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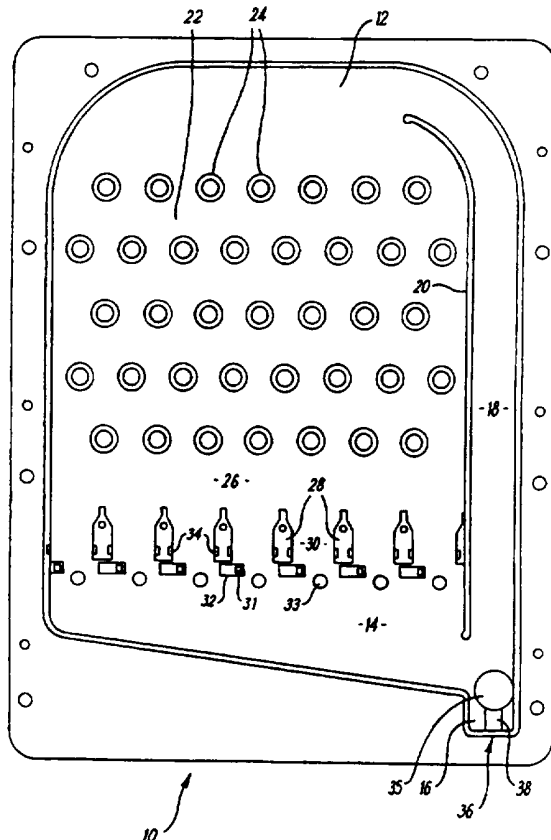
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**G4V VAA V117 V118**  
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(56) Documents Cited  
**GB 2320206 A GB 0377316 A US 5342049 A**

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(54) Abstract Title  
**Feature assembly for gaming machine**

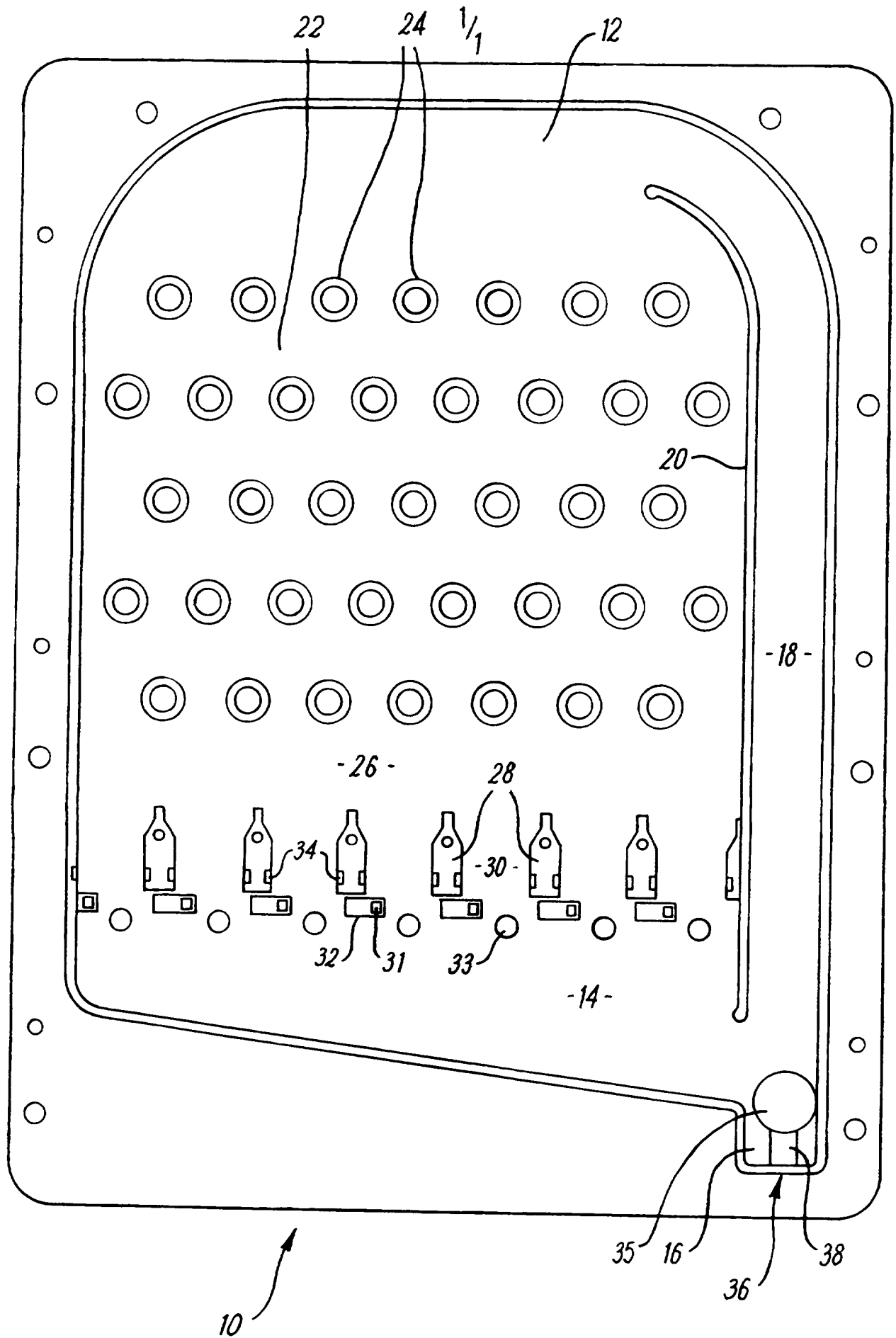
(57) In a feature assembly for a gaming machine which is actuated following selected or all wins on the gaming machine a freely moving member eg a ball 35 is directed past a plurality of projections 24 which determine the path of the member and direct it into one of several possible locations 30. The particular location then affects the win already made on the gaming machine eg win or loss. The movable member may be temporarily retained in the location 30 by a slidable member 31 and its presence detected by a phototransistor 34. Wins or losses at the locations 30 may be indicated by bi-colour LED's.



