United States Patent [19]

Penniman et al.

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[45] **Sept. 17, 1974**

[54] **MOUNTING RACK FOR SKIS OR THE LIKE**

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[73] Assignee: **Barreca Products Co.,** Shelburne, Vt.

[22] Filed: **Aug. 31, 1972**

[21] Appl. No.: **285,492**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 183,550, Sept. 24, 1971, abandoned.

[52] **U.S. Cl... 224/41.1 F,** 211/60 SK, 280/11.37 K, 294/87 R

[51] **Int. Cl.** **B60n 9/04**

[58] **Field of Search**..... 224/42.1 F, 42.1 E, 42.1 D, 224/29 R, 45 S, 5 Z; 280/11.37 K, 11.37 A; 211/60 SK, 4 R, 7, 64; 294/67 BB, 87 R, 63 B

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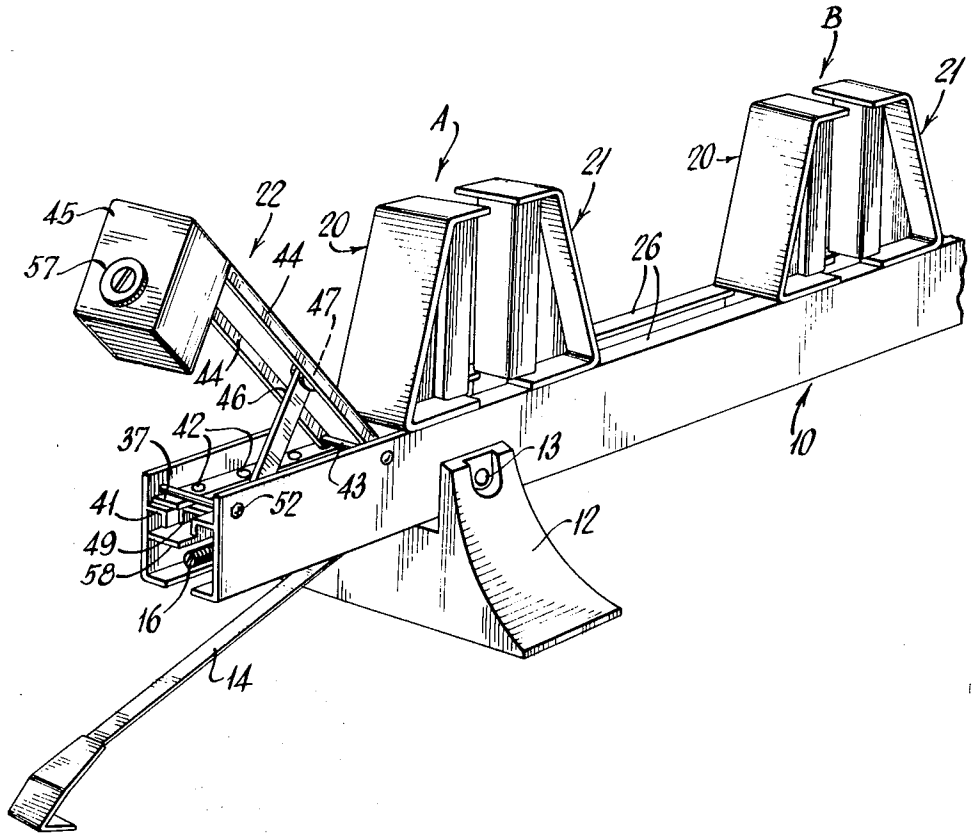
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[57] **ABSTRACT**

The invention contemplates a novel rack construction, as for carrying skis or the like on the roof or other exterior part of a vehicle. Plural pairs of skis are vertically clamped, back-to-back, by like pairs of relatively movable upstanding post members, and a single lockable actuator at one end of the rack is operative to set or to release all post pairs in unison. In the form disclosed, each pair of posts comprises a fixed post and a movable post, and the movable posts are all ganged in their connection to the single actuator.

29 Claims, 15 Drawing Figures

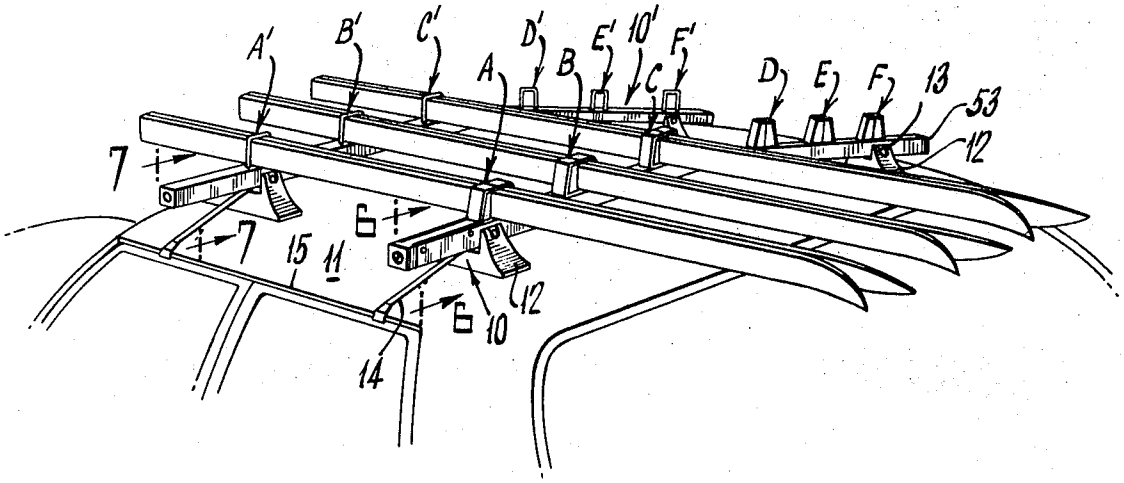


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Fig. 1.



