



New connection on: : 11-05-2018 : 17:42:02 - Last disconnection on: : 11-05-2018 : 17:42:02

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

[EPODOC: SS 9] ..fi

Select a database: ..FI EPODOC

 Database: EPODOC

[EPODOC: SS 9] (lab OR laboratory) AND(mobil+ OR portabl+ OR mov+)AND(educat+ OR school+ OR instruct+ OR teach+)AND(projector OR sound OR tablet OR print+ OR display OR computer)

Results in EPODOC 74

[SS 10] ..v

[EPODOC: SS 10] ..li



1/74 © EPODOC / EPO

PN - [CN206961428U](#) U 20180202

PR - CN20172958334U 20170803

AP - CN20172958334U 20170803

DT - I

PA - CHENHANWEN

TI - High **school** physics experiment sample **display** device

AB - The utility model discloses a high **school** physics experiment sample **display** device, including **mobile** jib, LED lamp area, storage cabinet and motor, the round pin axle is all installed at both ends about the **mobile** jib, LED lamp in -band side is connected with the **mobile** jib, the right -hand member of round pin axle is connected with sample placing plate, be fixed with the sliding tray in the middle of the sample placing plate, be provided with the screw hole in the middle of the sliding tray, fixing bolt is installed to the slider upper end, the slider below is connected with sample placing plate, the storage cabinet inboard is fixed with the handle, the drawer is installed to the baffle lower extreme, the drawer below is provided with the gyro wheel, the motor upper end is connected with the **mobile** jib. This high **school** physics experiment sample **display** device

is equipped with the motor, can drive the **mobile** jib when the show and rotate to carry out omnidirectional show to the sample, make the student **laboratory** sample that clearly watches more directly perceived, LED lamp area along **mobile** jib axial evenly distributed in its left and right sides, can provide the illumination, more clear when making the student watch **laboratory** sample.

2/74 © EPODOC / EPO

- PN - [CN206946782U](#) U 20180130
- PR - CN20172468136U 20170429
- AP - CN20172468136U 20170429
- DT - I
- PA - YANGMENGRU
- TI - Middle **school** physics frictional force experiment **teaching** aid
- AB - The utility model relates to a middle **school** physics **teaching** apparatus field, concretely relates to middle **school** physics frictional force experiment **teaching** aid, including **laboratory** bench, connection platform and mount table, the **laboratory** bench is located the left end of connecting the platform, is provided with the brassboard on the **laboratory** bench, and the **laboratory** bench bilateral symmetry is provided with the baffle, and is provided with the spout between brassboard and the both sides baffle, placed the experiment piece on the brassboard, experiment piece top sets up the recess, and the recess left end is provided with the **display** that is used for showing the pressure size, and experiment piece bottom is provided with pressure sensor, switch on between **display** and the pressuresensor and be connected, the experiment piece is connected with the dynamometer, and the dynamometer is installed on the **movable** block, and the gyro wheel is installed to the **movable** block bilateral symmetry, and the **mobilizable** matching of gyro wheel is installed in the spout, the right -hand member of dynamometer is connected with the cotton rope, and the cotton rope is fixed on the take -up pulley, and the take -up pulley is installed on the mounting bracket, and the one end of take -up pulley is provided with the rocking handle, and mounting bracket fixed mounting is on the installation piece. The utility model discloses experiment operation is convenient, and the practicality is stronger.

3/74 © EPODOC / EPO

- PN - [CN206740067U](#) U 20171212
- PR - CN20172535481U 20170516
- AP - CN20172535481U 20170516
- DT - I
- PA - UNIV HENAN POLYTECHNIC
- TI - Intelligent **portable** hall sensor placement property **laboratory** bench
- AB - Intelligent **portable** hall sensor placement property **laboratory** bench relates to linear displacement and detects and control field. It is integrated by lithium cell, bluetooth receiving module, vary voltage and voltage stabilizing module, step motor and the control unit, hall sensor and data collection card. Bluetooth of the **mobile** phone emission module sends the angle displacement **instruction**, transmits controller, control stepper motor drag spiral micrometer head rotation production linear displacement to through bluetooth receiving module, hall sensor detects spiral

micrometer head's linear displacement volume, and output signal conveys USB data collection card through signal processing and amplifier circuit, during the classroom **teaching** demonstration, but USB data collection card output signal direct transmission to **computer**, through projecting apparatus show and the corresponding voltage characteristic curve of displacement volume. The utility model has the characteristics of integrate, intelligent and **portable**, it is novel unique.

4/74 © EPODOC / EPO

- PN - [CN206741519U](#) U 20171212
- PR - CN201621360043U 20161212
- AP - CN201621360043U 20161212
- DT - I
- PA - UNIV SUZHOU VOCATIONAL
- TI - **Laboratory** inspection management system based on RFID
- AB - The utility model relates to a **laboratory** inspection management system based on RFID, polymorphic communication module holds looks UNICOM with power module, server module and removal respectively, polymorphic communication module includes communication interface, the RFID subassembly with communication interface looks UNICOM, WIFI subassembly, 3G4G subassembly and microprocessor, communication interface still with **display** screen looks UNICOM, the server module includes the concurrent processing module and rather than web end experimental system, device management system, **teaching** affair administration system, data processing module and the system of registering of looks UNICOMs, the system of registering passes through **mobile** communication service program and links to each other with data processing module, the utility model discloses an interlinkage relation between **teachers** and students, classroom, course and the experimental facilities is set up to the quick automatic identification **teachers** and students' of RFID identity, realizes **teachers** and students' database of sharing **educational** administration system system, and work efficiency is high.

5/74 © EPODOC / EPO

- PN - [CN206628111U](#) U 20171110
- PR - CN20172283598U 20170322
- AP - CN20172283598U 20170322
- DT - I
- PA - MA XIAN
- TI - Interactive installation for multimedia **teaching**
- AB - The utility model discloses an interactive installation for multimedia **teaching**, including the square cabinet body, wherein the inboard of the cabinet body is equipped with and stores the room, is equipped with the opening on the cabinet body leading flank, the opening part has open cabinet door through hinge **movable** mounting, the **display** is installed in the upper surface embedding of the cabinet body, and the **display** passes through the screw fixed connection cabinet body, the utility model discloses in distance learning's process, raise the blank between the **teacher**, then aim at the blank with the camera, make things convenient for so very much blackboard **teaching** to increased and the student between the interdynamic, thereby

when the student putd question to, the **teacher** can invite very fast provided corresponding answer mode, **teaching** effects is better, it can't realize the writing on the blackboard and the condition that **teachers** and students do not have the interdynamic appear to have solved traditional multi -media **computer lab**, utilize the projecting apparatus can realize holistic projection, and the blank wholly possess the lift to projected height can conveniently be adjusted, and the collection of projection picture also can be realized to the quick angle modulation of camera.

6/74 © EPODOC / EPO

PN - [CN107331254](#) A 20171107
 PR - CN20171703156 20170816
 AP - CN20171703156 20170816
 DT - I
 CNOI - [G09B23/12](#)
 PA - NORTH CHINA ELECTRIC POWER UNIV BAODING
 TI - Bubble generation system and method for **teaching** demonstration
 AB - The invention belongs to the **teaching** instrument technical field, and relates to a bubble generation system for **teaching** demonstration; the bubble generation system comprises a water source and a gas source respectively connected with a bubble generator; a first adjusting valve and a second adjusting valve are arranged between the gas source and the bubble generator; a magnetron flow divider is arranged between the second adjusting valve and the bubble generator so as to divide the gas into two gas paths, thus controlling a pneumatic pull bar to **move**; the system control method comprises the following steps: injecting water from the water source to a gas discharge chamber until a **display** pipe is filled with water; using the first adjusting valve to fill high pressure gas into a gas balancing chamber; using the magnetron flow divider to adjust the pneumatic pull bar to **move** up and down, thus forming bubbles; observing bubble changes in the **display** pipe. The advantages are that the bubble generation system is simple in structure, easy to control, can change the shapes and sizes of more than 300 kinds of bubbles, and the bubble changes can be directly and easily observed, thus effectively demonstrating the bubble changes, and assisting the industrial **laboratory** detections; the bubble generation system is low in cost and easy to maintain.

7/74 © EPODOC / EPO

PN - [CN107274311](#) A 20171020
 PR - CN20171338957 20170515
 AP - CN20171338957 20170515
 DT - I
 PA - GUANGDONG UNIV OF TECHNOLOGY
 TI - **Laboratory teaching** and equipment management method based on two-dimensional code and database
 AB - The invention discloses a **laboratory teaching** and equipment management method based on a two-dimensional code and a database. The method comprises the steps that a database address and technical data automatically generated by the database (3) are converted into a combination of a two-dimensional code and a text, the combination of

the two-dimensional code and the text is **printed**, and then an image recognition module (2) is used to convert information recorded in the two-dimensional code (1) into either the database address or the technical data. The method has the advantages that an equipment user can acquire the technical data of equipment through the two-dimensional code pasted on the scanning equipment and can be quickly familiar with usage of the equipment; an equipment manager can realize management of the equipment indirectly through management of the database and the two-dimensional code; the usage security and convenience of the equipment are also improved; and moreover, the method can be applied to practice through only one **computer**, one **mobile** phone and one **printer**, and compared with any disclosed technical scheme, the method is easy to implement, less in investment and fast in effect taking.

8/74 © EPODOC / EPO

- PN - [CN107067051](#) A 20170818
- PR - CN201611140722 20161212
- AP - CN201611140722 20161212
- DT - I
- CNOI - [G06K17/0022](#)
- CNOA - [G06K2017/0077](#) ; [G06K2017/0096](#)
- PA - UNIV SUZHOU VOCATIONAL
- TI - **Laboratory** patrol inspection management system based on RFID (Radio Frequency Identification)
- AB - The invention relates to a **laboratory** patrol inspection management system based on RFID (Radio Frequency Identification). A multi-state communication module independently communicates with a power module, a server module and a **mobile** side; the multi-state communication module comprises a communication interface, an RFID component, a WIFI (Wireless Fidelity) component, a 3G/4G (The 3rd Generation Telecommunication/ The 4th Generation Telecommunication) component and a microprocessor, wherein the RFID component, the WIFI component, the 3G/4G component and the microprocessor communicate with the communication interface; the communication interface also communicates with a **display** screen; the server module comprises a coprocessing module, a Web side experimental system, an equipment management system, an **educational** administration management system, a data processing module and an attendance system, wherein the Web side experimental system, the equipment management system, the **educational** administration management system, the data processing module and the attendance system communicate with the coprocessing module; and the attendance system is connected with the data processing module through a **mobile** communication service program. By use of the system, the RFID is adopted to quickly identify the identities of **teachers** and students, a link relationship among **teachers**, students, classrooms, courses and experiment equipment is established, a **teacher** and student database capable of sharing an **educational** administration system is realized, and working efficiency is high.

9/74 © EPODOC / EPO

- PN - [CN106981244](#) A 20170725
- PR - CN2016140680 20160118

AP - CN2016140680 20160118

DT - I

CNOI - [G09B23/285](#)

PA - WANG YAO

TI - Novel wireless/wired network multimedia thoracic and abdominal examination high simulation **teaching** system

AB - The invention relates to a novel wireless/wired network multimedia thoracic and abdominal examination high simulation **teaching** system and belongs to the field of medical **education** equipment. The system comprises a **teacher** machine and student machine control system and a thoracic and abdominal examination model. The system is characterized in that the **teacher** machine and student machine control system comprises a **computer**, a wireless transmitter, a wireless receiver arranged in the thoracic and abdominal examination model, a **teacher** machine/student machine control processor and a storage cell. **Teaching** software and the audio information are stored in the **computer**, the processor is controlled for connecting a bass micro **sound** box at a chest model cardiopulmonary palpation auscultation portion, connection with a novel chest high fidelity tone generator is carried out, and a synchronization vibration film is arranged internally; the belly model is internally provided with an abdominal breathing structure and a simulation liver spleen swelling mechanism composed of liver-bladder-spleen deceleration motors, and a benign tumor model, a tenderness switch and a loudspeaker are further arranged. The system is advantaged in that wire erection is not needed, the system is convenient to **move**, a one-room multi-purpose mode is realized, a wired network multimedia **laboratory** can be established when conditions are satisfied, and **teaching** quality can be substantially improved.

10/74 © EPODOC / EPO

PN - [CN206344976U](#) U 20170721

PR - CN20162749814U 20160715

AP - CN20162749814U 20160715

DT - I

PA - PANG SHUO

TI - **Educational** robot under water

AB - The utility model relates to an **education** robotechnology field, concretely relates to **educational** robot under water contains the **moving** camera support, the cabin, it includes frame, cover, main cabin, it includes camera, LED lamp, steering wheel, sensor, master controller, the battery compartment, the depth gauge, the screw propeller, it includes preceding aft propeller, perpendicular screw, the storehouse is joined in marriage to buoyancy, main cabin is connected with control cabinet on water through the cable, through remove **mobile** client or through the **computer** based on the BS mode use web browser interface mode to control cabinet incoming signal on water. The utility model has the characteristics of low cost, waterproof seal, operate steadily etc, the dive degree of depth can reach 100 meters at most, and fan of robot or the student of universities can install other modules as required and compile corresponding control program, the utility model discloses can regard as the student of universities to study the **laboratory** glassware of courses such as robot control technique, sensor, mechanical innovative design.

11/74 © EPODOC / EPO

- PN - [CN206340202U](#) U 20170718
- PR - CN201621409122U 20161221
- AP - CN201621409122U 20161221
- DT - I
- PA - SHANDONG XINGKE INTELLIGENT TECH CO LTD
- TI - Be applied to real horizontal steel construction simulation well frame of **instructing** equipment fixing of elevator
- AB - The utility model discloses a be applied to real horizontal steel construction simulation well frame of **instructing** equipment fixing of elevator, including **computer lab** base, level simulation well, crossing line crane span structure triplex, the triplex is placed side by side, level simulation well is including the three frame of placing side by side, and a layer station part is placed to the middle part frame establishes layer door and simulation sedan -chair top in, places car subtotal pit part in the frame of simulation sedan -chair top both sides respectively. The utility model discloses be the horizontally mounting means with the change of the original vertical mounting means of elevator, be applicable to elevator **teaching** equipment's installation completely for the mountable of elevator **teaching** equipment has reduced the requirement of elevator **teaching** equipment to placing the place in ordinary place, open frame construction's application for all surveyability are **moved** to every of elevator operation in -process, and the student of being convenient for observes the structure with the whole elevator of study.

12/74 © EPODOC / EPO

- PN - [CN206194153U](#) U 20170524
- PR - CN201621051658U 20160831
- AP - CN201621051658U 20160831
- DT - I
- PA - GUANGDONG YAJIASI TECH CO LTD
- TI - Naked eye three -dimensional stereoscopic **display's mobile laboratory**
- AB - The utility model discloses a naked eye three -dimensional stereoscopic **display's mobile laboratory** relates to the functional design field of a car, especially relates to passenger traffic car **education** functional design, characterized by: characterized by: be equipped with foldable **display** screen mounting bracket in the back of bus, be equipped with jumbo size bore hole 3D **display** screen on the foldable **display** screen mounting bracket, foldable **display** screen mounting bracket the place ahead is equipped with the soft cushion of foldable **teaching**, it is equipped with arc white fire control safety exit on the automobile body of the side of soft cushion to impart knowledge to students, it is equipped with foldable **teaching** podium to impart knowledge to students the place ahead of soft cushion, the automobile body both sides of passenger's seat are equipped with the decorative board of white, the decorative board top of white is equipped with blackish green shelves water's edge, the back of driver's cabin is equipped with the decorative structure of white, the utility model discloses the **display** screen that can install more than 50 cun ensures that all there is the best viewing effect every position to vacate bigger activity and **teaching** space,

solved the articulation reduction under the highlight of bore hole 3D, 3D effect good problem for a long time simultaneously.

13/74 © EPODOC / EPO

- PN - [CN206179343U](#) U 20170517
- PR - CN20162500831U 20160520
- AP - CN20162500831U 20160520
- DT - I
- PA - CHEN XIANYING
- TI - Novel tuning fork resonance demonstration appearance
- AB - The utility model provides a novel tuning fork resonance demonstration appearance, belongs to **laboratory** glassware for the physical **teaching**, including transparent projection case, transparent support, transparent syllable -dividing cover, tuning fork, built -in megaphone formula audio amplifier, can focus highlight flashlight, voice frequency generator software and smart **mobile** phone etc.. During the experiment, the voice frequency generator software on the smart **mobile** phone can produce the signal of telecommunication of certain frequency to carry the **sound** that embeds megaphone formula audio amplifier and make it to send corresponding frequency, the tuning fork is at the low -down forced vibration of the effect of **sound**. When the frequency of **sound** equaled the natural frequency of tuning fork, resonance took place and produces violent splash at the surface of water for the tuning fork, and its splash projection displays on the translucent plastic screen through can focus highlight flashlight and level crossing to the tuning fork resonance phenomenon that has showed evidently directly perceived just can last the sympathetic response, has embodied **laboratory** glassware's science, **teaching** nature and interest.

