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(54) VIBRATING DEVICE FOR SCREEDING MACHINE

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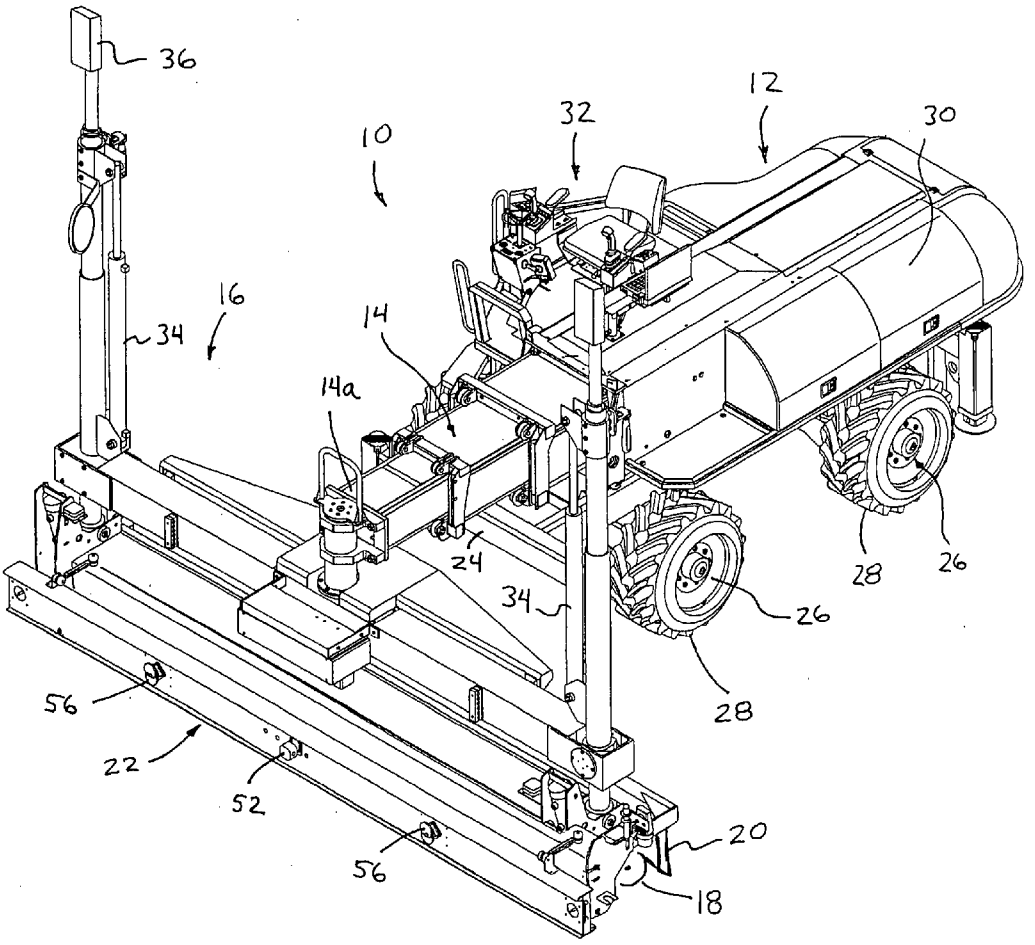
(57) **ABSTRACT**

A vibrating device for a screed head assembly mountable to a screeding device includes a vibrating member and a vibrating system. The vibrating member comprises an integrally formed elongated member having upper and lower screeding surfaces and a vertical portion extending therebetween. The vertical portion may define a hollow cavity therealong. The vibrating system is operable to vibrate the vibrating member to compact and smooth the concrete surface. The vibrating system is mounted to the vertical portion of the vibrating member and operates to vibrate the vibrating member to screed the concrete surface when the lower screeding surface engages the concrete surface. The vibrating system may include a drive motor operable to rotatably drive at least one drive pulley which, in turn, drives a drive belt to rotate at least one eccentric element rotatably mounted to the vibrating member.