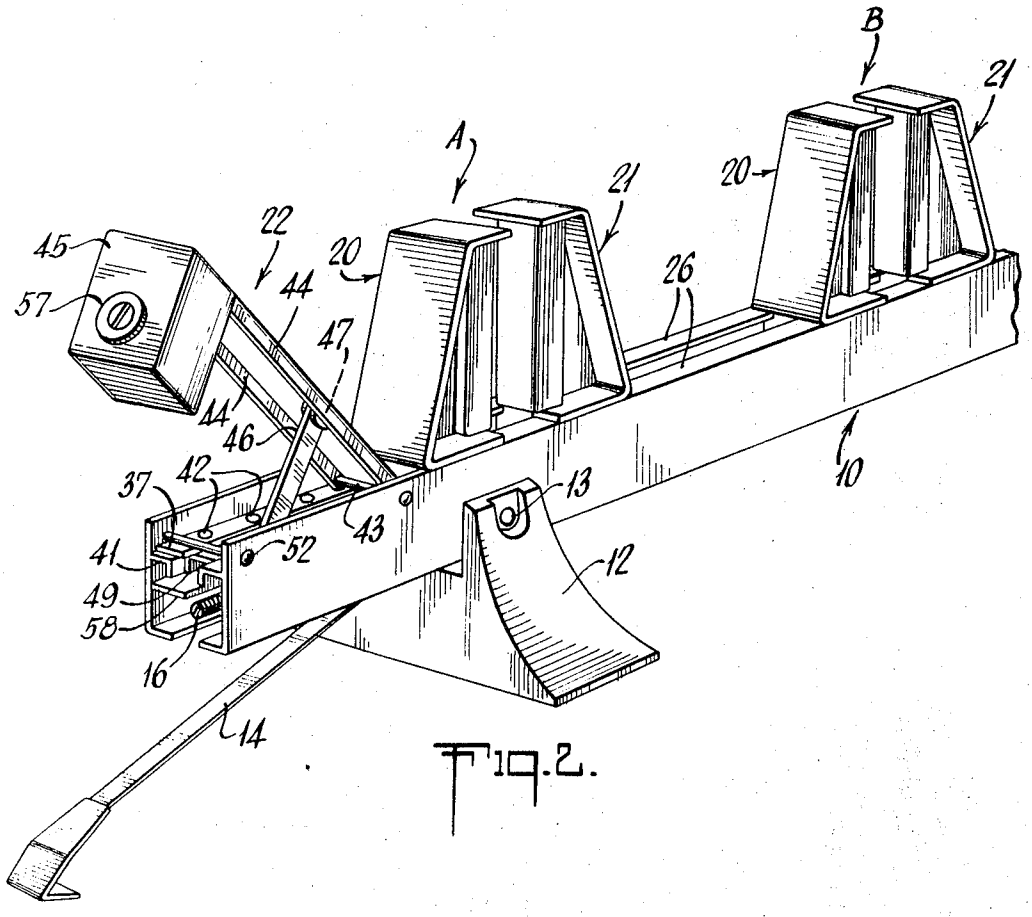


Fig. 2.

Fig. 3.

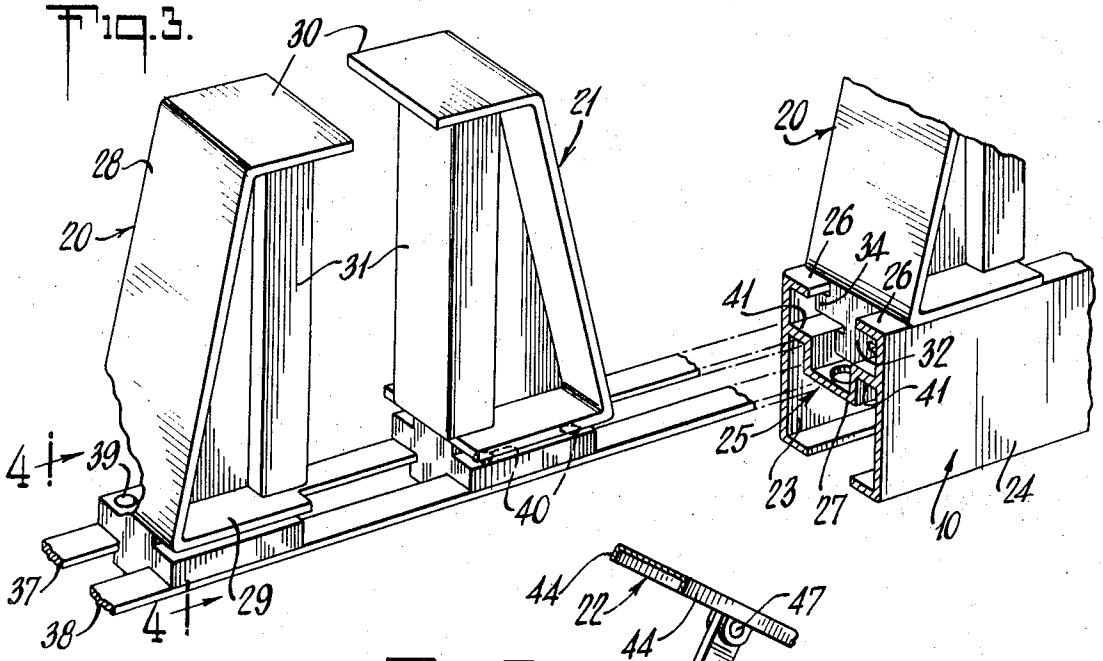


Fig. 5.

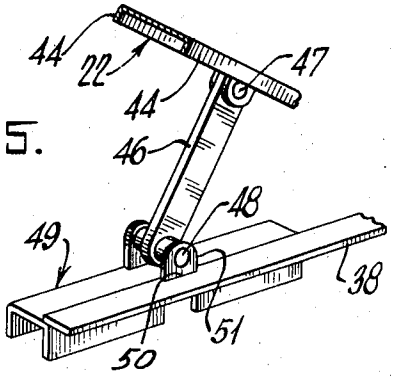


Fig. 4.

