



Office de la Propriété
Intellectuelle
du Canada

Un organisme
d'Industrie Canada

Canadian
Intellectual Property
Office

An agency of
Industry Canada

CA 2376776 A1 2003/10/09

(21) **2 376 776**

(12) **DEMANDE DE BREVET CANADIEN
CANADIAN PATENT APPLICATION**

(13) **A1**

(22) Date de dépôt/Filing Date: 2002/04/09

(41) Mise à la disp. pub./Open to Public Insp.: 2003/10/09

(51) Cl.Int.⁷/Int.Cl.⁷ A63C 5/00

(71) Demandeur/Applicant:
FIANDER, TODD G., CA

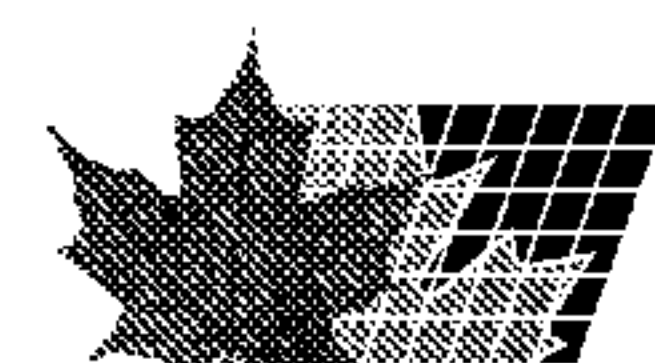
(72) Inventeur/Inventor:
FIANDER, TODD G., CA

(54) Titre : SYSTEME DE FIXATION DE SKI POUR BICYCLETTE

(54) Title: THE BIKE SKI BINDING SYSTEM

(57) **Abrégé/Abstract:**

The Bike Ski Binding is a system for adapting any bicycle so that it may be used in the snow. The Bike Ski Binding system consists in a short ski that is affixed to the front tire of the bicycle by a binding that is designed to attach directly to the tire. The ski used can vary in size depending on the size of the rider, the bicycle, the sort of terrain, or snow conditions being ridden. The binding is attached to the ski with screws, or could be a single molded unit combining ski and binding. The size of the binding is determined by the size of the tire to which it is attached: a two to three inch tire would typically require a binding six inches long and two and a half inches deep and a depth of two and one half inches. The Bike Ski Binding is designed so that the tire fits snugly inside the binding and is held in place by a ratcheted tensioning strap which compresses the tire into the binding for a secure attachment. A second strap, at the top of the tire, attaches the tire to the forks of the bicycle and prevents the tire from rotating while allowing a range of motion consistent with controlled steering.



Abstract

The Bike Ski Binding is a system for adapting any bicycle so that it may be used in the snow. The Bike Ski Binding system consists in a short ski that is affixed to the front tire of the bicycle by a binding that is designed to attach directly to the tire. The ski used can vary in size depending on the size of the rider, the bicycle, the sort of terrain, or snow conditions being ridden. The binding is attached to the ski with screws, or could be a single molded unit combining ski and binding. The size of the binding is determined by the size of the tire to which it is attached: a two to three inch tire would typically require a binding six inches long and two and a half inches deep and a depth of two and one half inches. The Bike Ski Binding is designed so that the tire fits snugly inside the binding and is held in place by a ratcheted tensioning strap which compresses the tire into the binding for a secure attachment. A second strap, at the top of the tire, attaches the tire to the forks of the bicycle and prevents the tire from rotating while allowing a range of motion consistent with controlled steering.

The Bike Ski is made out of molded plastic and comes in 3 sizes in order to hold the different tire dimensions. The Bike Ski is 18 inches in length with an integral molded plastic binding beginning 1 inch from the rear end. The binding is 6 inches in length. The inside section is slightly curved ensuring a snug fit of the wheel. The Bike Ski Binding sides are 2 1/2 inches in height and are joined together by a tensioning strap. The strap goes overtop of the tire and rim of the bicycle and is secured in the closed position by a ratcheted tensioning buckle. A second independent tensioning strap is use to secure the top part of the wheel to the top section of the bicycle fork. This second tensioning straps allow the front wheel a forward and backward motion of about 2 inches, providing the ski with the necessary range of motion for turns.

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1 A removable ski and binding system, attaching to the front tire of a bicycle, and a strap attaching the top of the tire to the top of the bicycle forks which prevents the tire from rotating.

2 A binding, as defined in claim 1, which is designed to utilize the compressibility of a pressurized tire as an essential component of a secure attachment between the ski binding and the bicycle.

