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I-20123 Milano (IT)(54) **Terminal apparatus for the bet of gambling contests.**

(57) Terminal apparatus for the bet of coupons of gambling contests, comprising a reading group (GL) for the coupons (S) filled in and introduced in the apparatus and a printing group (GS) for the application of further information on said coupons (S); a central control unit (UC) and a keyboard (T) connected to said central unit (UC) for entering data and

instructions in said central unit (UC). A telematic group (MDM) connects the central unit (UC) to the switched public telephone network (RTP) for the transmission of data relating to bets.

The printing group (GS) comprises a thermal printer and said coupons are realized on a heat-sensitive support.

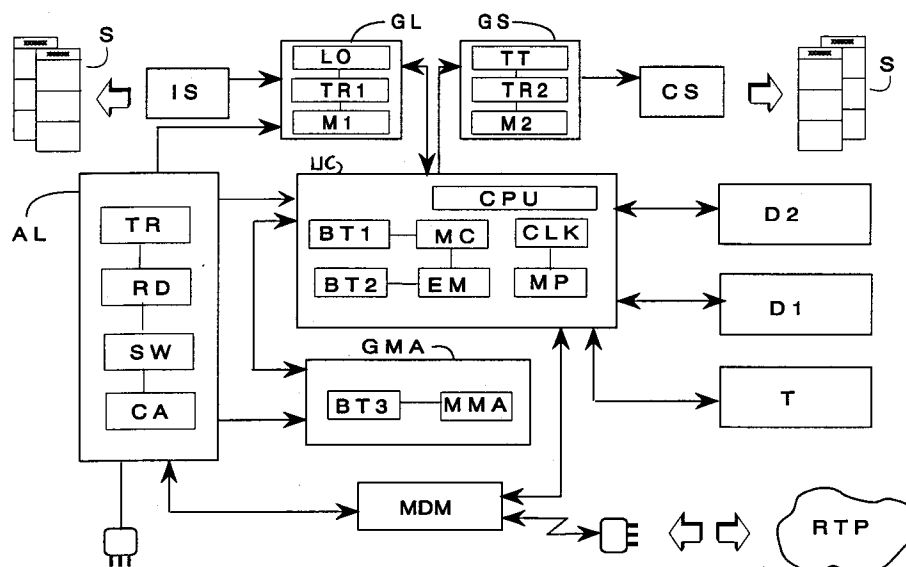


Fig. 2

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This invention relates to a terminal apparatus for the bet of coupons in gambling contests.

More particularly, this invention relates to a terminal apparatus for the acceptance and validation of gambling systems coupled to the results of sports-events such as horse races (Totip) and/or other sports-events or the like.

As is known, in the Totip contest, all the operations carried out on the coupons in the receiving office are performed by hand, and the validation of said coupons is through the application of a slip.

The hand validation system has several drawbacks, among which the slowness, the risk of making mistakes, and the cost of the operations which affects indirectly the proceeds.

Object of this invention is to overcome the aforementioned limitations of the hand validation system of the coupons for gambling contests in general and in particular, but not limitedly to, in the Totip contest.

This object is achieved through a terminal apparatus for the bet of coupons in gambling contests, characterized in that it comprises in combination:

- a reading group for the coupons filled in and introduced in the apparatus, said coupons containing pre-printed information and information entered by the gambler;
- a printing group for the application of further information to said coupons;
- a central unit for the control of said reading and printing groups;
- a keyboard connected to said central unit for entering data and instructions in said central unit;
- display means for the clear representation of the gambling data;
- a telematic group connected to said central unit and to the switched public telephone network; and
- means for feeding (AL) the apparatus.

The printing group preferably comprises a thermal printer, and the coupons are realized on a heat-sensitive support.

The terminal apparatus for the bet of coupons in gambling contests, subject matter of this invention, will be better understood from the following description, wherein reference is made to the enclosed drawings which represent, by way of example, a preferred non limitative embodiment, and wherein:

Fig. 1 is the external perspective view of the terminal apparatus subject matter of this invention; and

Fig. 2 is a block diagram of the terminal apparatus subject matter of this invention.

Fig. 1 shows the external aspect of the terminal apparatus subject matter of this invention. It com-

prises a case 1, provided with a first inlined front panel 1A, on which a keyboard K is mounted, and with a second inclined front panel 1B, next to the first one, on which two slits are obtained, one for the introduction, and the other one for the emission of the coupons.

On case 1 two displays are also provided for the clear visualization of the gambling data, typically the number of the columns and the cost of the bet. Said displays are respectively a display D1, reserved for the operator or receiver of the coupon and positioned on panel 1A, and a display D2 for the gambler, positioned on the upper part of panel 1B, so as to be visible to the gambler.

