



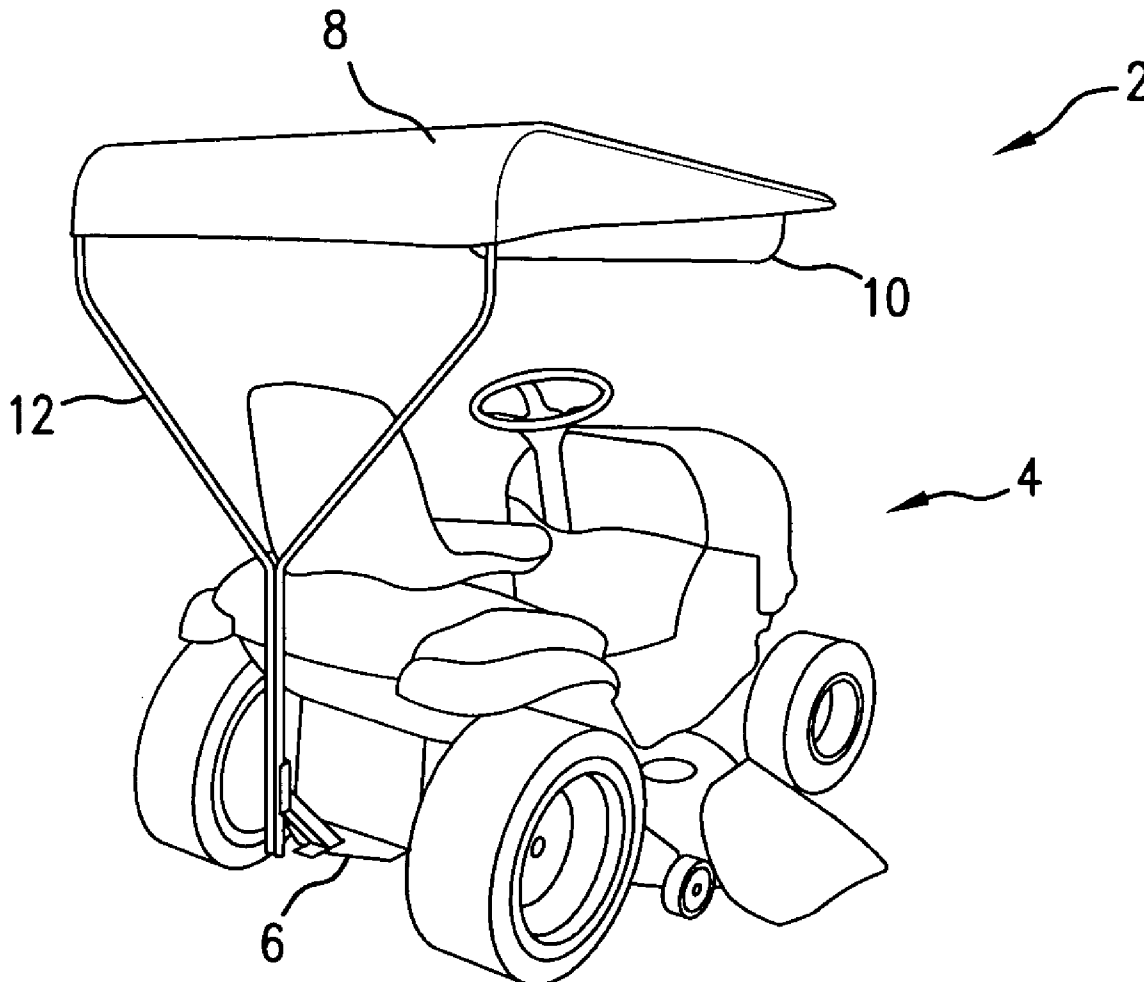
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(19) **United States**(12) **Patent Application Publication****Koch, III**(10) **Pub. No.: US 2009/0183757 A1**(43) **Pub. Date: Jul. 23, 2009**(54) **LAWN MOWER SHADE****Publication Classification**(76) Inventor: **Stanley Koch, III**, Gladwin, MI
(US)(51) **Int. Cl.**
E04H 15/06 (2006.01)
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(52) **U.S. Cl.** **135/88.05; 248/205.1**Correspondence Address:
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MIDLAND, MI 48640 (US)(57) **ABSTRACT**

The lawn mower shade is a rear mounted support frame that has a canopy attached to the top portion for the user's protection from environmental conditions. Such conditions may consist of damaging UV radiation that is produced from the sun. Mowing traditionally requires extended periods under the sun increasing the risk of sun burn and skin cancer the instant device reduces exposure to damaging UV rays. The mower shade also will protect the user from other environmental conditions such as precipitation. Another advantage to the mower shade is the support frame provides unitary strength to support the canopy and a cammed support frame designed to allow the support frame to pivot away from a solid object when struck such as a branch preventing damage. The mower shade is capable of attaching to any riding lawn mower through its hitch assembly.