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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995



FEATURE ASSEMBLY FOR A GAMING MACHINE

This invention concerns a feature assembly for a gaming machine, and also a gaming machine incorporating such an assembly.

With gaming machines it is important if at all possible to have new and different features to differentiate the machine from prior machines and to attract and retain users of the machine. One such type of feature is to provide a way that a player can gamble with winnings to provide the potential of increasing these winnings, and of course losing them.

According to the present invention there is provided a feature assembly for a gaming machine, the assembly comprising a freely movable member, means for directing the movable member into a projection area, the projection area comprising a plurality of projections or other members which cause the direction of movement of the movable member to change if the movable member engages therewith, the projection area leading into a win area such that the movable member will pass through the projection area into the win area, the win area comprising a plurality of win locations, arranged such that the movable member will eventually enter a one of the locations, the location concerned being dependent on the direction the movable member leaves the projection area, with the assembly so configured such that if the movable member enters a one or more of the win locations a first scenario such as a win occurs, and if the movable member enters the or a one of the other locations, a second scenario such as loss occurs.

Means may be provided for retaining the movable means in the win locations. The retaining means may comprise one or more selectively movable projections against which the movable member can rest. Alternatively the retaining means may comprise means for selectively providing a magnetic field at the win location to retain the movable member thereat by magnetic attraction.

Means may be provided for detecting if the movable member is in a win location. The detecting means may comprise an optical reading device, and preferably a phototransistor.

Means may be provided to indicate which win locations correspond to which scenario. The indication means may comprise light means, which light means may be lit if a respective one of the scenarios applies. Alternatively, the light means may show a particular colour or other indication dependent upon which of the scenarios apply. The light means may comprise bicolour LED's. The indicating means preferably comprises a discrete light means for each winning location, and each light means is preferably provided at or adjacent the respective winning location.

