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(54) Roller device, particularly for mobilizing suitcases.

(57) The present invention concerns means for carrying bags and the like travel packages, and particularly to rolling aids for facilitating transport of such packages.

According to the invention there is thus provided a pocket size roller device for facilitating the mobilizing of suitcases and the like loads. The roller is adapted to be releasably attached to the bottom of a suitcase when in use and to be removed when not in use. The roller comprises a block shaped housing, a pair of distanced rollers mounted to the housing, and a loop forming strap or similar means affixed to the housing and adapted to be tightened around the suitcase for releasably fastening the housing to the bottom of the suitcase.

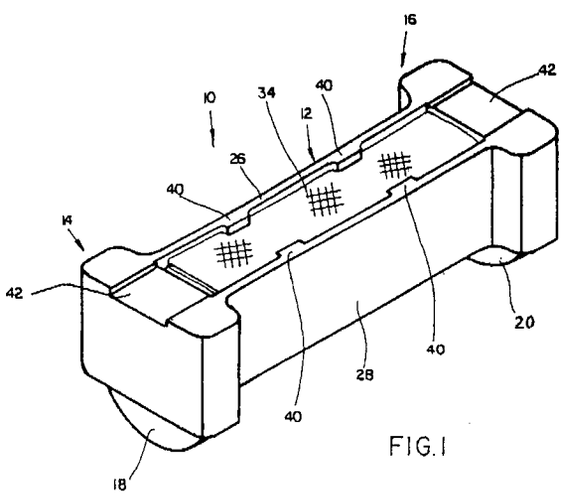

FIG.1

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FIELD AND BACKGROUND OF INVENTION

The present invention concerns suitcases, carrying bags and the like travel packages, and particularly relates to rolling aids for facilitating the transportation of the packages.

Many attempts have been made to make it easier for travellers to walk around airports' endless corridors, carrying their bags with them. There are widely used various types of trolleys, either permanently available at the airport or other transportation stations, or collapsible trolleys owned by the traveller which are foldable into a compact article after use; or there are available at the market suitcases having built-in rollers attached to the bottom side of the suitcase, thus forming an integral part of the suitcase.

These solutions, although most popular, do not present a satisfactory solution to the problem at hand; actually the said foldable trolleys tend to become a nuisance because of their bulk even when folded up both at use during a journey and also between successive uses.

Built-in rollers are usually of a small diameter and therefore sensitive to even the smallest obstacle on the floor, causing the suitcase to become stuck or overturned. Furthermore, their small size also dictates the installation of four rollers. If only two, larger rollers are provided at one side of the suitcase, a special retractable handle is necessary, which of course, renders the suitcase more complicated to construct and of course more expensive.

Also known are suitcases with detachable castors or rollers, namely which can be dismounted one by one and put away when not in use but then they could be misplaced or lost altogether.

SHORT SUMMARY OF INVENTION

The present invention aims to cure the above and other deficiencies of the conventional rolling aids for suitcases.

According to the invention there is thus provided a pocket size roller device for facilitating the mobilizing of suitcases and the like loads, being adapted to be releasably attached to the bottom of suitcase when in use and to be removed when not in use, the device comprising a block shaped housing having a flat top, a pair of distanced rollers mounted to the housing, and a loop forming strap with a buckle, affixed to the housing and adapted to be tightened around the suitcase for releasably fastening the housing to the bottom of the suitcase.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The invention will become more clearly understood and its advantages better appreciated in the light of the ensuing description of preferred embodiments thereof, given by way of example only, with reference to the accompanying drawings wherein:

Fig. 1 is a three dimensional view of the roller device featuring the principles of the present invention.

Fig. 2 is a fragmental, longitudinal cross section of the roller device of Fig. 1.

Fig. 3 illustrates use of the roller device.

Fig. 4 is an end view of the suitcase with roller device shown in Fig. 3.

Fig. 5 illustrates a further mode of use of the device according to the invention.

