

WESTERN ONTARIO BRIEFS

WILTON GROVE.—The large brick home of Andrew Marr on Concession 3 was completely destroyed by fire. Most of the furniture was saved. The loss is partially covered by insurance. GODERICH. - Ticket Agent Roy leaves next week for Norwich, where he has been appointed station agent. WABASH.—The snowfall in this district was welcomed by farmers, as it protected the wheat which has survived the ravages of the recent heavy

SARNIA.—The Exchange Hotel, corner Victoria and Lochiel streets, one of the landmarks of the city, has been sold to Laskey and Homer of Windsor who will tear down the present frame building and erect a modern three-story structure. The property was owned for many years by the late Jos. Ellison, and was recently purchased by J. Donohue.

GALT.—Rev. E. H. Beckman, pastor of St. Paul's Lutheran Church, was honored by a class he confirmed by being presented with a gold watch and a sum of means.

SHEDDEN. - Horse buyers from Aylmer have purchased the white team owned by E. Down for \$500.

TYRCONNEL.—Fire which started from the kitchen chimney completely destroyed the home of John W. Morrish. Only a few articles of furniture were saved.

GRANTON.—A trinket campaign to aid in furnishing coffee for the boys in the trenches will be carried on on Wednesday next by the members of the Women's Institute.

FOREST .- Wilfrid Isaacs af Dashwood has been appointed line manager for the People's Telephone Company.

GLENCOE.—Oil drillers are putting down a test well for F. J. Carman on the Hyndman farm, Longwood road, in Ekfrid Township.

AMHERSTBURG.—Capt. A. C. Callam has gone to Chicago to get his big steel steamer, the W. E. FitzGerald, in shape for the opening of navigation.

GLENCOE.—The council has decided to invest \$3,000 of funds accrued in its sinking fund account in five-year bonds

of the city of London, which pay 61/8 per cent. ELORA .- W. J. Connon, who recently

GRANTON.-Miss Geddes of Ailsa Craig has been engaged to teach the junior class, as Miss A. Armitage has accepted a position in London.

HARROW.—The Quality Canning

Company is closing contracts for sweet corn at \$12 per ton. Last year's price was \$8. A large acreage is being

the staff of the Malcolm Furniture Com-FOREST.—The shareholders of the

Forest Hotel Company are holding a special meeting today to ratify an agreement for the sale of the hotel and wind up the company.

AMHERSTBURG.—John Grant, aged a Amherstburg's oldest barber, is so ritically ill that little hope is held for

APPIN.—The play put on last night the Newbury Dramatic Club in aid the Red Cross by the Women's In-tute drew a capacity house and de-

has purchased the 50-acre farm of James Stanton for \$4,500.

FARMERS WANT ROAD PROPERLY LOCATED

BLENHEIM April 12 .- I. Timpkins. J. Brown and L. McCallum, farmers of Harwich, are having a suit on Monday next in the supreme court sittings at Chatham before Justice Rose. The action is brought up in order to force the township to have the 18-19 side road has for years encroached their farms. The council has denied their demands n with the proper location

of the road for some years. FULL OF POISON

Pain in Back So Bad at Times She Could Scarcely Walk-Thorough Cure Was Effected.

Flamboro, Ont. April 12.—At this season of the year there is a great deal of suffering from poisons in the system. Living too much indoors, breathing vitlated air and eating artificial foods all tend to derange the normal action of the kidneys, liver and

With these filtering and eliminating organs sluggish and inactive poisons are left in the blood to poison the whole system and set up pains, aches and serious disease. The writer of this letter was in a serious condition from constipation and kidney troub when she began using Dr. Chase's Kidney-Liver Pills and was entirely

Mrs. Ed Miller, West Flamboro, Ont., writes: "I can truthfully say that Dr. Chase's Kidney-Liver Pills have cured me of constipation. I sufwith constipation almost ever since I can remember, and for four years had pains at the left side of the back. If I walked across the kitcher would have to sit and rest That, I think, was terrible for a woman of twenty years. The condition of my blood was shown by pimples breaking out on my face. I suffered so much from pains and stiffness in the back I am sure my system was full of poison Dr. Chase's Kidney-Liver Pills have entirely cured me, and I feel better than I have felt for many years."

