- - Watch Hilo Grow - -

ation would pay. D. E. Metzger for several years superintendent of the Hilo Railway, was a bidder and a successful one, his price being many thousand dollars below the next lowest. An appropriation of two hundred thousand was followed soon by one of one hundred thousand and this has been since increased by one of a similar amount, the appropriations aggregating $400,000.

The contract with Mr. Metzger is on a basis of so much per ton of rock filling which now runs about sixty tons per running foot. He estimates that the present appropriation will run the breakwater about 2,800 feet out into the bay. The survey calls for a structure 9,760 feet long, on to the buoy that is anchored with a light of the Hilo side of the bay. On March 10, the rock extended 1515 feet from the

D. E. METZGER,
Builder of Hilo Breakwater.

shore, beginning at a point between Reed's Bay and Secunnet. At the terminus, the day I was on the work, a ledge of coral and sand was met and the engineers decided to verge to the eastward about one hundred and ten feet so as to avoid it. It was supposed this ledge, shown by the soundings, was lava of the same nature as that which marks the bay in the vicinity of Cocoanut Island. No borings were made and the metal sounders showed contact with a hard substance which was believed to be rock. Borings were made after the work had been run more than fifteen hundred feet and instead of lava, dead coral and sand was brought up. Just inside this ledge is a pocket having a depth of from 20 to 38 feet, while outside of it, next to the breakwater, the depths runs from five to twelve feet. The ledge is precipitous and there is bare possibility of a slide with the prevailing trade winds beating over the rocks during an easterly storm such as was experienced in Hilo last month.

The first angle in the work is at 1515 feet and at 7,275 it is acute, going in the direction of the Hilo shore for 2,500 feet to the buoy. When the contract with Mr. Metzger is completed

A. S. LE BARON GURNEY,
Clerk, Fourth Circuit Court.

the line will be changed from an angle to a curve. Where this change is to take place the drop off varies from 20 to 38 feet. At low water mark the width of the breakwater is forty-two and one-half feet, widening from that point two and one-half feet for every foot of depth. At sixteen feet below low water there is another angle that approaches the natural formation, the wave action being slight at that depth. The work is being done at the rate of 100 feet per month so that it will be finished, accidents barred, in seven years and Mr. Metzger expects to have his contract finished January 1918 next year.

This does not mean that the breakwater will not be of service to the coast shipping that goes into that port before that date. I am informed by Mr. Metzger that at a length of 4000 feet it will be a protection sufficient to allow the largest vessels to lie at anchor during storms of weather. Even now, with the works extending a little more than fifteen hundred feet, there is a noticeable difference in the water between the inside and outside of the structure. What it will be when it is a reality that it will fend off the effect of the heavy northerly swells may be easily imagined. It will be a protection against the prevailing trades as well and that is what the breakwater is being built for.

To the layman, after an examination of the charts of Hilo bay, it would appear that a dredger would have nearly work cut after the breakwater is a fact. I am assured by the contractor that this is not the case, as the mud and sand that washed in it will probably work out again with the shifting tides. But there is a shoal blocking the entrance to the forty-foot deep pocket that must be blown out before it will be of any service to the shipping. Mr. Metzger estimates the cost of dredging out this obstacle at $100,000, and it would be money well spent, because deep water is not too plentiful in the locality. With the pocket open to shipping there would be an abundance of room, the depth varying from five to forty-three feet.

The top of the breakwater will have a width of fifteen feet. It will be eleven feet above low tide and nine feet above mean tide. I was under the impression that the wharves for the city would be built from the breakwater, and was laughed at when I said so. Uncle Sam, it seems, is not in the business of building wharves, and those that are to be built by private enterprises will be on the easterly side of the bay, up to where the railroad wharf is. Mr. Metzger has ninety men working steadily and twenty who happen around about every other day. The twenty are Hawaiians, who prefer to rest up on the second day so as to be prepared for work the third. With the completion of the breakwater Hilo will realize its hopes as a favorable port for vessels which pass through the Panama Canal, and it will become one of the utmost importance to shippers. It will be near to those on the way to the Orient or to Australia who may need supplies. When it is completed Hilo may become a place of importance greater than its most loyal citizen hopes for, because there may be a drydock and a shipyard where vessels may be repaired. There are great possibilities for Hilo, and Uncle Sam is doing all he can to bring them near to it.

