Aug. 23, 1938. G. P. BUTLER, JR 2,128,036

SKI PRESS

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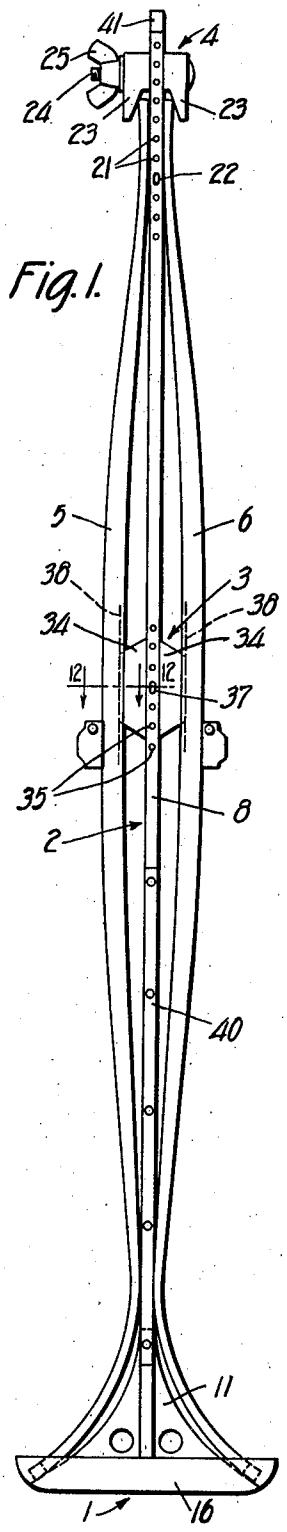



Fig. 1.

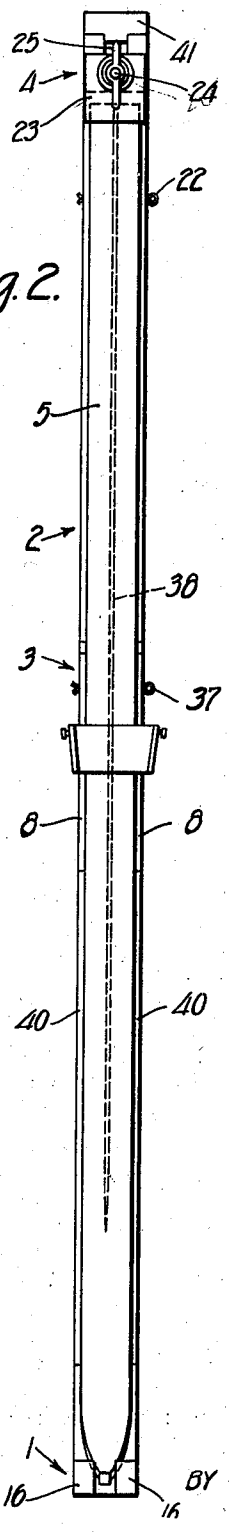



Fig. 2.

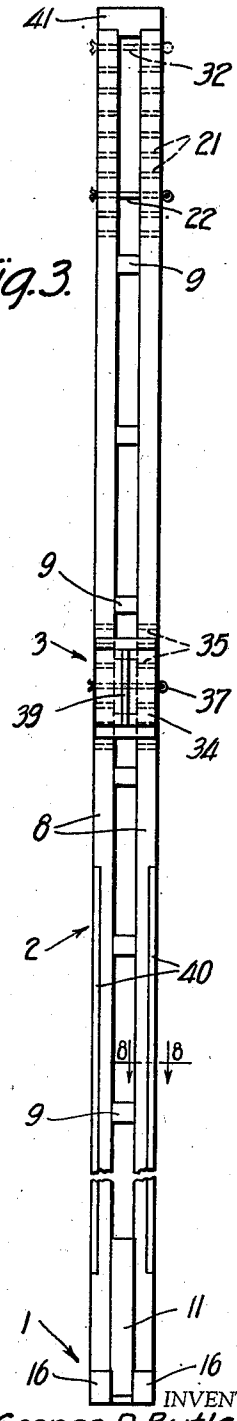



Fig. 3.