Dr Chase's Kidney-Liver Pills, one pill a dose, 25c a box, at all dealers, or Edmanson, Bates & Co., Limited, Toronto. Do not be talked into accepting substitutes. Imitations only disap-

Parainteresting Facts from Science and Life

Can GRAVITATION How SCIENCE Discovered SECRET of REVERSING Force of GRAVITY Be Destroyed ELECTRICITY?

THAT science has at last solved the conundrum of how to overcome gravity seems to L be indicated by the astonishing results obtained in a series of experiments with electricity recently conducted by Prof. Francis E. Nipher of the St. Louis Academy of Science.

It is the theory of scientists that in some mysterious way the minute electrical charges existing on the particles making up molecules and atoms are definitely linked up and concerned with such basic phenomena as gravitation. Since all bodies are made up of atoms it would seem logically to follow that the forces of gravity must depend in some way upon attractions which atoms exert upon each other, and due to the fact that the atoms are separated, at least in solids and liquids, by extremely small distances, we might expect these inter-atomic forces to be relatively more powerful than are those of ordinary gravitation. Until recently, however, the mystery linking this interatomic activity with the force of gravitation baffled all attempts at solution, although many scientists had tackled it.

But at last experimental proof has been forthcoming through the untiring labors of Prof. Francis E. Nipher. In a pamphlet Prof. Nipher supplies experimental evidence that gravitational attraction cannot only be suspended or nullified by the electrical current, but it actually can be trans-

formed into "gravitational repulsion!" Clearly to understand Prof. Nipher's epochmaking experiments, the reader is reminded of that familiar law of physics which states "that all

which is greater the nearer the particles are together." To be still more definite, Newton's law says that bodies behave as if every particle of matter attracted every other particle with a force that is proportional to the product of their masses and inversely proportional to the square of the distance betwen them. It is the gravitational attraction between the earth and the bodies upon it which causes the latter to have weight.

This fact, it is pointed out, is often lost sight of and should be well understood by every student. To make the matter more clear, the following example is given:

Imagine that a man's body is (as by flying, jumping, diving from a high point, etc.) for the moment separated from the surface of the earth. As soon as the mass of the body is separated from the earth, gravitational attraction is set up between the two masses. The earth pulls the man's body. and also his body pulls the earth, but as the mass of the earth is infinitely greater, its movement cannot be detected.

Just how Prof. Nipher discovered the secret of "reversing gravity" and the apparatus with which he conducted his experiments is very interestingly described in an illustrated article in the Electrical Experimenter.

"Prof. Nipher's mechanical apparatus," says this writer, "resembled that used in the 'Cavendish experiment,' by which it was first experimentally proved that Newton's law of universal gravitational attraction applied to small bodies in their

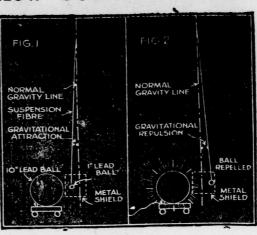


Fig. 1. Attractive Effective of Gravity Between Large and Small Masses. No Current. Fig. 2. Gravitational Repulsion Between Large and Small Masses. Current on.

action upon each other at short distances, just as well as it did to small terrestial bodies under the influence of the earth. This apparatus consists of a delicate torsion suspension fiber (see Figs. 3 and 4), a light, rigid arm at the lower end of the fiber suspension, and at either end of this bar two small lead spheres of known mass. Two equal large balls of solid lead are placed close to the small suspended spheres in the manner shown. Now, remembering that familiar law of physics-that every body in space attracts every other body proportionally to their respective masses and inversely as the distance between them-then it is evident that when this apparatus is set up, that the small suspended spheres will be slightly attracted by the larger stationary balls. This condition is represented in Fig. 1.

