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United States Patent [19]

Kugell et al.

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[54] **MULTI-RING TELEPHONE METHOD AND SYSTEM**

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[73] Assignee: **Pilgrim Telephone, Inc.**, Cambridge, Mass.

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[52] U.S. Cl. **379/211**; 379/188; 379/205; 370/261; 370/270

[58] Field of Search 379/201, 202, 379/203, 204, 205, 206, 211, 212, 93, 95, 188, 199, 37, 354, 355, 356; 370/259, 260, 261, 262, 270, 280; 395/2.4; 340/825.44, 825.45, 825.47

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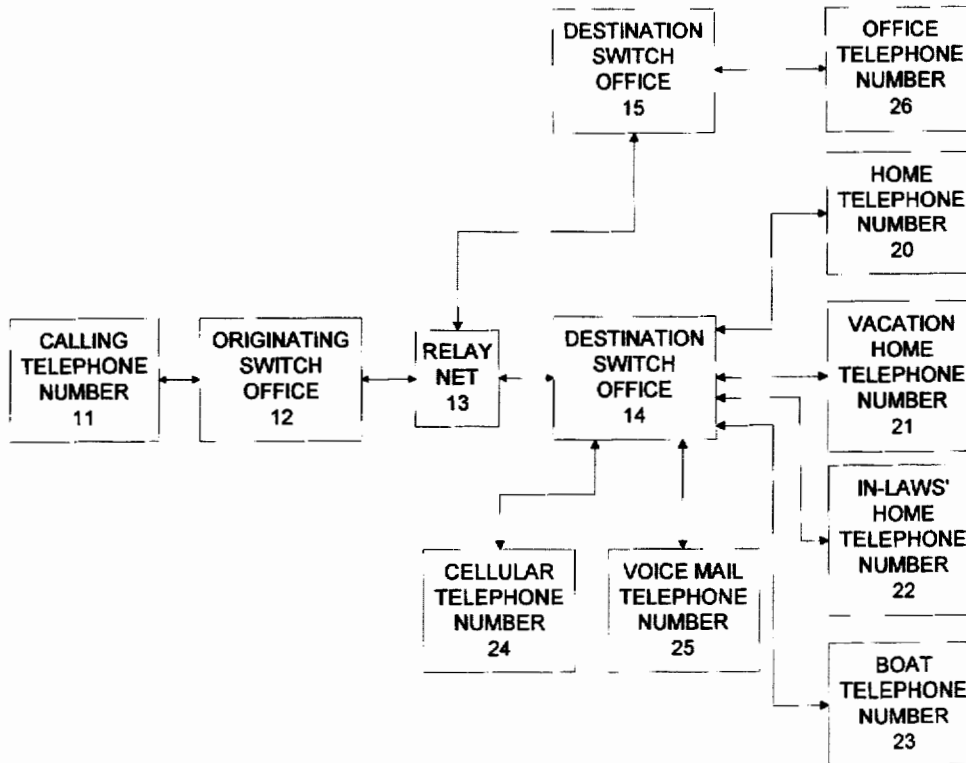
[57] **ABSTRACT**

A method and system of providing telephone service comprises associating a list of telephone numbers with a representative telephone number. A call to the representative telephone number is detected and a plurality of telephone numbers on the list are simultaneously signalled. Thereafter, signalling is terminated at at least one of the plurality of telephone numbers thereby allowing a connection to be established with one or more parties at telephone numbers among the plurality of telephone numbers. Each telephone number on the list may be a representative number which is associated with another list of telephone numbers.