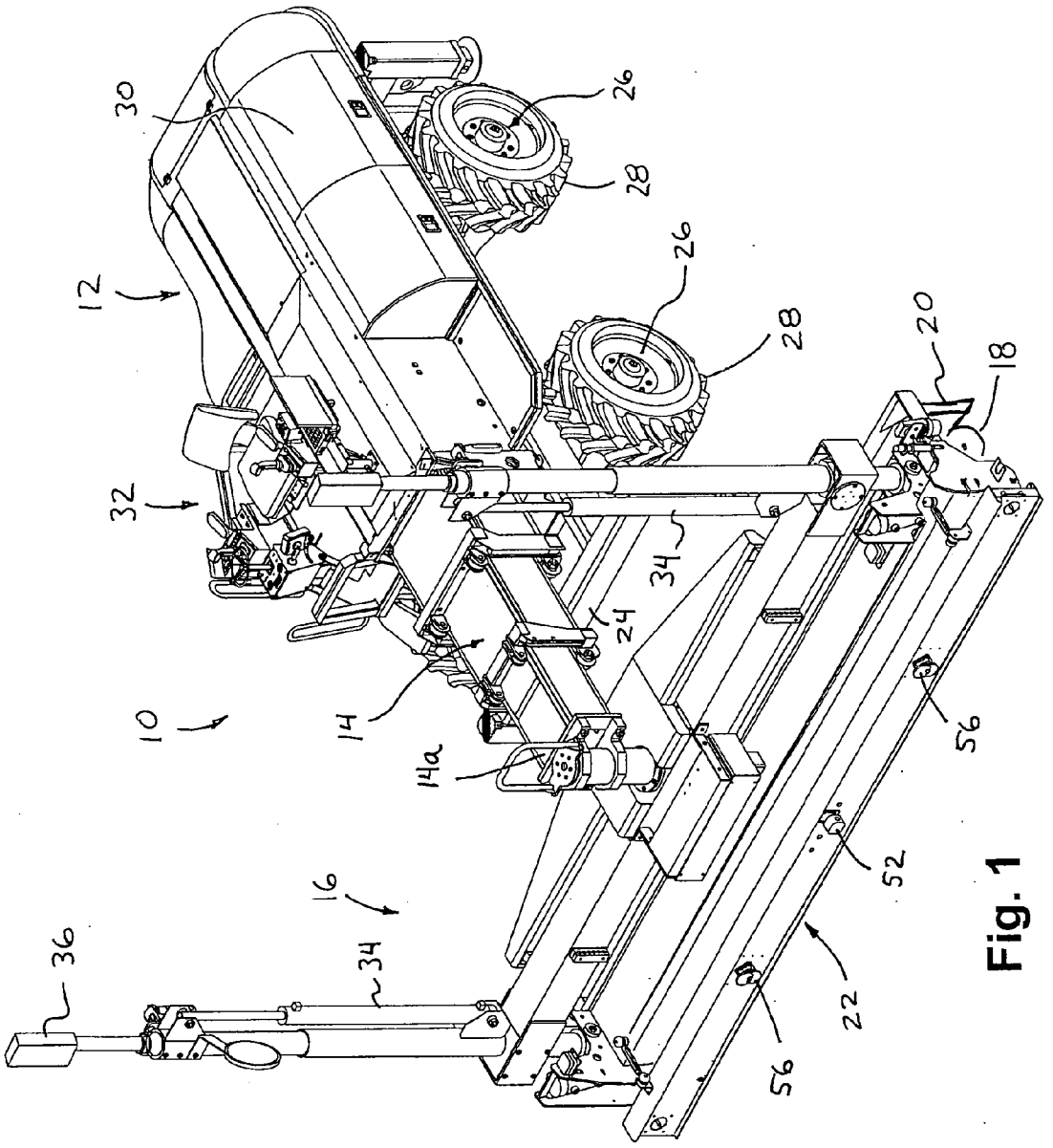


Fig. 1

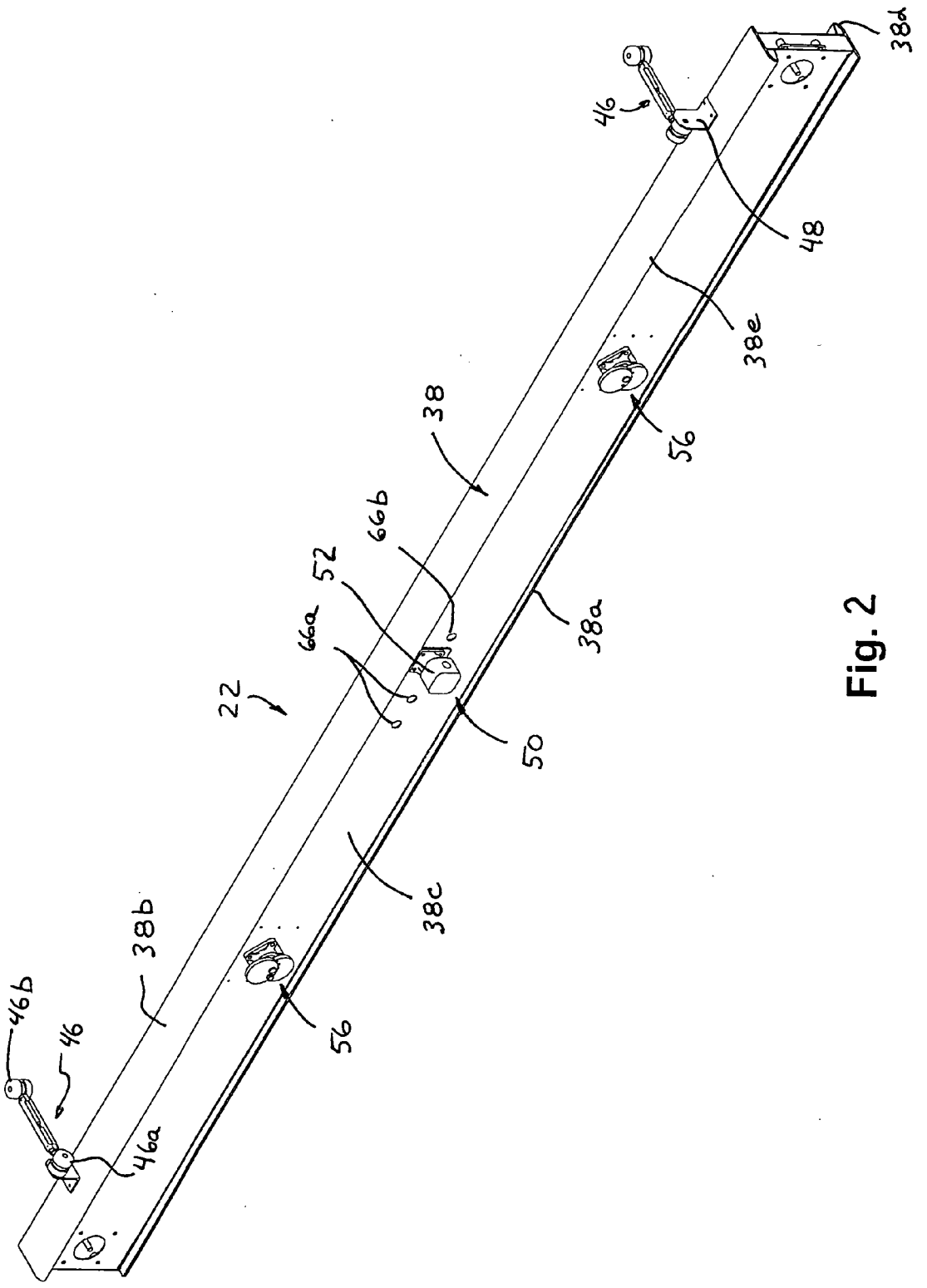


Fig. 2

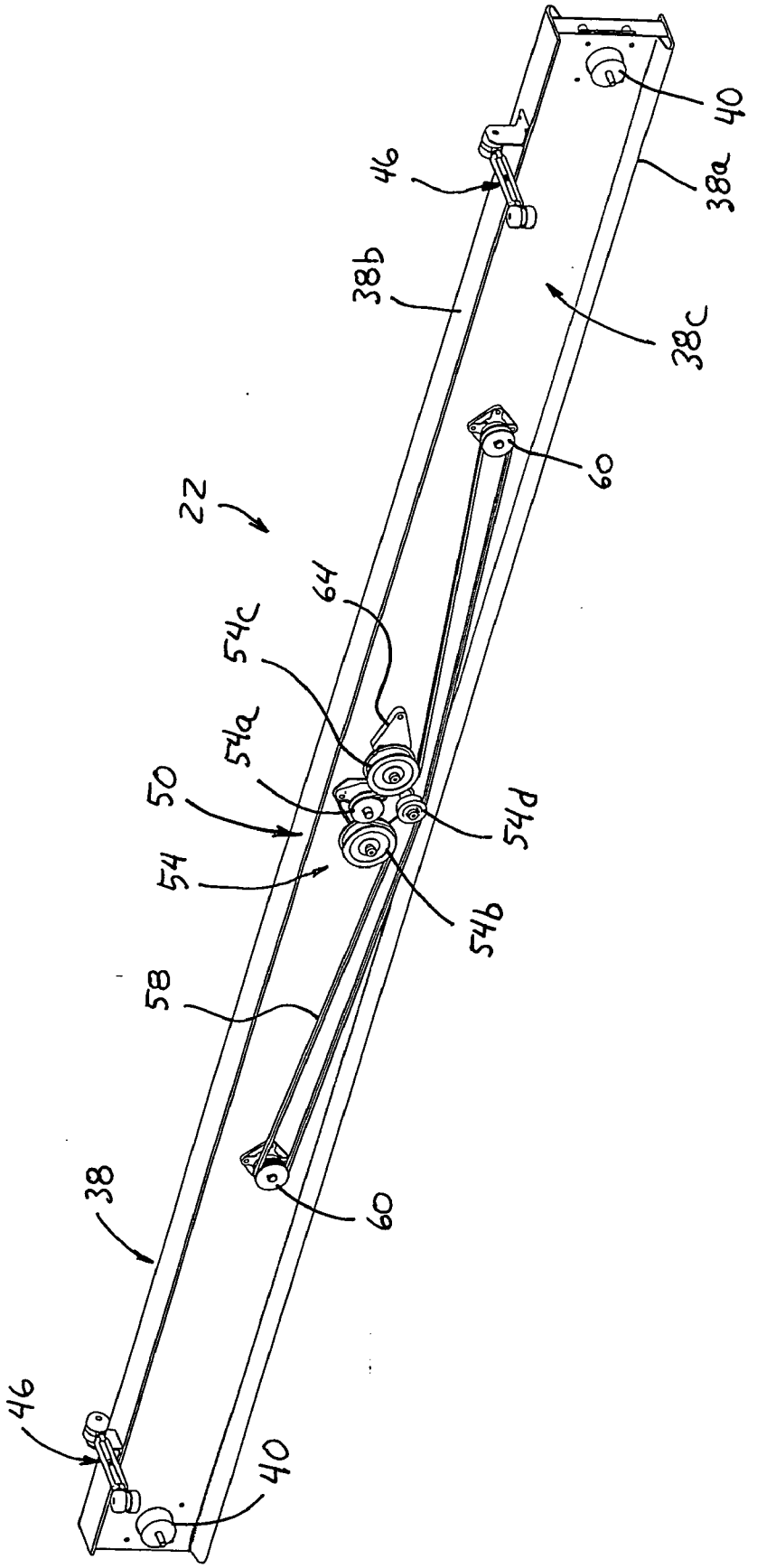
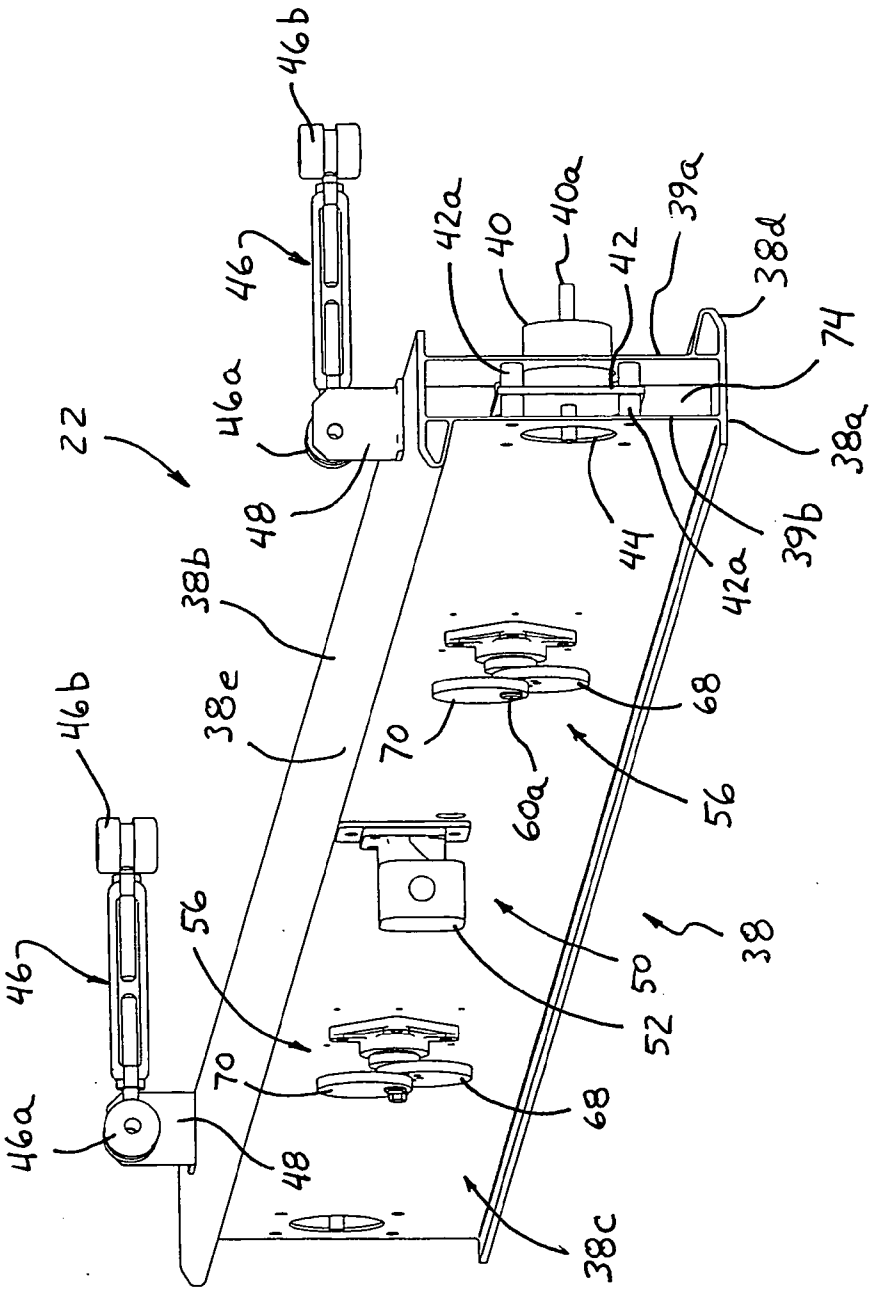


