

# United States Patent

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[54] **SKATE DEVICE FOR TRANSPORTING LARGE OBJECTS**  
**3 Claims, 4 Drawing Figs.**

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**ABSTRACT:** The invention relates to a skate device for transporting unwieldy, large flat objects with ease. The device comprises an elongated base member containing a pair of brackets at each end and a clamping bracket member at its midsection. Rollers are provided on the bottom of the base member and are all in line. The end rollers are mounted slightly above the midsection roller to enable the skate to be tipped backward or forward on the end rollers for maneuverability. The skate is clamped to an edge of the flat object for transporting.

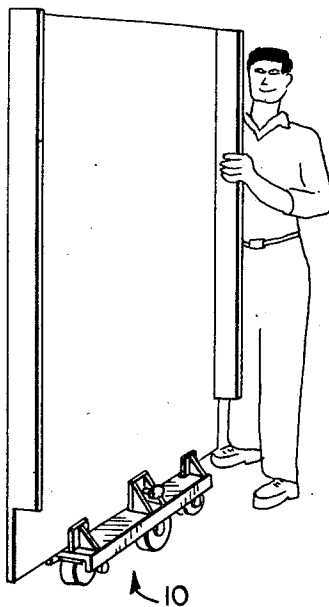


FIG. 1

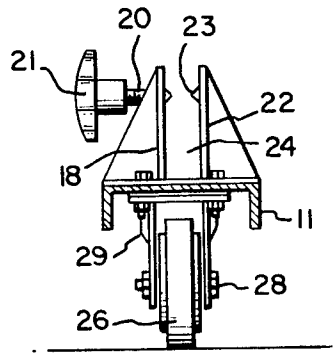
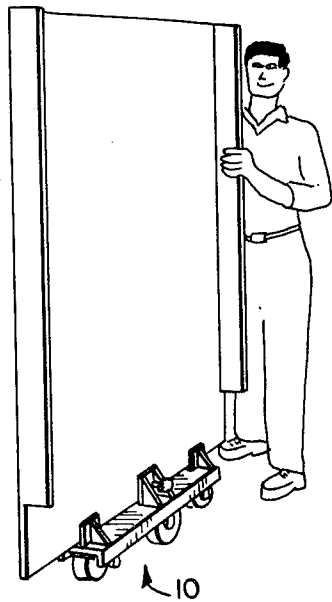


FIG. 4

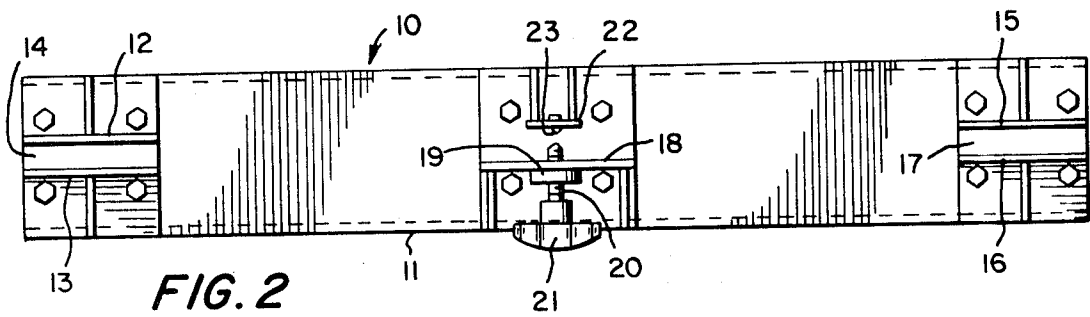


FIG. 2

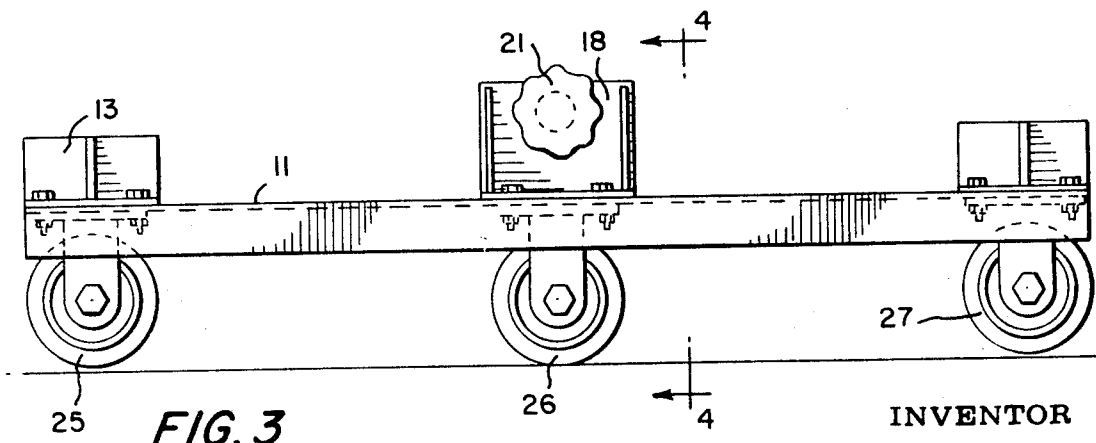


FIG. 3

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**SKATE DEVICE FOR TRANSPORTING LARGE OBJECTS**

This invention relates to a device for transporting a large flat object from one place to another.

