



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 085 491 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
21.03.2001 Bulletin 2001/12

(51) Int. Cl.⁷: **G09F 15/00**

(21) Application number: **00200418.2**

(22) Date of filing: **08.02.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **20.09.1999 CN 99104072**

(71) Applicant: **KMB Creations Limited**
Lai Chi Kok, Kowloon (HK)

(72) Inventor: **Ng, Winnie**
Kowloon, Hong Kong (CN)

(74) Representative:
Weatherald, Keith Baynes
Castles,
17 Lansdowne Road
Croydon CR0 2BX (GB)

(54) **Bus stop pole**

(57) A bus stop pole has at a convenient height a housing having two display surfaces. One is intended to carry advertising material, while the other uses panels of LEDs and a touch-screen, liquid-crystal display to display variable information in response to manipulation of the touch-screen.

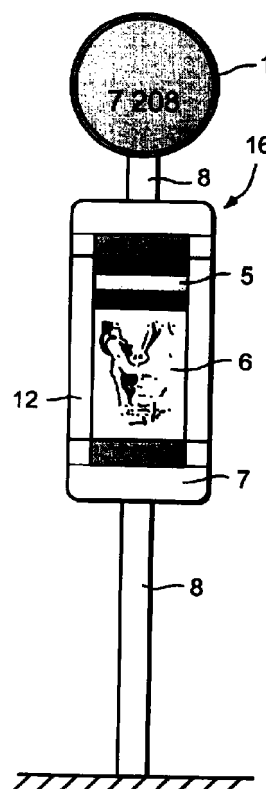


FIG. 1

EP 1 085 491 A1

Description

[0001] This invention relates to bus stop poles, by which is meant road furniture of the type which is largely upright and intended to indicate to passengers and to drivers where a bus or other public transport vehicle is intended to stop to discharge and pick up passengers.

[0002] GB-A-2 214 691 discloses a bus stop in the form of an upright carrying a cylindrical drum which is rotatable about the axis of the upright. The drum has fluorescent tubes within it intended to back-light information sheets or advertising material mounted on curved panels forming part of the cylindrical portion of the drum. This known device has the disadvantage that the displayed information is static.

[0003] The present invention aims at providing a bus stop pole which is water- and vandal-proof, and which provides means by which intending passengers may ask for relevant information to be displayed on request.

[0004] Accordingly the present invention provides a bus stop pole which is as claimed in the appended claims.

[0005] The present invention will now be described by way of example with reference to the accompanying drawing, in which:

Figure 1 is a rear elevation of one embodiment of the invention;

Figure 2 is a front elevation of the pole shown in Fig. 1, and

Figure 3 is a side elevation of the pole shown in Figs. 1 and 2.

[0006] The bus stop 16 shown in Fig. 1 is as it would be seen from the roadway. It comprises an upright in the form of a pole 8, preferably of stainless steel. The upright 8 is intended to have its lower end (as viewed) embedded in cement or other means to keep it in place despite attempts by vandals to remove or distort it. At a suitable height from the ground 10 is a housing 7 attached firmly to the upright. The housing has two oppositely-directed major surfaces 12 and 14 (of which only surface 12 is shown in Fig. 1). This surface is intended to face the roadway, so that it can be viewed conveniently by people in passing vehicles, and on walkways on the opposite side of the road. Surface 12 is intended to have its major area covered by a display panel on which a poster 6 may be mounted, the poster being able to be lit by means of a light source positioned within the housing 7. The manner in which the poster is positioned on the housing does not form part of the subject-matter of this invention, and so will not be described herein in any further detail. Another part of the surface 12 may have a panel on which is displayed the name or location of the bus stop, and this may likewise be illumi-

nated from within the housing.

[0007] The portion of the upright 8 above the housing is surmounted by a plate 1 having two major faces. Although Fig. 1 shows the plate as being oriented such that it is parallel with the roadside kerb, and therefore with the surfaces 12 and 14, it is within the purview of this invention to orient it at right-angles to the kerb, so that it may be viewed from afar by intending passengers approaching the bus stop from either direction. In another embodiment (not shown), the plate may be of cruciform cross-section, so that it presents a similar appearance whatever the location of a viewer. On both or all of its major surfaces, the plate bears indicia indicating which route(s) serves the stop. Preferably the route identity information is displayed on a back-lit transparent or translucent member (not shown).

