Newfoundland Officially Welcomed Into Canadian Confederation—In a colorful ceremony in Ottawa on Friday, the new tenth Province of Newfoundland was welcomed into the Canadian confederation.

Top picture shows those who took leading parts in the program. Left to right they are: Prime Minister St. Laurent; Governor-General Viscount Alexander; Hon. Gaspard Fauteux, Speaker of the Commons; Hon. J. Gordon Bradley, secretary of the State and newly appointed representative of Newfoundland in the Cabinet; Senator J. H. King, and Former Prime Minister King Lower photo shows Prime Minister St. Laurent cutting the first strokes of Newfoundland's coat-of-arms on the shield reserved for the new province on the Peace Tower, while Mr. Bradley looks on.

How The Continents Once Wandered

Few youngsters today manage to "finish" geography without an exercise in juggling cut-out continents around.

They find the nose of South America fits very neatly into the Gulf of Guinea, that North America swings over to match Europe with extreme nicety if the islands and peninsulas are tucked in, too. Even Australia and Antarctica can be pushed up and fitted in at the southern end of things, to make a map after the style of the ancients—earth's land area in one mass, with seas all around.

Children have been doing this for several generations, but merely as an exercise in mental gymnastics. Teachers and men of natural science who found themselves intrigued with the possibilities and who studied the matter at all seriously have been pretty generally smiled at in learned company—until recently. Now there is a growing mass of evidence which seems to indicate there may be more truth to be uncovered than fiction writers dreamed.

Taylor, Baker, Wegener, du Toit, Evans, Daly, van der, Gracht, Bailey, and Schuchert are just a few of the names in a long list of people who have had something to say for or against the "Wegener Hypothesis." Even before such recent investigators as these, the famed philosopher-scientist, Francis Bacon, discussed "continental drift" as early as 1620. Most proponents postulate a time when the earth was oriented differently in space, when the polar axis did not go through what is now called the Arctic and Antarctic writes Herbert B. Nichols in The Christian Science Monitor.

The first real attempt to outline the problem is an orderly sort of way was made by F. B. Taylor, geologist, in 1908. For 30 years he periodically published reports of investigations which had led him to believe that back in Cretaceous Times (some 180,000,000 years ago when the age of giant reptiles was ending), the earth captured a satellite out of space (the moon).

For the next several million years, he theorized, giant tides rose and fell on this planet. Together with rotational forces these caused an unbalance on the globe which resulted in sliding continents, in a radical drift of land masses, like giant rafts of granite sial afloat on a glasslike sea of the underlying and more dense sima. Just as a cork bobs to the top of a pail of water, so the continents project because made of rocks lighter than those underlying the ocean.

Fellow geologists picked him apart because he ignored stratigraphical and fossil relationships as well as earth movements believed earlier than Cretaceous. He made no attempt to put the jigsaw puzzle together except in the case of North America and Greenland.

Then in 1911 Howard Baker made up for his deficiency by presenting his "displacement globe" postulating that originally there was but a single continent or pangaea which split from Alaska across the Arctic and down the full length of the Atlantic to the Antarctic. The unequal parts, he said, drifted off in opposite directions toward the Pacific region with additional fractures and rotations taking place in certain portions.

Alfred L. Wegener, German geophysicist, really put the prevailing theories to test and assembled the parts in the working hypothesis that bears his name. It is best set forth in his work on "The Origin of Continents and Oceans," revised in 1928.

Wegener quotes astronomical observations to support a claim that the continents are still drifting. Measurements in Europe, Greenland and North America proved to him that North America is still traveling slowly westward. This movement, more distinct in times past, he held, accounts for the marginal foldings, the so-called "backbone of the Americas," the Andes and Rockies.

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This idea is considerably at variance with Baker, who saw the early drifting not as any slow, angular movement but the result of simultaneous and rapid flight. Sometime during the late Miocene or early Pliocene eras, he said, the orbital movemtnts of the earth and Venus varied enough to bring those planets so close together that a thick layer of crustal matter was stripped from the Pacific region, hurled into space to forever afterward travel a path of its own around the earth. That was his explanation of how the continents were formed and how the moon began.

In his early restoration of the land areas, Wegener brought the shore lines almost together. However, in his later work he recognized the weight of opinion against him and allowed room not only for the mid-Atlantic ridge, a long chain of mountains known to stretch beneath the ocean from Iceland clear to Antarctica, but for generous marginal areas as well, to take care of known continental shelves. These stretch out to sea for many miles before dropping off into abyssal depths.