Fig. 6 illustrates the attachment of a roller device of a different configuration.

Fig. 7 shows a modification of the device of Fig. 1.

Fig. 8 shows a lid member of the device of Fig. 7.

Fig. 9 is a modification of lid of Fig. 8.

Referring now to Figs. 1 and 2, there is shown the roller device generally denoted by numeral 10 which consists of a rectangular pirsmatic housing 129 preferably manufactured by plastic injection moulding. The housing comprises a pair of opposite block like portions 14 and 16, designed to accommodate a pair of rollers denoted 18 and 20. Hence the portion 14 defines a hollow cavity 22 for the mounting of an axle 24 with the roller 18; the portion 16 at the other side of the housing 12 is of an identical construction.

Side walls 26 and 28 of the housing 12 define together with bottom wall 30 a hollow compartment 32. The compartment 32 is of a size suitable for storing therein a folded strap 34 provided with a buckle 36. Conveniently, the bottom wall 30 include slits 30a, 30b, 30c and 30d through which the strap 34 is threaded - rather than being affixed by external means such as rivets or by gluing.

At the open top of the compartment 32 there are preferably provided four detents 40 designed to form stop means for retaining the folded strap 34 within the compartment 32 when the device is not in use.

Furthermore, shallow recesses or depressions 42 are made at both sides of the housing for a reason to be clarified further below.

In use, as illustrated in Figs. 3 and 4, the roller device 10 is attached by its strap 34 to the bottom wall of a suitcase 50, and tightened by the buckle 36. The strap's extended length 34a is passed below tightening straps 52 and 54 of the suitcase 50 (if available); the strap 34 is preferably provided with a handle loop 34b by which the suitcase is being lifted and dragged by the user.

It will thus be evident that the depressions 42 (Fig. 1) allow the passage of the strap 34 thereon, so as not to interfere with the direct and stable contact of the upper surface of the housing 12 against the bottom of the suitcase 50.

The roller device 10 is readily adapted to be used in pairs, whenever deemed convenient, as depicted in Fig. 5.

In Fig. 6 there is illustrated a roller device 10 which comprises housing 12 which stores a strap 34 made in the present embodding of rubber, a strong thin rope 60 is used in an analogous manner to handle portion 34a.

When not in use, the roller device 10 will be completely separated from the transported item, be it a suitcase, bag, or any other load, and for convenience, the strap may be folded back into the storage compartment 32. Considering its small size, the device 10 may be easily stored away without causing any nuisance or inconvenience, as heretofore experienced with the foldable trolleys - or the individual rollers - as the case may be.

It is noteworthy that the diameter or the rollers 18 and 20 may be much larger than that of rollers or castors used in the built-in versions of suitcases; also, the suitcase travels at a larger distance from the ground. Therefore, rolling becomes easier and smoother, particularly over irregular or coarse floors.

In the embodiment shown in Fig. 7, the device 110 has a lid 170 snugly fitting over the strap storage compartment 132, e.g. by friction or snap action - instead of the retaining detents 40 (Fig. 1).

The lid 170 is of a smaller width at its central portion, at least where one or two pulling out cut-outs 172 are made.

The strap 134 may be attached to the lid 170 in ways as exemplified in Figs. 8 or 9.

A recess window 174 may be provided for the insertion of an identification table, advertisement, logo, etc.

Obviously, the lid member proper also functions as a handle (see 34b in Fig. 3).

It can be envisioned that the roller device will readily be manufactured in mass production at extremely low cost and even become promotional give away article for airline companies or travel agencies.

Those skilled in the art will readily appreciate that various changes, modifications and variations may be applied to the invention as heretofore described, without departing from its scope, as defined in and by the appended claims.

