

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY (IPEA/US)**

Application of: Jakubisin et al.	§	Docket No.: 35906.411WO01
	§	
Application No.: PCT/US2018/045178	§	
	§	
Int'l Filing Date: August 3, 2018	§	
	§	
For: BUCKET LIP STABILIZER	§	
STRUCTURE	§	

**RESPONSE TO THE WRITTEN OPINION OF THE INTERNATIONAL SEARCH
AUTHORITY UNDER ARTICLE 34**

Mail Stop PCT

Attn: ISA/US, Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with the PCT Rules, Applicant hereby responds to the Written Opinion of the International Search Authority and demands Chapter II examination under Article 34, in the above-referenced international application.

If any fees, including extension-of-time fees, are necessary, the extension of time is hereby requested, and the Commissioner is hereby authorized to charge any fees (or credit any overpayments) to Haynes and Boone, LLP's Deposit Account No. 08-1394.

Amendments to the Claims begin on page 2.

Remarks begin on page 7.

Clean Claims begin on page 14.

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A wear member assembly comprising:
 - a bucket lip comprising:
 - a first surface;
 - a second surface that faces opposite the first surface;
 - a curved surface extending between the first surface and the second surface; and
 - an anchor hole extending through the bucket lip between the first surface and the second surface;
 - a stabilizer structure comprising:
 - a forward stabilizer portion arranged to fit along the first surface between the anchor hole and the curved surface, the forward stabilizer portion sized and shaped to extend over and conform to the curved surface and having a terminal end that terminates adjacent the curved surface of the bucket lip between the first surface and the second surface; and
 - an adapter comprising a pair of bifurcated legs adapted to fit over the bucket lip such that a first leg of the pair of bifurcated legs fits along the first surface and a second leg of the pair of bifurcated legs fits along the second surface, the first leg including a slot arranged to receive the forward stabilizer portion.
2. (Original) The wear member assembly of claim 1, further comprising a wear member arranged to fit onto and secure to the adapter.
3. (Original) The wear member assembly of claim 2, wherein the adapter comprises a forward extending nose and the wear member includes a rearward facing cavity sized and shaped to fit onto the nose.
4. (Original) The wear member assembly of claim 3, wherein the nose and the wear member include transverse holes for receiving a connector to lock the wear member to the adapter.
5. (Original) The wear member assembly of claim 1, wherein the forward stabilizer portion

is aligned with a rear stabilizer portion.

6. (Original) The wear member assembly of claim 1, further comprising, a rear stabilizer portion positioned rearward of the anchor hole.

7. (Original) The wear member assembly of claim 6, wherein the rear stabilizer portion is wider than the forward stabilizer portion.

8. (Original) The wear member assembly of claim 7, wherein a rearward portion of the slot is wider than a forward portion of the slot.

9. (Original) The wear member assembly of claim 1, wherein the bucket lip includes a projection extending from the curved surface.

10. (Original) The wear member assembly of claim 9, wherein a forward portion of the forward stabilizer portion that extends over the curved surface is bifurcated so as to fit around the projection.

11. (Original) An adapter for securing a wear member to a bucket lip, the adapter comprising:

a proximal end comprising:

a first leg arranged to fit along a top surface of a bucket lip, the first leg having an inner surface disposed to face the top surface of the bucket lip and having a rear end surface, the first leg having a longitudinally extending slot formed therein extending from the rear end surface, the longitudinal slot being sized and arranged to extend over a forward stabilizer portion extending along the top surface; and

a second leg arranged to fit along a bottom surface of the bucket lip, the second leg having an inner surface disposed to face the bottom surface of the bucket lip; and

a distal end comprising a nose adapted to secure to the wear member, the distal end comprising a rear-facing curved surface shaped to abut against a forward facing curved surface of the forward stabilizer portion, the rear facing curved surface comprising a slot that intersects

with the longitudinal slot of the first leg and that terminates without intersecting the inner surface of the second leg.

12. (Original) The adapter of claim 11, wherein the rear-facing curved surface comprises a non-circular lobe shape.

13. (Original) The adapter of claim 11, wherein the longitudinally extending slot is further adapted to receive a rear stabilizer portion positioned rearward of the forward stabilizer portion.