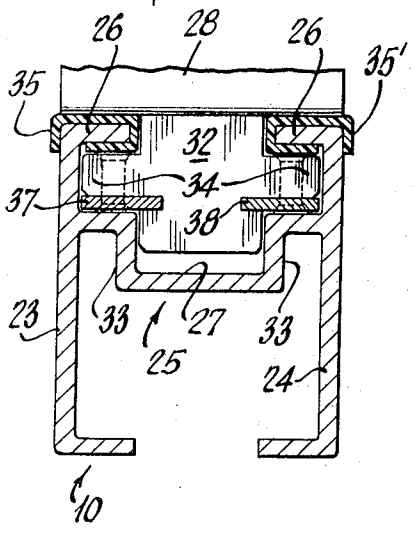


Fig. 6.

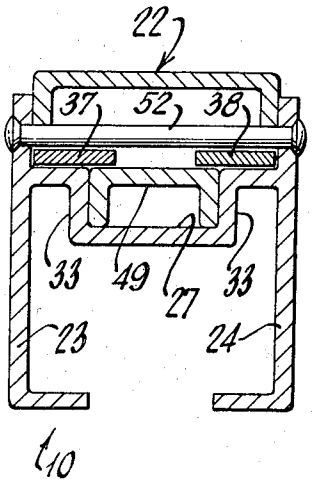


Fig. 7.

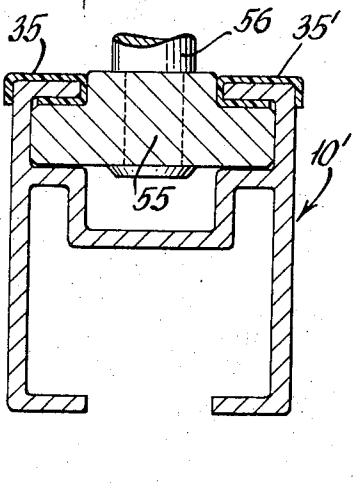


Fig. 8.

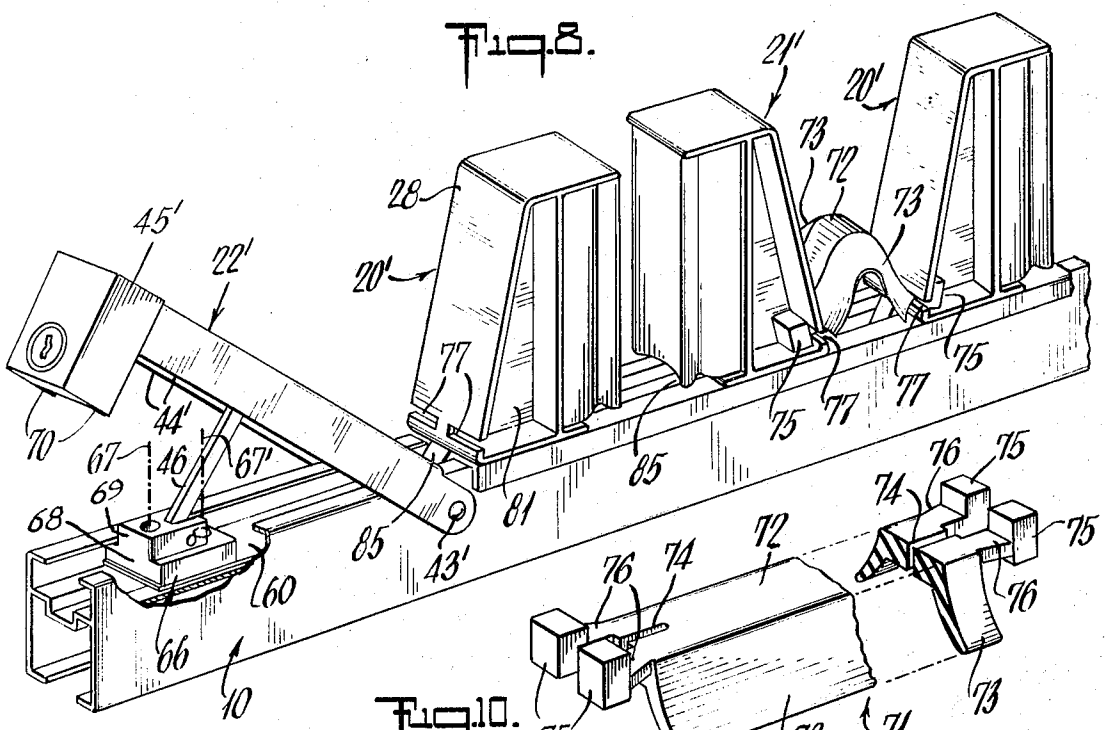


Fig. 10.

Fig. 11.

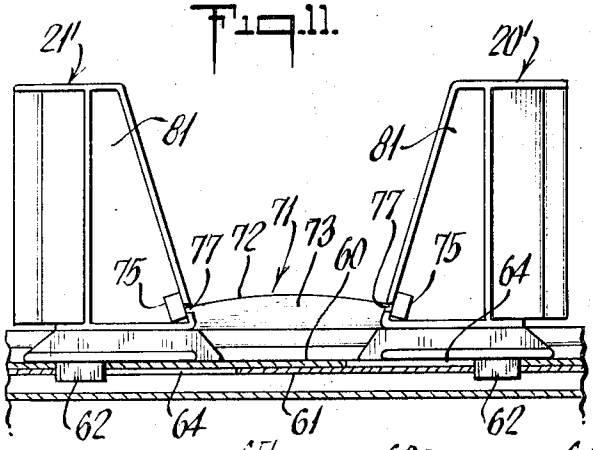


Fig. 12.

