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*TREATMENT OF LABORERS.*

The subject of the medical treatment which should be provided for employees is one which frequently demands the attention of employers. The managers of plantations often have responsibilities in this regard forced upon them, which they are unable to meet in a satisfactory manner. Situated as many plantations are, far removed from the residences of medical men; or, as in some cases, with physicians accessible, but who charge full professional fees to workmen who have not the means to pay; the employers are compelled to treat the sick themselves.

There is doubtless good cause for complaint in some instances of the want of sufficient medical aid being afforded to workmen. But in many cases it is unjust to hold the employers responsible. The large majority of the managers of sugar plantations on these Islands are humane men, who aside from business motives have much concern for the welfare of their workmen. They are disposed to care for the health of those in their employ. It sometimes happens that they are unjustly charged with unfeeling treatment of those who claim to be sick, because the plea of sickness is one easily made and difficult to disprove, and is often attempted when the sole aim is merely to evade work. That abuses occur cannot be denied; but that such is the rule, is not true. Selfish considerations, if no other, constrain employers to regard the health and welfare of their workmen. There is and has been such a demand for labor, and the supply so limited, that the employer who abuses his men in this or any other respect would soon feel the effect of such ill treatment in an increased difficulty in obtaining them.

There is force in the complaints made by many of the planters of the manner in which the duties of the Government Physicians for the most

part have been discharged. Ever since 1870 appropriations have been made by the Legislature for Traveling Physicians, to be disbursed under the direction of the Board of Health. The theory being that these physicians should treat all poor native Hawaiians without charge. But the Board has made, or permitted, an exception to be made in the cases of those employed on plantations. And as in many instances a large proportion of the natives of the district are engaged on plantations, the result has been that very little actual service has been rendered in the manner originally intended. The planters would cheerfully afford their people the benefit of the services of trained medical men without charge to them, if such men were near at hand, and if the charges were reasonably moderate. But in many cases they reside many miles from the plantations, and in view of the circumstances, their charges are very high. There are exceptions to the rule, but we believe them to be few.

While we call attention to this phase of the subject, and desire fairly to present the difficulties with which the planters have in many cases to contend, we would urge the importance of the duties which devolve on them to care for the health and comfort of their workmen. There are responsibilities of this nature which cannot be evaded.

Where large business interests are at stake, and the manager is called upon to exert every effort to accomplish results, there is danger of neglect in the discharge of these duties. When every day, difficulties and obstacles have to be met and overcome, and the manager who has the responsibility and direction of the whole is driven to his wits end to devise ways and means to carry forward the work successfully, there is danger that he will forget the rights of others; and in the magnitude and importance of the interests of the plantation, sacrifice those rights. When his own judgment, and the demands of other owners, and perchance the calls of urgent creditors, all require the strictest economy, it is not strange if he should sometimes lose sight of some of his duties to his workmen. And many of these workmen, recognizing their own importance and the indispensable value of their services, are led to take advantage of the situation and practice deceptions; falsely feigning sickness, or pleading a death in the family or some other domestic calamity, when nothing of the sort is true; until the manager is so prejudiced by their duplicity and misrepresentations, that innocent ones suffer in consequence.

But however much an employer is imposed upon and sinned against, he cannot with impunity shirk the responsibility he owes to those in his employ, and under his control. Might may be on his side, and he may in a measure forget the responsibility, but there are laws of cost and compensation which will be vindicated sooner or later.

*CUTTING AND CARTING CANE.*

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One of the most important problems of the planter is to bring his cane economically to the mill, and we therefore are much pleased to give our planting friends the cost of cutting, carting, etc., at the large mills of Colonel Spreckels, near Kahului, where the cane is brought to the mills by the locomotive and tramway system of Fowler & Co. Two engines are employed and are kept in constant operation, as the four mills use about one thousand tons of cane per day, making from eighty to one hundred tons of sugar daily.

The cost of cutting the cane, loading upon cars, and delivering the same at the mill is \$6.80 per ton of sugar manufactured.

The cost of hauling alone is \$1.75 per ton of sugar manufactured. The canes average one and a half miles from the mill.

Upon the same plantation a piece of cane was cut and hauled to the mill in carts, the cost of which was \$17.27 per ton of sugar manufactured.