INVENTOR.
George P. Butler Jr.
BY Moses & Nolte
ATTORNEYS

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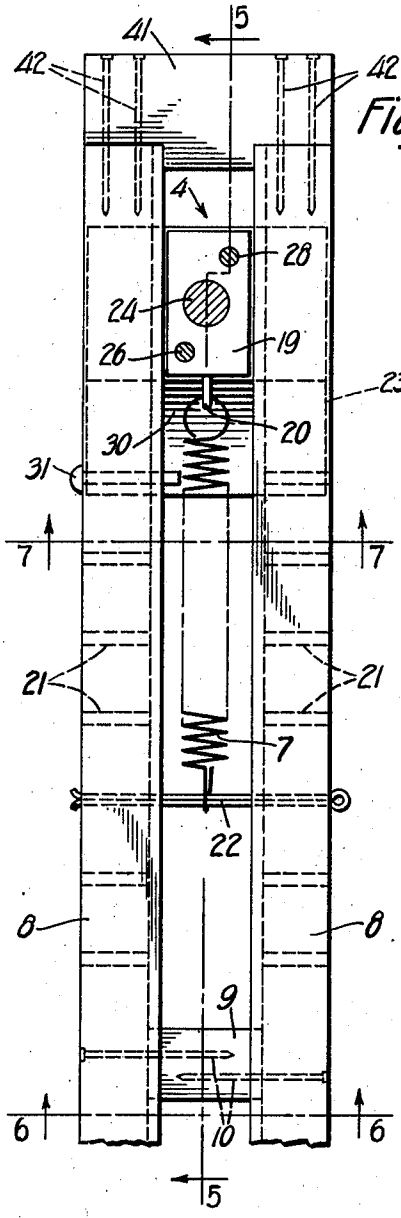



Fig. 4.

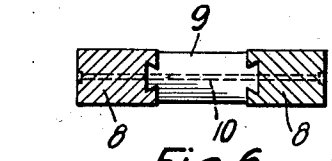



Fig. 6.

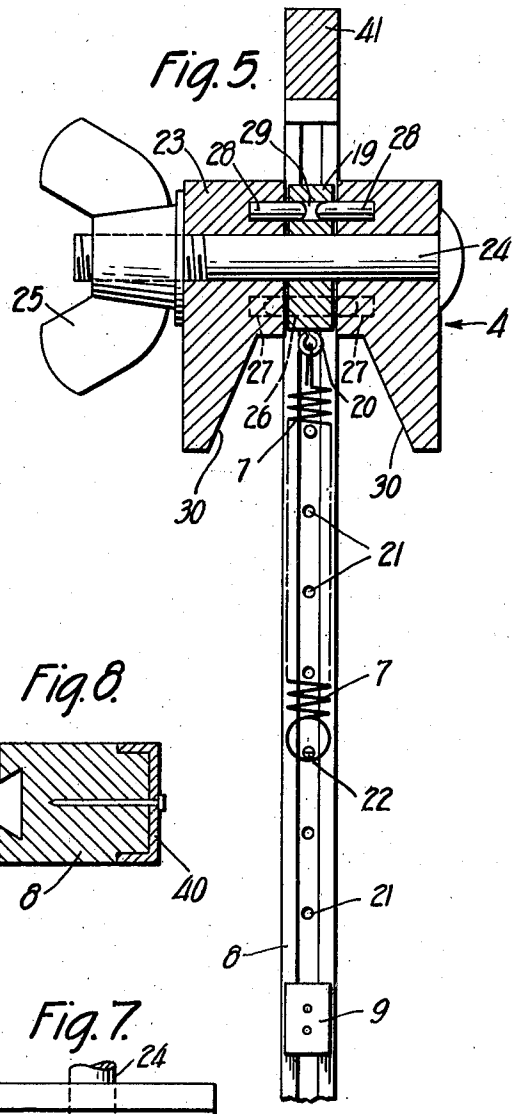



Fig. 5.




