



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁵ : G07F 17/32, A63F 1/00, 9/22</p>	<p>A1</p>	<p>(11) International Publication Number: WO 94/12955 (43) International Publication Date: 9 June 1994 (09.06.94)</p>
--	-----------	--

<p>(21) International Application Number: PCT/GB93/02476 (22) International Filing Date: 1 December 1993 (01.12.93) (30) Priority Data: 9225267.5 3 December 1992 (03.12.92) GB 93202080.3 15 July 1993 (15.07.93) EP (34) Countries for which the regional or international application was filed: AT et al. (71) Applicant (for all designated States except US): BELL-FRUIT MANUFACTURING COMPANY LIMITED [GB/GB]; Leen Gate, Lenton, Nottingham NG7 2LX (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): FARRELL, Peter, John [GB/GB]; 80 Studland Way, West Bridgeford, Nottingham NG2 7TS (GB). MELEN, Simon, Charles [GB/GB]; 48 Fairway Crescent, Sawley, Long Eaton, Nottingham NG10 3AH (GB). (74) Agent: BARKER, BRETTELL & DUNCAN; 138 Hagley Road, Edgbaston, Birmingham B16 9PW (GB).</p>	<p>(81) Designated States: AU, CZ, JP, NO, SK, US. Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>
---	---

<p>(54) Title: IMPROVEMENTS IN AND RELATING TO MACHINES FOR PLAYING GAMES OR FOR AMUSEMENT (57) Abstract In a machine (M) for playing games or for amusement based upon a card game the player may play two or more hands (2; 3; 4; 5; 6) simultaneously; when a card or symbol comes into play the player can select to which hand the symbol in play is to be allocated. In one embodiment a game is based upon the card game of blackjack and the player plays five hands (2; 3; 4; 5; 6) simultaneously. Points and/or prizes may be awarded for a number of possible winning combinations of one or more hands. A machine may also be based upon other games in which symbols are collected by the player, for example dominoes.</p>

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgystan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

IMPROVEMENTS IN AND RELATING TO MACHINES FOR
PLAYING GAMES OR FOR AMUSEMENT

This invention relates to machines for playing games or for amusement and especially, but not exclusively, to such machines which are coin, token, credit, or credit-card, freed for play.

The field of coin, token, credit or credit-card operated amusement and gaming machines which are released for play by the introduction of one or more game credits is well developed. The outcome of a game can typically result in a win awarding a prize of greater value than the initial game credit staked by the player.

One known kind of gaming or amusement machine in common use typically comprises a mechanical or electro-mechanical arrangement of three or more rotating reels or drums, around the peripheries of which are arranged various differing symbols, usually depictions of fruits although other symbols may be used. A typical game consists of spinning these reels which are then brought to a standstill at varying times. The combination of several symbols of the same kind in a horizontal line after the reels have all stopped gives rise to a winning situation. There are, of course, many variations to this basic theme.

It is also known, and indeed common, to present such games by means of a video graphics display device such as a cathode ray tube; indeed this was first shown by ourselves in our UK Patent No. 1 466 765 and further developed in our UK Patent No. 2 106 682. Many such games are merely video representations of simulated

spinning reels. Such games are not of interest in connection with the current invention.

There is another significant class of games usually presented by means of video displays which are in widespread use, and in these cases the games consist of video representations of well-known gambling games involving playing cards. A large number of these machines are in operation throughout the world, the majority of them being based on the game of Draw Poker. In these games the player is dealt a hand of 5 playing cards, and can then choose whether to "stick" with the cards dealt or to select a re-draw of any number of them in order to improve the hand. Conventional casino rules apply to the hierarchy of winning hands, such as flushes, straights and so on, differing wins being awarded as determined by the required prize structure of the machine. In some implementations it is also possible to increase the amount staked after the first deal, and to further gamble any amount won after the conventional poker element of the game has been completed.

Games are also known in which a hand of Blackjack (also known as pontoon) representing the player is matched against a second hand representing the machine. Conventional Blackjack casino rules are again usually applied, for instance, it may not be permitted for the "bank" (i.e. the machine) to "stick" with a hand of less than 16, and in the case of equal value hands the "bank" (the machine) wins and so on.

