

Utility Models

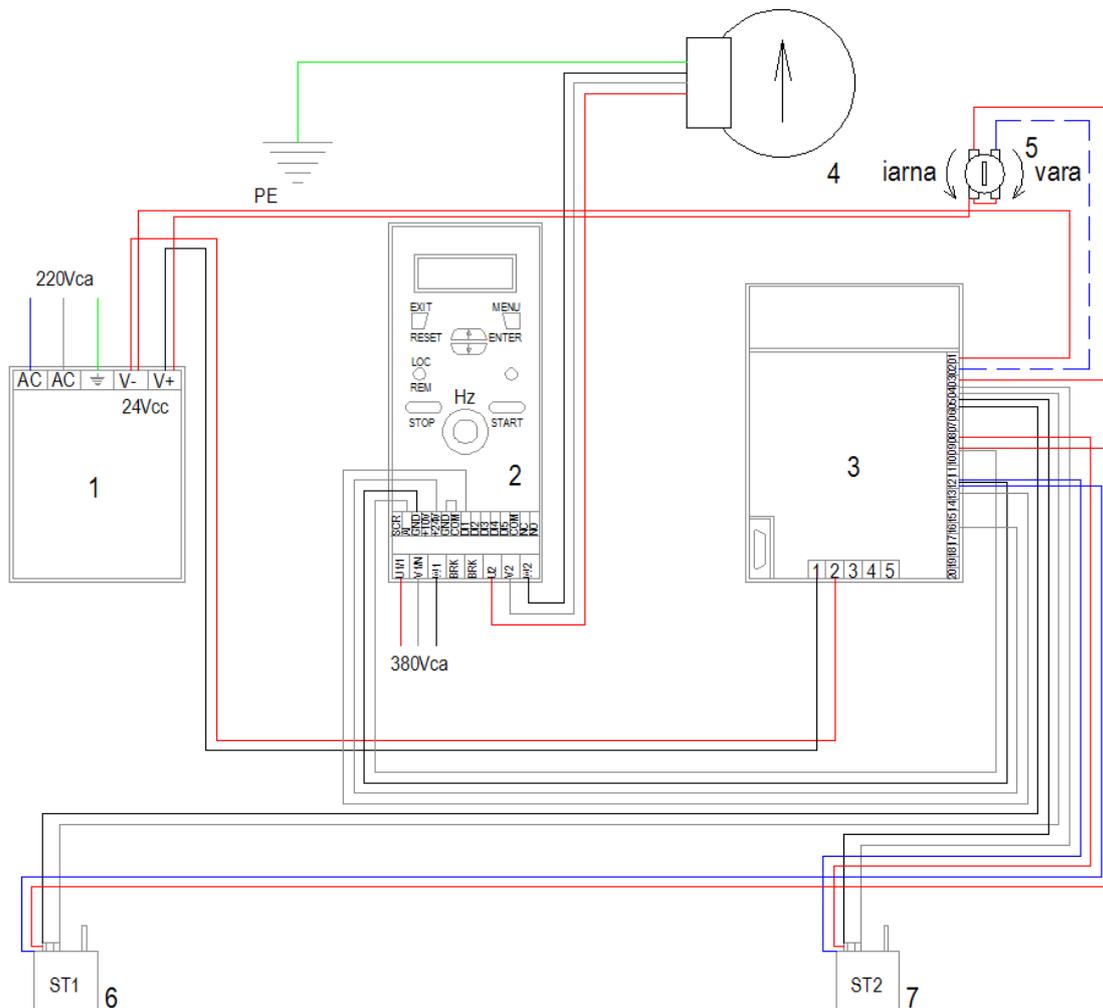
INVENTOR: SEBARCHIEVICI CĂLIN

AUTOMATIC CONTROL DEVICE FOR HEATING SYSTEMS

The technical problem solved by the invention is to provide a device for pump's speed control automatic adjustment based on monitoring the ambient temperature in order to optimize electrical and thermal energy in the system.