Fig. 8.

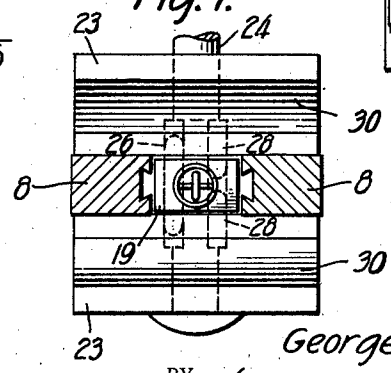



Fig. 7.

INVENTOR.
George P. Butler Jr.
BY Moses & Nolte
ATTORNEYS

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Fig. 9.

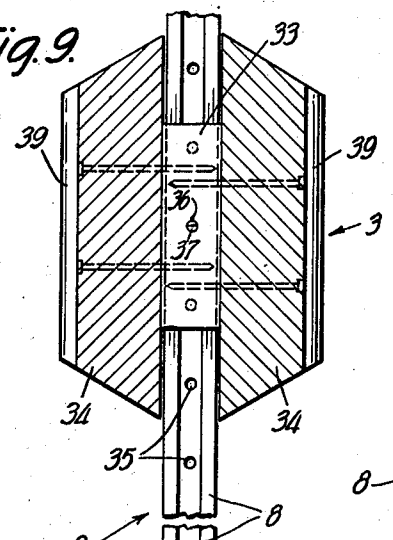



Fig. 12.

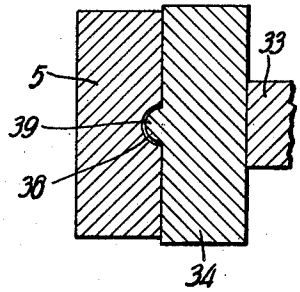



Fig. 10.

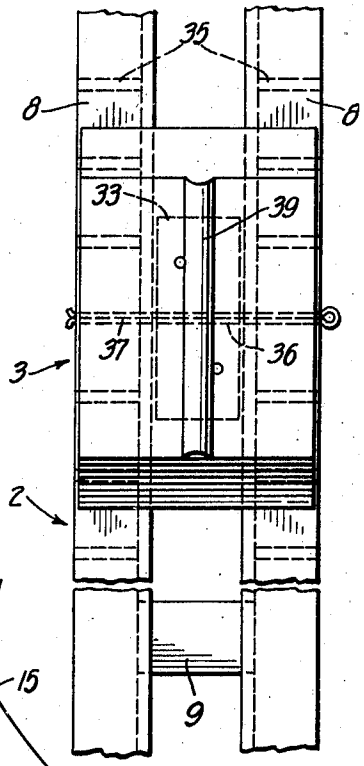
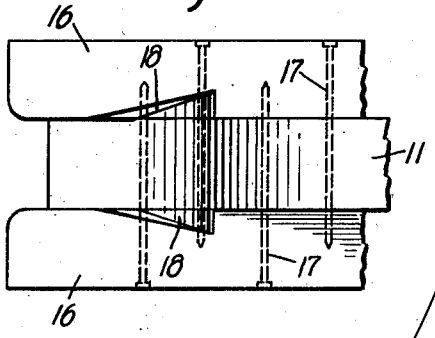



Fig. 11.




INVENTOR.
George P. Butler Jr.
BY Moses & Nolte
ATTORNEYS

Patented Aug. 23, 1938 2,128,036

# UNITED STATES PATENT OFFICE

2,128,036

## SKI PRESS

George P. Butler, Jr., Mount Kisco, N. Y.

Application February 3, 1938, Serial No. 188,526

17 Claims. (Cl. 280—11.37)

This invention relates to ski presses for preventing objectionable deformation of skis when they are not in use, and for correcting any deformation which may occur while the skis are out of the press.