Ask any resident of the place, and he will tell you that when the breakwater is finished and the railroad is in operation to Hamakua, that the difference in the place will be so great that its oldest friends will not recognize it unless they are there to see it grow. There are those who will tell you that some day Hilo will outclass Honolulu, while the more modest will say that he expects to see Hilo in ten years what Honolulu is today. Personally I believe he will. There is nothing to stop the growth of Hilo but the bay, and they can sink piles there if necessary. With the breakwater comes the undertaking, of as great importance to the town, but it is in aid of the landlubbers, rather than the shipping masters.

The Hilo Railway.

It must be thirty years since S. G. Wilder first conceived a plan for a railway along the Hamakua coast of Hawaii beginning at Kohala and extending to Hilo. It died a borning. Years later a man named Gear, who came here from Chicago shortly after annexation and took up land in Maulua Gulch contracted the disease, spent some of his own money and a good deal of that of his friends in running surveys and then quit. He did more than the late Mr. Wilder because he picked out a site for a depot and got into debt and difficulty. Then he subsided.

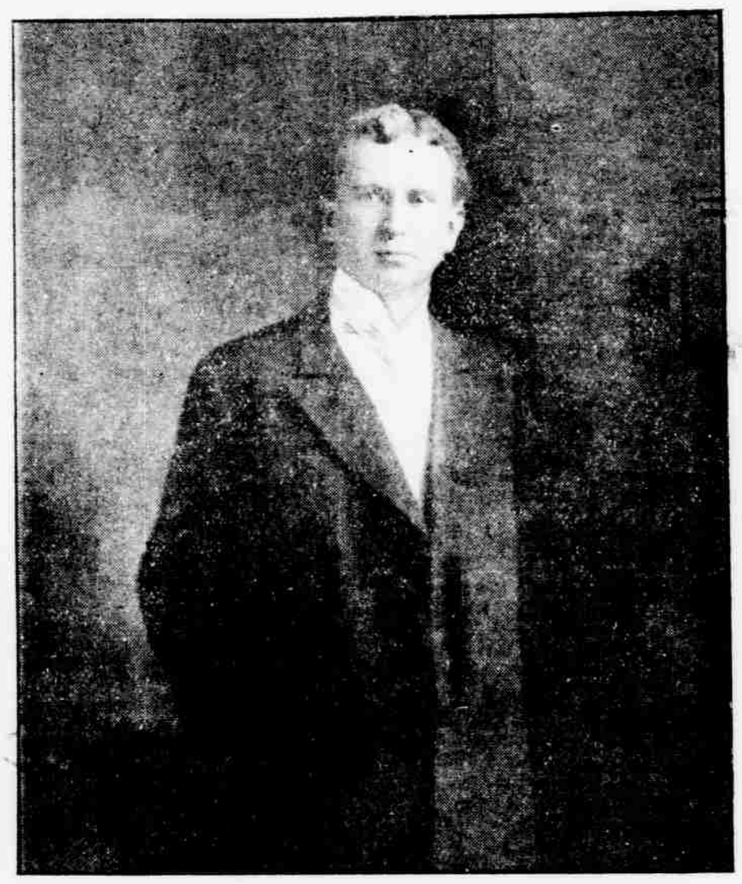
During the interval the Olaa Sugar Company was promoted with plantation and mill beginning nine miles from Hilo and running mauka to twenty-two miles. The shipping point being Hilo, there must be a means of getting the product to tidewater and the freight to the mill and plantation. The railway was, apparently, the most economical means and B. F. Dillingham and his associates got busy. His experience in railroad building had fitted him for the obstacles that might be placed in his way by Nature's forces. His grit enabled him to overcome them and when the survey was made he called for accounts. L. M. Whitehouse got the award for the first eight miles and W. H. Lambert, now of the Philippines, was made superintendent.

