

COPPER MINES NEAR PORTLAND

Valuable Property on Upper Washougal River Is Being Developed.

FIND BIG ORE BODIES

Continuous Work for Past Seven Years Shows Up Mammoth Copper Proposition That May Rival Greatest Producers.

Some maintain that the farthest frontier has vanished; that the romance of the West has gone with the cowboy and the buffalo and that since the days of '49, the glamor of American mining camps has vanished. But they are wrong. Portland people do not generally know that within 35 miles of the city, as the crow flies, there is a real mining camp in operation. About the camp there is the glamor of romance that clung to the California mines in the days of Bret Harte. In this camp is one place, outside of melodrama, where people wear blue flannel shirts.

This property, so close to Portland and so little known, is a real mining camp. One minor died there and a child was born in those hills. Two women live there in rude log cabins. At the bottom of the gulch, along whose sides are perched the cabins, Shirt Creek dashes noisily. The baby that had such a rough birthplace has been named Shirt Creek Belle Master-son, and is the daughter of the master mechanic at the mine. The miners are planning for a christening soon, when a padre will be brought into the camp over the mountain roads and the miners will gather from the camps for miles around to give this child, the first born in the district, an appropriate start in life.

Mystery hung over the man who died at the camp. He was an unknown, one of those men who never tell their past for reasons perhaps best known to themselves. He died of heart disease, suddenly, and nobody in the camp ever knew his name. But the miners gave him a Christian burial and he sleeps peacefully in the mountains, far from the busy outside world.

On the headwaters of the Washougal River, in Skamania County, Washington, this mining camp is located. The Washougal Gold & Copper Mining Company is developing a property there that is proving a surprise to people who are allowed to go through the drifts and see the rich quality of the ore and the large quantity in sight. Few Portland people have ever been through the tunnels on the property but those who have seen the mine in operation have expressed wonder that such an extensive property should be developed within such a short distance of Portland and so little be known about it.

Vast Ore Bodies in Sight.

The management of the company has preferred to do sufficient work to show the extent of the ore bodies before saying anything about the mine or making predictions of what it will produce. This development work has been accomplished. Not only does the ore assay high but there is a wide ledge that has been traced for over a mile on the surface of the ground, while two tunnels that cross cut the vein at different levels, show that the ledge widens and increases in value as lower levels are reached.

Vast quantities of ore of very high grade are in sight now. None can predict what the property will produce in copper and gold. But many believe it will rival if not outdo some of the famous copper mining camps in the country.

Very extensive development work has been done. During the past seven years, about \$300,000 has been expended in this way. The property covers 160 acres in the Lower St. Helens district, in the neighborhood of Bald Mountain. To carry supplies and machinery to the mines, which are located 15 miles from Cape Horn, it was necessary to construct a wagon road four miles from the crossing of Silver Creek to a fork that would have daunted any less hardy than the owners of the property. But they set to work and laid out and built a road through what was formerly an almost impassable mountain country. Besides, the road improved the main road from the Columbia River to Silver Creek and are still doing considerable work to keep the thoroughfare in good condition. Now the road is in such good shape that the company's teams travel over it daily in bringing in supplies and in taking out the ore. The reduction plant that the company is taking in to set up and operate at the mines.

The properties of the Washougal Company were located in November, 25, 1901, by F. A. Mabee, its president. This was no smiling country, waiting to be wooed, but a forbidding, inaccessible mountain district that had to be won, and had the locator of the property been any less indomitable and courageous than he is, the rich copper veins would still be lying there, awaiting development. Even after cabins had been built and work started in tunneling to crosscut the ledge, a forest fire on the mountains five years ago and wiped out all the improvements that had been made. Not to be discouraged, however, work was resumed. Other discouragements followed but Mr. Mabee swept them aside and kept up work when others would have despaired. Now he may well be proud of what has been accomplished for mammoth copper property has rewarded his patience and courage.

