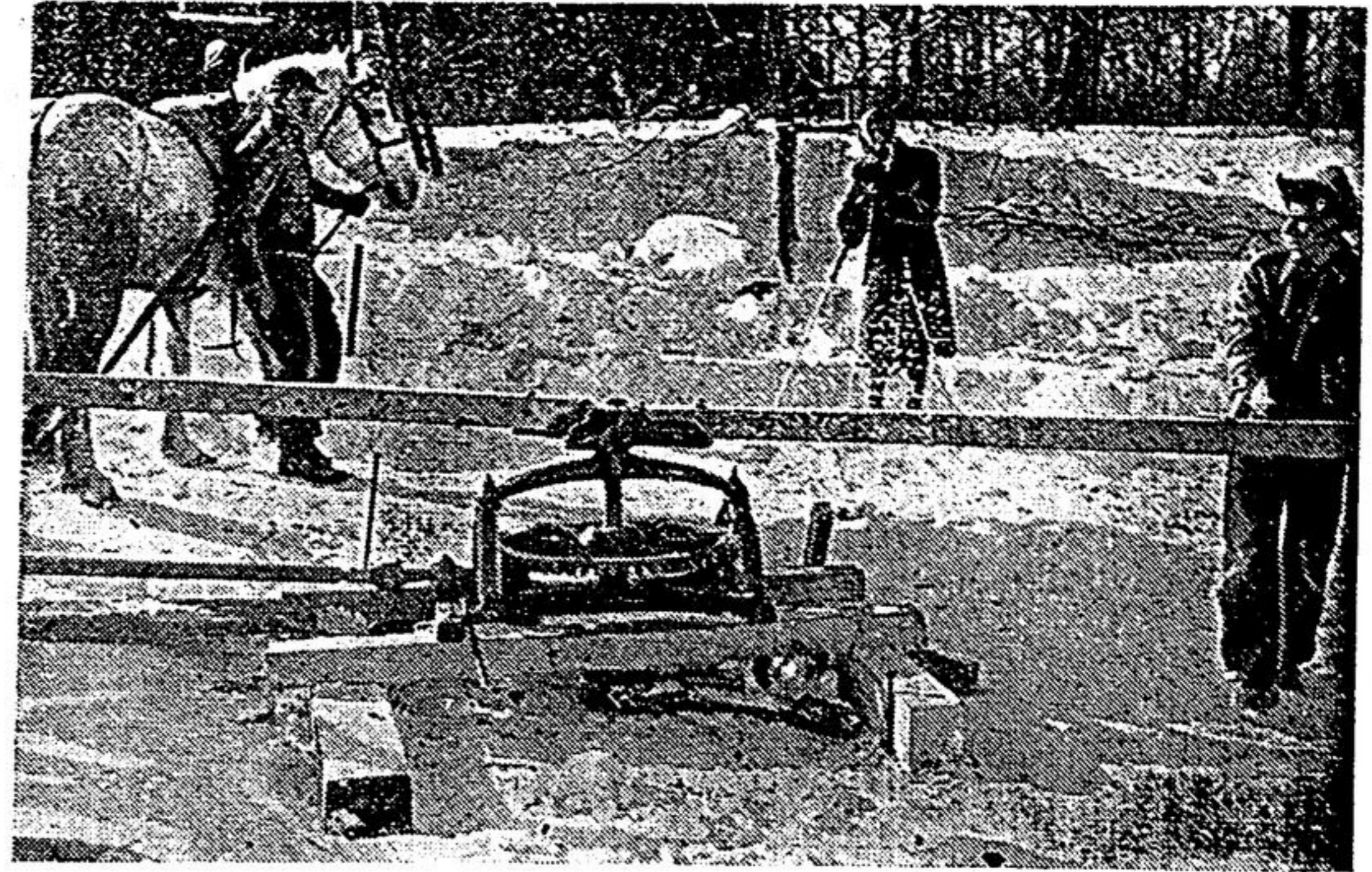
