

Harnessing the Sandy's Hitherto Wasted Power

in which the water will be from 10 to 20 feet in depth.

The lake will be formed by constructing a dike of earth at an average height of eight feet. The water is drained from the lake into a concrete fore-bay, or settling basin, on the edge of a high bluff. Large steel pipes, 48 inches in diameter and 700 feet in length, will carry it down to the water-wheels in the station-house below. The transmission line from this point to the business center of Portland is 24 miles.

The intake for the third plant is below the mouth of Bull Run and Little Sandy rivers. The location of the intake is three miles below the second station, where a 20-foot dam will be constructed for the purpose of diverting the water to a bench or table land where it can be easily conducted through a canal or flume, four miles to the station and discharged through a hydraulic development of four units of 4,000 horsepower each. This plant will be located 20 miles from the city of Portland.

It is estimated that the cost of the initial installation will be \$371,000. That includes the costs of the remainder of rights of way, intake and headgates, reservoirs and canals, powerhouse and similar costs.

The new company proposes to be a competitor to the Portland General Electric company in its bid for the patronage of Portland. The Portland General has its source of electric power at the falls of the Willamette river at Oregon City. It is to be supplemented, however, by a steam plant ranging from 14,000 horsepower now under construction.

It is estimated that within the next 12 months 35,000 additional electric horsepower will be ready for service in the city of Portland.

The new plant itself will be the most simple that human ingenuity can devise. It will consist of a 12-inch steel shaft 20 feet long with a water wheel on one end and a dynamo on the other. As the



Sandy River Valley.

WITH a capital stock of \$1,000,000 the Mount Hood Electric company proposes to harness the power of the turbulent stream that has been wasted for centuries. It is one of the numerous plans that have recently been laid for establishing a network of interurban electric roads through the state of Oregon.

The purpose of the company, as explained in its articles of incorporation that were recently filed, is to "develop light, heat and power from the waters of Sandy river in Clackamas and Multnomah counties in the state of Oregon." Actual construction work has already begun and the company has authorized an issue of 500 20-year 5-per-cent bonds of \$1,000 each. The sum will be applied toward the installation of the initial plant. The Sandy river has its source at the western base of Mount Hood. It is perpetually fed by miles of melting glaciers during the summer months. The water shed tributary to the Sandy above the point of intake is 400 square miles and the amount of precipitation over the district as shown by government statistics is 60 inches per year, more than double that of the city of Portland.

At the point of intake for the second plant, six miles down the stream, the water available is 1,000 feet per second. The river has a fall of from 20 to 75 feet per mile, running for the most part over a boulder bed between high sandstones and small cliffs. The proposed development consists of three separate plants situated from six to eight miles apart along the stream, one using the water after it has been discharged from the wheels of the plant above.

Jags in Many Lands

From the New York Sun. THEY can't push it into me that wood alcohol kills everybody that goes up against it," said a man who has soldiered both in the army and the navy. "It isn't the kind of wood I'd pick out if I had my choice, but there's plenty of corked up stuff that's worse than wood alcohol. That vino that you get down in the Philippines, for one thing. I'd rather drink straight-out wood alcohol, any day, than the vino we used to lap up for need of something better, down around Mindanao. "Wood alcohol doesn't make a man mean and mussy. It just stretches him out, quick and businesslike, and he does it. But take four drinks of that Luson vino and you'll dig your way through nine miles of jungle to bite your little sister. And a vino head, compared to the come-to of wood alcohol, seems like a pleasant ride in a merry-go-round with your steady. I've had both, and I know. "When it comes to that, I'd rather lick up enough decent wood alcohol to get that busy and prosperous feeling than to toy along with Mexican mescal. Quiser stuff to fool with, mescal. "When you get good and brimmed up on that, all you've got to do, three or four days later, when you think you're sober, is to toy along the head right lively from side to side, and there you are, with a jag all over again. Likes to linger around your system and give you your money's worth, mescal. "Some of that rum made out of molasses that you get in the West Indies would make a jack rabbit spit in the face of a jaguar. And what's worse, it burns outside as well as in. "You can believe it or not, but there was a corporal of marines who got hold of a pot of that blackjack rum one night, and the next morning his mustache was burned to within a quarter of an inch of his face, and his color had turned from brown to a sort of sandy, that. He swore that the rum, some of which trickled over his mustache, had done it, and nobody would be up against that treacle rum doubted him. "There's a sake sold for half a yen a quart in Japanese ports that'll make a man rob his own dirty-box and then blame it on his hammock-mate. Tricky stuff, too, that harbor sake of the swipes brand. "Tastes something like Rhine wine, and goes down as easy as the cambric tea your aunt used to give you when you were a kid. But just when you're beginning to believe that the world's pretty soft, after all, for a man that understands how to live in it, sip! you're gone, and then you sink off by yourself and study up schemes to get your most intimate shipmate into some deep trouble. There isn't any more vindictive tonell oil on earth than that rice juice of the Japs, once you get pickled right in it. "But what I started to say was that wood alcohol has different effects upon different people. I've been swaddled and shipmates on land and sea, with fellows who were immune from what they're calling wood alcohol poisoning around here now. They could drink wood alcohol like a Houston street peahunter heaving into barrel house dippers that sell for 3 cents a ladle, and when they'd come out of it they'd see you in wheelbarrows the week into hand-

place. At the point of intake for the second plant, six miles down the stream, the water available is 1,000 feet per second. The river has a fall of from 20 to 75 feet per mile, running for the most part over a boulder bed between high sandstones and small cliffs. The proposed development consists of three separate plants situated from six to eight miles apart along the stream, one using the water after it has been discharged from the wheels of the plant above.