Displays D1 and D2 are preferably of the liquid crystal type (LCD), with the contrast and the display angle controllable through keyboard K to adjust the apparatus to the different ambient and utilization conditions.

The display D1 of the receiver, i.e. the display placed before the operator of the receiving office, has two lines with 24 letters per line; while display D2 for the gambler has only one line with 20 letters.

With reference to the block diagram of Fig. 2 within case 1 the apparatus comprises a reading group GL which receives coupons S from a coupon enterer IS. According to a feature of this invention, coupons S to be realized for the terminal apparatus subject matter of this invention are realized on a heat-sensitive support, preferably a sheet of thermal paper, preprinted and filled in afterwards by the gambler.

The reading group GL comprises an optical reader, preferably constituted by 14 LEDs insensitive to red light, which can read the information contained in the coupon, a driving mechanism TR1 and a motor M1 for the actuation of the coupon driver.

The optical reader GL can recognize 14 data channels and two synchronism channels. The information which is read includes the data preprinted on the coupon and those entered by hand by the gambler. The information read by the optical reader is transmitted to the central unit UC, which shall be illustrated in detail in the following.

The apparatus is provided also with a high-speed printing group GS, comprising a thermal head TT for printing information on the coupon S, with a definition of 100 dots per inch, as well as a driving member TR2 and a motor M2 substantially equal to those of the reading group GR. At the outlet of the printing group GS, a drawer is provided for, for collecting coupons S.

Preferably, the reading group GR and the printing group GS are physically realized as a single unit, with a sliding channel of about 83 mm (3" 1/4). The reading velocity is about 60 cm/sec

(25"/sec), and the printing velocity is about 7.5 cm/sec (3"/sec).

Both displays D1 and D2, suitable to visualize the information necessary to complete the bet (columns, cost, etc.), are connected to the central unit UC, which manages the running of the apparatus.

Keyboard T, also connected to the central unit UC, is a multifunction keyboard with 36 keys, preferably of the membrane type, whose overlay is replaceable in case of modification of the functions of the keys.

The central unit UC comprises a central processing unit or CPU, preferably realized through a microprocessor, for instance a Motorola microprocessor of the family 68000.

The central unit comprises also a 256 Kbytes CMOS type main memory CM of the RAM type, and an expanded memory ME constituted, for instance, by a 126 k Novram, both of them connected to stand-by batteries BT1 and BT2 for preserving data in case of feed break. The central unit UC comprises also a permanent memory MP, possibly modified (ROM or EPROM), comprising the programme of the microprocessor and other elements, and a clock source or internal clock CLK.

Outside the central unit UC, a back-up memory group GMA is provided, comprising a back-up extractable memory MMA, also provided with a stand-by battery BT3, said back-up memory group MMA being extractable to ensure the possibility of switching data between terminals, also in the absence of electric energy supply.

Besides, a telematic group comprising a modem MDM, is connected to the central unit UC, which telematic group is connected in its turn to the switched public telephone network RTP. Said telematic group allows the transfer to a central computer (not shown) of the data of the bets.

A feeder AL connected to the 220 V a.c. network is provided, which supplies the different operating voltages of the apparatus.

The feeder is of the switching type, comprising a network transformer TR, a rectifier RD, a switching group SW and a stand-by condenser CA for the management of current breaks.

In case of current break during the validation of a coupon, condenser CA allows an autonomy sufficient to cancel the validation operation being carried out, printing on the coupon the writing "NON VALID".

Although this invention has been described in conjunction with a specific embodiment, it is evident that many alternatives and variations will be apparent to those skilled in the art, in the light of the foregoing description. Accordingly, this invention is intended to embrace all the alternatives and variations that fall within the spirit and scope of the appended claims.

Claims

1. Terminal apparatus for the bet of coupons of gambling contests, characterized in that it comprises in combination:
 - a reading group (GL) for the coupons filled in and introduced in the apparatus, said coupons containing preprinted information and information entered by the gambler;
 - a printing group (GS) for the application of further information on said coupons (S);
 - a central unit (UC) for the control of said reading group (GL) and said printing group (GS);
 - a keyboard (T) connected to said central unit (UC) for entering data and instructions in said central unit (UC);
 - displays (D1, D2) for the clear visualization of gambling data;
 - a telematic group (MDM) connected between said central unit (UC) and the switched public telephone network (RTP); and
 - means for feeding (AL) the apparatus.
2. Apparatus according to claim 1, characterized in that said printing group (GS) comprises a thermal printer and that said coupons (S) are realized on a heat-sensitive support.
3. Apparatus according to claim 1 or 2, characterized in that said telematic group comprises a modem (MDM) for the transfer of data on bets.
4. Apparatus according to any of the preceding claims, characterized in that it is contained in a case (1) provided with a first inclined front panel (1A) on which a keyboard (T) is mounted, and a second inclined panel (1B) next to the first one, on which two slits are obtained, one for the introduction, the other one for the emission of coupons (S).
5. Apparatus according to any of the preceding claims, characterized in that said displays (D1, D2) are of the liquid crystal type (LCD), with the contrast and display angle controllable through said keyboard (T).
6. Apparatus according to any of the preceding claims, characterized in that said central unit (UC) comprises: a central processing unit (CPU) realized through a microprocessor, connected to a main memory and an expanded memory (EM) provided with stand-by batteries (BT1, BT2) for preserving data in case of feed breaks; a permanent memory (MP) containing

the programme for said microprocessor, and an internal clock source (CLK).