Fig. 3


46b
46
46a
22
48
38b
38e
46b
46
46a
48
56
70
68
42a
40
40a
42
39a
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42a
44
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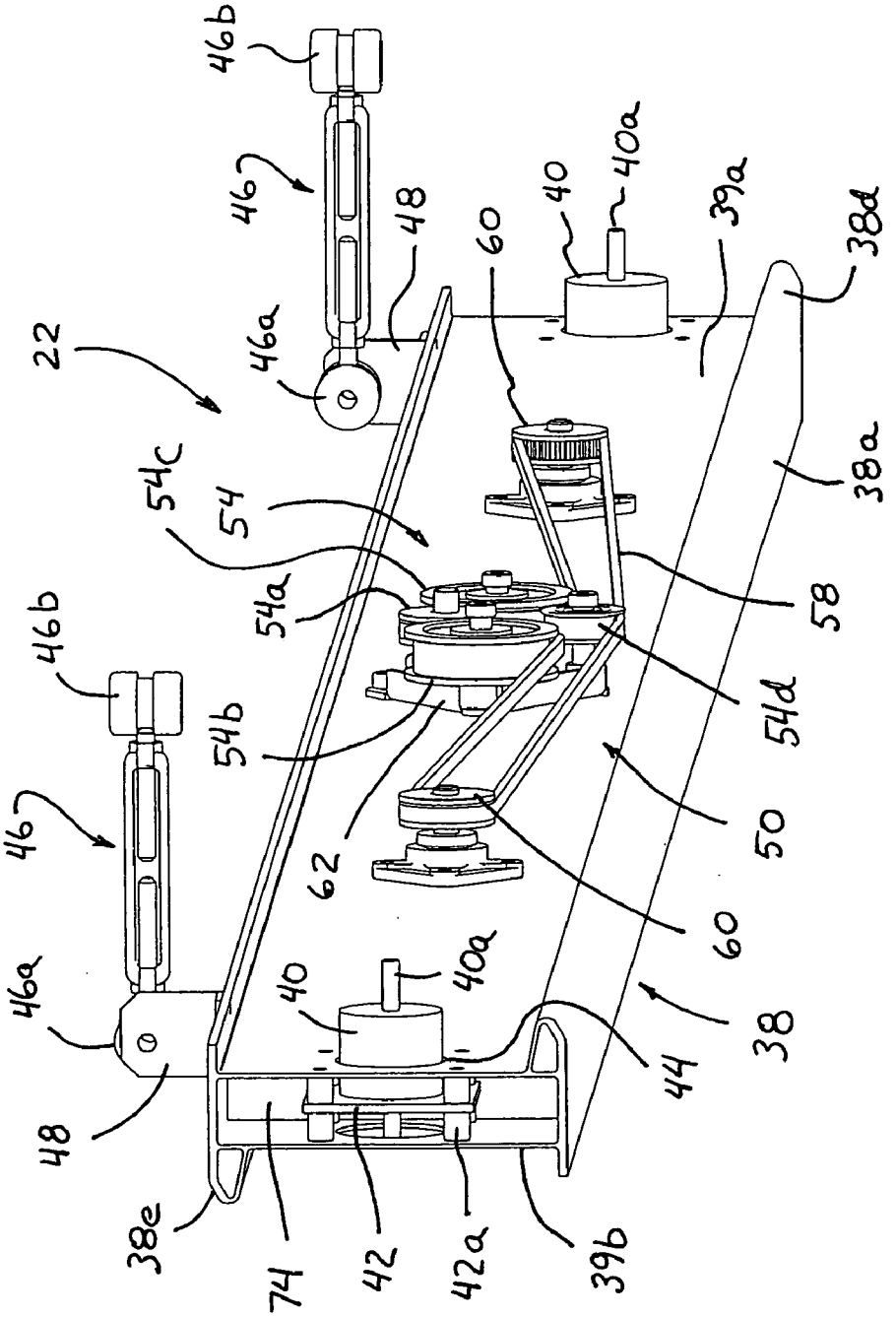
60a
56
38
50
52
38c

Fig. 4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54c
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46b
54b
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46
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62
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46a
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38
48
44
38e
74
42
42a
39b