Claims

1. A pocket size roller device for facilitating the mobilizing of suitcases and the like loads, being adapted to be releasably attached to the bottom of the suitcase when in use, and removed when not in use, the device comprising:
   a) a block like housing having a flat top,
   b) a pair of distanced rollers mounted to the housing, and
   c) a loop forming strap with a buckle, affixed to the housing, and adapted to be tightened around the suitcase for releasably fastening the housing to the bottom of the suitcase.

2. The roller device of claim 1 wherein the housing is hollow, forming a compartment for the storage of the strap in a folded state.

3. The roller device of claim 2 wherein the compartment is opened towards the said flat top.

4. The roller device of claim 3 wherein means are provided for retaining the folded strap within the said compartment.

5. The roller device of claim 4 wherein the said retaining means include at least one detent projecting into the said top opening of the compartment.

6. The roller device of claim 4 wherein the said retaining means comprise a lid member releasably fitting over the opening of the compartment.

7. The roller device of claim 1 wherein the rollers are installed within cavities formed at opposite sides of the housing.

8. A roller device as claimed in claim 1 where said strap is made of resilient material such as rubber band.

9. A roller device as claimed in claim 1 where the device is further provided with a thin strong rope to facilitate the carrying of a bag.

10. The device of any of the preceding claims wherein the housing is made by plastic injection molding.

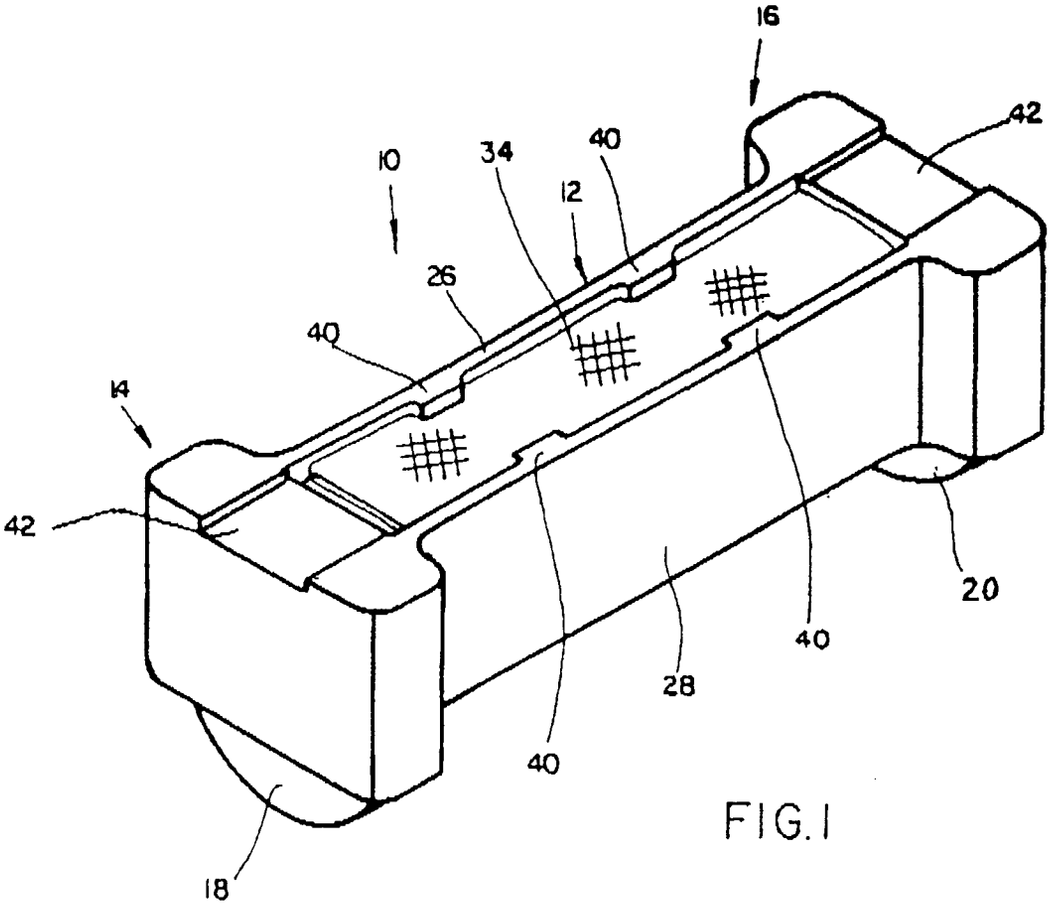
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FIG.1

