

NEW INVENTIONS

Crowd drawers of the week

For seven days since last Sunday (April 8), thousands have flocked to a government compound on Pedro Gil Street (formerly Herran), corner Taft Avenue, Manila. The crowd drawer: an array of quality products and devices created by Filipino inventors, many of them self-taught.

The display was set up on the occasion of Inventors Week, observed annually since 1967 to give recognition to the works of scientifically inclined Filipinos and to induce them to use their creative energies for the benefit of the country and her people.

Sponsored by the Philippine Inventors Commission, a technical agency of the National Science Development Board, in coordination with the Filipino Inventors Society, the week-long affair is highlighted by the awarding of P57,000 in cash prizes to outstanding inventions in four categories: mechanical, electrical, chemical, and general.

Featured in this year's exhibit are 130 inventions, utility models, and illustrations of creative researches. At the compound of the National Science Development Board where these were on display, one could see a wide variety of articles and devices: from an improved water heater to a three-wheeled motor vehicle, from a multi-purpose thresher to a multi-purpose dryer of agricultural products.

The yearly exhibit-contest is only one of the means adopted by the commission to promote creativeness and encourage result-oriented inventions. The commission hopes that the inventions will revolutionize fields of activity that have been previously dominated by more expensive and imported machines or devices. Many of the inventions featured in the



A Filipino inventor: relentless, resourceful.

exhibit eventually are manufactured commercially with the assistance of the commission.

Since the commission started operating in October 1965, two years before Inventors Week began to be observed, it had received nearly 1,000 applications for the commission's assistance. Once an application is approved, the inventor gets grants-in-aid from a special science fund, which now amounts to P1,120,000. Because of this assistance, scores of inventions are now being produced commercially through the Philippine Inventors Marketing Center, the commission's marketing arm.

One such commercially produced invention is the compact Kono rice mill, or "Konopak," a 405-pound portable rice mill designed by Sofronio Sian and which eventually may replace the imported but less efficient "Kiskisan" huller. This can only mean foreign exchange savings for the country.

A winner of the Presidential Medal of Merit in 1969, the portable rice

mill has been subjected to field tests under various operating conditions with successful results. A test report of United Nations experts with the Grain Industries Development Center of the defunct Rice and Corn Administration (now the National Grains Authority) indicated the highly efficient performance of the mill and the pivotal role that it could play in the economy of developing countries.

It was found that the performance of the Konopak rice mill is very similar to that of a large commercial mill. The total rice recovery is around 67 percent compared with the 55 percent in the Kiskisan. The Konopak can mill between 60 and 80 cavans for 12 hours, and unlike a large mill, can handle even a few kilograms of palay at a time. Its maintenance cost was also found to be much lower than that of the Kiskisan.

The Konopak inventor estimates that under the most common form of milling rice in the Philippines, the amount of rice lost is .3 million tons, or six percent of the country's total yield of 5 million tons.

With the Konopak, this loss can be reduced considerably, he says.

Another invention that benefited from the commission's assistance is the multi-purpose and economical miracle cooker manufactured by the Kamias Cottage Industries. Composed of a cover, a steamplate, an inner container and a main container, the cooker can steam vegetables, cook rice and boil meat or beans all at the same time. The cooking time, depending on the size of the cooker, ranges from 30 to 40 minutes.

Still another one is a hollow block molding machine that is now popular among small-town hollow block manufacturers, building owners and contractors. Called the Fibri-firme portable combination motor and manual operated hollow block machine, it is the only Philippine-made and patented machine that does not need special foundation nor expensive pallets. It is easy to operate and turns out clean-cut and sturdy concrete hollow blocks. It is manu-

factured and distributed by Firmeza Engineering Enterprises.

Also now commercially manufactured, by the Fadrig, Inc., is the P25,000 garbage disposal system composed of one trailer and 20 boxes that can be operated by only one man and is equivalent, performance-wise, to that of a P60,000 dump truck operated by six men.