Although these types of card game machines are fairly popular we have appreciated that they suffer from several inherent weaknesses which prevent them from achieving their full potential in terms of

commercial success in any but niche markets. Players can become bored with these games as the excitement of playing can be marred by the fact that the chances of winning or losing any one game can be predicted fairly readily at a very early stage of the game, after which point the player can do little to retrieve a losing situation. There are few strategy options open to the player. This is further impaired in practical implementations of poker and blackjack type machines by the mechanism within the machine which is used to control and limit the long-term return or payback therefrom, which can sometimes manifest itself as being unfair to the player. In order to comply with widely differing gaming laws in various countries, games adapted for use with a gaming machine have to be configured in ways in which manipulation of the randomness of certain cards appearing is necessary, and this further heightens the player perception of an "unfair" game biased against him. The one advantage that such games possess is that they are based on universally-known rules of play and are relatively easy to understand.

The aim of the present invention is to provide a new machine for playing games or for amusement, with a view to alleviating at least some of the problems discussed above.

According to a first aspect of the invention we provide a gaming or amusement machine having first hand display means adapted to display or represent a first hand, or proto-hand, of a card game, characterised in the provision of second hand display means adapted to display or represent a second hand, or proto-hand, of a card game, card-in-play indicating means, and card allocating means, the card allocating means being

adapted to allocate a card nominated in play to one of the first or second hands.

The card allocating means may be player operable. The player may thus select to which hand or proto-hand a card in play is allocated.

It will be appreciated that during a play of the machine a player may have a combination of complete hands and incomplete or proto-hands. Even a hand with the full number of "cards" may be changed to a different combination of cards in some game features.

We believe that this improves the machine since the player does not perceive the game as being so unfair since he may exercise a degree of skill and judgement in selecting to which hand or proto-hand a card is allocated. We have appreciated that the amount of influence which the player can exercise over the outcome of known card game machines is somewhat limited. This realisation is at least in some part a contribution to the invention.

A multi-hand card game machine in which the player may allocate a card to a chosen hand retains the benefit of clarity of play and easily understood and widely known rules, whilst avoiding some of the disadvantages discussed.

Preferably there are more than two hands displayed into which a player can chose to introduce a card in play.

The first or second hand display means preferably comprises an electronically controlled display screen, but it could of course comprise mechanical display

means, for example reels or the like. The same screen may comprise the first and second hand display means.

Preferably the card in play is shown to the user so that he knows its value before he allocates it to a particular hand.

Preferably the card in play is a new card not previously allocated to a hand in that game, but an alternative is to allow the transfer of a card from one hand to another. This may be under the control of the user who may be able to select the card to be transferred, or the hand into which the transferred card is transferred, or both. This transfer concept may be a game feature which is only usable at certain times.

Preferably the machine has control means which identifies whether or not a card is allowed to be allocated to a particular hand. The control means preferably has a predetermined set of rules by means of which the allowability or otherwise of a potential hand is determined.

Each hand may contribute towards a combined game score, and combined score display means may be provided to indicate this. Each hand may also have its own hand score display means. A prize may be awarded when the combined score achieves a predetermined value. The control means preferably determines the score achieved by a hand according to predetermined rules. The control means may award different scores for two hands which would under the normal rules of the card game be worth the same. For example in the case of Blackjack a hand of any one of a Jack, Queen, or King plus an Ace, may be awarded more points than a hand of a five, seven and nine (even though they would both normally score 21).

It will be appreciated that the card game machine invention proposed is based upon a presentation of playing card symbols in which the player may have a high degree of involvement in placing these symbols into sub-hands, the sub-game scoring rules of which are familiar to any exponent of conventional card games. The game usually operates with a totally random shuffle of the playing card "deck" at the start of each game, and so it appears to the player to be inherently fair. Further, it is possible to configure the win structure of the game in such a way that it can be made to comply with almost any ratio of prize to stake mandated by local gaming laws, without compromising this inherent fairness of the game. Of equal attraction to the player is that the mode of play gives a great deal of player interaction and choice within the game, and that an early run of "poor" cards can still be turned into a jackpot win within the game, heightening player excitement.