ing them slum or scouse out of mess hours. "There was Chug Mooney, an oiler on a ship that I made a cruise on when First I shipped with the sea soldiers. Chug stood in with the ship's painter, so that he had a good alcohol bun on most of the time—not wood alcohol as a general thing, but it came to that once for a long stretch. "The ship's painter, you see, carries the keys to the alcohol tank on a man-of-war, and he serves the stuff out for shellac daubing, paint blistering, and all that. Men-o-war carry the best grain alcohol in their tanks for this work, and if the ship's painter likes the cut of your jib and the set of your fur, it's pretty soft for you to say that, that's all I've got to say. "Most ship's painters, without the Jimmy Legs or any of the rubber-pipe knowing anything about it, keep a covered over bucket of it in their lockers all the time for the comfort and entertainment of their friends, and if you're there right with the ship's painter, you can get a little ladle of it just about any old time you feel gummy. To fix it right, you take your little four fingers to it to the galley, and pour it into a tin cup, and the cook stokes you to some coffee, out of the pot that's always standing handy. "You can have all the highballs you want, but if there's anything gobbler or more action than a lump of dead-right alcohol that you know is right, tossed into about half a beaker of hot coffee and mixed around, they don't sell it on any beach that I ever happened to get the feel of with my feet, and I've been freighting around for a long time. I've had slugs of it, made me feel like hilling down to the berth deck alley and pipe-claying all the rest of the sea soldiers' belts—almost. I didn't do it, but I came near feeling like it. "The stuff warms and cheers you right out to the ends of your ears, and the only thing you've got to watch out for is that you don't chuckle yourself to death thinking of what a snap you've got in standing in with the ship's painter. "Well, Chug Mooney, the red-headed oiler, was aces up on kings and still one to draw with the ship's painter, who was a Turk himself, and for 18 months of the cruise Chug just rolled around the engine room, on watch and off, with the closest imitation of a continuous performance suds thing ever known in the American navy. Chug maced the ship's painter for about a quart of the tank it alcohol day during all that time, and he only had to stake the cook to a little of this per diem in order to snag out all the coffee-on-the-side that he needed. "But finally we landed for a long soak, picking up barnacles in the harbor of La Libertad, Salvador, where the ship was sent to watch that Exota revolution, which was like the bum after-pieces of an Eighth avenue variety show. We rolled and tossed around there for months. "The ship's equipment and engineer stores ran low, and there was a lot of delay in getting fresh stores down from the Mare Island yard. One day the alcohol tank was drained dry, and then it looked as if Chug Mooney might be up against it. I'll leave it to anybody if it isn't a sad thing for a man to have to let go all of a sudden, or even be threatened with such a thing, after he's had an 18 months' alcohol edge, without a day's interruption. "Anyhow, the berth deck alleyways and such like had to be shellac daubed for weekly inspection, and the ship's



View of Island in the Sandy River Below the Headwaters.

Two Millions a Year Fills Teeth

From the Chicago Tribune. OF the wealth of this country there is a certain part that has never entered into the records of the census or fiscal departments of the government. There is, if the estimates of the men who should know are to be taken as authoritative, over \$10,000,000 personal wealth, in the shape of gold, of which the government is entirely ignorant, or, if not ignorant, has decided not to mention in its financial reports. Each year there is over \$2,000,000 worth of gold that disappears, that is lost to the moneys of the world, and yet is not lost. More than \$2,000,000 worth of gold is used annually in caring for the mouths of citizens of the United States who have been neglectful in the matter of their teeth. This \$2,000,000 is practically wealth that is lost. After the gold is once securely fixed in the mouth of a dentist's patient it ceases to exist as a precious metal of importance in the world of finance. The figures seem vast when the small amount used in making a filling is considered, but they are undoubtedly correct. The man in charge of the gold department of the largest dental supply house in the country arrived at these figures after extensive researches

and calculations, and his estimate is verified by other men in a position to know. Two million dollars taken out of the stock of gold is the price that the country pays annually for having its teeth cared for in an up-to-date manner. With the increase of fillings per capita throughout the country, which modern dental methods have brought about, this loss to the gold wealth of the country is to assume proportions of importance within the next few years. Then, 10 years ago there was only 25 per cent of the people of this country ever went to a dentist except to have a tooth pulled. Five years ago the percentage was 33 1-3. Now, it is declared, 50 per cent of the population pay visits to the dentist's chair for some other reason than of having an aching tooth extracted. This increase in the number of dental patients in the country has resulted in a consequent increase in the amount of gold used for this purpose. Practically all of the 50 per cent who are numbered as the dentist's patrons have some gold in their teeth. This means that at least \$10,000,000 worth of gold put in the mouths of the citizens as against the \$2,000,000 of today.