"Before connecting any form of electric current to the modified Cavendish apparatus, Prof. Nipher took special precaution carefully to screen the moving element from any electro-static or electromagnetic effects. His apparatus briefly consists of two large lead spheres ten inches in diameter, resting upon heavy sheets of hard rubber. Two small lead balls, each one inch in diameter, were now suspended from two silk threads, stationed at the sides of the two large lead spheres, from which they were separated a little distance. MoreFour Diagrams Which Graphically Show the Effects of Electricity on

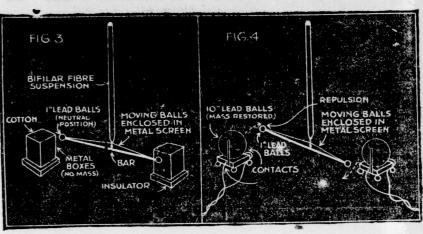
balls were insulated elaborately from the large spheres by inclosing them first air-

Gravitation.

tight in a long wooden box, which was also covered with tinned iron sheets as well as cardboard sheets. There was, furthermore, a metal shield between the box and the large metal spheres. The large metal lead spheres now exerted a certain gravitational pull upon the suspended small lead balls, as indicated in Fig. 1, and the small lead balls were slightly pulled over toward the large spheres. "In his first experiments Prof. Nipher applied

a high tension current from a static machine to the large lead balls (see Fig. 2). No difference was noted whether the positive or negative terminals were applied. In one of these experiments the masses were 'repelled' (normal gravitational attraction had been nullified and changed to repulsion) by a force nearly twice as great as the initial gravitational repulsion. This effect is shown

"In further experiments Prof. Nipher decided to check his results. To do this, he replaced the large solid lead spheres with two metal boxes, each filled with loose cotton batting. These hollow boxes (having practically no mass) rested upon insulators. They were separated from the protective screen by sheets of glass and were grounded to it by heavy copper wires. The metal boxes were then charged in every way that the solid lead spheres had been, but not the slightest change in the position of the suspended balls could



over, the suspended Fig. 3. Experiment with Two Metal Boxes Filled with Cotton in Place of Large Lead Spheres. No Gravitational Change Was Caused with Current on or off. Fig. 4. By Passing 20 Amperes Through the Large Balls, Gravitational Attraction Was Reduced to Zero.

be detected. This would seem to prove conclusively that the 'repulsion' and 'gravitational nullification' effects that he had produced when the solid large balls were electrically charged, were genuine and based undoubtedly on a true interatomic electrical reaction, and not upon any form of electro-static or electro-magnetic effects between the large and small masses. If they had been, the metal boxes, with no mass, would have served as well as the solid balls.

"Another interesting experiment was conducted with low frequency alternating current applied to the large lead spheres. Spring contact brushes were fastened to the wooden blocks supporting the large spheres as shown in Fig. 4, one brush on either side of the ball. This permitted sending current through the ball from one side to the other. First, a direct current of 20 amperes was sent through the two large masses, but no effect upon the suspended masses could be detected. Next, an alternating current of 20 amperes was sent through the large masses (see Fig. 4), with the result that the gravitational attraction was quickly reduced to zero, and not only that but in 15 to 20 minutes the small lead spheres had moved away over one-half as much to the opposite direction as the distance they had been attracted originally toward the large masses. Thus gravitation had not only been completely nullified, but it was actually reversed."

VEGETABLES from the SEA

TOW would you like to top off your dinner with a dessert of kanten, which is a Jap-anese pudding made from the isinglass of seaweeds? Or you might enjoy a dish of dulse or kelp, two other palatable dishes of marine vegetables, which are described in Popular Science

Monthly. "Kanten is a sort of isinglass," says this authority. It is thoroughly white, semi-transparent and shiny. It is extensively used for food in the form of jellies, candies, pastries and for anything which is prepared with gelatine. It is much superior to the common animal isinglass. Late statistics of the production of 'kanten' are not availsold his farm near here and located in Fergus, has purchased a 17-acre farm at Vineland, and will move there next able, but in 1902 3,000,000 pounds were made, with a valuation of \$750,000.