The assembly may be arranged to provide more than two scenarios, and the indicating means may be arranged to show which of the scenarios applies to each win location.

The assembly may be arranged such that which scenarios applies to each win location is set at random, and may also change randomly.

The assembly is preferably arranged such that in use the moving means passes through the projection area into the win area by gravity. The projection area may comprise a plurality of upstanding projections arranged such that the movable member will generally pass therethrough in a tortuous path. At least one of the projections could be resilient to accelerate the moving member therefrom following impact.

The win area may be provided substantially immediately below the projection area, and preferably comprises a plurality of win locations, the areas being divided off from each other by upstanding dividing members.

The assembly is preferably arranged such that from the winning locations the movable member will pass, and preferably by gravity, to a rest

position. Means are preferably provided for projecting the movable member from the rest position into the projecting area. A pathway is preferably provided for the moving member from the rest position. The pathway is preferably inclined upwardly and/or extends alongside the projecting area.

The projecting means preferably comprises an impact member movable against the moving means to project same. The impact member may be sprung, and an arrangement may be provided to selectively hold the impact member against the spring force, and said arrangement may comprise a solenoid.

The movable member may comprise a ball.

The invention also provides a gaming machine comprising a feature assembly according to any of the preceding eleven paragraphs.

The gaming machine may be arranged such that the feature assembly is operable following a win being achieved. The scenarios may be any of the win being paid; the win being lost; or the win being multiplied. The feature assembly may be selectively operable and this may be on a random basis, or at the choice of a player.

An embodiment of the present invention will now be described by way of example only and with reference to the accompanying drawing, in which Fig. 1 is a diagrammatic plan view of a feature assembly according to the invention.

The drawing shows a feature assembly 10. The assembly 10 comprises an enclosed area 12 with a planar floor 14. The area 12 is arranged to slope downwardly towards the bottom of the drawing. The area 12 is of generally rectangular configuration but the upper two corners are rounded, and the bottom edge is inclined downwardly to the right hand side to finish in a firing recess 16. A firing channel 18 is provided extending upwardly, as show in the drawing, from the recess 16, and defined between the right hand wall of the

area 12 and a parallel wall 20 spaced inwardly therefrom including an upper curved portion corresponding to the rounded off upper corner of the area 12.

Defined below the top of the firing channel 18 is a projection area 22. The area 22 comprises a plurality of upstanding projections 24. The projections 24 are provided in five horizontal rows, and are equispaced within each row. The rows are offset relative to each other.

Provided below the projection area 22 is a win area 26. Six upstanding projections 28 are provided equispaced between the left hand edge of the area 12 and the wall 20 to define seven win locations 30 located respectively between the projections 28 or between a one of the projections 28 and the left hand side wall of the area 12, or the wall 20.

A selective barrier arrangement is provided immediately beneath each location 30 for a purpose hereinafter to be described. A barrier arrangement comprises an upstanding finger 31 slidably mounted across a slot 32 between a first position below a respective projection 28, and a second position as shown, below a respective location 30. A bicolour LED 33 is also located below each win location 30.

A detector arrangement is provided for each location 30. Each arrangement comprises phototransistors 34 in the respective projections 28 defining each location 30, to provide a light beam extending thereacross which is broken by an object in the location 30.

A ball 35 is provided within the area 12. A firing mechanism 36 is located in the recess 16. The mechanism 36 comprises a sprung impact member 38 selectively engagable with the ball 35. A solenoid (not shown) is provided to selectively hold the member 38 against the spring force such that it is pulled downwardly.

In use, in the rest position the ball 35 will be located in the recess 16.