14. (Original) The adapter of claim 13, wherein the bucket lip includes an anchor hole positioned between the forward stabilizer portion and the rear stabilizer portion.

15. (Original) The adapter of claim 14, wherein the first leg includes a hole positioned such that it is aligned with the anchor hole of the bucket lip when the adapter is positioned in the most rearward position over the bucket lip.

16. (Original) The adapter of claim 15, wherein the second leg includes a hole positioned such that it is aligned with the anchor hole of the bucket lip when the adapter is positioned in the most rearward position over the bucket lip.

17. (Original) The adapter of claim 15, wherein the anchor hole in the bucket lip and the hole in the first leg of the adapter are sized and shaped to receive a wedge member.

18. (Original) A method for securing a wear member to a bucket lip with an adapter, the method comprising:

placing an adapter rearward over a bucket lip, the adapter having a pair of bifurcated legs that straddle the bucket lip, one of the legs having a slot for fitting onto a stabilizer structure on the bucket lip, the stabilizer structure comprising a forward stabilizer portion projecting from a top surface of the bucket lip and extending over a curved forward facing surface of the bucket lip without extending beyond a plane of a bottom surface of the bucket lip;

securing the adapter to the bucket lip; and

fitting a wear member over the adapter by fitting a rearward facing cavity of the wear member over a forward facing nose of the adapter.

19. (Original) The method of claim 18, further comprising welding the forward stabilizer portion to the bucket lip.

20. (Original) The method of claim 18, wherein the stabilizer structure includes a rear stabilizer portion positioned rearward of an anchor hole in the bucket lip.

21. (Original) A stabilizer structure comprising:
an elongated main body portion comprising:
an upper portion with outward-facing side surfaces;
a lower portion below the upper portion, the lower portion being greater in width than the upper portion; and
a forward portion integrated with the main body portion as a single monolithic piece, the forward portion comprising:
a bridge section;
a first prong extending from the bridge section; and
a second prong extending from the bridge section, wherein the first prong, second prong, and bridge section share a single forward-facing curved surface and a single rear-facing curved surface, the forward-facing curved surface having a different curve than the rear-facing curved surface.

22. (Original) The stabilizer structure of claim 21, wherein the main body portion includes a narrow rear portion at a proximal end opposite the forward portion.

23. (Original) The stabilizer structure of claim 21, wherein a proximal end of the main body portion, opposite the forward portion, includes a rounded edge.

24. (Currently Amended) An adapter for securing a wear member to a bucket lip, the adapter comprising:

a distal end comprising a nose adapted to secure to the wear member;

a first leg extending in a proximal direction from the distal end and arranged to fit along a top surface of a bucket lip, the first leg comprising:

an inner surface disposed to face the top surface of the bucket lip;

an outer surface disposed to face away from the top surface of the bucket lip;

[[and]]

a rear end surface; and

a longitudinally extending slot formed in the inner surface and extending from the rear end surface toward the distal end, the longitudinal slot having a lower portion disposed relatively closer to the inner surface and having a first width, the longitudinal slot having an upper portion disposed relatively closer to the outer surface and having a second width, the first width being greater than the second width, the longitudinally extending slot having a depth that tapers from a larger depth at the rear end surface to a smaller depth at the distal end; and

a second leg extending in a proximal direction from the distal end and arranged to fit along a bottom surface of the bucket lip.

25. (Original) The adapter of claim 24, wherein the longitudinally extending slot has a greater width at a proximal end than at a distal end of the longitudinally extending slot.

26. (Original) The adapter of claim 24, wherein the longitudinally extending slot extends toward a rear-facing curved surface of the adapter between the first leg and the second leg, the longitudinally extending slot tapering as it approaches a center of the rear-facing curved surface.

REMARKS

Status of the Application

Claims 1-26 are pending, of which claims 1, 11, 18, 21, and 24 are independent. In the September 17, 2018 Written Opinion, the Examiner characterized claims 7, 8, 21-23, and 25 as having both novelty and inventive step. However, the Written Opinion characterized claims 1-3, 5, 6, 9, 10, and 24 as lacking novelty under PCT Article 33(2) and claims 1-6, 9-20, 24, and 26 as lacking inventive step under PCT Article 33(3). This characterization is respectfully traversed for the following reasons.