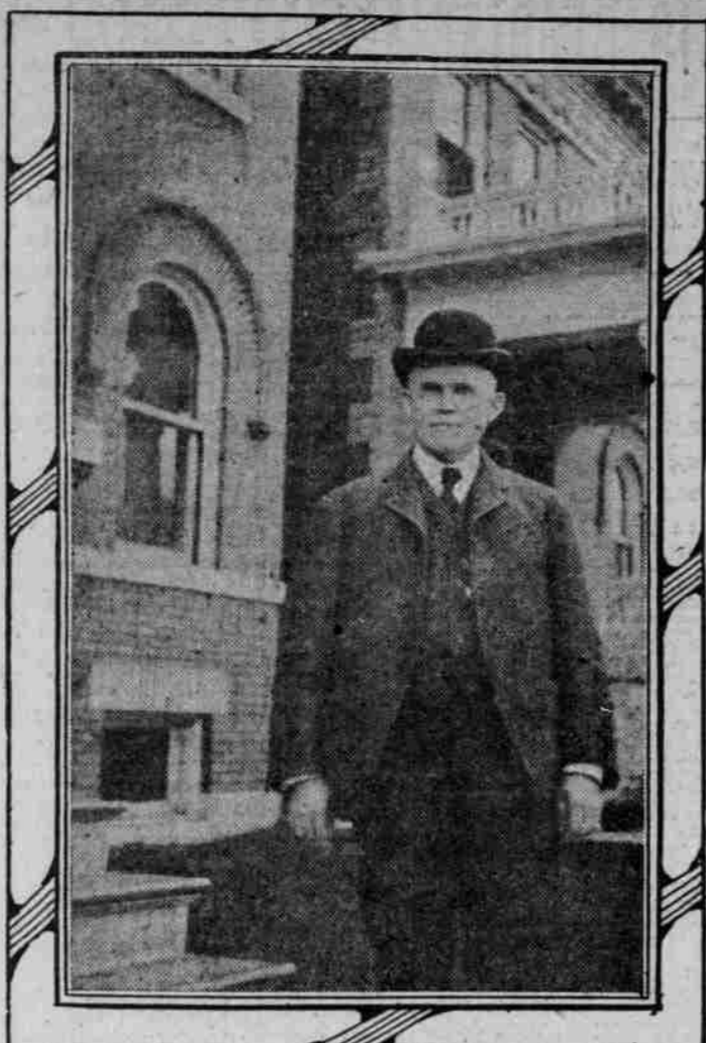
Tunnels Open Up Ledges.

Mr. Mabee found the outcroppings of the copper ledges on the Washougal company's properties and commenced work on the Nellie and Twin Baby properties, where the principal development has been done. A shaft was sunk on the ledge 50 feet. The ore increased in value with depth, and then a tunnel was commenced 40 feet down the mountain side. This was driven in 280 feet, with 150 feet opening on the ledge, the tunnel being in the form of a "T". Three hundred feet further down the mountain the working tunnel was driven 650 feet long with 1000 feet of ore exposed. This tunnel shows a ledge 17 feet wide and proves the existence of a true fissure vein that widens and grows richer with depth.

The driving of these tunnels was a work of years. They are both blasted through solid granite, and dynamite and supplies for the workmen had to be carried in on the backs of men and horses, for a large part of the work, over the steepest and most dangerous of mountain trails. The upper tunnel is all hand work. For the lower tunnel a compressed-air drill outfit was installed.

A sawmill has been built on the property, run by a gasoline engine of 25 horsepower, which also runs the air compressor. Sullivan drills are used and the tunnel has been laid with track and piped. Ore cars are used to bring out the rock, and several hundred thousand tons of ore has been taken out and is piled up awaiting the starting of the smelter.