[0008] As shown in Fig. 2, the display surface of the housing 7 is significantly different from that of Fig. 1. It is divided into at least one large panel 2 covered with an array of light-emitting diodes (LEDs), and another panel 3 forming a touch-screen liquid-crystal display. In one embodiment of the invention the panel 2 is divided into two incremental panels. One of these sub-panels may be used to display non-transport information controlled by a remote centre, while the other one would be intended to display bus route information and operational messages. At times the display on both sub-panels could be changed from the centre to display advertising material.

[0009] The panel 3 could be used to display route information, such as a route map and a fare table, together with such information that the bus operator wants to show, such as the Web page or address of the operator.

[0010] Positioned towards the bottom end of the housing (as viewed) is a loudspeaker. This could be operated optionally at the choice of intending passengers, or permanently, to announce in words what the display is showing. When the display is operated in two or more languages, the language of the aural announcements is changed appropriately.

[0011] Fig. 3 shows the appearance of the pole 16 from one side.

[0012] By means which are known, and which do not form part of the subject-matter of this invention, all the electricity-using and data-display devices forming part of the bus stop pole are connected through the buried end of the upright to electricity and data cables.

[0013] It will thus be seen that this invention provides a bus stop pole which displays and announces variable information requested by intending passengers, as well as the usual static information, and advertising material under the control of the bus company.

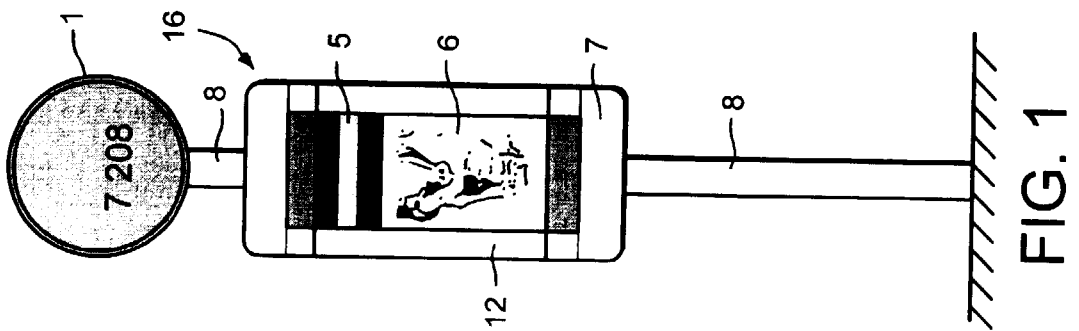
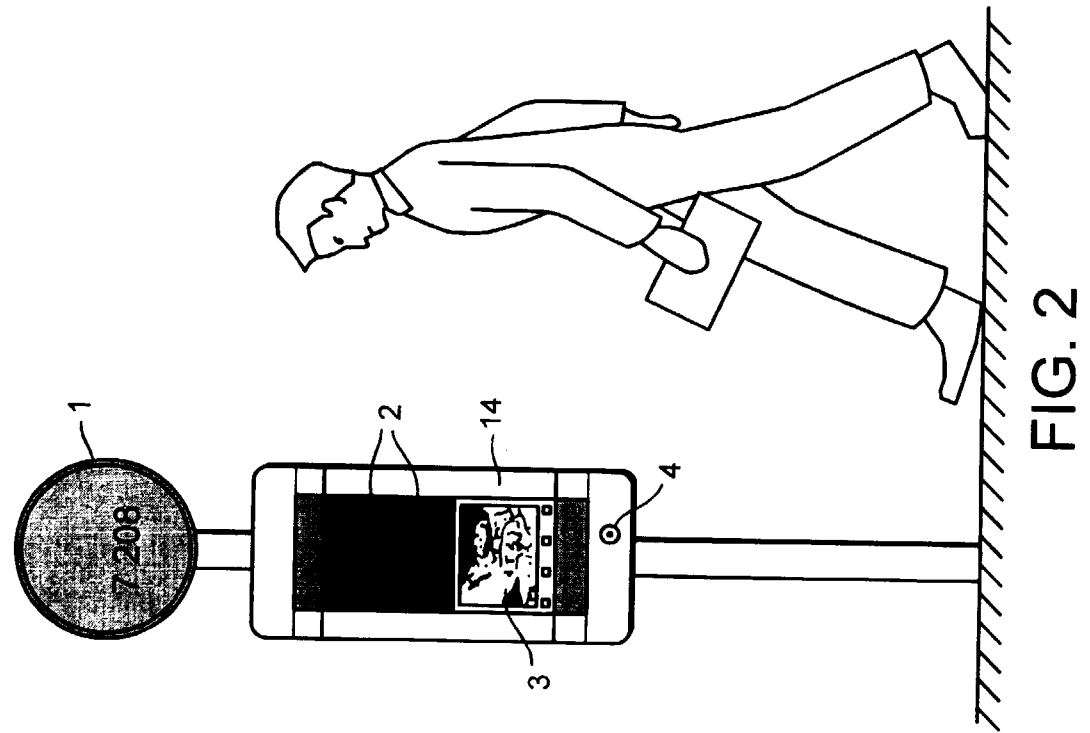
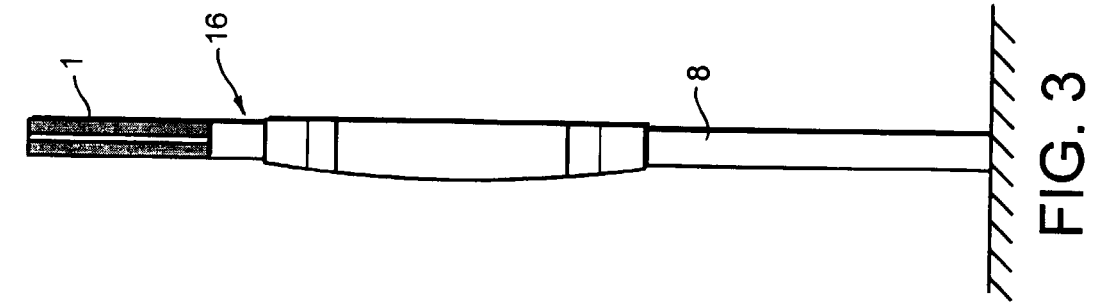
Claims

