Exhibit Indicates Diesel Principle Is 1,000 Years Old

Principle Use by Primitive People of Malay Peninsula

Indications that the fundamentals of high-compression ignition, of paramount importance in the Diesel engine of today, were discovered originally by the primitive people of the Malay Peninsula and the East Indies long before their first contact with white men, are disclosed by new accessions to Smithsonian Institution exhibits.

Remarkable Fire Piston

One of the fire-lighting gadgets of the Malays was the fire piston, a remarkable primitive invention. It consists of a tightly wrapped plunger which is forced into a wooden cylinder at the bottom of which is placed a bit of tender. The plunger, hit by the hand, compresses the air beneath it and it generates sufficient heat to light the tinder. This is then taken out, fanned into a flame and used to start a fire. Substantially this is what German engineers rodiscovered centuries later.

In the Diesel engine the same fundamental is used for the ignition of oil, making possible an engine without any special ignition system.

Man Is 'Tops' At Petit Point

Artistic Urge Resorts to Fine Needlework Hobby

Toby Kernan, secretary of a leading South African lecturer, has the strangest hobby and he is very proud of it. He works portraits and scenes in petit point.

Wanting an outlet for an artistic longing which was squelched at the age of eight when he discovered he could not master drawing or painting, he began copying pictures in needlework.

Now after 20 years, his petit point pictures are ranked among the finest in the world. He has made pictures of both Queen Mary and Queen Elizabeth and presented them to their Majesties. He works with silk on linen without drawing even an otuline of his picture.

A picture three feet by two feet takes 500 hours, or a year to do. Some of his stitches on the linen are over only one thread. They are so minute that they are hardly visible to the naked eye. He uses as many as 12 different silks to work an eye.

He took several of his pictures with him to America for exhibition. He was offered £1,000 ($4,700) for a copy of the first Queen Elizabeth's death mask, but he refused to sell it as he works as a hobby and not for profit.

14, He Builds Airplanes

Jack Leydon, 14-year old Halifax model aircraft builder and flier, barred because of his youth from competition in C.N.E. Dominion championship matches, who appealed to model craft authorities in Ottawa, has been allowed to compete. He is contesting five classes, including gasoline jobs.

When Is It Midsummer?

The question is largely a matter of definition. It must be remembered that the periods of greatest average warmth and cold lag considerably behind the longest and shortest days respectively. For this reason meteorologists consider the best compromise is to include June, July and August as summer; September, October and November, autumn; December, January and February, winter; and March, April and May, spring.

The days in May are longer than in August, but not nearly so warm, and the spring foliage is not fully out till the end of May; similarly November has shorter but warmer days than February, and the autumn tints of oak, beech and elm are seldom at their best in the country till the middle of October.

Bumper Peach Crop Loads Trees In Ontario and B.C.

Federal Department of Agriculture estimate indicates that a bumper crop of peaches is being picked in Ontario and British Columbia this year. The estimate places the 1939 crop in Ontario at more than 650,000 bushels, an increase of 15 per cent. over the 1938 crop, which was a good one, and in British Columbia at 143,000 bushels, 10 per cent. more than last year. Some indication of the bountiful crop may be gathered from these pictures of the peach crop in the Niagara peninsula.

Have You Heard ?

Those Neighbors Again!

"I have called with that book, madam, 'How to play the Piano'," said the music traveller, gently. "What book?" asked the lady, indignantly. "I didn't order any book." "No madam," said the man, nervously, "but the neighbors did, and they asked me to deliver it to you."

—o—

Exciting

Boggs: "Frank is keeping a secret record of his whole married life." Hoggs: "Oh! one of those scrapbooks!"

—o—

Dim Wit

A tale is going the rounds about the dim-witted chap who lived in a small town and had no means of support. The "boys" got together and decided to chip in fifty cents each and create a job for—we'll call him Lem. Then they appointed a paymaster.