14/74 © EPODOC / EPO

- PN - [CN205808676U](#) U 20161214
- PR - CN20162781530U 20160723
- AP - CN20162781530U 20160723
- DT - I
- PA - MA ZHONGJIE
- TI - Vibration -damping sheet direction detector that shakes thoroughly partially
- AB - The utility model belongs to the technical field of the optics polarization detects, a vibration -damping sheet direction detector that shakes thoroughly partially is provided, can solve shake the thoroughly short -term test of direction of inclined to one side vibration -damping sheet effectively. Including shell (1), light source circuit (2), standard inclined to one side vibration -damping sheet (3), a preceding stage extinction section of thick bamboo (4), rectangular prism (5), the top of a back level extinction section of thick bamboo (6) is provided with slide glass revolving stage (7), and the slide glass revolving stage adopts transparent plastic or clear glass preparation to form. The top of slide glass revolving stage (7) is provided with photoelectric detection treatment circuit (8), adopts photodiode or photocell as sensing element. The inner wall of shell (1) is provided with **display** screen (10), battery (11). The utility model relates to a rationally, compact structure, **portable** and convenient operation, can accomplish shake the thoroughly detection of direction of inclined to one side vibration -damping

sheet fast, can be applied to places such as the **teaching laboratory** of **school**, research institutions **laboratory**, science and technology center, have fine popularization and application and worth.

15/74 © EPODOC / EPO

- PN - [CN205681555U](#) U 20161109
- PR - CN20162108605U 20160203
- AP - CN20162108605U 20160203
- DT - I
- PA - YAO LEI
- TI - Weather radar video monitor system based on wireless sensor network
- AB - Weather radar video monitor system based on wireless sensor network assembles node, local video control end, long -range monitor control center including wireless video acquisition node, wireless video. Wireless video acquisition node is the least significant end of this system, is responsible for the video acquisition function in the one's respective area, is equipped with various meteorological element sensor perception **computer lab** internal environments simultaneously. The pronunciation of wireless video acquisition node in with high definition picture or video monitoring and monitoring range, through hand held **mobile** terminal equipment and image acquisition equipment, collect, the transmission including pronunciation, picture / video large data volume's data through jump more the transmission of route transmission mode extremely wireless video the node assembles. Wireless video assembles the node and local video control end is continuous, mainly is responsible for the receipt of wireless video acquisition node data, analysis, storage, processing, encapsulation. Simultaneously also can make corresponding processing to the **instruction** that comes from remote monitoring control center. Wireless video assembles the seamless connection work that multiple heterogeneous network had been accomplished to the node, has shielded bottom wireless sensor network's concrete network structure, has realized the real -time communication function of a plurality of wireless sensor network nodes and upper layer control platform. Long -range monitor control is given the center through remote data transmission net or optic fibre with data transfer after carrying out certain processing to the data of video information and perception to local video control end, is convenient for send alarm information. The weather radar's of new generation that guarantees so promptly unmanned on duty can handle by long -range alarm information to the radar again, provides the powerful guarantee for the radar flight crew masters the radar performance in real time.

16/74 © EPODOC / EPO

- PN - [CN205640447U](#) U 20161012
- PR - CN20162389125U 20160429
- AP - CN20162389125U 20160429
- DT - I
- PA - PINGYUAN COUNTY POWER SUPPLY COMPANY STATE GRID SHANDONG ELECTRIC POWER COMPANY; STATE GRID CORP CHINA
- TI - **Portable** LED work light of **computer lab**
- AB - The utility model discloses a **portable** LED work light of **computer lab**, including lamp

holder and lamp stand, rotate between lamp holder and the lamp stand and be connected, be equipped with the LED lamp in the lamp holder, set up three vertical draw-in groove on the outer fringe face of lamp stand, set up the chucking device of telescopic link and telescopic link in the draw-in groove, the top of telescopic link is articulated with the top of draw-in groove, and three telescopic link constitutes the support frame under the state of opening, can be fixed in the draw-in groove by the chucking device under folded state, still be equipped with the bandage on the lamp stand, it buckles to set up the **schoolbag** on the bandage. The utility model discloses **portable**, and when using the utility model discloses when throwing light on, do not need the staff with holding, only need open the telescopic link support and can realize the illumination in suitable illuminator level and the angle of subaerial adjustment, only need withdraw the telescopic link to the draw-in groove in the inconvenient place that sets up the support frame, then with the bandage tie up on the arm or other supports on can, simple and convenient.

17/74 © EPODOC / EPO

PN - [CN205607424U](#) U 20160928

PR - CN20162401029U 20160505

AP - CN20162401029U 20160505

DT - I

PA - SHENZHEN INLEMS TECH CO LTD

TI - **Portable** examination machine

AB - The utility model belongs to the technical field of the relevant equipment technique of biological **laboratory** and specifically relates to a **portable** examination machine. It includes the main case and installs on the main case and for the overturn **display** of motion of the upper surface of main case, inlay on the upper surface of main case and be equipped with a keyboard and a touch control board through the pivotal axis, being packaged with integrated drive plate and calibration subassembly in the main case, inlaying on the trailing flank of main case and be equipped with power source, network interface, a plurality of calibration sensor interface and a plurality of and treat **school** sensor interface, the leading flank facial make-up of main case is equipped with a handle. The utility model discloses a with standard component integration in the main case to cooperate corresponding sensor interface, can and carry out the check-up such as the various detection sensor in the equipment such as incubator, liquid nitrogen container, refrigerator, operation panel to the various detection sensor in biological **laboratory**'s the internal environment, simultaneously, through the improvement to machine construction, the rapid Assembly of various components and parts connects when not only doing benefit to the check-up, carry moreover, place and use very convenient.

18/74 © EPODOC / EPO

PN - [CN205582023U](#) U 20160914

PR - CN20162377601U 20160429

AP - CN20162377601U 20160429

DT - I

PA - NANYANGMEDICALCOLLEGE

- TI - Cloud terminal **teaching** assistance attendance system
- AB - The utility model belongs to the technical field of the **computer** science technique, specific cloud terminal **teaching** assistance attendance system that says so, cloud terminal **teaching** assistance attendance system mainly include cloud terminal **teaching** machine, cloud terminal server, wireless communication device and **mobile** client, cloud terminal **teaching** machine passes through the **computer lab** network and links to each other with cloud terminal server, **mobile** client passes through wireless communication device and cloud terminal server is long -range links to each other. The utility model discloses utilize the fingerprint start device among the cloud terminal equipment to realize fingerprint attendance, and gather student's the time of operating the **computer**, utilize cloud terminal server to realize the operate the **computer** statistics management of attendance time to the student, and accessible wireless communication device in time sends the attendance result and feeds back to the **teacher**, the realization is operated the **computer** the course to the student and is carried out effectual attendance management, and with attendance data storage in cloud platform customer end, the sharing of attendance data has been realized, other people can conveniently look up, whether the inspection attendance condition is correct.

19/74 © EPODOC / EPO

- PN - [KR20160095224](#) A 20160811
- PR - KR20150015802 20150202
- AP - KR20150015802 20150202
- DT - I
- CNOI - [G01R15/202](#) ; [G09B23/181](#)
- PA - IND ACAD COOP GWANGJU UNIV [KR]
- TI - **TEACHING APPARATUS FOR CURRENT DIRECTION GAUGE**
- AB - The present invention relates to a **teaching** tool for measuring a current direction, using state change information of a magnetic field and an electric field, which enables to easily determine whether a current flowing through a conducting wire passes through, and a direction thereof in a site or a **laboratory** on which various types of equipment are installed so as to check the equipment or improve a learning effect of an electricity-related learner, by detecting changes on a magnetic force, which are induced by a **movement** of magnets, with a plurality of hall sensors. The **teaching** tool for measuring a current direction, using state change information of a magnetic field and an electric field comprises: a magnetic needle plate (50) rotated by a magnetic field induced by a current flowing through a conducting wire; a plurality of hall sensors (41-44) spaced apart from the magnetic needle plate (50) at predetermined intervals, and detecting changes on the magnetic field induced by a rotation of the magnetic needle plate (50); a detection unit (10) for detecting measurement values of the hall sensors (41-44); a calculation unit (20) for calculating changes on the magnetic field by the detection unit (10); a control unit (30) for detecting a direction of the current flowing through the conducting wire by an output of the calculation unit (20); a **display** unit (32) for displaying the direction of the current flowing through the conducting wire by an output of the control unit (30); a power supply unit (31) for supplying a power such that the **display** unit (32), the control unit (30), and the calculation unit (20) are operated; and an operation unit (33) for setting a reference value of the changes on the magnetic

field by initializing the calculation unit (20), and operating a power supply of the power supply unit (31).

20/74 © EPODOC / EPO

- PN - [CN205453957U](#) U 20160810
- PR - CN20162156456U 20160301
- AP - CN20162156456U 20160301
- DT - I
- PA - UNIV JILIN
- TI - Remotenetwork **laboratory** system
- AB - The utility model belongs to the technical field of the experimental facilities, the utility model relates to a remote network **laboratory** system, by client **computer** at least and **laboratory**?glassware, master control end **computer**, the server, instrument workstation screen image acquisition device, on -site image collection system, **portable** video control terminal, the network?configuration module, audio acquisition module, the audio frequency and video controlling part, web server module and database are formed, the web server is connected the database and is planned as a whole to handle to data message and control information, realize that **laboratory**?glassware is connected with user's multi -to -multi. The utility model discloses a long -range experiment in coordination can be carried out in the remote network **laboratory**, practices thrift the strange land and does a kind cost, shortens experimental period, the web -based **instruction** changes instrument experiment course professor mode, improves the? **teaching**?efficiency, practices thrift instrument machine -hour, has broken course study geographic restrictions, make things convenient for instrument management, can be so that instrument and course rational utilization of resource, it is more nimble with the time that the student learns the form of course.

21/74 © EPODOC / EPO

- PN - [CN105844974](#) A 20160810
- PR - CN20161381517 20160601
- AP - CN20161381517 20160601
- DT - I
- CT - || STSE (A)
[CN201163446Y](#) Y 20081210 [A] (UNIV FUJIAN [CN])
[A]
* 全文 *;
[CN102063818](#) A 20110518 [A] (UNIV EAST CHINA JIAOTONG)
[A]
* 全文 *;
[CN202167154U](#) U 20120314 [A] (SHENZHEN POLYTECHNIC)
[A]
* 全文 *;
[US2014040454](#) A1 20140206 [A] (RAMSEY KAREN [US], et al)
[A]
* 全文 *;
[CN104732826](#) A 20150624 [A] (SONG XIAOYU, et al)

[A]

* 全文 *;

[CN105335919](#) A 20160217 [A] (INSPUR ELECTRONIC INFORMATION INDUSTRY CO LTD)

[A]

* 全文 *;

[CN105405324](#) A 20160316 [A] (UNIV NORTHEAST)

[A]

* 全文 *

- CNOI - [G09B5/02](#)
- PA - UNIV CHONGQING POSTS & TELECOM
- TI - Cloud physics **laboratory** learning platform
- AB - The invention discloses a cloud physics **laboratory** learning platform. The cloud physics **laboratory** learning platform includes an intelligent terminal device end and a cloud server end; a cloud physics **laboratory** learning module is installed in the intelligent terminal device end; a plurality of experimental modules are arranged in the cloud physics **laboratory** learning module; each experimental module is independently set as a resource package which is stored on the cloud server end through using a wired or wireless communication mode in the intelligent terminal device end; and the cloud server end performs big data processing and storage on experimental data uploaded by the intelligent terminal device end so as to obtain a performance analysis report and feeds back the performance analysis report to the intelligent terminal device end. According to the cloud physics **laboratory** learning platform of the invention, an intelligent terminal such as a **mobile** phone and a **computer** is adopted as a carrier, and the cloud server is used in combination, and therefore, palmtop type physics experiment **teaching**, performance statistics intellectualization, popularization maximization and **education** effectiveness cost performance optimization can be realized, temporal and spatial constraints in traditional experiment **teaching** can be broken, and a new physics **teaching** mode can be created.

22/74 © EPODOC / EPO

- PN - [CN205388756U](#) U 20160720
- PR - CN20162121993U 20160216
- AP - CN20162121993U 20160216
- DT - I
- PA - ZHANG JIANMIN
- TI - **Computer** anti -theft device in **computer lab**
- AB - The utility model discloses a **computer** anti -theft device in **computer lab**, it includes a plurality of **computer** mainframe, **computer** mainframe includes quick -witted case side board and quick -witted case fossil fragments frame, is being equipped with micro -gap switch between the quick -witted case side board of every **computer** and quick -witted case fossil fragments frame, micro -gap switch is connected with microcontroller through the bus respectively, microcontroller carries out the communication through wireless network interface card and **mobile** terminal. The utility model discloses can be absorbed in the relevant content on class of **teaching** by the emergence of the incident of theft, messenger **teacher** by reducing machine incasement hardware, reduce engine room equipment's dimension and protected the cost.

23/74 © EPODOC / EPO

- PN - [CN205312801U](#) U 20160615
- PR - CN2016246015U 20160119
- AP - CN2016246015U 20160119
- DT - I
- PA - HUNAN ESE ELEVATOR GROUP CO LTD
- TI - Realize device of two car transfers of no **computer lab** list ladder
- AB - The utility model discloses a realize device of two car transfers of no **computer lab** list ladder, **move** the control unit including main control unit and the lower floor car attend is connected with main control unit respectively, a terraced unit is exhaled by the lower floor for changeeing to the ladder is exhaled to the following floor in transfer station, a flat bed the control unit for changeeing to the ladder was exhaled to the floor more than the transfer station upper strata is exhaled terraced unit and is used for control to transfer more than the transfer station floor and carries out the flat bed, main control unit gathers the **instruction** of above -mentioned each unit output in real time, and the car operation the control unit of the supreme lower floor of output start control **instruction**, flat bed the control unit accomplishes with response in the two cars of single ladder and transfers to the purpose floor. The utility model has the advantages of simple structure, transfer required with low costs, that can realize not having the two cars of **computer lab** list ladder are changed to and not limited by stair height, interval.

24/74 © EPODOC / EPO

- PN - [CN105433594](#) A 20160330
- PR - CN2016100692 20160104
- AP - CN2016100692 20160104
- DT - I
- CT - || STSE (A)
[US6493220](#) B1 20021210 [A] (CLARK RICHARD A [US], et al)
[A] 1-3
* 全文 *;
[CN2673192Y](#) Y 20050126 [X] (YISHENG SHANGHAI INFORMATION T [CN])
[X] 1-3
* 参见说明书第3-6页, 图1-5b *;
[CN201200113Y](#) Y 20090304 [X] (GUANGZHOU KONGZHI ELECTRONIC T [CN])
[X] 1-3
* 参见说明书第2-3页, 图1-2 *;
[CN201692237U](#) U 20110105 [X] (SECOND PEOPLES HOSPITAL OF WUHU)
[X] 1-3
* 参见说明书第0015-0022段, 图1-2 *;
[CN202286940U](#) U 20120704 [A] (JIANGSU MASTER COMP SYSTEM INTEGRATION CO LTD)
[A] 1-3
* 全文 *;
[US2012236496](#) A1 20120920 [A] (MCRORIE ROBERT GRANT [US])
[A] 1-3
* 全文 *;

[CN203073585U](#) U 20130724 [X] (LI KAIYONG)
[X] 1-3
* 参见说明书第0003-0010段，图1 *;
[CN203378726U](#) U 20140108 [A] (ZHANG MINGRUI)
[A] 1-3
* 全文 *;
[CN203446837U](#) U 20140226 [A] (HOU JIANLING)
[A] 1-3
* 全文 *;
[CN203647636U](#) U 20140618 [X] (ZHANG YAN)
[X] 1-3
* 参见说明书第0021-0028段，图1-3 *;
[CN203692862U](#) U 20140709 [X] (HEILONGJIANG NONGKEN VOCATIONAL COLLEGE)
[X] 1-3
* 参见说明书第0016-0019段，图1-4 *;
[CN204257086U](#) U 20150408 [X] (ZHOU SHAN VOCATIONAL SCHOOL)
[X] 1-3
* 参见说明书第0022-0033段，图1-5 *

CNOI - [A47B21/00](#)
PA - UNIV HUNAN CITY
TI - **Movable teaching** worktable for experimental guidance **teacher**
AB - The invention discloses a **movable teaching** worktable for an experimental guidance **teacher** and relates to the technical field of **laboratory** equipment. The **movable teaching** worktable comprises a **computer** mainframe, a keyboard, a displayer, a mouse, a battery, a table face, a commonly-used tool box, a handle, supporting columns and universal wheels, wherein the **computer** mainframe and the battery are located at the bottom of the worktable, the commonly-used tool box is located under the table face, two of the universal wheels are provided with stop locks, the battery is a high-capacity lithium polymer battery, the box door of the commonly-used tool box is a right-side downwards-opened door, the lower edge of the box door is connected with a box body through a hinge, the box door is horizontal in an opening state, the opening state is controlled by a pull rod, and the pull rod is detachable. The **movable teaching** worktable for the experimental guidance **teacher** provides a **computer** and the commonly-used tool box and is convenient to use.

