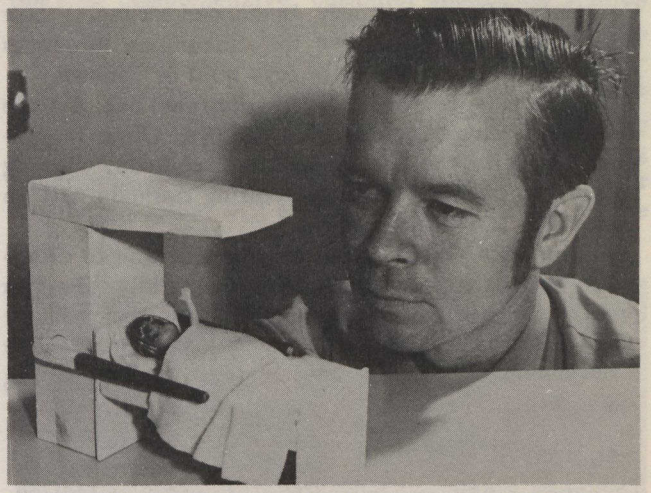
AIR BATH INVENTION

An Ottawa Defence Research Board chemist has invented a device called an "air bath", for use when a flow of clean air round an object or process is critical. The invention, a result of fuel-cell research, promises to be particularly useful in hospital operating rooms, for micro-electronics assembly procedures, in the packaging of convenience foods and for a variety of other activities requiring special preventive measures against contamination.

Ernest E. Criddle, of the Defence Research Establishment in Ottawa, explains that the air bath provides a steady stream of clean air flowing round and away from a "clean-work area" such as an operating table or an assembly bench. Clean air is provided by a blower and an air filter. The flow reduces the possibility of contamination, from people for example, from reaching and affecting a critical area. It provides also for the directed removal of odour or other contaminants emanating from the work being carried out. Because this device provides greatest protection in the critical area, costs associated with achieving clean conditions in a room should be substantially less than at present. Mr. Criddle points out that some clean rooms can cost up to $16,000, whereas an air bath could provide equal protection for the critical area and improve conditions in the remainder of the room for as little as $500 to $2,000.



Defence Research Board chemist Ernest E. Criddle, of Ottawa, demonstrates a hospital application of his "air bath" invention.

METHOD

The air bath forces clean air through the sides of two small, porous tubes which rest on opposite sides of the critical work area, such as a microscope or an operating table. The filtered air bathes the work gently and flows away from it. The velocity and flow pattern of the controlled air can also be varied to suit specific requirements.

As the device can be constructed to be both small and flexible, it can be designed to create less inconvenience for operators than conventional clean rooms. In addition to its increased effectiveness round many critical work areas it will provide immediate protection within seconds after being turned on.

The development arose from investigations by Mr. Criddle on electrocatalysis particularly related to batteries and fuel cells. Potential applications in the medical and electronics fields were quickly recognized and Canadian Patents and Developments Limited is responsible for proprietory rights.

****** SEASON'S GREETINGS AND A HAPPY NEW YEAR TO ALL OUR READERS ******

NEW NICKEL MINE

The development of a new nickel mine, known as Levack West, in the Sudbury district of Ontario, has been announced by The International Nickel Company of Canada, Limited.

The new mine, which is expected to come into production in 1975 at an estimated capital cost of $21 million, will have a daily capacity of about 2,500 tons of ore. Site-clearing is under way and development work will begin by the end of the year.

This will be the first International Nickel mine to be developed exclusively from a ramp starting at the surface and providing access to all levels. No shaft will be sunk. Instead, a 9,000-foot ramp will be driven to carry personnel and supplies to the working areas. In order to facilitate the handling of ore, a one-and-a-half mile-long tunnel will be driven 1,600 feet below surface to connect Levack West with INCO's nearby Levack mine, to where the ore will be transferred tor hoisting to surface and treatment at the Levack Mill.

At Levack West, surface buildings will include a dry-room, an office, service facilities and a sand-plant. The mine will be developed by mechanized cut-and-fill methods and will provide some 250 new jobs.

International Nickel is currently engaged in an expansion program to increase its production capability in Canada to 600 million pounds of nickel a year by the end of 1972. Levack West will compensate for reducing availability of ore from the present Levack mine and will help lift the company's production capacity beyond this goal by the middle of the decade.