This paper proposes amendments to claims 1 and 24.

Comments Regarding Novelty and Inventive Step (Item V)

The Office asserts that independent claims 1 and 24 lack novelty and that independent claims 11 and 18 do not involve an inventive step. Without acquiescing to the propriety of the pending rejection, Applicant herein amends independent claims 1 and 24 and presents arguments below relating to independent claims 1, 11, 18, and 24.

Applicant respectfully observes that the claims of the present application show novelty and inventive step. The PCT International Search and Preliminary Examination Guidelines state with respect to novelty that:

the invention, as defined by a claim, lacks novelty if **every element or step** is explicitly or inherently disclosed within the prior art ...
including any features implicit to a person skilled in the art ...

Ch. 12, § 12.01, emphasis added.

Thus, when considering novelty each and every element or step in the claims must be taken into account. The Guidelines continue with respect to inventive step:

In considering inventive step (non-obviousness), the invention claimed must normally be considered as a whole. In determining the differences between the prior art and the claims, the question is not whether the differences themselves would have been obvious **but whether the claimed invention as a whole would have been obvious.**

Ch. 13, § 13.05, emphasis added.

Thus, the whole invention must be taken into account when determining inventive step.

Independent claim 1

In this case, features of claim 1, when viewed as a whole, are not all disclosed by U.S. Patent No. 9,409,258 to Black Cat Blades, Ltd. (“Black”). Therefore, the features of claim 1 show novelty as well as inventive step. Amended claim 1 is directed to a wear member assembly that includes:

- a bucket lip comprising:

- a first surface;

- a second surface that faces opposite the first surface;

- a curved surface extending between the first surface and the second surface; and

- an anchor hole extending through the bucket lip between the first surface and the second surface;

- a stabilizer structure comprising:

- a forward stabilizer portion arranged to fit along the first surface between the anchor hole and the curved surface, the forward stabilizer portion sized and shaped to extend over and conform to the curved surface and having a terminal end that terminates adjacent the curved surface of the bucket lip between the first surface and the second surface; and

- an adapter comprising a pair of bifurcated legs adapted to fit over the bucket lip such that a first leg of the pair of bifurcated legs fits along the first surface and a second leg of the pair of bifurcated legs fits along the second surface, the first leg including a slot arranged to receive the forward stabilizer portion.

Black fails to teach or suggest such a system. The written opinion cites to Black’s stabilization abutments 42 as corresponding to the “forward stabilizer portion.” (Written Opinion, Box No. V.) The written opinion then states that “abutment 42 ends next to forward end 26 ... as shown in figure 2.” (*Id.*) However, the stabilization abutment 42 of Black does not terminate “between the first surface and the second surface,” as recited by amended claim 1. U.S. Patent Publication 2008/0005940 to Ollinger (“Ollinger”) and U.S. Patent No. 6,986,216 to Emrich et al. (“Emrich”), alone or in combination, fail to correct the deficiencies of Black. Thus, independent claim 1 has both novelty and inventive step over the references.

Claims 2-6, 9, and 10 depend from independent claim 1. Therefore, for at least these reasons and further in view of their own independent features, these claims should also be allowable over the applied references.

Independent claim 24

Amended claim 24 is directed to an adapter for securing a wear member to a bucket lip. The adapter includes:

- a distal end comprising a nose adapted to secure to the wear member;
- a first leg extending in a proximal direction from the distal end and arranged to fit along a top surface of a bucket lip, the first leg comprising:
 - an inner surface disposed to face the top surface of the bucket lip;
 - an outer surface disposed to face away from the top surface of the bucket lip; [[and]]
 - a rear end surface; and
 - a longitudinally extending slot formed in the inner surface and extending from the rear end surface toward the distal end, the longitudinal slot having a lower portion disposed relatively closer to the inner surface and having a first width, the longitudinal slot having an upper portion disposed relatively closer to the outer surface and having a second width, the first width being greater than the second width, the longitudinally extending slot having a depth that tapers from a larger depth at the rear end surface to a smaller depth at the distal end; and
- a second leg extending in a proximal direction from the distal end and arranged to fit along a bottom surface of the bucket lip.