1. An integrated bus stop pole (16), comprising: an upright (8) made of stainless steel; a housing (7)

intermediate its ends, the housing having two oppositely-directed display surfaces (12, 14), of which one (14) has one part (2) of its area formed of light-emitting diodes (LEDs), and another part (3) formed by a touch-screen liquid-crystal display panel, and at least one route indicia display panel (1) at the upper end of the upright, the electrical and electronic components within the housing being adapted to be connected at the intended sunken end of the upright to electricity and data supply means.

2. A pole as claimed in claim 1, in which the said another display surface (12) is intended to face the adjacent roadway; in which the said one display surface therefore faces intending passengers, and in which the said another display surface is intended to display back-lit posters.
3. A pole as claimed in claim 2, in which the said another display surface has two adjacent panels of LEDs.
4. A pole as claimed in any preceding claim, in which the touch-screen panel is positioned on the surface at a location remote from the route-display panel so that, when the pole is in its working position, the touch-screen panel is below the panel(s) of LEDs.
5. A pole as claimed in any preceding claim, in which the or each route-display panel is intended to display one or more sets of indicia each identifying a route on which the respective stop is located, and in which the indicia are able to be illuminated from light sources forming part of the pole.
6. A pole as claimed in any preceding claim, in which the panel(s) of LEDs is or are adapted to display route information in addition to non-transport information.
7. A pole as claimed in any preceding claim, in which the touch-screen panel is adapted to display route and/or fare information in an audio-visual and interactive manner, together with audible information for the visually-disabled or -impaired.
8. A bus stop pole substantially as described herein with reference to, and as shown in, the accompanying drawing.

55





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 20 0418

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	FR 2 738 931 A (MARCOZ BRUNO PAUL CLAUDE) 21 March 1997 (1997-03-21) * the whole document *	1-8	G09F15/00
Y	FR 2 363 849 A (BAL CLAUDE) 31 March 1978 (1978-03-31) * the whole document *	1-8	
A	FR 2 741 987 A (GEMPSY FRANCE SA) 6 June 1997 (1997-06-06) * the whole document *	1-8	
A	GB 2 066 992 A (ELECTRONIC ROOMFINDERS INLAND) 15 July 1981 (1981-07-15) * abstract; claims; figures *	1-8	
A	WO 96 02881 A (SOWDEN KENNETH MANDENO) 1 February 1996 (1996-02-01) * abstract; claims; figures *	1-8	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G09F
Place of search		Date of completion of the search	Examiner
THE HAGUE		4 May 2000	Gallo, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 20 0418

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-05-2000

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
FR 2738931	A	21-03-1997	NONE		
FR 2363849	A	31-03-1978	NONE		
FR 2741987	A	06-06-1997	AU	1033697 A	19-06-1997
			CA	2238891 A	05-06-1997
			DE	69604703 D	18-11-1999
			EP	0885425 A	23-12-1998
			WO	9720277 A	05-06-1997
GB 2066992	A	15-07-1981	FR	2472798 A	03-07-1981
WO 9602881	A	01-02-1996	AU	2972195 A	16-02-1996