubular covers, provided with corner-pieces K L, end portion, S, and portions O P Q, substantially as described.

6. A slide box blank consisting of a bottom, two sides, end portions, S O P Q, at one side of the bottom, and of portions I R and flap C at the opposite side of the bottom, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARVEY S. MUNSON.

Witnesses:

E. P. BEST,

EDSON S. BEACH.