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[56] **References Cited**
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[54] **SAFETY ESCAPE BAG**
 1 Claim, 3 Drawing Figs.

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[51] Int. Cl..... **A62b 1/20**

[50] Field of Search..... **182/48, 49;**
193/25

ABSTRACT: A safety escape chute having a series of pliant tubular columns connected by resilient portions made of spiral mesh so that when a first escaper is in the chute his weight so deforms the spiral mesh resilient portions downwardly that a second escaper cannot pass therethrough and thus cannot collide with the first escaper at the bottom of the chute.

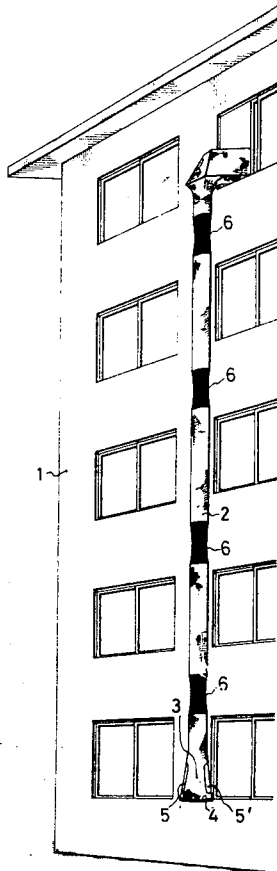


FIG.1

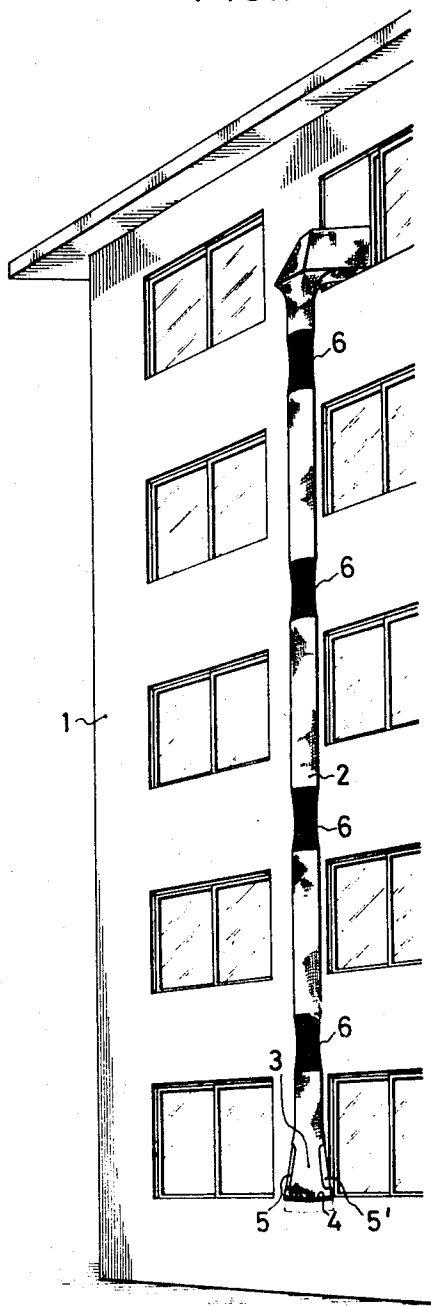


FIG.2

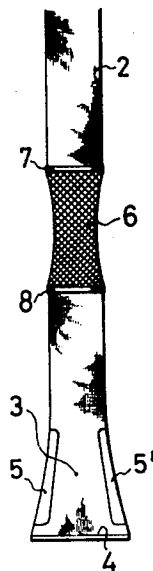
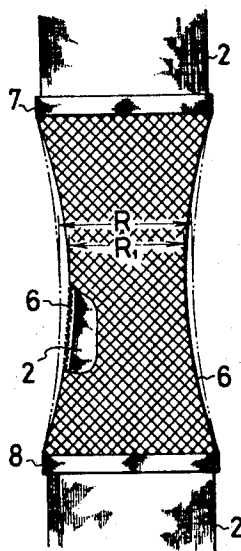


FIG.3



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SAFETY ESCAPE BAG

This invention relates to a safety escape bag used for refugees when the building is on fire.

The main object of the invention is to provide a safety escape bag characterized by the functions that any collision is surely prevented between refugees who are falling or descending in confusion through the extended bag.