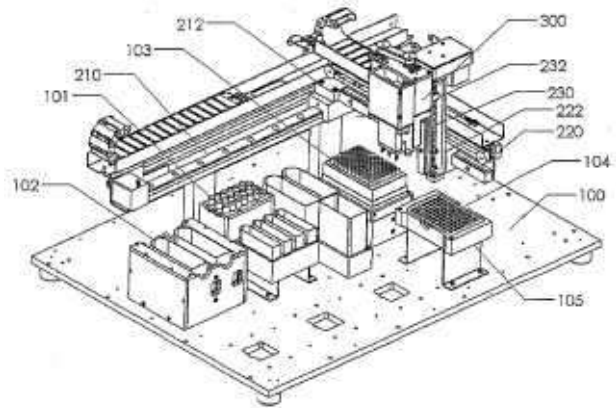
25/74 © EPODOC / EPO

PN - [CN205068025U](#) U 20160302
PR - CN20152828578U 20151026
AP - CN20152828578U 20151026
DT - I
PA - LIU GUANGMING
TI - Security protection system that **mobile** communication **computer lab** was used
AB - The utility model provides a security protection system that **mobile** communication **computer lab** was used, includes the **mobile** communication **computer lab**, and the **mobile** communication **computer lab** comprises the outer room body and the interior room body, and the outer room body and the interior room body all are

cylindricly, and the disc is installed to outer room body bottom, and the annular groove has been seted up to the disc periphery, and disc central authorities are equipped with drive arrangement, and drive arrangement is connected with interior room body bottom, and four gyro wheels are installed all around in interior room body bottom, and the gyro wheel is located the annular groove, interior room body one side wall mounting has radiator fan, has seted up a plurality of air vent to radiator fan's the interior room body on the lateral wall of just personally experiencing sth. Part of the body with outer room. The beneficial effects of the utility model are that the treater remote control send **instruction** of surveillance center, the **instruction** is received through a wireless module to the in -situ processing ware, and the in -situ processing ware starts drive arrangement work, and drive arrangement rotates the interior room body for the door of the interior room body staggers with the door of the outer room body.

26/74 © EPODOC / EPO

- PN - [US2016023203](#) A1 20160128
- PNFP - US9579646 B2 20170228
- PR - US201514808304
20150724; US201462028734P
20140724
- AP - US201514808304 20150724
- DT - *; Rep
- CT - || R141 (A1)
[US2011268627](#) A1 20111103 [
] (WARHURST JULIAN [US], et al);
[US6793891](#) B2 20040921 [] (YIU
FELXI [US]);
[US2001039843](#) A1 20011115 [
] (SCHOEPP TORSTEN [DE]);
[US8697012](#) B2 20140415 [
] (IKUSHIMA KAZUMASA [JP]);
[US7189369](#) B2 20070313 [
] (HIGUCHI AKIRA [JP]);
[US6399024](#) B1 20020604 [
] (BEVIRT JOEBEN [US], et al);
[US4830832](#) A 19890516 [
] (ARPAGAU RENATO [CH], et al)
- || STSE (B2)
[US4830832](#) A 19890516 [
] (ARPAGAU RENATO [CH], et al);
[US6399024](#) B1 20020604 [
] (BEVIRT JOEBEN [US], et al);
[US6793891](#) B2 20040921 [] (YIU
FELXI [US]);
[US7189369](#) B2 20070313 [
] (HIGUCHI AKIRA [JP]);
[US8697012](#) B2 20140415 [
]



	] (IKUSHIMA KAZUMASA [JP]); US2001039843 A1 20011115 [] (SCHOEPP TORSTEN [DE]); US2011268627 A1 20111103 [] (WARHURST JULIAN [US], et al)
CCI	- B01L3/0279 ; G01N35/1074 ; G01N35/109
CCA	- B01L2200/023 ; Y10S901/41
PA	- (A1 B2) ACCEL BIOTECH INC [US]
TI	- (A1) DUAL TIP ARRAY DISPENSING HEAD - (B2) Dual tip array dispensing head
AB	- (A1 B2) An automated multi-function processing head for a laboratory work station having a table for supporting microtiter plates, other fluid receptacles, a movable arm, and a dual tip dispensing head affixed for reciprocal movement along the arm. The workstation combines into a single programmable system the capabilities for automation of a wide range of bioanalytical procedures including sample pipetting, serial dilution, reagent additions, mixing, reaction timing and washing of reaction vessels. The work station is adapted to transfer, dispense and aspirate liquid from one location to another automatically in accordance with user programmed instructions. Fluid is dispensed and aspirated using a dual tip dispensing head having two sets of tip couplers actuated by one drive system. The two sets of tip couplers allow the use of different sizes of pipette tips and tips at different pitches or distances between the centerlines. Integral to the dual

tip dispensing head are two arrays of tip couplers that are used to pick up disposable pipette tips, which are automatically picked up by the head and ejected by a tip ejector mechanism. One motor coupled to an actuator is used to control the multiple functions including; tip coupling, fluid aspiration, fluid dispensing, and tip ejection for both arrays of pipette channels. The work station is designed for interactive connection with a remote **computer**.

27/74 © EPODOC / EPO

- PN - [CN204884257U](#) U 20151216
- PR - CN20152431151U 20150619
- AP - CN20152431151U 20150619
- DT - I
- PA - GUANGDONG IND & TRADE COLLEGE
- TI - Be used for car image control system circuit **teaching** case of backing a car
- AB - The utility model discloses a be used for car image control system circuit **teaching** case of backing a car, the power distribution box comprises a box body, built -in power module, camera, navigation host **computer** and the the control unit of being equipped with of box. The utility model discloses a **teaching** case can use under 220 alternating currents or the galvanic environment of 12V, and application scope is wide, its small, light in weight of while, and **portable**, portability to **laboratory** or classroom etc. Are local uses, and the **teaching** is convenient, the adoption the utility model discloses a **teaching** case is imparted knowledge to students, and the student can very clearly see back a car image control system's circuit of car, easilier understands its theory of operation to through letting the student start interconnecting link, make it understand the circuit trend, **teaching** effects is showing. The utility model discloses a **teaching** case is with low costs, small, easy to be removed, facilitates the use, and the circuit is difficult for generating heat, the short circuit, repairs easily, maintains that **teaching** effects is good.

28/74 © EPODOC / EPO

- PN - [CN204872670U](#) U 20151216
- PR - CN20152468541U 20150626
- AP - CN20152468541U 20150626
- DT - I
- PA - TIANJIN SHENLAN ELECTRIC TECHNOLOGY CO LTD
- TI - Mine belt feeder centralized control system based on network technique

AB - Mine belt feeder centralized control system based on network technique, wherein, the centralized control **computer** is got in touch with the PLC sub -station of belt **computer lab** through the optical network who is put up by switch and photoelectric conversion module, carries out long -range concentrated supervision and operation, switch and PLC sub -station and the contact of centralized control **computer** are for its distribution IP address, set up photoelectric conversion module A at the centralized control center, belt **computer lab** PLC sub -station sets up photoelectric conversion module B, photoelectric conversion module A's one end is connected to the switch at centralized control center, and the other end is connected to photoelectric conversion module B, the input module of PLC sub -station is connected to its protection switch who corresponds, with protection switch's action signal acquisition to the communication module who follows on the PLC sub -station sends for the centralized control **computer**, and the operating **instruction** drive belt feeder that the centralized control **computer** sent **moves**.

29/74 © EPODOC / EPO

PN - [CN204855826U](#) U 20151209

PR - CN20152621580U 20150818

AP - CN20152621580U 20150818

DT - I

CCA - [Y02A90/342](#)

PA - EAST CHINA INST TECHNOLOGY

TI - Drift formula high density resistivity method **laboratory** pond analogue means

AB - The utility model discloses a drift formula high density resistivity method **laboratory** pond analogue means, it includes the telescoping device, the electrode, the transmission hawser, high density host **computer** and flotation gear, the telescoping device erects on the flotation gear, the flotation gear is including floating the support, the setting is at four showy balls of showy support tetrapolar and pneumatic pump, the intercommunication is connected with the pneumatic pump through the valve between four showy balls, the symmetry was equipped with a pair of drift pneumatic valve on length direction's axial was followed to showy support, the drift pneumatic valve is connected with the pneumatic pump, the drift pneumatic valve is equipped with pneumatic valve gentleness and **moves** the export, the direction edge length direction's that gives vent to anger of pneumatic export axial outwards. The utility model discloses can control the area of contact and the shift position of electrode bottom and the surface of water well, can guarantee the accuracy of experimental data, can reach the purpose and the requirement of physical model experiment in scientific research and the specialty **teaching**.

30/74 © EPODOC / EPO

PN - [CN204833778U](#) U 20151202

PR - CN20152612557U 20150814

AP - CN20152612557U 20150814

DT - I

PA - UNIV CHINA GEOSCIENCES WUHAN

TI - **Movement** safety **teaching** scientific research experiment device

AB - The utility model relates to a **movement** safety **teaching** scientific research experiment device, the device system include bus control module, and embedded chip system module, **mobile** terminal insert interface module, and the **display** module shows control module, storage control module and storage module, embedded chip system module wherein, **mobile** terminal inserts interface module, **display** control unit, the storage control module be connected with bus control module, **display** device and **display** control unit are connected, storage module and storage control module are connected. The utility model discloses system architecture is clear, and it is reasonable, multiple functional to set up, use this device system can cover **movement** safety **teaching** and the crucial experiment of scientific research comprehensively, be favorable to expanding the **teaching** and the scientific research experiment in **movement** safety field, also can reduce the **laboratory** investment.

31/74 © EPODOC / EPO

PN - [CN204733388U](#) U 20151028

PR - CN20152354903U 20150528

AP - CN20152354903U 20150528

DT - I

PA - GUANGZHOU PANYU POLYTECHNIC

TI - **Computer lab** cluster environmental monitoring system based on wireless sensor network

AB - The utility model discloses a **computer lab** cluster environmental monitoring system based on wireless sensor network. It includes gateway that the perceiving module who comprises wireless sensor network's zigbee node, embedded tiny6410 development board constitutes and the remote monitoring system who compiles based on WEB and android, and it is continuous with remote monitoring system that perceiving module passes through the gateway, perceiving module include that each **computer lab**, experiment real **instruct** each indoor terminal node, coordinate the node, each terminal node with coordinate the node and pass through zigbee node data transport connection, the gateway include central data process system, QT graphic interface and database, remote monitoring system include WEB control terminal and flat board or **mobilephone** terminal. The utility model discloses can be in real time alarm information and unusual environment state and parameter transmission to **computer lab** or the real room managers that **instructs** of experiment to can in time take effectively and the best measure fast.

32/74 © EPODOC / EPO

PN - [CN204720168U](#) U 20151021

PR - CN20152406156U 20150612

AP - CN20152406156U 20150612

DT - I

PA - HUNAN INTERNAT ECONOMICS UNIVERSITY

TI - **Computer** of colleges and universities **computer lab** is with multi -functional record class pen

AB - The utility model discloses a **computer** of colleges and universities **computer lab** is

with multi -functional record class pen belongs to **teaching** articles for use technical field. The utility model discloses a body main part, camera, the pen socket and pen stand, a body main part include the record class pen section of making a video recording, a record class linkage segment and record class pen nib section, and the camera is fixed at the record class pen section of a making a video recording top, and record class pen is made a video recording the intersegmental part and is equipped with the circuit board, even has storage module and battery on the circuit board, and the bottom of the record class pen section of making a video recording is followed the extension of circuit board and is set up the USB interface, a record class linkage segment top is the spread groove of cooperation suit USB interface, and a record class linkage segment bottom forms the installation cavity with the cooperation of record class pen nib section, the pen socket with adjustable **movable** mounting on the pen stand, pen socket upper end cooperation forms a suit record class pen nib section mounting groove, the pen stand is inside to be equipped with chip and power, the pen stand top surface is equipped with liquid crystal **display**. The utility model is simple in operation, respond well, economical and practical, multiple functional can shoot, record a video.

33/74 © EPODOC / EPO

PN - [CN104991470](#) A 20151021

PR - CN20151262269 20150521

AP - CN20151262269 20150521

DT - I

CT - || STSE (A)

[CN1419201](#) A 20030521 [A] (SHANGHAI TELEVISION UNIV [CN])

[A] 1-7

* 全文 *;

[CN101359223](#) A 20090204 [A] (SHENZHEN SCIFORD TECHNOLOGY CO [CN])

[A] 1-7

* 全文 *;

[CN101661535](#) A 20100303 [A] (UNIV SOUTH CHINA NORMAL)

[A] 1-7

* 全文 *;

[CN102324193](#) A 20120118 [A] (NANJING COLLEGE CHEMICAL TECH)

[A] 1-7

* 全文 *;

[CN203276623U](#) U 20131106 [X] (INST OF INFORMATION TECHNOLOGY OF GUET)

[X] 1-7

* 说明书第11段-第13段及说明书附图1 *;

[CN103956096](#) A 20140730 [A] (UNIV BEIJING UNION)

[A] 1-7

* 全文 *;

[CN103985277](#) A 20140813 [A] (UNIV SHANGHAI JIAOTONG)

[A] 1-7

* 全文 *;

[WO2015042688](#) A1 20150402 [A] (ENABLE TRAINING AND CONSULTING INC [CA], et al)

[A] 1-7

* 全文 *

CNOI - [G05B19/04](#)
CNOA - [G05B2219/25314](#)
PA - UNIV SUZHOU VOCATIONAL
TI - Remote **teaching** control experiment system
AB - The invention relates to a remote **teaching** control experiment system. The remote **teaching** control experiment system comprises a camera with a holder, a server, a communication module, an experiment condition on-site control module, an experiment device, a database module, a virtual **printing** device and a **mobile** terminal. The camera with the holder is arranged in a **teaching** experiment field for monitoring the experiment device and is connected with the server through the communication module; the experiment condition on-site control module is connected with the experiment device, the database module and the server; and the virtual **printing** device is connected with the database module. According to the invention, an experimenter carries out experiment processing and observation on a **mobile** terminal by means of a network, the obtained experiment result is equivalent to the result obtained in a **laboratory**, operating the remote **teaching** control experiment system is the same as really operating an experiment device is realized, the operation interest of the students is improved, the analysis is carried out on the experiment result, and the virtual **printing** device is provided to a client for **printing** the experiment process and result, so that the remote **teaching** control experiment system is very intelligent.

34/74 © EPODOC / EPO

PN - [CN204695665U](#) U 20151007
PR - CN20152276533U 20150430
AP - CN20152276533U 20150430
DT - I
PA - UNIV JINAN
TI - External analogue means of modularization animal alimentary canal
AB - The utility model discloses an external analogue means of modularization animal alimentary canal, including the external analogue unit of at least one animal alimentary canal, the external analogue unit of every animal alimentary canal all includes frame, retort and a plurality of functional module, and two upper and lower regions are divided into to the inside of frame, goes up the region and is formed with multiple modules installation position, and the functional module is detachable to be adorned on corresponding module installation position, and lower region is formed with at least one retort installation position, and the retort is detachable to be adorned on corresponding retort installation position, the functional module contains sensor or **moving** part, or contains the two simultaneously, every functional module through the USB serial port connection host **computer**, is equipped with the USB active hub by 328 conduct control chip of solitary arduino nano on the frame, USB is responsible for to singlechip power supply in the functional module and goes up the mutual transfer **instruction** of the next machine. The utility model discloses being integrated multiple modules in the frame, having saved the **laboratory** space, the module can quick replacement, accomplishes not shut down and to change the trouble module by the checksum.