3 A binding, as defined in claims 1, or 2, comprising of a plastic, aluminum, or any other material of suitable strength, which is cast as single unit with the ski and has raised sides whose length and depth is determined by the size of the tire and the ski, which has a curved inside dimension designed to match the curve of a cross section of a specific tire.

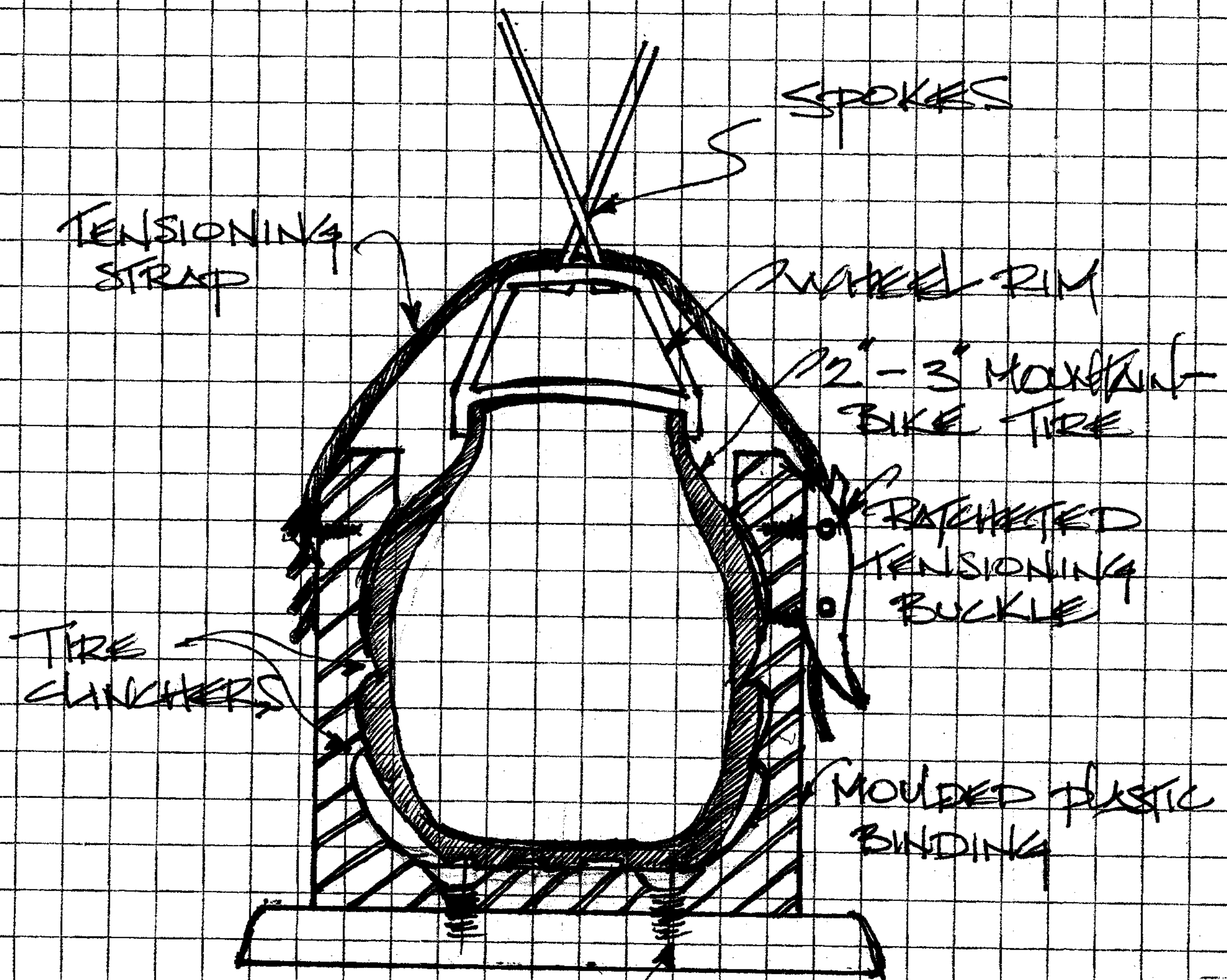
4 A binding, as defined in claims 1, or 2, comprising of a plastic, aluminum, or any other material of suitable strength, which is a flat plate with raised sides attached to the ski with countersunk screws, whose length and depth is determined by the size of the tire and the ski, which has a curved inside dimension designed to match the curve of a cross section of a specific tire.