I remember being invited to ride out on the line to the end of the track one night a few months after the first sod was turned and I still enjoy the recollection of the little party made up of prominent citizens of Hilo, Chalmers A. Cressman of San Francisco, and the newspaper men of the town. The night was inspiring, for the moon shone through the palms in a way that gave one tropical ardor. I have not forgotten the luncheon prepared by Mrs. Lambert and at which her husband was host. I never forget a luncheon and this one lingers because it was good. The trip was made on a hand-car improvised into a passenger observation coach by Mr. Lambert, and we were as comfortable as bugs in a rug. In time the road was in operation and cars were running on schedule time to eight miles. Then to nine miles, where the plantation had established a store. As capitalists were shown the possibilities of the road, money came in at the office for its bonds and the road was extended to twelve and then fourteen miles, finally stopping at Mountain View, seventeen miles from Hilo. Here there was a long time halt and those who had residences above that place were sore because they had not the same privileges of those living below. Trains stopped anywhere for passengers to get on or off and freight was picked up at every crossing. The service was enjoyed even by tourists who were accustomed to the rules which govern transcontinental railways.

A few years ago the rails were extended to Glenwood, twenty two miles from Hilo, and I am informed that the day is not far distant when the trains will go to the volcano. At Glenwood begins the excellent service of the Volcano Stables and Transportation Company in its line between that point and Kau, via the volcano. Hilo as a road has certainly grown prosperous since that night we took the excursion on the handcar. From a bunch of graders and freight handlers it has blossomed into a corporation employing 212 men in various capacities, 93 being set on men, 32 set cars, 41 trimmers and other staff and 35 freight handlers. During the year ending June 30 last it carried 75,521 passengers and the passenger earnings per mile were $750.57, a comfortable increase over the previous year. During the same period the trains carried 115,631 tons of freight which brought a revenue of $132,186.23, and for the first ten years of its existence the percentage of expense to earnings was 36.87.

R. W. Filler, the present superintendent, is practical in all that the term implies. He is a doer. He will take one initiative every time and carry a project through to success if there is a fighting chance. For that reason the people who know him say the Hilo Railway Company is fortunate in having his services at this time, for the most important work is extending the line to the north along the coast. And just here is a project that means brains used in engineering and brains in the construction work. The engineering is in the hands of Charles Kluegel and his able assistant, James Sisson, while Harry Kluegel does a lot of the office work.

The extension contemplates a line along the coast through a portion of the Waimaku lands, thence through those of Paukaa, Papaikou, Pepeekeo, Honomu and Hakalau. The length of the road will be about nineteen miles to this point, and the company hopes to have it built there early in January. The steepest grade between Hilo and Papaikou, to which place it will be in operation on July 4th, is 1 4-10. The summit is reached at Onomea, where the elevation is 318 feet. There are a number of deep gulches to cross, and nearly the entire line compresses cuts, which in-



CHARLES F. PARSONS,
Judge of the Fourth Circuit Court.

volved the removal, up to a week ago, of 270,000 cubic yards of earth. To me it looked as though it would require as much more to fill the gaps which must pave the way for the metals. It is to be a scenic railway, and Mr. Filler has in mind a car that tourists may engage for the day to travel over the line. There are many beautiful picture spots between Hilo and Hakalau, where the waterfalls are as numerous as bees around a hive, the water tapping over rocks and then plunging a hundred or more feet to the sea. A picturesque spot is Honolii gulch, only two miles from Hilo, and where a steel bridge 511 feet long and ninety feet from the base will be built. The view up the gulch is inspiring. The green mosses on the sloping banks make a scene that will linger long in the memory of the tourists who go out on the line. At Papaikou there is to be another bridge, 412 feet long and sixty-two feet from the base of rails. This is in the midst of a beautiful scenic country, with enough of the forest in the neighborhood to make it attractive to those who care not for cane alone.

The graders are at work now on Hakalau lands and at Kolekole Gulch, twelve miles from Hilo, they are blasting a tunnel that means diverting the course of the stream. The rock and dirt removed from the hill through which the tunnel is being built will be used for filling the gulch and one will offset the other. Tremendous concrete culverts are being built in the gulches where there is to be a fill and in one there is a retaining wall that will keep the sea from washing inland and destroying the masonry work. Kapahehe Gulch, ten miles from Hilo, is smaller than the one two miles beyond, but it presents the same engineering difficulties and they are being overcome. The absence of sharp curves in the line is a noticeable feature, the greatest being not more than a 5-degree radius. Unfortunately there will be grade crossings and every known means of preventing accidents will be used. Mr. Filler tells me he will find an automatic gate with an electric bell attachment so the drivers of wagons and pedestrians will be warned by the bell and barred by the gate. The grade between Hakalau and Hilo is at most 1.2 per cent.