35/74 © EPODOC / EPO

- PN - [CN104899410](#) A 20150909
- PR - CN2015199914 20150309
- AP - CN2015199914 20150309
- DT - I
- CT - || STSE (A)
[CN101655887](#) A 20100224 [Y] (HANGZHOU BONSTECH SCIENCE & TE)
[Y] 1-7
* 权利要求3 *;
[CN102779219](#) A 20121114 [Y] (YUEKANG HEALTH ADMINISTRATION CONSULTANT
TECHNOLOGY CO LTD)
[Y] 1-7
* 说明书0048段、附图4 *;
[CN103142314](#) A 20130612 [Y] (GUANGZHOU NENGDI AUTOMATION EQUIPMENT CO LTD)
[Y] 7
* 说明书第0022段 *;
[CN101021912](#) A 20070822 [Y] (ZHONGSHAN CITY RENMIN HOSPITAL [CN])
[Y] 1-7
* 说明书第6页第7-11行, 第9页第6-17行, 第12页第18-23行 *
- PA - FOURTH MILITARY MEDICAL UNIV; SINLDO TECHNOLOGY BEIJING CO LTD
- TI - Clinical pharmacist informatization interaction system based on IOS
- AB - The invention discloses a clinical pharmacist informatization interaction system developed on the basis of IOS. The clinical pharmacist informatization interaction system comprises a consultation work station, a ward inspection work station, a medicine knowledge base, a medical record browser, a doctor's advice on-line reminder, an information island inquiry part, a clinical pharmacist digital office part, a network consultation part and a network training part. The clinical pharmacist informatization interaction system has the advantages that an HIS (Hospital Information System), an LIS (**Laboratory** Information System) and a PACS (Picture Archiving And Communication System) of a hospital are directly transplanted into a **mobile** ward inspection system and are connected with the HIS, the LIS and the PACS of a wired network; through the coverage by a local area network of the hospital, a clinical pharmacist can pick up and read information of a patient, such as medical records, doctor's advice, various examinations, assay results and nursing information at any time through a **tablet** personnel **computer** in the daily ward inspection process, can accurately and timely perform medication **education** at the bed side and can record the illness state change to help doctors adjust the treatment scheme in proper time; medication information is transmitted to a management terminal of a department and the hospital in time; high-end services including doctor's advice on-line reminding, information island inquiry, clinical pharmacist digital office, network consultation, network training and the like can be performed; and the comprehensive requirement of the clinical pharmacist is met.

36/74 © EPODOC / EPO

- PN - [CN104851346](#) A 20150819
- PNFP - CN104851346B B 20170808

PR - CN20151216917 20150430

AP - CN20151216917 20150430

DT - I

CT - || STSE (A)
[US2003017440](#) A1 20030123 [A] (BERGEY TODD DAVID [US], et al)
 [A] 1-10
 * 全文 *;
[CN101482460](#) A 20090715 [A] (INST OF ANIMAL SCIENCES CAAS [CN])
 [A] 1-10
 * 全文 *;
[CN101665758](#) A 20100310 [A] (UNIV SHANGHAI)
 [A] 1-10
 * 全文 *;
[CN102399692](#) A 20120404 [A] (ZHEJIANG ACAD AGRICULTURAL SCI)
 [A] 1-10
 * 全文 *;
[CN202658158U](#) U 20130109 [A] (INST URBAN ENVIRONMENT CAS)
 [A] 1-10
 * 全文 *;
[CN103740589](#) A 20140423 [A] (UNIV JIANGNAN)
 [A] 1-10
 * 全文 *

CTNP - || STSE (A)
 [A] - 张铁鹰、汪徽等, "肉仔鸡体外消化模拟技术的研究", 《中国农业科学》
 [A] 1-10
 * 第2600-2606页 *
 [A] - 汤海鸥、高秀华等, "肉仔鸡两步法体外消化模拟技术研究", 《饲料与畜牧》
 [A] 1-10
 * 第29-34页 *

CNOI - (A)
[G09B23/28](#)

PA - (A)
 UNIV JINAN

TI - (A)
 Modular animal digestive tract in-vitro simulation system and human intestinal tract simulation method thereof

AB - (A)
 The invention discloses a modular animal digestive tract in-vitro simulation system and a human intestinal tract simulation method thereof. The modular animal digestive tract in-vitro simulation system comprises at least one animal digestive tract in-vitro simulation unit. Each animal digestive tract in-vitro simulation unit includes a frame, a reaction tank used for simulating a specific digestive tract cavity, and multiple function modules which can complete a specific and relatively independent task of intestinal tract simulation. Each frame is provided with multiple installation positions for installing the function modules and the reaction tank, and the function modules and the reaction tank are installed on the frame detachably. Each function module includes a sensor or a **moving** part, or includes both the sensor and the **moving** part. Each function

module uses a separate Arduino nano 328 as a control chip, and is connected with an upper **computer** through a USB serial port. Each frame is equipped with a USB active hub. A USB is responsible for power supply to single chip microcomputers in the function modules and **instruction** transmission between upper and lower computers. Multiple function modules are integrated in one frame, so that the **lab** space is saved, the modules can be replaced rapidly, and a faulty module can be checked and replaced without shutdown.

37/74 © EPODOC / EPO

- PN - [CN204288551U](#) U 20150422
- PR - CN20142808867U 20141219
- AP - CN20142808867U 20141219
- DT - I
- PA - JIANGSU INTEGRITY TEACHING EQUIPMENT CO LTD
- TI - Primary **school** science **teaching laboratory** table
- AB - The utility model provides a primary **school** science **teaching laboratory** table including an inverted-cone table body, a cylindrical base, and a round tabletop, a rotating shaft is arranged in the center of the inverted-cone table body, the round tabletop is arranged at a part, which is not close to the top end, of the upper end of the rotating shaft, the round tabletop uses a solid physiochemical board and is 5cm-10cm spaced from the inverted-cone table body, a plurality of separator plates are uniformly arranged on the upper surface of the round tabletop, a sector area is formed between every two separator plates, a round LED lamp is arranged at the top end of the rotating shaft, a camera, facing any one of the section areas, is arranged under the LED lamp, **display** screens are arranged ahead other section areas, and the included angles between the **display** screens and the round tabletop are in the range of 45-60 degrees, and lock rollers are arranged at the bottom of the cylindrical base. The primary **school** science **teaching laboratory** table is novel in design, and students can follow a **teacher's** operations while the **teacher teaches** the science experimental operations, and the students can carry out the experiment through cooperation without the need for **moving** around.

38/74 © EPODOC / EPO

- PN - [RO200600557](#) A8 20150130
- PNFP - RO123627 B1 20150130
- PR - RO20060000557 20060711
- AP - RO20060000557 20060711
- DT - I
- PA - (A8 B1)
MĂȚIEȘ VISTRIAN [RO]; BĂLAN RADU [RO]; RUSU CĂLIN [RO]; HANCU OLIMPIU [RO];
LĂPUȘAN CIPRIAN [RO]; BESOIU SORIN [RO]
- TI - (A8 B1)
PORTABLE LABORATORY FOR MECHATRONIC EDUCATION
- AB - (A8)
The invention relates to a flexible and reconfigurable **portable laboratory** for

mechatronic **education** and training, meant for every stage of the **educational** process and for professional training and reconversion activities, intended to operate in both virtual and real environment. According to the invention, the **laboratory** consists of a **portable** platform (1) on which a voltage source (2), a parallel planar robot (3), an intelligent parallel-displacement unit (4) and a base plate (5) with microcontroller representing the interface between the experiment modules and a **computer** (6) are fixed, the parallel-planar robot (3) being based on a pentalateral mechanism with rotation couplings, some leading elements (7 and 10) being independently driven by some D. C. motors (11 and 12) including some speed reduction units and some position sensors, where the pentalateral mechanism may be reconfigured as a quadrilateral mechanism or as an adjustable-oscillation mechanism, some characteristic points (B, C and D) generating a broad range of geometrical figures or paths, the intelligent parallel-displacement unit consisting of a linear electromagnetic actuator (19) with **mobile** inductor, a position transducer (20), a speed transducer (21) and a current transducer (22), the unit operation program being installed in the **computer** (6) or in a microcontroller (40), the base plate (5) including the microcontroller (40), a motor driver (41), a sensor interface (42) and an interface (43) for the connection to a port (44) of the **computer** (6).

- (B1)

The invention relates to a flexible and reconfigurable **portable laboratory** for mechatronic **education** and training, meant for every stage of the **educational** process and for professional training and reconversion activities, intended to operate in both virtual and real environment. According to the invention, the **laboratory** consists of a **portable** platform (1) on which a voltage source (2), a parallel planar robot (3), an intelligent parallel-displacement unit (4) and a base plate (5) with microcontroller representing the interface between the experiment modules and a **computer** (6) are fixed, the parallel planar robot (3) being based on a pentalateral mechanism with rotation couplings, some leading elements (7 and 10) being independently driven by some D.C. motors (11 and 12) including some speed reduction units and some position sensors, where the pentalateral mechanism may be reconfigured as a quadrilateral mechanism or as an adjustable-oscillation mechanism, some characteristic points (B, C and D) generating a broad range of geometrical figures or paths, the intelligent parallel-displacement unit consisting of a linear electromagnetic actuator (19) with **mobile** inductor, a position transducer (20), a speed transducer (21) and a current transducer (22), the unit operation program being installed in the **computer** (6) or in a microcontroller (40), the base plate (5) including the microcontroller (40), a motor driver (41), a sensor interface (42) and an interface (43) for the connection to a port (44) of the **computer** (6).

39/74 © EPODOC / EPO

PN - [CN204102222U](#) U 20150114

PR - CN20142670492U 20141112

AP - CN20142670492U 20141112

DT - I

PA - JINLING INST TECHNOLOGY

TI - Special access control system of intelligent **teaching laboratory**

AB - The utility model discloses a special access control system of an intelligent **teaching**

laboratory. The special access control system comprises an access management **computer**, a network exchanger, an access controller, an electric lock, an exit button, a card reader, an electric door closer and a passive infrared detector, wherein the electric lock is connected with the access controller by virtue of a connecting wire, the electric door closer comprises a motor and a mechanical arm rod, the passive infrared detector is arranged above a **movable** door, the exit button and the card reader are arranged on two sides of the **movable** door and are connected with the access controller by virtue of connecting wires, the access controller is connected with an AC 220V power supply, and the network exchanger is connected with the access management **computer** and the access controller by virtue of connecting wires. The access control system disclosed by the utility model is designed and innovated based on the use characteristics of the **teaching laboratory**, can be used for greatly prolonging the service life of the door, and can be used for controlling the opening and closing of the door according to different **teaching** requirements of the **laboratory** because the door is opened and closed by using the motor.

40/74 © EPODOC / EPO

PN - [CN104240581](#) A 20141224

PNFP - CN104240581B B 20160817

PR - CN20141192995 20140508

AP - CN20141192995 20140508

DT - I

CT - || STSE (A)

[CN200983229Y](#) Y 20071128 [A] (XI AN JIAOTONG UNIVERSITY SCIE [CN]);

[CN103745645](#) A 20140423 [A] (MA DENGYUN);

[CN88200362U](#) U 19881214 [A];

[FR2680902](#) A1 19930305 [A] (CENTAURE [FR]);

[CN2498583Y](#) Y 20020703 [A] (ELECTROMECHANICAL TEACHING INS [CN]);

[CN201060591Y](#) Y 20080514 [A] (GUO FUHONG LUO YUKE [CN]);

[CN103578343](#) A 20140212 [A] (UNIV SHENYANG JIANZHU);

[US2014093861](#) A1 20140403 [A] (SCOLARI NATHAN A [US], et al);

[RU125652U](#) U1 20130310 [A];

[CN202905003U](#) U 20130424 [A] (YAN JINHUA);

[CN202084239U](#) U 20111221 [A] (ERJUN GAO);

[CN2488128Y](#) Y 20020424 [A] (UNIV XINAN JIAOTONG [CN]);

[CN2508328Y](#) Y 20020828 [A] (SONG FAN [CN]);

[CN2062479U](#) U 19900919 [A] (CHEN CONGXUAN [CN]);

[CN101984482](#) A 20110309 [A] (ZHEJIANG YALONG EDUCATION EQUIPMENT CO LTD);

[CN203085000U](#) U 20130724 [A] (TONG YANAN);

[CN103514797](#) A 20140115 [A] (MA DENGYUN);

[CN203311675U](#) U 20131127 [A] (UNIV SHAANXI SCIENCE & TECH);

[CN202084223U](#) U 20111221 [A] (LINGLING CUI);

[CN203882532U](#) U 20141015 [R] (UNIV SHAOGUAN);

[CN2811951Y](#) Y 20060830 [A] (UNIV SHANGHAI JIAOTONG [CN]);

[CN102269653](#) A 20111207 [A]

CTNP - || STSE (A)

[A] - 樊虎荣, "反转法设计四杆机构教学体会", 《河南纺织高等专科学校学报》,

(20021231), vol. 14, no. 1

[A] - 陈晔等, "“平面四杆机构中曲柄存在条件”的教学方法探讨与实践", 《辽宁工业大学学报(社会科学版)》, (20120229), vol. 14, no. 1

PA - (A)
UNIVSHAOGUAN

TI - (A)
Bar mechanism **teaching** model

AB - (A)
The invention discloses a bar mechanism **teaching** model. The bar mechanism **teaching** model comprises a box, a manual bar transmission mechanism, a magic rail deformation mechanism and a guide rail **moving** mechanism. The bar mechanism **teaching** model is reliable in work, convenient to operate and capable of demonstrating any track including the case of the application of a typical bar mechanism to real life, and meanwhile the bar mechanism **teaching** model can demonstrate centering and any biasing crank sliding block mechanism; the production cost of the bar mechanism **teaching** model is reduced; a **display** cabinet which is arranged in a **laboratory** becomes the **portable** model capable of being held by a student for exploring by himself; any track can be demonstrated with one model through simple conversion, and therefore interestingness is high; the exploring capacity and the innovation capability of the student can be stimulated.

41/74 © EPODOC / EPO

PN - [CN203882532U](#) U 20141015

PR - CN20142234464U 20140508

AP - CN20142234464U 20140508

DT - I

PA - UNIVSHAOGUAN

TI - Rod mechanism **teaching** model

AB - The utility model discloses a rod mechanism **teaching** model comprising a box body, a manual operation rod transmission mechanism, a magic rail deformation mechanism and a guide rail **moving** mechanism. The rod mechanism **teaching** model is reliable in work and convenient in operation, any track can be demonstrated, examples of using a typical rod mechanism in real life can also be demonstrated, any aligned slider-crank mechanism and any biased slider-crank mechanism can be demonstrated, the rod mechanism **teaching** model is lowered in production cost, the rod mechanism **teaching** model which is originally placed in a **display** cabinet of a **laboratory** turned into a **portable** model which can be held by a student who can explore with his own hands, any track can be demonstrated by the model through simple transformation of the model, the rod mechanism **teaching** model is strong in interest, and exploration and innovation capability of the student can be stimulated.

42/74 © EPODOC / EPO

PN - [CN103982100](#) A 20140813

PNFP - CN103982100B B 20160413

PR - CN20141197293 20140512

AP - CN20141197293 20140512

DT	- I
CT	- STSE (A) CN204081759U U 20150107 [R] (UNIV FUDAN) [R] 1-8 权利要求1-8 CN202420096U U 20120905 [A] (SHASHA LU) [A] 1-8 全文 CN202745559U U 20130220 [A] (ZHANG CHENGLIANG) [A] 1-8 全文 US2009033107 A1 20090205 [A] (ZIMMER GUNTHER [DE], et al) [A] 1-8 全文 CN1862178 A 20061115 [A] (LG ELECTRONICS TIANJIN [CN]) [A] 1-8 全文 CN202166266U U 20120314 [A] (TAIZHOU LG ELECT REFRIGERATOR) [A] 1-8 全文
PA	- (A) UNIV FUDAN
TI	- (A) Device for preventing laboratory refrigerator door incomplete closing
AB	- (A) The invention belongs to the technical field of small equipment in laboratory, and specifically relates to a device for preventing laboratory refrigerator door incomplete closing. The device comprises a tablet compressing disc, a fixing frame, an L-shaped right-angle connection rod, and a bolt bar; the tablet compressing disc is connected to the fixing frame through the right-angle connection rod, the fixing frame is fixed on the external sidewall of a refrigerator, and the bolt bar is hung on the fixing frame. During the application process, the tablet compressing disc rotates around the long edge of the right-angle connection rod until the tablet compressing disc reaches the surface of the refrigerator surface, and then the tablet compressing disc naturally hangs down and is withstood on the upper part of the bottom plate of the fixing frame under the self-gravity action. Because the tablet compressing disc bears against the front surface of the refrigerator door, the refrigerator door is ensured to be completely closed. Thus the refrigerator door incomplete closing due to carelessness is avoided. Other accidents caused by the incomplete closing of refrigerator door, such as the refrigerator door is carelessly opened by the movement of people, are also avoided. The device can be widely applied to the locations such as biological laboratories where the refrigerators need to be opened or closed frequently so as to assist the activities like scientific research, teaching, production, and the like.