Other inventions and products commercially produced are the vegemeat, an excellent substitute for animal meat; an auto fish catcher; the Oliva Wine, made from Philippine fruits; a gas vaporizer, a gasoline-saving device which can save up to 25 percent gasoline; an emergency auto light; a lawn mower which cuts grass in any direction and can be operated even after rain or on soft soil; a do-it-yourself battery; and scores of others. These can be availed of at the Philippine Inventors Marketing Center at 1424 Quezon Boulevard Extension, Quezon City, with telephone numbers 98-24-41 and 98-24-42.

What are the functions of the Philippine Inventors Commission and how does it operate?

It extends technical, financial, legal, research, promotional and marketing assistance to Philippine inventors and creative researchers, irrespective of race or nationality, provided they are Philippine residents.

It examines the utility, patentability and workability of an invention, prepares technical parts of patent applications, designs and fabricates working models.

The legal division prepares and notarizes required oaths and contracts and legal parts of patent applications. It prosecutes the application at the Philippines Patent Office or patent offices abroad and handles infringement and other patent cases.

The commission, through the Philippine Inventors Marketing Center, displays and promotes inventions and receives orders for the inventors. This assistance is given at no initial cost to the inventor, but subject to certain terms and conditions.

EMILIO U. MACASPAC

AGRICULTURAL BOON

Handy pump for farmer

Small farmers long burdened with the high cost of irrigation water pumps can now look forward to acquiring one that is both handy and inexpensive.

Costing only P200, the new kind of pump can draw water from irrigation ditches, open channels, rivers, and shallow wells. Unlike most other pumps, it can handle water containing mud and other impurities with a minimum of wear and tear.

The pump was designed by a Filipino agricultural engineer, Nestor Navasero, employed at the agricultural engineering department of the International Rice Research Institute in Los Baños, Laguna. It was developed at IRRRI last year under a research contract with the US Agency for International Development.

Called the "IRRI Bellows Pump," it is foot-operated and can be carried by the farmer from one portion of his

land to another, depending on the irrigation needs of his crops.

The prices of water pumps now available in the market range from P1,000 to P10,000 and are beyond the reach of the great majority of Filipino farmers. They are much heavier too and can be moved only by three or more persons or with the help of a car or a truck, thus entailing additional expense, time, and effort for the farmer.

The main parts of the pump are two canvas bellows reinforced with metal inserts. The whole device, together with its handle, weighs 20 kilograms, less than half the weight of a cavan of clean rice. It can pump 50 to 60 gallons of water per minute to a height of one to two meters.

The Kalayaan Engineering Co., the firm authorized to distribute the foot pump, hopes to mass produce the pump before the year is over.

Because of its simplicity, main-

tenance cost of the pump is very negligible. It is so simple that its repair can be handled by even small machine shops. Repair work may even be rare because, aside from simplicity, the pump has the added virtue of durability.

"The IRRRI Bellows Pump is easy to operate," according to its distributor. The farmer simply stands on the two foot-rests and shifts his weight from one foot to the other. This compresses one of the bellows, sucking the water in and forcing it through the outlet

valve. By alternately shifting his weight in a rhythmic manner, the farmer will be able to pump a continuous flow of water from an irrigation ditch, river or shallow well to his cropland. The range of the water flow may be increased by connecting a long rubber hose to the pump.

By setting the price of the pump at P200, the distributor hopes that "this badly needed device can be availed of by small farmers, especially the thousands benefited by the land reform program."

Aside from irrigation purposes, the pump can be a handy tool in draining shallow fishponds or swampy lots being prepared for construction. It can also be used to drain the basements of houses in case of floods.

Because of its varied uses, the pump, now on display at the National Science Development Board compound at the corner of Pedro Gil Street and Taft Avenue, is attracting the attention not only of farmers but also fishpond operators, lot owners, and building contractors.

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