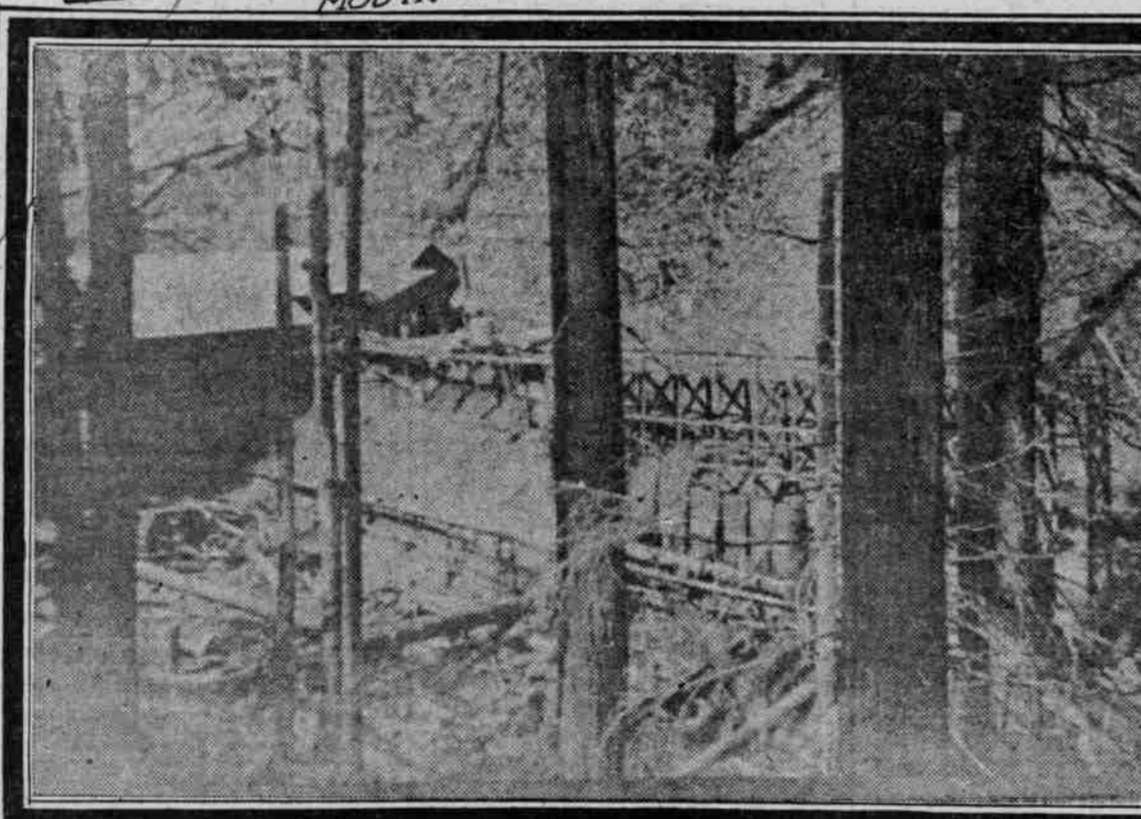
The smelting plant is now on its way in to the mines. Part of the machinery is already on the ground, and the remainder is at Cape Horn awaiting transportation in. Teams are at work carrying this ma-



F. A. MABEE, LOCATOR OF THE PROPERTY AND PRESIDENT OF THE COMPANY



MOUTH OF THE MAIN TUNNEL.



SAW MILL AND ORE DUMP.

terial to the mine, and the smelter will be set up and in operation before Fall.

An ore crusher is also being taken in, and a 100-ton concentrating plant will be purchased. Machinery has also been purchased and has arrived at Cape Horn on its way to the mine for a complete electric water-power plant, to be operated by a Pelton wheel. This will light the camp, run the machinery, operate ore elevators and ore belts, besides furnishing all the power needed around the mine.

With the installation of the electric power plant an electric lighting outfit will be put in with a pumping power of not less than 200 gallons per minute. Blacksmith shops and all the tools and apparatus needed to carry on the work at the present stage of development are on the ground, and the property is fortunate in having thoroughly practical mining men in control, for all, from President Mabee down, are familiar with ores and the workings of a mine.

Assayer on the Property.

An assay office has just been completed and Frank W. Harper, an assayer formerly with the Green Consolidated, who is a graduate of the School of Mines, Raleigh, Mo., has been employed and is on the ground.

Buildings are substantial at the mine, and the new structures are being built of lumber from the company mill, instead of logs, as the first cabins were constructed.

One splendid feature of the property is the large amount of available timber on the land held by the Washougal Gold & Copper Mining Company. All the timber that may be needed for the development of the mines is there handy to the workings. Donkey engines make the timber up to the sawmill, where it is converted into lumber. A fortunate feature of the development is the accessibility of the material for timbering the tunnels. If this timber had to be brought from a distance it would prove very expensive on account of the character of the country, but as it is on the company's own land, there is no difficulty in securing all that is needed without cost. The tunnels so far run, however, require very little timbering, owing to the solid granite walls that have to be cut through to reach the ore veins. But some timbering at the mouths of tunnels is necessary.