Using the rate of increase each year for the last 10 years as a basis, the average yearly consumption of the precious metal in this manner has been about \$1,500,000 a year. This would make about \$15,000,000 worth of gold which has been put into teeth since 1894. For this amount could be built three of the best battleships in the world; the president's salary could be paid for 30 years; every voter who goes to the polls this year could be paid a dollar for his trouble and still leave a million for good measure. Deaths of course have cut the number of people who have had gold fillings put in their teeth in these years considerably. Five million dollars' worth of gold, it is estimated, has been buried in the graveyards of this country in the period covered by these figures. If a total could be derived at, reckoning from the time when gold first was used in fillings, it is certain that the amount of gold lying unused and dead in graves would be near to \$25,000,000. Subtracting the \$5,000,000 taken off the earth from the total of \$15,000,000 in the last decade, it will be seen that there must be at least \$10,000,000 worth of gold preambulantly about the country in the mouths of the citizens.

found out where he got the makings of the cox, for he hadn't been ashore, and the cox'un, who usually brought the wet dogs off from the beach, was laying off on that for a while, fearing detection. "It was the sea-soldier corporal on guard at the gangway who nailed the old gunner's mate at his source of supply in the middle of one night, although the corporal never reported it aft. Buckley was getting it over the recoil chamber of one of the rapid-fire guns. The recoil chamber of one of those guns is filled with half oil and half wood alcohol, the pulp stuff being used because it answers the purpose as well as the grain juice, and is three or four times cheaper. "Old Buck had found a way to tap it, and was drawing it as needed, to keep his edge from dulling by contact with the gray fogs of the north Pacific, where we were then stationed. He had a way of setting the oil at the bottom of his pan and then draining the pulp alcohol off into his bottle. "The alcohol tasted some, oily, of course, besides carrying its own smell and tang in the mouth, but Buckley told me after it was all over, one night at the gangway as we smoked, that he had never enjoyed a 10-day bun so much in his life as he had the one he got out of the recoil chamber of that gun. "I'm not advising anybody to go in for the pulp stuff as a beverage to go with meals, or even for a steady thing. I'm only holding out for it that there's worse paint than wood alcohol."

Blues a Real Ailment

From the Milwaukee Sentinel. "The people in Texas are now able to save thousands of dollars on their cotton crop each year on account of the recent discovery of the fact that the seeds are valuable," said C. H. Donahew of Denton, Tex. "Years ago the farmers used to throw them away, until it was discovered that they made two valuable products, the oil, which is used in lard, and the hulls of the seed, which is the best meal known. There is not a particle lost, and as the seeds are worth \$16 a ton the amount gained is no small consideration. In these days the cotton is brought to the bottom cotton is picked as clean as the floor. When the cotton is picked the seeds are taken to the refinery, where the oil is made, and then the remainder is taken to the mill, where feed for cattle is ground. "The most striking value of the fattening qualities of the meal is shown by a herd of cattle that was brought off the plains in the southern portion of the state and fed nothing but the meal during the winter. When the feed was brought to Denton the cattle were the poorest specimen of Texas cattle that I ever saw, but when they were fed the meal they were as fat as hogs, and their hides were worth more than the meat."

Blues a Real Ailment

When people learn that it is quite possible to throw off an unwholesome mood through the use of a certain complaining of the blues—which usually consist of a fear of something about to happen, rather than what has happened. There is an idea that only women have the blues, and that men are quite often the sufferers, and when they suffer the attacks are very much more intense than the feminine sort and harder to get rid of. Gambiers regard the blues as a disease, and as a rule they cease to bet or make very small bets until the sun begins to shine for them again. "When the blues are of short duration, easily dispersed, they do not count for much, but when they seem to have come to stay and everything tends to make life seem like a wearying, it is a pretty sure indication that something is wrong with the physical condition. "So it is a wise idea to find out if anything is wrong with the body which produces the mental disquiet. The seed far as fits of this sort is an attack of typhoid fever or malarial fever leading on to typhoid. Despondency is one of the surest symptoms of malaria in the system. "Grip is also succeeded by an intense depression of spirits in many cases, even with children who lose interest in their games and their companions after they have had an attack of this disease. "Change of scene is always a good prescription for low spirits, but when a trip to Bermuda or Europe is not possible it is a good idea to change air as far as possible the routine of the day. Eat different foods, travel by other routes, seek change in the manner of living just as far as circumstances allow. "The theatre is also considered a rather good remedy when the play is a musical comedy of the light and frivolous order. There is no doubt that such plays are doing a wonderful amount of good to a normal mental state, although they may not relish this form of amusement ordinarily."