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No one is ready to admit yet that continental drift is really proven fact, but an increasing number of scientists in many fields are entertaining the thesis at least. Furthermore, several institutions have not only been willing to publish the results of scientific investigations but to finance those investigations as well.

At the University of Cincinnati, Dr. Kenneth E. Caster, geologist, reopened the question following four years of research work in South America. There he traveled tens of thousands of miles gathering data under the auspices of the United States Department of State and the Guggenheim Foundaion.

"None of my findings in South America definitely proves or disproves the drift hypothesis," he says, "but they are significant enough to warrant additional field studies in South Africa, India, and Australia to make necessary comparisons.

"Although a great number of geologists discount the theory of continental drift, especially North American ones, it is a completely open issue. It can't be settled with information now at hand. I'm not yet convinced that the theory is valid, but I am also not discounting it."

* * *

One of the theory's most famous champions was Alexander L. du Toit, a noted South African geologist, responsible for "A Geological Comparison of South America With South Africa," published under this title in 1927 by the Carnegie Institution of Washington. Ten years later he produced a more finished work, "Our Wandering Continents," in which he presented a mass of detailed data indicating Africa to be the key to the whole problem. Africa, he held, was the heart of Gondwanaland. His early work showed how South America and West Africa tie in beautifully from a geological viewpoint. Later he accomplished like comparisons to show how India, Africa, Australia and Antarctica must have filled up the Indian Ocean at one time.

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He found that the Falkland Islands must have been closer to Cape Horn than to Argentina in former times, for its geology more nearly fits that of the Cape than it does the Argentine.

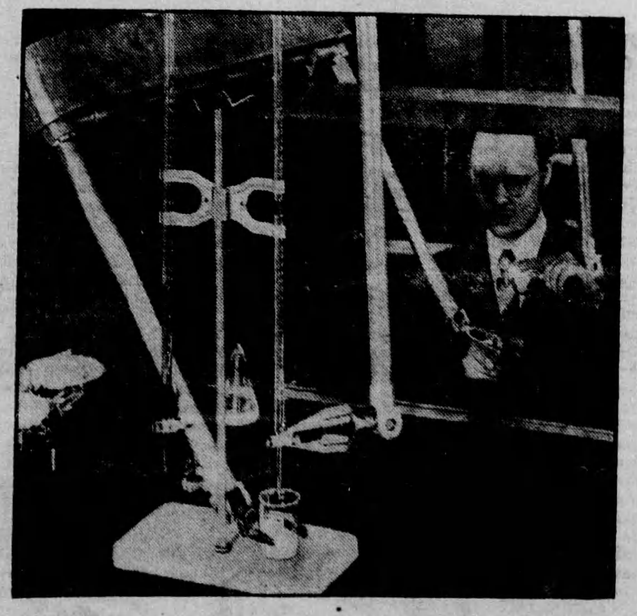
Geologic literature is full of ponderous volumes written to explain how oceans and continents might have been formed. One school says the ocean basins have always been more or less permanent. But opponents argue there is far too much evidence to show that there have been great interchanges of land and sea areas, of continental and oceanic dimensions.

Du Toit surveyed this literature and, together with his studies on the ground, bolstered the case for continental drift. If one were to set out to prove this thesis, he would look for vast rift valleys and ocean deeps where continents on the move would cause fractures; for evidence of mountain building or upwelling of crustal material near the assumed forward moving edge of a drifting land mass; for time correlations with movements of sub-crustal molten magma from below; for fossil relationships indicating widespread similarity of flora and fauna in the days before separation—increasing diversity since; for evidence that the earth's poles may not have always been where they are now; for species of plants and animals now living, but of known ancient origin, which might have persisted, in now widely separated areas, as relics down through the ages.

Versatile

This versatile cotton T-shirt, done in brilliant green-and-white stripes, is at home with shorts slacks or pedal-pushers. It has short sleeves and buttons up to a neat, turn-down collar. Actress Lola Albright finds it ideal for cycling.

'Hands' for Research



Inventor Raymond C. Goertz of the Argonne National Laboratory in Chicago demonstrates his "master slave," a device to be used in research involving radioactive materials. The inventor controls the mechanical "hands" in the foreground from outside a glass panel, which is replaced by concrete and lead insulation in actual operation. Special optical lenses will enable scientists to watch the work of the ingenious contrivance, which can perform virtually any operation possible with human hands.

Starting Soon...

