



New connection on: : 06-11-2018 : 19:09:39 - Last disconnection on: : 06-11-2018 : 01:47:06

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] identifying and products

Results in EPODOC 9.439

[SS 2] ss1 and process

Results in EPODOC 108

[SS 3] ss2 and motion

Results in EPODOC 20

[SS 4] ss3 and product and line

Results in EPODOC 0

[SS 5] ss3

Results in EPODOC 448

[SS 6] ss 3

Results in EPODOC 0

EPODOC: term 'SS 3' not found in index 'BI'. WARNING(1)

[SS 7] ss2 and motion

Results in EPODOC 20

[SS 8] ..li



1/20 © EPODOC / EPO

PN - [CN105576812](#) A 20160511

PNFP - CN105576812B B 20171103

PR - CN201610113154 20160229

AP - CN201610113154 20160229

DT - I

CT - || STSE (A)
[US7642757](#) B2 20100105 [A] (YOON JONG-SOO [KR], et al)
[A] 1-4
* 全文 *;
[CN102983577](#) A 20130320 [A] (EPRI SCIENCE & TECHNOLOGY CO, et al)
[A] 1-4
* 全文 *;
[CN103545799](#) A 20140129 [A] (BEIJING SIFANG AUTOMATION CO, et al)
[A] 1-4
* 全文 *;
[CN104124682](#) A 20141029 [A] (NARI RELAYS ELECTRIC CO LTD, et al)
[A] 1-4
* 全文 *;
[CN104967148](#) A 20151007 [A] (HU GAOFEI)
[A] 1-4
* 全文 *

CNOI - (A)
[H02J9/02](#)

PA - (A)
ELECTRIC POWER RES INST STATE GRID JIANGSU ELECTRIC POWER COMPANY; STATE GRID
CORP CHINA

TI - (A)
Zero sequence current locking protection method for contact failure of UPFC parallel
transformer transfer switch

AB - (A)
The invention discloses a zero sequence current locking protection method for contact
failure of a UPFC parallel transformer transfer switch. The method comprises steps that
SS1, a parallel side line area and a transformer low voltage side connection zone are
taken as equivalence to acquire an equivalent circuit graph, and circuit parameters are
set; SS2, a bus coupler zero sequence current is calculated according to the equivalent
circuit graph and the circuit parameters; SS3, contact failure logic discrimination is
carried out; SS4, according to the contact failure **motion** result, the transfer switch in a
contact failure state is reclosed, when switching from a first transformer to a second
transformer, a transformer switch of the second transformer is closed, when contact
failure is detected, reclosing is carried out, after reclosing succeeds, a transformer
switch of the first transformer is opened; if reclosing fails, switching is forbidden.
According to the method, for a problem of operation stop of a UPFC system caused by
contact failure in a switching operation process of the UPFC parallel transformer
transfer switch, an adverse logic discrimination method is proposed, reclosing is
realized during contact failure, and power supply safety and reliability of a UPFC

access area are improved.

2/20 © EPODOC / EPO

- PN - [CN202632010U](#) U 20121226
- PR - CN20122292848U 20120620
- AP - CN20122292848U 20120620
- DT - I
- PA - YICHANG SENDE ELECTRIC EQUIPMENT MFG CO LTD
- TI - Handheld controller for radiotherapy simulator
- AB - The utility model discloses a handheld controller for a radiotherapy simulator. The controller comprises a digital band switch SS1, light emitting microswitches (SS2 to SS18), a safety switch SS0 and an output interface, wherein one contact of the safety switch SS0 is connected with a common line of the light emitting microswitches, and the other contact of the safety switch SS0 is connected with all ports of the digital band switch SS1; and independent ports of all the light emitting microswitches and all the ports of the digital band switch SS1 are all connected to the output interface respectively, and switch opening/closing information is sent out through the output interface. The handheld controller is simple in structure and easy in operation and can realize all **motion** operations required by the radiotherapy simulator, so that medical plans can be effectively verified, and then, patients undergoing radiotherapy can obtain accurate irradiation and the injury to normal tissues can be avoided and reduced.

3/20 © EPODOC / EPO

- PN - [EP2213603](#) A2 20100804
- PNFP - EP2213603 A3 20110504
- EP2213603 B1 20120822
- PR - US20090149446P 20090203; US20090489042 20090622
- AP - EP20100000520 20100120
- DT - *; Rep
- CT - || STSE (A3)
[DE2326563](#) A1 19741212 [XYI] (WINDMOELLER & HOELSCHER)
[X] 1-5
* pages 5-7; figure . *
[Y] 6,7
[I] 8-10;
[US4265443](#) A 19810505 [Y] (BERTHELOT DANIEL)
[Y] 6,7
* figure - *;
[JP2000191156](#) A 20000711 [A] (TOYO JIDOKI KK)
[A] 1,11
* abstract *;
[EP1997646](#) A2 20081203 [A] (PRINTFINISH GMBH [DE])
[A] 1,11
* paragraphs [0022] , [0023]; figure - *;
[DE10103116](#) A1 20020725 [A] (GAEMMERLER AG [DE])
[A] 11

* paragraph [0001]; figure 1 *;
[US4133523](#) A 19790109 [A] (BERTHELOT DANIEL)
 [A] 1,4-8,11,15-19
 * figures 2,3 *;
[EP1816098](#) A1 20070808 [A] (MUELLER MARTINI HOLDING AG [CH])
 [A] 1,11
 * paragraph [0023]; figures 2a,2b,2c,2d *;
[DE3336820](#) A1 19840530 [A] (POLYGRAPH LEIPZIG [DD])
 [A] 1,11
 * figure . *;
[US4049260](#) A 19770920 [A] (SZYMBORSKI ANDREW M)
 [A] 1,11
 * figures 1-6 *;
[GB2272690](#) A 19940525 [A] (BOSCH GMBH ROBERT [DE])
 [A] 1,11
 * figure -; claims 1,4 *

- CCI - [B43M3/045](#) ; [B65H29/16](#) ; [B65H29/6609](#) ; [B65H39/02](#) ; [B65H1/22](#) ; [B65H1/30](#) ;
[B65H5/24](#) ; [B65H7/04](#)
- CLC - [B65H2301/44732](#) , [B65H2220/01](#) , ADD
 - [B65H2301/44732](#) , [B65H2220/02](#) , ADD
 - [B65H2511/22](#) , [B65H2220/03](#) , ADD
 - [B65H2511/51](#) , [B65H2220/01](#) , ADD
 - [B65H2513/40](#) , [B65H2220/02](#) , ADD
 - [B65H2513/104](#) , [B65H2220/02](#) , ADD
 - [B65H2701/1311](#) , [B65H2220/01](#) , ADD
 - [B65H2701/1313](#) , [B65H2220/01](#) , ADD
- CCA - [B65H2301/3121](#) ; [B65H2301/42134](#) ; [B65H2301/44732](#) ; [B65H2404/254](#) ;
[B65H2404/2691](#) ; [B65H2511/22](#) ; [B65H2511/51](#) ; [B65H2511/514](#) ; [B65H2513/104](#) ;
[B65H2513/40](#) ; [B65H2701/1311](#) ; [B65H2701/1313](#) ; [B65H2701/1916](#) ; [B65H2801/66](#)
- PA - (A2 A3 B1)
 PITNEY BOWES INC [US]
- TI - (A2 A3 B1)
 Method for feeding a shingled stack of sheet material
- AB - (A2)
 A method for feeding a shingled stack (SS) of sheet material (12) to a downstream processing device (30) includes the step of identifying a discontinuity (PG) in the shingled stack of sheet material wherein the discontinuity has a length dimension from an aft end of a downstream portion (SS1) of the shingled sheet material to a forward end of an upstream portion (**SS2**) of the shingled sheet material. In a next step, the **motion** of first and second serially arranged conveyors (50, 40) are controlled such that the length dimension of the discontinuity is substantially equal to a prescribed gap (PG) of known length dimension. The first conveyor (50) supports the upstream portion (**SS2**) of the shingled sheet material and the second conveyor (40) supports the downstream portion (SS1) of the shingled sheet material. The deck of the first (50) is advanced over the deck of the second conveyor (40) toward the aft end of the downstream portion by the length dimension of the prescribed gap (PG). The upstream portion is then dispensed into shingled engagement with the downstream portion to

produce a continuous stack of shingled sheet material.