The invention is particularly concerned with the handling and transporting of flat objects with large surface areas such as a sheet of metal, wood, plastic and the like. The handling by one or more persons of a sheet having considerable length and breadth compared with its thickness is particularly cumbersome when it is desired to get it into and out of a storage location and transporting it any distance to where it is to be used for any purpose. The problem is particularly difficult when the object is heavy such as one made of a metal such as steel and the like.

Accordingly, this invention provides a device for handling and transporting large flat objects by means of skate or dolly designed to be clamped to the object and thereafter the object is moved on the skate to a desired location.

The invention will be apparent from the following description taken in conjunction with the accompanying drawing wherein a particular embodiment of the invention is described, wherein:

FIG. 1 is a perspective view of the skate of the invention showing a large flat object in position on the skate and capable of being moved by a workman;

FIG. 2 is a top view of the skate of the invention;

FIG. 3 is a side elevational view of the skate; and

FIG. 4 is a sectional view taken along line 4-4 of FIG. 3.

Referring now to the drawings, the numeral 10 generally denotes the skate or dolly of the invention. The skate comprises a base 11 which is a U-shaped elongated channel member constructed of aluminum, steel, or the like. A pair of identical brackets 12 and 13 are secured to one end of the base 11 by suitable means providing a space 14 between them. Similarly, a pair of brackets 15 and 16 are secured to the other end of the base 11 by suitable means providing a space 17 between them.

At the midsection of base 11, another bracket device is provided which comprises a bracket member 18 suitably secured to base 11 and containing a threaded nut 19. A pointed threaded bolt 20 containing a knob 21 is screwed into the nut 19 and through a hole (not shown) of bracket 18. Opposite bracket 18 is another bracket 22 containing a pressure point abutment 23. A space 24 is provided between the two brackets 18 and 22.

The base 11 is provided with three caster or rollers 25, 26 and 27 mounted inline along the bottom of the base, as shown in FIG. 4, the roller 26 is mounted on axle 28 carried by frame 29 mounted on the underneath side of base 11. Rollers 25 and 27 are similarly mounted. The rollers are identical in construction and may be made from aluminum, phenolic resins and the like. Rubber tires may be mounted on the rollers to provide safety and protect floors.

The axles of rollers 27 and 25 at each end of base 11 are mounted in a manner that they are slightly closer to the base than the axle of roller 26. In this arrangement of rollers, a load

carried by the skate is primarily carried by roller 26 which always contacts the ground surface. Accordingly, the ends of the skate may be tilted either up or down around axle 28, whereby the load is additionally carried by either roller 25 or 27 but not by all three rollers at the same time. In this manner, the skate may be easily maneuvered, swiveled and steered. Thus, if it is desired to turn the skate with a load on it, the skate is adjusted to ride only on roller 26 and it is turned in the direction desired. In straight line movement, the load may be adjusted to ride on roller 26 with either rollers 25 or 27.

When it is desired to transport a large flat object, one needs only to clamp the skate to one edge of the object by placing the edge in spaces 14, 24 and 17 of the respective brackets. The knob 21 is turned and the bolt 20 is tightened against the surface of the object on one side and the abutment 23 is tightened against the opposite side of the object. The object may be flat on the ground when the skate is attached, and it is only necessary to lift an edge for attaching the skate. Thereafter, the object can be tilted upwardly to a vertical position on the skate as shown in FIG. 1.

It can be seen that the novel skate embodies a member of significant features which increase the safety of handling unwieldy flat objects, which is easily maneuverable, and with which the objects may be rolled on edge from place to place with far less effort than previously was possible. A particular aspect of the invention is its simplicity of design and resultant reduced construction costs.

While a specific embodiment of the invention has been described, it is understood that the invention is not limited to the specific features shown and various changes may be made in its construction by those skilled in the art, without departing from the spirit of the invention as defined by the appended claims. For example, the clamping means may be modified to provide for padding which would tighten against brittle objects such as a large pane of glass and the like. Furthermore, the clamping means may be disposed at either or both ends.

What I claim is:

1. A skate device for transporting large flat objects comprising an elongated base member, a pair of brackets mounted on the top of each end of said base member, a third bracket mounted at the top of the midsection of said base member, each of said brackets being in horizontal alignment and comprising a pair of parallel vertical members having a fixed width there between for receiving an edge of a flat object to be transported, said third bracket containing an adjustable clamping means adapted to clamp the edge of a flat object within said bracket, rollers mounted on each end and at the midsection on the bottom of said base member, said end rollers mounted slightly above said midsection roller, whereby said skate may be tilted forward or backward on said end rollers.

2. The skate device of claim 1 wherein said clamping means comprises a pointed threaded bolt member and an opposed pressure point abutment.

3. The skate device of claim 1 wherein said end brackets are U-shaped channel members.

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