Black fails to teach or suggest such a system. The written opinion states that “longitudinal recess 44 ***has larger depth in the middle as it needs to fit projection 48 of stabilization member 46 and then tapers off to a smaller depth on the ends*** ... as shown in figure 2.” (Written Opinion, Supplemental Box) (emphasis added.) Therefore, as recognized by the written opinion, the longitudinal recess 44 does not “taper[] from a larger depth at the rear end surface to a smaller depth at the distal end,” as recited by amended claim 24. Ollinger and

Emrich, alone or in combination, fail to correct the deficiencies of Black. Thus, independent claim 24 has both novelty and inventive step over the references.

Claim 26 depends from independent claim 24. Therefore, for at least these reasons and further in view of its own independent features, this claim should also be allowable over the applied references.

Independent claim 11

In this case, features of claim 11, when viewed as a whole, are not all disclosed by Black in view of Ollinger. Therefore, the features of claim 11 show novelty as well as inventive step. Claim 11 is directed to an adapter for securing a wear member to a bucket lip. The adapter includes:

- a proximal end comprising:

- a first leg arranged to fit along a top surface of a bucket lip, the first leg having an inner surface disposed to face the top surface of the bucket lip and having a rear end surface, the first leg having a longitudinally extending slot formed therein extending from the rear end surface, the longitudinal slot being sized and arranged to extend over a forward stabilizer portion extending along the top surface; and

- a second leg arranged to fit along a bottom surface of the bucket lip, the second leg having an inner surface disposed to face the bottom surface of the bucket lip; and

- a distal end comprising a nose adapted to secure to the wear member, the distal end comprising a rear-facing curved surface shaped to abut against a forward facing curved surface of the forward stabilizer portion, the rear facing curved surface comprising a slot that intersects with the longitudinal slot of the first leg and that terminates without intersecting the inner surface of the second leg.

The written opinion recognizes that Black fails to teach “the rear facing curved surface comprising a slot that intersects with the longitudinal slot of the first leg and that terminates without intersecting the inner surface of the second leg.” But, the written opinion states:

Ollinger does disclose the rear facing curved surface comprising a slot that intersects with the longitudinal slot of the first leg and that terminates without intersecting the inner surface of the second leg (adapter 34 has an interior recess 109 which comes in contact with slot 103 but stops at end 97 before intersection with the inner surface of lower leg 38 occurs; figures 1, 7; paragraphs [0054], [0068], [0069]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Black to have a slot that ends in the same manner as Ollinger for the advantage of stopping the shifting of the adapter on the base (see Ollinger paragraph (00681)).

However, it would not have been obvious to one of ordinary skill in the art to combine Black and Ollinger in the manner suggested by the written opinion at least because such a combination would render Black unfit for its intended purpose. For example, to combine Black and Ollinger in the manner suggested by the written opinion would require one leg of Black's adapter 14 to be removed. Black is not designed to work with only one leg of its adapter 14. Thus, the combination of Black and Ollinger is improper, and a person of ordinary skill in the art would not be motivated to make such a combination. Thus, independent claim 11 has at least an inventive step over the references.

Claims 12-17 depend from independent claim 11. Therefore, for at least these reasons and further in view of their own independent features, these claims should also be allowable over the applied references.

Independent claim 18

Claim 18 is directed to a method for securing a wear member to a bucket lip with an adapter. The method includes:

placing an adapter rearward over a bucket lip, the adapter having a pair of bifurcated legs that straddle the bucket lip, one of the legs having a slot for fitting onto a stabilizer structure on the bucket lip, the stabilizer structure comprising a forward stabilizer portion projecting from a top surface of the bucket lip and extending over a curved forward facing surface of the bucket lip without extending beyond a plane of a bottom surface of the bucket lip;

securing the adapter to the bucket lip; and
fitting a wear member over the adapter by fitting a rearward facing cavity of the wear member over a forward facing nose of the adapter.