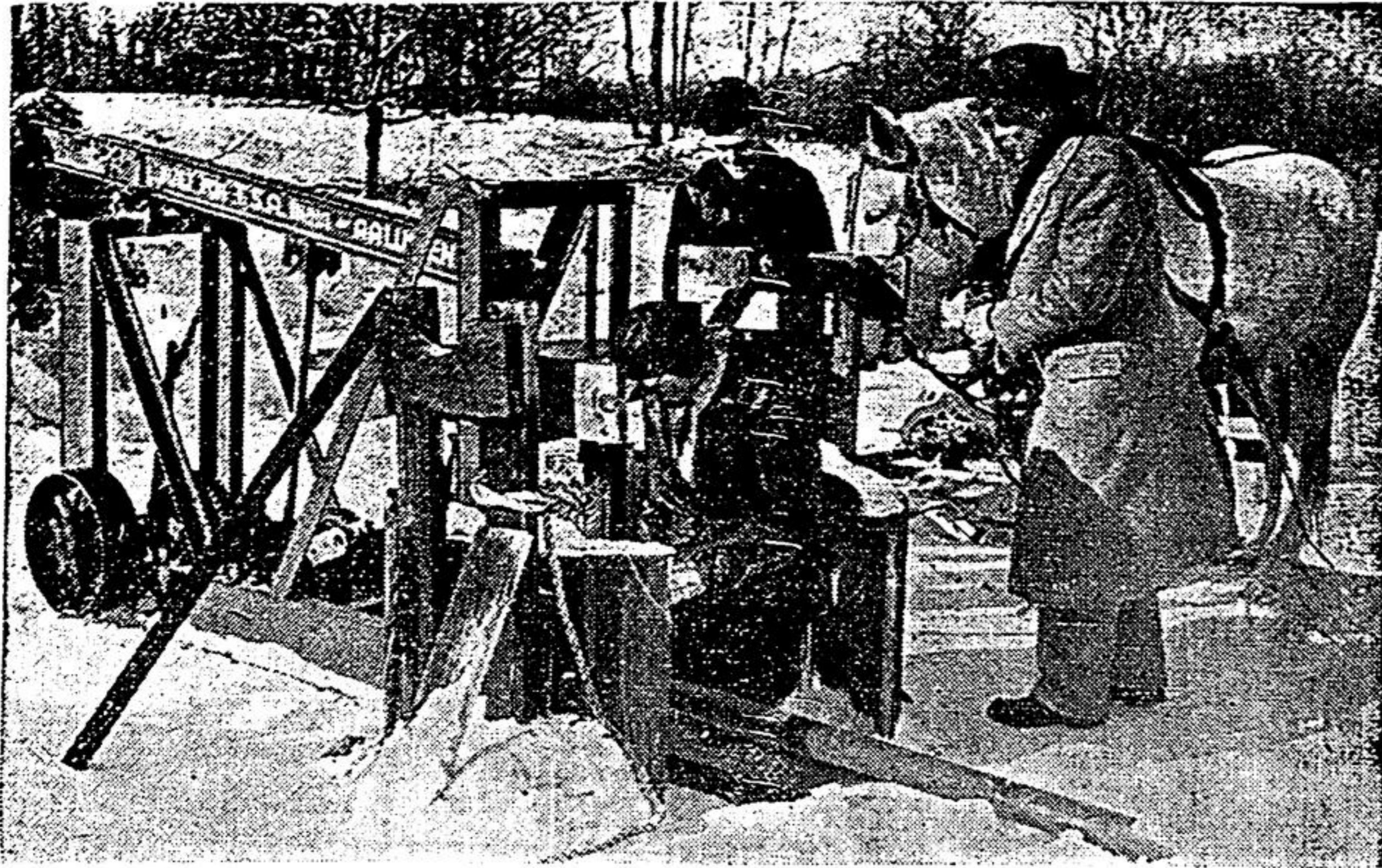