Game features such as a gamble feature, nudge feature, a trail stop or a skill stop may also be incorporated and these may be controllable or under the influence of the player. It may for example be possible at certain times in the game to "nudge" the card in play so that its value is increased or decreased. Alternatively, or additionally, it may be possible to "nudge" the card in play so that the card in play is ignored and the next card to be "dealt" from the "deck" of cards becomes the card in play. Similarly, the player may in some game features be able to stop trail skill stop, or other skill stop, on a card to be brought into play. Player operable input means may be provided to enable the player to play a game feature, for example, a nudge button may be provided to allow a nudge feature to be played.

Although we see the invention as being primarily concerned with card game machines, and it was invented in that field, we can also see it being applicable to machine for playing other games, for example dominoes, or dice hand games.

According to a second aspect of the invention we provide a gaming or amusement machine having first hand display means adapted to display or represent a first hand, or proto-hand, of a game, characterised in the provision of second hand display means adapted to display or represent a second hand, or proto-hand, of a game; a hand of the game comprising a plurality of game elements or symbols combined to create an allowable combination, configuration, arrangement, number, or the like of said game elements, the hand being one of a finite number of combinations of game elements (usually acquired in an attempt to achieve one of a finite known number of target combinations) and selection means adapted to select one of the first or second hands, or proto-hands, to be the hand or proto-hand to which an in-play game element is to be allocated by the machine.

The selection means may be operable by the player and in this case the player may control into which hand the in-play element is introduced.

According to a third aspect the invention comprises a method of improving the player interest in a card game, or like game, playing machine characterised by enabling the player to allocate a card (or the like) in play to one of a plurality of hands that the player is playing, the choice of hand to which the card in play is allocated being under the control of the player.

An embodiment of the invention will now be described by way of example only with reference to the accompanying drawings of which:-

Figure 1 shows a card game amusement machine; and

Figure 2 shows detail of the machine.

The machine M shown in Figure 1 consists of a suitable housing H, coin or token input means S, payout means P, video display screen 12, various player-operable control switches 10 and 11, and other appropriate control means (not shown). The machine is a card game machine.

The video graphic display screen 12 of the machine is divided up into several distinct areas as shown in Figure 2 (1 to 6, 7's, 8 and 9). Any other similar disposition of display fields could, of course, be used. One of the fields 1 displays the card to be played from the remainder of the unplayed deck (the in-play card). Below this are five sub-hand fields, 2 to 6, which are initially blank, and immediately above each sub-hand are display areas 7 reserved to show the sub-hand score. A further field 8 shows the total of all the sub-hand scores, which represents the overall cumulative current game score. There is also an area 9 reserved to show the total game scores corresponding to various levels of prizes. This could be printed onto artwork adjacent to the video display screen of the machine, but for convenience and flexibility it is preferred to show this also within the video display area, as the prizes may alter according to the stake wagered by the player which may be varied within a series of games, or to display differing prizes on machine of the same basic type used within territories

with differing gaming laws, in order to facilitate standardisation of the machines and ease production difficulties.

Below each of the five sub-hand fields are sub-hand control switches 10 which can be operated by the player; these are preferably illuminated under the control of the machine in order to indicate clearly to the player when they can be used.

Upon depositing sufficient credit into the machine and starting the game by means of start switch 11, a playing card face is shown in field 1. Control switches 10 then flash, and a message appears within an otherwise unused part of the display area 12 "which hand?". The player then has to operate one of the switches 10, upon which the card just dealt from the "deck" and appearing in field 1 is then transferred to the relevant sub-hand or proto-hand field. The sub-hand score for this card is shown in the appropriate sub-hand score field 7, and the total game score (which at this stage is equal to the sub-hand score) is displayed in the game score field 8. The score for each card is assessed conventionally, that is, cards with a face value of between two and ten take their face value; picture cards take a value of 10, and aces can take a value of either 1 or 11 depending on context. In this example, Jokers are not used but this does not preclude their inclusion in other versions of the same basic game. A second card is then dealt from the "deck" and shown in field 1, the player again being invited to operate one of the selection switches in order to transfer this card to one of the sub-hand fields. If he chooses a sub-hand field already displaying a previously played card, the sub-hand card display will be stacked to show both card faces. The respective

sub-hand and total game score fields are again updated as appropriate.

The objective of the game is that the player should use his skill and judgement in order to make each of the sub-hand fields score as near to 21 as possible. Once a total of 21 has been reached in any of the sub-hands, no further card placements are allowed in this hand (this incidentally gives a limit of 11 cards in one stack); moreover should the card just dealt from the deck be of such a value as to take any of the sub-hand scores over 21 the player is prevented from placing the card into any of those sub-hands, this being indicated by the lamp within the relevant sub-hand selection switch 10 not flashing.