43/74 © EPODOC / EPO

PN - [CN203591096U](#) U 20140514

PR - CN20132806606U 20131209

AP - CN20132806606U 20131209

DT - I

PA - UNIVHUAZHONGAGRICULTURAL

TI - Physical **display** cabinet of 3D **laboratory**

AB - The utility model discloses a physical **display** cabinet of a 3D **laboratory**. The physical **display** cabinet of the 3D **laboratory** comprises a round table part and an intermediate shaft with one end fixedly arranged on the round table part, wherein a top cover support is **movably** arranged at the other end of the intermediate shaft, a large chain wheel shaft and a plurality of cabinet body shafts are arranged at the bottom of the top cover support, all the cabinet body shafts are respectively sleeved with a small chain wheels and cabinet body **moveably**, the small chain wheels are connected with the cabinet bodies, the large chain wheel shaft is **movably** sleeved with a large chain wheel, the large chain wheel is driven to rotate by a speed reduction motor fixed to the top cover support, and the large chain wheel is connected with the small chain wheels through a transmission chain. The cabinet can meet the autonomous and orderly learning requirements of students, and the class visiting effect of a whole class can be improved when a **teacher** explains a displayed mechanism.

44/74 © EPODOC / EPO

PN - [CN203149984U](#) U 20130821

PR - CN2013266712U 20130206

AP - CN2013266712U 20130206

DT - I

PA - WENZHOU VOCATIONAL & TECHNICAL COLLEGE

TI - Flexible manufacture training system with multiple automatic navigation vehicles

AB - The utility model relates to a flexible manufacture training system with multiple automatic navigation vehicles, and solves the defects of the prior art that **moving** an actual production system to **laboratory** for training has high cost, weak system maintenance property and weak scalability. The system comprises an **instruction** emitting apparatus connected with a network switch; the network switch is connected to a production management **computer**; the production management **computer** is connected to multiple automatic navigation vehicles through ethernet communication; and the automatic navigation vehicles match with a flexible manufacture system. The flexible manufacture system can be installed in a production workshop according to requirement, and can considerate both training and actual production; a flexible manufacture system does not need to be purchased specially for training, so as to reduce training cost; and the **instruction** emitting apparatus can transmit training projects to the automatic navigation vehicles through the production management **computer**, and the automatic navigation vehicles and the flexible manufacture system cooperate to complete actual operation.

45/74 © EPODOC / EPO

PN - [RU94041997](#) A 19960920

PR - RU19940041997 19941122

AP - RU19940041997 19941122

DT - I

PA - LIPETSKIJ G PED INST

TI - METHOD OF EXAMINATION OF PROPERTIES OF ELECTRIC FIELD

AB - FIELD: physics. SUBSTANCE: invention refers to field of training aids for physics and can be used for demonstration of potential character of electric field during lecture or **laboratory** practical work in **educational** institutions of various types. Method includes excitation by generator 1 of field of electric currents flowing between metal electrodes 2 in fluid conductive medium 3. Probe 5 and indicator 6 are used to measure distribution of potential along surface of conductive medium. Probe is mechanically coupled to mouse 7 of **computer** 8 with monitor 9 and **printer** 10. Graphic frame corresponding to capacitance 4 is generated on screen of monitor. **Moving** mouse 7 together with probe 5 equipotential and force lines are plotted directly on monitor 9 and their **printouts** are produced with the aid of **printer** 10. EFFECT: increased graphicality of method. 2 dwg, 1 tbl

46/74 © EPODOC / EPO

PN - [CN202874490U](#) U 20130417

PR - CN20122598341U 20121114

AP - CN20122598341U 20121114

DT - I

PA - UNIV QINGDAO SCIENCE & TECH

TI - Multimedia **teaching** trolley for **laboratory**

AB - The utility model provides a multimedia **teaching** trolley for a **laboratory**. The trolley is characterized in that the trolley comprises a lower **computer** host containing box, a middle **display** containing box and an upper **projector** containing area, the **projector** containing area comprises a bottom plate, a front side plate, a rear side plate, a right side plate and an upper cover plate, the upper cover plate comprises a fixed deck plate and an L-shaped bidirectional folded **movable** cover plate, the fixed deck plate is horizontally arranged on the upper right side of the **projector** containing area, the L-shaped bidirectional folded **movable** cover plate is hinged to the left side of the fixed deck plate and is closed, the top and the left side of the **projector** containing area are completely enclosed by the fixed deck plate and the L-shaped bidirectional folded **movable** cover plate, and a **projector** cable ventilation opening running through the **display** containing box is arranged on the bottom plate below the fixed deck plate. Multimedia devices are convenient to operate and free of mutual interference, and the trolley is fine in ventilation, safe to use, compact in structure when out of service, neat and attractive in appearance, simple to manufacture and high in practicability.

47/74 © EPODOC / EPO

PN - [CN102915664](#) A 20130206

PNFP - CN102915664B B 20141231

PR - CN20121424082 20121030

AP - CN20121424082 20121030

DT - I

CT - || STSE (A)

[US2005197558](#) A1 20050908 [A] (WILLIAMS JAMES P [US], et al)

[A]

[CN202887579U](#) U 20130417 [R] (XUZHOU MEDICAL COLLEGE)

[R]

[CN2678566Y](#) Y 20050216 [Y] (WANG KUIJIAN [CN])

[Y]

[CN102129796](#) A 20110720 [Y] (XUZHOU MEDICAL COLLEGE)

[Y]

PA - (A B)
XUZHOU MEDICAL COLLEGE

TI - (A B)
Operation training and **teaching** model of digital gastrointestinal machine

AB - (A)
The invention discloses an operation training and **teaching** model of a digital gastrointestinal machine. The operation training and **teaching** model comprises a main machine, a simulating transparent human body, a photographing agent swallow control unit, a workstation and a motion control unit. The main machine comprises a rack arm, an X-ray bulb tube model, a machine head, an image intensifier module, a positioning lamp, a transparent image acquisition device, a diagnostic couch and a diagnostic couch **moving** component. The simulating transparent human body comprises a casing and transparent viscera. The photographing agent swallow control unit is composed of a developing system, a photographing agent injection control system and a swallow control system. The workstation is formed by a gastrointestinal machine **computer** software system and a **computer** USB (universal serial bus) interface circuit. The diagnostic couch **moving** component comprises a diagnostic couch motion control circuit and is electrically connected with the diagnostic couch. By the operation training and **teaching** model of the digital gastrointestinal machine, simulating operation training and **teaching** can be finished in a **laboratory**, multi-group experiments can be organized at the same time, **teaching** effect is improved, and the simulating device is low in production cost, economic and practical.

48/74 © EPODOC / EPO

PN - [CN202677683U](#) U 20130116

PR - CN20122267629U 20120608

AP - CN20122267629U 20120608

DT - I

PA - JIANGSU YONGYU INFORMATION INDUSTRY CO LTD

TI - Digital test system

AB - The utility model discloses a digital test system, comprising an intelligent sensor, a **computer** and a figure data collector. The intelligent sensor is arranged on a matched **teaching** aid for acquiring data, the **computer** receives the data acquired by the intelligent sensor, the data is processed by the **computer** by calculation, and the processed data is displayed on the figure data collector. According to the utility model, the structure of the test system is simple, a **portable** test system can be prepared, the digital test system possesses an LJSB interface conveniently connected with the **computer**, a multi-core terminal is included, the digital test system can be conveniently connected with the intelligent sensor, and thereby the digital test system

can be widely used in various places beside in a **lab**.

49/74 © EPODOC / EPO

- PN - [CN102737538](#) A 20121017
- PR - CN2011191662 20110412
- AP - CN2011191662 20110412
- DT - I
- CT - || STSE (A)
[CN202120485U](#) U 20120118 [R] (SHANGHAI DIESEL INFORMATION TECHNOLOGY CO LTD)
[R]
[CN2499917Y](#) Y 20020710 [Y] (HUANG XINWAN [CN])
[Y]
[CN201378380Y](#) Y 20100106 [Y] (SHAOXING ZHAO)
[Y]
[CN201503655U](#) U 20100609 [A] (FENG ZHU)
[A]
[CN201134177Y](#) Y 20081015 [Y] (SCIENT & TEACHING INSTR FACTOR [CN])
[Y]
[CN201765726U](#) U 20110316 [A] (RONGZE GAO, et al)
[A]
- PA - SHANGHAI DIESEL INFORMATION TECHNOLOGY CO LTD
- TI - Horizontal projectile motion experimental instrument
- AB - The present invention relates to an experimental device in a **teaching laboratory** and a physical test device, more specifically relates to a horizontal projectile motion experimental instrument. The horizontal projectile motion experimental instrument comprises a panel, a base, a sliding chute, a small steel ball, an electromagnetic ball holding frame, a photoelectric door, and a steel ball bearing plate. The bearing plate is provided with a piezoelectric ceramic sensor and carbon paper. The base is provided with a power supply plug, a USB interface, a **display** box, a nixie tube, a single chip microcomputer chip, a digital **display** circuit, a relay control circuit, a mode selection circuit, a clear key circuit, a key circuit which controls electromagnet, a signal processing circuit which comprises a photoelectric door signal circuit and a vibration signal circuit, and a power supply circuit. According to the invention, the digitization and electromechanical integration of the instrument are realized, precise time measurement can be obtained by using sensor technology, a time value of ball **movement** can be recorded, measured time value data is displayed, and the combination of a **teaching** experiment and a **computer** is realized.

50/74 © EPODOC / EPO

- PN - [CN202120485U](#) U 20120118
- PR - CN20112106303U 20110412
- AP - CN20112106303U 20110412
- DT - I
- PA - SHANGHAI DIESEL INFORMATION TECHNOLOGY CO LTD
- TI - Horizontal projectile motion experimental instrument

AB - The present utility model relates to experiment equipment of a **teaching laboratory** and physical test equipment, specifically to a horizontal projectile motion **teaching** experimental instrument. The experimental instrument comprises a panel, a pedestal, a sliding chute, a small steel ball, an electromagnetic ball-holding rack, a photoelectric door, and a steel ball carrying plate. The carrying plate is provided with a piezo ceramic transducer and carbon paper, the pedestal is provided with a power supply jack, a USB jack, a **display** box, a nixie tube, a one-chip microcomputer chip, a digital **display** circuit, a relay control circuit, a mode selection circuit, a button circuit comprising a clear button circuit and an electromagnetic relay control circuit, a signal processing circuit comprising a photoelectric gate signal circuit and a vibration signal circuit, and a power supply circuit. By adopting the instrument, the digitalization and the dynamo-electric integration are realized, precise time measurement can be obtained by utilizing the sensor technology, the time value of the ball **movement** can be recorded, the measured time value data can be displayed, and the combination of **teaching** experiment and a **computer** can be realized.

51/74 © EPODOC / EPO

PN - [CN101930683](#) A 20101229

PNFP - CN101930683B B 20111005

PR - CN20101279481 20100907

AP - CN20101279481 20100907

DT - I

CT - (A)
[CN1213424](#) A []; [CN101469666](#) A [];
[US2007160472](#) A1 []

PA - (A)
UNIV HOHAI
- (B)
UNIV HEHAI

TI - (A B)
Wind tunnel-free Magnus effect demonstrating experiment device

AB - (A)
The invention discloses a wind tunnel-free Magnus effect demonstrating experiment device, which comprises a cylinder turntable, a turntable sliding rail, a turntable support directional **moving** wheel and a forced rotating shaft, and also comprises a water storage tank, a one-way water inlet tube, an air inlet control valve, a first level splitter plate, a second level splitter plate, a third level splitter plate and a back pressure energy dissipation plate. Compared with the prior art, the wind tunnel-free Magnus effect demonstrating experiment device has the advantages of obvious dynamic effect, high visualization degree, no **sound** pollution, stable flow state, low cost, small power consumption and small volume, and is suitable to be popularized in a hydraulic power and fluid **laboratory** of the university, a hydraulic power and fluid **laboratory** of the research institution and a science palace for popular science **education**.

- (B)
The invention discloses a wind tunnel-free Magnus effect demonstrating experiment device, which comprises a cylinder turntable, a turntable sliding rail, a turntable support directional **moving** wheel and a forced rotating shaft, and also comprises a

water storage tank, a one-way water inlet tube, an air inlet control valve, a first level splitter plate, a second level splitter plate, a third level splitter plate and a back pressure energy dissipation plate. Compared with the prior art, the wind tunnel-free Magnus effect demonstrating experiment device has the advantages of obvious dynamic effect, high visualization degree, no **sound** pollution, stable flow state, low cost, small power consumption and small volume, and is suitable to be popularized in a hydraulic power and fluid **laboratory** of the university, a hydraulic power and fluid **laboratory** of the research institution and a science palace for popular science **education**.

52/74 © EPODOC / EPO

PN - [CN201662913U](#) U 20101201
 PR - CN20102126721U 20100309
 AP - CN20102126721U 20100309
 DT - I
 PA - HAINAN VOCATIONAL COLLEGE OF SCIENCE AND TECHNOLOGY
 TI - Solar PV application experimental system
 AB - The utility model relates to a solar PV application experimental system which is an experimental facility used for **teaching** and researching. Most experimental systems are arranged on an experimental platform of a **laboratory**, thereby having the limitation. The utility model has the technical scheme that a solar battery pack is in the lead connection with a solar voltmeter **display** screen, a solar ampere meter **display** screen and a PLC controller by an adjustable resistor; a load voltmeter **display** screen and a load ampere meter **display** screen are in the lead connection with the PLC controller; and the PLC controller is in the lead connection with a main switch, a light switch a motor switch, a battery switch, an LED bulb group switch and a socket switch. The utility model has the advantages that the solar PV application experimental system has small shape and convenient carrying, is the **movable** experimental equipment can generate and store electricity independently; in addition, the stored electric quantity is large, and the power supply can be lasting, therefore, the solar PV application experimental system can be used for charging an external power supply or external equipment and can also be set into various voltage forms to meet different requirements.

53/74 © EPODOC / EPO

PN - [CN201655048U](#) U 20101124
 PR - CN20102103426U 20100122
 AP - CN20102103426U 20100122
 DT - I
 PA - SHENZHEN CREATION UNLTD TECHNOLOGY DEV CO LTD
 TI - Desktop-embeddable collector
 AB - The utility model belongs to the field of elementary and secondary **school** general **education laboratory teaching** aids, in particular to a novel digitization technology and **computer**-combined collector, which is suitable for exploring the construction of a **laboratory** and the reformation of the traditional **laboratory**. A collector which can be embedded in a desktop comprises a shell, a **display** screen arranged on the shell, and a microprocessor and a storage which are arranged in the shell, and is characterized in that the edge of the surface of the upper part of the shell is

provided with a circle of clamping plate; the upper surface of the clamping plate is an inclined plane or a circular arc-shaped upper surface, and thus, the thickness of the edge of the upper part of the clamping plate is smaller and the edge of the clamping plate embedded in the desktop is more smooth. The utility model can provide the collector which is not only **portable** and can be operated in hands but also is a desk type and can be conveniently placed on the desktop for operation and simultaneously can be embedded into a traditional **laboratory** table to form a whole with the traditional **laboratory** table.

54/74 © EPODOC / EPO

PN - [CN101850280](#) A 20101006
 PR - CN2009166729 20090401
 AP - CN2009166729 20090401
 DT - I
 PA - YUEYAN CHEN; WEI HOU; LIRONG WANG
 TI - **Portable** medical **laboratory** work platform
 AB - The invention relates to a **portable** medical **laboratory** work platform which belongs to the technical field of medical devices. The **portable** medical **laboratory** work platform is characterized in that an erythrocyte sedimentation rate device, a touch **display** screen, a **printer** and a microphone are respectively arranged on an inner cover of a box body; a power supply, a refrigerating box, a biochemistry analyzer, a cell analyzer and a cell analyzer reagent box are respectively distributed at the rear half of the box body; a reagent box and a consumable box are respectively distributed on the first half of the box body; the reagent box and the consumable box are respectively articulated with and fixed to two front frame bodies of the box body; a microscope and a centrifuge are separate and can be placed between the reagent box and the consumable box in the box body. The invention is a detachable and **portable** container, can integrate sample collection, centrifugation, temperature constant, reagent refrigerating, project testing and common reagents into a whole; and meanwhile, the invention also provides a set of operation **instruction** which is simple and clear and is suitable for people not professional in testing at a basic level.