# Whitchurch Farm Proving Ground For "Pumps for Punjab"



Old-time Ontario farm machine, the "horsepower," seen in centre, is a major feature of the unique pump.

Especially designed pump is being tried on a Whitchurch farm to test its capabilities for

use in India. At right is F. A. Peter, missionary, engineer and designer of the pump. Stand-

ing with him is George Styles, sr., owner of the farm. (Telegram Photos)

A small farm in Whitchurch Twp. near Pine Orchard, has been the testing ground for a pump designed to irrigate some of the millions of acres of arid farm land in the Punjab, India.

The pump itself is simple, deliberately designed, and built that way, for almost without exception the average farmer in India knows nothing about machinery. This is no electrically or gasoline-driven water life. The motive power is something familiar to most every older farmer in Ontario—old-fashioned "horse power."

The story behind these "Pumps for the Punjab" is a bit more complicated and it started over 7,000 miles away, when F. A. Peter, associated with Missionary Society of the Church of England in Canada, reasoned that no man on the verge of starvation could be very receptive to religious teachings.

The story involves a kindly widow living at Alcona Beach, Lake Simcoe; the formation in 1946 of Technical Services Association, India; the Anglican Mission in the Punjab and eventually all Protestant missions there; technical advice from the Ontario Research Foundation, and the untiring interest of Gordon Wallace, co-owner of the Aalus Engineering Co., of Toronto. It also involves George Styles Sr., owner of the small farm in Whitchurch Township, who put his deep well at Mr. Peter's disposal for testing the specially-designed pump.

A sub-zero wind whipped across the Styles farm the other day when Mr. Peter and several workmen from the engineering company made further tests on the pump. It was a tough day for testing a machine to be used on the hot plains of India, but it was all to the good for certain defects showed up which might not otherwise have

been spotted as easily.

One of the most stoical members of the party was Miss Elizabeth Peter, who ground away at a motion picture camera during the sub-zero testing. These films will be taken to India, along with the irrigation pump and shown to the backers of the Technical Services Association and the Punjab government with the idea of turning the pump out on a mass production basis. Miss Peter has been associated with her brother in the mission work for some years.

"Peter the Pump-Maker," as you might call him, appears to be a man of many parts. He studied theology in England, obtained an engineering degree on the Continent, and also studied medicine in Europe. Knowing that something had to be done for the Indian farmer, he was largely responsible for interesting the Anglican Mission and other Protestant missions in the Punjab in the formation of a technical association. Such an association was formed in 1946 with some financial backing by the Indian government in his territory. He is serving full time with the association, on loan by the Anglican mission.

The most pressing problem in the Punjab, according to Mr. Peter, is irrigation. Vast areas are irrigated, in many instances, by the use of the old Persian wheel. Other huge areas cannot be irrigated this way as the sub-surface water lies too deep—from 150 to 200 feet. Drilling tube wells in India is a comparatively simple matter but getting water up from a depth of 200 feet is another problem.

Electrical power in India is very scarce and out of the question for the Punjab farmer. Also out of the question was the use of a gasoline motor to raise water, simply because the average farmer can't afford it. Mr. Peter decided that the

only solution was to design a tube well pump using the farmer's pair of bullocks as motive power.

Coming to Toronto a few months ago, Mr. Peter set about to find a "horsepower" in working order. He scoured York County for this old-time piece of machinery and finally found one in fairly good shape and it was donated to the work of the mission by Mrs. J. Thompson of Alcona Beach. He then sat down at his drawing board and designed a compact tube well pump keeping in mind that all working parts had to be of the greatest simplicity.

The pump he designed is somewhat similar to those used in oil fields, but much more compact. His main problem was the heavy lift from 200 feet through a four-inch tube but he got over this by having the weight of water in the tube balanced by a dead weight at one end of the pump. Certain difficulties were ironed out in the engineering department of the Ontario Research Foundation and the plans were then taken to the Aalus Engineering Co., the pump being made there from his blueprints.