(21) Appl. No.: **12/321,101**(22) Filed: **Jan. 15, 2009****Related U.S. Application Data**

(60) Provisional application No. 61/011,437, filed on Jan. 17, 2008.



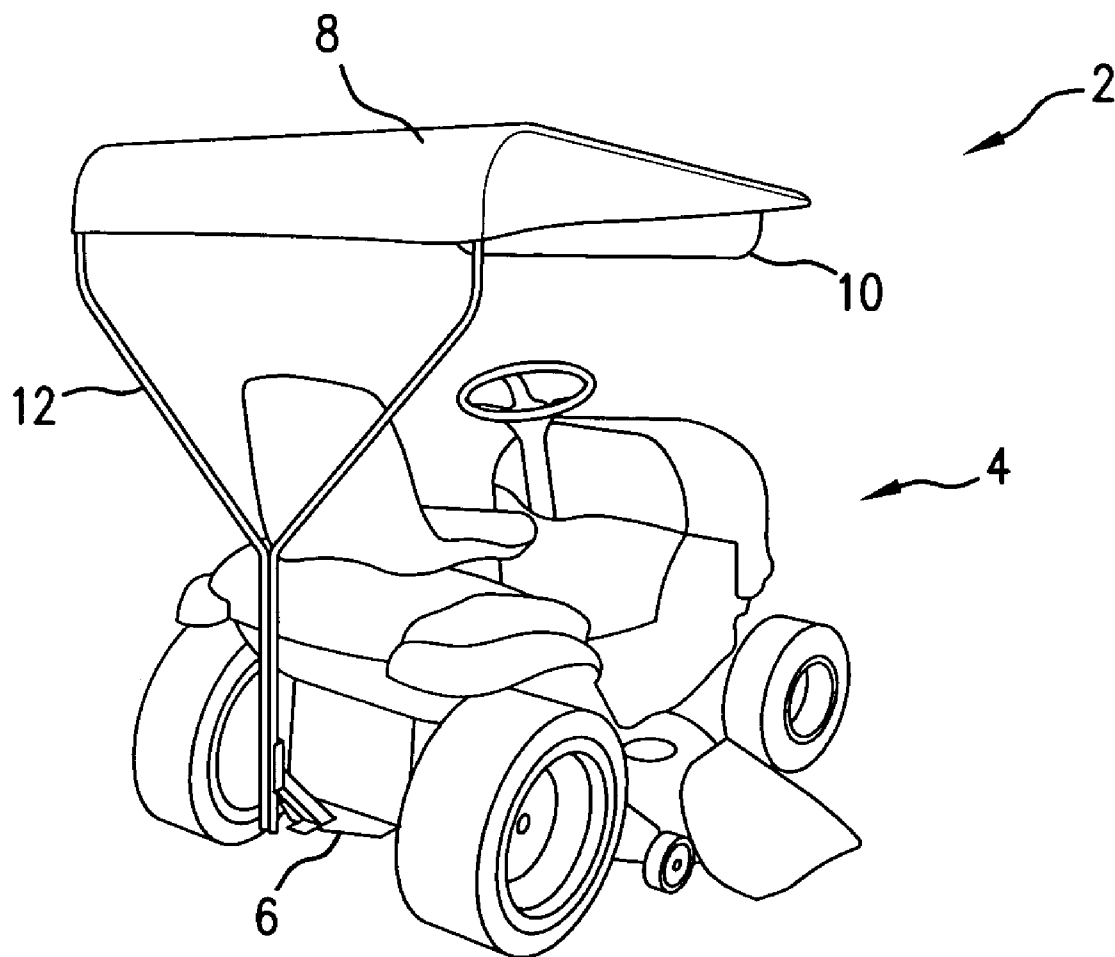


FIG. 1

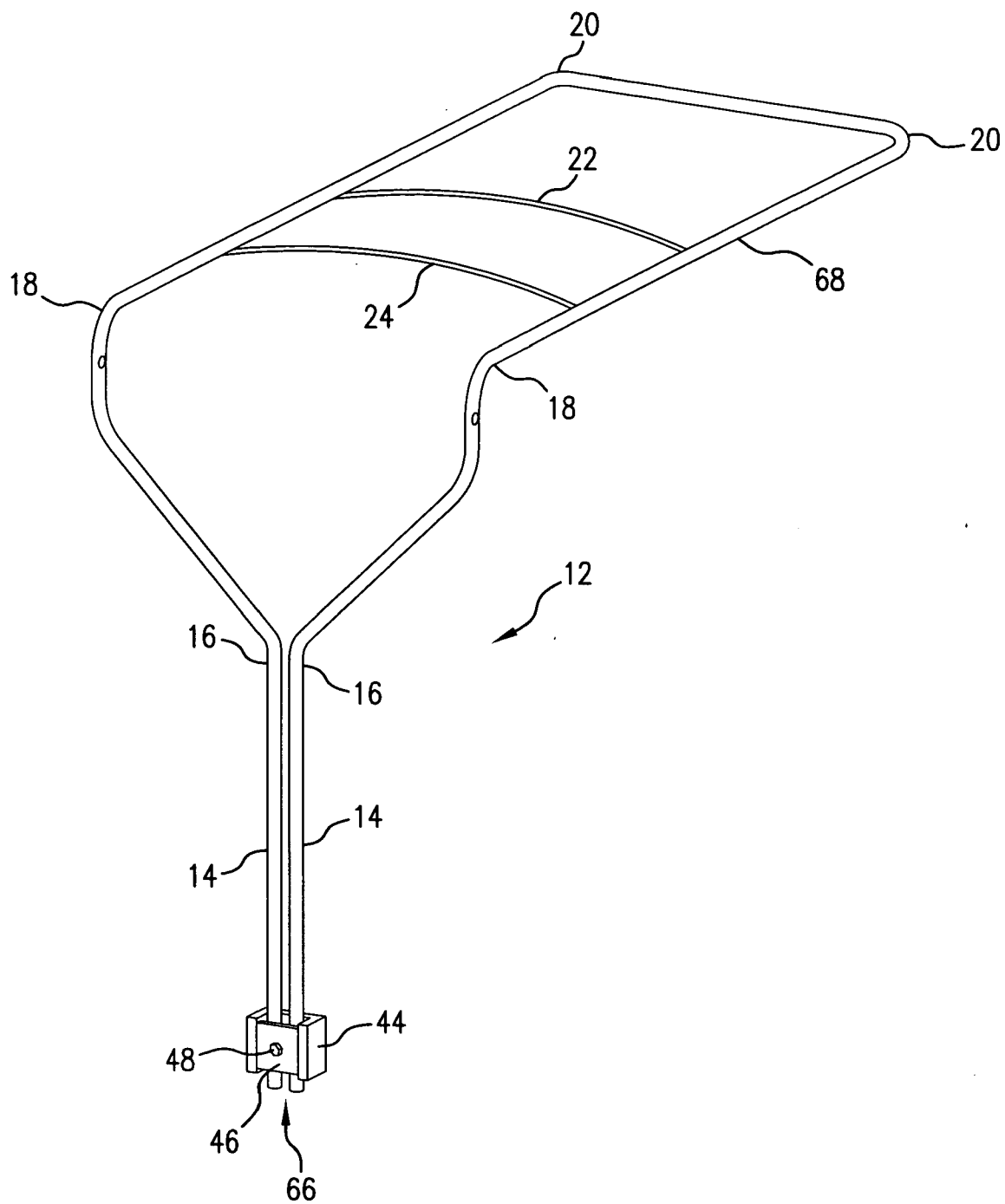


FIG. 2

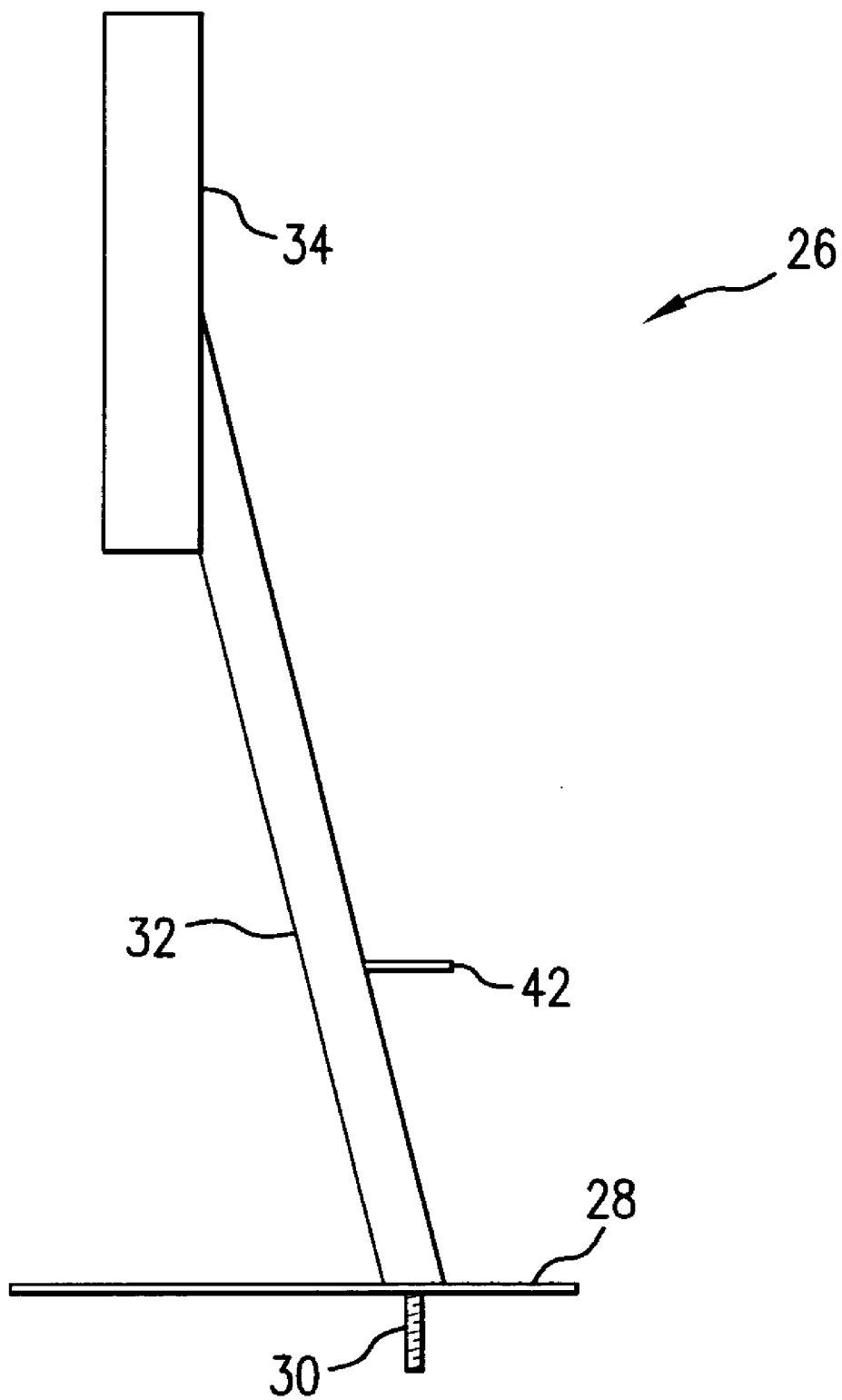


