

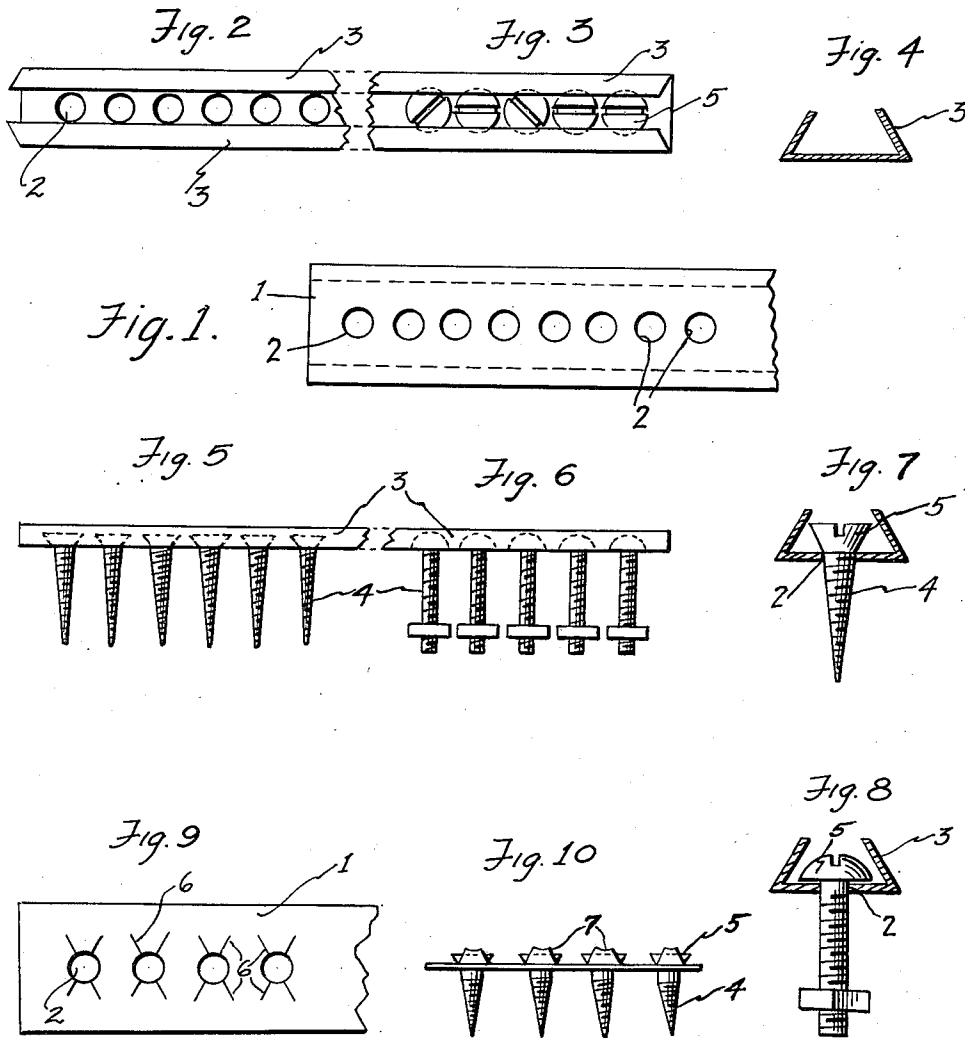
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K. B. MASON

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HARDWARE PACKAGE

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Kenneth Berry Mason.

INVENTOR.

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HARDWARE PACKAGE

Kenneth Berry Mason, Hohokus, N. J.

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This invention relates in general to the packing of articles having an enlarged head and a relatively narrow neck or body portion, and in particular to a means for packing screws, bolts and the like, and to a merchandise package comprising the same.

It is a general object of my invention to provide means for packing screws, bolts and the like in a simple and economical manner particularly with respect to the saving of time in handling lots comprising a plurality of such articles.

A specific object of my invention resides in an article of manufacture comprising means for supporting a plurality of screws, bolts and the like in orderly assembly, and resilient means normally preventing the escape of said articles from the support and adapted to release said articles when pressure actuated.

It is a further specific object of my invention to provide a convenient package comprising a plurality of screws, bolts and the like and means supporting and maintaining said articles in an orderly assembly.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises articles of manufacture possessing the features, properties, and the relation of elements which will be exemplified in the articles hereinafter described and the scope of the invention will be indicated in the claims.

In the art to which my invention appertains it has long been the custom to pack screws and bolts in loose condition chiefly because it has not been found possible to pack them in unit lots in orderly arrangement in a simple and economical manner without adding materially to the retail selling price. Retailing articles of this character in loose condition results in the disadvantage among others that a great waste of time occurs in counting the articles by hand when they are retailed in small unit lots.

I have discovered a method of packing screws, bolts and articles of like physical shape in a simple and economical manner and means for retailing a plurality of the same without the loss of time required in counting.

For a more complete understanding of the nature and objects of my invention reference should be had to the accompanying drawing, in which

Fig. 1 is a plan view of a blank from which the novel means for supporting and packing a plurality of screws, bolts, etc., may be made.

Figure 2 is a plan view of a blank which has

been formed into the means hereinafter described.

Figure 3 is a plan view of a package containing screws assembled in the means illustrated in Figure 2.

Figure 4 is a vertical sectional view of the means shown in Figure 2.