Much of the grading away from Hilo has been done by the sluicing process and at considerably less expense than if it had to be carted and dumped. The completion of the road to Hakalau will depend to a certain extent, upon the character of the soil and the amount of water obtainable. If the plantations are using the water it will be impossible for the railway to get any, or at least sufficient to work with. Some of the delay up to date has been caused by the building of concrete culverts and the delays may be repeated for there are seventy crossings between Hilo and Hakalau. Some of these do not amount to much and there are others that do, as the culverts vary from a 24-inch vitrified pipe to the larger steel culverts. The cost of these vary with the size, some of them running as high as $1000.

The employment of cars and locomotives on many extensions have been advised by Mr. Filler. The present equipment of the company consists of six locomotives, two of 76 tons each, exclusive of the tenders. Five passenger cars, 20 box cars, and 85 flats. With the extension to Pana which was built about the time the first crop of cane in the Pana plantation was ready for the mill. The mileage of the Hilo railway is 50.4. The schedule calls for one mixed freight and passenger between Hilo and Kapoha and Pahoa daily. Between Hilo and Glenwood, daily, one passenger and one freight and passenger.

During the month of January the company carried 7,801 passengers and for the first seven months during the present fiscal year 47,000. At this season there is very little sugar freight so that during the seven months last passed but 30,000 tons of freight were carried and the gross earnings were $122,000. Considering the fact that the road has but one plantation, a sawmill and a quarry, with their respective employes, to draw from, this is pretty good. It is estimated that there will be at least 25,000 passengers on the line of the extension and the earnings of the company will be manifestly greater than those of the old road. It will mean much for the town of Hilo because there are so many white residents of that section who will spend more time and money in Hilo than they now do owing to the character of the roads. It will take ladies and children to the town, the former for their supplies and the latter to the schools and the town is bound to be benefited. There has been some opposition to the road, but it has not been so strong that it could obstruct its building. Naturally there will be a new station in Hilo, and it will be an improvement to the town. When these things come I will look for the government to get busy with the improvements which are up to it to provide.

Property Values.

While the tax assessors are generally complained of for their appraisements the fact that there has not been a single appeal before the tax board during the past two years shows that there is general satisfaction with N. G. Wilfong, who has been assessor for this division for several years.

Taxes collected from real property last year amounted to $77,045 on a valuation of $5,704,515. The percentage of delinquents are approximately 1023. Personal property tax collected $4,871.20. All of the corporations not having a principal office in this district pay their income taxes in Honolulu so that it is not possible to secure from the tax assessor data as to that share of the taxes reaching this island. From the corporations doing business here and with their main office in Hilo the amount of the incomes returned to the assessor, after deducting amount allowed by law, was last year, net: $314,561, and does not include the sugar plantations.

The value of real estate returned to the assessor in the district of South Hilo shows big values owned by the Hawaiians, larger, in fact than is generally supposed. The division by nationalities gives:

	Real Estate	Personal Property
American and Europeans	$554,605	$101,725
Hawaiian	533,940	11,805
Portuguese	174,029	20,210
Chinese	24,250	21,510
Japanese	28,869	71,410
Corporations	$4,060,850	$4,271,255

In 1907 Tax Assessor Wilfong returned collections amounting to $343,794 and in 1908 $408,170.

The returns from the corporations include the value of the mills, and growing cane, the total number of plantations being 28 against 7 on the island of Oahu. Considerable surprise is manifested at the smallness of the real estate holdings by the Japanese. But this is not strange. They are familiar with the lease method and a little by each year in the way of rent appeals to them more strongly than in paying a lump sum. This probably accounts for the accumulated wealth of the individuals here who make a business of building miserable shacks on the principal thoroughfares, on a lease, instead of erecting dwellings that would be a credit.

Sugar Crops—Real and Estimated.