The difference therefore in favor of the tramway is \$10.57 per ton of manufactured sugar, a trifle over half a cent per pound, or upon a thousand ton crop \$2,000.

We have got to look the fact in the face that the continuation of the Reciprocity Treaty is uncertain, and in the case of its termination nothing but a great reduction in expenses and the strictest economy in every direction can save us from ruin. It is therefore of the utmost importance that every means known whereby a saving can be effected to the planters should at once be made public. We therefore ask all of our planting friends to aid one another by publishing the results of your labors to economize, either by the use of new machinery or new methods, both of cultivation and manufacture of sugar. It would be very interesting to hear the result of plowing by machinery, and we hope those who are now using this method will kindly address a line to the Editor.

E. P. A.

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*OTTO'S FILTER APPARATUS.*

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As the possibility of no reciprocity and a consequent reduction in the net value of sugar to our planters, presents itself, it becomes of the greatest importance that the least possible percentage of sugar be wasted in the process of manufacture; and it is probable that nothing which has been introduced into the Island mills within the last five years, has done so much in that direction as the method of extracting the juice from the

skimmings, invented and first adopted by Mr. A. Otto of Paauhau, Hawaii. To those who have not had an opportunity of seeing it, an outline description of the method and apparatus will be interesting.

The skimmings are collected and if necessary heated and introduced into a tight vessel called the compressor. This is a cylinder three feet in diameter and four or five feet high, sufficiently strong to retain a pressure of forty pounds per square inch. It is fitted with a small safety valve so that a safe pressure shall not be exceeded. The juice in this compressor is treated with carbonic acid gas, the obtaining of which is perhaps the most interesting part of the whole process. It is simply drawn from the smoke stack by an air pump, passes through a purifying apparatus before it reaches the pump, and is then forced into the compressor.

By this treatment the juice is rendered easily separable from the dirt with which it is mixed, and the germs of fermentation are destroyed. From the compressor the dirty juice is forced directly to the filter cloths, and from them the juice comes perfectly clear and free from any of the sourness which is almost invariably so apparent in worked-over skimmings, while the dirt is retained on the cloths and removed in the form of a solid cake.

The filter cloths, which are nothing more than ordinary sugar bags, are arranged in a wooden frame and are cleaned about twice a day. They must be removed after a certain amount of use, so that a new set is put in for every 250 clarifiers of juice ground by the mill.

By this process it may be seen that practically every quart of juice is retained and the dirt alone thrown away, while a very important result is that the juice obtained from the skimmings is free from any fermentation which might endanger the cleaned juice with which it is mixed.

The skimmings from clarifiers and cleaning pans, also the bottoms from the same, and the settlings in the juice tanks, in fact every pint of dirty juice or even dirt with juice in it is worked over in this apparatus.

Only one man is required to attend to the whole process, except that it is an advantage to give him assistance when the filter cloths are cleaned in order to have it done quickly. The amount of steam used to drive the air pump, and to heat the skimmings is but trifling.

The whole cost of the apparatus for a mill making ten tons per day will not exceed \$900 including royalty on the patent.

The amount of juice which may be saved at any mill by the use of Mr. Otto's apparatus may be estimated by carefully measuring the total amount of refuse which is thrown away, either as residue from scum tanks or as settlings from any juice tanks or cleaning pans, and if such refuse will run at all, it is probable that three-fourths of the whole amount in gallons can be obtained from it as clear juice. It must also be remembered that if there was really no gain in the amount of juice obtained it would pay to adopt it as a method of getting better juice from skimmings than that obtained in the ordinary way.

Mr. Otto is confident that by this means he actually gains four per cent. in the total amount of sugar obtained from a given amount of juice.

Another point to be mentioned is, that with this apparatus it is not necessary to be so particular to avoid wasting juice in the process of clarifying and skimming, as every bit that goes over with the skimmings is sure to be obtained afterward.

Its economy is attested by the fact that it has been adopted by the neighboring mills at Honokaa and Ookala, also by Judge Hart at Kohala; and a number of other mills have ordered it. Most of the readers of the *PLANTER'S MONTHLY* will doubtless remember the article from Judge Hart in commendation of it, which appeared a few weeks since in the *Gazette*.