47 Claims, 9 Drawing Sheets

DESTINATION
SWITCH
OFFICE
15

TE
N

TE
N

V

TE
N

II

TE
N

TE
N

CALLING
TELEPHONE
NUMBER
11

ORIGINATING
SWITCH
OFFICE
12

RELAY
NET
13

DESTINATION
SWITCH
OFFICE
14

CELLULAR
TELEPHONE
NUMBER
24

VOICE MAIL
TELEPHONE
NUMBER
25

FIG. 1

CISCO SYSTEM

FIG. 2

163a-e

161

| SWITCH OFFICE 16 | 162 → | MULTIPLE RING ADD-ON 17 |

171a
171b
171c
171d
171e

FIG. 2A

143
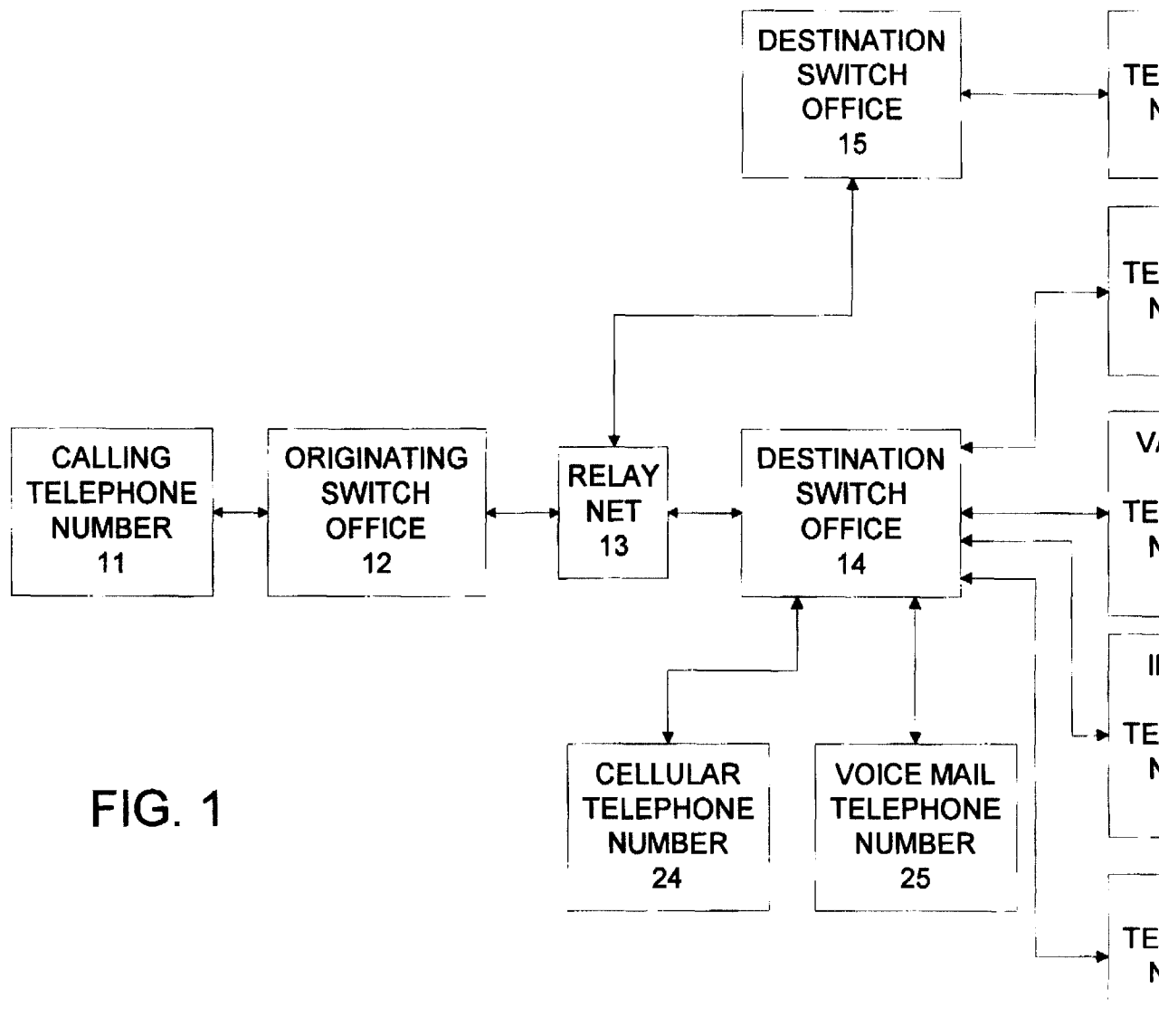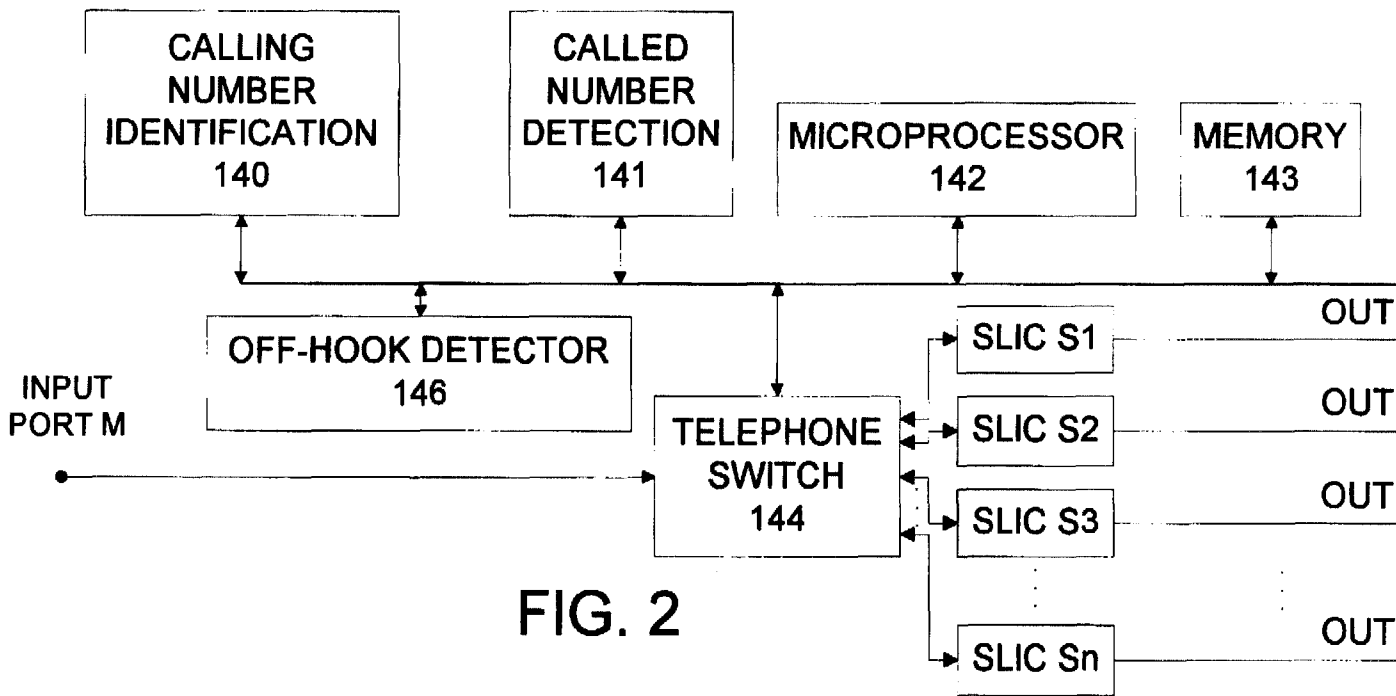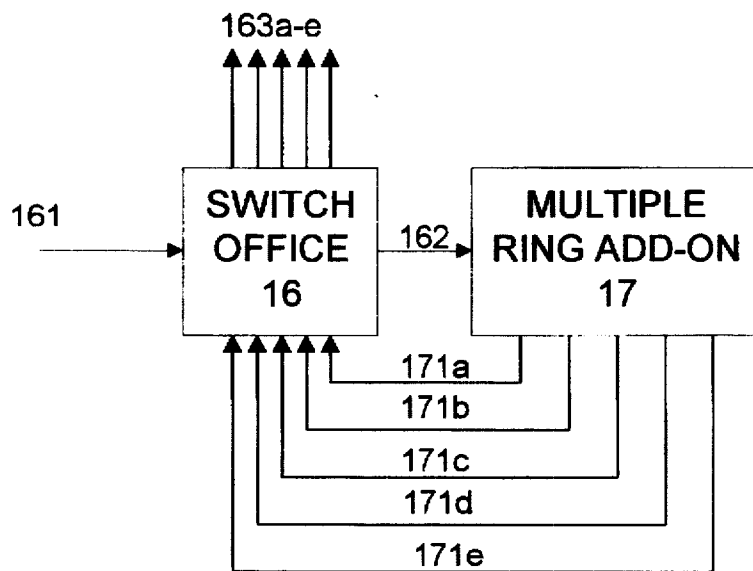
REPRESENTATIVE NUMBER: 800-555-1234			SIGNALLING TERMINATION REQUIREMENTS: 1 OFF-	
LIST OF ASSOCIATED NUMBERS	TIME PARAMETERS	ANI PARAMETERS	SIGNALLING DELAY PARAMETERS	VERIFICA PARAME
HOME TEL. NUMBER 20	6PM-12AM ONLY	TABLE A (EXCLUDED NOS.)	5 RINGS ONLY	PIN N(
VACATION HOME TEL. NUMBER 21	9AM-5PM, M-F ONLY	TABLE A (EXCLUDED NOS.)	5 RINGS ONLY	PIN N(
IN-LAWS' HOME TEL. NUMBER 22	6 PM-10 PM, AUGUST ONLY	TABLE B (EXCLUDED NOS.)	START AFTER 6 RINGS	VOICE C(
BOAT TEL. NUMBER 23	SAT. & SUN. ONLY	TABLE C (PERMITTED NOS.)	NONE	PIN N(
CELLULAR TEL. NUMBER 24	ALL TIMES	NO EXCLUSIONS	NONE	NON
VOICE MAIL TEL. NUMBER 25	JULY 15 - JULY 28 ONLY	NO EXCLUSIONS	START AFTER 20 RINGS	NON

FIG. 3

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