4/20 © EPODOC / EPO

- PN - [US6408024](#) B1 20020618
- PR - JP19990130912 19990512; WO2000JP02969 20000510
- AP - US20010743507 20010111
- DT - **
- CT - || STSE (B1)
[US5461420](#) A 19951024 [] (SONY CORP [JP]);
[US5929902](#) A 19990727 [] (C CUBE MICROSYSTEMS [US]);
[US5990955](#) A 19991123 [] (INNOVACOM INC [US])
- CCI - [G11B27/28](#) ; [H04N5/253](#) ; [H04N7/0112](#) ; [H04N19/142](#) ; [H04N19/179](#) ; [H04N19/87](#)
- PA - MATSUSHITA ELECTRIC IND CO LTD [JP]
- TI - Telecine video signal detecting device
- AB - As to a telecine video signal (Sv), in a telecine video signal detector (Dtp) for detecting a scene-change part (SC) and deciding whether successive telecine conversion has been carried out, a **motion** detector (3) detects a **motion** between video signals (Sv) one field apart from each other; a first statistical processing unit (4) accumulates detection results (Sm) for one field; a first telecine decision unit (5) decides whether the field represents telecine-converted video; the second statistical processing unit (6) detects statistical information (**Ss2**) of the input signal (Sv); a scene-change detector (8) detects a scene-change in the output (**Ss2**) from the second statistical processing unit (6); a second telecine decision unit (9) decides field continuity from a detection result (Ssc) of the scene-change detector (8) and a result (St1) of the first decision unit (5); and then an AND circuit (10) carries out an AND operation on outputs (St1, St2) from the first and second decision units (5, 9).

5/20 © EPODOC / EPO

- PN - [WO0004569](#) A1 20000127
- PR - US19980114999 19980714
- AP - WO1999US15673 19990713
- DT - *; Rep
- CT - |US| ISR (A1)
[US4126782](#) A 19781121 [A] (USAMI KATSUHISA, et al);
[US5032724](#) A 19910716 [A] (GERLACH ROBERT L [US], et al);
[US5541410](#) A 19960730 [A] (DOWBEN PETER A, et al)
- CCI - [H01J49/482](#)
- PA - UNIV NEBRASKA [US]
- TI - HIGH RESOLUTION CHARGED PARTICLE-ENERGY DETECTING MIRROR ANALYZER SYSTEM AND METHOD OF USE
- AB - A compact, small diameter, high resolution charged particle energy detecting, retractable cylindrical mirror analyzer system (PI) includes multiple sequential stages (SS1, **SS2**). The analyzer system (PI) allows for positioning, via a manipulator (MP) of the cylindrical mirror analyzer system (PI), which is attached to a linear **motion** feedthrough on a Conflat™ flange (BP) of a vacuum system.

6/20 © EPODOC / EPO

PN - [JP2007276200](#) A 20071025
PNFP - JP4899592B B2 20120321
PR - JP20060102931 20060404
AP - JP20060102931 20060404
DT - I
CT - (A)
[JPH06293135](#) A []; [JPH11138775](#) A [];
[JP2005238553](#) A []; [JPH08156248](#) A [];
[JP2002361865](#) A []; [JP2003226009](#) A []
FI - B41J2/015&101; B41J2/045; B41J2/135; B41J2/14; B41J2/14&301; B41J2/14&305;
B41J2/145; B41J2/15; B41J3/04&103A
FT - 2C057/AF29; 2C057/AF51; 2C057/AG14; 2C057/AM16; 2C057/AN01; 2C057/AR03;
2C057/AR16; 2C057/BA04; 2C057/BA14; 2C057/BA15
PA - (A)
SEIKO EPSON CORP
TI - (A)
INK-JET PRINTER AND INK-JET PRINTER DRIVING METHOD
AB - (A)
PROBLEM TO BE SOLVED: To provide an ink-jet printer which avoids problems by using a single driving pulse, and at the same time can reduce heating of two transistors push-pull connected to each other, and to provide an ink-jet printer driving method.
- SOLUTION: In the ink-jet printer which supplies driving waveform signals to the two transistors push-pull connected to each other, and applies outputs therefrom as driving pulses COM to actuators each formed of a capacitive load, to thereby eject droplets from corresponding nozzles, the actuators for all the nozzles are divided into two systems. Then when the driving pulses COM which each have a voltage value stepwise increased/decreased by adding/subtracting a **motion** unit of a second clock signal BCLK to/from waveform data for specifying a voltage value, while the voltage value of the driving pulse COM is held, a selecting switch is closed in response to a first switch signal SS1, to thereby connect the driving pulse COM to the actuators in one of the systems. When the actuators in the one system are charged/discharged to each of predetermined electric potentials, the driving pulses COM are connected to the actuators in the other system in response to second switch signal **SS2**.
- COPYRIGHT: (C)2008,JPO&INPIT

7/20 © EPODOC / EPO

PN - [JP2001028735](#) A 20010130
PNFP - JP3974743B B2 20070912
PR - JP20000138331 20000511; JP19990130912 19990512
AP - JP20000138331 20000511
DT - I
FI - H04N5/253; H04N7/01&G

FT - 5C022/BA11; 5C063/BA12; 5C063/CA05; 5C063/CA07; 5C063/CA23; 5C063/CA36; 5C063/CA40; 5C122/DA33; 5C122/EA06; 5C122/FH00; 5C122/FH11; 5C122/FH12; 5C122/FH24; 5C122/GH00; 5C122/GH10; 5C122/GH16; 5C122/HA88; 5C122/HB01; 5C122/HB02; 5C122/HB03

PA - (A)
MATSUSHITA ELECTRIC IND CO LTD

TI - (A)
TELECINE VIDEO SIGNAL DETECTOR

AB - (A)
PROBLEM TO BE SOLVED: To provide a telecine video signal detector that detects a scene change part in a telecine video signal so as to decide whether or not a video signal is continuously converted into a telecine signal. SOLUTION: The telecine video signal detector is provided with a **motion** detector 3 that detects a **motion** between video signals Sv apart by one field, a 1st statistic processing unit 4 that accumulates its result Sm for one field, a 1st telecine decision unit 5 that discriminates there or not the field includes a video image that is telecine-converted, a 2nd statistic processing unit 6 that detects statistic information **Ss2** from the input signal Sv, a scene change detector 8 that detects a scene change from the output **Ss2** of the 2nd statistic processing unit 6, a 2nd telecine decision unit 9 that decides the consecutiveness of fields on the basis of the detection result Ssc of the scene change detector 8 and a result St1 to the 1st decision unit 5, and an AND circuit 10 that ANDs the outputs St1, St2 of the 1st and 2nd decision unit 5, 9.

8/20 © EPODOC / EPO

PN - [JPH09147408](#) A 19970606

PR - JP19950310473 19951129

AP - JP19950310473 19951129

DT - I

FI - G11B11/10&586C; G11B11/105&586; G11B11/105&586H; G11B7/135; G11B7/135&Z

FT - 5D075/AA03; 5D075/BB04; 5D075/CC04; 5D075/CC11; 5D075/CC24; 5D075/CD07; 5D075/DD03; 5D119/AA11; 5D119/AA13; 5D119/BA01; 5D119/BB01; 5D119/BB05; 5D119/DA05; 5D119/EB13; 5D119/EB14; 5D119/EC40; 5D119/EC44; 5D119/EC48; 5D119/KA04; 5D119/KA11; 5D119/KA43; 5D789/AA11; 5D789/AA13; 5D789/BA01; 5D789/BB01; 5D789/BB05; 5D789/DA05; 5D789/EB13; 5D789/EB14; 5D789/EC40; 5D789/EC44; 5D789/EC48; 5D789/KA04; 5D789/KA11; 5D789/KA43

PA - MATSUSHITA ELECTRIC IND CO LTD

TI - OPTICAL HEAD

AB - PROBLEM TO BE SOLVED: To provide an optical head capable of high density reproducing even with a laser of a long wavelength. SOLUTION: An emission means constituted of a laser 10 and a polarizing hologram 11 irradiates three pieces of light beams. A track T1 on a magneto- optical disk 1 is irradiated by SP of a P polarization (polarization components parallel to x, y axes are called respectively as an S polarization, the P polarization based on a reflection surface of a beam splitter 12 for convenience), and adjacent tracks T2, T3 are irradiated by SS1, **SS2** of the S polarization. An analyzer 14 whose bearing is set in 45 deg. for the y axis, and the light is divided to components U, Y orthogonally intersected with each other to be incident on

a photodetector 15. The output of the photodetector 15 is received by a differential amplifier 16. Thus, since the information of the adjacent tracks are subtracted from main reflection light by differential **motion**, cross talk is eliminated, and an inexpensive semiconductor laser is used without enlarging a numeral aperture.