The same can be said of water, for never was there a better supply for a mine than at the Washougal properties.

There are numerous streams of the purest water for all sorts of purposes and so swift is Short Creek that a flume is now being built by the men at the camp for diverting the water from this stream and operating the lower plant with it. A flume 300 feet long has been run along the side of the gulch, taking water from the creek above the mill, which will be dropped down the side of the mountain several hundred feet to operate the electric power plant.

During the first season that Mr. Mabee was in the Bald Mountain district he located about 15 properties. Since that time these claims have been constantly added to, until a great tract of country, all traversed by similar ledges of rich copper ore, has been secured. Work has been done on these other ledges to show they will some day, when development is carried on, be as rich as the workings of a mine.

Near the junction of Shirt and Blue Bird creeks, below the Washougal Company's camp, but on its land, several rich ledges have been uncovered and men are blasting tunnels to discover the extent of the ore bodies. Further down Blue Bird Creek are other ledges, where work is being carried on regularly. Above the main camp are the Golden Bow, Copper King and other ledges. The Golden Bow has 300-foot ledge that is rich in copper, silver and free milling gold.

Ore Will Last for Years.

These properties will be developed later, but with the ledge already opened in the Nellie and Twin Baby claims, there is ore enough in sight to take lifetimes in working it. By sinking and drifting on the ledge cross-cut by the tunnels, it will take many years to get out the ore and mill it.

During the past week an Oregonian representative visited the properties of the Washougal Gold & Copper Mining Company, reports of whose big ore ledges had come to this paper. Unlike many mines managed principally for the sale of stock to an unsuspecting public, the Washougal Company was very willing to have its properties investigated and furnished every facility for a careful examination of the mine.

The upper tunnel was gone through and the ledge examined where it was cut. The vein of ore stands nearly vertical and outcrops for several hundred

feet on the surface. Lying some 75 feet back and at a little higher elevation is another outcrop of quartz, which indicates a parallel vein that is much larger and more extensive ore body than that now being developed.

The vein filling is quartz and is much oxidized down to the upper adit or tunnel, although bunches of erubescite or variegated copper ore are frequently found in the enclosed quartz still unoxidized and carrying high values. Much of this oxidized ore is a blue and green carbonate of malachite and azurite.