It is an object of the invention to provide a ski press in the form of a unitary structure which is convenient to use, simple for the user to understand, economical and convenient in the matter of space requirements, efficient in performing its intended function, and inexpensive to manufacture.

Skis are composed of hard wood which has been given a desired curvature and set. The skis are necessarily exposed to moisture in use, and hence to a serious liability of deformation when they are put away after use. Even if the skis are put away dry they are still likely to be found deformed after any substantial period of storage.

Skis vary in length between four feet and eight feet, so that unless they can be stored in an upright attitude they are apt to present quite a problem as regards the question of available storage space. It is accordingly an object of the present invention to provide a ski press which is adapted to stand upright and to support the skis in upright attitudes while maintaining them in proper condition.

Not only is it important to maintain the proper shape of the curved forward ends of the skis, but it is also desirable to bow the skis longitudinally to maintain the lower faces of the skis in a concave form, since this promotes the distribution of pressure longitudinally of the skis when the user applies them to his feet and stands upon them.

In accordance with the present invention, provision is made of a ski press comprising a central standard and a rigid base, the latter being formed with ski tip engaging notches at opposite sides of the central standard and at equal distance therefrom, together with a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, and spring means resiliently urging the keeper slide toward the base. The press further includes an intermediate ski bowing spreader mounted on the standard, for bowing the intermediate portion of each ski away from the standard. Such a press admits of very convenient and easy application of the skis since it is only necessary to insert a ski tail within one side of the keeper slide, thrust the slide upward slightly, and press the ski tip into position to engage the tip retaining notch of the base. The longitudinal pressure applied to the ski by the tip engaging notch of the base and by the spring stressed keeper slide tends to maintain or increase the curvature of the upwardly bent, forward end of the ski, and also to maintain the desired bowing of the ski body.

The base and the standard are rigidly secured to one another and the standard is desirably reenforced for a sufficient distance from the base upward to assure that the shape of each ski shall be positively controlled by the press independently of the other ski.

Other objects and advantages will hereinafter appear.

In the drawings forming part of this specification and illustrating a practical and highly advantageous embodiment of the invention:

Fig. 1 is a view in vertical elevation of a ski press, together with a pair of skis mounted in it;

Fig. 2 is a view in side elevation of the structure disclosed in Fig. 1;

Fig. 3 is a view in side elevation of the ski press of Fig. 1 with the skis removed, and with the keeper slide omitted;

Fig. 4 is a fragmentary, detail view in side elevation on a larger scale than Figs. 1 to 3, illustrating particularly features of the construction and mounting of the keeper slide;

Fig. 5 is a vertical, sectional view taken on the line 5—5 of Fig. 4, looking in the direction of the arrows;

Fig. 6 is a horizontal, sectional view taken on the line 6—6 of Fig. 4 looking in the direction of the arrows;

Fig. 7 is a horizontal, sectional view taken on the line 7—7 of Fig. 4 looking in the direction of the arrows;

Fig. 8 is a detail, sectional view taken on the line 8—8 of Fig. 3 looking in the direction of the arrows;

Fig. 9 is a fragmentary view, partly broken away, and showing particularly the lower end of the press and the ski bowing spreader;

Fig. 10 is a fragmentary view in side elevation of the ski bowing spreader and associated parts;

Fig. 11 is a fragmentary plan view of a tip portion of the press base; and

Fig. 12 is a detail horizontal, sectional view taken on the line 12—12 of Fig. 1 looking in the direction of the arrows.

Briefly the press comprises a base 1, a central standard 2, a ski bowing spreader 3, and a keeper slide 4 which is resiliently urged toward the base. The base 1 is provided with ski tip engaging notches at equal distances from the central standard for engaging and confining the re-

spective tips of the skis 5 and 6. The bottom faces of the middle portions of the ski bodies engage the bowing spreader 3. The tail portions of the skis are engaged and thrust downward by the keeper slide, the latter being drawn downward by a coil spring 7 (see particularly Figs. 4 and 5).