9/20 © EPODOC / EPO

PN - [JPH02123985](#) A 19900511

PNFP - JPH0714279B B2 19950215

PR - JP19880275151 19881031

AP - JP19880275151 19881031

DT - I

CCI - [H02N2/021](#)

FI - H02K33/02&Z; H02N2/00; H02N2/00&B; H02N2/04; H02N2/06; H02P25/06; H02P5/00&101C; H02P7/00&101H

FT - 5H540/AA06; 5H540/BA10; 5H540/BB06; 5H540/EE01; 5H540/EE05; 5H540/EE06; 5H540/FA12; 5H540/FB01; 5H633/BB13; 5H633/GG20; 5H633/GG23; 5H633/GG24; 5H633/JA00; 5H633/JA02; 5H633/JA06; 5H681/AA19; 5H681/BB07; 5H681/BB13; 5H681/BC09; 5H681/DD23; 5H681/EE22; 5H681/EE23; 5H681/FF23; 5H681/FF24

PA - (A)
OKUMA MACHINERY WORKS LTD

TI - (A)
LINEARACTUATOR

AB - (A)
PURPOSE:To enable high acceleration or deceleration to be performed at high precision and enable high thrust to be obtained by performing fixing or separating working without stopping a driven body, when the driven body is in a moving state.
CONSTITUTION:By a controller 41, the position command SP or speed command SV of input provided from an external section is compared with a position detecting value DP or speed feedback signal DV from a position detector or a speed detector 42 fitted on a driven body 34, and by a correlation between a driving fine adjustment actuator 31 and a fixing or separating fine adjustment actuator 32, each output of telescopic **motion** commands SS1, **SS2** is directed to drivers 431, 432. By the respective drivers 431, 432, the telescopic **motion** commands SS1, **SS2** are amplified, and the driving fine adjustment actuator 31 and the fixing or separating fine adjustment actuator 32 are controlled, and the body 34 to be driven is driven. As a result, at a high speed and high precision, high acceleration or deceleration can be performed, and the working of high thrust can be obtained.

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PN - [JPS6082452](#) A 19850510

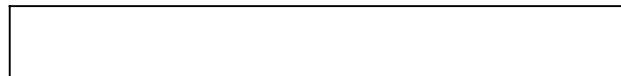
PR - JP19830191551 19831013

AP - JP19830191551 19831013

DT - I

CCI - [B60M3/04](#)

FI - B60M3/04&D



PA - MEIDENSHA ELECTRIC MFG CO LTD

TI - SECTION POWER FEEDER FOR
ELECTRIC RAILROAD

AB - PURPOSE:To prevent the
occurrence of arc at the section
by monitoring the voltage across
feeder wires passing through a
section by means of a voltage
relay while on-off controlling the
switching control elements when
the voltaga is approximately
zero. CONSTITUTION:The voltages
across feeder lines 11a-11c
having sections 12a, 12b
between them are monitored
respectively by voltage relays
17a, 17b, and upon **motion** of an
electric car under regenerative
braking to the section 12a to
bring the voltage to
approximately zero, a thyristor
breaker 16a is turned on while
16b is turned off, to prevent arc
at the section 16a. While two
bridge circuits comprised of
diodes 14, 15 and 19, 20 are
provided between two feeder
lines, so only two breakers 16a,
16b are required and only two
sections are required between
adjoining power stations
SS1, **SS2** to simplify the system
and to improve the reliability
resulting in prevention of
breakdown of pantograph or
feeder lines.

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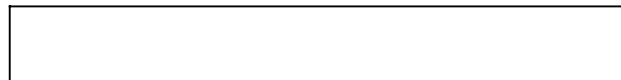
PN - [JPH0271627](#) A 19900312

PR - EP19880121384
19881221; EP19880106983
19880430

AP - JP19890112777 19890501

DT - I

CT - || STSE (A)
[JPS5826247B](#) B2 19830601 [];
[JP60068738B](#) B 00000000 [];



[JP55828449B](#) B2 19830616 [];
[JP56132851B](#) B 00000000 [];
[JP59094487B](#) B 00000000 []

CCI - [G01S5/16](#) ; [G08C23/04](#) ;
[H03J1/0025](#) ; [H03J9/06](#) ;
[H03M1/301](#) ; [H03M1/305](#)

CCA - [H03J2200/22](#) ; [G08C2201/32](#)

FI - G03B17/38&B; H04B10/00;
 H04B10/11; H04B10/116;
 H04B9/00&P; H04B9/00&R;
 H04B9/00&116;
 H04Q9/00&311U

FT - 2H020/FB01; 2H020/FB03;
 5K002/AA01; 5K002/BA02;
 5K002/BA21; 5K002/CA02;
 5K002/CA14; 5K002/DA05;
 5K002/FA01; 5K002/FA03;
 5K002/GA04; 5K048/AA04;
 5K048/BA03; 5K048/CB01;
 5K048/DB04; 5K048/DB06;
 5K048/DC01; 5K048/EA01;
 5K048/EB02; 5K048/FC01;
 5K048/HA04; 5K048/HA06;
 5K102/AA15; 5K102/AA27;
 5K102/AB05; 5K102/AL23;
 5K102/AL28; 5K102/PH31

PA - ITT IND GMBH DEUTSCHE

TI - WIRELESS REMOTE CONTROL
 SYSTEM FOR ELECTRONIC DEVICE

AB - PURPOSE: To reduce number of
 keys considerably without
 decreasing number of control
 instructions by providing a
 means that generates an electric
 signal through a **motion** between
 a remote control transmitter and
 a remote control receiver or
 between electronic devices in
 relation to a radiant ray
 detector. CONSTITUTION: A
 remote control receiver is
 provided in a remote control
 transmitter (f) and an electronic
 device (g) in a wireless remote
 control system for an electronic
 device, and one radiant ray
 source (q) or over is provided to

the control transmitter (f) and the device (g). A radiant ray emitted from the radiant ray source (q) is emitted onto an optical collector S by a cylindrical lens Z. The collector S is made up of two optical collectors s1, s2, the longitudinal axes at the relative positions are in parallel with each other, each surface of the collectors s1, s2 has a regular pattern where a transparent zone bd and an opaque zone bu are alternately and regularly arranged. The pattern of the collector s1 is deviated laterally by a distance (d) with respect to the pattern of the collector s2, each of radiant ray detectors sd1, sd2 is placed at each of light collection points ss1, ss2 of the collectors s1, s2 and provides the outputs of output signals x, y respectively.

12/20 © EPODOC / EPO

PN - [JP557125055](#) A 19820804

PNFP - JPH0341348B B2 19910621

PR - JP19810012157 19810128

AP - JP19810012157 19810128

DT - I

CT - || STSE (A)
[JPS5557464](#) A 19800428 [
] (HEIDELBERGER DRUCKMASCH
 AG)

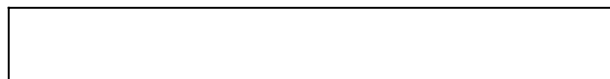
CCI - [B41F7/26](#)

FI - B41F7/24; B41F7/26; B41F7/40

FT - 2C034/BB03; 2C034/BB32;
 2C034/BB33; 2C034/BB42;
 2C034/BB62; 2C034/BB63;
 2C034/BB66

PA - (A)
 KOMORI PRINTING MACH

TI - (A)
 WATER SUPPLY DEVICE FOR



PRINTING MACHINE

AB

- (A)

PURPOSE: To prevent all the members and units from damages, in a water supply device for a printing machine, by operating revolution of a water supply roller, revolution of a volume adjusting roller and ON-OFF **motion** of a wetting roller at a fixed condition. CONSTITUTION: Interlocked select switches SS1 and **SS2** are turned ON to upper positions to rotate a block 1. When a switch S is turned ON, a relay R1 is operated to make a water pump 25 supply a water vessel 8 with water. And then, when a push button switch A1 is turned ON, a relay R2 is operated to turn a water supply roller 5. When, a certain period of time is elapsed after a timer relay T1 started operating, a water film is formed on a water volume adjusting roller 6, a relay R2 of the roller 6 starts operating, and thereby a cylinder 23 is operated to move the roller 6 and put it on a roller 7. And, a timer relay T2 is operated, and after a certain period of time, a water film is formed on the roller 7. When a push button switch A3 is turned ON, a relay R4 starts operating, and thereby a cylinder 17 is operated to put a water applying roller 3 on the block 1.