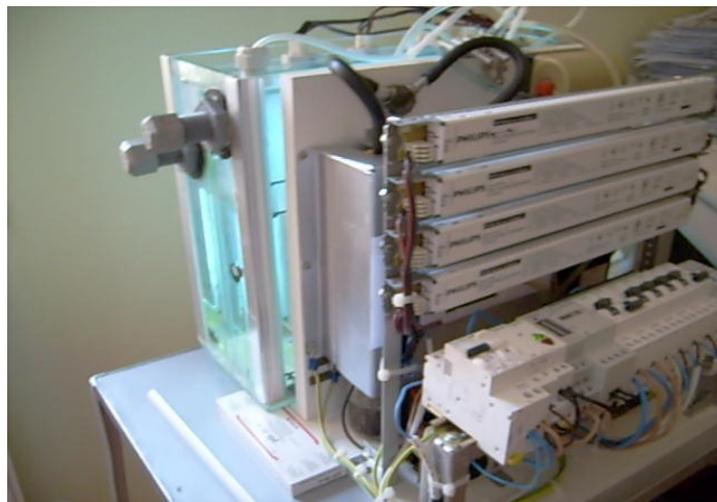
According to the invention, the automatic control device for heating systems ensures the speed control of the heating system supply pump through a programmable logic controller that uses information from interior and exterior temperature sensors. The command of the programmable logic controller is submitted to a frequency converter that commands the pump's speed and its start-stop function in order to reduce energy consumption. The automatic device for heating systems according to the invention has the following advantages:

- ensures the heating system optimization by automatic speed pump adjusting;
- provides thermal energy and electricity savings;
- leads to improved boiler efficiency (running on natural gas, oil or solid) that is used to prepare the thermal fluid for space heating;
- helps to improve the heat pump's (air-water, water-water or ground-water type) seasonal coefficient of performance.



INVENTOR: PAVEL ŞTEFAN

WASTE WATER DECONTAMINATION SYSTEM IN THE DENTAL UNIT



The invention concerns a system for the decontamination and treatment of waste water in the dental unit, water that is to be purged in the sewers. The technical problems to be solved regard the creation of a system that could, once attached to the dental unit, the collection of the contaminated waste water, its treatment and sterilization, and, finally, the evacuation of the water under hygienic and safety conditions. The system must perform the tasks simultaneously and efficiently.

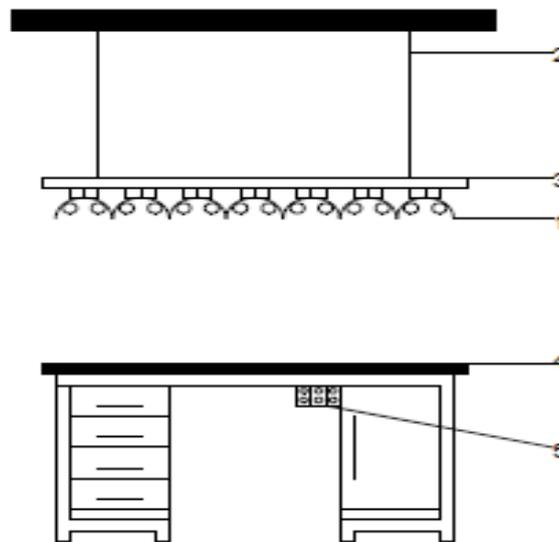
The newly invented system to perform the decontamination of waste water from the dental unit, is composed of an assembly of closed and segmented (divided) recipients that are equipped with baffles that allow the injection of a air and ozone mix into a first set of decontamination activation cells, to be followed by further decontamination by UV germ-killing lamps (C class) in the next activation cells; and finally, evacuated into the sewer system when the physical, chemical and microbiological parameters are reached.

The newly invented system for the decontamination of waste water from the dental unit presents the following advantages:

- Uses decontamination agents produces into the installation (ozone) and long term use devices (germ-killing UV lamps);
- The decontamination is efficient as it uses just approx. 1kW/hour electrical energy for 16 hours of functioning;
- The maintenance operations are very simple and require just the replacement of germ-killing UV lamps after 10,000-15,000 hours of functioning;
- The system can be easily monitored while working;
- Safety during functioning;
- Allows for the avoidance of environmental pollution resulting from the use of chlorine as disinfectant.

INVENTOR: PAVEL ȘTEFAN

LIGHTING SYSTEM FOR THE „CERAMIC ROOM” COMPARTMENT OF THE DENTAL LABORATORIES



The invention consists of a lighting system to be used in dental laboratories, in the compartment known as „ceramic room”, where the dental ceramic works are processed.

The technical problem the new system solves is how to obtain an E [lx] lighting and colour temperature in the „ceramic room” that can be adapted to dental works realized in dental laboratories

The new system consists of 7 lighting units with mirror disperser, highly efficient electronic ballast and fluorescent lamps with a color rendering index (Ra) of 94 and a temperature of color rendering of 5200°K. The control of the „ceramic room’s” lighting system is in three steps, in order to provide variable light according to technological needs.