The standard 2 is composed principally of a pair of parallel spaced wooden posts 8. The inner faces of the posts 8 are desirably formed with dovetailed grooves. Dovetailed spacer blocks 9 are located at intervals between the posts 8 and are fixed in place by suitable fastening means such as nails 10.

The base comprises a generally triangular rigid block 11 which is interposed between the lower ends of the posts 8 and secured fixedly to the post by suitable fastening means such as nails 12. The rigid member 11 is of generally triangular form. It has a straight base 13 but the edges 14 and 15 which form the legs of the triangle are curved to present concave faces of appropriate contour for conforming substantially to the curved forward ends of the bottoms of the skis. Side bars 16, disposed below the lower ends of the posts 8, are secured to opposite sides of the base member 11 by any suitable fastening means such as nails 17. As will be clearly seen in Figs. 9 and 11, the ends of the side bars project above the ends of the triangular base member 11. Each of the side bars is formed with an undercut groove 18. These grooves, in cooperation with the triangular member 11, form notches for receiving and retaining the tapering tip portions of the skis.

Skis come in various lengths ranging from four feet for children, to eight feet for tall men. It is desirable, therefore, in order to limit the stock of ski presses necessary for adaptation to all sizes of skis, to make provision for adjusting the range of movement of the keeper slide 4 and for adjusting the position of the bowing spreader 3. In accordance with the present invention, all lengths of skis may be accommodated by putting out presses of two standard sizes, one adapted to take skis up to six feet in length, and the other to take skis from six feet to eight feet in length. These adjusting features will be described in connection with the description of the keeper slide 4 and of the bowing spreader 3, respectively.

The keeper slide 4 comprises a slide block 19, see Figs. 4 and 5, which plays between the posts 8 near the upper ends of the posts. The slide block is provided with a screw eye 20 for connecting the block 19 with the spring 7. The posts 8 are provided at their upper ends with a series of aligned pairs of bores 21, the bores being provided at uniform intervals along the posts. A cotter pin 22 may be passed through a selected pair of bores 21 and spread, to serve as an anchorage for the lower end of the spring 7. Thus, for short skis the cotter pin 22 will be adjusted downward along the posts while for longer skis it will be adjusted upward.

The slide block 19 loosely supports a pair of keeper members 23. The keeper members normally engage the side faces of the posts 8 loosely so that they are freely responsive to the downward pull of the spring 7 or to an upward manual thrust exerted directly or through the pressing upward of a ski.

The keeper members 23 are supported from the block 19 by means of a through bolt 24. The bolt is passed through both members 23 and through the slide block 19 and is retained in place by means of a manually adjustable wing nut 25. The keeper members 23 are mounted upon the block 19 with freedom for movement toward and from the block but with the restraint against rotation relative to the block by means of dowel pins. The block 19 fixedly carries a dowel pin 26 which projects beyond the opposite faces of the block and which is snugly but freely received in bores 27 of the keeper members. Each of the keeper members 23 has a dowel pin 28 fixed in it, and the two dowel pins are adapted to be snugly but freely received in a bore 29 which passes through the slide block 19. While the wing nut 25 is normally kept backed off a bit throughout the skiing season to permit the skis to be readily taken out and put away, it can be tightened at the end of the season to clamp the members 23 firmly against the opposite faces of the posts 8 so that all movement of the keeper slide is precluded.

The keeper members 23 are formed with rabbets or notches which face the posts 8. These notches are formed with bevelled faces 30 in opposed relation to the posts 8 so that skis having tails of different thicknesses may be received and held snugly in place against the posts 8. A thick ski will be engaged near the lower end of the face 30, while a relatively thin ski will be engaged near the upper end of the face 30.

It is not desirable that the keeper slide be permitted to descend without obstruction in response to gravity, and the pull of the spring 7, when the press is empty, since the keeper slide should be retained somewhere near its normal holding position. For the purpose of limiting downward movement of the keeper slide, a stop pin 31 is desirably driven through one of the bores 21, (see Fig. 4).