13/20 © EPODOC / EPO

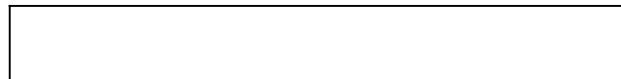
PN - [GB1052174](#) A 00000000

AP - GBD1052174 00000000

DT - *

CCI - [G09B9/46](#)

AB - 1,052,174. Training apparatus for aircraft and ships. OTIS ELEVATOR CO. March 13, 1964 [March 18, 1963], No. 10798/64.



Headings B7V and B7W.

Apparatus for simulating the control of a vehicle, e.g. a helicopter, by presenting to a trainee a representation on a cathode-ray tube an indication of desired and actual conditions or positions of the helicopter comprises an oscillator 13 which supplies sine wave oscillations through transformer TR1 and phase shifter C1, RE2 to amplifiers A1 and A2, the outputs of which pass through contacts 40, 42 of commutating switch 20 to the deflection circuits of an oscilloscope 12 to provide a visual indication of a condition that a trainee has to maintain or attain. If **motion** has to be imparted to the image presented by the oscilloscope a synchronous motor 14 drives through gearing 15 a disc 16 having light-transmitting properties that vary with angular displacement whereby a pair of lamps L1, L2 energize through the disc photo-electric cells PC1, PC2 connected to a D.C. supply through isolating resistors R1, R2. The cells, in conjunction with resistors RE4 and RE5 form voltage dividers. the varying outputs of which are connected over lines 18, 19 to the inputs of amplifiers A1 and A2 through resistors R3, R4, thereby altering the position of the image on oscilloscope 12. Signals representative of the location of the simulated vehicle are derived in summing amplifiers SA1, SA2 (Fig. 3) and applied from leads X and Y, contacts 7, 8 and 44, 46. Switch 20 constantly switches from contacts 40, 42 to contacts 44, 46 so that indications of both actual and desired

operating conditions are displayed on the oscilloscope. Fig. 2 shows apparatus for deriving signals representative of movement of a trainee's control stick 11 wherein D.C. voltage is supplied through reversing switches PS1, PS2 to potentiometers POT1, POT2, the pick-off of each of which is adjusted by control stick 11 to provide outputs corresponding to the X and Y axes. For the X axis, the output from POT1 is supplied through adjustable resistor RE6 to D.C. amplifier INT1, arranged as an integrator by feed-back capacitor C4, the integrated output being applied to a voltage divider comprising resistors R5, R6 which with inversion amplifier INV1 result in 180 degrees phase shift of the applied signal. An adjustable feedback resistor RE12 is switched at SS1 to supply positive and negative feedback to the input of amplifier INT1. The signal from amplifier INV1 is supplied through resistor RE8 to integrating amplifier INT3 and inversion amplifier INV3 whereby it is again integrated and inverted, a positive or negative feedback loop to INT1 being provided by resistor RE13. A third stage of integration may be provided by integrator INT5 and inverter INV5, and the outputs from the three circuits are taken to a manually operated Integration Selection Switch ISS whereby simulation of first, second or third order control may be selected, the appropriate order output appearing on leads X11, Y11; X22, Y22 and X33, Y33 respectively. Terminals 21-24 and, for the Y circuit, terminals

25-28 may be used to crossconnect the two branches to simulate crosscoupling along two axes, e.g. to simulate the loss of altitude that tends to accompany a turn of an aircraft. The outputs on Y11 Y22, Y33 from Fig. 2 are fed respectively to the bottom, middle and top of potentiometers POT11, POT10 and POT9, Fig. 3. The outputs from X11, X22 and X33 are fed respectively to the bottom, middle and top of potentiometers POT8, POT7 and POT6. The wipers of all the potentiometers are actuated by a reversible electric motor 29 through a reduction gear 32 and the outputs from potentiometers 9-11 and 13 are fed into the Y circuit and those from potentiometers 6-8 and 12 into the X circuit. As motor 29 progressively lowers the movable contacts the inputs to summing amplifiers SA1 and SA2 change progressively from a pure third order function to mixed third and second order functions which in turn gradually changes to the second order and then to the first order. Potentiometers 12 and 13, with rheostats RE16 and RE17, provide feedback loops to the amplifiers, to increase the amplification factor to assist the trainee. The outputs from the amplifiers pass over leads X and Y to contacts 8 and 7 respectively of switch CPS, Fig. 1, for application to the deflection circuits of oscilloscope 12. The apparatus has the characteristic of reducing its order of control, reducing the degree of movement imparted to the " target " image and increasing the gain of

summing amplifiers SA1, SA2 in conformity with the degree of error. When this error exceeds a predetermined value the effect is to simplify the trainee's task and to achieve this it is desirable to change the positive and negative error signals ($X - X_{SP}$ and $Y - Y_{SP}$) from amplifiers SA3, SA4 into absolute values of negative polarity and this is done in amplifiers AV1 and AV2, the resulting X and Y axes error signals being combined in summing amplifier SA5, the output of which gives the instantaneous difference between the required and achieved performance of the trainee. Fluctuations in the output from amplifier SA5 are smoothed by capacitors C10-C13, selected by switch EAS and the smoothed signal is amplified at A3 and fed through a switch OP and an interrupter 33 to secondary winding of transformer TR2 to produce an alternating potential that is 180 degrees out of phase with an alternating potential taken from POT3 through resistor R40, the two out-of-phase signals being combined in amplifier 31 and applied to phase winding PW2 of motor 29. The switch OP is opened to permit the setting of a stable condition of the apparatus preparatory to a trainee assuming control. In operation, and to simulate a helicopter, the various controls are adjusted until the "feel" response of the control stick 11 appears correct to an operator experienced in that particular helicopter. Switch OP (Fig. 3) is opened and switch ISS (Fig. 2) is set on position 3 so that motor

29 drives all the potentiometers POT3 to POT13 to their uppermost positions. Each input resistor RE6, RE8 &c. (Fig. 2) is adjusted to produce a customary time lag between control actuation and aircraft response and feedback switches SS1, SS2 &c. are adjusted for positive or negative feedback and resistors in the feedback loops are adjusted to simulate the stability of the craft, and the degree of response to control actuation is adjusted by resistors RE16 and RE17 in the feedback loops to amplifiers SA1 and SA2 (Fig. 3). The drive to the desired set of operating conditions is controlled by varying the output from photo-cells PC1, PC2 by adjustment of resistors RE4, RE5. Switch CPS (Fig. 1) will be set to the right-hand set of contacts if the trainee's object is to maintain a visual representation of the simulated helicopter in registration with a simulated desired position of the helicopter. For a training session switch OP is closed and a trainee attempts to maintain registration between the images on the oscilloscope. Any signals representing error are summed in amplifiers SA1 and SA2 and returned over leads X and Y to switch CPS for operation of the deflection circuits of oscilloscope 12. Simultaneously signals from photo-cells PC1, PC2 are supplied through switch CPS and switch 20 to the deflection circuits and over leads X and Y to the inputs of summing amplifiers SA3 and SA4, where they are combined with the integrated signals

resulting from the control
actuators to produce more or
less constantly varying values
indicative of the deviation that
the trainee achieves from a
desired position.

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PN - [GB467708](#) A 19370622
PR - GB19360022667 19360817
AP - GB19360022667 19360817
DT - *
CCI - [B21B37/48](#)
PA - AMERICAN ROLLING MILL CO
TI - Improvements in or relating to
the cold rolling of strip metal
AB - 467,708. Control of several
motors. WILLIAMS, W. P.
(American Rolling Mill Co.) Aug.
17, 1936, No. 22667. [Class 38
(iii)] [Also in Groups XXII and
XXXV] In cold rolling a strip in a
series of rolls M with tensioners
T between each mill or group of
mills, the tensioners T have a
constant pull and are coupled to
the rheostats of the
corresponding mill motors or to
puller motors so that there is a
constant positive difference
between the tension in the strip
on the outgoing side and the
tension of an incoming side of
the mill or group of mills. A
puller may be located beyond the
final mill which exerts a tension
not less than the sum of all the
differences in tension on each
side of each individual mill or
group. The strip is comprised of
shorter strips joined end to end
by a welder 51, and trimmed by a
flash cutter, and forms a free
loop 53 before back tension is
applied as it proceeds to the
mill. At the exit the strip is
sheared into length and coiled