The new system has the following advantages:

- Provides optimal light on the work surface, according to the technological process mastered by the dental technician;
- Simple electrical control over the lighting;
- Safe functioning;
- High energy efficiency;
- Simple maintenance requirements.

INVENTOR: NEICU MARIAN ȘTEFAN

ENGLISH LANGUAGE VOCAL INTERPRETER FOR ROMANIAN LANGUAGE SPEAKING USERS

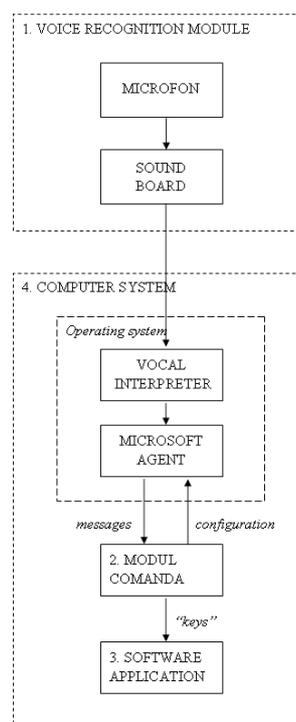
The invention field refers to systems through which a vocal interpreter of English language is used by non-speakers of English language (for example speakers of Romanian language) with the help of the emulation of a keyboard through a software application installed on a computer.

The technical aspect of the invention consists in the creation of a system that allows the simultaneous use of the computer keyboard with some vocal orders transposed with the help of a microphone and of an integrated computer program, in orders equivalent to those from the keyboard.

According to the invention, the English language vocal interpreter for Romanian language speaking users consists in a microphone connected to a computer system on which is installed a software which is configured in the system so as to acknowledge only a set of controls which are sent to the application by pressing the keys or by pressing some key combinations for the purpose of carrying out the desired action. Thus, a user who knows the approximate pronunciation of the symbols on the keyboard in the language for which the vocal interpreter was designed, can replace the key pressing with their pronunciation at a microphone connected to a software on which the respective vocal interpreter is installed. Other controls may be used which do not require an exact pronunciation in the language for which the vocal interpreter was made.

According to the invention the English language vocal interpreter for speakers of Romanian language has the following advantages:

- Does not require good knowledge of the English language
- The software module which is the control module can be easily integrated in existent application, in order to provide an alternative control system. Its activation is controlled by the user, therefore there is no risk of occurrence of undesired controls.
- There are no software licenses costs involved for the vocal interpreter, as a free vocal interpreter can cope with success with the requirements imposed by the above mentioned application module.



INVENTOR: DAN DANIEL

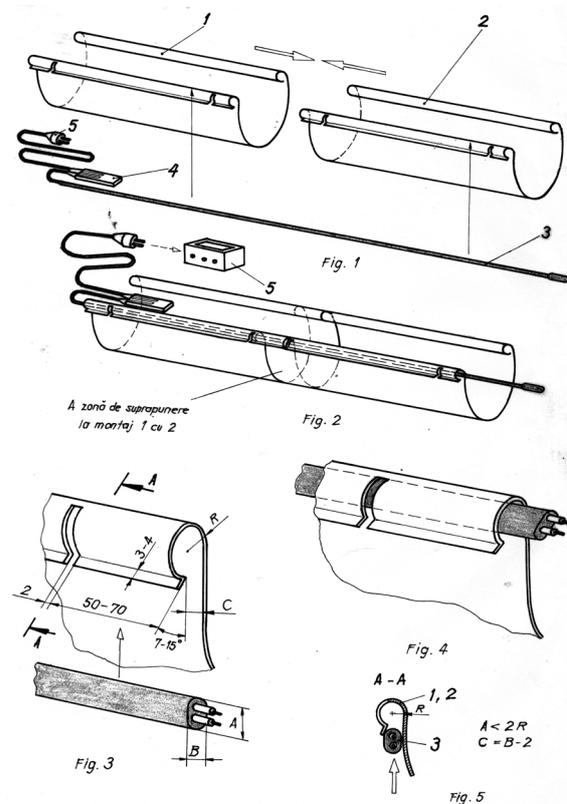
GUTTER WITH DE-ICING SYSTEM

The invention refers to a gutter with automatic or manually operated de-icing system for removing icicles formation, especially in areas susceptible to public access.