It is rather confusing to the layman, and to the assessor as well, to read in the annual report of the manager of a plantation that his crop for the coming season will be 20,000 tons, and find in his return to the assessor an estimate nearly 12,000 tons less, which may be accounted for by the fact that most of the company's lands are cultivated by contract. In some instances the estimates are omitted and in others so ridiculously low, apparently, that the assessor passes them up temporarily. Settlement of the difference will be made when the explanations are furnished. I have secured from the tax office in Hilo figures showing the crop of 1909 and the estimate for 1910:

	Last Crop.	Next Crop.
Ookala	6646	....
Kaiwiki Sugar Co.	....	2,500
Laupahoehoe Sug. Co.	8,004	....
Hakalau Plantation	11,586	12,000
Honomu Sugar Co.	6,041	6,565
Pepeekeo Sugar Co.	6,873	7,436
Onomea Sugar Co.	14,416	11,926
Hilo Sugar Co.	12,291	7,574
Hawi Mill Co.	6,011	5,442
Waiakea Mill Co.	9,486	....
Olaa Sugar Co.	19,784	8,274
Hawaiian Agr. Co.	12,573	10,000
Hutchinson Sugar Co.	4,712	6,200
Punaluu Plan. Co.	835	407
Hawaii Mill Co.	6,011	5,442
Union Mill Co.	3,160	2,377
Kohala Sugar Co.	4,100	4,361
Halawa Plantation	1,135	....
Niulii Plantation	2,768	1,800
Pacific Sugar Mill (Kukuhaele)	5,263	5,600
Honokaa Sugar Co.	10,533	9,000
Paauhau Plantation	9,315	6,848
Hamakua Mill	8,293	5,500
Kukaiau Plantation Co.	2,141	2,000

The average profit of Hawi Mill for the last three years has been $200,000 per annum. Union Mill Company shows a profit during the same period of $50,000 per annum. These are both small plantations compared with Hamakua estates which show smaller earnings, due to method of cultivation and the climatic conditions. With the ditch irrigating the big plantations the increase in the output of sugar should be noticeable.

In drawing comparisons I find the Hilo district behind Oahu in the matter of profits arising from the sugar industry. For instance: The last report of Ewa plantation on the Island of Oahu shows net profits about a million dollars, while on Hawaii, in Hilo districts, the net profits of the six plantations were but $1,121,919. The cane area, under cultivation, in Hilo district is 26,000 acres belonging to the plantations, besides having cane from 1500 acres belonging to homesteaders. This is divided as follows:

Hakalau (in South Hilo district), 2,093; Homesteaders, 400; Honomu, 3,450; Homesteaders, 200; Pepeekeo, 3,872; Onomea, 6,712; Homesteaders, 200; Hilo Sugar Company, 4,033; Homesteaders, 800; Pouahawai Coffee Company, 80; Hawaii Mill Company, 1,552; Waiakea Mill Company, 5,200; Homesteaders, 200.

The Fruit Industry.

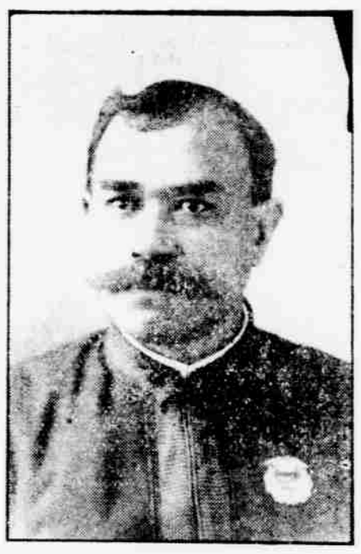
Five years ago, when the small farmer of Oahu was crawling out of his small shell as a cultivator, and becoming a planter of pineapples, there were those in the Hilo district, who at-

WILLIAM A. FETTER,
Deputy Sheriff, Hilo.