up. Each strip tensioner T comprises three rollers 12, 13, 14, Fig. 6, the roller 14 being urged up into the loop of the strip by an adjustable weight or an adjustable pressure hydraulic cylinder 19 to take up any slack to maintain the tension. As the roller 14 moves up or down, a cable 27, Fig. 6, attached at one end thereto rotates a sprocket 36, Fig. 8, which chain drives a rheostat 45 so controlling the mill motor or the motor of the strip puller. The sprocket 36 has a lost **motion** gap for the drive pin 35. A hand wheel 43 can also be operated to declutch the chain drive 39 and operate the rheostat as desired. To thread the strip through the mill the cable 27 is slackened off to lower the tensioning roller 14 to allow the strip to be threaded through. Fig. 10 shows the electrical drive controls in which a motor G drives a generator H supplying current to all the mill motors A<1>, B<1>, &c. and to the motor F<1> of the strip puller P. The operator at 40 operates hand wheel 21 of rheostat 343 of motor F<1> and so controls the tension pull and control of motor F<1> also in turn controls the speed of all the other motors in the train automatically through the action of the tension take-up devices T. By opening a switch 345 the trip breaker 902 stops the puller motor F<1>. If the strip breaks, e.g. at the switch SS3 it trips the circuit-breaker 502 of mill motor A<1> and also through leads 314 trips breaker 602 stopping the motor B<1> and so on so that all mill rolls preceding the break stop. The operator 40, however,

operating switch 1100 closes electromagnetic circuit to hold closed the switches **SS2** &c. while the mill is being threaded. The operator adjusts a rheostat 1001 to control the exciter K which controls the voltage applied by the generator H to all the mill motors A<1> &c. while each static tensioner T superimposes an individual control of the speed of the corresponding mill motor. An indicator light 403 is connected with the main breaker 401. Specification 6048/11, [Class 38 (iii)], is referred to.

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PN - [GB641970](#) A 19500823
 PR - USX641970 19460911
 AP - GB19470021119 19470801
 DT - *
 CCI - [B66B1/14](#) ; [B66B1/468](#)
 CCA - [B66B2201/4623](#) ; [B66B2201/463](#)
 PA - WAYGOOD OTIS LTD
 TI - Elevator system
 AB - 641,970. Lifts. WAYGOOD-OTIS, Ltd. Aug. 1, 1947, No. 21119. Convention date, Sept. 11, 1946. [Class 40 (i)] A lift control system includes an electronic tube for a floor served by the lift, a circuit for causing the tube to conduct,so as to register a call for the floor and to slow down a lift approaching the floor. General.-The invention is described with reference to a system having two lifts EL1, EL2, Fig. 1, serving four floors. Each lift includes a starting button SB, Fig. 4, which closes the doors and starts the lift, a dooropening button DOB, a non-stop button NSB, Fig. 2, and its cancelling button NSRB, direction reversing



buttons DRB, URB, Fig. 4, and floor-selecting buttons C1, C2, C3, CT, Fig. 2, and their cancelling buttons CC1, CC2, CC3, CCT. Closing the doors puts the lift in a condition to respond to both the floorselecting buttons and the lift-calling buttons U1 ... U3 for up-demands, and D2 ... DT for down demands situated at the various floors. Buttons U1 ... U3, D2.. DT are duplicated on the other side of the corridor as buttons U1<SP>1</SP> ... U3<SP>1</SP>, D2<SP>1</SP> ... DT<SP>1</SP>. All buttons consist of cold cathode tubes which ignite when their envelopes are touched and thus act as indicators as well as controllers. When the lift is moving up it stops at any floor at which a button U1 ... U3 has been fired as well as at floors selected by buttons C1 ... CT, while when it is moving down, it stops at any floor at which a button DT ... D2 has been fired as well as at floors selected by buttons C1 ... CT. If the lift is full, the attendant by touching and firing button NSB can prevent the lift stopping in response to demands by intending passengers ; in such a case if a " down " call at the second floor remains unanswered for a predetermined time (e.g. due to " down " lift being full) an up-moving lift is stopped and reversed at the second floor. Lift driving and controlling arrangements.- Associated with each lift is a selector machine 9, Fig. 1, which includes a crosshead 12 driven through a toothed tape 10, gearing and screw in accordance with the lift movements. The crosshead 12 carries a carriage

15 which is movable from a neutral position relative to the crosshead. At rest, the carriage is in the neutral position, and it is advanced a predetermined amount relative to the crosshead as the lift commences to move. Thereafter it moves rigidly with the crosshead which moves in accordance with the lift until upon the appropriate circuits being closed, the carriage 15 is brought to rest. The crosshead continues to move until the carriage is once again in the neutral position when the crosshead and the lift stop. This relative **motion** of carriage and crosshead is effected by a torque motor AM, Fig. 4, and controls the acceleration and deceleration of the lift. The carriage carries retractable pawls co-operating with stopping lugs provided for each floor. Travelling brushes BD, BHL, BU, Fig. 2, for each car are carried by a panel on the corresponding carriage 15 and co-operate with contacts SD1 ... SDT, HL1 ... HL3, SU1 ... SU3 corresponding to the four floors respectively. Each carriage 15 also carries insulating cams CX, CY, for operating hook switches HX1 ... HXT, HCI ... HCT respectively for the four floors, and each hook is of such a length that they are actuated slightly in advance of the engagement of the brushes BD, BHL, BU with the corresponding floor contacts for both up and down travel. The crosshead of each car carries a brush DB, Fig. 3, which engages stationary contacts TTC, LTC for the terminal floors. Putting a lift into service.- A lift on the first (lowest floor)

out of service is put into service by (1) closing switch IS, Fig. 2, to put car buttons CT, C3, C2, C1 into circuit and to light PC1 on the first floor to indicate the presence of the lift, and (2) by starting a motor generator to energize the circuit of Fig. 4.

Starting a lift.-The attendant ignites button SB, Fig. 3, to actuate relay KR to close contacts KR1, KR2, Fig. 4, preparing the circuit of field windings AMF1, AMF2 of torque motor AM and relays H, UD or DD respectively. The firing of tube SB, Fig. 3, applies a voltage sufficient to fire tube DCB which operates door-closing relay DC, the doors closing contacts DL, GS1, GS2, Fig. 4. Relay DC energizes relay PM, Fig. 4, which retracts the pawls carried by the carriage 15 and completes the circuit of motor AM to move the carriage 15 relative to the crosshead 12. The carriage closes contacts 1LS, 3LS, Fig. 4, to actuate relays H, EX respectively. Relay H operates relay BR to remove the brake from motor 1 M of Fig. 4), short circuits RM to energize field winding MF and removes the shunt GF from the armature GA of motor M. Relay EX opens contacts EX4 to de-energize relay PM, the pawls however remaining retracted. The closure of contacts 1LS actuates either relay UD or DD, Fig. 4, depending on whether the lift is to go up or down, to energize generator field winding GF in the appropriate direction to drive hoist motor M. Relay BR energizes relay BK which removes the short circuit from the brake cooling resistance RB and releases relay XA which in

turn operates relay E to open contacts E1 rendering the door-opening relay DO, Fig. 3, ineffective. Relay E also shunts resistance RG, Fig. 4, to run the motor M at speed and actuates relay SO which locks and breaks the circuit of button SB. As the lift moves, a brush ADB on the crosshead leaves contact ALC to de-energize relay HLS to ignite tube URB in the lift as an up-moving indicator. Closing doors without starting the lift. The attendant fires tube DCB, Fig. 3, which operates relay DO but does not operate relay KR so that the torque motor AM, Fig. 4, is not started. Opening doors.-The attendant fires tube DOB, Fig. 3, to energize relay DO which opens lift doors. If SB is fired, relay E, Fig. 4, is energized to break the circuit of tube DOB so that the doors cannot be opened until tube SB is extinguished.