55/74 © EPODOC / EPO

PN - [CN201251880Y](#) Y 20090603
 PR - CN20082152966U 20080911
 AP - CN20082152966U 20080911
 DT - I
 PA - UNIV SHANGHAI 2ND POLYTECHNIC [CN]
 TI - Mechanical analogue loading device of controllable dynamic torque
 AB - The utility model relates to a mechanical analogue loading device which can generate time-varying dynamic torques, aiming to overcome that current analogue loading devices have complex structures, high costs and slow responses and can not accurately output dynamic torques of different load characteristics. The mechanical analogue loading device of controllable dynamic torque comprises a tested prime motor and driving assembly which are mechanically connected, wherein the driving assembly is mechanically connected with a magnetic particle brake which is connected with electric

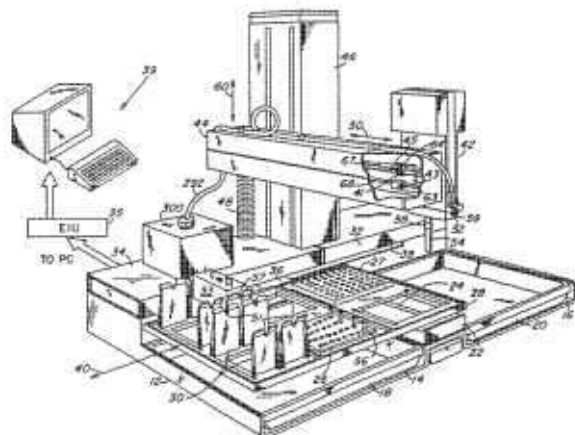
signals of a power program controller. The power program controller is connected with an **instruction computer** which controls the output current of the power program controller, and the output current of the power program controller is used as the excitation current of the magnetic particle brake. The mechanical analogue loading device of controllable dynamic torque can simulate load characteristics of various devices under various working conditions, and simulate all kinds of load in **laboratory**, thereby providing efficient modes to dynamic experiment load of dynamo-electric control systems, **movement** control systems and numerical control servo systems.

56/74 © EPODOC / EPO

PN - [CN101325016](#) A 20081217
 PR - CN2008112072 20080626
 AP - CN2008112072 20080626
 DT - I
 PA - LU JUN [CN]
 TI - Intelligent integral **laboratory**
 AB - An intelligent integrated **laboratory** belongs to the information technique and the automation technique, and relates to a panoramic type **moving** sand table simulation **laboratory** driven by a **computer** software. The **laboratory** is connected with a **moving** sand table with a three-dimensional space by adopting a **computer** control signal output interface, thereby allowing the **computer** software to communicate with the practicality simulated **moving** sand table, achieving the regular compound **movement** of the sand table under the **instruction** of a **computer**, and further reflecting the character and the process of managerial activities and operation flow really. Not only the information management is simulated, but also the processes of the operation flow and practicality **movement** can be displayed in a panoramic manner. The **laboratory** displays the relations of information processing, managerial decision and practicality **movement** by comparatively saved capital and site in a panoramic type intellectualized manner. The processing result to information and the decision to managerial problems can be displayed through the practicality **movement** on a real-time basis, thus greatly enhancing the interests of learners and investigators, and increasing the experiment and the practical training capacities of the **laboratory**.

57/74 © EPODOC / EPO

PN - [US5206568](#) A 19930427
 PR - US19910698759
 19910510; US19860844374
 19860326
 AP - US19910698759 19910510
 DT - *
 CT - [US4488241](#) A []; [US4689541](#) A [];
[US4757245](#) A []; [US4878002](#) A [];
[US4952518](#) A []; [US5046539](#) A [];

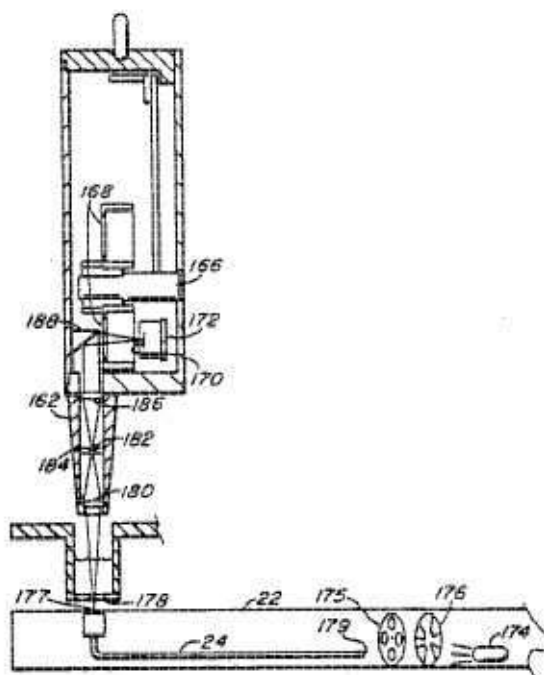


[US5055263](#) A []

- CCI - [G01N21/253](#) ; [G01N35/028](#)
- CCA - [G01N2035/103](#) ;
[G01N2035/1058](#) ;
[G01N2035/106](#)
- PA - BECKMAN INSTRUMENTS INC [US]
- TI - Coordinated control of stepper motors
- AB - An automated multi-purpose analytical chemistry processing center and **laboratory** work station having a **movable** table for supporting microtiter plates and other fluid receptacles, a **movable** arm, and a modular **mobile** pod affixed for reciprocal **movement** along the arm. The workstation combines into a single programmable system the capabilities for automation of a wide range of bioanalytical procedures including, not only sample pipetting, serial dilution, reagent additions, mixing, reaction timing and similar known manual procedures, but also programmable spectrophotometric measurements and other physical parameters, further processing based on these measurements and automatic data recording. The work station is adapted to transfer, dispense, and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using

an interchangeable modules having one or a selected plurality of nozzles. Affixed to the modules nozzles are disposable pipettor tips, which are automatically picked up by the pod and ejected by a tip ejector mechanism at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

- 58/74** © EPODOC / EPO
- PN - [US5125748](#) A 19920630
- PR - US19910698756
19910510; US19860844374
19860326
- AP - US19910698756 19910510
- DT - *
- CT - [US4090791](#) A []; [US4495149](#) A [];
[EP0136002](#) A2 []; [EP0138205](#) A1 [];
[GB2089034](#) A []
- CCI - [G01N35/028](#) ; [G01N21/253](#)
- CCA - [G01N2035/103](#) ;
[G01N2035/1058](#) ;
[G01N2035/106](#)
- PA - BECKMAN INSTRUMENTS INC [US]
- TI - Optical detection module for use in an automated **laboratory** work station
- AB - An automated multi-purpose analytical chemistry processing center and **laboratory** work station having a **movable** table for supporting microtiter plates and other fluid receptacles, a **movable** arm, and a modular **mobile** pod affixed for reciprocal **movement** along the arm. The workstation combines into a single programmable system the capabilities for



automation of a wide range of bioanalytical procedures including, not only sample pipetting, serial dilution, reagent additions, mixing, reaction timing and similar known manual procedures, but also programmable spectrophotometric measurements and other physical parameters, further processing based on these measurements and automatic data recording. The work station is adapted to transfer, dispense, and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using an interchangeable modules having one or a selected plurality of nozzles. Affixed to the modules nozzles are disposable pipettor tips, which are automatically picked up by the pod and ejected by a tip ejector mechanism at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

PN - [US5108703](#) A 19920428

PR - US19910698649
19910510; US19890383299
19890720; US19860844374
19860326

AP - US19910698649 19910510

DT - *; Rep

CT - || STSE (A)
[US4478094](#) A 19841023 [
] (SALOMAA KARI [US], et al)

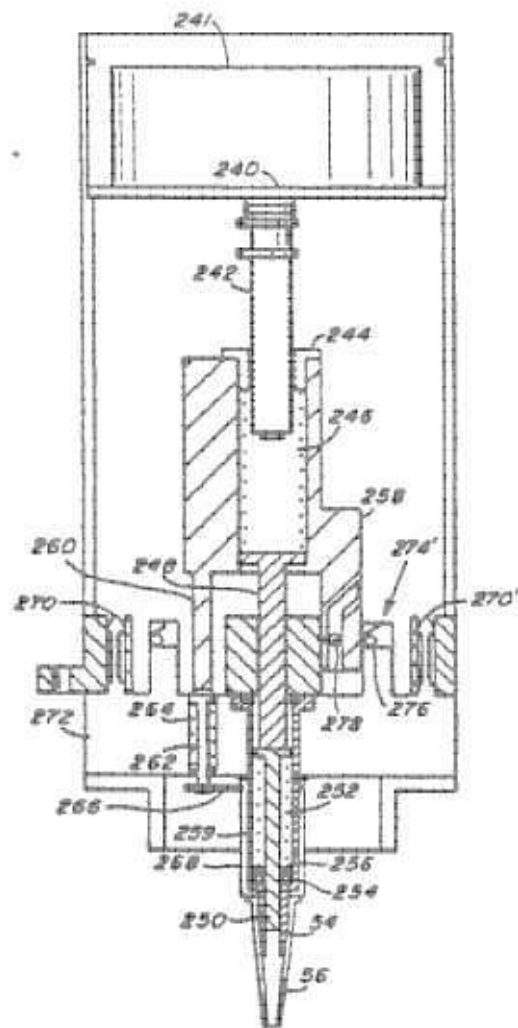
CCI - [G01N21/253](#) ; [G01N35/028](#)

CCA - [G01N2035/103](#) ;
[G01N2035/1058](#) ;
[G01N2035/106](#) ;
[Y10T436/113332](#)

PA - BECKMAN INSTRUMENTS INC [US]

TI - Automated multi-purpose
analytical chemistry processing
center and **laboratory** work
station

AB - An automated multi-purpose
analytical chemistry processing
center and **laboratory** work
station having a **movable** table
for supporting microtiter plates
and other fluid receptacles,
a **movable** arm, and a
modular **mobile** pod affixed for
reciprocal **movement** along the
arm. The work station combines
into a single programmable
system the capabilities for
automation of a wide range of
bioanalytical procedures
including, not only sample
pipetting, serial dilution, reagent
additions, mixing, reaction
timing and similar known
manual procedures, but also
programmable
spectrophotometric
measurements and other
physical parameters, further
processing based on these
measurements and automatic
data recording. The work station
is adapted to transfer, dispense,



and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using an interchangeable modules having one or a selected plurality of nozzles. Affixed to the modules nozzles are disposable pipettor tips, which are automatically picked up by the pod and ejected by a tip ejector mechanism at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

PN - [US5139744](#) A 19920818

PR - US19860844374
19860326; US19910698414
19910510; US19890383299
19890720

AP - US19910698414 19910510

DT - *

CT - [US3708264](#) A []; [US4478094](#) A [];
[US4510684](#) A []; [US4632631](#) A [];
[FR2123593](#) A5 []

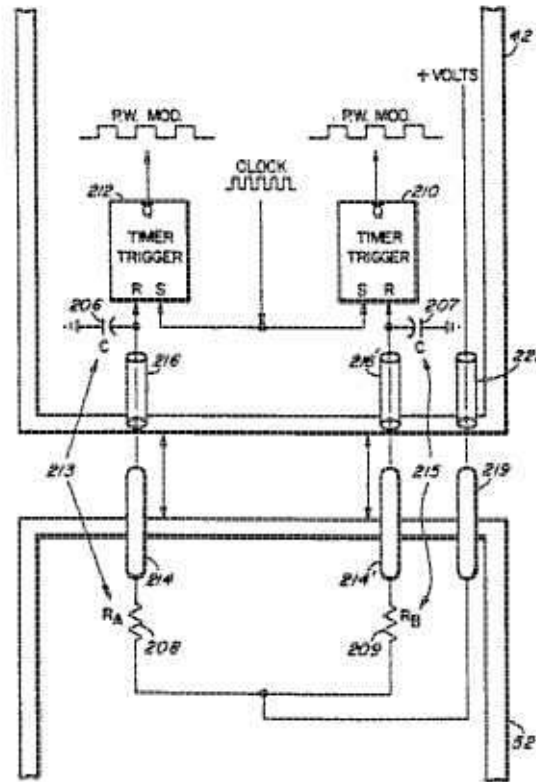
CCI - [G01N21/253](#) ; [G01N35/028](#)

CCA - [G01N2035/103](#) ;
[G01N2035/1058](#) ;
[G01N2035/106](#)

PA - BECKMAN INSTRUMENTS INC [US]

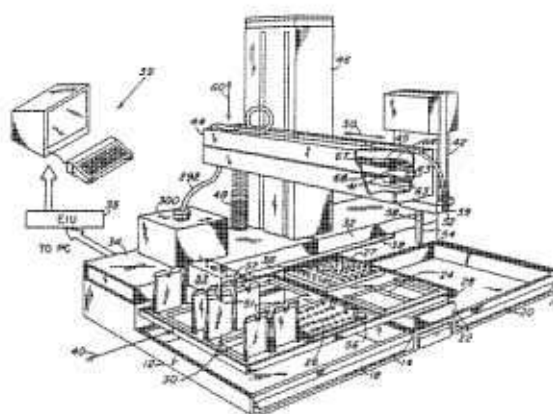
TI - Automated **laboratory** work station having module identification means

AB - An automated multi-purpose analytical chemistry processing center and **laboratory** work station having a **movable** table for supporting microtiter plates and other fluid receptacles, a **movable** arm, and a modular **mobile** pod affixed for reciprocal **movement** along the arm. The workstation combines into a single programmable system the capabilities for automation of a wide range of bioanalytical procedure including, not only sample pipetting, serial dilution, reagent additions, mixing, reaction timing and similar known manual procedures, but also programmable spectrophotometric measurements and other physical parameters, further processing based on these measurements and automatic data recording. The work station is adapted to transfer, dispense,



and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using an interchangeable modules having one or a selected plurality of nozzles. Affixed to the modules nozzles are disposable pipettor tips, which are automatically picked up by the pod and ejected by a tip ejector mechanism at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

- 61/74** © EPODOC / EPO
- PN - [US5104621](#) A 19920414
- PR - US19890383299
19890720; US19860844374
19860326
- AP - US19890383299 19890720
- DT - *: Rep
- CT - || STSE (A)
[US3708264](#) A 19730102 [
] (JOTTIER C);
[US4090791](#) A 19780523 [
] (SIDDIQI IQBAL, et al);
[US4265855](#) A 19810505 [
] (MANDLE RICHARD M, et al);
[US4313735](#) A 19820202 [
] (YAMASHITA KATSUJI, et al);
[US4478094](#) A 19841023 [
] (SALOMAA KARI [US], et al);
[US4495149](#) A 19850122 [
] (IWATA TOYOTARO [JP], et al);



[US4558946](#) A 19851217 [
] (GALLE KEVIN [US], et al);
[US4629703](#) A 19861216 [
] (UFFENHEIMER KENNETH F [US]);
[US4727033](#) A 19880223 [
] (HIJIKATA KAZUO [JP], et al);
[EP0136002](#) A2 19850403 [
] (EKHOLM PERTTI, et al);
[EP0138205](#) A1 19850424 [
] (FRANKEL ARTHUR EDWARD, et
 al);
[GB2089034](#) A 19820616 []

CTNP - [] Zymark Technical Brief
 Laboratory Robotics for
 Chemistry
 and Biotechnology, Jun. 1985
 [] Beckman Biomek 1000
 Automated Laboratory Work
 Station 1986

CCI - [G01N21/253](#) ; [G01N35/028](#)

CCA - [G01N2035/103](#) ;
[G01N2035/1058](#) ;
[G01N2035/106](#) ;
[Y10T436/113332](#)

PA - BECKMAN INSTRUMENTS INC [US]

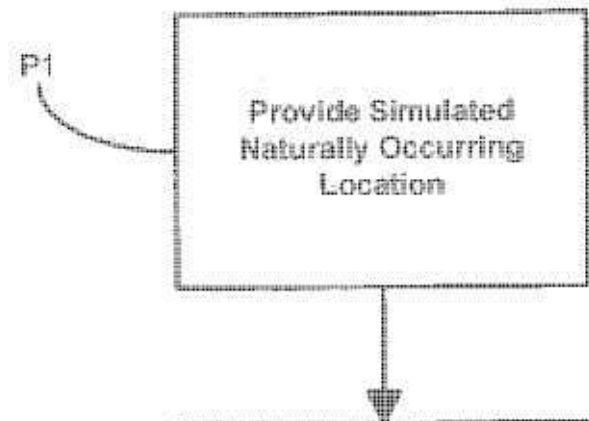
TI - Automated multi-purpose
 analytical chemistry processing
 center and **laboratory** work
 station