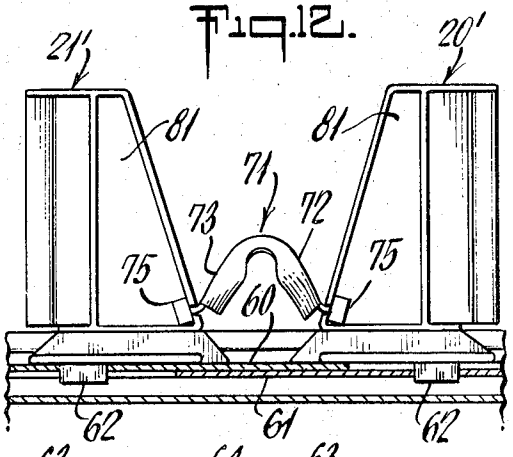


Fig. 9a.

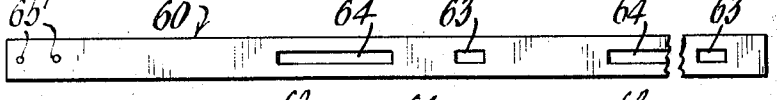


Fig. 9b.

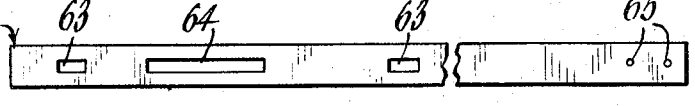


Fig. 13.

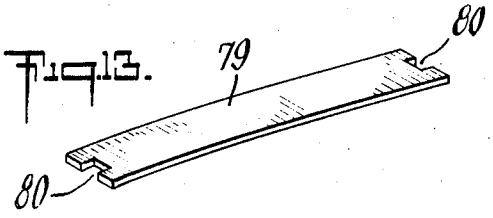
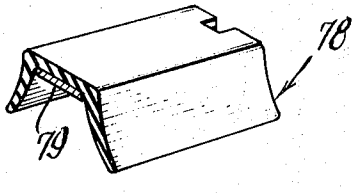


Fig. 14.



MOUNTING RACK FOR SKIS OR THE LIKE

This application is a continuation-in-part of pending application Ser. No. 183,550, filed Sept. 24, 1971, now abanded.

Our invention relates to rack constructions for carrying skis or the like on the roof or other exterior part of a vehicle.

Several general types of ski racks are in use today, but each is beset with disadvantages and unnecessary limitations. Generally, these disadvantages reduce to uneven clamp action, insecure clamp action, and too few skis served by a single lock and key.

It is an object of the present invention to provide an improved construction, avoiding the disadvantages and limitations of prior constructions.

Another object is to provide an improved rack of the character indicated having greater and more-efficient ski-carrying capacity.

A further object is to provide an improved ski rack in which all ski-clamp regions are actuable in a single operation, and from one side of the vehicle.

Still another object is to meet the above objects with a construction in which ski-clamp action is uniform at all ski-clamp regions.

A still further object is to provide a construction of the character indicated with inherent ability to operate in the presence of ice accumulations.

A general object is to meet the foregoing objects with a construction of basic simplicity, inherent low cost, and offering maximum security against tampering and thievery.

Other objects and various further features of novelty and invention will be pointed out or will occur to those skilled in the art from a reading of the following specification, in conjunction with the accompanying drawings. In said drawings, which show, for illustrative purposes only, a preferred form of the invention:

FIG. **1** is a perspective view of an automobile rooftop installation of two ski racks or carriers of the invention;

FIG. **2** is an enlarged fragmentary, perspective view of the actuating end of the rear-mounted one of the racks of FIG. **1**, shown for the open position, for reception or removal of skis;

FIG. **3** is a simplified fragmentary perspective view of the rack of FIG. **2**, partly broken away, to reveal internal parts and their cooperation;

FIG. **4** is a sectional view taken at **4—4** in FIG. **3**;

FIG. **5** is a fragmentary view in perspective for certain of the actuating parts of the rack of FIG. **2**;

FIG. **6** is an end view of the actuating mechanism, for the closed condition as seen by cutting the mechanism at **6—6** in FIG. **1**;

FIG. **7** is a sectional view taken at **7—7**, in the other rack of FIG. **1**;

FIG. **8** is a view similar to FIG. **2** to show a modified rack construction of the invention;

FIGS. **9***a* and **9***b* are planform views of control elements in FIG. **8**;

FIG. **10** is an enlarged perspective view of a resilient ice-deflecting member used in the construction of FIG. **8**;

FIGS. **11** and **12** are similar fragmentary views in side elevation, showing use of the member of FIG. **10**, for the ski-clamping condition and for the ski-unclamping conditions, respectively;

FIG. **13** is a perspective view of a reinforcing element for use in a modification of the member of FIG. **10**; and

FIG. **14** is a fragmentary perspective view of the complete member embodying the reinforcing element of FIG. **13**, the same being centrally cut to reveal the cross-section of the reinforced construction.

Referring to FIG. **1**, the invention comprises an elongated frame member or bar **10**, being one of two frame members **10—10′** for any given installation, as to the roof **11** of an automobile. The frame members **10-10′** may be duplicates of each other, but in the preferred form, their similarity is in initial appearance only, as will later become more clear.

Frame members **10** may be straight but are shown slightly arched or centrally bent, for general conformance with the contour of roof **11**. Frames **10-10′** stand upon spaced feet or pads **12**, which may be of molded rubber or the like, preferably incorporating suction-cup formations for greater hold of a given footing. Pinned connection at **13** to frame **10** enables a limited degree of contour-conforming pad articulation, depending upon the particular vehicle. Anchoring straps **14** carried by frames **10-10′**, near their ends, enable lateral stability, as through connection to the rain gutter **15** of the sedan model shown. The means for attachment and adjustment of straps **14** with respect to frames **10-10′** form no part of the invention and will therefore not be described, beyond identifying at **16** (FIG. **2**) tool-engageable means whereby the anchoring tension may be set for strap **14**.