Response to requirements of passengers in the lift.-With the lift on the lowest floor and lift buttons C2, C3, Fig. 2, ignited, tube HCR fires to actuate relay HJ. Relay HJ ignites the up-going indicator tube URB, Fig. 3, in the lift and opens the circuit of relay HR, Fig. 4, so that when the lift starts relay HR is not actuated by the actuation of relay HLS. When the carriage carried cam CY, Fig. 2, engages hook switch HC2, the circuit of tube CCP is prepared for completion by the closing of switch S1 when the lift reaches cam TC2 at the second floor. The ignition of tube CCP energizes the pawl reset relay PM of Fig. 2, to release the pawls carried on the carriage 15, and immediately de-energizes itself, the pawls remaining released. Relay PM,

Fig. 2, also opens the circuit of the torque motor AM, so that the carriage is arrested although the crosshead stills moves with the lift. The crosshead thus opens contacts 3LS, 1LS, Fig. 4, to release relays E, EX, Hand UD. Relay E reinserts resistance RG in the hoist motor circuit to decelerate the lift and prepares the circuit of door-opening relay DO, Fig. 3. Relay EX opens the circuit of the pawl reset relay PM, Fig. 2, prepares the circuit of the pawl retracting relay PM, Fig. 4, for operation when the doors close, and prepares the circuit of the direction controlling relay DG, Fig. 3. Relay H, Fig. 4, releases relay BR to apply the brake, while relay UD stops the hoist motor M. As the lift arrives at the second floor, the brush CX. Fig. 2, engages hook switch HX2 to extinguish the car button C2 and light indicator PC2 on second floor. The lift restarts as described above, and when brush CY, Fig. 2, engages hook switch HC3, brush BHL is still below HL3 so that tube HCR is maintained conducting over contacts HLC; relay HJ is thus maintained until brush BHL engages contact HL3 to find no potential thereon (as there is no higher call) so that tube HCR is extinguished and relay HJ releases to operate relay HR, Fig. 4. The sequence of operations is then as for the second floor until as the lift stops and contacts H2, EX2, Fig. 3, close, direction controlling relay DG is energized over its reset 'coil. Reset coil DG prepares relay DD for actuation by the door-closing switches GS1, DL in place of relay UD, and thus reverses the energizing

circuit of hoist motor M. Relay DG also extinguishes the lift up-indicator URB and ignites the down indicator DRB, reverses the connections of the torque motor and ignites lift button CI to create a call to the lowest floor. In the absence of any other call, the lift will go down to the lowest floor on closing the doors. On reaching the lowest floor, limit switches **SS2**, SS4, Fig. 4. open to assure slowing and stopping, lift button C1 is extinguished and landing lamp PC1 lit, while relay H energizes the set coil of relay DG over brush DB and contact LTC to extinguish the lift down button DRB to reverse the direction circuits, and to actuate relay DGX, Fig. 4, to prepare the reset coil of relay DG for operation. Response to a demand from a floor.-The ignition of call buttons U2, U2<SP>1</SP> and indicator WPU2 by a person desiring to ascend from the second floor puts a potential on contact SU2 and tube HCR is fired to operate relay HJ and thus ignite the lift indicator URB to indicate to the attendant that a demand exists. If, further tubes D3, D3<SP>1</SP> and indicator WPD3 are ignited by a person desiring to descend from the third floor, a potential is put on contact SD3 and an alternative circuit established for tube HCR. The attendant ignites tube SB, and as the lift rises tube HCR remains lit since contact HLC alternates with HL1, HL2, HL3. Brush BD picks up a potential at SU2, to fire tube LCP and operate the pawl-releasing relay PM, Fig. 2, to initiate the stopping of the lift at the second floor. Relay PM

fires tube LCC to extinguish tubes
U2, U2<SP>1</SP> and WPU2
and then quenches itself, but
tube HCR remains li

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- PN - [GB604455](#) A 19480705
- PR - USX604455 19440624
- AP - GB19450016214 19450625
- DT - *
- CCI - [B66B1/20](#)
- PA - WAYGOOD OTIS LTD
- TI - Improvements in electric control
system for elevators
- AB - 604,455. Electric control systems
for lifts. WAYGOOD-OTIS, Ltd.
June 25, 1945, No. 16214.
Convention date, June 24, 1944.
[Class 40 (i)] In a multicar-lift-
system wherein an " up " or "
down " call registered at one of a
plurality of landings is normally
arranged to stop a car travelling
in the corresponding direction,
such a call if unanswered for a
predetermined time is arranged
to stop a car travelling in the
opposite direction. The invention
thus obviates undue waiting by
intending passengers at landings
during busy periods when cars
filled to capacity are non-
stopped past floors for which
calls are registered. The
invention is described for a
system in which only down calls
registered for a predetermined
time are given preference. Where
a plurality of such calls are
registered, preference may be
given to the lowest, the highest
or the longest of such calls. In
each case the preferential call
stops an up-travelling car and
sets it for downward travel.
Preferably, however, only an
available up-car, i.e. one which



has no push-button within it depressed for a higher floor, is stopped. Car controls.' As shown, two or more elevator cars 1, 2, Fig. 1, are each hoisted by an electric motor 3 supplied from a Ward-Leonard generator 13, and each includes a start control switch, car floor buttons C2 ... C7, Fig. 2a, for each floor other than the first, a safety switch and a non-stop button NSB. Associated with each car is a floor controller or selector machine 9, Fig. 1, which includes a cross-head 11, driven through a toothed tape 10, gearing and screw in accordance with the car movements. The cross-head 11 carries a carriage 12 which is movable from a neutral position relative to the cross-head. At rest, the carriage is in neutral. It is advanced a predetermined amount relative to the cross-head as the car commences to move. Thereafter it moves rigid with the cross-head, which moves with the car, until upon the appropriate circuits being closed, the carriage is brought to rest. The cross-head continues to move until the carriage advance is taken up when the cross-head and the car are stopped. This relative **motion** of carriage and cross-head which is effected by a torque motor AM, Fig. 3, controls the acceleration and deceleration of the car. The carriage carries retractable pawls co-operating with stopping lugs provided for each floor. Travelling brushes 38, 48, 58, 68 for each car are carried by a panel on the corresponding-carriage 12 and co-operate with contacts 31, 32 ... 41, 42 ... 51, 52 ... 61, 62 &c. corresponding to

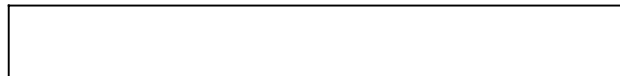
the respective floors 1, 2 ... 7. Each carriage panel also carries an insulating cam 88 for operating hook switches 82, 83 ... 86 for the second to sixth floor, respectively, and of such a length that it opens a hook switch for any floor slightly in advance of the engagement of the travelling brushes 38, 48 ... with the corresponding floor contacts for both up and down travel. The cross-head of each car carries a brush 90, Fig. 3; which engages' respectively stationary contacts 91, 92 for the terminal floors (7th and 1st). An additional hook switch 122, Fig. 3, is arranged to be opened by cam 88 or a separate cam 123'only when the car is at the 1st floor. Fig: 2a shows the push-button control and' restoring circuits for two cars and Fig. 3 the power and control circuits for one of them. Car starting. Assuming the cars are standing at the 1st floor when power is switched on, then for car No. 1, the non-stop relay NS(1), Fig. 2a, is energized over the non-stop button NSB(1). The up-direction switch operating coil PU and the reset coil of the down-direction switch PD, Fig. 3, are operated over travelling brush 90 and contact 92, the switch PU latching in its operative position. The highest down hall call relay XS(1), Fig. 2a, is energized over contacts PU1(1) and brush 68(1). The auxiliary direction relays PR, Fig. 3, is energized over contacts PU3 and the car button magnet CBM over PU4. Over contacts PU6 the field winding AM125 and armature AM126 of the torque advancer motor are connected in parallel. To start the car, the

start control switch is thrown to " full running." Contacts 105, 106, 107, Fig. 3; are bridged thereby, contacts 106 operating slightly ahead of the others. The bridging of contacts' 106 closes circuits (not shown) to close the car gate and first' floor hatchway door and energizes over contacts OS1, EA4, the stop magnet operating coil SM which locks over contacts SM3. The auxiliary stopping. switch ASM, Fig: 3, is energized over-contacts SM2 in series with one coil EA of the auxiliary speed relay. EA does not yet operate, but ASM pulls up, and over contacts ASM4 the circuit to the advancer torque'motor AM is made as the start control switch bridges contacts 105. Contacts PU6 being operated, the fields AM125 and AM127 are respectively in parallel and in series with the armature which is therefore rotated to advance the carriage 12, Fig. 1, upwards. As the carriage advances relative to the crosshead, it closes selector switches SS1, **SS2**, Fig. 3. The second coil of the auxiliary speed relay EA is energized over **SS2**. This relay now operates and functions to prevent energization of the direction switches PU, PD and re-operation of the stopping magnet once a call has been picked up after the car has come to stop at the floor for which the call is registered. Upon closure of the hatchway door and car gate, the field and brake switch H is energized over SS1, PU7, up limit switch 108, gate contacts G, door contacts DL, contacts 107 and safety switch 110. Over contacts H3 an operating sequence switch