Fig. 5

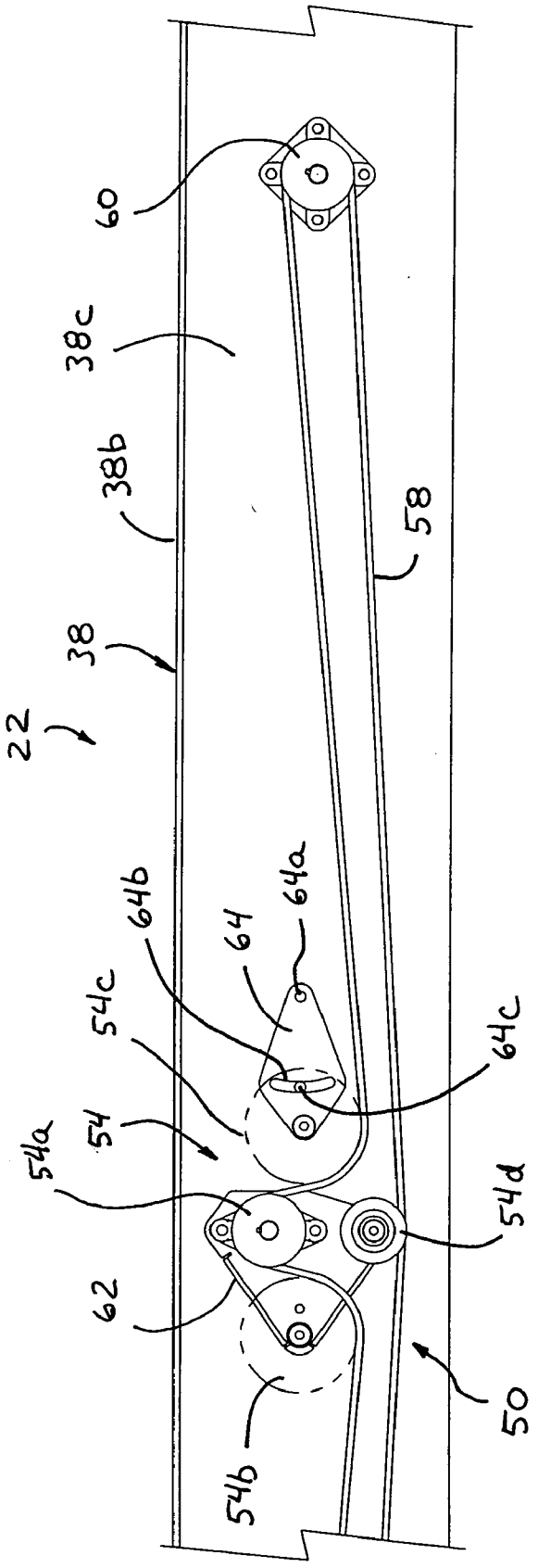

Fig. 6

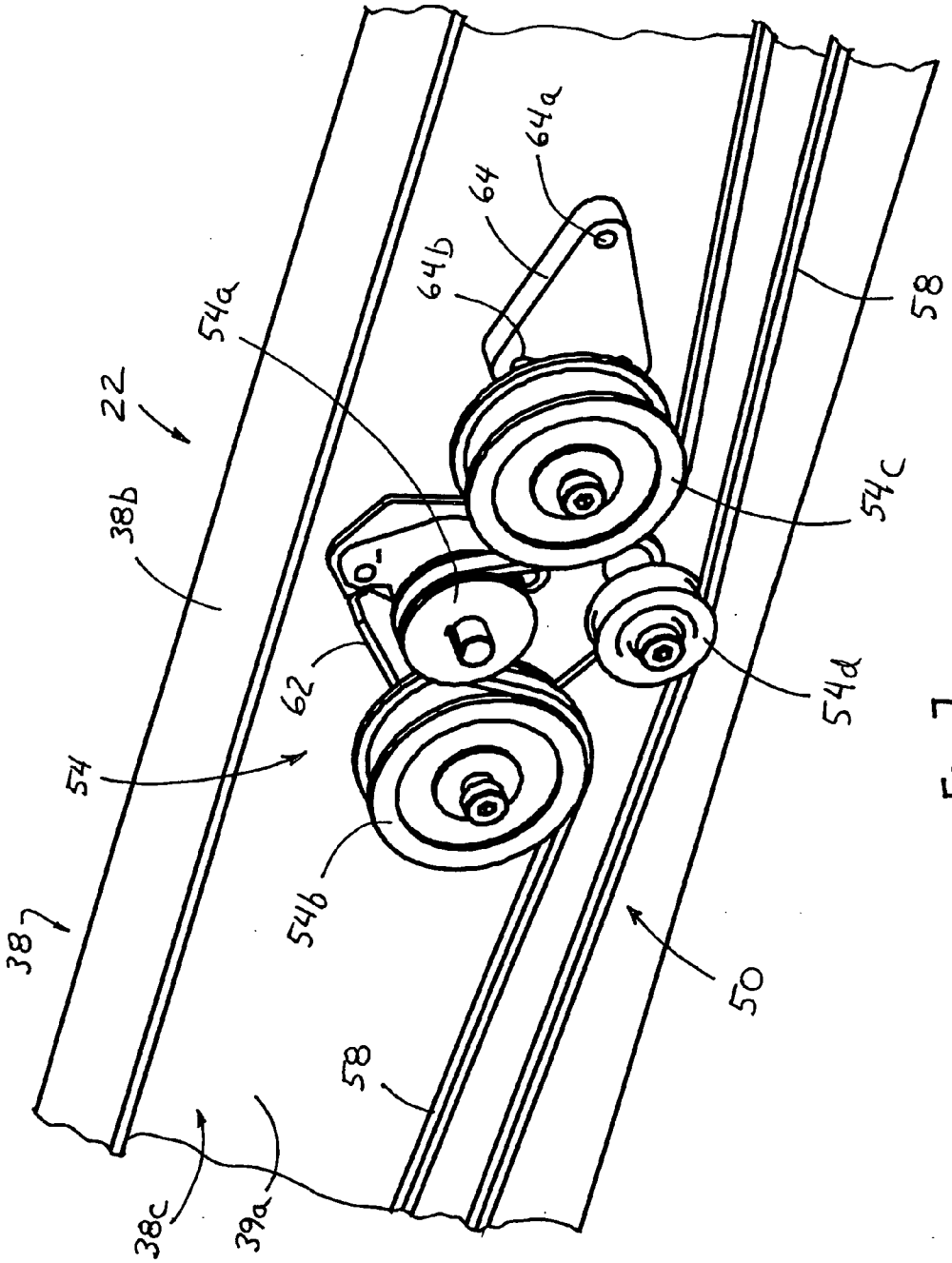

Fig. 7

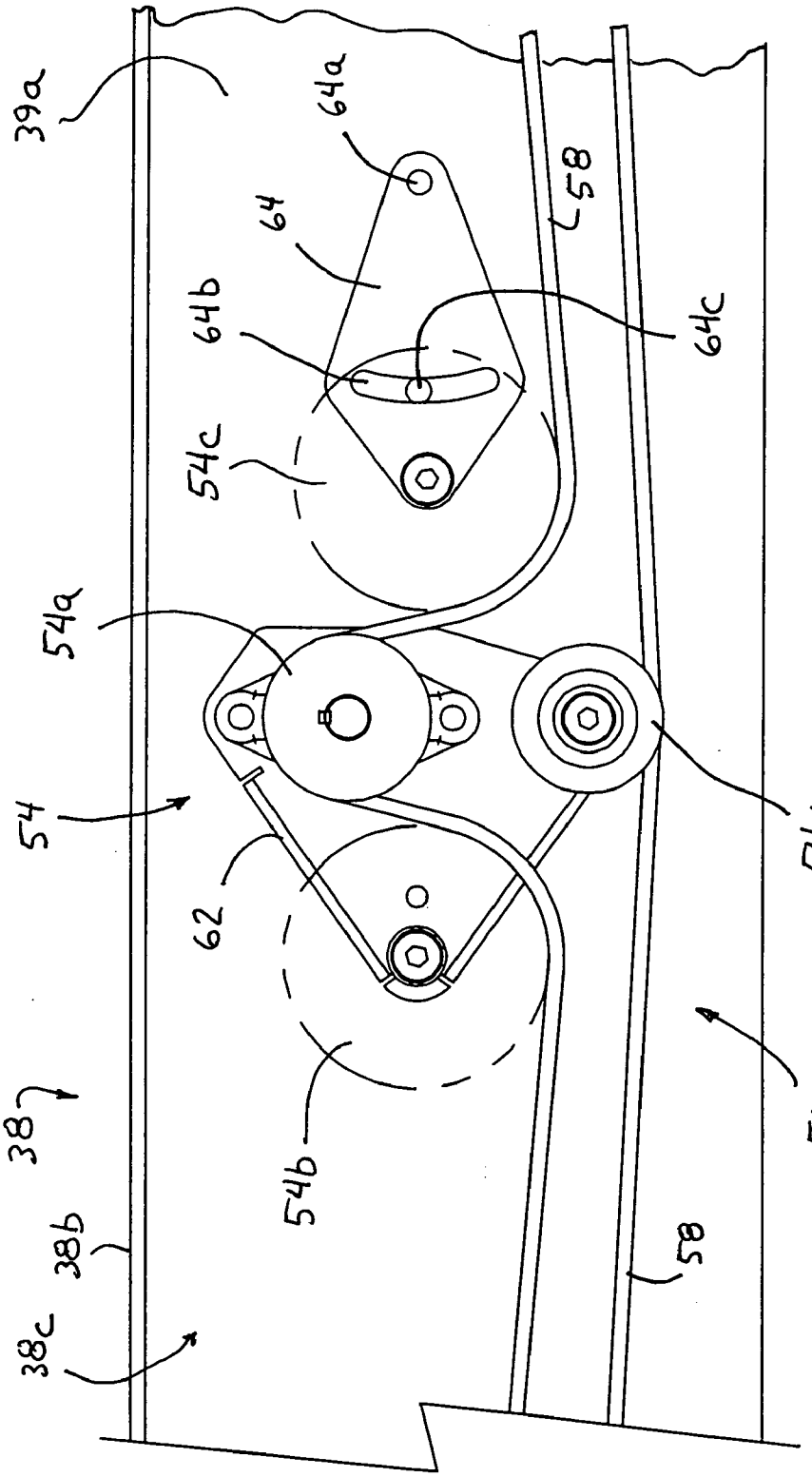

Fig. 8

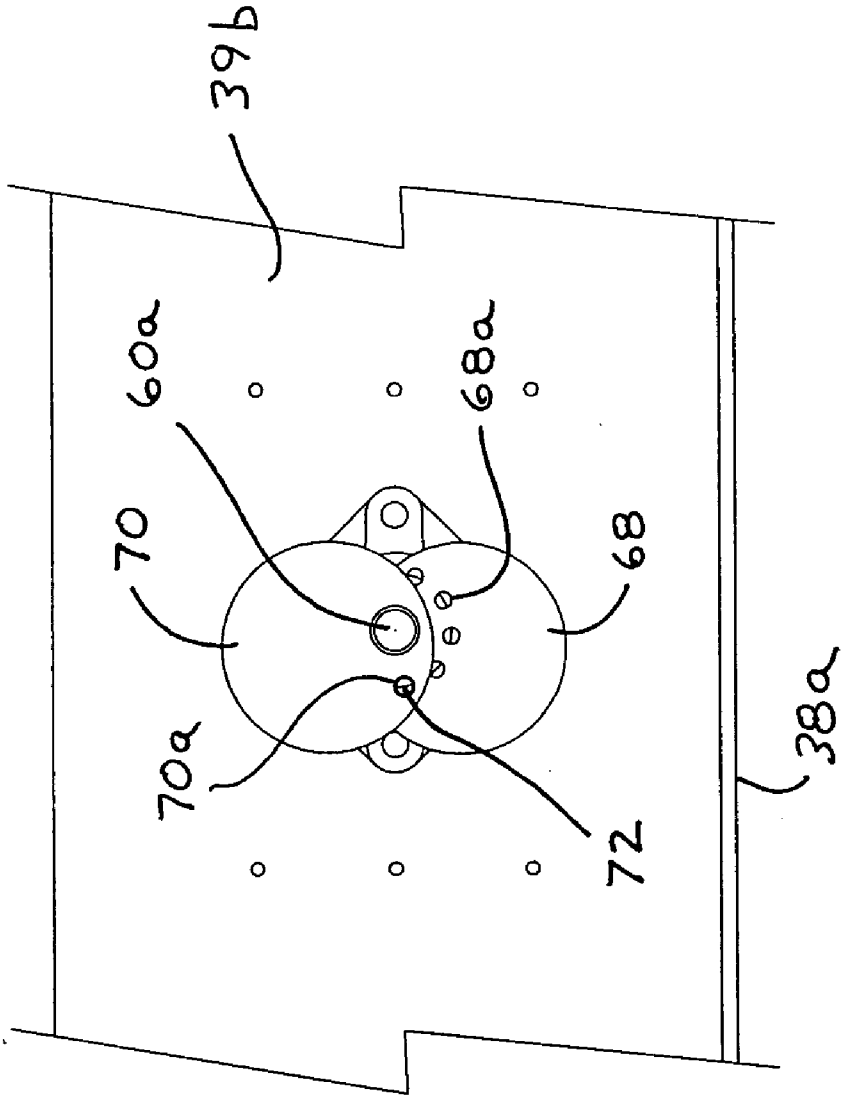

Fig. 9

VIBRATING DEVICE FOR SCREEDING MACHINE

CROSS REFERENCE TO RELATED APPLICATION

[0001] The present application claims the benefit of U.S. provisional application Ser. No. 60/738,091, filed Nov. 18, 2005, which is hereby incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates generally to screeding devices for screeding and finishing a surface of loose and/or plastic material such as of uncured concrete, sand, dirt, combinations thereof or the like and, more particularly, to a screeding device having a screed head assembly which includes a vibrating device.

BACKGROUND OF THE INVENTION

[0003] It is known to provide a screed head assembly which includes a plow, auger and vibrating device and which is operable to establish a grade and substantially compact, smooth and/or finish the surface of loose, plastic material such as uncured concrete. The vibrating device typically includes a generally horizontal beam for engaging the concrete surface, and a generally horizontal shaft extending along the beam. The shaft includes eccentric weights or discs spaced therealong. Rotational driving of the shaft thus imparts rotation of the eccentric weights which, in turn, causes the beam to vibrate to compact and screed the concrete surface as the screed head assembly is moved over and along the concrete surface.

[0004] Typically, the eccentric weights are rotated in response to a drive motor that rotatably drives a horizontal drive shaft that is mounted along the vibrating member. The horizontal drive shaft or shafts is/are rotatably driven by the drive motor and function to rotatably drive the eccentric weights. Such horizontal drive shafts are supported and mounted along the vibrating member via a plurality of bearings and mounts to rotatably support the shaft or shafts at multiple locations along the vibrating members.

SUMMARY OF THE INVENTION

[0005] The present invention is intended to provide a screed head assembly for a screeding device or machine which includes a plow, an auger and a vibrating device. The vibrating device includes a drive motor and drive system that operate to rotate a pair of eccentric discs at or toward or near each end of a vibrating member, so as to vibrate the vibrating member to compact and smooth the concrete surface. The drive system includes drive pulleys and drive belts that operate to rotate the eccentric discs in response to rotational driving by the drive motor.

[0006] According to an aspect of the present invention, a vibrating device for a screed head assembly mountable to a screeding device includes a vibrating member and a vibrating system. The vibrating member comprises a unitary or integrally formed elongated member having upper and lower screeding surfaces and a vertical portion extending therebetween. The vertical portion defines a hollow cavity therealong. The vibrating system is mounted to the vertical portion of the vibrating member and operates to vibrate the vibrating member to screed the concrete surface when the lower screeding surface engages the concrete surface.

[0007] The vibrating member may comprise an extruded vibrating member, such as extruded of aluminum or other suitable material. The upper and lower screeding surfaces may be formed to be substantially similar so that the vibrating member may be flipped over to use the initially upper screeding surface to engage the concrete surface. Optionally, the hollow cavity may be filled with an insulating element.