A vital feature of the pump is the inclusion of a belt which, by throwing a lever and engaging certain simple cogs, can be turned about 200 revolutions a minute. To this belt wheel the Punjab farmer would attach his other implements requiring power. The motive power would be the same as in the case of the pump, the pair of bullocks hitched to the shaft of the horsepower and plodding steadily around in a circle.

The irrigation pump is only one of the projects. Mr. Peter, as head of the Technical Association, has in mind. But in the years to come, if the basic welfare of the Punjab farmer is bettered, it is altogether likely that the tests now being made on the small farm will have played a major part.



Primitive Persian wheel, used in Middle East and India to

draw water, is not practicable for any great depth. Slow mov-

ing oxen turn the primitive apparatus.

## ARE WE EVOLVING OR DEVOLVING?

By Lewis Milligan

Whether we believe in the Darwinian theory of evolution or not, a superficial enquiry into the natural processes of Nature is sufficient to reveal the working of a universal intelligence and an over-ruling Will in this world. The term "evolution" means to unroll or unfold—like the unrolling of a motion-picture film or the unfolding of a rose. Both of these ideas imply existence of the thing unrolled or unfolded. A seed, for instance, is a plant folded into a minute package which, given the right environment—soil and season—evolves into a duplicate of its parent. The same reproductive process goes on in all forms of life up to man, and it went on for millions of years before man appeared upon the earth.

Ever since man arrived he has been more or less dissatisfied with the world in which he found himself. He first of all moved about from place to place as a nomad, as though he were looking for something he had lost. When he got tired of wandering and settled down he was still dissatisfied and set to work to improve his environment. He has certainly improved it since the cave days, having progressed through the stone, the bronze and the iron ages to the present age of numerous metals, coal, gas, oil, electricity, radio, radium and the atomic bomb!

In all of these things he has proved himself a master mechanic. In his struggle for existence and his curiosity he has created for himself a new environment and acquired an immense amount of knowledge and experience. Man has accomplished all this not only in spite of but because of unfavorable circumstances. Indeed he has made the greatest progress in those parts of the world where he had to struggle for his existence against the elements. He would never have if he had not been in desperate need discovered the deep-laid beds of coal of fuel to keep himself from freezing. His discovery of coal led to the discovery of steam-power and all the subsequent mechanical and scientific inventions which we enjoy today.

But has man, with all these great achievements, attained to a higher intellectual, spiritual and moral stature? Undoubtedly he is better educated in the mass, and knowledge is more widespread, but are we really producing greater intellects, poets, musicians, artists, philosophers and spiritual leaders than those of a hundred or even two thousand years ago? Julian Huxley,

in a lecture delivered in the early 'twenties, claimed that there was no evidence of any upward change in the higher level of intellectual, during the whole historic period artistic or ethical possibilities.

"Einstein," said Mr. Huxley, "has no better—or worse—mathematical brain than had Newton; Darwin was not a better biologist than Harvey, any more than was Beethoven a finer musician than Bach, Rodin a better sculptor than Praxiteles, Fox or Wesley greater or less great ethical teachers than the Hebrew prophets, Kant possessed of greater philosophical abilities than Plato—or even Bernard Shaw a greater writer than Shakespeare! The general run of human capacity has remained the same for thousands of years."

Poets, artists and musicians of the modern schools might not agree with that verdict. Bernard Shaw, at least, regards himself as a greater dramatist than Shakespeare, and the free-verse writers think their cryptic effusions superior to the poetry of Wordsworth. The surrealists have apparently convinced themselves that their chaotic daubs are finer art than that of the old masters, while there seem to be hosts of people who have no sense of harmony, and who prefer the discordant noises of a Warsaw Concerto to a Moonlight Sonata. So far

from showing an evolution to loftier forms of artistic expression, there are definite signs of devolution back to the art of the cave dwellers, the tom-tom beaters and the wild war-whoppers in these products of the modern schools.

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