FIG. 3

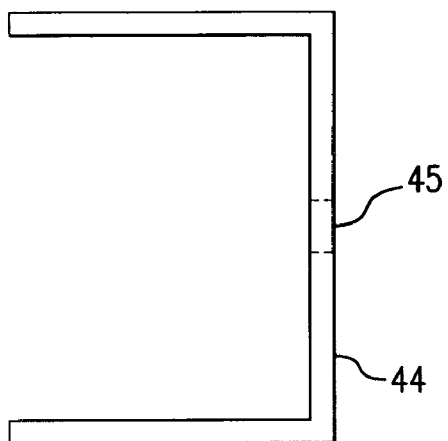


FIG. 4

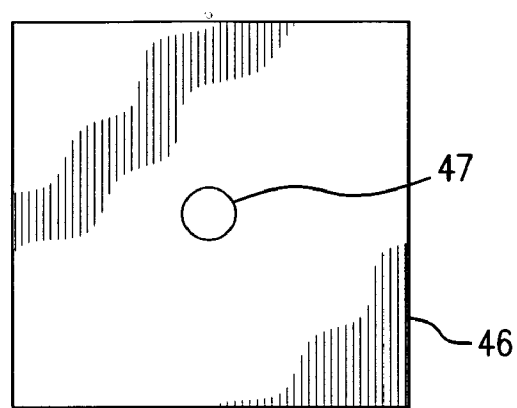


FIG. 5

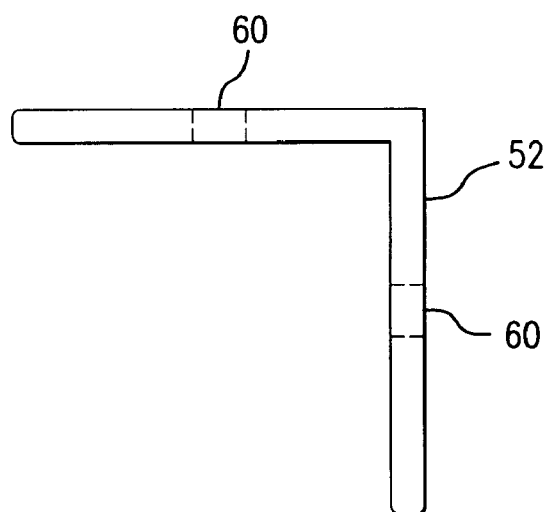


FIG. 6

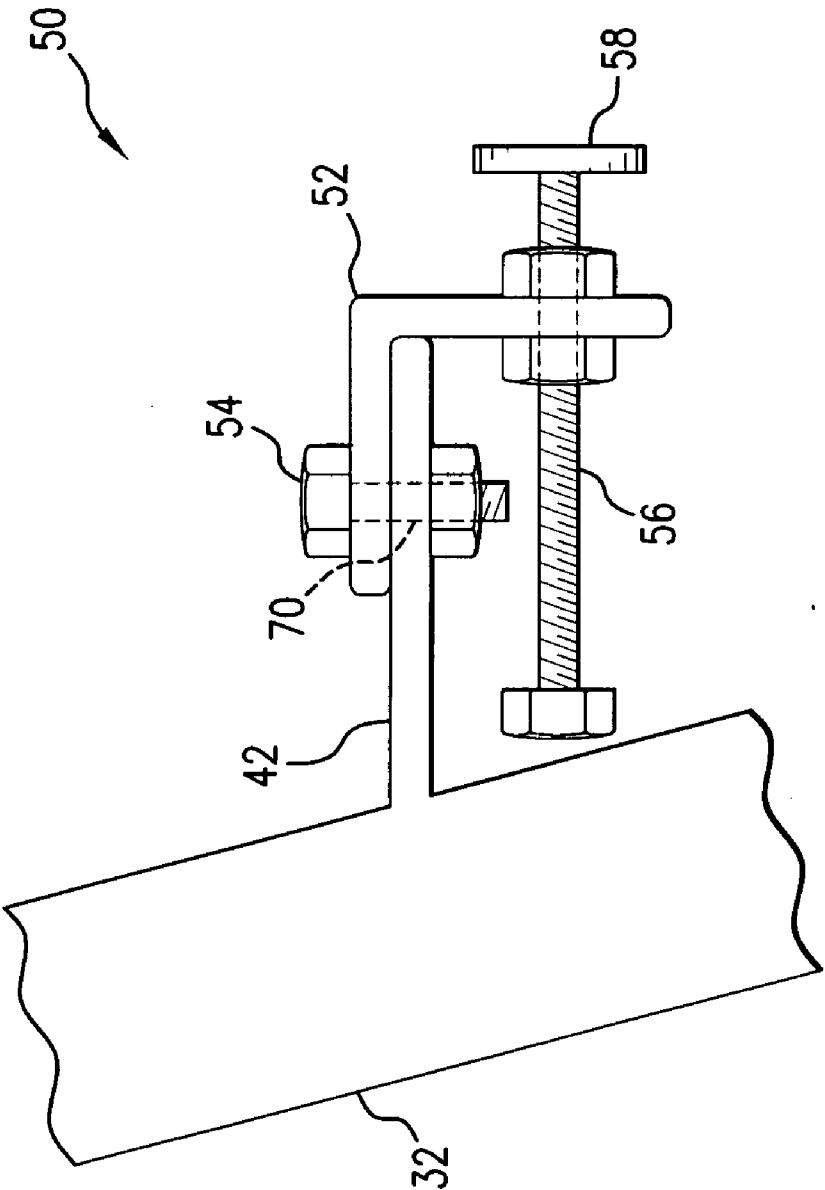


FIG. 7

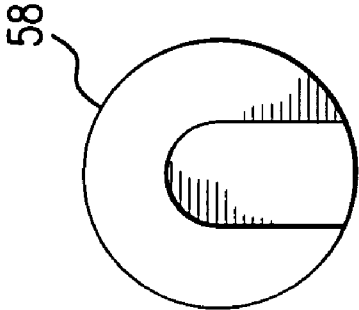


FIG. 8

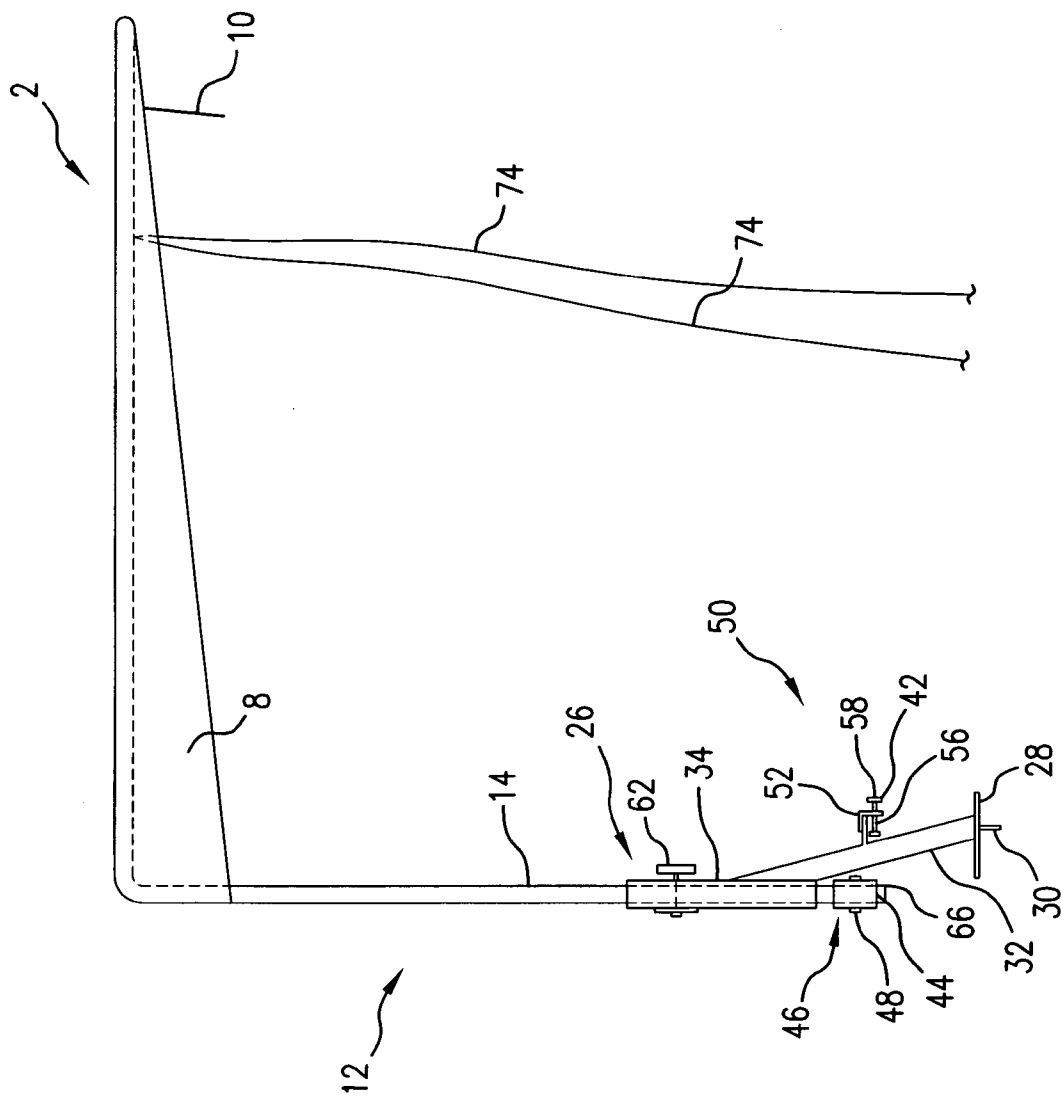


FIG. 9