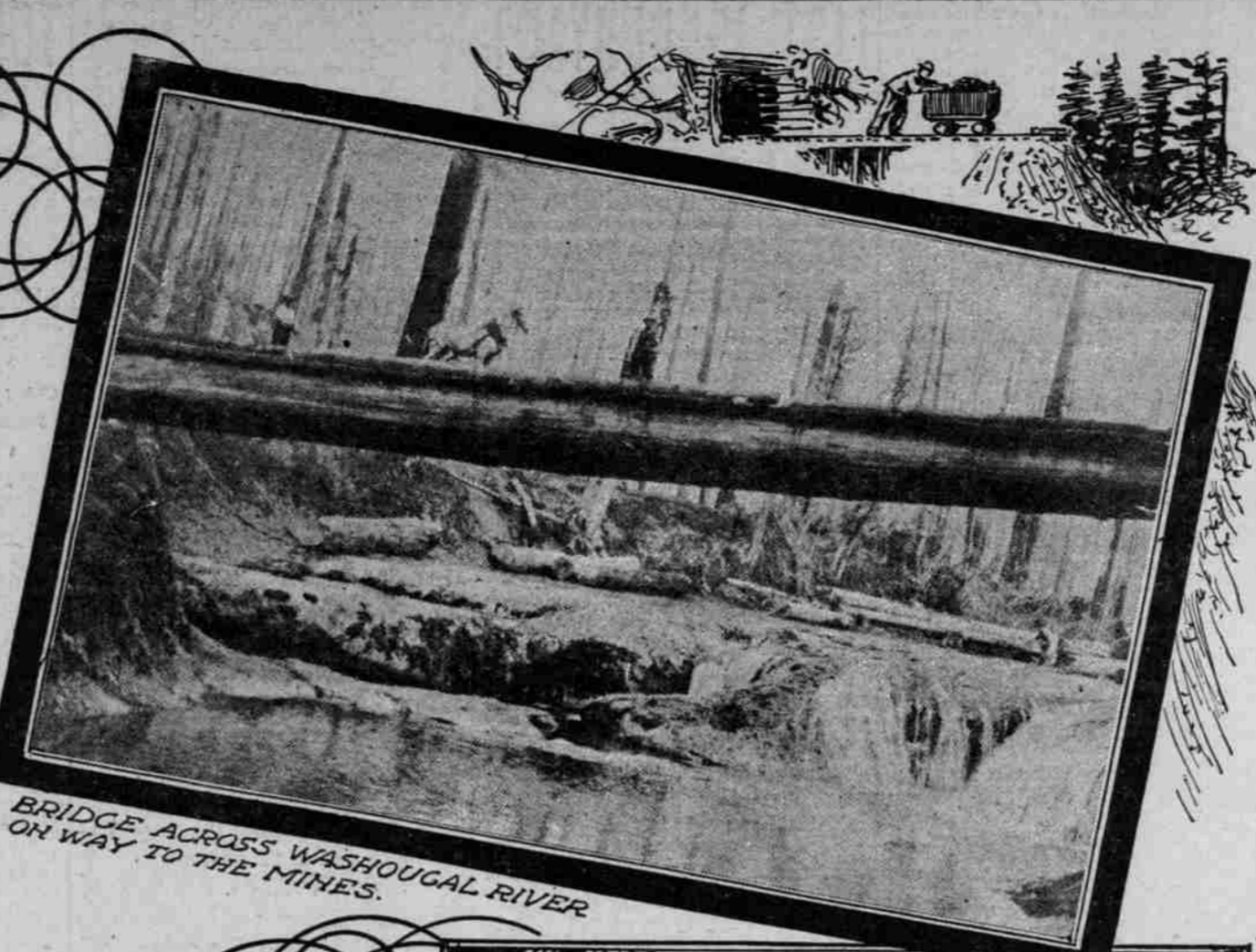
Where the upper tunnel strikes the vein is a distance of 300 feet vertically from the surface outcroppings. The enclosing rock of the vein is hard and good holding ground and needs no timbering, either in the country rock or in the vein. In fact, both are so tight that only a few drops of water seep through. The vein is a true fissure vein, as mining experts have proved.

The lower tunnel, 300 feet down the mountain, which crosscuts the ledge, proves that the vein increases in width and richness the further down it goes. While the vein was about six feet wide in the upper tunnel, it spreads out to 17 feet in the lower adit. The ore is much richer and it is believed it increases in value further down. A hoist will be put in and drifts will be run on the ledge from the T in the lower tunnel. But the ore already uncovered and blocked out is rich enough to satisfy anyone. Ore taken from anywhere on the ledge runs from \$25 to \$200 in copper, silver and gold values, the bulk of the metal being copper.

Will Stop Out Ore.

An upraise is now being made from where the lower tunnel crosscuts the vein to the upper tunnel, giving a ventilating shaft that will clear the smoke away after blasting and the ore will then be stopped out between the two levels. Work has already started on this upraise.

President Mabee was asked to have a good-sized shot put in that would bring down a quantity of the ore for the inspection of The Oregonian man to see the character of the rock the upraise will bring out. He very obligingly gave orders to that effect and a shot brought down about 70 tons. The shot three carloads, of a ton each, were brought out and dumped at the mouth



BRIDGE ACROSS WASHOUGAL RIVER ON WAY TO THE MINES.



THE TWINS OF BALD MOUNTAIN

of the tunnel, where a good look could be given it.

The ore was not selected or picked over, but was run out just as it fell, and it contained a quantity of the granite wall rock that was shattered and came down with the ore. The ore was all rich, some of it exceedingly so. The rich black sulphurets were perhaps the most valuable part of the ore and under a glass this showed up in a splendid manner. This part of the ore was so soft that it broke into small pieces from the force of the explosion, but after the coarse ore was thrown on the dump, awaiting reduction, the fine stuff was shoveled up in ore sacks and piled.

Some of the chunks of ore that came out in these three cars would assay 40 per cent copper. The green malachite that appears to be barren has fairly good value. The rock as a whole in this lot was very rich and fully justifies President Mabee's faith in the property that has kept him steadily at work in its development despite many discouragements.