Should the card in play be an Ace, this takes the value of either 11 or 1, and the sub-total score field will alternate between the two scores calculated with this value; the game total score will however only show the highest score. Should the game total enter the range in which prizes are awarded although less than the maximum score of 105, the player is given the choice by means of operation of further control switch 13 as to whether he wishes to attempt to improve his score by being allowed to play the next card in the "deck" (as yet unrevealed) or to collect the prize which he has already become entitled to. Should the total game score not yet have reached the level at which prizes are awarded but the next card from the "deck" cannot be played as it would take all of the sub-hands over a score of 21, then the player is said to be "bust" and the game is terminated.

A typical prize structure would give small awards for a total score of 101, and increasing awards up to the maximum of 105.

The deal of the cards from the "deck" is preferably arranged by means of a random determining element in the machine to be totally unbiased, that is that each card remaining from the initial 52-card "deck" has an equal chance of appearing as the next card. As all of the previously-played cards are visible to the player he can use his skill to calculate the changes in odds of certain cards and of various values appearing next, and compile a strategy to maximise his chances of winning. There are a very large number of such strategies that can be employed, and thus player interest can be sustained over a long period.

In order to extend the upper limit to the range of prizes which can be offered within a randomly-dealt game, differentials within prize levels for the same total game scores can be devised; for example, a score of 105 achieved with four "natural" 21-scoring "Blackjack" sub-hands (that is, with each containing just two cards, and ace and a 10 or picture card) would be expected to occur a lot less frequently than a score accumulated with 3 or 4 cards making up some of the sub-hand 21 scores, and so could give rise to a much higher prize. Similarly other events within the sub-hands, for example a 21 made up with 5 or more cards, could occasion a bonus prize award.

Of course, within the basic scheme of the invention as described there are many other possible implementations; within the given example there are shown to be 5 distinct playing sub-hands, but this number could be varied to be higher or lower.

The sub-hands themselves are shown as complying with the basic rules of a conventional "Blackjack" hand, but they could comply with other rules such as Poker.

The machine may utilise, as shown in the example, one 52-card "deck" or it may use several. The band of total scores which qualify for prizes could be adjusted as required, as could the higher prize separation mechanism based on natural blackjacks.

A standard 52-card deck is indicated in the example but Jokers could be incorporated into game variants if required. Alternatively, or additionally, the pack need not be a standard deck of playing cards but could be a set of game elements of any number preferably carrying different symbols (or at least some different symbols). The odds of the various cards appearing do not have to be equal, but could be biased.

The graphic display system preferably incorporates a cathode-ray tube but any other visual presentation method with appropriate attributes could be used.

The value of the stake per game could be varied under player control, and this could also alter the ratios of the various prizes in order to encourage high-stake play; additional cards drawn from the deck could be paid for from game credits at various stages; additional payments could be made within the game in order to change or discard the card in play, or exchange cards between hands. Furthermore we could arrange for a pool of 2 or more cards to be "in-play", a card or cards from the pool being allocatable to a chosen hand at a later stage of the game. The player may have to pay extra for this feature.

To summarise, the embodiment provides a machine which has a number of sub-hands within a single card-type game, with the player being given total flexibility within the rules of the game as to which sub-hand he wishes the next card in play to be played into.

This invention fulfils a requirement for a game which greatly improves player participation and strategy choice, which does not appear to the player to be biased and unfair and which does not lock him out of the larger prizes early in the game. The game uses a conventionally ordered card scoring system, which is easily adaptable to take into account widely-varying stake-to-prize ratios for different territories thus enhancing both the overall acceptability of the game and the ease and convenience of production of it. The invention thereby significantly advances the art of card-based video games and allows commercial success in a larger number of markets and situations than is currently possible.

It will be appreciated that we have described in the main large pre-payment amusement machines since that is the field in which the invention was made. However, it may also be applicable to machines which require no pre-payment, for example home video games.