"In Ireland, dulse is a much favored vegetable, as is laver, which is called 'sloke.' Both these vegetables grow plentifully under the water along all our Atlantic coast.

"American seaweed resources are equal, if not superior, to the Japanese or those of any other OWEN SOUND.—Councillor Frank Barber has resigned after a residence of 30 years in Owen Sound, and will reside in Kincardine, where he has joined to the marine vegetables prepared in the Market of the Market Park to the country. Yet, while Japan prepares seaweeds each year which exceed \$2,000,000 in value, the total value of the marine vegetables prepared in the United States is \$35,000.

"The industry in the United States is practically confined to Massachusetts, and but a single species is used-Irish moss. It is true that in Monterey and Santa Barbara counties in California, Chinese fishermen dry certain marine algae for food, but the value of this amounts only to

about \$800 a year. "Kelp is an enormous seaplant which abounds along the Pacific coast. A full grown plant will have a stem 300 feet in length which bears at the top an air bulb. From this bulb grow 50 or more middlemarch.—David Lyle Jun. giant leaves, each one of which will attain a length of 30 or 40 feet. This plentiful vegetable is entire-

be obtained from the state of Hyderabad,

A India, in the shape of the mowra flower,

and it is manufactured into products of commer-

cial utility, according to a writer in the Scientific

American. The mowra tree abounds in the forests

and open country in this region, and during the

hot weather the flowers drop off the tree and are

gathered and dried to the consistency of raisins.

annually, of which about 10,000 tons are used for

liquor and the balance is run to waste.

On the average some 25,000 tons are gathered

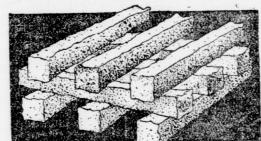
It has been discovered that it is possible to

make sugar, motor spirits and several other val-

uable products out of this material. In addition

Hitherto they had been utilized for liquor alone.

ly ignored by us, but the Japanese prize it highly. They make what is known as 'kombu' from kelp. Because it fades in the curing process, much of it is dyed green. This shredded, dyed 'kombu' is used as a vegetable and is cooked with soups and



Kanten Is a Sea Vegetable. Isinglass Used in Foods Prepared with Gelatine.

meats. It is even made into a sort of confection by sugaring small strips of it. 'Kombu' appeals the occidental taste when crisp sticks of it are broken in small pieces and served as a cereal."

The CAMERA As a Deadly WEAPON

THE peaceful-looking camera is now one of the deadliest instruments of the war. Why I it has become so is due to the ease with which any object can be accurately "described" by means of a photograph. Words alone are of little use alongside a photograph; but the two combined make for accurate and rapid reports on any given subject. For this reason the spies have not overlooked the camera in carrying on their clandestine activities, and it is safe to say that tens of thousands of photographs made by spies have had an important bearing on the fortunes of the world war.

The camera may be the means whereby invaluable fortifications can be quickly destroyed; it may give away important ideas or inventions to the enemy; it may betray the location of important batteries and doom them to early destruction; and it may result in heavy loss of life to troops whose position is divulged by the black and white markings of a photographic plate or film. At any rate, the camera in the war zone is no longer a peaceful instrument; it is many times deadlier than its equivalent weight of high explosive.