The written opinion recognizes that Black fails to teach at least “the forward stabilizer extending over a curved forward facing surface of the bucket lip without extending beyond a plane of a bottom surface of the bucket lip.” But, the written opinion states:

Ollinger does disclose the forward stabilizer extending over a curved forward facing surface of the bucket lip without extending beyond a plane of a bottom surface of the bucket lip (base 32 (forward stabilizer) goes over the front edge 44 without crossing inner side 47 of arm 48; figure 1; paragraph (0054).... It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Black to have a stabilizer in the same manner as Ollinger for the advantage of the stabilizer being easier to access because the bottom is difficult to get to (see Ollinger paragraph (0054).

However, it would not have been obvious to one of ordinary skill in the art to combine Black and Ollinger in the manner suggested by the written opinion at least because such a combination would render Black unfit for its intended purpose. For example, to combine Black and Ollinger in the manner suggested by the written opinion would require one leg of Black’s adapter 14 to be removed. Black is not designed to work with only one leg of its adapter 14. Thus, the combination of Black and Ollinger is improper, and a person of ordinary skill in the art would not be motivated to make such a combination. Thus, independent claim 18 has at least an inventive step over the references.

Claims 19 and 20 depend from independent claim 18. Therefore, for at least these reasons and further in view of their own independent features, these claims should also be allowable over the applied references.

CONCLUSION

In view of the foregoing it is respectfully requested that the Examiner consider the foregoing remarks and conduct a detailed examination of the International application which is the subject of the Demand under Article 31 of the PCT, including the issuance of an International Preliminary Report on Patentability with respect to Claims 1-26, and providing the Applicant with an opportunity and ample time to respond to any negative opinions contained therein.

Respectfully submitted,

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CLEAN CLAIMS

1. A wear member assembly comprising:
 - a bucket lip comprising:
 - a first surface;
 - a second surface that faces opposite the first surface;
 - a curved surface extending between the first surface and the second surface; and
 - an anchor hole extending through the bucket lip between the first surface and the second surface;
 - a stabilizer structure comprising:
 - a forward stabilizer portion arranged to fit along the first surface between the anchor hole and the curved surface, the forward stabilizer portion sized and shaped to extend over and conform to the curved surface and having a terminal end that terminates adjacent the curved surface of the bucket lip between the first surface and the second surface; and
 - an adapter comprising a pair of bifurcated legs adapted to fit over the bucket lip such that a first leg of the pair of bifurcated legs fits along the first surface and a second leg of the pair of bifurcated legs fits along the second surface, the first leg including a slot arranged to receive the forward stabilizer portion.
2. The wear member assembly of claim 1, further comprising a wear member arranged to fit onto and secure to the adapter.
3. The wear member assembly of claim 2, wherein the adapter comprises a forward extending nose and the wear member includes a rearward facing cavity sized and shaped to fit onto the nose.
4. The wear member assembly of claim 3, wherein the nose and the wear member include transverse holes for receiving a connector to lock the wear member to the adapter.
5. The wear member assembly of claim 1, wherein the forward stabilizer portion is aligned with a rear stabilizer portion.

6. The wear member assembly of claim 1, further comprising, a rear stabilizer portion positioned rearward of the anchor hole.
7. The wear member assembly of claim 6, wherein the rear stabilizer portion is wider than the forward stabilizer portion.
8. The wear member assembly of claim 7, wherein a rearward portion of the slot is wider than a forward portion of the slot.
9. The wear member assembly of claim 1, wherein the bucket lip includes a projection extending from the curved surface.
10. The wear member assembly of claim 9, wherein a forward portion of the forward stabilizer portion that extends over the curved surface is bifurcated so as to fit around the projection.
11. An adapter for securing a wear member to a bucket lip, the adapter comprising:
 - a proximal end comprising:
 - a first leg arranged to fit along a top surface of a bucket lip, the first leg having an inner surface disposed to face the top surface of the bucket lip and having a rear end surface, the first leg having a longitudinally extending slot formed therein extending from the rear end surface, the longitudinal slot being sized and arranged to extend over a forward stabilizer portion extending along the top surface; and
 - a second leg arranged to fit along a bottom surface of the bucket lip, the second leg having an inner surface disposed to face the bottom surface of the bucket lip; and
 - a distal end comprising a nose adapted to secure to the wear member, the distal end comprising a rear-facing curved surface shaped to abut against a forward facing curved surface of the forward stabilizer portion, the rear facing curved surface comprising a slot that intersects with the longitudinal slot of the first leg and that terminates without intersecting the inner surface of the second leg.