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#### *THE VACUUM PAN.*

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The appearance of a Vacuum Pan with its different accessories is no doubt familiar to all, though its present degree of mechanical perfection has been attained only through a progressive development, and practical elucidation of the chemical laws and phenomena underlying the theory of crystallization. The primitive and crude methods for extracting sugar still to be met with in certain sugar growing districts have but lately given way to improved and systematic processes. In those early days juice was mingled with from 1-300 to 1-800 of its weight in lime, heated over fires, the albuminous matter thereby coagulating, removed, and concentration effected by ladling the syrup along a battery of pots and pans until sufficient consistency had been attained, it was then run into coolers with false perforated bottoms, the molasses drained off and the remaining crystals dried in the sun.

That this *modus operandi* of frequent boiling and long continued exposure to the atmosphere, must have resulted in a great waste of crystallizable material is evident, and it was the search after better systems that led to the great improvements since effected, and the invention of new mechanical adjuncts for boiling down syrups and separating the product such as the Double or Triple Effect, the Vacuum Pan and the modern form of centrifugals, by means of which a beautiful sugar may be obtained and by far the largest percentage at the first crystallization.

We are all familiar with that law in Nature's physics, which regulates the boiling point of a liquid, by the pressure of the atmosphere exerted

upon it. In other words the degree of heat at which water will boil at the sea level under an atmospheric pressure of 14.7 pounds to the square inch, is 212 degree Fahrenheit. We can diminish this weight upon the liquid by ascending from this level, or exhausting the air from the vessel containing the liquid, in either case lowering the boiling point of the fluid by which means an economy of fuel is effected.

The Vacuum Pan, as it is called, embodies an ingenious application of this principle, and as in the former instance, the tendency of the juice to pass quickly into the uncrystallizable modification by being subjected to the deleterious influence of the atmosphere, has by the method of boiling in vacuo been in a great measure overcome. The apparatus generally consists of three sections joined tightly together and supplied within with a number of special steam coils and sometimes a heating jacket, without, for increasing the heating surface, by which means the danger of overheating and burning the syrup is entirely avoided; the temperature ought never to rise above 160 degrees Fahrenheit, as will be explained hereafter.

Let us suppose the sugar boiler to have sufficient juice with which to begin operations—the atmospheric pressure is first removed by means of a powerful air pump and can be regulated by observing the falling of the barometer, generally attached to a pan. The valves are next opened, giving access of the juice to be concentrated, these are absorbed or rather forced in by the atmospheric pressure; a sufficient amount having been secured, the valves are closed and heat applied to the coils or steam-jacket as the case may be. This admission of steam must be carefully regulated since the liquid when approaching its boiling point is liable to foam or boil over as it is frequently called. Should this appearance begin to exhibit itself a speedy application of oil, tallow or even atmospheric air through the cup valves is to be recommended, as otherwise considerable saccharine matter may be lost by passing over into the condenser. The operator having succeeded in getting the juice to boil, the water connection with the condenser must be opened so that the cold water entering it condenses the vapors passing over from the evaporation of the juice; it will be well here to note the fact, that the comparative activity of the air pump in conjunction with a large or small amount of water for condensing purposes determines the time of boiling, for other conditions being the same, an operator with low steam at his disposal, but large heating surface, a good normal activity of pump, and a fair head of water, can do as much and more in the same time than he, the safety valves of whose boilers are periodically blowing off, who is afraid of his pump or whose condensing water is kept warm.

The appearance and activity of a charge in the pan can readily be ascertained by gazing through the glass attachments. In the beginning, while the juice is still of low density, the waves of ebullition are observed to be tall, sharp, foamy and changing their centres of radiation with great

rapidity; these indications of low density disappear however as the boiling progresses and the syrup becomes more concentrated; the violent boiling and frothiness have now been displaced by numberless bubbles of small diameter, that appear heavier, more opaque and spheroidal, having the appearance somewhat of boiling oil or fat. The experienced sugar boiler can even gauge by the manner in which the mass is boiling, its rate of motion, the consistency of the bubbles and steam displacements, the approach of the granulating point; for a more accurate determination of which the following suggestions may prove of service:

The proof stick is inserted into its proper place on the pan, the chamber filled with a sample of the mass and the stick withdrawn. Some of the contents are then dropped upon the end of the thumb, rubbed a little in contact with the index finger and the two then separated. One of three appearances may show itself. The fingers when separated do not draw the syrup to a thread, in the second instance the thread may be so strong and tough as to show no symptom of breaking even when the two ends are as far removed as the distance of the fingers will permit, while thirdly a thread appears which when formed to the length of say three inches will bend by its weight into the form of a hook and then break. The first experiment proves the juice to be still requiring considerable concentration; excessive boiling sometimes beyond the granulating point though made use of when very fine grain is desired, is evidenced by the second proof; while the last shows that the proper moment has arrived for the absorption of fresh juice and of which the smallest quantity will suffice, the introduction consuming a little more time than absolutely necessary to open and shut the valve.

When the concentration of the juice has reached that stage in which the solution is no longer able to retain with it the crystallizable matter, the separation of this, in small grained particles from the mother liquor begins to set in, the tiny, shining specks are easily distinguished when thrown against the glasses or gazing through a small plate of glass upon which a few drops have been let fall. As the separation progresses, the liquid slowly loses its sticky consistency and becomes thinner owing to its loss of saccharine matter. The crystals become larger and more numerous, the molasses or sling allows the liquid to be concentrated denser, and the process is continued until experience and prudence recommend cessation, for care must be observed in not venturing too far, lest a *masse-cuite* be obtained from which the molasses with difficulty separates.

In granulating sugars, the periodic reinforcement of the syrup with fresh juice is of great importance, since by its means the growth of the crystal is regulated and its subsequent dimensions determined—building up as it is called in technical language. It is by no means incumbent to wait until grain is formed, but fresh charges may be introduced from time to time in proportion as a proof exhibits a longer or shorter thread as before mentioned, and the mass should be so manipulated that only after the

fourth or fifth charge the grain is made to appear. Its building up then becomes an easy matter, while each addition of fresh juice causes violent ebullition in the pan owing to the lower boiling point of the entering liquid and the sudden cooling off effected; all such measures expedite granulation. The formation of the grain and its subsequent size should be entirely under the control of the operator; the lighter he allows his proofs to remain — (but when necessary rethinning with heavy charges,) the larger his resulting crystal will be while at the same time the converse is true, namely that to produce a small, fine grain, he need but keep his proofs heavy, and charges light, the crystals then will have no opportunity to increase in size.

The degree and manner of boiling must not be left out of consideration, they also exert considerable influence on the resulting *masse-cuite*. A quiet steady ebullition of the strike over steam of constant pressure is necessary to the production of large sized crystals, while heavy boiling and violent motion produce a small, unsatisfactory grain, the friction of the crystals, in this case, against one another and the sides of the pan, rounding the edges and rendering them opaque.

The young sugar boiler will soon determine by experience the requisite consistency of his proofs, as also the proper moment for introducing fresh juice, the generation and building up must proceed slowly by its own innate tendency, and never forced, and only he need aspire to prominence in his profession, who is ever awake to the difficulties of his post and performs his obligations with unswerving fidelity to his employer's interests.

And still, the *modus operandi* is exceedingly simple; an amount of juice is absorbed into the pan, which, when concentrated to thread proof before mentioned, will cover the steam coil and amount to say 50 per cent. of the total juice required, or the pan's capacity; a small charge is now introduced, the same concentrated a little further, until, after a few such supplies, grain will be observed forming.

The novice need entertain no fears that crystallization will not be prolific, he need only persevere steadily, guarding against a proof that is too much advanced in concentration, and he will be eventually rewarded with the appearance of a grain, large, coarse and bright with a clear bright sling between. Let him test the grain from time to time by rubbing it between the fingers under water; a good grain will not immediately become weak and solvent, but retain its shape. He can then continue his boiling and gradually bring down the strike to its final proof, and he is then enabled to withdraw from the pan a sample, lumpy and hard, which does not disintegrate on being held in the palm of the hand or show any considerable drainage of syrup. By this means, a sugar is obtained from which the molasses readily separates in the machines, leaving a beautiful crystal. The steam connections are then shut off, the water valves closed, the motion of the air pump discontinued, and the air valve opened, restoring the atmospheric balance.