CLAIMS

1. A machine (M) for playing games or for amusement having first hand display means (2) adapted to display or represent a first hand or proto-hand of a card game, second hand display means (3) adapted to display or represent a second hand or proto-hand of a card game, card-in-play indicating means (11), and card allocating means (10), the card allocating means being adapted to allocate a card nominated in play to one of the first or second hands.
2. A machine in accordance with claim 1 which has more than two hand display means (4, 5 or 6) to which a card in play can be allocated.
3. A machine in accordance with claim 1 or claim 2 in which there is player operable card allocating means (10) and the card in play is allocated to said one of the first or second hands at the choice of the player.
4. A machine in accordance with any preceding claim in which transfer of a card is a feature which is only usable at certain times.
5. A machine in accordance with any preceding claim in which the first and second hand display means comprise an electronically controlled display screen.
6. A machine in accordance with any preceding claim in which the hand in play is a new card not previously allocated to a hand in that game.
7. A machine in accordance with any preceding claim in which the card in play is shown to the user so that

he knows some information about it (such as its value or suit) before he allocates it to a particular hand.

8. A machine in accordance with any preceding claim in which a player may transfer a card from one hand to another.

9. A machine in accordance with claim 8 in which the user may select the card to be transferred to another hand.

10. A machine in accordance with any preceding claim in which the machine has control means which identifies whether or not a card is allowed to be allocated to a particular hand.

11. A machine in accordance with claim 10 in which the control means has a predetermined set of rules by means of which the allowability or otherwise of a potential hand is determined.

12. A machine in accordance with any preceding claim in which more than one hand, or each hand, contributes towards a combined game score.

13. A machine in accordance with any preceding claim in which more than one, or each, hand has its own hand score display.

14. A machine in accordance with any preceding claim in which a prize may be awarded when the combined or a hand score achieves a predetermined value.

15. A machine for playing games or for amusement having first hand display means (12) adapted to display or represent a first hand or proto-hand of a game, and second hand display means (3) adapted to display or

represent a second hand or proto-hand of a game, a hand of the game comprising a plurality of game elements or symbols combined to create an allowable combination, configuration, arrangement, number, or the like of said game elements, the hand being one of a finite number of combination of game elements, and selection means (10) adopted to select one of the first or second hands, or proto-hands, to be the hand or proto-hand to which an in-play game element is to be allocated by the machine.

16. A machine in accordance with claim 15 in which the selection means (10) is operable by the player.

17. A machine in accordance with claim 15 or claim 16 in which the game elements are cards or representations of cards.

18. A machine for playing games or for amusement substantially as described herein with reference to the accompanying drawings.

19. A method of improving the player interest in a card game, or like game, playing machine, by enabling the player to allocate a card (or the like) in play to one of a plurality of hands that the player is playing, the choice of hand to which the card in play is allocated being under the control of the player.

20. A method of improving the player interest in a game playing machine which has hands in the game, the method being substantially as described herein.

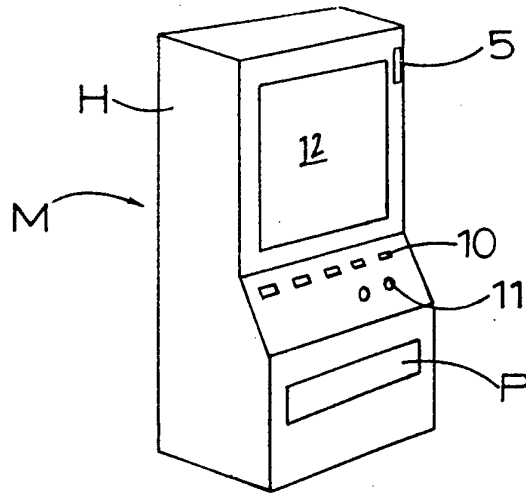


FIG. 1.