relay OS is operated to lock ASM over contacts OS2. The contacts 105, 106, 107 are now all bypassed by contacts H2, H3, H4, so that the start control switch may be released. Contacts H8, H9 complete the circuit for the field 96 of the Ward-Leonard generator 95 and the brake 7, Fig. 1, on the hoist being released by energization of the brake release coil BR over contacts H6, H7 the car motor 98 whose field 100 is separately excited starts the car upwards. The brake, upon being released, operates a relay BK to insert a cooling resistance 103 in series with the coil BR and over contacts BK1 operates a speed switch E which at contacts E1 cuts resistance from the field 96 of the generator 95 to bring the car motor up to full speed. Floor button operation. Assuming that the up third floor button U3 is depressed by an intending passenger prior to operation of the start control switch, the operating coil 3U of the self-latching up third floor relay, Fig. 2a, is energized. At contacts 3U1 the stationary contacts 53(1) are energized so that when engaged by the car brush 58(1) a circuit is completed for the restoring coil 3U of the third floor relay in series with the neutralizing coil SM(1) of the stopping magnet over contacts 3U1, 53(1), brush 58(1), PR2(1), NS1(1), EA(1), SM1(1). The neutralizing coil SM(1) opposes the operating coil of the stopping magnet SM, releasing the retractable pawls on the carriage 12 and breaking the circuits of both coils of the stopping magnet SM at SM(1), SM3, the auxiliary stopping

switch ASM and one coil of speed relay EA at SM2. Contacts ASM2(1) close to increase the current flow in the restoring coil 3U of the third floor relay which is now reset. The torque advancer motor AM is de-energized at ASM4. As the car continues its upward travel the up pawl engages the third floor stopping lug causing switches **SS2**, SS1 to open in sequence. Relay E first drops out to reinsert resistance 101 in the generator field and slow down the hoist motor 98, and then, as the car reaches the third floor landing, SS1 opens, de-energizes the field and brake switch H and brake release coil BR to stop the motor. The operating sequence switch relay OS is also de-energized at contacts H3 provided that the start control switch has been returned to neutral. If this has not been done, the relay OS remains operated and prevents restarting of the car until the control switch has been returned to neutral. Car button operation. Should a passenger now enter the car desiring to go to, say, the fifth floor, the car attendant presses car button C5(1) which is held operated by the magnet CBM. This renders contact 35(1) alive and, operates, over hook switches 85(1) ... 87(1) the highest car call relay XC(1) which at contacts XC1(1) breaks the circuit of the highest hall call relay XS(1). The car is started as before by operating the start control switch. As the car approaches the fifth floor cam 88 (1) engages and opens the fifth floor hook switch 85(1) to de-energize relay XC(1). A little later

brush 68(1) on the carriage panel engages stationary contact 65(1) to complete again the circuit for the highest hall call relay XS(1) which over contacts XS1 energizes automatic return relay XH, Fig. 3, which locks over contacts XH2, and over XM1(1), Fig. 2a, energizes the neutralizing winding SM(1) of the stopping magnet. This winding is also energized over the operated car button C5(1), contact 35(1) and brush 38(1). It functions to reset the stopping magnet, slow down and then stop the car as described above at the fifth floor. As the car stops, contacts H1, Fig. 3, close to reset the up direction switch PU and operate the self-latching- " down " direction switch PD. This releases the depressed car button C5(1), renders the brushes for upward travel ineffective and those for downward travel effective switches over the circuits of the advancer torque motor AM and the generator field winding for downward travel, and switches the down limit switches 116, 117 in circuit so that when the start control switch is again operated the car moves downwardly. General control arrangements. With the arrangement shown in Figs. 2a, 3, the car when travelling upwards in answer to a call, will respond to intervening up calls made during ascent provided the corresponding floor contacts 51, 52 ...



AP	- GB19580014665 19580507
DT	- *
CCI	- B23Q35/121 ; B23C9/00 ; B23D7/00 ; B23Q15/0075 ; B23Q15/225
PA	- ASS ELECT IND
TI	- Improvements relating to machine tool control
AB	- 873,976. Copy-milling. ASSOCIATED ELECTRICAL INDUSTRIES Ltd. May 7, 1959 [May 7, 1958], No. 14665/58. Class 83 (3). A machine tool limit position control system comprises, for a given direction of feed motion , a pulse generator capable of producing electrical impulses correspondingly with feed along that direction, a reversible pulse counter having a zero condition which can be selectively related to any one, constituting a limit position, of a number of positions along said direction, which counter is governed in respect of its direction of counting according to the sense of the feed motion (namely forwards or backwards along said direction) and is arranged to establish, on reaching its zero condition in response to pulses produced during a feeding motion towards the limit position, a condition for bringing about a modification of the overall feeding action, and means functioning consequently on the counter reaching its zero condition to relate the zero condition to a desired limit position for a subsequent feeding motion along the same direction. In a copy-milling machine, three screws SA, SC, SL, Fig. 1, rotated by motors AM, CM, LM, move the tool in axial, cross-

feed and longitudinal directions. The tracer scans the model in longitudinal passes p1, p2, Fig. 1a, with a cross-feed x between passes, and the tracer controls the axial movement of the tool. The longitudinal and cross-feed motions are measured by pulse generators PGL, PGC. The pulses from the generator PGL are fed to reversible counters CL1, CL2, each of which counts in one direction only and after a predetermined count reverses the motor LM and causes the motor CM to impart a cross-feed. (Cutting may take place only on forward passes, in which case there is cross-feed only after each complete traverse and the return longitudinal movement is carried out at an increased speed.) The tracer controls the motor AM for the axial feed and may also control the longitudinal feed. The counter PGC stops the cutting operation when the selected area W has been covered. To cause the limits of longitudinal feed to follow the lines EC, AF, the counters CL1, CL2 are set to the required amounts for the first two traverses and a variable pulse ratio device V is set to feed pulses to ratio selectors RS1, RS2, to cause the limits to move as desired. The device V may be an electro-mechanical or electronic pulse divider such as a uni-selector having a fixed number of output pulses for each of two banks CB1, CB2. Sense selectors SS1, **SS2** enable the operator to change the direction of the limit lines such as to produce an upper limit line EGH, Fig. 1b. In a modification, the cutter, after traverse in one

direction, is withdrawn clear of the work to a point determined by an additional counter. On the return movement towards the work, further counting means initiate a reduced speed of the cutter travel as the cutter approaches the work. The points of reduced speed may lie on a straight line or may be at a constant distance from the work surface. In a further modification, the cutter follows round contours $r_1 - r_4$, Fig. 3a, on a workpiece S. The cross-feed and longitudinal movement counters will both return to a zero count when a complete circuit has been made. When a simultaneous zero condition is sensed, an axial feed x is imparted to the cutter. All embodiments may be incorporated in a single machine. The pulse generator may be a commutator, a cam and switch, or of electronic or photo-electric type. The machine tool part may be set initially in a required zero starting position or a number of pulses may be fed to the counter(s) to bring the counter(s) to zero at a desired starting position. Each counter may employ multi-cathode cold-cathode counting tubes and may give a visual indication of its count at any moment.

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 PN - [GB471759](#) A 19370909
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 DT - *
 CCI - [H04M11/04](#)
 PA - AUTOMATIC ELECTRIC CO LTD;
 WILLIAM JAMES BROWN



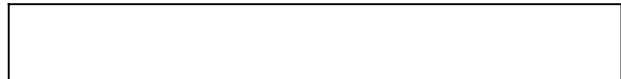
- TI - Improvements in or relating to electrical signalling systems
- AB - 471,759. Fire-alarm systems. AUTOMATIC ELECTRIC CO., Ltd., and BROWN, W.J. March 9, 1936, No. 7118. [Class 40 (i)] In a fire-alarm system of the closed-circuit non-interference type employing street boxes capable of transmitting a code signal characteristic of the locality, telephone facilities are provided for permitting the transmission of calls of a different type, e.g. ambulance calls. The system is such that interference between telephone calls and fire alarm calls is prevented. The Figure shows a system of street boxes SS1 ... SS4 connected to a central station the circuits of the box **SS2** being shown in detail. Fire calls. When the handle of the box is pulled contacts N1, N2 are operated to insert the non-interference magnets L1, L2 into the loop and earth the loop so as to permit signal transmission in the event of a fault on the loop. Simultaneously the code wheel is released and after a short test period, the code is transmitted and a gong G and tape recorder RE at the central station are operated. Relays LA LB, T also are operated and cause the number of the box to be displayed. In the event of a break in the loop, relays LA, LB, T release and a relay EW (not shown) operates contacts ew1, ew2 to connect the legs of the loop in parallel and earth the central station battery BA through the gong G and recorder RE. Under these conditions calls from the box are transmitted from earth over rectifier MR and the unbroken leg of the loop. Fire-alarm