It may not be amiss to enunciate the following rules laid down by Walkoff in his admirable treatise on sugar manufacture :

“Boiling operations contain essentially the following three principles.

1—The formation of grain.

2—The separation of the crystal.

3—The extraction of the maximum amount of the same.”

To attain this end we must employ so far as possible the following means :

A low density juice will produce a larger crystal than juice already well contracted as the former has been less subjected to the evil influence of heat compared to the latter.

Proofs must be light if heavy crystals are desired, the contrary for fine grain, while the same argument holds good in relation to reinforcing, for large grain, big charges,—small grain, light charges.

Violent boiling is not permissible in the construction of coarse, even, large grain, but results in a small, irregular opaque sugar.

For large grain, proofs must in the beginning be kept light and only gradually taken heavier, while the converse is to be adopted for small grain.

The frequent introduction of charges must not happen with such frequency as to destroy and re-dissolve grain already formed.

Various mechanical attachments have from time to time been suggested, whose function was to secure a proper control of the masse-cuite in the pan by indicating the precise moment when concentration was attained, thus preventing mistake in regulating the proper moment for charging. Such contrivances have thus far for the most part failed. It is fortunate, however, that attention can be called to one which by reason of its cheapness and accurate indications is eligible to all. It is neither more or less than an ordinary steam-gauge attached to the exhaust end of the steam coil. Juice or any diluted solution absorbs with avidity the energy and heat of the steam acting upon it, thus removing its pressure. As the liquid becomes concentrated and less water remains there must be less heat consumed, so that for every unit evaporated there must be a corresponding rise in pressure; the index pointer of the dial substantiates this and slowly rises until, when total concentration is reached, the indications of the pointer agree with the boiler pressure; by introducing a fresh charge the hand immediately falls, and subsequently rises, and so ad libitum.

A. L.

*LAHAINA CANE.*

The following account of the so-called "Lahaina" or "Kenikeni" cane, was written by Mr. D. D. Baldwin several years ago, and published in the *Hawaiian Gazette*. It is undoubtedly the most accurate history of the introduction of this valuable variety of sugar cane which has appeared and we copy it for the MONTHLY:

*"To the editor of the Hawaiian Gazette:*

SIR: The justly acknowledged superiority of the 'Lahaina Cane' warrants a correct statement of the facts regarding its origin. In 1854 Capt. Edwards of the whaleship *George Washington* brought from Tahiti the two varieties of cane now commonly known as the "Cuban" and the "Lahaina." This seed was intended for Mr. Titcomb, a Kauai planter; but the ship first calling at Lahaina, Mr. Chase, U. S. Consul resident, obtained possession of it, and planted it in his Lahaina garden. Two or three years later Mr. Oudinot obtained from these cuttings of the "Cuban," and this was the variety which disturbed the slumbers of his boarders by its rapid growth. It was then often called the "Oudinot Cane," from the supposition, which the "Marshal" favored, that it had been imported by him from Louisiana. This, and not the "Lahaina Cane," is also the variety now known as the *kenikeni*. But there is no ground for the supposition that it is so called as having been sold by Mr. Oudinot at 10 cents a stick, as dimes and the term *kenikeni* for them was quite unknown to Lahaina. The original term by which the cane was known was *kinikini*—numerous, very many, so called from its prolific nature. Latter years the term seems to have been corrupted to *kenikeni*.

Neither do I think there is any ground for the supposition that either of these canes originally came from New Caledonia; for the Tahiti native canes have long been quoted by English writers on sugar as the best known varieties. The "Lahaina" variety can readily be distinguished by its long straight leaves of light color, heavily aculeated, or covered with prickles at the base, and its small round prominent buds; while the "Cuban" has leaves of darker green, bending down in graceful curves, with no prickles, and large triangular buds located in little cavities on the sides of the cane stalk.