Another object of the invention is to provide a safety bag characterized by the function that any refugee will be forcibly and automatically checked for a while in the bag when the forerunner is still descending.

Now, with these and other features of the invention, further descriptions will be set forth substantially below in the illustrations, drawings and appended claims:

FIG. 1 is a perspective view of a safety escape bag installed over the building, carrying out an embodiment of the invention.

FIG. 2 is an enlarged view of the bag showing a novel function thereof.

FIG. 3 another enlargement of the bag showing the same function thereof in detail.

Referring to FIG. 1, a slender, cylindrically formed, safety escape bag 2 is hanging over the building 1 vertically with the entrance or way in suitably installed on the uppermost window. The lowermost portion 3 of the bag 2 is formed with a closed flat bottom 4 which surely serves to prevent any falling-down refugee from being directly crashed against the ground. Also, the cylindrical bag is adapted to have a diameter to slide down the refugees narrowly, and being made of tough cloth, to slow down the falling speed of the refugees slightly by friction thereof. Said lowermost portion 3 of the bag 2 is mounted on the cylindrical side with exits 5, 5' which enable the refugees to get off the closed flat bottom 4. Said cylindrical bag 2 has one or more than two collision-checking or -stopping means 6 which form one of the major novelties of the invention. As clearly seen in FIGS. 2 and 3 together with FIG. 1, the temporary stopping means 6, in each, consists of a short cylindrical body of spiral mesh, just like that of fishnet, quite different from what is called cloth substance, to be positioned suitably to make one of the compartments of said bag. As the upper and lower dually threaded-out rims 7, 8 of the mesh stopping means are loaded with considerably strong and heavy weights of the refugees, the rim portions may be connected by means of bonding cements or reinforced by special mounting patches.

Thus, in actual operations, when the refugees go down through said safety escape bag 2, being made of cloth with the narrow diameter, causes the friction against the falling-down refugees, whereby their own-weights falling actions will be decreased in speed, to enable them to reach the bottom 4 at a safely reserved speed. Further, when the initial refugee passes down through said temporary stopping means of spiral mesh, he will be considerably checked in speed to continue to fall

down safely until he reaches weighing said bottom 4 to urge said cylindrical bag 2 to extend itself downward, as shown by dotted lines in FIG. 1, because the bag is suspended over the building. Then, the slight extension of said cylindrical escape bag 2 decreases the diameter R to R1, to such an extent that the following refugee will be checked down temporarily by the stopping means 6 while the initial is still on said flat bottom before he is freed to fall down again as soon as the initial or forerunner gets off out of the optional exit of the lowermost portion thereof, to make the extended bag lose the loading pull therefrom.

As described above, this safety escape bag according to an embodiment of the invention is characterized in that any refugee who is confused to jump into the bag, is surely checked halfway by one of said temporary stopping means 6 from the forerunner to be safely protected against any possible collision from behind; in that said cylindrical spiral mesh means 6 is quite low in production cost as said fishnet like materials may be employed for; and in that any multiple application of said collision-stopping means 6 with a regular interval, will assure more safety landings for the refugees without regard to said diameter R or R1.

In the drawings and specifications, I have set forth a preferred embodiment of the invention, and although special expressions or terms are employed for the embodiment, they are only used therefor in an illustrative or descriptive sense, and not for the purposes of limitation, the scope of the invention being defined by the appended claim.

I claim:

1. An escape device comprising an elongated tubular body adapted to be supported at its one end in a position to extend vertically downwardly and including an opening at its upper end for receiving an escaper, a closed flat bottom at its lower end for catching thereon the escaper who has fallen through the body and an opening provided laterally to the wall of said elongated tubular body adjacent to its lower end for the escaper to exit from the body, and means to prevent the fall through said tubular body of a second escaper while a first escaper is in said escape device,

said tubular body comprising a series of pliant tubular columns having diameters sufficient for allowing an escaper to pass through and connected by resilient portions made of spiral meshes, said resilient portions comprising said means to prevent the fall of a second escaper, each said resilient portion having a diameter smaller than those of the tubular columns and being radially expandable to such an extent that the free fall and downward speed of an escaper are resisted and reduced, each said resilient portion being longitudinally expandable to such an extent that it can completely prevent the fall of the second escaper therethrough when the first escaper has been caught on the closed flat bottom and his weight is added to the device, thereby preventing two escapers from colliding each other at the lower end of the device.