5 A binding as defined in claims 1, 2, 3 or 4, comprising a curved inside cross section with two grooves, approximately half way up the sides and running the length of the binding one quarter to one half inches apart where the upper edge of each groove curves to form a downward facing ridge.

6 A binding, as defined in claims 1, 2, 3, 4, or 5, which uses a tensioning strap made of nylon webbing, or any other suitable material, that passes from one raised side of the binding over top of the tire rim and between the tires spokes to the other raised side of the binding which, when tightened using a ratcheted buckle or other suitable means, compress the tire into the curved inner dimension of the binding creating a secure attachment.

7 A binding, as defined in claims 1, 2, 3, 4, 5, or 6 which uses a second strap made of nylon webbing, or any other suitable material, that passes through the tire and over the forks of the bicycle which prevents the tire from rotating while allowing a range of forward and backward motion necessary for controlled turns.

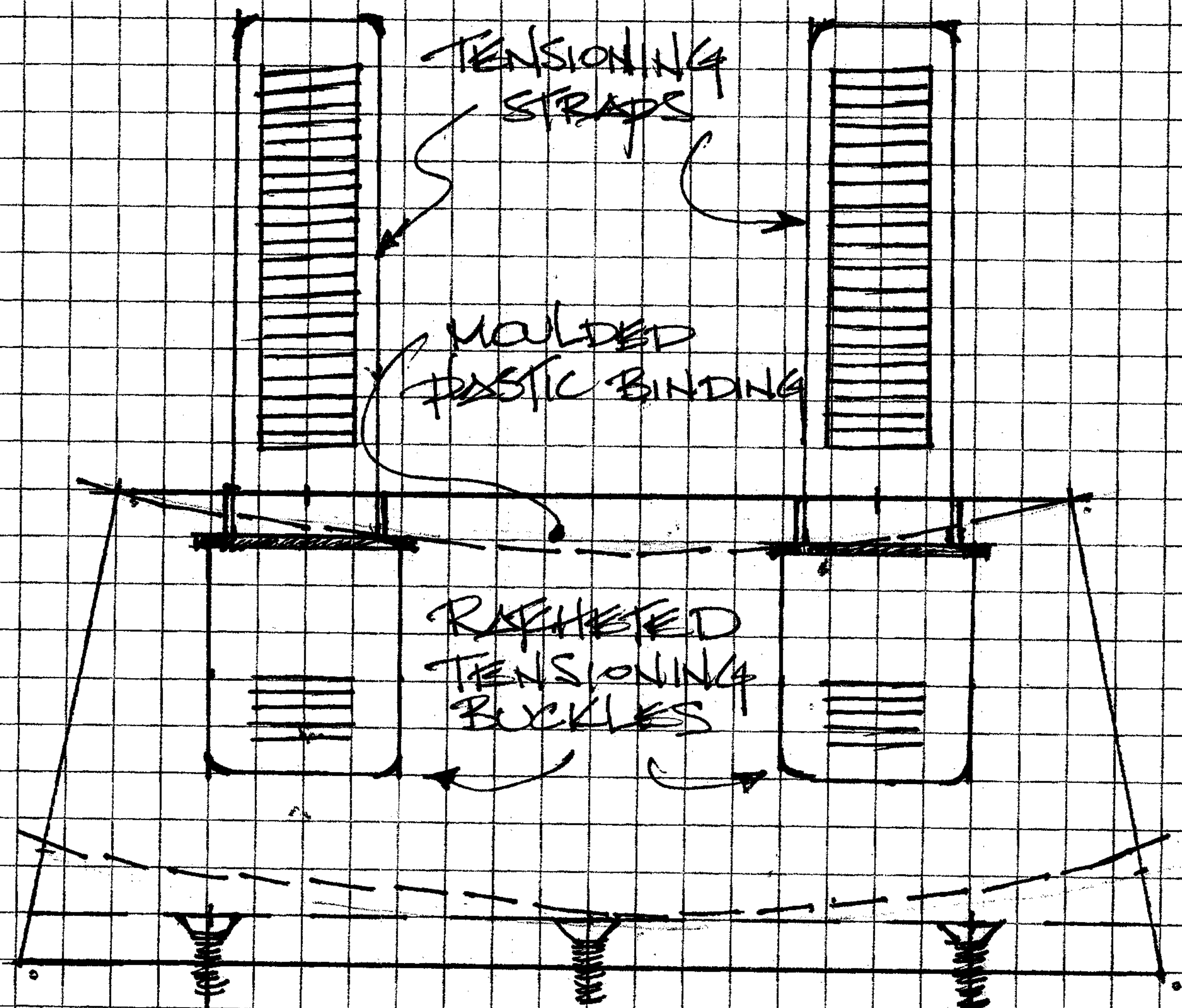
FEB. 11/2002

THE BIKESKI BINDINGBIKESKI BINDING SECTION

(SCALE: 1" = 1")