The ore will be crushed by the machinery now being taken into the mine and run through the smelter that will be put up during the coming summer. A contract for the brick for the chimney of the smelter was let during the past week. Then the ore will be run into a matte and this hauled out to Cape Horn and shipped away to mar-

ket. Some of the ore, notably the black sulphurets, is so rich that it will be hauled out in sacks, as the per cent of copper is as high as it would be after smelting.

J. H. Flisk, the well-known mining expert, who died last year in Naples, while on a tour of the world, made an examination of the Washougal properties in June, 1905, and reported very favorably upon them. At that time only the upper tunnel had been run but he advised driving a second on the lower level, which was done later and fully justified Mr. Flisk's prediction as to the extent and value of the ore ledges. Had Mr. Flisk lived, he would have seen his fondest hopes for the property realized. Mr. Flisk's report, which contained the results of careful assays of the ore, is now in the possession of President Mabee.

Capitalized at Million.

The Washougal Gold & Copper Mining Company is capitalized at \$1,000,000, which seems very low considering the value of the property and the extent of the ore bodies in sight. However, the company was not formed to sell stock, as the stock is closely held and the capitalization is fully paid up.

Much credit should be given Mr. Mabee for his courage in the development of the mine, for he spent money and energy from the time the property was only a prospect. He has prospected in the best-known mining districts of the

country, however, and his judgment in locating ore bodies has proved to be excellent.

He is fortunate in having a capable corps of assistants. There are over 40 men employed at the mine. George Kramer, one of the directors of the company, is paymaster and general outside manager, and his work in keeping the mine going is to be commended. He has done great work in building and improving the roads leading to the mine from Cape Horn. Miller Master-son, the master mechanic at the mine, is an exceptionally capable man. The men all recognize his skill in keeping the machinery in good running order.

But the man who keeps close supervision of the entire property all the time is President Mabee himself. He has a splendid home in St. Louis but ever since he located the mine he has been in the mine to see that everything is in good order. He purchased the machinery and has directed the development of the mine ever since he located it. Mr. Mabee brought a box of samples of the ore taken out of the tunnel at the mine at the request of The Oregonian man back to Portland with him, and has it at his rooms at the Portland Hotel, where it may be seen by anyone who cares to look it over.

The big sums disbursed by the Washougal Gold & Copper Mining Company are of great benefit to Portland, for this money is spent here. Local wholesalers buy the material supplies for the mines and the company outfits here exclusively. Yesterday the payroll for the month was met here and amounted to \$2000. The Wells-Fargo Express Company states that since the mining company has been engaged in the development of its property, about \$200,000 has been transmitted by telegraph from the East through the local office to carry on the work. Every cent of this money was spent in Portland, with the exception of that used to buy a quantity of mining machinery, that was bought in the East.

EXCURSION TO DONALD.

Excursion on the new electric road to Donald to attend the auction sale of town lots Tuesday, May 12. One day excursion, free. Music and free lunch on grounds at noon. Round-trip rate from Portland, \$1.05. Train leaves foot of Jefferson street at 8:25 A. M.

Eight-car trains are to be run on the Boston street line to endeavor to cope with the traffic offered.

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CURING OURSELVES.

The most singular part of the whole process is that these bodies are not mere accidental parts of the food, or products of its digestion, but definite chemical substances, which can be isolated from the blood of one animal and injected into the body of another, and will promptly cause a flow of digestive juice. They do not, like a toxin or living poison, set up any antitoxic reaction on the part of the body, and a dose that will produce a given effect one day will produce an almost identical effect on the next, although, if given for a considerable length of time a trifling increase in the dose is necessary. They have the same curious special or selective effect upon some particular organ, or system of the body, as, for instance, morphine has upon the central nervous system, digitalis upon the heart, and Epsom salts upon the intestines. This opens a wide and hopeful vista of possibilities that, by continued and patient studies, we may yet be able to isolate from our foods and from the body tissues themselves these special substances. Nature's own curatives, with which may be harmlessly and effectively roused to action such bodily organs or functions as may be sluggish or overworked. This is in harmony with the strong tendency among progressive and thoughtful physicians to utilize more and more in the treatment of disease foods and substances and extracts derived from the glands and other organs of the body itself. We may be found to carry within us the best remedies for our own diseases.

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