It is the airman over the battle lines who makes the most use of the camera. Early in the war the rival camps came to appreciate the importance of aerial photography, and began ediately to develop cameras for this class of work. Today aerial reconnaissance is carried out largely with the aid of photography; large

For Protection Against

Wounds in

the War

grapher

Wears an

Inverted

Funnel-

Helmet.

which were pointed over the side of the aeroplane in order to make a photograph. The Germans developed, for this purpose, an ingenious camera in the form of a long and slightly tapered body, equipped with a direct-view finder and a pistol grip. The shutter was released by pulling a trigger and the entire apparatus was strongly suggestive of a revolver. This camera, like most of the others, was equipped with & focal plane shutter. But the demand for clearer, sharper photographs has given rise to big, longfocus cameras.

made use of small cameras of the hand type

While details regarding the various cam eras now in use are naturally most carefully guarded by the various nations at war, it is known that the present tendency is toward still larger cameras, which, in many instances, are built into the planes. The French are making use of a camera which measures over four feet in length, with a slightly tapered body ending in a lens board. The airmen refer to it as the 'vest pocket' camera. Obviously, such a camera could not be lifted over the side of the aeroplane nacelle because of the surface which it would expose to the onrushing air, and hence it is installed in the aeroplane body with the lens pointing down through a hole or well, while the machine is maneuvred into position for making the exposure.

"An improved type of Italian camera automatically makes photographs at predetermined intervals on a strip of film, and as each exposure includes in one corner the image of a compass. the individual prints can be more readily assembled by the 'readers' and compilers at head quarters, since the points of the compass are given with each one.

"There has been developed in America an ingenious camera which makes use of standard motion picture film, and which, by means of a cable release, can be operated by the airman at any moment. From 1 to 750 exposures can be made on one roll of film and because of the small bulk and the light weight of this equipment it is quite possible for two or more cameras to be

carried by one aeroplane, if desired. "As a preliminary to a big offensive, tens of thousands of photographs are made of the enemy's positions and the country in back of him. These photographs are developed and printed, in some cases enlarged, and 'read' by experts in back of the lines. The information gathered from these photographs is invaluable to the commanders, as can well be imagined; for it permits them to have their maps exceedingly accurate and up-to-the-minute. Thus, when the enemy lays down new railways, prepares new communication trenches, brings up new batteries, or constructs new concrete blockhouses or 'pill boxes,' the photographs reveal their presence, and they are accordingly marked in on the staff maps. In order to conceal facts from the prying eyes of the aerial cameras, camouflage is often executed in colors which photograph most

"When the tremendous drum fire opens up on the enemy lines, the artillerists are guided largely by elaborate maps prepared from photographic data. In fact, much of the range findi g is done by means of these maps, and the fire checked by aerial observers. And as the drum fire thunders on day after day the airmen aloft make more photographs, which, after being developed and printed. indicate to the 'readers' at headquarters the extent of the artillery destruction, and in this way the commanders know when the enemy's works have been sufficiently pulverized or otherwise disorganized to render an infantry attack comparatively safe."

How OLD Is the OCEAN?

YOW old is the ocean? Standing on the and all life will become extinct.

shore and looking out over the expanse of water, the ocean seems a fixed and eternal fact, but the seas had a beginning and will have an end. Scientists say that when this time comes the last drop of water will have been absorbed into the earth's crust, its surface will be a desert

MOWRA FLOWER as SOURCE of POWER to sugar, the flower contains acetic acid and a N industrial product of considerable value can

> It appears that the government of India has purchased a large quantity of mowra from Hyderabad for use in the acetone factory at Nasik. Another fact which promises to be of great economic importance is that, with suitable additions, mowra spirit can be used with success as a substitute for gasoline as a source of power for internal combustion engines, especially in motor cars. It is stated that several kinds of motor cars have been run on a spirit prepared from mowra at half the cost of petrol and that 100,000 gallons of such spirits can be manufactured from 1500 tons of

certain amount of acetone which is one of the

principal ingredients of cordite.

The age of the oceans has been estimated by a leading authority, Prof. Frank Clarke of the United States Geological Survey, at about 90,000,000 years. This, of course, is only an approximation, but is based on carefully studied scientific data. All the water was once contained in the vapor that surrounded the glowing, slowly cooling mass which is now the earth. After the gases combined to form water, the process of making the ocean salt began. This was the work of the rivers. Mineral salts were extracted from the rocks over which they flow and deposited in the sea.