AB - An automated multi-purpose
 analytical chemistry processing
 center and **laboratory** work
 station having a **movable** table
 for supporting microtiter plates
 and other fluid receptacles,
 a **movable** arm, and a
 modular **mobile** pod affixed for
 reciprocal **movement** along the
 arm. The workstation combines
 into a single programmable
 system the capabilities for
 automation of a wide range of
 bioanalytical procedures
 including, not only sample
 pipetting, serial dilution, reagent
 additions, mixing, reaction
 timing and similar known
 manual procedures, but also

programmable spectrophotometric measurements and other physical parameters, further processing based on these measurements and automatic data recording. The work station is adapted to transfer, dispense, and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using an interchangeable modules having one or a selected plurality of nozzles. Affixed to the modules nozzles are disposable pipettor tips, which are automatically picked up by the pod and ejected by a tip edjector mechanism at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

62/74 © EPODOC / EPO
PN - [US2003148252](#) A1 20030807

PR - US20020273646
20021018; US20020061137
20020201



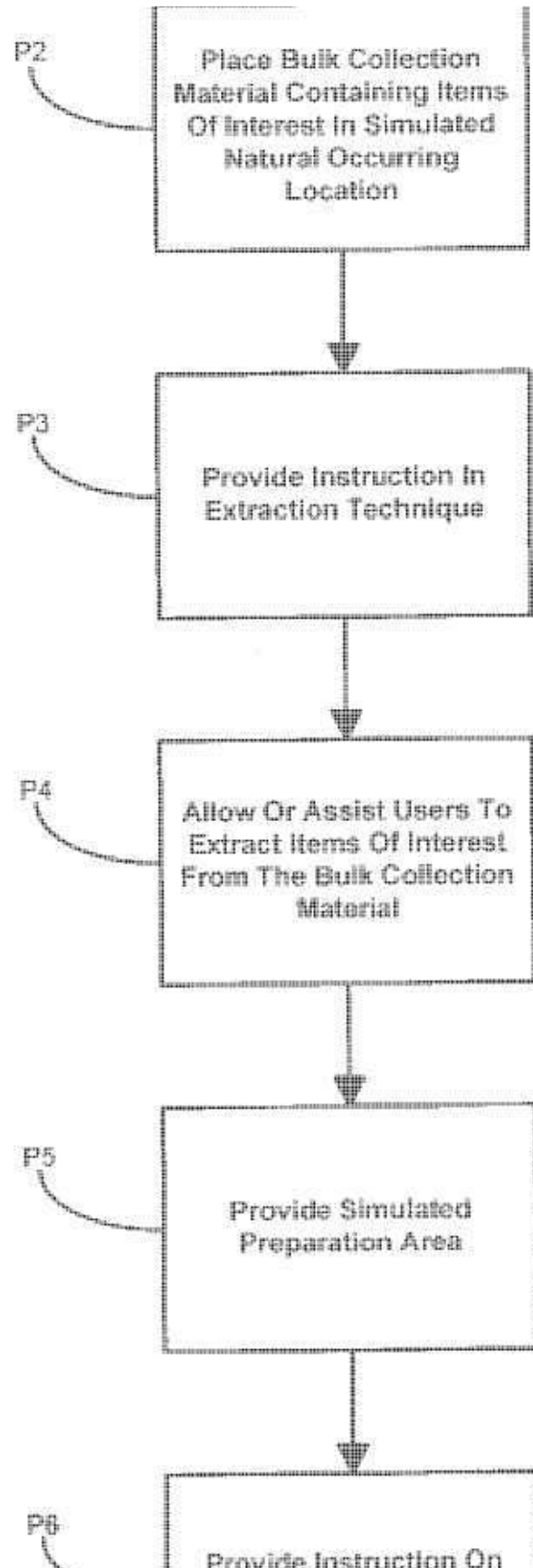
AP - US20020273646 20021018

DT - **

CCI - [G09B23/40](#)

TI - **Mobile educational** systems and methods relating to fossils

AB - Systems and methods for **teaching** subjects related to the collection and preparation of collectible samples, such as fossils. In one exemplary embodiment, a **mobile** quarry, or "dig" is provided where students may collect samples, recreating the experience of fieldwork. **Instruction** on the collection of samples may be given during collection. A student may take a collected sample to a provided learning center, or preparation **laboratory**, is provided to prepare the sample for study or **display**. **Instruction** on the preparation of the sample and what may be learned from the sample may be provided at the same time



Preparing Items Of
Interest

[illegible]

CT - || R141 (A1)

US2004239640 A1 []

AB

- An integrated **teaching** base station, especially at least two interactive digital **display teaching** base stations located at different **teaching** and training sites, the one within is a first personal digital **display** base system, the other one at a remote terminal is the second personal digital **display** base system. Via broadband internet connection, **teaching** materials can be transmitted among the interactive digital **display teaching** base stations and can be accessed and displayed at any time. The **teaching** base stations can be further combined with an audio/video surveillance module, an audio/video data integration module and a

network audio/video data communication module to form the interactive digital **display** audio/video **teaching** base station that can be used to record and store **teaching** data at the first personal digital data base system. Multimedia **mobile** communication device can be used to connect the interactive digital **display** audio/video **teaching** base station so as to observe the class at the **teaching** and training sites (S) in order to enhance understanding and communication. In addition, it can be used to establish a terrarium module, an aquatic module, a zoology module, etc, at the **teaching** and training site (S). This together with the interactive digital **display** audio/video **teaching** base station forms an interactive digital **display** audio/video **lab** environment **teaching** base station. A remote second personal digital data base system connects with multiple labs, operation room for clinical **teaching**, etc. In this way, open and detailed observations and discussions can be conducted to promote the best results in observation, research and **teaching**.

PN - [WO8706008](#) A2 19871008

PNFP - WO8706008 A3 19871105

PR - US19860844374 19860326

AP - WO1987US00501 19870305

DT - *; Rep

CT - |EP| ISR (A3)
[US4495149](#) A [];
[EP0136002](#) A2 [];
[EP0138205](#) A1 [];
[GB2089034](#) A [];
[US4090791](#) A []

CCI - [G01N21/253](#) ; [G01N35/028](#)

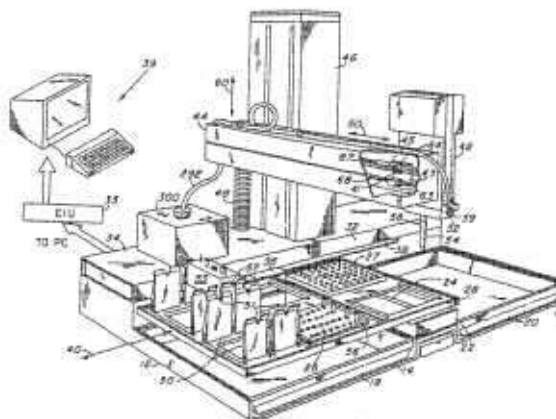
CCA - [G01N2035/103](#) ; [G01N2035/106](#)

PA - (A2 A3)
 BECKMAN INSTRUMENTS INC [US]

TI - (A2)
 AUTOMATED MULTI-PURPOSE
 ANALYTICAL CHEMISTRY
 PROCESSING CENTER
 AND **LABORATORY** WORK
 STATION

- (A3)
 AUTOMATED MULTI-PURPOSE
 ANALYTICAL CHEMISTRY
 PROCESSING CENTER
 AND **LABORATORY** WORK
 STATION

AB - (A2)
 An automated multi-purpose
 analytical chemistry processing
 center and **laboratory** work
 station having a **movable** table
 (28) for supporting microtiter
 plates (27) and other fluid
 receptacles, a **movable** arm (44),
 and a modular **mobile** pod (42)
 affixed for reciprocal **movement**
 along the arm (44). The
 workstation combines into a
 single programmable system the
 capabilities for automation of a
 wide range of bioanalytical
 procedures including, not only
 sample pipetting, serial dilution,
 reagent additions, mixing,
 reaction timing and similar
 known manual procedures, but



also programmable spectrophotometric measurements and other physical parameters, further processing based on these measurements and automatic data recording. The work station is adapted to transfer, dispense, and aspirate liquid from one location to another automatically in accordance with user programmed **instructions**. The work station is capable of measuring physical characteristics of selected samples and performing experimental assays in a closed loop manner in accordance with those measurements. Fluid is dispensed and aspirated using an interchangeable modules (52) having one or a selected plurality of nozzles (54). Affixed to the modules nozzles are disposable pipettor tips (56), which are automatically picked up by the pod (42) and ejected by a tip ejector mechanism (58) at the control of the user. Additional modules may be used to perform Measurement Functions. The work station is designed for interactive connection with a remote **computer**.

65/74 © EPODOC / EPO

PN - [SG130065](#) A1 20070320

PR - SG20050054770 20050831

AP - SG20050054770 20050831

DT - I

PA - TSENGHSIN-TUNG

TI - INTEGRATED **TEACHING** BASE STATION

AB - An integrated **teaching** base station, especially at least two interactive digital **display teaching** base stations located at different **teaching** and training sites, the one within is a first personal digital **display** base system, the other one at a remote terminal is the

second personal digital **display** base system. Via broadband internet connection, **teaching** materials can be transmitted among the interactive digital **display teaching** base stations and can be accessed and displayed at any time. The **teaching** base stations can be further combined with an audio/video surveillance module, an audio/video data integration module and a network audio/video data communication module to form the interactive digital **display audio/video teaching** base station that can be used to record and store **teaching** data at the first personal digital data base system. Multimedia **mobile** communication device can be used to connect the interactive digital **display audio/video teaching** base station so as to observe the class at the **teaching** and training sites in order to enhance understanding and communication. In addition, it can be used to establish a terrarium module, an aquatic module, a zoology module, etc, at the **teaching** and training site (S). This together with the interactive digital **display audio/video teaching** base station forms an interactive digital **display audio/video lab environment teaching** base station. A remote second personal digital data base system connects with multiple labs, operation room for clinical **teaching**, etc. In this way, open and detailed observations and discussions can be conducted to promote the best results in observation, research and **teaching**.

66/74 © EPODOC / EPO

PN - [RU2313831](#) C1 20071227
 PR - RU20060123584 20060703
 AP - RU20060123584 20060703
 DT - I
 PA - VOENNO KOSM AKADEMIJA IM A F M [RU]
 TI - **TEACHING** DEVICE FOR DEMONSTRATING FIRST MAXWELL EQUATION
 AB - FIELD: physics, possible use in **laboratory** practicum of physics course. ^ SUBSTANCE: device contains two flat coils, position in front of and parallel to each other, connected serially to generator of **sound** frequency. Both coils are mounted on a support, on which scale with points is positioned. **Movable** platform **moves** across the support between coils along the scale with points. Measuring toroidal coil is mounted on **mobile** platform at the level of axis of two coils and at even distance from them in such a way, that its axis coincides with direction of intensity vector of electric field created by alternating magnetic field of both coils. Indicator of position of toroidal measuring coil is positioned on **moving** platform and coincides with axis of measuring toroidal coil. Input clamps of EMF recorder are connected to contacts of measuring toroidal coil. Drive with belt transmission is fastened to a support and **moves mobile** platform between aforementioned coils along the scale with points. Supporting toroidal coil is mounted on support between coils at level of their axis in such a way, that axes of measuring toroidal coil and supporting toroidal coil are parallel. Phase difference meter is included, first input of which is connected to contacts of measuring toroidal coil, and second input - to contacts of supporting toroidal coil. ^ EFFECT: expanded demonstrational capabilities. ^ 6 dwg

67/74 © EPODOC / EPO

PN - [RU2005117288](#) A 20061120
 PNFP - RU2292601 C1 20070127

PR - RU20050117288 20050606

AP - RU20050117288 20050606

DT - I

PA - (C1)
VOENNO KOSM AKADEMIJA IM A F M [RU]

TI - (C1)
INSTALLATION FOR STUDYING AN ELECTROMAGNETIC FIELD

AB - (C1)
FIELD: the invention refers to **educational** apparatus and may be used in **laboratory** practical work on physics course for studying and deepening knowledge of physical laws and phenomena. ^ SUBSTANCE: the installation has Helmholtz rings installed on a stand and attached in-series to a **sound** frequency generator, a measurer of phase difference, a switch, a recorder of electromotive force, a scale with divisions in degrees transversal to this axle, a **mobile** indicative coil, fixed on the axle of revolution with a handle and an arrow, and its outputs are connected with the first input of the measurer of difference, (n-1) fixed indicative coils which have different diameter, envelop the **mobile** indicative coil and installed on the stand in the middle between the Helmholtz rings in such a manner that their axles coincide with the axle of the Helmholtz rings. On the last fixed indicative coil a scale with divisions in degrees is fastened and an axle of revolution with a handle and an arrow the scale with divisions in degrees is fastened and an axle of revolution with a handle and an arrow is installed transversely to the axle of Helmholtz rings. ^ EFFECT: expands the field of studying. ^ 7 dwg

68/74 © EPODOC / EPO

PN - [JP2003271343](#) A 20030926

PNFP - JP4067322B B2 20080326

PR - JP20020076250 20020319

AP - JP20020076250 20020319

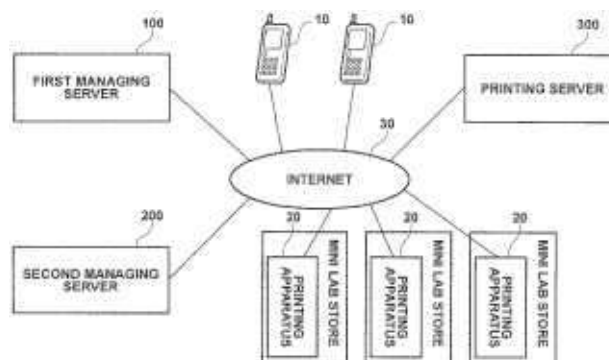
DT - I

CCI - [H04N1/00132](#) ; [H04N1/00137](#) ;
[H04N1/00143](#) ; [H04N1/00151](#) ;
[H04N1/00164](#) ; [H04N1/00167](#) ;
[H04N1/00188](#) ; [H04N1/00244](#)

CCA - [H04N2201/3242](#) ;
[H04N1/00307](#) ;
[H04N2201/0039](#) ;
[H04N2201/0098](#) ;
[H04N2201/3249](#) ;
[Y10S707/99933](#)

FI - B41J29/38&Z; G06F13/00&547V;
G06F3/12&A; G06F3/12&C;
G06F3/12&305; G06F3/12&353;
G06F3/12&368; G06F3/12&372;
G06F3/12&387; G06F3/12&392

FT - 2C061/AP01; 2C061/HQ17;



5B021/AA01; 5B021/BB01;
5B021/BB02; 5B021/EE02;
5B084/AA02; 5B084/AA06;
5B084/AA26; 5B084/AB06;
5B084/AB30; 5B084/AB31;
5B084/AB36; 5B084/AB37;
5B084/AB39; 5B084/BA03;
5B084/BB01; 5B084/CD02;
5B084/CD09; 5B084/CF14;
5B084/DB04

- PA - (A)
FUJI PHOTO FILM CO LTD
- TI - (A)
IMAGEMANAGEMENTSERVER,
IMAGE **PRINT** SERVER AND IMAGE
SERVER SYSTEM
- AB - (A)
PROBLEM TO BE SOLVED: To
discriminate a service to manage
digital image data from a service
to execute **print**-associated
processing, and to maintain
convenience to a user.
- (A)
SOLUTION: When a user issues
a **print instruction** through
a **portable** telephone set 10,
the **print** processing part 156 of
a first management server 100 or
the **print** processing part 256 of
a second management server
200 transmit an URL address
indicating the storage place
of **print-instructed** image data
and the image ID of the image
data to a **print** server 300.
A **portable** telephone set 10 is
connected to the **print** server
300, and the **print** server 300 is
made to perform **print**-
associated processing. The **print**
server 300 makes a user set
a **print** condition through
the **portable** terminal 10, and
transmits the set **print** condition
and the image data downloaded
from the place indicated by the
transmitted URL address of the

image data to a **printer** 20 in a mini-**laboratory** store connected through a network to make the **printer** perform **printout** processing.