[0008] According to another aspect of the present invention, a vibrating device for a screed head assembly mountable to a screeding device includes a vibrating member and a vibrating system. The vibrating member includes a generally planar lower surface for engaging a surface of uncured concrete, dirt, sand, gravel or the like, and a generally vertical portion extending upwardly from the lower surface. The generally vertical portion extends longitudinally along the vibrating member. The vibrating system is operable to vibrate the vibrating member to compact and smooth the concrete surface. The vibrating system includes a drive motor operable to rotatably drive at least one drive pulley which, in turn, drives a drive band or belt to rotate at least one eccentric element rotatably mounted to the vibrating member. Rotation of the eccentric element or elements imparts a vibration to the vibrating member.

[0009] Optionally, the eccentric element comprises a pair of eccentric elements spaced along the vibrating member. Optionally, the eccentric element comprises a pair of eccentric discs mounted at a rotatable shaft. One of the eccentric discs may be fixedly mounted to the shaft and the other of the eccentric discs may be adjustably positioned about the shaft relative to the first eccentric disc. The eccentric discs may be selectively oriented to selectively set a degree of vibration of the vibrating element.

[0010] Therefore, the present invention provides a vibrating device for a screed head assembly that includes an extruded vibrating member and a pulley and belt drive system. The extruded vibrating member may provide a low cost vibrating member that may be flipped or reversed to provide an increased life cycle of the vibrating member as one surface or edge becomes worn. The extruded vibrating member may include a hollow cavity therealong, and the cavity may be substantially filled with an insulating material or element to reduce noise during operation of the vibrating device. The drive system provides rotational driving of eccentric elements to vibrate the vibrating member, while providing a mounting arrangement that has reduced bearings and mounts as compared to known horizontal shaft vibrating systems.

[0011] These and other objects, purposes, advantages and features of the present invention will become apparent upon review of the following specification in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. **1** is a perspective view of a screed device or machine having a screed head assembly and vibrating device in accordance with the present invention;

[0013] FIG. **2** is a perspective view of the vibrating device suitable for use with the screed head assembly of FIG. **1**;

[0014] FIG. **3** is another perspective view of the vibrating device of FIG. **2**;

[0015] FIG. **4** is another perspective view of the vibrating device of FIGS. **2** and **3**, taken generally at an end of the vibrating device;

[0016] FIG. **5** is another perspective view of the vibrating device of FIGS. **2-4**, taken generally at the same end as in FIG. **4**;

[0017] FIG. **6** is an end elevation of a portion of the vibrating device of the present invention, showing the drive belts and pulleys of the drive system of the present invention;

[0018] FIG. **7** is an enlarged perspective view of the drive system of the vibrating device of FIG. **3**;

[0019] FIG. **8** is an enlarged end elevation of the drive system shown in FIG. **6**; and

[0020] FIG. **9** is an end elevation of the eccentric discs suitable for use with the vibrating device of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0021] Referring now to the drawings and the illustrative embodiments depicted therein, a screeding device or machine **10** includes a wheeled base unit **12** and an extendable or telescoping boom assembly **14** which extends from base unit **12** (FIG. **1**). A screed head assembly **16** is adjustably mounted at an outer end **14***a* of extendable boom **14**, as discussed below. Wheeled base unit **12** is movable via wheels **26**, preferably having pneumatic tires **28** formed from rubber or other materials thereon, and is positionable adjacent to an area of uncured concrete (or other material) to be processed, worked, compacted, vibrated, smoothed and/or screeded by screed head assembly **16**. In the illustrated embodiment, screed head assembly **16** includes an auger device or assembly **18**, a plow **20** positioned forwardly of auger device **18**, and a vibrating device **22** positioned rearwardly of auger device **18**. Plow **20** and auger device **18** function to establish the grade of the uncured concrete surface, while vibrating device **22** compacts and smoothes the uncured concrete surface as screed head assembly **16** is moved over the uncured concrete surface, as discussed below. Although described as being suitable for processing an uncured concrete surface, the present invention is equally suitable for processing surfaces of other materials, such as sand, dirt, gravel or the like, without affecting the scope of the present invention.

[0022] Wheeled base unit **12** includes a lower support frame **24** having front and rear propulsion support axles, each of which may provide both propulsion and steering capability of the tired wheels **26**, **28**. An upper frame **30** of base unit **12** may be rotatable relative to lower frame **24** and may include an operator support platform or control platform **32**. Wheels **26** may be individually driven or powered by hydraulic motors (not shown) or other means for independently driving the wheels of base unit **12**, without affecting the scope of the present invention. Wheeled base unit **12** and boom assembly **14** of screeding device **10** may utilize principles disclosed in U.S. Pat. Nos. 4,930,935; 6,183,160; 6,152,647; and/or 6,129,481, which are hereby incorporated herein by reference.

[0023] The concrete screeding machine may comprise any type of concrete screeding device or machine, such as a LASER SCREED™ screeding machine as commercially available from Somero Enterprises, Inc. of Houghton, Mich., or other types of suitable concrete screeding devices or machines, without affecting the scope of the present invention. For example, the screeding machine may comprise a screeding machine of the types disclosed in U.S. Pat. Nos. 4,655,633; 4,930,935; and 6,227,761, which are hereby incorporated herein by reference. In the illustrated embodiment, the extendable and retractable boom **14** extends and retracts relative to the wheeled base unit **12**, and is extendable and retractable to move screed head assembly **16** over and along a targeted concrete surface, while the screed head assembly **16** is vertically adjustable relative to the boom **14**.

[0024] The screed head assembly **16** may be adjustably positioned such that the auger **18** is at a desired grade via a pair of actuators or hydraulic cylinders **34**, one at or near each end of the screed head assembly. The actuators **34** may be operable to raise and lower the screed head assembly in response to an automatic elevation control system, such as a control system utilizing laser beacon receivers **36** and a laser reference plane generator (not shown), which is typically mounted externally of screeding machine **10** on a tripod or another fixed location. The elevation of the plow, vibrating assembly and auger assembly may thus be adjustable relative to a cross member support in response to the laser plane system, such as by utilizing aspects of the screeding devices described in U.S. Pat. Nos. 4,655,633; 4,930,935; and 6,227,761, which are hereby incorporated herein by reference. Optionally, the laser receivers may be replaced with at least one three dimensional tracking target (not shown) and one sonic height sensor (not shown) for use with an automatic three dimensional profiler system commercially available from Somero Enterprises of Houghton, Mich., and such as disclosed in U.S. Pat. No. 6,227,761, issued May 8, 2001 to Kieranen et al. for APPARATUS AND METHOD FOR THREE DIMENSIONAL CONTOURING, which is hereby incorporated herein by reference.

[0025] Screed head assembly **16** includes vibrating device **22** positioned rearwardly of auger device **18** and plow **20**. As shown in FIGS. **2-5**, vibrating device **22** includes an elongated, generally I-shaped vibrating beam or member **38**, which includes a generally flat or planar base or lower portion or screeding surface **38***a*, a similarly formed, generally flat upper portion or screeding surface **38***b* and a generally vertical portion or web **38***c* extending therebetween. Lower portion **38***a* may include an upwardly turned front or leading lip **38***d* along a forward or leading edge thereof to limit or substantially preclude vibrating member **38** from cutting into the uncured concrete surface as screed head assembly **16** is moved over the uncured concrete surface.

[0026] In the illustrated embodiment, the lower and upper portions **38***a*, **38***b* of vibrating member **38** are substantially similar so that the vibrating member **38** is formed to be reversible. Thus, if the vibrating member were to be flipped 180 degrees about its longitudinal axis, the vibrating member could be used with the initially upper portion **38***b*

engaging the concrete surface (and with a curved lip **38***e* at its forward or leading edge when so positioned). Such a formation allows the vibrating member to be flipped to use the other side or portion, such as in situations where the lower portion **38***a* becomes worn, and thus may extend the life cycle of the vibrating member.