In accordance with the invention, like pairs of adjustably clamped upstanding posts are provided in spaced relation along the length of frame **10**, the number of such pairs being the desired maximum number of pairs of skis to be accommodated. In FIG. **1**, the respective pairs of posts are generally identified A-B . . . F, for a capacity of six pairs of skis. The left-hand post member **20** (FIG. **2**) of each of the pairs A through F is one of a first plurality (six) of duplicates, fixedly spaced with respect to each other and carried by frame **10**; similarly, the right-hand post member **21** of each of the pairs A through F is one of a second plurality (six) of duplicates, fixedly spaced with respect to each other and carried by frame **10**, at locations interlaced with those of the first plurality. These pluralities are movable with respect to each other such that, in a first position, all corresponding pairs of ski-post members **20–21** are in closed, ski-engaging, adjacency (FIG. **1**) and that, in a second position, all corresponding pairs of ski-post members **20–21** are "open," i.e., sufficiently spaced for ski removal and insertion. Movable actuator means, such as a toggle-actuating or control arm **22** carried at one end of frame **10**, reacts between the first and second pluralities **20–21**, for selectively moving the same from and to the first and second positions. Preferably, arm **22** is "down" and aligned with frame **10** for the first or ski-clamping position; and in the form shown, the posts **20** of the first plurality are fixed to the frame, while the posts **21** of the second plurality have a common ganged actuating connection to the control arm **22**.

Specifically, frame **10** includes elongated guide means, formed in the course of extruding the frame material, for example aluminum. The basic extruded section appears in FIGS. **3** and **4** and is generally H-shaped, having spaced inwardly flanged upstanding

side members or walls **23–24,** connected by a central web **25,** and thus defining an upwardly open channel and a downwardly open channel. The lower channel will be understood to accommodate anchor straps **14** and their adjustment mechanism, symbolized **16.** The upper channel, which features upper flanges **26** and a depressed groove or trough **27** (in web **25**), is relied upon for support and guidance of the post systems **20–21.**

All posts **20–21** may be duplicates of each other, being preferably metal castings. Above frame **10,** the post structure is a generally C-shaped arm **28,** rising from a flat base **29** and terminating with a flat platform **30.** Post means **31,** rigidly fixed to base **29** and platform **30,** includes an outer sheath of yieldable protective material, such as rubber or a suitable plastic, for firm but harmless compressed and resiliently loaded engagement with an inserted ski. Beneath the upper surface of frame **10,** an integral tail **32** projects downward, for guidance by and between flanges **26** and by and between the sidewalls **33** of the central depression **27** (of web **25**); integral wings **34** project laterally beneath flanges **26.** Snapped-in extruded-plastic liners **35-35′** (as of polyethylene) are fitted to the respective flanges **26** for smooth low-friction and rattle-free support of posts **20–21** on the guide means **26.**

As noted above, all posts (**20**) of the first plurality are secured in spaced relation, and all posts (**21**) of the second plurality are also secured in similarly spaced relation, the first plurality being frame-referenced and the second plurality being control-arm actuated. In the form shown, a first or anchor strap **37** performs the first of these functions and a second or actuating strap **38** performs the second of these functions; straps are preferably of stainless steel and are stiff but sufficiently flexible to conform to the arch or bend of frame **10.** Strap **37** is secured, as by riveting **39,** to a concealed part of each of the posts **20** of the first plurality; strap **38** is similarly secured, as at **40,** to the remaining posts **21.** Straps **37–38** are laterally offset on opposite sides of the tail **32,** being accommodated in the respective spaces beneath the wings **34** and the web shoulders **41,** from which the groove **27** depends. The fixed reference for strap **37** may be achieved by riveting the ends thereof to the adjacent shoulder **41,** as shown at **42** for the exposed end in FIG. **2.**

Of the various available mechanisms for actuating strap **38** and, therefore, posts **21,** a simple toggle is preferred, wherein arm **22** is pivoted to the sidewalls **23–24** on a horizontal pin **43** (FIG. 2). For firm reference, top flanges **26** are locally cut away at the region of accommodating arm **22,** and arm **22** is a channel having downward side flanges **44** which fit closely but freely between walls **23–24.** Pin **43** preferably passes through both walls (**23–24**) and both flanges (**44**) in such manner that in the "down" position of arm **22,** the exposed surface of arm **22** is flush with the upper surface of frame **10.** Arm **22** is shown with an enlarged head or cap **45,** of section conforming to the external limits of the extruded section **10,** so that the "flush" appearance with section **10** is complete when in the "down" position (FIG. **1**). A toggle link **46** is pinned at **47** to trunion formations in arm **22;** at its other end, a pin **48** connects link **46** to a slide member **49** (see also FIG. **5**). Slide **49** pilots on the elongated depression **27** and is stabilized between the flanks **33** thereof. A simple offset bracket may be the means of connecting the actuating strap **38** with slide **49,** but in the form shown in FIG. **5** a local cut-out **50** in the edge of strap **38** locates against the respective end edges of the slide trunion **51** by which pinned connection to link **46** is established. Assembly may be locally retained by one or more pins **52,** headed for permanent retention over straps **37–38** in the region of motion of slide **49** and positioned so as not to interfere with longitudinal motion of slide **49,** it being noted that straps **37–38** are of sufficient width to overlap the side-flange regions of slide **49.**

The described toggle mechanism need be provided only at the indicated single end of the rack frame **10,** since toggle actuation simultaneously controls the open or closed position of all ski-post pairs A through F. The other end of frame **10** may therefore be permanently closed by a suitable cap **53,** riveted or otherwise fixed to frame **10** (see FIG. **1**).