It is also desirable to limit the extent of upward movement of the keeper slide 4, since this slide will have to be thrust upward in order to insert the second ski after the first ski has been put in place, and it would be highly objectionable to have the first ski accidentally fall out of place as an incident of such operation. For the purpose of limiting upward movement, a cotter pin 32, (see Fig. 3) may desirably be inserted through a pair of the bores 22 above the keeper slide, in position to engage and arrest the slide block 19 as the slide block is moved upward. Other provision is made in the press as illustrated for limiting upward movement, as will be explained hereinafter. The limit chosen is desirably such that a ski supported by the base cannot clear its keeper member 23 when the keeper member is at the upper limit of its range of movement. In other words, the removal of a ski from the press requires that the ski shall be lifted off the base.

The bowing spreader, as illustrated, comprises a slide block 33 interposed between the posts 8, and a pair of spacer blocks 34 nailed to the slide block in opposed relation, and in position to overlie the faces of the posts 8. The slide block 33 is at least as thick as, and desirably a little thicker than, the posts 8, so that there is no binding of the blocks 34 against the posts. The posts 8 are provided with a series of pairs of aligned bores 35 disposed at uniform intervals along the posts for permitting the spreader to be secured in various selected positions. The slide block 33 is provided with a bore 36. The mounting of the bowing spreader upon the posts 8 is effected by passing a cotter pin 37 through an aligned pair of the bores 35 and through the bore 36 of the interposed block 33, and then spreading the cotter pin.

In addition to their bowing function, the blocks 34 perform an important function in preventing the skis from slipping laterally out of the press.

As is well known, the lower face of a ski is formed with a longitudinal central groove **38** (see Figs. 1, 2 and 12). Each block **34** has its ski engaging face formed with a projecting rib **39** (see Figs. 9 and 10 also), which is slidingly received in the groove **38** of the associated ski. This does not interfere in any way with longitudinal sliding and flexure of the ski under the pressure exerted by the spring **7**, but it does definitely confine the ski against lateral movement, and hence prevent accidental dislodgment of the ski from the keeper **23**.

The most important point in maintaining the condition of the skis is to maintain the curvature of the forward ends of the two skis substantially alike and within a reasonably close approximation of a predetermined shape. To this end, it is important that the stresses of the forward ends of the skis shall not be depended upon to balance one another, as would be the case if the central standard were flexible, but that each shall be subjected to standard conditions. It is a feature, therefore, that the base and the standard form a rigid structure at least to a height on the standard above that at which the standard could posibly be engaged directly by the bottoms of the skis. The base member **11** is itself rigid, and serves to reenforce the extreme lower ends of the posts **8**, but in addition channel bars **40** of metal are secured to the posts **8** (see Fig. 8), and extend upward from a position overlapping the base member **11** to a substantial distance above the base member.

The faces **14** and **15** of the block **11** are of suitable contour for conforming to the curved ends of a pair of skis. It is not necessary that the ski ends fit these curved faces of the member **11** exactly, but so long as they are not forced beyond that degree of curvature no harm will result. The bottom faces of the skis are intended to bear against the opposite faces of the posts **8** in the region reenforced by the angle bars **40**, but here against it is not at all imperative that they shall do so. It is important, however, that each be limited so that neither will tend to transmit its pressure through the standard and serve to deform the other.

As has been mentioned, it is contemplated that two standard sizes of press will be adaptable to all sizes of skis. Where an eight foot press is used with six foot skis, however, it is not desirable to retain the surplus length of the standard. The press as originally made comprises a wooden cap block **41** which serves as a spacer and reenforcement for the upper ends of the posts **8**, and which is secured to the posts by any suitable means such as nails **42**. Since the upper ends of the posts consist exclusively of wood, it is a simple matter to saw off the surplus length, remove the cap block **41** and reapply the cap block to the sawed off posts. The cap block may be utilized, and is illustrated herein. as utilized, for limiting upward movement of the keeper slide. The cotter pin **32** may be utilized for this purpose when preferred.