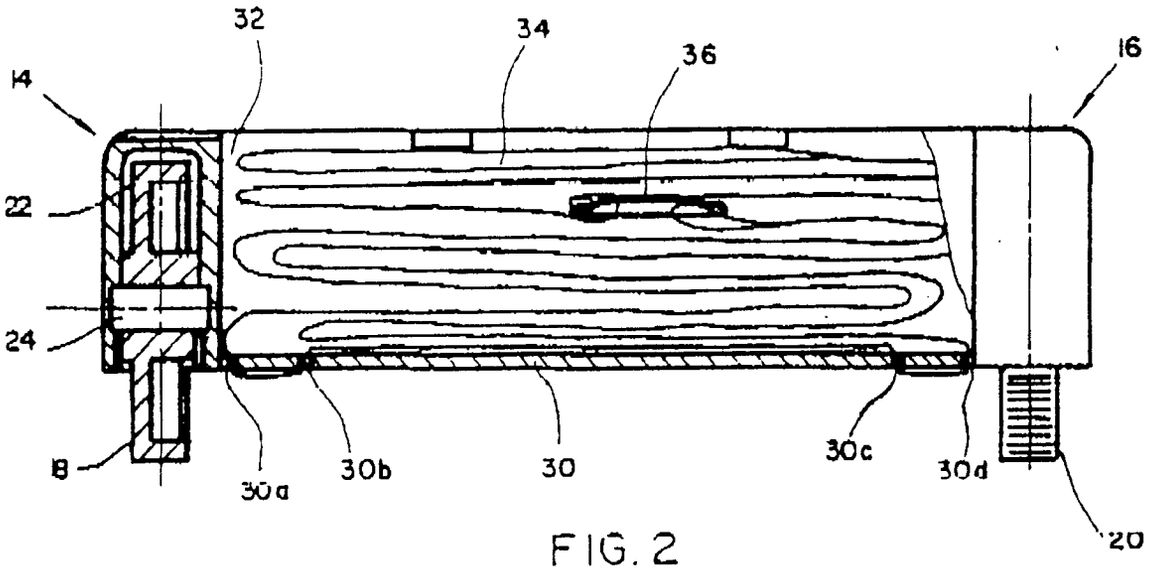
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FIG. 2

