The claims:

1. A drive assembly for utilising motion of a person running or jogging, the drive assembly comprising:

a rotatable member coupled to a frame of a machine;

a stirrup, and a foot pedal pivotally attached to the stirrup at a pivot axis;

a first pivot connected between the stirrup and the rotatable member; and,

a second pivot connected between the stirrup and the frame;

wherein in use the pivot axis of the foot pedal travels both in front of and behind a rearward position of the second pivot, and the second pivot follows a substantially forward upward and backward downward reciprocating path relative to the frame.

2. The drive assembly of claim 1, wherein in use the pivot axis of the foot pedal remains below the first pivot and the second pivot during motion of the foot pedal.

3. The drive assembly of either claim 1 or 2, wherein in use the pivot axis of the foot pedal travels both in front of and behind an axis of rotation of the rotatable member.

4. The drive assembly of any one of claims 1 to 3, wherein in use the pivot axis of the foot pedal remains rearward of the second pivot during motion of the foot pedal.

5. The drive assembly of any one of claims 1 to 4, wherein in use the pivot axis of the foot pedal traces an asymmetric ovate path during motion of the foot pedal.

6. The drive assembly of any one of claims 1 to 5, wherein in use a rearward apex of the foot pedal's path is above a forward apex of the foot pedal's path.

7. The drive assembly of any one of claims 1 to 6, wherein in use the foot pedal traces a reciprocating path which is substantially similar to a path traced by a foot of the person when running or jogging.

8. The drive assembly of any one of claims 1 to 5, wherein the pivot axis of the foot pedal is provided by a pedal spindle.

9. The drive assembly of any one of claims 1 to 8, wherein motion of the foot pedal drives the rotatable member.

10. The drive assembly of any one of claims 1 to 9, wherein the rotatable member is a crank arrangement including crank arms and a sprocket.

11. The drive assembly of any one of claims 1 to 10, wherein the stirrup includes a pedal offset lug to inwardly offset an attachment point of the foot pedal.

12. The drive assembly of any one of claims 1 to 11, including a further stirrup on the opposite side of the frame, and a further foot pedal pivotally attached to the further stirrup.

13. The drive assembly of any one of claims 1 to 12, wherein the second pivot is connected to the frame via a shuttle assembly.

14. The drive assembly of any one of claims 1 to 12, wherein the second pivot is connected to the frame via a wheel able to move along a track member.

15. The drive assembly of claim 14, wherein the track member is a monocoque track member with one or more grooved rails.

16. The drive assembly of any one of claims 14 to 15, wherein a frontward end of the track member is angled upward relative to a rearward end of the track member.

17. The drive assembly of any one of claims 14 to 16, wherein at least one grooved rail in the track member confines the wheel to follow a linear reciprocating path.

18. The drive assembly of any one of claims 14 to 17, wherein in use the pivot axis of the foot pedal remains below the wheel during motion of the foot pedal.

19. The drive assembly of any one of claims 1 to 18, wherein the second pivot is able to move relative to the frame.

20. The drive assembly of any one of claims 1 to 19, wherein the machine is a self propelled apparatus.

21. The drive assembly of any one of claims 1 to 20, wherein the machine is a bicycle.

22. The drive assembly of any one of claims 14 to 18, wherein the machine is a bicycle and the track member is located between a top tube of the bicycle at a front end and a vertical support tube of the bicycle at a rear end.

23. The drive assembly of any one of claims 1 to 19, wherein the machine is a stationary exercise apparatus.

24. The drive assembly of claim 23, wherein the second pivot is coupled to the frame via a swing arm.

25. The drive assembly of either claim 23 or 24, wherein the stirrup is a Y shaped stirrup having three arms.

26. The drive assembly of claim 25, wherein the first pivot is attached to a first arm, the second pivot is attached to a second arm, and the foot pedal is pivotally attached to a third arm.

27. The drive assembly of any one of claims 23 to 26, wherein the rotatable member is located rearward of the second pivot.

28. The drive assembly of any one of claims 23 to 26, wherein the rotatable member is located forward of the second pivot.

29. The drive assembly of any one of claims 23 to 28, wherein an additional hand driven assembly is mechanically coupled to the rotatable member and provides handles for the person.

30. A bicycle for utilising motion of a person running or jogging, the bicycle comprising:

a front wheel and a rear wheel attached to a frame;

handle bars attached to the frame;

a crank arrangement attached to the frame and configured to drive the rear wheel;

stirrups, a stirrup positioned on either side of the frame;

foot pedals, a foot pedal pivotally attached to one of each of the stirrups;

first pivots, a first pivot connected between one of each of the stirrups and the crank arrangement; and,

second pivots, a second pivot connected between one of each of the stirrups and the frame via one or more wheels able to move along a track member.