Each of the LED's 33 will either show green or red, in a randomly selected combination. The ball 35 can be "fired" by activating the solenoid corresponding to the member 38 to pull the member 38 back, and subsequently deactivating the solenoid such that the member 38 moves upwardly by virtue of the spring force to impact the ball to send it along the channel 18. The ball 35 will subsequently pass through the area 22 under gravity, with its path being determined by how it impacts against the various projections 24. The ball 34 will eventually pass through the area 22 into the area 26 and will enter a one of the locations 30. With the fingers 31 in the second position, the ball 35 will come to rest in a one of the locations 30.

The assembly 10 is provided in a gaming machine (not shown) such as a fruit machine. When a win is achieved on the fruit machine the player can choose to use the assembly 10 to gamble the win. If the ball 35 lands in a location 30 with the respective LED 33 showing green, the win will be doubled. If the ball 35 lands in a location 30 with a respective red LED, the win will be lost. Once the win has been paid out or the loss recorded, the fingers 31 can be moved to the first position and the ball 35 will return to the firing recess 16.

There is thus described a feature assembly for a gaming machine, and a gaming machine incorporating such a feature, which provides a number of advantages. The assembly provides extra interest and the possibility to gamble again, and also provides an interesting and pleasing visual aspect to the gaming machine.

In the above described example the configuration of the LEDs 33, i.e. whether they are red or green, is chosen at random for each use thereof and this combination then remains fixed whilst the ball is fired. The assembly may be arranged such that a certain number of LEDs 33 are green, and the arrangement could be that the LEDs will always be alternately red and green. The assembly could be arranged such that the combination can change at any time.

The machine could be arranged such that the assembly is used after every win, or is played at random occasions, rather than providing a player with the option of using this. When the assembly is used after every win, the scenarios could be no change, and double the win. More than two scenarios could be provided, and there could for instance be a multiplication greater than doubling.

The assembly could have a different construction. For example, different means could be provided for retaining the ball in the win locations, or it could simply pass therethrough. The movable member could be other than a ball. The projections in the projection area could have a different form. Some of these projections could be resilient so as to accelerate a ball impacting thereagainst. The projections could obviously be provided in a different configuration. A different firing mechanism could be used. The assembly could be used for a different type of gaming machine or could perhaps be the only way of deciding a win on the gaming machine, perhaps with each win location indicating the win which may be achieved.

Indicating means rather than the described LED's could be used. For instance, lights which selectively flash to denote a win or lose could be used. This indicating means could indicate a particular win or multiplication of a win. An indication as to which win locations are "winners" could be provided elsewhere. The retaining means could be arranged to only retain the ball in a "winning" win location, with the ball passing straight through a "losing" win location.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.



CLAIMS

1. A feature assembly for a gaming machine, the assembly comprising a freely movable member, means for directing the movable member into a projection area, the projection area comprising a plurality of projections or other members which cause the direction of movement of the movable member to change if the movable member engages therewith, the projection area leading into a win area such that the movable member will pass through the projection area into the win area, the win area comprising a plurality of win locations, arranged such that the movable member will eventually enter a one of the locations, the location concerned being dependent on the direction the movable member leaves the projection area, with the assembly so configured such that if the movable member enters a one or more of the win locations a first scenario such as a win occurs, and if the movable member enters the or a one of the other locations, a second scenario such as loss occurs.
2. An assembly according to claim 1 wherein means are provided for retaining the movable means in the win locations.
3. An assembly according to claim 2 wherein the retaining means comprise one or more selectively movable projections against which the movable member can rest.
4. An assembly according to claim 2 wherein the retaining means comprise means for selectively providing a magnetic field at the win location to retain the movable member thereat by magnetic attraction.
5. An assembly according to any of the preceding claims wherein means are provided for detecting if the movable member is in a win location.
6. An assembly according to claim 5 wherein the detecting means comprise an optical reading device.