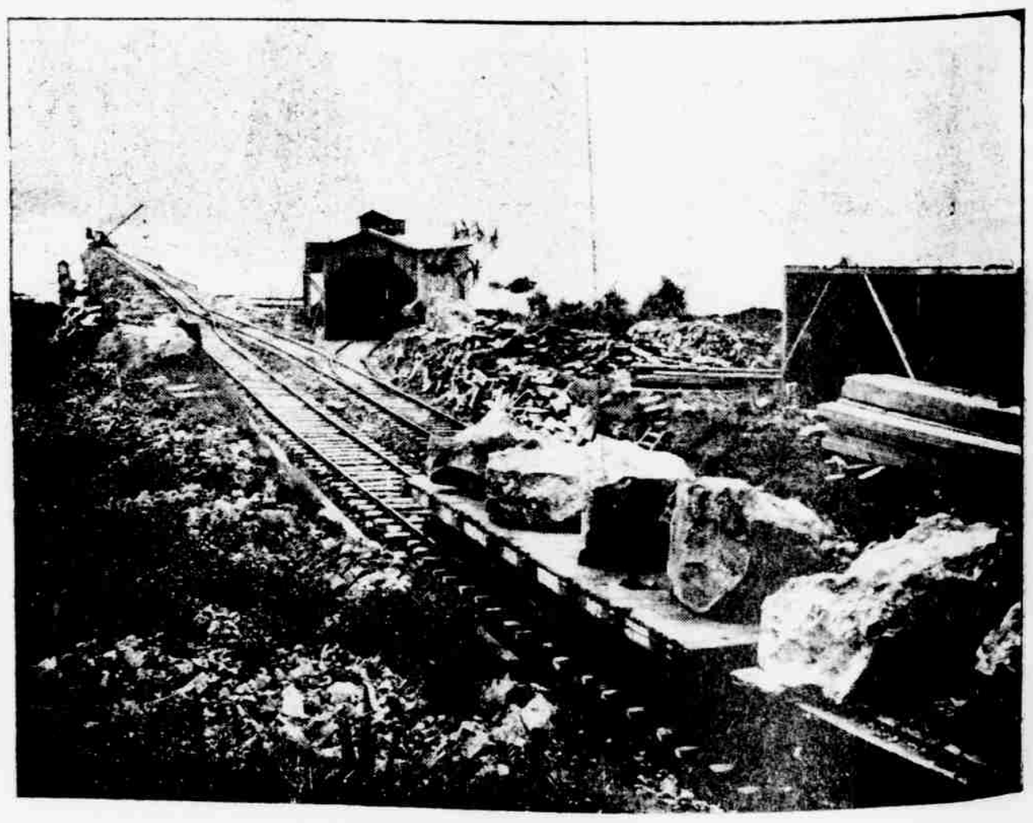
tempted to grow bananas for shipment to the Coast, of the opinion that land here, and plenty of it, could be utilized for growing pines. One enthusiastic man started with the idea of combining cultivation with canning, but he was snowed under by more influential and wealthier men who had the canning bee in their bonnet, men who had been in plantation life for many years and who desired to control the manufacturing plants just as they control the manufacture of sugar in their various localities. There were two corporations formed: The canners and the growers.

The first year the cannery company paid $27.50 per ton for pines in order to encourage the small planter. Things prospered with the holder of small tracts of land. The cultivation, however, was not followed as it should have been, or the grade of pines would have been better as to size. The consumers on the mainland demanded a two and one-half pound package and the growers were satisfied to raise smaller pines. The price went down and dissatisfaction followed, but there was no apparent desire on the part of the planters to give a fruit that would suit the consumers. The flavor was, and is, all that the most exacting person would demand. It is juicy and sweet but not of a size that is salable, so the planter became involved with the canners and indebted to the bank for advances. The cannery went back to the tune of two figures in the thousand column and closed down. There was a meeting last Saturday to decide what would be done next year. To me it looked as though there would be a small canning plant for sale. I was told that much of the land planted to pines last year is now in cane and will continue so.

As far as I was able to go in investigating the cause of the trouble it was a lack of cultivation. I mean by that: Neglect to fertilize, and it was the main reason for failure. The climate here is suitable but the bank account of the individual planter is not. It requires capital to make a start. Money was needed to buy fertilizer and to pay for superintendence for nearly all of those deepest interested were engaged in other business. The cannery was backed by the very men who had made sugar profitable and they wanted to show the small land owner their willingness to help out. As fertilizer is necessary for the production of cane so it must be for all other products. But the man of limited means could not see it. He is like the man who looks upon advertising as an



SAMUEL K. PUA,
Sheriff, County of Hawaii.



CONSTRUCTION WORK ON HILO BREAKWATER.