I have described what I believe to be the best embodiments of my invention. I do not wish, however, to be confined to the embodiments shown, but what I desire to cover by Letters Patent is set forth in the appended claims.

I claim:

1. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, and means associated with the standard for resiliently thrusting the skis longitudinally of the standard toward the base.

2. In a ski press, in combination, a central standard, a spreader base rigid therewith and formed with ski tip engaging abutments at opposite sides of the standard and at equal distances therefrom, and means associated with the standard for resiliently thrusting the skis longitudinally of the standard toward the base.

3. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, and spring means resiliently urging the slide toward the base.

4. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, and an intermediate ski bowing spreader mounted on the standard substantially midway between the keeper slide and the tip engaging portion of the base.

5. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, and an intermediate ski bowing spreader mounted on the standard substantially midway between the keeper slide and the tip engaging portion of the base, said ski bowing spreader being formed with ribs upon its ski engaging faces for slidingly interfitting with grooves formed in the bottom faces of the skis.

6. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, and an intermediate ski bowing spreader mounted on the standard substantially mid-way between the keeper slide and the tip engaging portion of the base, said ski bowing spreader being formed with ski engaging projections for preventing lateral displacement of the skis.

7. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, and spring means resiliently urging the slide toward the base, an intermediate ski bowing spreader mounted on the standard substantially mid-way between the keeper slide and the tip engaging portion of the base, and means for facilitating the securement of the ski bowing spreader in any one of a plurality of selected longitudinal positions upon the standard.

8. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a

keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, and abutment means mounted on the standard for limiting movement of the keeper slide toward the base when the press is empty.

9. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, and means for facilitating anchoring of the spring means at any one of a series of selected points along the standard.

10. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, means for facilitating anchoring of the spring means at any one of a series of selected points along the standard, abutment means mounted on the standard for limiting movement of the keeper toward the base when the press is empty, and means for facilitating securement of the abutment means at any one of a series of selected points along the standard.

11. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, and spring means resiliently urging the slide toward the base, said keeper slide comprising keeper members having bevelled faces opposed to the standard to form therewith tapering notches for gripping the tails of skis of different thicknesses.

12. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, said keeper slide comprising a slide block and a pair of keeper members loosely carried by the block at opposite sides of the standard, and means operable to draw said keeper members toward one another and into positive clamping relation to the standard.

13. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, said keeper slide comprising a slide block and a pair of keeper members loosely carried by the block at opposite sides of the standard, a through bolt passed through the slide block and the keeper members, and a wing nut threaded on the bolt for drawing said keeper members toward one another and into positive clamping relation to the standard.

14. In a ski press, in combination, a central standard, a base rigid therewith and formed with ski tip receiving notches at opposite sides of the standard and at equal distances therefrom, a keeper slide associated with the standard at the end remote from the base for engaging the tails of the skis, spring means resiliently urging the slide toward the base, said keeper slide comprising a slide block and a pair of keeper members loosely carried by the block at opposite sides of the standard, a through bolt passed through the slide block and the keeper members, a wing nut threaded on the bolt for drawing said keeper members toward one another and into positive clamping relation to the standard, and dowel pins for maintaining the keeper members against rotation relative to the slide block while permitting movements of said members toward and from the block.

15. A ski press as set forth in claim 3 in which the standard consists of a pair of parallel posts having dovetailed grooves in their opposed faces, and a series of dovetailed spacing blocks fitted between the posts at intervals and secured fixedly in place.

16. A ski press as set forth in claim 3, in which a stop is provided for limiting movement of the keeper slide away from the base to a position in which an unstressed ski resting upon the base cannot clear the keeper slide.

17. A ski press as set forth in claim 3 in which the standard is composed of spaced parallel wooden posts adapted to be cut off to proper lengths for use with a particular pair of skis, and which further includes a cap member adapted to be secured to the cut ends to unite and reenforce them.

GEORGE P. BUTLER, JR.