7. Apparatus according to claim 6, characterized in that it furtherly comprises a back-up memory group (GMA) comprising an extractable back-up memory (MMA) and a stand-by battery (BT3), said group being extractable to switch data between terminals, even on an electric energy break. 5 10
8. Apparatus according to any of the preceding claims, characterized in that said reading group (GL) comprises an optical reader which can read the information contained in each coupon (S), a driving mechanisms (TR1) and a motor (M1), which actuates the coupon driver. 15
9. Apparatus according to any of the preceding claims, characterized in that said printing group (GS) comprises a thermal head (TT) to print information on coupon (S), a coupon driving member (TR2), and a motor (M2) which actuates the coupon driver. 20 25
10. Apparatus according to any of the preceding claims, characterized in that the reading group (GL) and the printing group (GS) are realized as a single unit. 30
11. Apparatus according to any of the preceding claims, characterized in that it comprises a switching type feeder (AL), comprising a network transformer (TR), a rectifier (RD), a switching group (SW) and a stand-by condenser (CA) for the management of current breaks. 35

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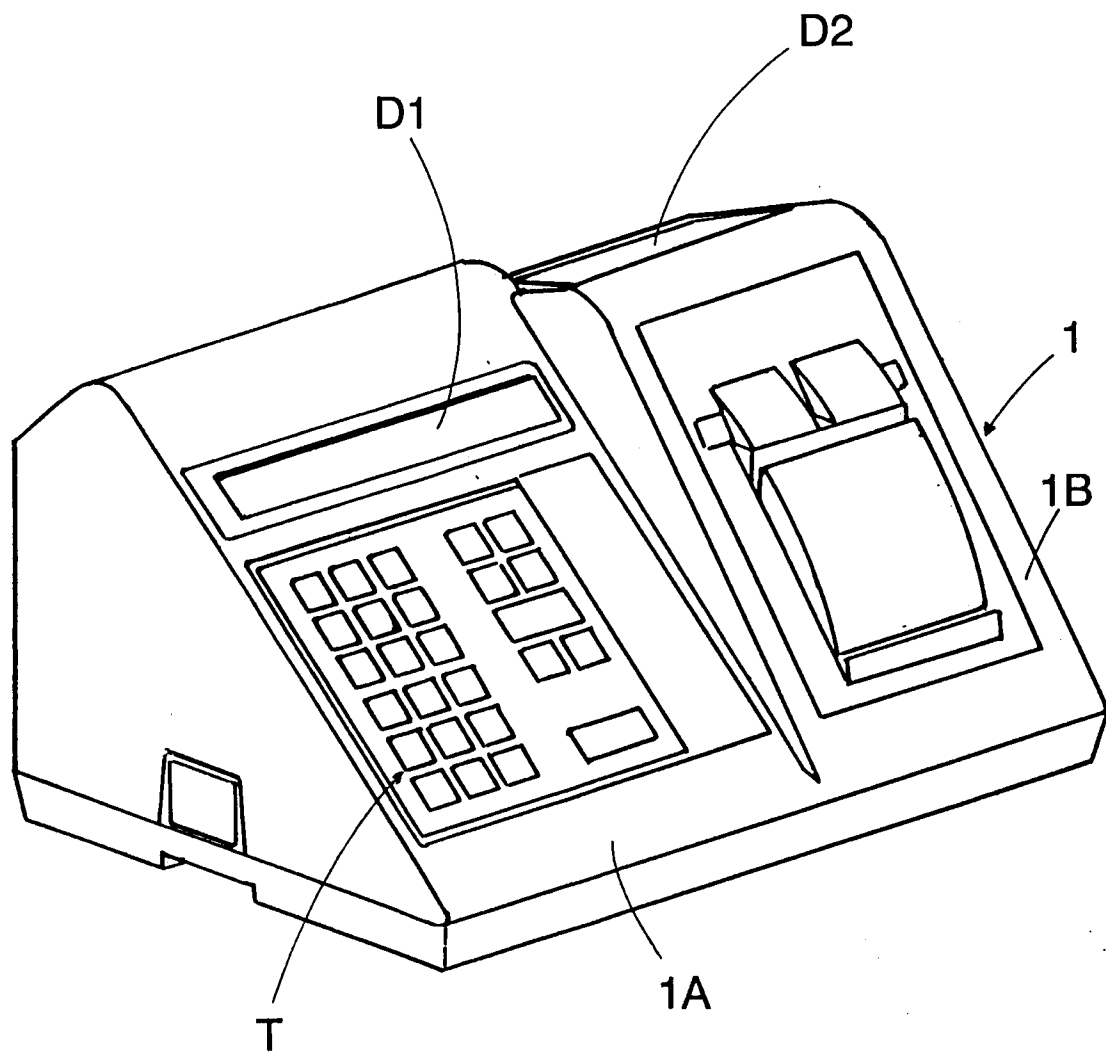