Each year the action of the streams is said to make the ocean slightly more salty and this is the basis on which its age is calculated. The amount of salt carried by the rivers of the world is computed by the scientists and compared with the total quantity in the ocean. After evaporation and the velocity of currents have been considered, it is possible to calculate how long it has taken to make sea water as salty as it is today.

About 31/2 per cent, of mineral salts and 961/2 per cent. fresh water make up the oceans. Threefourths of the solid matter is common table salt, chloride of sodium, other ingredients being chloride, sulphate and bromide of magnesium; sulphate and carbonate of lime and sulphate of potash, besides traces of various other minerals and metals, including gold and silver.

A SPECIAL CORSET FOR THE WOMEN WAR

S American women by the thousands and even by the hundreds of thousands are even by the hundreds of thousands in the coming war workers to replace men in the coming war workers to replace men in the various industries, thereby releasing them for military duty, the new need of a special kind of corset for the members of this vast feminine industrial army was anticipated. It has just been announced that such a corset, as a war emergency device, has been designed which is said to be hygienically moulded and to give perfect support to spines that are none too strong, and to supply a brace to muscles that are unaccustomed to the physical strains they are required to withstand. This newly designed pair of stays, it is claimed, is essentially the corset for the women workers whoare entering the more active employments where physical strength and undeveloped muscles will be put to strenuous tests. It is claimed that it is the working woman essentially who most needs a corset. Women of wealth and fashion, who seldom tax their muscles or their spines, get along

very well with a simple girdle or some soft corset substitute, but the industrial worker, bred from generations of workers, probably requires the aid of science to help her in her struggle for main-

tenance for herself and children. When European women entered the new fields of industry opened to them by the withdrawal of men to the ranks of fighters, corsets were temporarily discarded, but the designer of this "war corset," Daniel Kops of New York city, who has had 30 years of experience in creating corsets for every type of figure, realized that there would be a greater demand than ever for those devices. He believes that women can enter almost any field of work hitherto occupied exclusively by men if they are properly corseted.

Women street car conductors, workers in munition factories, elevator operators-in fact any who have entered the new trades-will be able to stand hour after hour, lift heavy articles and perform other arduous tasks if their bodies are properly supported, is Mr. Kops's theory.

And as proof of this essential point in preparing women for the industrial fray Mr. Kops designed this working woman's corset model. It is long but flexible, it hooks in front and laces at the sides, and over the spine is a specially woven fabric which gives no pressure, the designer says.

The front and upper portions of the corset terminate in a V-shaped piece, supplying strong bands to hold up the abdominal muscles. By an odd contrivance of laces and apertures these bands may be adjusted from the outside of the front sections by pulling the laces outward. One pull tightens the laced bandage slightly, and a series of pulls will bring it in so as to be quite snug. Simultaneously this reefing of the front section

pulls in the back at the waist line to give additional support to this supposedly weak feature of the feminine figure. While the front section ends in a point just below the waist the sides are extended over this so that the corset has the appearance of being one of the regulation extra long

With the splendid anastigmat lenses available today, together with the high degree of perfection attained in enlarging processes, the spy need not use a large camera. The chances are that in most instances small and readily concealed pocket cameras are employed, making film or plate negatives measuring an inch square or possibly 21/2 by 31/2 inches as the maximum. These negatives, or contact prints made from them, by some route or another make their way to spy headquarters, and there they are enlarged and studied by specialists trained in "reading" photographs. These specialists, we are told, can glean a tremendous amount of information from what would appear to the layman to be a most uninteresting and valueless print. And when such informations are properly collated and distributed to the various military departments where they can do the most good and the most

planes, accompanied by fast fighting machines,

make their way over the enemy's lines and pro-

ceed to photograph a given area.

camera begins to be realized.

"Each of the big powers in the war has numerous types of aerial cameras now in use," says a contributor to the Scientific American. "At one time, when aerial warfare was still in its infancy, the French, British and Germans

harm to the opponent-the deadliness of the