The claims:

1. A drive assembly for utilising motion of a person running or jogging, the drive assembly comprising:

a rotatable member coupled to a frame of a machine, the frame having a front end and a rear end;

a stirrup, and a foot pedal pivotally attached to the stirrup at a pivot axis;

a first pivot connected between the stirrup and the rotatable member; and,

a second pivot connected between the stirrup and the frame;

wherein in use the pivot axis of the foot pedal travels both in front of and behind a rearward position of the second pivot, and the second pivot follows a substantially forward upward and backward downward reciprocating path relative to the frame, and the pivot axis of the foot pedal remains below the first pivot during motion of the foot pedal.

2. The drive assembly of claim 1, wherein in use the pivot axis of the foot pedal remains below the first pivot and the second pivot during motion of the foot pedal.

3. The drive assembly of either claim 1 or 2, wherein in use the pivot axis of the foot pedal travels both in front of and behind an axis of rotation of the rotatable member.

4. The drive assembly of any one of claims 1 to 3, wherein the pivot axis of the foot pedal is provided by or aligned along a pedal spindle.

5. The drive assembly of any one of claims 1 to 4, wherein in use the pivot axis of the foot pedal traces an asymmetric ovate path during motion of the foot pedal.

6. The drive assembly of any one of claims 1 to 5, wherein in use a rearward apex of the foot pedal's path is above a forward apex of the foot pedal's path.

7. The drive assembly of any one of claims 1 to 6, wherein in use the foot pedal traces a reciprocating path which is substantially similar to a path traced by a foot of the person when running or jogging.

8. The drive assembly of any one of claims 1 to 5, wherein the pivot axis of the foot pedal is provided by a pedal spindle.

9. The drive assembly of any one of claims 1 to 8, wherein motion of the foot pedal drives the rotatable member.

10. The drive assembly of any one of claims 1 to 9, wherein the rotatable member is a crank arrangement including crank arms and a sprocket.

11. The drive assembly of any one of claims 1 to 10, wherein the stirrup includes a pedal offset lug to inwardly offset an attachment point of the foot pedal.

12. The drive assembly of any one of claims 1 to 11, including a further stirrup on the opposite side of the frame, and a further foot pedal pivotally attached to the further stirrup.

13. The drive assembly of any one of claims 1 to 12, wherein the second pivot is connected to the frame via a shuttle assembly.

14. The drive assembly of any one of claims 1 to 12, wherein the second pivot is connected to the frame via a wheel able to move along a track member.

15. The drive assembly of claim 14, wherein the track member is a monocoque track member with one or more grooved rails.

16. The drive assembly of any one of claims 14 to 15, wherein a frontward end of the track member is angled upward relative to a rearward end of the track member.

17. The drive assembly of any one of claims 14 to 16, wherein at least one grooved rail in the track member confines the wheel to follow a linear reciprocating path.

18. The drive assembly of any one of claims 14 to 17, wherein in use the pivot axis of the foot pedal remains below the wheel during motion of the foot pedal.

19. The drive assembly of any one of claims 1 to 18, wherein the second pivot is able to move relative to the frame.

20. The drive assembly of any one of claims 1 to 19, wherein the machine is a self propelled apparatus.

21. The drive assembly of any one of claims 1 to 20, wherein the machine is a bicycle.

22. The drive assembly of any one of claims 14 to 18, wherein the machine is a bicycle and the track member is located between a top tube of the bicycle at a front end and a vertical support tube of the bicycle at a rear end.

23. The drive assembly of any one of claims 1 to 19, wherein the machine is a stationary exercise apparatus.

24. The drive assembly of claim 23, wherein the second pivot is coupled to the frame via a swing arm.

25. The drive assembly of either claim 23 or 24, wherein the stirrup is a Y shaped stirrup having three arms.

26. The drive assembly of claim 25, wherein the first pivot is attached to a first arm, the second pivot is attached to a second arm, and the foot pedal is pivotally attached to a third arm.

27. The drive assembly of any one of claims 23 to 26, wherein the rotatable member is located rearward of the second pivot.

28. The drive assembly of any one of claims 23 to 26, wherein the rotatable member is located forward of the second pivot.

29. The drive assembly of any one of claims 23 to 28, wherein an additional hand driven assembly is mechanically coupled to the rotatable member and provides handles for the person.

30. A bicycle for utilising motion of a person running or jogging, the bicycle comprising:

a front wheel and a rear wheel attached to a frame, the frame having a front end and a rear end;

handle bars attached to the frame;

a crank arrangement attached to the frame and configured to drive the rear wheel;

stirrups, a stirrup positioned on either side of the frame;

foot pedals, a foot pedal pivotally attached to one of each of the stirrups at a pivot axis;

first pivots, a first pivot connected between one of each of the stirrups and the crank arrangement; and,

second pivots, a second pivot connected between one of each of the stirrups and the frame via one or more wheels able to move along a track member;

wherein in use the pivot axis of the foot pedal travels both in front of and behind a rearward position of the second pivot, and the second pivot follows a substantially forward upward and backward downward reciprocating path relative to the frame, and the pivot axis of the foot pedal remains below the first pivot during motion of the foot pedal.