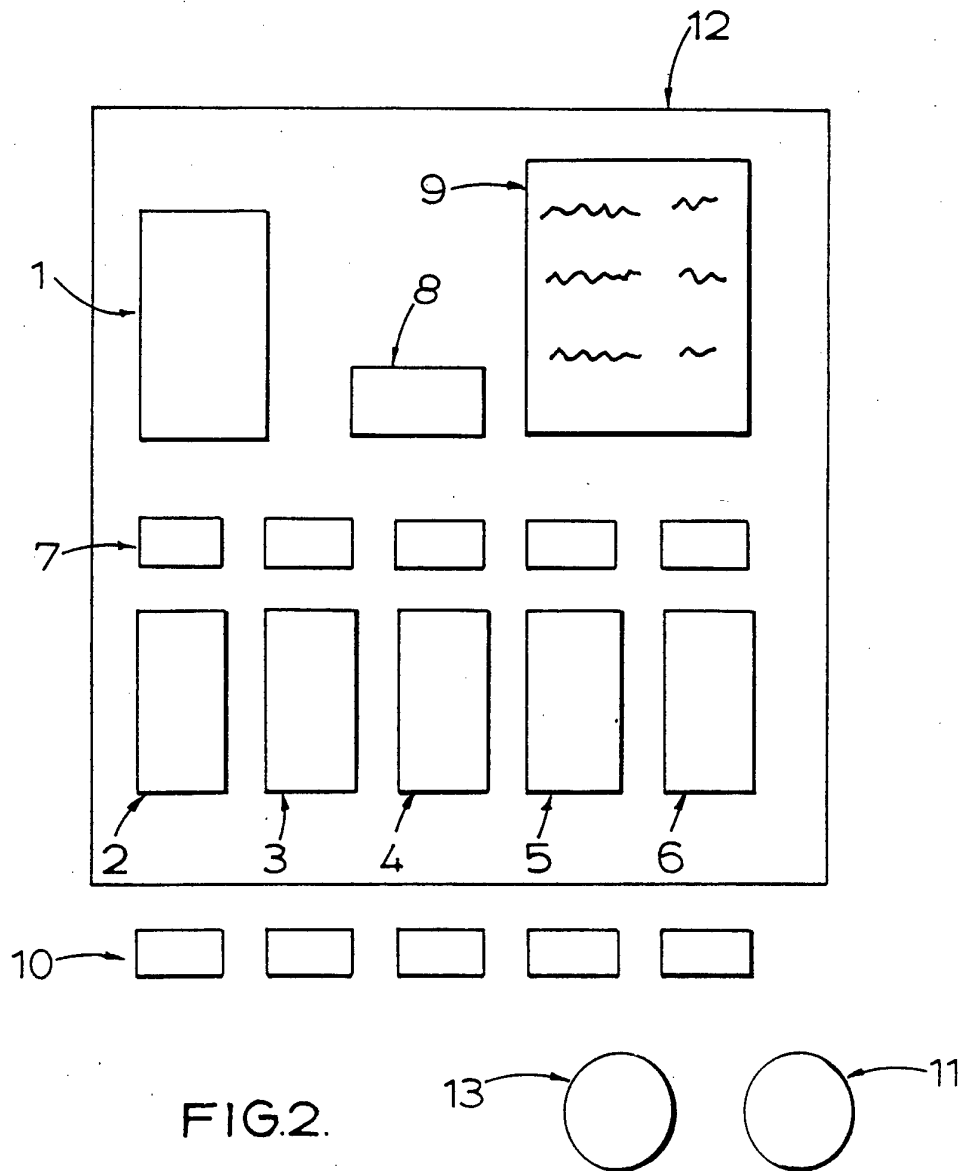


FIG. 2.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 93/02476

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 5 G07F17/32 A63F1/00 A63F9/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 5 G07F A63F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB,A,2 248 404 (NORAUT) 8 April 1992 see abstract; claims; figures see page 8, line 14 - page 13, line 7 ---	1,2,5,6, 12-15, 17,19,20
A	FR,A,2 559 395 (R. AROUETE) 16 August 1985 see abstract; claims; figures ---	1,2,4-6, 8,9,15, 17
A	US,A,3 796 433 (W.C. FRALEY) 12 March 1974 ---	
A	US,A,4 560 161 (J. HAMANO) 24 December 1985 ---	
A	GB,A,2 177 610 (J.B. NOBLE) 28 January 1987 -----	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 "&" document member of the same patent family

Date of the actual completion of the international search

17 March 1994

Date of mailing of the international search report

06. 04. 94

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax (+31-70) 340-3016

Authorized officer

David, J

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 93/02476

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB-A-2248404	08-04-92	NONE	
FR-A-2559395	16-08-85	NONE	
US-A-3796433	12-03-74	NONE	
US-A-4560161	24-12-85	JP-C- 1732294	17-02-93
		JP-B- 4011234	27-02-92
		JP-A- 60021783	04-02-85
GB-A-2177610	28-01-87	US-A- 4804185	14-02-89