12. The adapter of claim 11, wherein the rear-facing curved surface comprises a non-circular lobe shape.
13. The adapter of claim 11, wherein the longitudinally extending slot is further adapted to receive a rear stabilizer portion positioned rearward of the forward stabilizer portion.
14. The adapter of claim 13, wherein the bucket lip includes an anchor hole positioned between the forward stabilizer portion and the rear stabilizer portion.
15. The adapter of claim 14, wherein the first leg includes a hole positioned such that it is aligned with the anchor hole of the bucket lip when the adapter is positioned in the most rearward position over the bucket lip.
16. The adapter of claim 15, wherein the second leg includes a hole positioned such that it is aligned with the anchor hole of the bucket lip when the adapter is positioned in the most rearward position over the bucket lip.
17. The adapter of claim 15, wherein the anchor hole in the bucket lip and the hole in the first leg of the adapter are sized and shaped to receive a wedge member.
18. A method for securing a wear member to a bucket lip with an adapter, the method comprising:
 - placing an adapter rearward over a bucket lip, the adapter having a pair of bifurcated legs that straddle the bucket lip, one of the legs having a slot for fitting onto a stabilizer structure on the bucket lip, the stabilizer structure comprising a forward stabilizer portion projecting from a top surface of the bucket lip and extending over a curved forward facing surface of the bucket lip without extending beyond a plane of a bottom surface of the bucket lip;
 - securing the adapter to the bucket lip; and
 - fitting a wear member over the adapter by fitting a rearward facing cavity of the wear member over a forward facing nose of the adapter.

19. The method of claim 18, further comprising welding the forward stabilizer portion to the bucket lip.
20. The method of claim 18, wherein the stabilizer structure includes a rear stabilizer portion positioned rearward of an anchor hole in the bucket lip.
21. A stabilizer structure comprising:
an elongated main body portion comprising:
an upper portion with outward-facing side surfaces;
a lower portion below the upper portion, the lower portion being greater in width than the upper portion; and
a forward portion integrated with the main body portion as a single monolithic piece, the forward portion comprising:
a bridge section;
a first prong extending from the bridge section; and
a second prong extending from the bridge section, wherein the first prong, second prong, and bridge section share a single forward-facing curved surface and a single rear-facing curved surface, the forward-facing curved surface having a different curve than the rear-facing curved surface.
22. The stabilizer structure of claim 21, wherein the main body portion includes a narrow rear portion at a proximal end opposite the forward portion.
23. The stabilizer structure of claim 21, wherein a proximal end of the main body portion, opposite the forward portion, includes a rounded edge.
24. An adapter for securing a wear member to a bucket lip, the adapter comprising:
a distal end comprising a nose adapted to secure to the wear member;
a first leg extending in a proximal direction from the distal end and arranged to fit along a top surface of a bucket lip, the first leg comprising:
an inner surface disposed to face the top surface of the bucket lip;

an outer surface disposed to face away from the top surface of the bucket lip;
a rear end surface; and
a longitudinally extending slot formed in the inner surface and extending from the rear end surface toward the distal end, the longitudinal slot having a lower portion disposed relatively closer to the inner surface and having a first width, the longitudinal slot having an upper portion disposed relatively closer to the outer surface and having a second width, the first width being greater than the second width, the longitudinally extending slot having a depth that tapers from a larger depth at the rear end surface to a smaller depth at the distal end; and
a second leg extending in a proximal direction from the distal end and arranged to fit along a bottom surface of the bucket lip.

25. The adapter of claim 24, wherein the longitudinally extending slot has a greater width at a proximal end than at a distal end of the longitudinally extending slot.

26. The adapter of claim 24, wherein the longitudinally extending slot extends toward a rear-facing curved surface of the adapter between the first leg and the second leg, the longitudinally extending slot tapering as it approaches a center of the rear-facing curved surface.