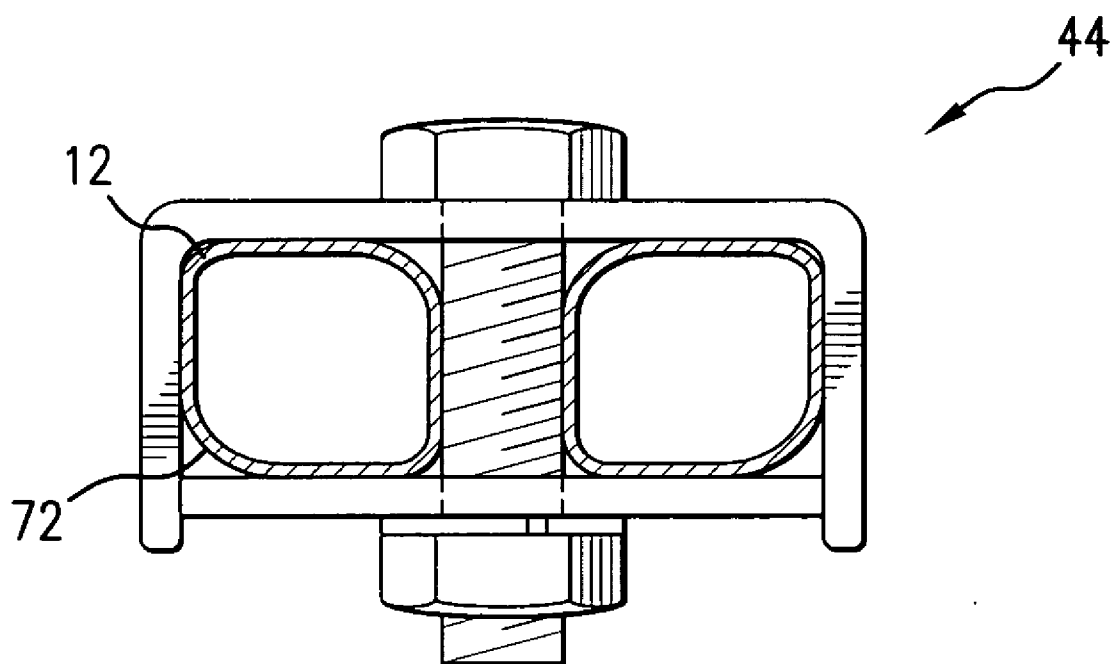


FIG. 10

LAWN MOWER SHADE

[0001] This application claims priority from U.S. Provisional Application No. 61/011,437 filed on Jan. 17, 2008.

[0002] The present invention deals with a device that is capable of attaching to any riding lawn mower and providing the user protection from various environmental conditions.

BACKGROUND OF THE INVENTION

[0003] The idea of a shade over a work vehicle is not new to the art. However, a shade that is height adjustable, universally adaptable to all riding lawn mowers and has a damage preventing anti-crumple zone feature that is unique in that it resets to its original configuration.

THE INVENTION

[0004] The instant invention is a mower shade. The mower shade comprising in combination a tubular support frame having a distal end. The distal end comprised of two separate pieces being detachably fixed together by a support frame bracket.