Figures 5 and 6 represent side elevation of an assembly of screws and of bolts respectively in the means shown in Fig. 2.

Figure 7 represents an enlarged vertical sectional view of the assembly of Figure 5 taken along the line 7—7 of said figure.

Figure 8 is an enlarged vertical sectional view of the assembly of Figure 6 taken along the line 8—8 of said figure.

Figure 9 represents a modification of the novel means for assembling screws, bolts, etc., in plan view.

Figure 10 is a side elevation of a package assembled by the use of the means shown in Figure 9.

Referring to the drawing, I provide a strip of resilient material such, for example, as a relatively narrow strip of sheet iron in which there is punched a plurality of holes. The diameters of such holes should be slightly larger than the necks of the screws, bolts or the like which it is proposed to pack. In one modification of the invention a strip of thin sheet iron 1 is provided with a row of equi-distant holes 2 of suitable size having regard for the article to be packed. As shown in Figure 2 and Figure 4 I may bend the edge portions adjacent the longitudinal central portion upwardly and inwardly so as to make with respect to the central section, an appreciable angle as illustrated in the drawing so that the members 3 make an angle of about 45° with respect to the flat central section. The clearance provided between the respective edges of these side members 3 should be substantially the same as the diameter of the holes provided and, in any event, less than the diameter of the head of the article to be inserted therein.

To assemble a plurality of screws, bolts and the like in said means above described, the shank, neck or narrow portion 4 of the article is inserted between the side members 3 and through the holes 2. The head or larger portion 5 of the article is then forced between the side members 3. For screws and bolts having a head which tapers into the neck portion the resilient side members 3 will be forced apart by applying pressure to the head. For packing bolts without tapering heads it will be found necessary to spring

the side members 3 apart until the head passes through. Without transcending the scope of my invention I may insert the articles in holes provided in a flat strip and then cause the side members to be erected in the desired position in a known manner.

Referring to Figure 9 I may, during or subsequent to the operation of punching the holes in the strip 1, produce a plurality of cuts 6 extending radially or otherwise from said holes. The portions of metal defined between a pair of cuts on opposite sides of the respective holes are bent upward along a line connecting the ends of a pair of said cuts until they are inclined at an angle of about 45° with respect to the base as shown in Figure 10. The upraised portions 7 cooperate to normally restrain the head of the screw or bolt from passing therebetween except when pressure actuated from below by said head being forced against the restraining members.

The improved packing means above described may, for convenience, be referred to as a "clip". The clip of this invention is accordingly seen to comprise a support having a plurality of holes adapted to receive the narrow or restricted parts of the several articles to be packed therein and resilient members cooperating normally to prevent the escape of said article by partially enclosing the head or enlarged part of said articles, the resilient members being adapted to release the article when pressure is applied upwardly on the shanks of the articles.

It is obvious that, without transcending the scope of my invention, I may provide a supporting strip having a plurality of rows of holes. Further the strip may have the resilient side members mounted thereon in known manner instead of integral therewith. In certain cases, for example, with screws or bolts having a head making an angle of 90° with the neck or shank, I may employ a single resilient side or restraining member, and such will be found suitable for restraining and preventing the escape of such an article from the support.

The novel clip of my invention is adapted for packing a plurality of articles having the general shape of screws and bolts, which may be of various types such as wood screws, machine screws, lag screws, stove bolts, machine bolts, carriage bolts. In the appended claims the expression "screws, bolts or the like" is intended to cover other articles having the general shape of such articles.

The novel package provided by use of the clip of this invention is convenient and economical for retailing a plurality of articles such as screws and bolts and the like. As the clip may be made of any desired dimensions and with any desired number of holes, the number of articles to be retailed per unit of cost may be included in a single package. The novel clip also provides a

convenient means for maintaining the articles packed therein in orderly assembly in the home, etc.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. As an article of manufacture, a hardware package comprising a plurality of screws, bolts or like objects having a relative large head and a relative narrow elongated shank, and means maintaining said articles in orderly assembly comprising a rigid metal strip provided with a plurality of holes adapted to receive the shanks only of said articles and resilient metal members integral with said strip and positioned at an angle of about 45° with respect to said strip, the opposing resilient members being directed toward each other and normally preventing the escape of said articles from the holes and adapted to release the articles when pressure is applied upwardly on the shanks of the articles.

2. As an article of manufacture, a hardware package comprising a plurality of screws, bolts or like objects having a relative large head and a relative narrow elongated shank, and means maintaining said articles in orderly assembly comprising a rigid metal strip the longitudinal central section of which is provided with a plurality of holes adapted to receive the shanks only of said articles and the longitudinal side sections of said strip forming resilient members positioned at an angle of about 45° with respect to the central section, the opposing resilient members being directed toward each other and normally preventing the escape of said articles from the holes and adapted to release the articles when pressure is applied upwardly on the shanks of the articles.

3. As an article of manufacture, a hardware package comprising a plurality of screws, bolts or like objects having means maintaining said articles in orderly assembly comprising a rigid metal strip provided with a plurality of holes adapted to receive the shanks only of said articles and resilient members formed by cutting said strip along lines extending radially from said holes and positioned at an angle of about 45° with respect to said strip, the opposing resilient members being directed toward each other and normally preventing the escape of said articles from the holes and adapted to release the articles when pressure is applied upwardly on the shanks of the articles.

KENNETH BERRY MASON.