There was an old brass cannon in the town square, and Lem was instructed to shine this cannon every day, rain or shine, and at the end of the week the paymaster would turn over seven dollars.

Lem worked with great zeal for about three months, shining and shining and shining. One Saturday night he approached the paymaster with a wild gleam in his eye.

"I want to quit," Lem opined.

"What's the matetr, aren't you satisfied with the working conditions?" the paymaster asked.

"Oh, yes," Lem said. "But I've been saving my money. Yesterday I bought a cannon of my own—now I'm going in business for myself!"

—o—

Easy Way

"I wish I could find out how many relatives I have."

"Why, that's the easiest thing in the world—just buy a summer cottage."

—o—

Willing to Oblige

One day a lady entered a large drapery establishment and asked to see some blankets.

After she had seen a quantity of blankets and not made any purchases, the shop assistant said: "I am very sorry, madam, but I am afraid we have not any more blankets in stock."

"It's quite all right," replied the lady, "I am only looking for a friend."

"Madam," said the perspiring shop assistant, "if you think your friend is in among the blankets, I should be very pleased to go through them again for you."

—Y

Aftermath

The cottage of the habitant,
The mansion of the great,—
Each holds one picture, proudly placed
For all to contemplate;
A picture proving that one love
Pervades our every scene,—
The picture of that peerless pair,
Our gracious King and Queen.

—Alan MacLachlan.

The Harper Method

Fifty years ago, a young girl in her 'teens founded the first system of beauty culture based on scientific principles. With nothing more than $360 in capital, her youth and a head of luxuriant hair, she started out on the road to success. She made a study of hair health and scalp conditions as would a physician. Her preparations became popular and her scientific method of treatment gradually invaded the field of skin care and special massage. Today the Harper Method Preparations are compounded with prescription-like accuracy. Graduates of the Harper Method Training School own nearly 500 authorized Shops where the Harper Method is practised according to the principles laid down by the founder.

How Can I?

BY ANNE ASHLEY

Q.—How can I steam-cook an apple pie?

A.—When baking an open-top apple pie, invert another pie pan over it. This will make the steam cook the pie thoroughly.

Q.—How can I eliminate flies from a room?

A.—Placing a castor oil plant in a room tends to drive away the flies. Many people discourage flies by placing in convenient places small saucers containing a mixture of cream, ground black pepper, and sugar.

Q.—How can I facilitate the pulling of threads from linen?

A.—Before pulling the threads, run a damp cloth along the line where the thread is to be pulled. The thread will pull easily while the cloth is damp.

Q.—How can I remove the odor from a knife which has been used for peeling onions?

A.—Run the knife blade through a raw potato, and it will take away the odor.

Q.—How can I store quinces?

A.—Place quinces carefully in a barrel, using only perfectly sound fruit. Fill the barrel with water, fasten on the head of the barrel, and put in a cool place. If done properly, the quinces will keep all winter.

Q.—How can I treat perspiring feet?

A.—Put a small portion of household ammonia and the same amount of vinegar into a foot bath. Follow this treatment daily.

If you have a suitable place, you will find your paint brushes always soft and ready for use if kept soaking in water.

Issue No. 35 — '39

What Science is Doing

FLAT CHESTS

Dr. S. E. Weisman of he Universiy of Minnesota has written a book "Your Chest Should Be Flat" which dispels the old notion that we ought to have torsos like barrels. After having measured 20,000 school children and tested 500 for vital capacity he decides that as a child ages the thorax broadens and flattens. The chests of the tuberculous, so far from being flat, as many suppose, are actually deeper, hence more undeveloped, than they should be. Dr. Weisman wants to forestall tuberculosis. Hence he suggests exercises of the kind that played their part in the evolution of man from the lower animals.