[0005] The mower shade has a canopy supported by the support frame, a mounting bracket mounted near the distal end of the support frame. The mounting bracket comprises an attachment bracket that attaches the mounting bracket to the distal end of the tubular support frame. The attachment bracket having affixed thereto, near the near end, an adjustment means. The attachment bracket has affixed near the distal end of the attachment bracket, an adjustable support brace, this support brace has a distal end and having attached to the distal end a mounting plate. The support brace has attached near the distal end, a stabilizer consisting of a flat plate permanently affixed to the support bracket and, a stabilizer bracket attached to the flat plate by a mechanical fastener.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a full rear view of the mower shade attached to a lawn mowing tractor.

[0007] FIG. 2 is a full side view of the support frame of the mower shade.

[0008] FIG. 3 is a full side view of the mounting bracket of the mower shade.

[0009] FIG. 4 is a full top view of the support frame bracket.

[0010] FIG. 5 is a full top view of support frame bracket plate.

[0011] FIG. 6 is a full side view of the stabilization bracket.

[0012] FIG. 7 is a full side view of the stabilization brace.

[0013] FIG. 8 is a full frontal view of the stabilization clip.

[0014] FIG. 9 is a side view of the mower shade ready for installation on a lawn tractor.

[0015] FIG. 10 is a top view of the support frame bracket with support frame installed.

DETAILED DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 is a full rear view of the mower shade 2 attached to a standard lawn mowing tractor 4. The mower shade 2 is attached to a lawn tractor 4 at its hitch 6 attachment point. The support frame 12 supports the canopy 8 which covers the riding area of the lawn tractor 4. The canopy 8 also contains a visor 10 for added eye protection from environmental conditions.

[0017] FIG. 2 is a full side view of the support frame 12 of the mower shade 2. The support frame 12 can be one unity piece or a combination of component parts represented by sections. The support frame 12 has two upright members 14 that rise from its near end 66. These upright members 14 continue upward terminating in two radius turns outward 16 and continue further where they terminate into two 90° radius turns forward 18. These members continue further terminating into two radius 90° turns inward 20 and continuing further terminating together. The support frame 12 also has support members 22 and 24 that span from one side of the support frame 12 to the other side. These support members are added support for the canopy 8 that stretches across the upper portion 68 to the support frame 12. The near end 66 of the support frame 12 is joined by the support frame bracket 44. The support frame bracket 44 is placed around the near end 66 of the support frame 12 and the support frame plate 46 is placed against the other side with the fastener inserted the members 14 is secured.

[0018] FIG. 3 is a full side view of the mounting bracket 26 of the mower shade 2. With the support frame 12 assembled it slides into the mounting bracket 26. The mounting bracket 26 is first secured to the hitch 6 of a lawn tractor 4. This is accomplished via the threaded member 30 of the mounting bracket 26. The threaded member 30 depends downwardly from the flat plate 28 of the mounting bracket 26. Then a securing element such as a nylon locking nut is tightened to the threaded member 30 securing the mounting bracket 26 to the lawn tractor 4. Rising upwardly from the flat plate 28 is the brace 32 that supports attachment bracket 34 of the mounting bracket 26. The mounting bracket 26 is universal in that it will attach to all lawn tractors 4. This feature lends incredible utility to the mower shade 2. Also visible on the mounting bracket 26 is the stabilization attachment 42.

[0019] FIG. 4 is a full top view of the support frame bracket 44. This top view shows how the near end 66 of the support frame 12 will be received within the support frame bracket 44. Also present is the opening therethrough 45.

[0020] FIG. 5 is a full top view of support frame bracket plate 46. The plate 46 is placed against the support frame 12 when inside the support frame bracket 44 and then the fastener 48 (not present) is placed through the openings therethrough 45 (FIG. 4) and 47 to secure the support frame 12 within the bracket 44.

[0021] FIG. 6 is a full side view of the stabilization bracket 52. This component attaches to the stabilization attachment 42. This portion of the mower shade 2 is also very critical to the mower shades 2 stability. It is clear that there are two openings therethrough 60 of the stabilization bracket 52.

[0022] FIG. 7 is a full side view of the stabilization attachment 42 with the stabilization bracket 52 attached forming the stabilization brace 50. The stabilization attachment 42 is attached the mounting bracket 26 brace 32 facing toward the lawn tractor 4 (not shown). The stabilization attachment 42 has an opening therethrough 70. The bracket 52 has openings therethrough 60 which when aligned and a fastener 54 is inserted; the stabilization attachment 42 and bracket 52 form the stabilization brace 50. The other openings therethrough 60 accommodated the space adjustments 56. The space adjustments 56 allows the clips 58 to intersect with the space adjustments 56 and provide a point of contact between the lawn mower 4 and the mounting bracket 26 therefore providing stability to the mower shade 2.