7. An assembly according to claim 6 wherein the detecting means comprise a phototransistor.
8. An assembly according to any of the preceding claims wherein means are provided to indicate which win locations correspond to which scenario.
9. An assembly according to claim 8 wherein the indication means comprise light means.
10. An assembly according to claim 9 wherein the light means are lit if a respective one of the scenarios applies.
11. An assembly according to claim 9 wherein the light means show a particular colour or other indication dependent upon which of the scenarios apply.
12. An assembly according to any of claims 9 to 11 wherein the light means comprise bicolour LED's.
13. An assembly according to any of claims 9 to 12 wherein the indicating means comprises a discrete light means for each winning location.
14. An assembly according to claim 13 wherein each light means is provided at or adjacent the respective winning location.
15. An assembly according to any of the preceding claims wherein the assembly is arranged to provide more than two scenarios.
16. An assembly according to claim 15 wherein the indicating means are arranged to show which of the scenarios applies to each win location.
17. An assembly according to claims 15 or 16 wherein the assembly is arranged such that which scenarios applies to each win location is set at

random.

18. An assembly according to claim 17 wherein the assembly is arranged such that which scenarios applies to each win location also changes randomly.

19. An assembly according to any of the preceding claims wherein the assembly is arranged such that in use the moving means passes through the projection area into the win area by gravity.

20. An assembly according to any of the preceding claims wherein the projection area comprises a plurality of upstanding projections arranged such that the movable member will generally pass therethrough in a tortuous path.

21. An assembly according to claim 20 wherein at least one of the projections is resilient to accelerate the moving member therefrom following impact.

22. An assembly according to any of the preceding claims wherein the win area is provided substantially immediately below the projection area, the areas being divided off from each other by upstanding dividing members.

23. An assembly according to any of the preceding claims wherein the win area comprises a plurality of win locations.

24. An assembly according to any of the preceding claims wherein the assembly is arranged such that from the winning locations the movable member will pass to a rest position.

25. An assembly according to claim 24 wherein the movable member will pass to the rest position by gravity.

26. An assembly according to claims 24 or 25 wherein means are provided for projecting the movable member from the rest position into the projecting

area.

27. An assembly according to claim 26 wherein a pathway is provided for the moving member from the rest position.

28. An assembly according to claim 27 wherein the pathway is inclined upwardly and/or extends alongside the projecting area.

29. An assembly according to any of claims 26 to 28 wherein the projecting means comprises an impact member movable against the moving means to project same.

30. An assembly according to claim 29 wherein the impact member is sprung.

31. An assembly according to claims 29 or 30 wherein an arrangement is provided to selectively hold the impact member against the spring force.

32. An assembly according to claim 31 wherein said arrangement comprises a solenoid.

33. An assembly according to any of the preceding claims wherein the movable member comprises a ball.

34. A gaming machine comprising a feature assembly according to any of claims 1 to 33.

35. A gaming machine according to claim 34 wherein the gaming machine is arranged such that the feature assembly is operable following a win being achieved.

36. A gaming machine according to claims 34 or 35 wherein the scenarios are any of a win being paid; a win being lost; or a win being multiplied.

37. A gaming machine according to any of claims 34 to 36 wherein the feature assembly is selectively operable.
38. A gaming machine according to claim 37 wherein the feature assembly is selectively operable on a random basis.
39. A gaming machine according to claim 37 wherein the feature assembly is selectively operable at the choice of a player.
40. A feature assembly substantially as hereinbefore described with reference to the accompanying drawings.
41. A gaming machine substantially as hereinbefore described with reference to the accompanying drawings.
42. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.



Application No: GB 9812022.3  
Claims searched: 1 to 41

Examiner: Geoff Nicholls  
Date of search: 15 March 1999

**Patents Act 1977  
Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.Q): G4V (VAA)

Int CI (Ed.6): G07F 17/32 17/34 17/38 A63F 7/02

Other: ONLINE: WPI, EPODOC, PAJ

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X, E	GB 2320206 A (SHOWCASE PROJECTS) Whole document relevant	1 to 3, 5, 8, 15, 16, 19, 23 to 30, 33 to 35
A	GB 377316 (BRADLEY)	
A	US 5342049 (WICHINSKY) Whole document relevant	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.