The gutter equipped with the de-icing system according to the invention prevents icicles formation at its edge by using a flexible de-icing kanthal cable which is inserted by clamping/clinching inside the specially designed and configured edge of the gutter. The gutter segments have an open circular edge with an opening angle which enables un-cumbersome insertion of the de-icing cable, and in the overlapping area of gutter segments a transversal semi-louver exists, thus avoiding stiffening of this overlapping area and maintaining the clamping/clinching insertion capacity on the entire length of the overlapped segmental gutter. The de-icing cable is equipped at one end with an ice and snow sensor and a connector to a de-icing central command unit which enables the automatic or manually operation of the de-icing system.

The gutter equipped with de-icing system according to the invention presents the following advantages:

- straightforward and cheap construction
- maximum efficiency by focussing the heat at the edge of the gutter, at the base of icicles formation
- does not require any supplemental mechanical fastening components to fix the de-icing cable
- it allows for automated or manually operation
- ensures uniform and simultaneous de-icing on the entire length of the gutter
- un-cumbersome installation and maintenance



INVENTOR: ȘERBAN VIOREL-AUREL

MANUFACTURING INSTALLATION OF CRUCIBLES FROM QUARTZ TUBES

The invention relates to a manufacturing installation of crucibles from quartz tubes used in the melting of metal alloys having high melting temperatures, or to the elaboration of amorphous alloys. According to the invention, the installation consists of a current generator converter type CTC (1) which supplies a transformer (2) and through this medium frequency currents are transmitted to a copper induction coil (3) which has inside a graphite sleeve (4) that plays the role of distributing and homogenize the thermal field generated by induction in the central axis of the inductor. Inside the graphite sleeve is introduced a quartz tube (5) which represent the preform that needs to be configured or reconditioned. It is fixed in position inside the graphite sleeve in working position through a mechanical fastening element (6) and is maintained in position or moved along the axis of the inductor by means of a guiding columns device (7). After fixing the quartz tube in working position, the heating is done by induction and when the optimal time for deformation is achieved the lower part is moved down and by means of a closing device (8) profiled in the active area supported on a stand (9), is obtained a truncated cone deformation of the quartz tube and at the same time the formation of a circular orifice or slot type.

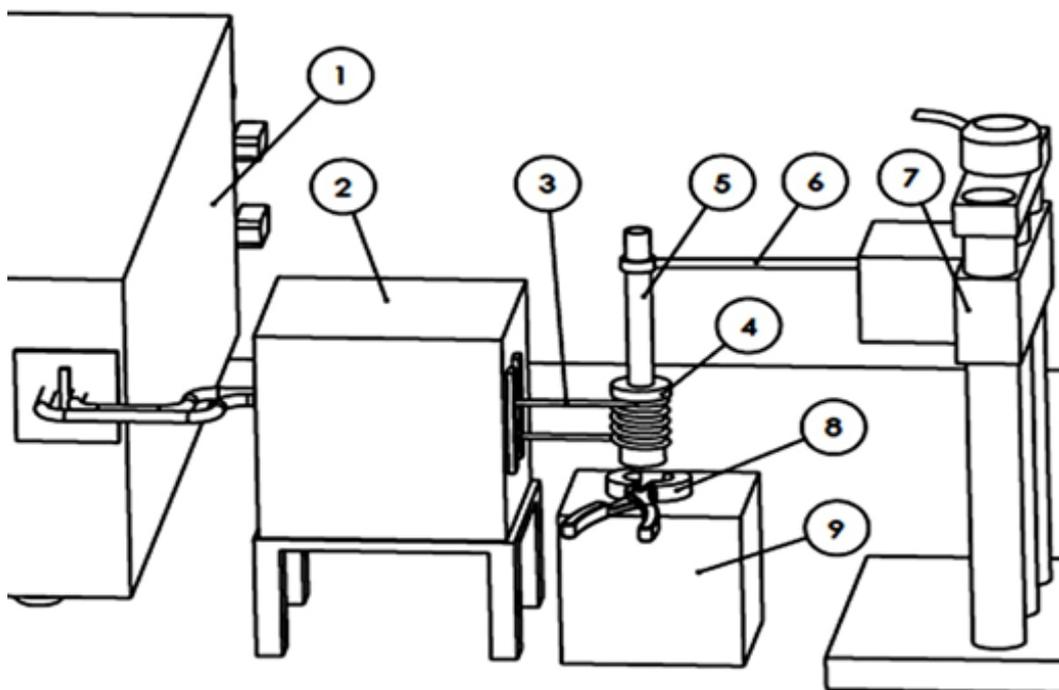


Fig 1. Installation overview