

REMARKS

Claims 1 – 22 are currently pending in this application. Claims 1, 11, 19, 20, and 21 are presently amended. Claims 12, 14 – 16, and 18 were previously withdrawn.

Claim Rejections - 35 U.S.C. § 112

Claims 1 – 11, 13, 17, 19, 20, and 21 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In Response, Applicants amended claims 1, 11, 19, 20, and 21 to address the clarity issues noted in the Action at pages 2 and 3. Claims 2 – 10, 13, and 17 were only rejected as depending on an indefinite base claim.

In view of the amendments noted above, withdrawal of the 35 U.S.C. §112 rejection of claims 1 – 11, 13, 17, 19, 20, and 21 is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

Claims 1-11, 13, and 19-22 were rejected under 35 U.S.C. §102 as being anticipated by U.S. 3,972,247 (“Armstrong”). Applicants respectfully traverse this rejection.

The rejected independent claims recite, *inter alia*, a first and second pawl for engaging teeth on an indexer mechanism. The first pawl is connected to or integrally formed with a driven arm of the lever and moves with the driven arm of the lever when the driven arm rotates about a first axis and a second axis. The

driven arm rotates independent of the first pawl about a third axis that is parallel to the first and second axes when the first pawl is in thrusting engagement with first teeth while the lever is manually moved in a first direction beyond a predetermined rotation threshold. The first pawl does not rotate about the third axis with the driven arm of the lever. The second pawl is driven out of retention engagement with the second teeth when the lever is moved in the first direction up to the predetermined rotation threshold.

Armstrong relates to a bicycle control mechanism that is selectively upshifted or downshifted to change the gear ratios of a bicycle gear-change transmission. In the Action, the Examiner states that the pawl 98 of Armstrong is mounted to the lever 110 so that there is no axial or radial movement between them and that Armstrong's pawl 98 and lever 110 moves integrally in a circumferential motion, as recited in the present claims. *See*, September 11, 2013 Office Action, page 13. Applicants disagree.

As shown in Armstrong's FIGS. 3 – 5, the advance pawl 98 is supported by the pivot pin 96. The pivot pin 96 is formed from a projection that is connected to the operator control means 38 and moves conjointly with the operator control means 38. As the lever 110 is activated, the advance pawl 98 pivots about the pin 96 so that the contact end 104 can be engaged with or disengaged from the teeth 66 of the ratchet wheel 60. When the advance pawl 98 is engaged with the teeth 66 of the ratchet wheel 60, the contact end 104 of the advance pawl 98 is pivoted away from the main body portion 114 of the lever 110 so that the leg portion 102 of the advance

pawl 98 is substantially parallel with the main body 114 of the lever 110. When the advance pawl 98 is disengaged from the teeth 66 of the ratchet wheel 60, the contact end 104 of the advance pawl 98 is pivoted towards the main body portion 114 of the lever 110 so that a trapezoidal space is formed between the main body 114, the projection, and the leg portion 102 of the advance pawl 98. *See*, Armstrong, FIG. 4. Thus, since Armstrong's advance pawl 98 is pivoted to the lever 110 it is capable of rotating about a third axis 64 that is parallel to the axis of rotation of the lever.

In contrast to Armstrong, the first pawl of the present claims moves about a pin that is orthogonal to both the first and second axes, but does not pivot with the driven arm about a third axis that is parallel to the first and second axes. Since Armstrong's advance pawl 98 pivots axially and radially toward and away from the body portion 114 of the lever, e.g., about the third axis with the lever, it does not anticipate the present claims.

Further, independent claims 19-21 of the present application recite a swinging member having two arms, a driven arm and a driving arm, that is pivoted onto the support body. A second pawl is formed on the driven arm of the swinging member. The second pawl disengages from the second teeth while the lever is moved in the first direction up to the predetermined rotation threshold. The driven arm of the lever, during its displacement up to the predetermined rotation threshold, controls the driving arm of the swinging member.