[0023] FIG. 8 is a full frontal view of the stabilization clip 58. The clips 58 in this embodiment have adhesive backing and are affixed directly to the lawn mower 4 and the spacers 56 are adjusted to make firm contact between the lawn mower 4 and the mounting bracket 26.

[0024] FIG. 9 is a side view of the mower shade 2 ready for installation on a lawn tractor 4 (not shown). This view shows the assembled lawn mower shade 2 and its relation to installation to a lawn mower 4. The near end 66 of the support frame 12 is secured within the support frame bracket 44 by the support frame plate 46 and fastener 48. The support frame 12 slides within the mounting bracket 26 and is adjustable with the tightening or loosening of the adjustment knob 62. The upright members 14 are visible with the canopy 8 covering the remainder of the support frame 12 of the upper portion 68 of the support frame 12. Also attached to the canopy 8 is the visor 10. The relationship between the support frame 12 and the mounting bracket 26 is clear in that the mounting bracket 26 mounts to the lawn mower 4 via the threaded member 30 of the mounting bracket 26. The flat plate 28 has the brace 32 attached to it and rises to the attachment bracket 34 that holds the support frame 12. The stabilization brace 50 is also clear as well as its components; the stabilization attachment 42, bracket 52, space adjustments 56 and clips 58. Also visible are the straps 74 that help to stabilize the mower shade to the lawn mower 4.

[0025] FIG. 10 is a top view of the support frame bracket 44 with support frame 12 installed. This view shows the cammed ends 72 of the support frame 12. This feature allows the support frame 12 to remain secured within the support frame bracket 44 without rotation in the event of collision with the mower shade due to a branch or other obstructions. This is the anti-crumple zone. The uprights 14 within the bracketed area are cammed 72 to give a break away feature. The camming allows the uprights to move only in a rearward direction if they are struck by an object with enough force to potentially damage the frame work 12 or the canopy 8. The break away feature allows the user to stop after an object is struck but not allowing the canopy 8 or frame work 12 to become damaged. The mower 4 is reversed and the canopy 8 returns to its original position and the user can resume to their activities.

[0026] The mower shade 2 also has straps 74 that provide added stability. These straps attach near the front end of the canopy 8 to the support frame 12 and to the lawn mower 4. They are adjustable in length allowing them to attach to any lawn mower 4. They are attached to the support frame 12 and the mower 4 and tightened for greater stability.

[0027] In other embodiments the mower shade 2 is adaptable to any vehicle that has a hitch assembly such as an ATV.

What is claimed is:

1. A mower shade, said mower shade comprising:

a tubular support frame, said tubular support frame having a distal end, said distal end comprised of two separate pieces being detachably fixed together by a support frame bracket;

a canopy supported by the support frame;

a mounting bracket mounted near the distal end of the support frame, said mounting bracket comprising an

attachment bracket that attaches the mounting bracket to the distal end of the tubular support frame, said attachment bracket having affixed thereto, near the near end, an adjustment means;

said attachment bracket having affixed near the distal end of the attachment bracket, an adjustable support brace, said support brace having a distal end and having attached to the distal end a mounting plate; said support brace having attached near the distal end, a stabilizer consisting of a flat plate permanently affixed to the support bracket and, a stabilizer bracket attached to the flat plate by a mechanical fastener.

2. A mower shade as claimed in claim 1 wherein the canopy is manufactured from polyester.

3. A mower shade as claimed in claim 1 wherein the canopy is manufactured from a group consisting of, nylon, rayon, cloth, canvas, plastics, polyester, polyvinylchloride, papers, coated papers and fabrics.

4. A mower shade as claimed in claim 1 wherein said canopy is manufactured from man made materials.

5. A mower shade as claimed in claim 1 wherein said canopy is manufactured from natural materials.

6. A mower shade as claimed in claim 1 wherein said support frame is manufactured from a group consisting of metals, woods, plastics carbon fibers, fiberglass, composites, graphite and alloys.

7. A mower shade as claimed in claim 1 wherein said straps are manufactured from a group consisting of plastics, natural fibers, synthetic fibers, monofilament, cord, rope and hemp.

8. A mower shade as claimed in claim 1 wherein said support frame is unitary.

9. A mower shade as claimed in claim 1 wherein said support frame is comprised of component parts represented by sections.

10. A mower shade as claimed in claim 1 wherein said mower shade is attached to any vehicle with a mounting hitch.

11. A mower shade as claimed in claim 1 wherein said mower shade is attached to an all terrain vehicle.

12. A mower shade as claimed in claim 1 wherein said support frame is manufactured from man made materials.

13. A mower shade as claimed in claim 1 wherein said support frame is manufactured from natural materials.

14. A shade as claimed in claim 1 wherein said canopy has a visor.

15. A mower shade as claimed in claim 1 wherein said mounting bracket has a stabilizer attached thereto, said stabilizer attachment uses a brace, space adjustments and adhesive clips to provide a point of contact to support said mounting bracket and said support frame against the mower for complete stability.

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