Fig. 1

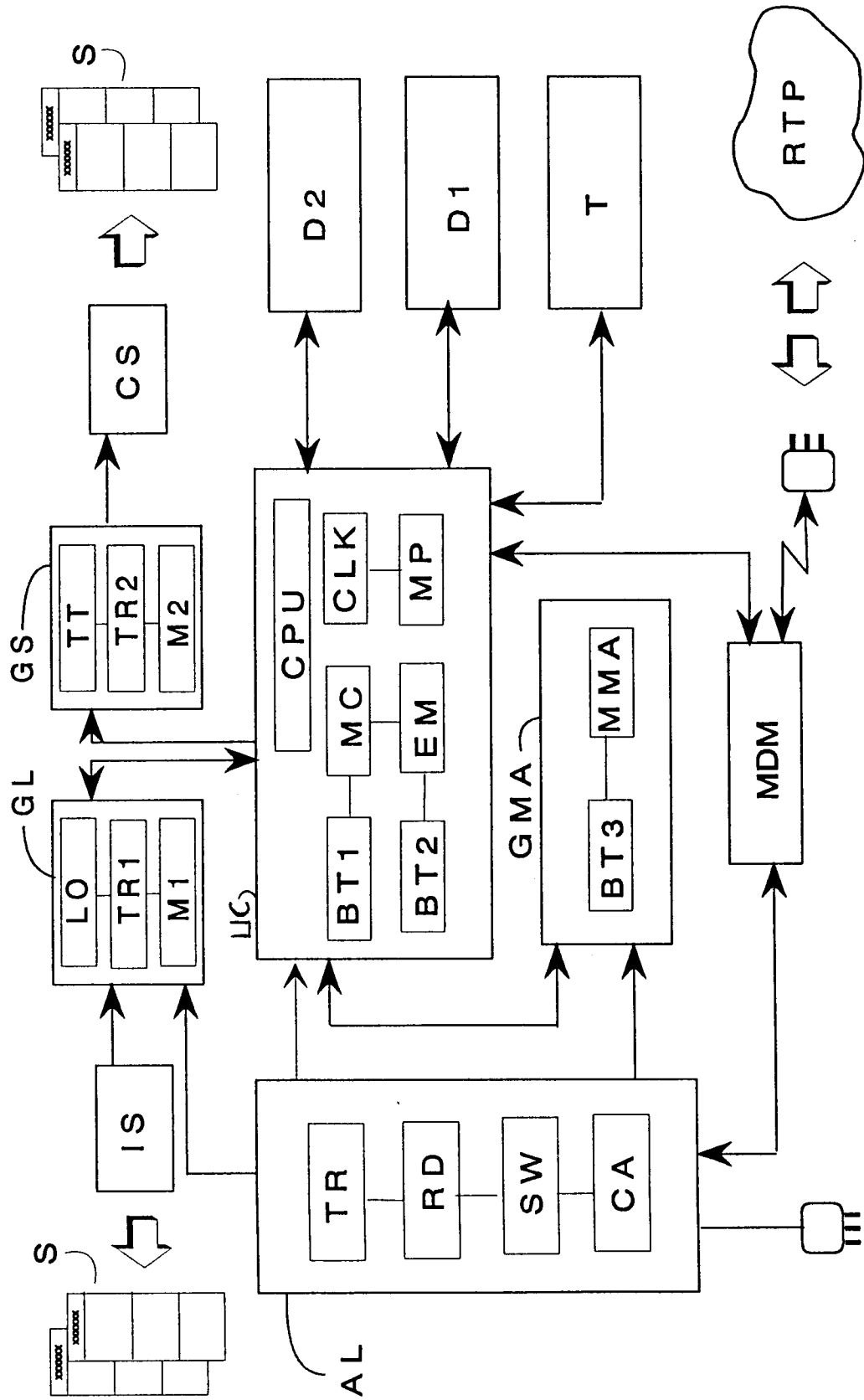


Fig. 2