The other rack frame **10′** may be an exact duplicate of frame **10,** but as indicated above, such complexity is neither necessary nor desired. Preferably, frame **10′** utilizes the same basic extrusion and anchor-strap (**14**) mechanism as does frame **10,** for uniform appearance. However, as seen in FIG. **7,** the upper channel of frame **10′** (complete with its plastic liners **35-35′**) is used for permanent retention of an elongated mounting strip **55** to which like inverted U-shaped retaining hoops **56** are anchored, at spaced locations A′-B′ . . . F′, corresponding to the locations A through F already described for frame **10.** Preferably, hoops **56** are of bent steel rod, coated with a vinyl sheath for protection of inserted skis.

In the preferred use of the invention, rack **10′** is located forward and rack **10** is to the rear, as shown in FIG. **1.** A pair of skis, held bottom-to-bottom and set on edge, is inseted, tail first, into one of the hoops **56,** as at station A′, to an extent assuring slight compression of the skis on each other. The rack (**10**) to rack (**10′**) spacing is selected to sufficiently accommodate the boot-binding region of the skis, so that the main body of the skis (forward of the binding region) may be simply dropped into the space between opened posts **20–21,** at the corresponding location A of frame **10.** The tips of the skis then project substantially toward the rear of the vehicle, as shown. When the requisite number of other pairs of skis has been similarly applied to the hoops **56** and posts **20-21** at remaining stations B-B′, C-C′, etc. the arm **22** is actuated downward and may be locked, as by a single key operated mechanism, suggested at **57** in FIG. **2,** and operative to selectively dog the toggle mechanism as by clamping to a projecting end part **58** of frame **10.** In the course of setting the clamps, slide **49** will be displaced longitudinally outwardly, and may project to a limited extent within cap **45;** the skis are all engaged by posts **31** well before the clamps are set. Slight differences in thickness of the different skis are accommodated by the yieldable texture of sheathing on posts **31,** but all post pairs are subjected to the same clamp action, by reason of the ganged actuating connection **38.** Location of the axes is essentially a single horizontal plane, close to strap **38** when arm **22** is down, assures retention of the clamped condition, without stress on the locking means **57–58,** as will be understood. Release of all skis is instantly achieved by unlocking at **57** and merely raising arm **22.**

The arrangement of FIG. **8** incorporates certain modifications with respect to that of FIGS. **1** to **7,** but using

the same channel-frame section **10** and many of the general principles already described. However, from the point of view of the respective ganged connections of the respective pluralities of fixed post members **20'** and movable post members **21'**, there is an important difference. In FIG. **8**, two like wide straps **60–61** provide the interconnections, being typified by the planform views of FIG. **9***a* and **9***b*. The first **60** of these straps is connected to all movable ski-post members **21'**; the second **61** is connected to the frame **10** and to all fixed ski-post members **20'**, as will be more apparent from FIGS. **11** and **12**. As previously described, all ski-post members may be duplicates, it being a feature of those (**20'–21'**) of FIG. **8** that they each include an integral downward projection or lug **62** of rectangular section to accurately locate in one of the smaller rectangular openings **63** of the control straps **60–61**; at the same time, a series of longer rectangular openings **64**, interlaced with the smaller openings **63**, accommodate insertion of lugs **62** while permitting a degree of longitudinal relative movement of the strap and lug involved.

The relation of straps **60–61** for the ski-locked condition of the rack is suggested by the overlap of the two showings, FIGS. **9***a* and **9***b*, the two like straps **60–61** being assembled in end-for-end reversed relation. Thus, the lug **62** for the first (left-most) fixed ski-post member **20'** passes through the left-most small opening **63** in strap **61** and through the left-most larger opening **64** in strap **60**, and lugs **62** for remaining fixed ski-post members **20'** in the full assembly will be understood to similarly engage small openings **63** in strap **61** and larger openings **64** in strap **60**. Similarly, the lug **62** for the first (left-most) movable ski-post member **21'** passes through the left-most larger opening **64** in strap **61** and through the left-most small opening **63** in strap **60**, and lugs **62** for remaining movable ski-post members **21** in the full assembly will be understood to similarly engage small openings in strap **60** and larger openings in strap **61**. For the fixed strap **61**, and offset end is pierced at **65** for local securing to frame member **10**, and the same piercings **65'** in strap **60** enable a molded-plastic glide fitting **66** (FIG. **8**) to be riveted thereto, as suggested by rivet alignments **67-67'**.

Fitting **66** includes a wide rectangular base **68** which is guided within the upwardly open channel of frame **10**, being retained between the vertical side walls thereof and between the web and upper flange portions **26** thereof. An upper projection **69**, guided between adjacent edges of flanges **26**, is slotted to accommodate pinned connection of the actuator link **46**, the latter being also connected to actuator arm **22'** to complete a toggle-actuator mechanism. Arm **22'** is preferably an inverted channel with an internal wall-to-wall spacing which spans the width of frame **10**, thus allowing the channel walls **44'** to substantially overlap and enclose the top of frame **10**, both at a pinned connection **43'** to the frame **10** and throughout the end region beyond the first ski-post member **20'**. The cap or head end **45'** of arm **22'** may also comprise side-plate formations **70** which overlap the end of frame **10**, when in ski-locking position.

In accordance with a further feature of the invention, provision is made for effectively closing off or sealing the upwardly-open frame channel, in the spaces between adjacent fixed and movable ski-post members of adjacent ski-clamping pairs. Specifically, in FIGS. **8**, and **10** to **12**, a single injection-molded elastomeric member **71** serves this purpose.