- (A)

COPYRIGHT: (C)2003,JPO

69/74 © EPODOC / EPO

PN - [JP2002101367](#) A 20020405

PR - JP20000287349 20000921

AP - JP20000287349 20000921

DT - I

FI - G03B19/02; G03B27/32&H; G03B27/46&Z; G06F3/00&651A; G06F3/048&651A; G06F3/12&N; G06F3/12&W; G06F3/12&303; G06F3/12&336; G06F3/12&343; G06F3/12&344; G06F3/12&345; G06F3/12&350; G06F3/12&353; G06F3/12&372; G06F3/12&392; G06T3/40; G06T3/40&A; H04N1/00&106B; H04N1/393; H04N101/00; H04N5/225; H04N5/225&F; H04N5/76; H04N5/76&B; H04N5/76&E; H04N5/765; H04N5/77; H04N5/91; H04N5/91&H; H04N5/91&J; H04N5/91&L

FT - 2H054/AA01; 2H106/BA55; 2H106/BH00; 5B021/AA30; 5B021/BB01; 5B021/PP08; 5B057/BA02; 5B057/BA23; 5B057/CA01; 5B057/CA08; 5B057/CA12; 5B057/CA16; 5B057/CB01; 5B057/CB08; 5B057/CB12; 5B057/CB16; 5B057/CC01; 5B057/CD05; 5B057/CH14; 5B057/CH20; 5C022/AA13; 5C022/AB68; 5C022/AC00; 5C022/AC01; 5C022/AC69; 5C052/AA11; 5C052/AC08; 5C052/FA02; 5C052/FA06; 5C052/FA07; 5C052/FA09; 5C052/FD07; 5C053/FA04; 5C053/FA08; 5C053/FA14; 5C053/GB36; 5C053/HA29; 5C053/HA40; 5C053/JA21; 5C053/LA11; 5C053/LA14; 5C062/AA01; 5C062/AA37; 5C062/AB13; 5C062/AB17; 5C062/AB22; 5C062/AB25; 5C062/AB38; 5C062/AB42; 5C062/AC02; 5C062/AC04; 5C062/AC05; 5C062/AC25; 5C062/AC27; 5C062/AC34; 5C062/AE03; 5C062/AE08; 5C062/AE16; 5C062/AF14; 5C076/AA22; 5C076/BA02; 5C076/BA03; 5C076/BA05; 5C076/BA06; 5C076/CB01; 5C122/DA04; 5C122/EA68; 5C122/FH07; 5C122/FH08; 5C122/FK08; 5C122/FK39; 5C122/GB02; 5C122/GC04; 5C122/GC17; 5C122/GC38; 5C122/GC52; 5C122/HA01; 5C122/HA09; 5C122/HB01; 5E501/AA02; 5E501/AA06; 5E501/AA14; 5E501/AA30; 5E501/AB03; 5E501/AB16; 5E501/AC15; 5E501/AC16; 5E501/AC33; 5E501/BA05; 5E501/CA03; 5E501/CA04; 5E501/CB02; 5E501/CC03; 5E501/EA02; 5E501/FA14; 5E501/FA15; 5E501/FB04; 5E555/AA04; 5E555/BA18; 5E555/BB18; 5E555/BC17; 5E555/DB54; 5E555/DC01; 5E555/FA01

PA - FUJI PHOTO FILM CO LTD

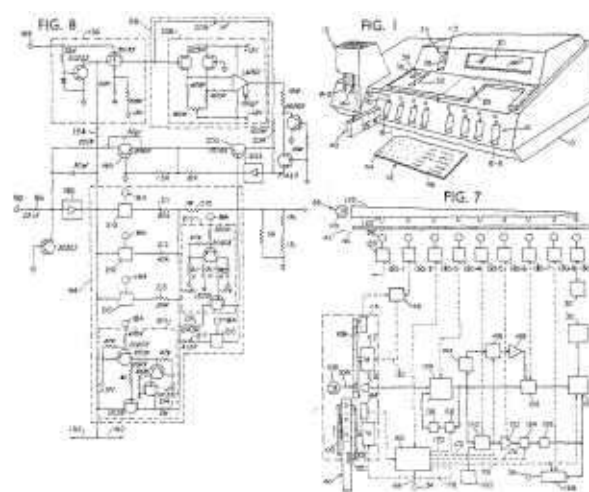
TI - DIGITAL CAMERA AND **PRINTING** SYSTEM

AB - PROBLEM TO BE SOLVED: To provide a digital camera and a **printing** system with which a photographed image can easily be looked at even without going through a **laboratory** shop. SOLUTION: Image data obtained by the photographing of an image picking up part 22 are converted into image data of relative low resolution or thumbnail image data such as image data of a small image size and stored in a thumbnail image storing part 30. A discrimination/**instruction** data generating part 36 prepares **print instruction** data and outputs the **print instruction** data to a **portable** telephone part 38, and the part 38 performs **printing** by transferring the data to **print** equipment 12 while making the **print**

instruction data correspond to the image data. In the case of confirming photographed images later, thumbnail images are sequentially displayed on a liquid crystal displaying part 32 by inputting an **instruction** to confirm the photographed images to a key inputting part 40.

70/74 © EPODOC / EPO

PN - [GB1335483](#) A 19731031
 PR - US19700045758 19700612
 AP - GB19710015284 19710517
 DT - **
 CCI - [G01N35/00594](#)
 CCA - [G01N35/00693](#) ;
 [G01N2035/0436](#)
 PA - INSTRUMENTATION LABOR INC
 TI - ANALYTICAL SYSTEMS
 AB - 1335483 Logarithmic amplifiers
 INSTRUMENTATION **LABORATORY**
 Inc 17 May 1971 [12 June 1970]
 15284/71 Heading G4G [Also in
 Divisions G1 and G3] Apparatus
 for automatic photometric
 analysis of chemical and
 biological (particularly blood)
 samples utilizes a number of
 cuvette assemblies containing
 different reagents for performing
 different tests on the samples,
 and associated with each
 container a record, e.g. an
 information bearing card, which
 specifies the nature of the
 reagent and the type of analysis
 to be performed and which
 bears **instructions** for setting
 operating parameters of the
 analysis apparatus &c. The
 photometric analysis apparatus
 comprises a slot 26 for receiving
 a cuvette assembly 40, a
 digital **display** 30 and a card
 reader. Also associated with the
 apparatus are dispensing and
 incubation apparatus 12, 16. A
 cuvette assembly comprises
 three chambers one or more of
 which contain a reagent
 appropriate to a particular test.



The record card 44 for the test is inserted into the reader 28 whose first channel 130-1, Fig. 7, reads out dispensing **instructions**, the cuvette assembly at this time being mounted beneath dispenser nozzles 14, to receive the correct measures of test samples, standardizing liquid &c. The cuvette assembly is then inserted into one of incubator wells 18 appropriate to the test, coding tabs on the handle part of the assembly being sensed photo-electrically to initiate the appropriate one of three timing cycles. The construction of the cuvette assembly is described in detail, Figs. 2-4 (not shown), as is the photo-electric code reader for the incubator, Figs. 5, 6 (not shown). The cuvette assembly, after incubation (which may involve two separate periods), is then inserted in slot 26, and the photometric analysis cycle commenced by pressing start button 34. The card reader comprises a light source 28 and light distribution system 120 providing fifty output channels 122 in a 5 x 10 matrix. The information from the card is read into ten channels, one of which senses correct card positioning. Apart from 130-1 for the dispenser, and 130-2 to control the filter to be used in the photometer path, the channels are used to set and adjust circuit components and parameters in accordance with the particular test. The mode of operation is read out on channel 130-3 and is applied to control logic 162 which controls the operation of the circuit appropriately. There are three

main modes of operation: "standard", "absolute", and "rate". The standard mode involves producing a measure of absorbance of the sample as compared with that of a standardizing liquid. This involves adding the latter liquids to the reagent already contained in two of the chambers of the cuvette. The interior of slot 26 is provided with a motor driven shuttle under the control of circuit 162, to **move** the three sample chambers of the cuvette consecutively into the light path. A slotted coding disc 320 is provided to identify the cuvette position. In this mode the first chamber is empty and is used for zeroing the logarithmic converter circuit 134 which converts the absorption signal from the photodiode 110 into one of absorbance. Switch 136 is closed by circuit 162 to allow feedback via storage circuit 138. The standard solution is then **moved** automatically into the light path, at the same time switch 154 being closed (switch 150 is closed and the gain of amplifier 152 is set by channels 130-5 and 130-6 respectively). The output of logarithmic circuit 134 thus represents the difference of the absorbances of the standard and blank chambers, and this is stored in 156. When the third, the test sample chamber, is **moved** into the light path, switch 154 is opened and the circuit 134 output, representing the difference of the test sample and the blank, is fed to digital voltmeter 142 for comparison with the standard measure from 156. The ratio is displayed at 30.

In the absolute mode, the sample absorbance is compared with a precision reference voltage 160, a standardizing liquid not being used. The measure obtained at voltmeter 142 may be compared with limit values read off from the record card on channel 130-8 to error logic 158 which produces an alarm signal from lamp 36 if it is outside the limits. The mode for sensing the rate of change of a characteristic of a sample uses only one chamber of the cuvette and involves differentiating the linearly increasing output of the converter 134 by device 144, other parts of the circuit being switched out. The circuit for this test also includes filter 146 and amplifier 148. The circuit of Fig. 1 is detailed in Figs. 8 and 9 (not shown) and uses solid state devices including field effect transistors and operational amplifiers. In Fig. 8 a logarithmic converter transistor 196 is connected in the feedback loop around amplifier 188 for photo-sensor output applied at 180. Circuit 198 comprises a bank of resistors 211 to 214 which are selectively switched in under the programme control at points 184, to alter the volts per decade response of the system. A list of tests which may be carried out is given and mentions determination of glucose, urea, h [mu]moglobin, protein, cholesterol, bilirubin, LDH, GOT, CPK and alkaline phosphatase.

PN - [EP1783598](#) A1 20070509

PR - EP20050023903 20051102

AP - EP20050023903 20051102

DT - *; Rep

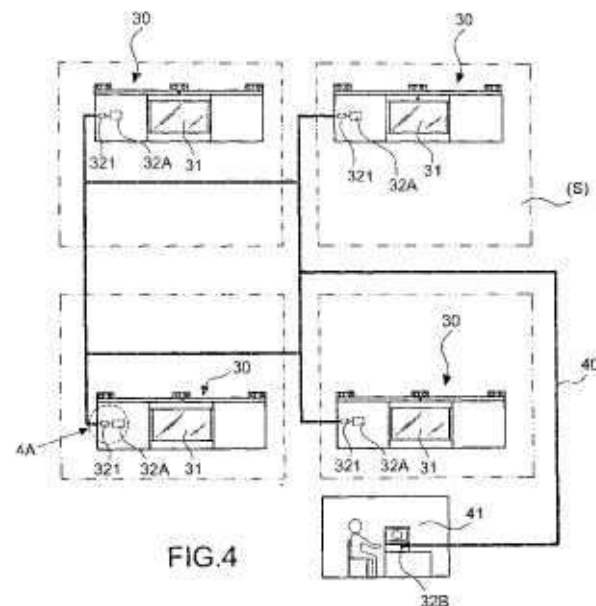
CT - || STSE (A1)
[DE19952939](#) A1 20010510
[X] (TUTOGEN MEDICAL GMBH [DE])
[X] 1-8
* the whole document *;
[WO03025816](#) A1 20030327
[A] (XINICS INC [KR], et al)
[A] 1-8
* abstract *

CCI - [G09B5/00](#) ; [G09B7/00](#) ;
[H04N7/18](#)

PA - TSENG HSIN-TUNG [TW]

TI - Integrated **teaching** base station

AB - An integrated **teaching** base station, especially at least two interactive digital **display teaching** base stations (30) located at different **teaching** and training sites (S), the one within is a first personal digital **display** base system (32A), the other one at a remote terminal is the second personal digital **display** base system (32B). Via broadband internet connection (40), **teaching** materials can be transmitted among the interactive digital **display teaching** base stations (30) and can be accessed and displayed at any time. The **teaching** base stations can be further combined with an audio/video surveillance module (60), an audio/video data integration module (70) and a network audio/video data communication module (80) to form the interactive digital **display** audio/video **teaching** base station (50) that can be used to record and store **teaching** data at



the first personal digital data base system (32A).
 Multimedia **mobile** communication device (94) can be used to connect the interactive digital **display** audio/video **teaching** base station (50) so as to observe the class at the **teaching** and training sites (S) in order to enhance understanding and communication. In addition, it can be used to establish a terrarium module (102a), an aquatic module (102b), a zoology module (102c), etc, at the **teaching** and training site (S). This together with the interactive digital **display** audio/video **teaching** base station (50) forms an interactive digital **display** audio/video **lab** environment **teaching** base station. A remote second personal digital data base system (32B) connects with multiple labs, operation room for clinical **teaching**, etc. In this way, open and detailed observations and discussions can be conducted to promote the best results in observation, research and **teaching**.

72/74 © EPODOC / EPO

PN - [CN2921992Y](#) Y 20070711

PR - CN2006297362U 20060622

AP - CN2006297362U 20060622

DT - I

PA - UNIV WUHAN TECH [CN]

TI - Experiment auxiliary studying machine for students

AB - The utility model relates to an experiment auxiliary studying machine for students, comprising a microprocessor MCU, a liquid crystal **display**, an input device, a **mobile** memory card interface and external memory card device, a USB interface arranged on the MCU data bus, a network communication chip and network interface, an IIS interface chip and a standard serial port interface. The utility model is characterized in that: the microprocessor MCU is connected with a **laboratory** apparatus data output

interface by a data communication interface (serial port or USB interface);the microprocessor MCU is connected with a **laboratory** network by the network interface; and the **laboratory** network is also connected with a **teachers** terminal server. The utility model can make each **teaching** segment including the experimental stage and so on gain global experimental guiding in class, can upload experimental data to the server to provide check for **teachers**, can intelligently identify right and wrong, error and precision of experimental results, and reminds students whether to rework experiments, and also has the function of calling **teachers** and requesting to answer questions.

73/74 © EPODOC / EPO

- PN - [CN2143790Y](#) Y 19931013
- PR - CN1992239623U 19921031
- AP - CN1992239623U 19921031
- DT - I
- PA - HANGZHOU TIMER FACTORY [CN]
- TI - Effective timer capable of stopping running after alarm
- AB - The utility model discloses an effective timer capable of stopping running after alarm which relates to a mechanical timer, and the warning alarm of alarm **sound** is emitted according to predetermined time within 60 minutes. The utility model is mainly used for grasping time of a scientific research **laboratory**, a physiotherapy chamber in a hospital, a barber shop, a **school**, a family, etc. The effective timer capable of stopping running after alarm which comprises an upper cover, a fixing plate, a base and a machine core is characterized in that a stop mechanism which is **movably** connected by a tableting, a rivet and a spring is arranged on a clamping plate between an alarm strip wheel assembly and a hair spring balance assembly. The utility model not only has the advantages that the alarm starting is reliable, the alarm system stops running immediately after alarm, the star-shaped on a plastic casing can be directed towards 'zero' position, the appearance is beautiful, etc.

74/74 © EPODOC / EPO

- PN - [CA2524985](#) A1 20070430
- PR - CA20052524985 20051031
- AP - CA20052524985 20051031
- DT - *
- CCI - [G09B5/08](#)
- PA - TSENG HSIN-TUNG [TW]
- TI - INTEGRATED **TEACHING** BASE STATION
- AB - An integrated **teaching** base station, especially at least two interactive digital **display teaching** base stations located at different **teaching** and training sites, the one within is a first personal digital **display** base system, the other one at a remote terminal is the second personal digital **display** base system. Via broadband internet connection, **teaching** materials can be transmitted among the interactive digital **display teaching** base stations and can be accessed and displayed at any time. The **teaching** base stations can be further combined with an audio/video surveillance module, an audio/video data integration module and a network audio/video data communication

module to form the interactive digital **display** audio/video **teaching** base station that can be used to record and store **teaching** data at the first personal digital data base system. Multimedia **mobile** communication device can be used to connect the interactive digital **display** audio/video **teaching** base station so as to observe the class at the **teaching** and training sites (S) in order to enhance understanding and communication. In addition, it can be used to establish a terrarium module, an aquatic module, a zoology module, etc, at the **teaching** and training site (S). This together with the interactive digital **display** audio/videoteaching base station forms an interactive digital **display** audio/video **lab** environment **teaching** base station. A remote second personal digital data base system connects with multiple labs, operation room for clinical **teaching**, etc. In this way, open and detailed observations and discussions can be conducted to promote the best results in observation, research and **teaching**.

[SS 10]