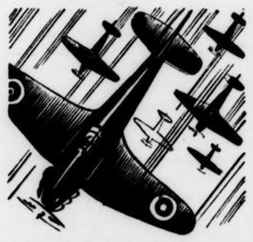
FROZEN IN ANESTHESIA

Professor G. H. Parker (Harvard) reports in Science that when he has to experiment on fishes, amphibians and reptiles he drops them into ice water. Cold so stupefies them that they are easily operated upon. He likes cold better than ether and drugs because they are no after-effects and because it is unnecessary to wait for the anesthetic to wear off. Parker wonders whether we may some day be frozen into anesthesia when we have eto have our appendices cut out.

WATER ABOVE EARTH

A new weather instrument so delicate that it can measure the temperature of drops of water a mile above the earth has been announced by the American Meteorological Society.

By concentrating the light of the sky on a "cascade" of mirrors it is possible to detect changes of as much as 35 degrees Fahrenheit in the upper atmosphere and to use such changes in predicting the weather for the following 24 hours.



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CANADIAN NATIONAL EXHIBITION
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FARM PROBLEMS

FALL WHEAT CROP REPAYS ITS CARE

Fall wheat is now a popular topic of discussion among farmers and all those interested in the growing of field crops. The old argument as to whether chess is wheat in a depraved form or a species of plant that thrives when the wheat is poor still persists but is gradually giving way to the more modern topics of better varieties, fertilizers and disease-control practices.

Even the casual observer cannot fail to notice how thick, uniform and strong the crops are in some fields as compared with those of many others in the same district. Fertilizer enthusiasts claim that proper feeding is the key to success; seed producers uphold the merits of high grade seed; but all admit the benefits derived from the new mercuric dust seed treatment. A thorough check-up shows that each of these factors, coupled with proper seed bed preparation, plays an exceedingly important part.

The results of many carefully supervised fertilizer experiments, conducted by agricultural colleges and other experimental stations in co-operation with interestd farmers, leave no doubt of the advantages derived from adequate, well-balanced fertility.

Phosphat (phosphoric acid) is particularly important. Root development, strength of straw, filling of grain and uniform maturity demand it.

Good Rotation

A fertilizer of the type of 2-12-6 provides a suitable balance of supplementary plant food for this crop on loams and soils of moree than average fertility. Higher phosphate fertilizers, such as 2-16-6 or 0-16-6, are preferable on many of the heavier soil types and areas notably deficient in phosphate.

Fall wheat provides a desirable division of work. It is a crop that can be sold for ready cash or used as part of the grain ration for most classes of livestock. It is a good crop to retain in the rotation, and on many a Western Ontario farm, where extreme drought prevented the satisfactory development of spring grain this year, fall wheat is likely to be the only profitable cereal.

Acreages sown to wheat in the Prairie Provinces this year total 25,813,000 as against 24,946,000 acres in 1938.

Modern Etiquette

BY ROBERTA LEE

1.—Shouldn't one be very careful what he writes in a letter?

2.—Should a college girl introduce herself as Miss Hall, or as Edith Hall?

3.—When giving a bridge party which follows a luncheon, is the hostess expected to serve sandwiches, or cakes, during the game?

4.—What should one say in congratulating a bridal couple?

5.—What is a good toast to offer to a guest of honor?

6.—When cutting meat on the plate, should the end of the knife handle be visible?

Answers:

1.—Yes; he should be very careful. One should not write anything that the recipient can resent, or that would cause him embarrassment if the letter were shown to someone else. Remember that a letter is often the basis for a law suit. 2.—She should call herself Edith Hall. 3. —No. 4.—This depends entirely upon how well one knows the bride or bridegroom. Remember that it is a breach of etiquette to congratulate the bride on getting a husband. 5.—'Here's to our guest of honor. He deserves what he gets, and may be always get what he deserves." 6.—No; the handle of the knife should be concealed in the palm.

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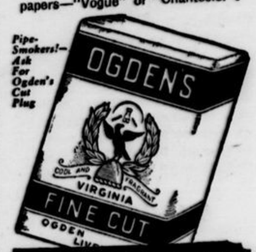

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