As best seen in FIG. **10**, member **71** is an inverted channel comprising an upper base region **72** and two outwardly flaring sidewall regions **73**. The longitudinal ends of the base region **72** are slitted at **74** to define forked ends for the independent integral accommodation of relatively large prismatic locating blocks **75**, via short connecting tongues, as at **76**. To retain a connection to member **71**, the lower end of the arm **28** of each post structure is laterally slitted at **77** (best seen in FIG. **8**). Assembly involves placement of a block **75** behind each arm **28** at one of the slits **77**, the associated tongue **76** being located in the slit and flaring walls **73** being held downward, in seal-wiping contact with the respective flanges **26**, when in the ski-clamping position (FIG. **11**); in this position, the longitudinal dimensions are preferably so chosen that member **71** is longitudinally tensed and is slightly upwardly arched in the space between adjacent ski-post members **21'-20'**. This being the case, actuation of arm **22'** in the ski-unclamping direction brings adjacent members **21'-20'** of adjacent ski-clamping pairs into closer proximity and forces seal member **71** to further arch, as best seen in FIG. **12**. In this process, any ice formation over member **71** is quickly broken, dislodged, and ejected away from the open slot between flanges **26**. Closure to the ski-clamping condition re-tenses and seals member **71** to flanges **26**, to resume the FIG. **11** relationship.

FIGS. **13** and **14** show a modified seal member **78** wherein a stiffly compliant reinforcement, such as an upwardly arched piece of spring steel **79** is imbedded in the elastomeric molding for member **78**. The longitudinal ends of the reinforcement **79** are centrally notched at **80**, for location by the central web **81** of each ski-post member at slots **77**, and the dimensions are preferably so selected that for the ski-clamped condition of FIG. **11**, the member **78** is under slight resilient compression, into a slight or low-profile upward arch, as suggested by the profile of member **71** in FIG. **11**.

It will be appreciated that we have described an improved ski-rack construction meeting all stated objects. Specifically, the following desirable ends are achieved:

1. Skis are carried in an attitude (orientation) that is the same as when carried or stored by the skier; this enables easier loading and unloading of the skis in the racks of the carrier.
2. With tails pointing forward and held in the described attitude, wind and drag resistance are minimized in transit; this attitude also presents less area for snow or ice accumulation.
3. There is but a single point (**57**) for locking all the skis, as distinguished from most racks of equivalent capacity, which require four locking points. The invention thus specifically avoids the situation of somebody on the passenger side forgetting to lock "his side of the rack."
4. The driver can with significant convenience unlock the whole rack from his side of the car.
5. The described clamp mechanism is equally applicable to carriers mounted upon the rear deck lid, as distinguished from roof mounting.
6. The mechanism is sealable against snow and ice accumulation, and is self-purging upon actuation.

While the invention has been described in detail for the preferred form shown, it will be understood that modifications may be made without departing from the invention. For example, to carry forward the ice-purging function of our carrier, the base ends of all ski-post members **20–21, 20'–21'** may be formed with an integral obliquely sloped plow surface **85,** rising above the plane of strap connection, and having the effect of upwardly displacing snow and/or ice accumulations for discharge out the upper frame channel, i.e., between flanges **26.**

What is claimed is:

1. A rack for skis or the like, comprising elongated frame means with means for mounting the same to a vehicle, a first plurality of like ski-post members carried by said frame means and fixedly spaced with respect to each other, a second plurality of like ski-post members fixedly spaced with respect to each other and carried by said frame means at locations interlaced with those of said first plurality, whereby a ski-post member of one plurality and an adjacent ski-post member of the other plurality define one of a plurality of spaced ski-engageable pairs, one of said pluralities of ski-post members being movable with respect to the other of said pluralities in such manner that in a first position all corresponding pairs of ski-post members are in closed ski-engaging adjacency and that in a second position all corresponding pairs of ski-post members are spaced sufficiently for ski removal or insertion, movable actuator means carried by said frame means at a location offset from said ski-post members and reacting between said first and second pluralities for selectively moving the same from and to said first and second positions, and a flexible member connected to a ski-post member of one plurality and to the next adjacent ski-post member of the other plurality, said flexible member substantially covering the top of said frame means between said adjacent ski-post members when said pluralities are in the first or ski-clamped position, said flexible member presenting negligible resistance to actuator movement upon operation to the second position.

2. A rack according to claim **1,** and including locking means for fixedly retaining said actuator means when said pluralities are in said first position.

3. A rack according to claim **1,** in which said actuator means is located at a single end of said frame means.

4. A rack according to claim **1,** in which said flexible member is of elastomeric material and is slightly upwardly arched when said pluralities are in said first position, whereby said flexible member is forced to substantially elevate its arch upon actuation to said second position.

5. A rack according to claim **1,** in which said flexible member is of inverted channel shape, the free edges of the side walls of the channel engaging transversely spaced regions of the top of said frame means when in said first position.

6. A rack according to claim **5,** in which said flexible member is longitudinally tensed in its connection to said adjacent ski-post members when in said first position and is longitudinally compressed into an elevated centrally arched condition when in said second position.

7. A rack according to claim **5,** in which said flexible member includes an upwardly arched reinforcement of relatively stiffly compliant material.

8. A rack for skis or the like, comprising an elongated frame member including elongated guide channel, a first plurality of ski-post members carried by said frame member at fixedly spaced locations along said channel, a second plurality of ski-post members carried by said frame member at locations interlaced with the ski-post members of said first plurality and slidable along said channel, a ganged connection comprising an elongated member slidably contained within said channel and retaining ski-post members of said second plurality in longitudinally spaced relation for guided movement in unison, such movement being between (a) a first position in which adjacent pairs of fixed and movable post members are in ski-engaging adjacency and (b) a second position in which adjacent pairs of fixed and movable post members are spaced sufficiently for ski removal or insertion, and a single actuator carried by said frame member for displacing said second plurality with respect to said first plurality.

9. A rack according to claim **8,** in which said ganged-connection member is a strap connected to all ski-post members of said second plurality.

10. A rack according to claim **9,** in which a second elongated strap contained within said channel retains the ski-post spacing of said first plurality, said second strap being fixed to said frame.

11. A rack according to claim **8,** in which said actuator comprises a toggle clamp reacting between said frame and said ganged-connection member.