A Thrilling New Serial

WEST Of The SUN

JOSEPH LEWIS CHADWICK

The West was young, it was wild, it was lawless, violent, hard. In the eighties it was no place for a young eastern girl—but Virginia Ames could see no alternative. Her fiance Phil Lawrence had written her; his letter had been strange, cryptic, urgent. By rail and stage and horseback she crossed the raw frontier . . . meeting soldiers, Apaches, gamblers, the riff-raff of the West. And finding at the end of the long trail a love that was older than she knew.

LOOK FOR THE FIRST INSTALMENT COMING SOON

You Won't Want To Miss A Single Chapter

THE FARM FRONT

by John Russell

There's a produce buyer I've heard about who estimates that many poultrymen lose as much as twelve cents a dozen on their eggs, simply because they're dirty and so must be graded much lower than they otherwise would be.

* * *

Which gives point to Expert J. E. Boyd's saying, "Hens don't lay dirty eggs. They get that way because the y aren't gathered often enough, because there aren't enough nests, or because the litter is not kept dry."

* * *

Just how can you clean dirty value? Well, if you have just a few eggs without lowering their market of them, you can remove the dirt quite easily with an egg sander. Black emery cloth stretched over a piece of sponge rubber will do the trick; and very fine sandpaper or steel wool also work well.

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If you have a whole lot of dirty eggs, you'll probably want to wash they. Here's a system which comes to me highly recommended. Put the eggs in a wire basket and soak the whole basket in a mixture of hot water (140 to 160 degrees) and detergent ("soapless soap").

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Soak the eggs for just a couple of minutes. Then, when the dirt is soaked loose, wash it off by pouring or spraying warm water over the basketful. Then let the air dry the eggs thoroughly. But don't on any account use cold water, as it will draw dirt and bacteria into the eggs.

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But don't start washing eggs until you've checked with your produce dealer. The chances are that he won't cut your price on washed evidence to show that even eggs ones they are. But there is some eggs—that is, if he knows which which have been carefully washed won't keep quite as long in cold storage as will unwashed ones.

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So it's best to be on the square with the dealer and tell him about the washing. Then he can put the eggs into immediate consumption channels, where they will be just as good as any others.

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A reader wants to know if there is any sort of paint which he can use on old lumber to prevent termites from eating into it. The answer is that impregnating the wood with coal-tar creosote will do the job. If you paint the creosote on with a brush, it will give fine protection to the surface. But if you are planning to use that lumber for sills, or something of the sort,—in fact anywhere that the wood might remain damp—it would be better to impregnate it thoroughly by soaking it in the creosote.

* * *

Here's something about farm sprayers which may be of value to some of you. It's the advice of Dale Hull, who is an agricultural engineer at Iowa State College, and who should know what he's talking about—I hope.

* * *

Pressures required for farm spraying operations range all the way from 30 pounds per square inch in weed control work to 250 pounds per square inch for fruit trees, cattle grubs and lice.

Hull recommends a sprayer that will produce up to 250 pounds per inch pressure.

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Don't buy sprayers with rubber impeller type pumps. They are sensitive to spray materials that have light petroleum bases, and many farmers have not found them satisfactory, Hull says.

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Built-in or external by-passes are recommended as pressure regulators on positive action pumps.

The suction hose needs to stand a pressure of 100 pounds, and the high pressure hose should be able to stand a pressure of 400 pounds.

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In order to keep a nozzle from clogging, Hull advises having an 80 or 100-mesh screen in place over the intake end of the hose leading from the sprayer tank.

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For the best coverage on weeds, use a nozzle producing a flat or fan-shaped spray pattern. For insecticide spraying in corn borer control, use a nozzle that gives a solid cone-shaped pattern.

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Nozzles having various spray angles and capacities can be purchased for application from as low as two gallons per acre up to any quantity desired.

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Nozzle tips can be bought which will produce either type of spray pattern, thereby eliminating the necessity of buying complete sets of each type of nozzle.

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Spray booms and tanks made of non-corrosive material, or that are protected by special coatings, such as paint, plating or galvanizing, will give more years of satisfactory service, Hull says.

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Which will be all for today—and my thanks to Mr. Hull for the assist.

'Quick Change' Act Flops—Stanley Prosek, in cap, 55, and John Major, 39, Cleveland, O., Transit System employees, get a free ride in a police van with part of "nearly a ton" of pennies, nickels and dimes police said they looted from fare boxes during the past year. Officials estimated the value of the stolen coins at $7,000.

LITTLE REGGIE

By Margarita