[**0027**] As best shown in FIGS. **4** and **5**, vibrating member **38** comprises a generally hollow member with a central cavity along the member and between the generally vertical and spaced apart walls **39***a*, **39***b* of the vertical portion **38***c*. Preferably, the vibrating member comprises an integral member or unitary member, which is unitarily formed via a forming process. For example, the vibrating member may be extruded to form the hollow elongated member with the upper and lower portions being substantially similar to one another and reversed relative to one another. The material selected for the extruded vibrating member may comprise any suitable material, such as aluminum or the like, without affecting the scope of the present invention.

[**0028**] As shown in FIGS. **2-5**, vibrating device **22** includes a pair of rubber isolators or mounts **40**, with a mounting element **40***a* protruding therefrom, for attaching or mounting the vibrating device to the screed head assembly. As best shown in FIGS. **4** and **5**, isolators **40** and mounting element **40***a* (such as a threaded stud or the like) may be secured to a mounting or attaching plate **42**, which may be secured between the vertical walls **39***a*, **39***b* via spacer elements **42***a* (such as substantially rigid aluminum spacers or the like) and associated fasteners or the like. The rubber isolator may protrude from the plate **42** and through an opening or aperture **44** in one of the vertical walls **39***a* for engagement with the screed head assembly. As can be seen in FIGS. **4** and **5**, the vibrating member **38** may be formed with the apertures **44** through both of the vertical walls **39***a*, **39***b*, so that the isolators may protrude through either aperture depending on the orientation or direction of the vibrating member **38**.

[**0029**] Vibrating device **22** also includes a pair of spaced apart vibrator mounting brackets or arms or members **46**, which are adjustably secured to the screed head assembly, such as to an auger support beam or the like and toward opposite ends thereof. The vibrator mounting arms **46** may be pivotally mounted at the upper portion **38***b* of vibrating member **38**, and may be pivotally mounted at the screed head assembly. Vibrating member **38** may include a pair of brackets **48** attached to upper portion **38***b*. The vibrator mounting arms **46** may be mounted to the respective brackets **48**, such as generally L-shaped brackets as shown in FIGS. **2** and **3**, via rubber vibration isolators or mounts **46***a* to minimize vibration from the vibrating member **38** back to mounting arms **46** and the auger support beam and screed head assembly. Likewise, the mounting arms **46** may be mounted to the auger support beam via rubber vibration isolators or mounts **46***b* to reduce vibration at the screed head assembly during operation of the vibrating device. In the illustrated embodiment, the mounting arms **46** are adjustable elements, such as threaded turnbuckles or the like, so that the arms may be adjusted in length to adjust the angle or orientation of the vibrating member **38** relative to the screed head assembly to set a desired pitch or attack angle of the vibrating member.

[**0030**] Vibrating device **22** includes a vibrating system or drive system **50**, which is operable to vibrate the vibrating member **38** to compact and smooth and screed the concrete surface when the vibrating member engages the concrete surface and while the screed head assembly is moved along the concrete surface. Drive system **50** includes a rotational driving motor **52**, such as a hydraulic motor or the like, and a drive assembly **54**, which functions to rotate a pair of eccentric elements **56** in response to rotational driving by the drive motor **52**, as discussed below. As shown in FIGS. **2** and **4**, drive motor **52** is mounted to vertical wall **39***b* (the rearward or trailing wall when in use) of vibrating member **38**. Drive motor **52** includes a drive shaft that extends from the motor and through the vertical portion **38***c* of vibrating member to couple with or connect to a drive pulley **54***a* of drive assembly **54**, which is attached or mounted at the other vertical wall **39***a* (the forward or leading wall when in use) of vibrating member **38**.

[**0031**] Drive assembly **54** includes drive pulley **54***a*, a pair of idler pulleys **54***b*, **54***c* and a guide or tensioning idler pulley **54***d* rotatably mounted at a generally central location along vertical wall **39***a* of vibrating member **38**. As best shown in FIGS. **5-8**, a drive belt **58** is reeved around the drive pulleys **54***a*, **54***b*, **54***c*, **54***d* and around wheels or pulleys **60** that are coupled with the respective eccentric weights or discs or elements **56** at or near the opposite end or outer regions of the vibrating member. The belt may comprise any type of drive belt or chain or the like, and may include teeth or ridges along a surface thereof for enhanced gripping and engagement with the pulleys, while remaining within the spirit and scope of the present invention. Thus, rotational driving of drive pulley **54***a* via operation of drive motor **52** functions to drive the belt **58** around the pulleys **54***b*, **54***c*, **54***d* and **60** to rotate the eccentric elements **56** about their generally horizontal axes so as to impart a vibration to the vibrating member **38**.

[**0032**] As best seen in FIGS. **6-8**, drive pulley **54***a* and idler pulleys **54***b* and **54***d* are rotatably mounted to a mounting bracket **62** that is attached to vertical wall **39***a* of vibrating member **38**. The bracket **62** thus may be readily attached to the vertical wall **39***a* (such as via suitable fasteners or the like) and the pulleys may be mounted at the bracket, thereby easing the assembly process of the pulleys to the vibrating member. The drive pulley **54***a* and idler pulleys **54***b*, **54***d* thus may be substantially fixed relative to one another by their respective mounting to the mounting bracket **62**, which, in turn, is fixedly attached to vibrating member **38**. As can be seen in FIGS. **6-8**, however, idler pulley **54***c* may be adjustably mounted to vibrating member **38** to allow for adjustment of the tension in the drive belt **58**.

[**0033**] In the illustrated embodiment, idler pulley **54***c* is rotatably mounted to a mounting bracket **64**, which is pivotably or adjustably mounted to vertical wall **39***a* of vibrating member **38**. The bracket **64** is pivotable about one fastener **64***a*, and includes an arcuate slot **64***b* for slidably or movably receiving another fastener **64***c* therethrough, so as to allow for pivotal movement of the bracket **64** when the fasteners are loosened a sufficient amount. As can be seen in FIG. **8**, pivotal movement of the bracket **64** about fastener **64***a* in the counter-clockwise direction would increase the tension in the belt **58**, while pivotal movement about fastener **64***a* in the opposite direction would decrease the tension in the belt **58**. When the bracket is positioned so that the pulley **54***c* provides the desired tension in the belt **58**, the fasteners **64***a*, **64***c* may be substantially tightened to sub-

stantially retain the bracket and pulley in the desired orientation. The fasteners may be tightened or secured from the other side of the vibrating member, such as via accessing the fasteners through apertures **66***a* (FIG. **2**) in the wall **39***b* of vibrating member **38**, so that the bracket **64** (and thus the idler pulley **54***c*) may be secured relative to the vibrating member without having to remove the idler pulley **54***c* from the bracket **64**. Similarly, the bracket **62** for the fixed pulleys may also be attached and secured via fasteners that are accessible through apertures **66***b* in wall **39***b* of vibrating member **38**.

[**0034**] As shown in FIGS. **2**, **4** and **9**, eccentric elements **56** may be rotatably mounted to the vertical wall **39***b* of vibrating member **38** and longitudinally spaced from the center of the vibrating member. Desirably, and as shown in FIG. **2**, the eccentric elements **56** may be positioned generally at the mid-points between the drive motor **52** or drive assembly **54** and the respective outer ends of the vibrating member **38**, in order to provide substantially uniform vibration along the entire length of the vibrating member. In the illustrated embodiment, each eccentric element **56** includes a pair of discs **68**, **70**, which are attached to a rotatable shaft **60***a* that rotates in response to rotation of the respective pulley **60**. The shaft **60***a* is attached to the discs **68**, **70** at a location off-center or remote from the centers of the discs, such that rotation of the shaft **60***a* causes the discs to rotate about an eccentric axis and thus to impart a vibration to the vibrating member.