12. A rack according to claim **11,** in which the sense of toggle-clamp connection to said ganged-connection member is such as to tension said ganged-connection member in the clamped setting of said first position.

13. A rack according to claim **8,** in which said actuator comprises a slide longitudinally guided within said channel, said slide being connected to said ganged-connection member, an arm pivoted to said frame on a first transverse axis, and a link having one end pivoted to said arm on a second axis and at a location offset from said first axis, the other end of said link being connected to said slide on a third axis, said axes being in substantially a single plane when said arm is pivoted to substantial alignment with said frame and when said pluralities are in said first position.

14. A rack according to claim **13,** in which said arm is pivoted between the sidewalls of the channel, being received within the channel when said pluralities are in said first position.

15. A rack according to claim **13,** in which said axes are substantially in the plane of said ganged-connection member when said pluralities are in said first position.

16. A rack according to claim **9,** in which said frame member is arched for general conformance with an automobile roof, said channel being upwardly open and including a bottom formation positioning said strap for guided conformance to the arch.

17. A rack according to claim **13,** in which key-operated lock means including coacting members carried by said arm and by said frame selectively retains said arm when said pluralities are in said first position.

18. A rack according to claim **17,** in which said arm includes an ene cap which is positioned, in the down position of said arm, to effectively close off the otherwise open end of said channel; said lock members of said arm being carried by said end cap.

19. A ski rack according to claim 8, in which said guide means includes a liner of low-friction plastic material.

20. A rack according to claim 8, in which said frame means includes a downwardly open channel, car-body anchor means referenced to said frame means within said last-mentioned channel and including adjustable means accessible via an open longitudinal end of said last-mentioned channel, said actuator including means pivoted to said frame near said longitudinal end and including a lockable end cap which in lockable position closes the said ene of both channels and which is movable, when unlocked, to a position which at least clears the end of the downwardly open channel.

21. A rack according to claim 8, in which said ganged connection comprises an elongated horizontal strap slidably contained within said channel, each ski-post member of said second plurality being connected to said strap on a central longitudinal alignment thereof.

22. A rack according to claim 21, in which a second strap overlapping said first strap connects the ski-post members of said second plurality, said second strap being fixed to said frame member, and each of said straps being slotted to permit ski-post member control via movement of said first strap with respect to said second strap.

23. A rack for skis or the like, comprising an elongated frame member including elongated guide means, a first plurality of ski-post members carried by said frame member at fixedly spaced locations along said guide means, a second plurality of ski-post members carried by said frame member at locations interlaced with the ski-post members of said first plurality and slidable along said guide means, a ganged connection retaining ski-post members of said second plurality in longitudinally spaced relation for guided movement in unison, such movement being between (a) a first position in which adjacent pairs of fixed and movable post members are in ski-engaging adjacency and (b) a second position in which adjacent pairs of fixed and movable post members are spaced sufficiently for ski removal or insertion, and a single actuator carried by said frame member and connected to one of the ski-post members of said second plurality for displacing in unison the ski-post members of said second plurality with respect to those of said first plurality.

24. A rack according to claim 23, in which adjacent sides of said pairs of post members carry cushion means for resilient ski contact.

25. A rack according to claim 23, in which said frame member includes a channel with said guide means at the mouth of the channel.

26. A rack for skis or the like, comprising elongated frame means with means for mounting the same to a vehicle, a first plurality of like ski-post members carried by said frame means and fixedly spaced with respect to each other, a second plurality of like ski-post members fixedly spaced with respect to each other and carried by said frame means at locations interlaced with those of said first plurality, whereby a ski-post member of one plurality and an adjacent ski-post member of the other plurality define one of a plurality of spaced ski-engageable pairs, one of said pluralities of ski-post members being movable with respect to the other of said pluralities in such manner that in a first position all corresponding pairs of ski-post members are in closed ski-engaging adjacency and that in a second position all corresponding pairs of ski-post members are spaced sufficiently for ski removal or insertion, said frame means including an upwardly open channel in which said ski-post members are positioned and guided, overlapping flat control strap means interconnecting the ski-post members of the respective pluralities and determining said spaced relationships, each ski-post member having an obliquely inclined plow formation rising from the elevation of strap adjacency and sloped to upwardly force snow or ice accumulations upon operation of said actuator means, and movable actuator means carried by said frame means at a location offset from said ski-post members and reacting between said first and second pluralities for selectively moving the same from and to said first and second positions.

27. A rack for skis or the like, comprising elongated frame means with means for mounting the same to a vehicle, a first plurality of like ski-post members carried by said frame means and fixedly spaced with respect to each other, a second plurality of like ski-post members fixedly spaced with respect to each other and carried by said frame means at locations interlaced with those of said first plurality, whereby a ski-post member of one plurality and an adjacent ski-post member of the other plurality define one of a plurality of spaced ski-engageable pairs, one of said pluralities of ski-post members being movable with respect to the other of said pluralities in such manner that in a first position all corresponding pairs of ski-post members are in closed ski-engaging adjacency and that in a second position all corresponding pairs of ski-post members are spaced sufficiently for ski removal or insertion, said frame means including an upwardly open channel in which said ski-post members are positioned and guided, and movable actuator means carried by said frame means at a location offset from said ski-post members and reacting between said first and second pluralities for selectively moving the same from and to said first and second positions, said actuator means including a single channel having an internal wall-to-wall span at least equal to the width of said upwardly open channel, said actuator channel being downwardly open and covering one end region of said upwardly open channel when said pluralities are in said first position.

28. A rack according to claim 27, in which said actuator channel is pivotally connected at one end to said upwardly open channel.

29. A rack according to claim 27, in which a separate flexible member of inverted-channel shape interconnects adjacent ski-post members of the respective pluralities and has edge-sealing contact with the side walls of the upwardly open channel, for the first-position relation of said ski-post members.

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