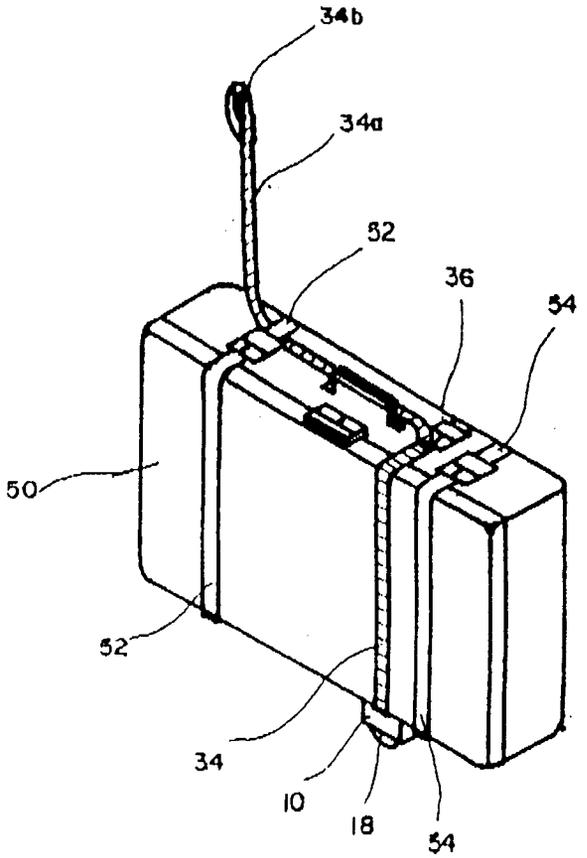


FIG. 3

FIG. 4

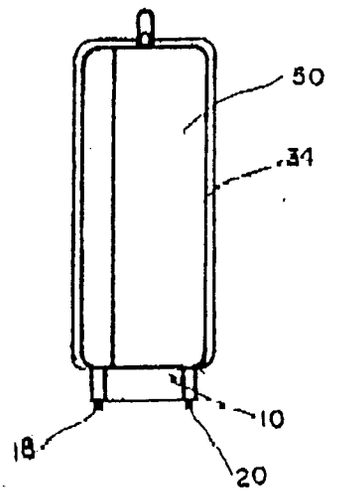


FIG. 5

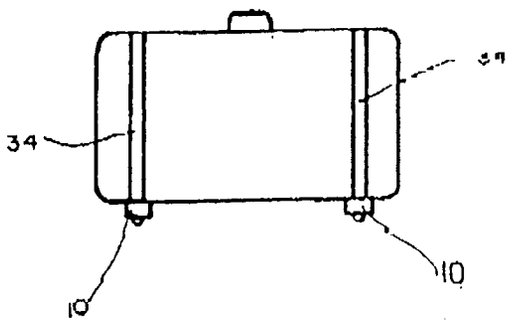
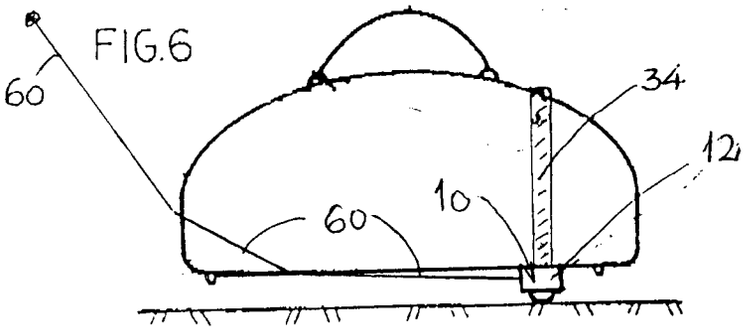