[**0035**] Optionally, and as shown in FIG. **9**, the discs **68**, **70** may be adjustable relative to one another to adjust the degree of vibration imparted by the rotation of the discs **68**, **70**. For example, one of the discs, such as disc **68** of the illustrated embodiment, may be fixedly attached to the shaft **60***a*, while the other disc **70** may be rotatable around the shaft and relative to the disc **68** and securable relative to the disc **68** (and thus the shaft **60***a*) when in the desired relative orientation. In the illustrated embodiment, one of the discs **68** includes a plurality of openings or apertures **68***a* formed therethrough, while the other disc **70** may include one or more similar apertures **70***a*. A retaining pin **72** or fastener (such as a set screw or the like) may be inserted through aperture **70***a* in disc **70** and into a selected aperture **68***a* in disc **68** to retain or secure the discs **68**, **70** relative to one another in the desired orientation. Thus, when the discs are oriented so that they are substantially oppositely positioned from one another (such as shown in FIG. **9**), the degree of vibration imparted by rotation of the discs is reduced, since the off-center weight of disc **68** is partially or substantially canceled or balanced by the off-center weight of disc **70**. If a greater degree of vibration is desired, the discs may be positioned or adjusted (such as by removing the pin **72** and rotating disc **70** about shaft **60***a*) so that disc **70** is substantially aligned with disc **68**, whereby the degree of vibration imparted by rotation of the discs is increased due to the weight of both discs being at generally the same side or region relative to the axis of rotation of the discs. Thus, the degree of vibration of the vibrating member **38** may be adjusted to a desired level depending on the particular application of the vibrating device **22**.

[**0036**] Therefore, the vibrating system or drive system **50** of the vibrating device **22** functions to rotate a pair of eccentric elements to impart the desired degree of vibration to the vibrating member **38**. The belt and pulley drive system provides an efficient system for rotatably driving the eccentric elements, without the need for multiple bearings and the like typically required for horizontal shaft type vibrating systems. The drive system of the present invention thus may provide a system with reduced costs and enhanced assembly over known horizontal shaft systems.

[**0037**] Optionally, and desirably, an insulating material or element **74** may be inserted into the hollow cavity of the vibrating member **38**, such as from one of the open ends of the cavity, to substantially fill the cavity to reduce noise during operation of the vibrating device. The insulating element **74** may be inserted from one end (or two insulating elements may be inserted from both ends) of the vibrating member, such as before the isolators **40** and plates **42** and the motor **52** and drive assembly **54** and pulleys **60** and eccentric elements **56** are attached to the vibrating member. The insulating element may then be drilled through to form the apertures for receiving the appropriate fasteners and/or spacers and the like. Optionally, the insulating element may be provided with the apertures already formed therethrough and with the appropriate spacers already received in the apertures, so that the insulating element may be inserted into the end of the vibrating member and positioned so that the apertures and spacers substantially align with the holes in the vertical walls **39***a*, **39***b* of the vibrating member **38**.

[**0038**] The insulating element may comprise any suitable insulating material, such as a foam insulating material or the like, and may be substantially rigid to allow for insertion of the insulating element into the cavity and along the vibrating member. Optionally, the insulating element may be a substantially fluid material or foam that is injected into the vibrating member and allowed to cure or substantially solidify within the cavity to insulate the cavity of the vibrating member, without affecting the scope of the present invention. After the insulating element is inserted or otherwise established within the cavity (or at any time if no insulation is established within the cavity), a cap (not shown), such as a molded plastic or polymeric cap or the like, may be attached at each open end of the vibrating member to substantially seal the ends of the vibrating member to limit or substantially preclude intrusion of debris and the like into the cavity of the vibrating member.

[**0039**] Therefore, the present invention provides a vibrating device for a screed head assembly that includes an extruded vibrating member and a pulley and belt drive system. The extruded vibrating member may provide a low cost vibrating member that may be flipped or reversed to provide an increased life cycle of the vibrating member as one surface or edge becomes worn. The extruded vibrating member may include a hollow cavity therealong, and the cavity may be substantially filled with an insulating material or element to reduce noise during operation of the vibrating device. The drive system provides rotational driving of eccentric elements to vibrate the vibrating member, while providing a mounting arrangement that has reduced bearings and mounts as compared to known horizontal shaft vibrating systems.

[**0040**] Changes and modifications in the specifically described embodiments may be carried out without departing from the principles of the present invention, which is intended to be limited only by the scope of the appended claims, as interpreted according to the principle of patent law.

1. A vibrating device for a screed head assembly mountable to a screeding device comprising:

a vibrating member, said vibrating member comprising an integrally formed elongated member having upper and lower screeding surfaces and a vertical portion extending therebetween, said vertical portion defining a hollow cavity therealong; and

a vibrating system, said vibrating system being operable to vibrate said vibrating member to compact and smooth the concrete surface, said vibrating system being mounted to said vertical portion of said vibrating member and operating to vibrate said vibrating member to screed the concrete surface when the lower screeding surface engages the concrete surface.

2. The vibrating device of claim 1, wherein said vibrating member comprises an extruded vibrating member.

3. The vibrating device of claim 1, wherein said upper and lower screeding surfaces are formed to be substantially similar so that the vibrating member can be flipped over to use the initially upper screeding surface to engage the concrete surface.

4. The vibrating device of claim 1, wherein said hollow cavity is substantially filled with an insulating element.

5. The vibrating device of claim 1, wherein said vibrating system comprises a drive motor operable to rotatably drive at least one eccentric element rotatably mounted to said vertical portion of said vibrating member.

6. The vibrating device of claim 5, wherein said drive motor is operable to rotatably drive at least one drive pulley which, in turn, drives a drive belt to rotate said at least one eccentric element.

7. The vibrating device of claim 5, wherein said at least one eccentric element comprises a pair of eccentric elements spaced along said vibrating member.

8. The vibrating device of claim 5, wherein said eccentric element comprises a pair of eccentric discs mounted at a rotatable shaft.

9. The vibrating device of claim 8, wherein one of said eccentric discs is fixedly mounted to said shaft and the other of said eccentric discs is adjustably positioned about said shaft relative to said one of said eccentric discs.

10. The vibrating device of claim 9, wherein said eccentric discs are selectively oriented to selectively set a degree of vibration of said vibrating element.

11. A vibrating device for a screed head assembly mountable to a screeding device comprising:

a vibrating member, said vibrating member includes a generally planar lower surface for engaging a surface of uncured concrete, dirt, sand, gravel or the like, and a generally vertical portion extending upwardly from said lower surface, said generally vertical portion extending longitudinally along said vibrating member; and

a vibrating system, said vibrating system being operable to vibrate said vibrating member to compact and smooth the concrete surface, said vibrating system including a drive motor operable to rotatably drive at least one drive pulley which, in turn, drives a drive belt to rotate at least one eccentric element rotatably mounted to said vibrating member.

12. The vibrating device of claim 11, wherein said at least one eccentric element comprises a pair of eccentric elements spaced along said vibrating member.

13. The vibrating device of claim 11, wherein said eccentric element comprises a pair of eccentric discs mounted at a rotatable shaft.

14. The vibrating device of claim 13, wherein one of said eccentric discs is fixedly mounted to said shaft and the other of said eccentric discs is adjustably positioned about said shaft relative to said one of said eccentric discs.

15. The vibrating device of claim 14, wherein said eccentric discs are selectively oriented to selectively set a degree of vibration of said vibrating element.

16. The vibrating device of claim 11, wherein said vibrating member comprises an integrally formed elongated member including an upper screeding surface at and along an upper portion of said vertical portion, said vertical portion defining a hollow cavity therealong and between said upper and lower screeding surfaces.

17. The vibrating device of claim 16, wherein said vibrating member comprises an extruded vibrating member.

18. The vibrating device of claim 16, wherein said upper and lower screeding surfaces are formed to be substantially similar so that the vibrating member can be flipped over to use the initially upper screeding surface to engage the concrete surface.

19. The vibrating device of claim 16, wherein said hollow cavity is substantially filled with an insulating element.

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