COUNTERSUNK
SCREWS TO
SECURE REMOVABLE
SKI TO BINDING

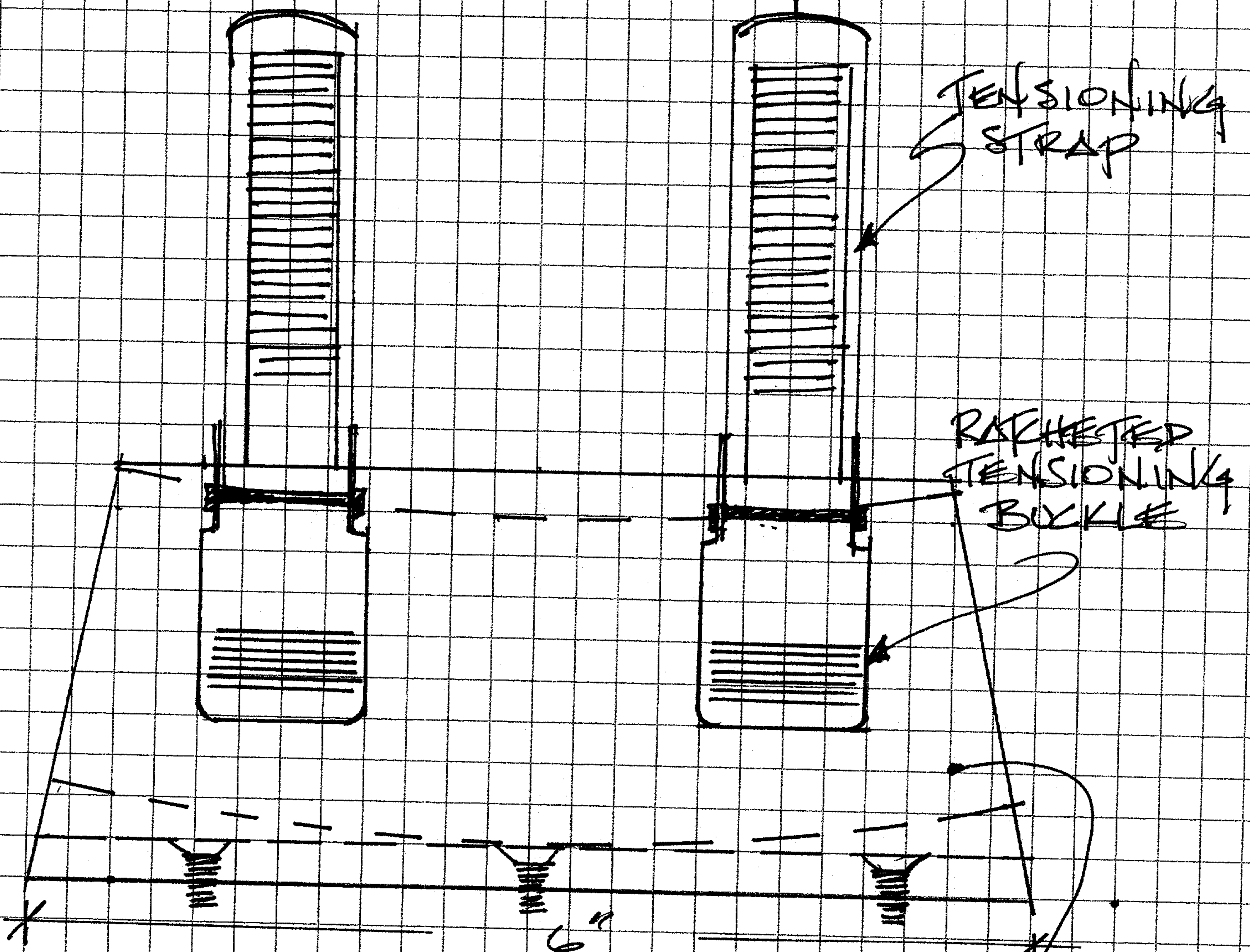
FEB 11/2002

THE BIKESKI BINDINGBIKESKI BINDING SIDEVIEW

(SCALE: 1" = 1")

FEB 4/2002

THE BIKESKI BINDING.



BIKESKI BINDING SIDEVIEW

MOULDED PLASTIC BINDING