FIG. 6



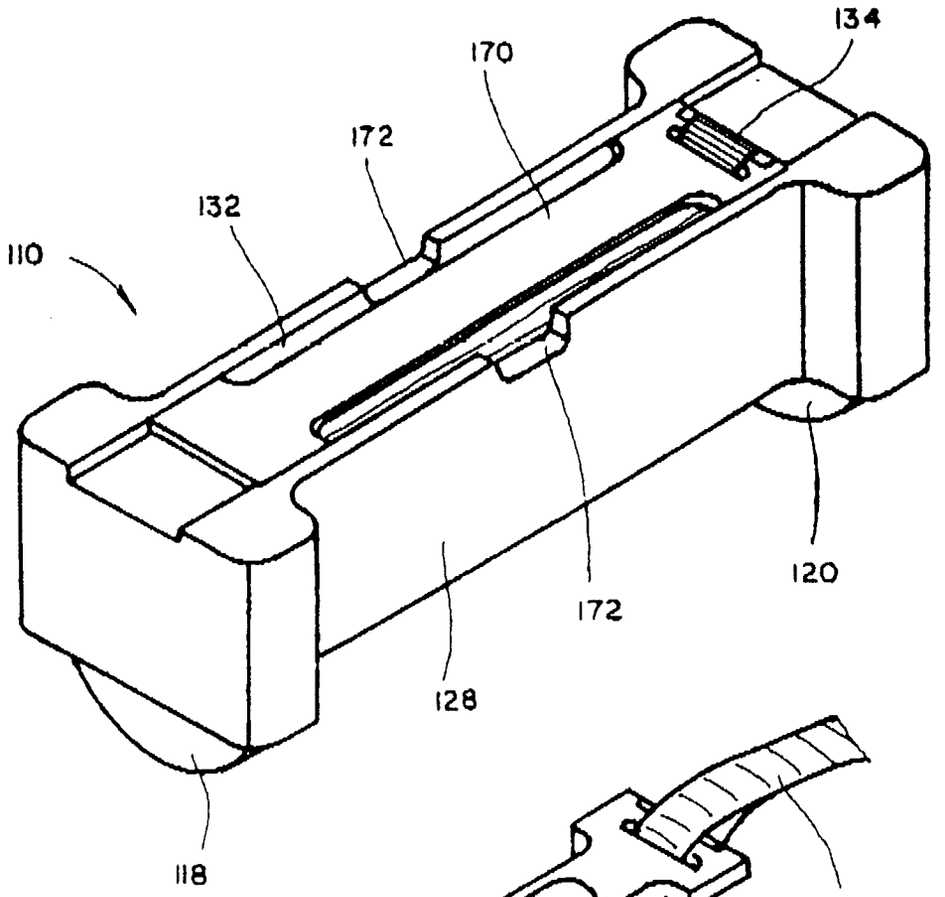


FIG. 7

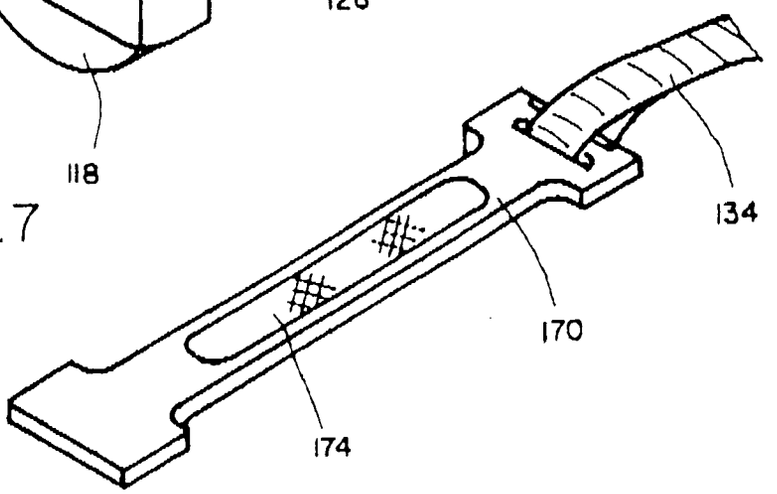


FIG. 8

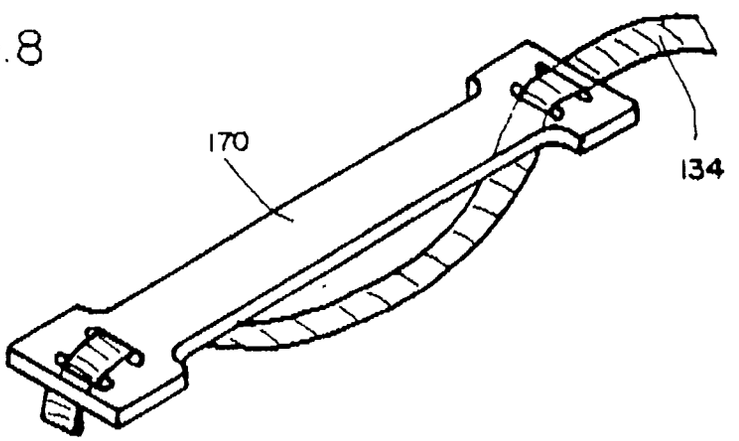


FIG. 9