telephone facilities. When it is desired to make a telephone call from the fire alarm box, the door is opened and door contacts FADC are opened to remove a short-circuit across a sounder S, morse and telephone keys SK, TK. Depression of the telephone call key TK inserts resistance YC in the loop and effects release of marginal relay T at the central station to operate a telephone call alarm. The station operator thereupon operates contacts k1, k2 to switch in the telephone equipment. Communication with the street box may then be effected, the street box equipment being plugged into the jack TJ. Ambulance calls. The ambulance call equipment is mounted in a separate compartment having a door which is opened automatically when a glass is broken to set in **motion** clockwork mechanism for operating contacts A1, A2, A3 which ensure the transmission of a call under normal conditions, earthed and broken loop, or broken loop respectively. Door contacts ADC are opened to insert the equipment on the loop. Under normal conditions, sounder S is operated and the ambulance telephone hand set is connected in the loop at s1. In the event of a broken loop, current for the telephone equipment is supplied from the station calling over the unbroken leg to earth over rectifier MR. If an earth exists at the break in the loop, sounder S is operated to connect the telephone equipment in the unbroken leg, the earth fault being used to supply the necessary telephone current. The

arrangements are such that an ambulance call does not interfere with the transmission of a fire call from another box. When another box is operating, the sounder S in the box from which an ambulance call is initiated is intermittently operated to prevent permanent earthing of the loop and consequential shortcircuiting of the box which is transmitting a fire call. Testing. A key ST is provided to facilitate testing of the box mechanism without transmitting a fire call.

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- PN - [GB695551](#) A 19530812
- PR - US19490073481 19490129
- AP - GB19500002374 19500130
- DT - **
- CCI - [H04Q3/0016](#)
- PA - AUTOMATIC ELECT LAB
- TI - National toll dialing system
- AB - 695,551. Automatic exchange systems. AUTOMATIC ELECTRIC LABORATORIES, Inc. Jan. 30, 1950 [Jan. 29, 1949], No. 2374/50. Class 40 (iv). An operator at a group centre of toll exchange in a long-distance telephone system can extend a call to any substation without the assistance of a second operator by keying a ten-figure number comprising three area code digits XYZ, three exchange code digits ABC and four numerical digits. A register translator translates either the area code digits or the exchange code digits into routing digits where necessary, but not both. The system comprises a number of toll areas, including one toll exchange, per area, and minor



exchanges. Minor exchanges in intermediate toll areas have access to two toll exchanges. The digits are registered and on operation of a toll key to select a free register-translator 1300, the digits are transferred by impulsing to the register-translator which transmits any necessary routing digits before transmitting the whole number XYZABC-1234 as registered. If the wanted substation is in an adjacent toll area, neither the area code XYZ nor a translation thereof is transmitted. If the substation is in a distant area, all ten digits are transferred from register to register in successive toll exchanges until the penultimate exchange which transfers only the exchange code digits and the numerical digits. Alternative routes are available between adjacent toll exchanges. An all-busy relay is operated over a chain of contacts if all the register translators available to the selected national toll circuit are busy. All circuits having access to these translators are then marked busy. Register translator, Figs. 10, 13 and Figs. 11, 12, 14, 15 (not shown). Area code digits received over a conductor 1401 are steered through an in-sequence switch RS and are registered on uniselectors A1, A2, A3 by operation of driving magnets A12, A22, A32. The exchange code digits and the numerical digits are registered on similar uniselectors (not shown). Relays 1310, 1320 co-operate to step the in-sequence switch RS at the end of each digit. The first and third area code digits control the vertical and rotary magnets AC3,

AC4 of a translating switch AC and the second code digit grounds one of two wipers over a wiper A24 of switch A2. Switch AC is crossconnected to a second translating switch AR. When the first exchange code digit is registered, conductor L is grounded by off-normal springs in the corresponding uniselector and switch AR is stepped by machine impulses controlling vertical and rotary magnets AR9, AR10 until the contact marked through switch AC is found by test relays 1080, 1085. The switch AR selects five or less routing digits which are later marked successively by ground over wiper SS3 and a cable 1344 which extends to the digit sending switch (not shown). A similar translating arrangement is provided for the exchange codes. Ten conductors on the cable 1344 are multiplied to the contacts of each uniselector A1, A2, A3, &c., to the contact of each band of the switch AR and of the corresponding switch in the exchange code translator, and to the contacts of a finder in the digit sending switch. The digit sending switch comprises a finder driven by machine impulses and a test relay which, on finding a marking, stops the forward transmission of impulses, and homes the finder. The transmission of digits starts when the second numerical digit is registered and the digit-sender is signalled by ground over wiper RS2 and wire M. The digits to be transmitted are marked successively by ground over wiper SS3. When the finder in the digit sender gets home after sending a digit, driving magnet

SS4 is released and the switch SS takes one step. If, for example, three of the possible five routing digits are not required in a particular setting of the switch BR, the corresponding contacts in the banks engaged by wipers AR4, AR5, AR6 are jumpered to a skip wire 1345 and the switch SS is driven to the fourth contact before transmission starts. Skip relay 1325 meantime stops impulse transmission from the sender by grounding conductor 1327. If the called toll area is near and no area routing digit is required relay 1330 operates and any exchange routing digits required are provided by the exchange code translating switches to which SS is connected over cable 1343. Contacts 6 to 8 of SS1 are then grounded at contact 1331 and the area code digits are not transmitted. If the exchange code digits are not required, relay 1430 (not shown, but corresponding to 1330 in the area code switch) operates and grounds contacts 9 to 11 of SS1. When the routing digits and the called number have been transmitted, ground is connected over the 16th contact of SS3 and wire N to release the register translator from the connection, whereupon the release conductor R is grounded, the register switches are released and SS homes over wiper **SS2**. If a two-**motion** selector (Fig. 12, not shown) controlled by the first routing digit does not find a free junction in the selected level, springs are closed at the eleventh step and wire Q is grounded by a busy relay to operate AR10 and to drive the

switch AR one step and routing digits are transmitted to select an alternative route. The busy relay grounds the skip wire 1345 to home SS. The cycle is repeated. If three routes are tested and if all are busy, counting relays prevent any further tests. The register translator is released and busy tone is returned from the outgoing selector.

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- PN - [EP1100267](#) A1 20010516
- PNFP - EP1100267 A4 20040519
- PR - WO2000JP02969
20000510; JP19990130912
19990512
- AP - EP20000925581 20000510
- DT - *; Rep
- CT - || STSE (A4)
[US5291280](#) A 19940301
[XA] (FAROUDJA YVES C [US], et al)
[X] 1
* column 2, line 33 - line L;
figure 2 *
* column 9, line 29 -
column 10, line 12 *
[A] 2-5;
[US4982280](#) A 19910101
[A] (LYON THOMAS C [US], et al)
[A] 1-5
* column 4, line 5 - line 46 *
* column 6, line 44 - column 7,
line 26 *;
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[A] (SNELL & WILCOX LTD [GB], et
al)
[A] 1-5
* page 3, line 27 - line 31 *
* page 5, line 24 - page 7,
line 27 *;
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[A] (LYON DAVID [GB], et al)
[A] 1-5
* column 2, line 27 - line 57 *
* column 3, line 1 - line 5 *
* column 4, line 7 - line 14 *



* column 6, line 13 - line 54 *

* column 7, line 11 - line 42 *

- CCI - [G11B27/28](#) ; [H04N5/253](#) ;
[H04N7/0112](#) ; [H04N19/142](#) ;
[H04N19/179](#) ; [H04N19/87](#)
- PA - (A1 A4)
MATSUSHITA ELECTRIC IND CO
LTD [JP]
- TI - (A1 A4)
TELECINE VIDEO SIGNAL
DETECTING DEVICE
- AB - (A1)
As to a telecine video signal (Sv),
in a telecine video signal
detector (Dtp) for detecting a
scene-change part (SC) and
deciding whether successive
telecine conversion has been
carried out, a **motion** detector
(3) detects a **motion** between
video signals (Sv) one field apart
from each other; a first
statistical processing unit (4)
accumulates detection results
(Sm) for one field; a first telecine
decision unit (5) decides whether
the field represents telecine-
converted video; the second
statistical processing unit (6)
detects statistical information
(**Ss2**) of the input signal (Sv); a
scene-change detector (8) detects
a scene-change in the output
(**Ss2**) from the second statistical
processing unit (6); a second
telecine decision unit (9) decides
field continuity from a detection
result (Ssc) of the scene-change
detector (8) and a result (St1) of
the first decision unit (5); and
then an AND circuit (10) carries
out an AND operation on outputs
(St1, St2) from the first and
second decision units (5, 9).
<IMAGE>