The Examiner states that Armstrong discloses a second pawl (specifically the portion of leg 84 that contacts teeth 68) formed on a driven arm (portion 84 that is

driven by element 86) of a swinging member (element 76 as a whole). Applicants disagree. Armstrong's swinging member does not have two arms; the second pawl 76 is a single arm that is pivoted at 80 on the support body. The second pawl 76 is not formed on a driven arm of a swinging member pivoted to the support body as recited by claims 19-21. The stop pawl 76 is pivotally supported by pivot shaft 80 and has a leg portion 84 which is adapted to selectively engage respective ones of the teeth 66. The release means 34 is comprised of a release pawl 86 pivotally mounted on release pawl pivot 88. The release pawl 86 is operatively connected to a release pawl torsion spring 90 having one end abutting a surface of the release pawl 86 and an opposite end engaging an abutment surface located on the operator control means 38. The stop pawl 76 and its leg portion 84 do not engage or interact with the advance pawl or its leg portion 102. In other words, the two portions relied on by the Examiner are just surfaces that are positioned at 90° with respect to each other, but are in fact a single, elongated body. Thus, Armstrong does not teach arms according to the independent claims of the present application or according to Webster's Dictionary, which defines an arm as "any armlike part or attachment, as of a lever on a machine: *the arm of a record player.*" See, "Arm." *Webster's Encyclopedic Unabridged Dictionary of the English Language*. Reading is Fun ed. 2001. Print. More recently, Webster's Dictionary defined arm as follows:

- 1: a human upper limb; *especially*: the part between the shoulder and the wrist
- 2: something like or corresponding to an arm: as
 - a. the forelimb of a vertebrate

- b. a limb of an invertebrate animal
 - c. a branch or lateral shoot of a plant
 - d. **a slender part of a structure, machine, or an instrument projecting from a main part, axis, or fulcrum**
 - e. the end of a ship's yard; *also*: the part of an anchor from the crown to the fluke — see anchor illustration
 - f. any of the usually two parts of a chromosome lateral to the centromere
- 3: an inlet of water (as from the sea)
- 4: a narrow extension of a larger area, mass, or group
- 5: power, might <the long arm of the law>
- 6: a support (as on a chair) for the elbow and forearm
- 7: sleeve
- 8: the ability to throw or pitch a ball well; also: a player having such ability
- 9: a functional division of a group, organization, institution, or activity <the logistical arm of the air force>

See, "Arm." Merriam-Webster.com. Merriam-Webster, n.d. Web. 11 Mar. 2014.
<http://www.merriam-webster.com/dictionary/arm>.

Claims 2 – 10 and 13, which depend on claim 1, are allowable over Armstrong for at least the same reasons provided above. Based on the arguments presented above, withdrawal of the §102 rejection of claims 1 – 11, 13, and 19 – 22 is respectfully requested.

Claims 1 and 17 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 2006/0207375 ("Jordan"). Applicants respectfully traverse this rejection.

Jordan relates to a bicycle shifter for pulling and releasing a control cable that is connected to a gear change mechanism. In the Action, the Examiner states that the drive mechanism 26 of Jordan has a drive pawl 86 that is "rotatably mounted about a drive pawl pivot 90 fixed to the control lever 20" and that the drive

pawl 86 is “axially positioned by a retaining ring 92” so that there is no axial or radial movement between the pawl 86 and lever 20. *See*, September 11, 2013 Office Action, pages 14 and 15. Applicants disagree.

As shown in Jordan's FIGS. 3a – 4h, the drive pawl 86 is rotatably mounted on a pivot 90 that is fixed to the control lever 20. Before the control lever 20 is actuated, the tail 98 of the drive pawl 84 rests against the declutching wall 88 of the housing 18. Once the control lever 20 is actuated, it rotates about the shaft 32 in a shift direction and moves the drive pawl 84 away from the declutching wall 88 and towards the ratchet teeth 66. The nose 96 of the drive pawl 84 is pivoted into engagement with the ratchet teeth 66. Jordan's drive pawl 84 is pivoted to the lever and it is capable of rotating about a third axis.

The Action does not reject the present claims as being obvious over the combination of Armstrong and Jordan. However, even if Armstrong and Jordan were combined, the present claims would not be obvious since neither Armstrong nor Jordan disclose or suggest a first pawl that is connected to and moves with a driven arm of the lever when the driven arm rotates about the first and second axes, but does not move with the driven arm when the driven arm rotates about a third axis that is parallel to the first and second axes.

Based on the arguments presented above, withdrawal of the § 102(e) rejection of claims 1 and 17 is respectfully requested.

Conclusion

If the Examiner believes that an interview will advance prosecution of the application, the Examiner is respectfully requested to contact the undersigned to schedule an interview at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1 – 22, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,
Dal Pra' et al.

Volpe and Koenig, P.C.
United Plaza
30 South 17th Street
Philadelphia, PA 19103-4009
Telephone: (215) 568-6400
Facsimile: (215) 568-6499
ASV/SAW/srp

By /Anthony S. Volpe/
Anthony S. Volpe
Registration No. 28,377
avolpe@vklaw.com
Tel: 215-255-9101