During the years 1861-2, when sugar making commenced in Lahaina, the *kenikeni* or "Cuban" was the favorite cane, and was universally planted there. But since then it has been almost wholly neglected, and the "Lahaina cane" has taken the preference, its great advantages being—

1. Rapid growth, thus quickly covering the ground and requiring less labor for cultivating and irrigating.
2. Deep rooting, it drawing nourishment from the subsoil, or from soil the surface of which has already been exhausted by other varieties of cane.
3. Its having, when mature, a hard rind which prevents the ravages of rats.
4. The superior richness of its

juice, it generally weighing one-third more than the juice of other varieties of cane cultivated under like circumstances. 5. It possesses a compact, firm fibre, which renders the trash easy to handle and enhances its value as fuel. With these advantages may be mentioned the peculiar whiteness of the juice of mature Lahaina cane, which, as far as I have been able to compare, exceeds that of any other island variety of cane, and with its superior density would naturally insure white grades of sugar.

In Lahaina as early as 1865 the juice of this cane was boiled in vacuo by the writer with fine results, it often yielding 29 ounces of sugar to one imperial gallon, or about 906 lbs. to a clarifier of 500 gallons; while other varieties of cane under like circumstances only yielded 18 or 20 ounces of sugar to the gallon, or 625 lbs. to a clarifier of the same size.

At this time several attempts were made by myself and others to introduce the Lahaina cane into Wailuku, Haiku and other localities; but the only response from planters to these incipient attempts was, that, though a good cane it doubtless owed much of its virtue to the mild warm climate and rich soil of Lahaina. It was introduced on the Kohala Plantation during the years 1871-2, and the extraordinary results there have justly brought it before the public. Further experiments are now proving its adaptation to nearly every cane-growing soil and climate on these Islands.

Since writing the above my attention has been called to some yields of Lahaina cane, attained during the past grinding season by Mr. J. L. Blaisdell, of the Pioneer Mill, Lahaina, which exceed anything I have yet seen in print. From 36 clarifiers of 500 imperial gallons each, he obtained 34,446 lbs. of sugar, an average of 984 lbs. to each clarifier, or nearly 31½ ounces to each gallon. And from 30 clarifiers of the same size he took 30,515 lbs. of sugar, an average of 1017 lbs. to each clarifier, or over 32½ ounces to each gallon.

D. D. BALDWIN.

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### PROHIBITION.

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The subject of recommending to the Legislature now in session, the passage of an Act to prohibit the importation, sale and manufacture of spirituous liquors, (including wines and beer,) except for medicinal and mechanical purposes, is now prominently before the country.

Petitions advocating this measure are being circulated throughout the Islands for signature, and great efforts are being made by the advocates of temperance to secure such legislation.

On Thursday evening, May 4th, a mass meeting was held at the Music Hall, in Honolulu, to discuss the question. Mr. P. C. Jones, Jr., of the firm of C. Brewer & Co., of this city, and Rev. S. E. Bishop were among the speakers, and we publish below the substance of their remarks. They each presented views of the case which should command attention.

Mr. Jones' remarks were as follows :

LADIES AND GENTLEMEN :—To most people a long array of figures is tiresome, uninteresting and dry ; but there are some upon whom no other facts make an impression and who will only be convinced by figures, and with the hope of reaching some such this evening, I present the following statistics which I believe will startle many in this audience, as I was startled when they were made up.

By referring to the Collector General of Customs' Report for the year 1881, you will find in table 7, that 68,391 gallons of wine, beer and spirits were taken out of bond for consumption. In making up this, the beer in bottles has been estimated at 10 pints and 5 quarts to the gallon.

Perhaps we shall more fully appreciate the magnitude of these figures if we show up what the effects are, allowing 1 pint as a sufficient quantity to produce intoxication, and a less quantity will produce that state in many of us here. It is enough to make 1,500 persons *drunk* every day in the year, the entire population of these Islands drunk every forty days or nine times in the twelve months.

But some will say " we want to know the amount in dollars. Well I have them prepared and beg to submit the following :

The invoice cost of the liquors at the ports of shipment imported into this country in 1881, (see Collector General's Report, Table No. 1) is.....	\$223,475 02
To this sum should be added for freight and insurance, a low estimate say 10 per cent.....	22,347 50
	<hr/>
	\$245,822 52
Duties on liquors, 1881, (see Table 8 Custom House Reports) is.....	\$177,126 03
Licenses (Minister of Interior Report).....	10,500 00 187,626 03
	<hr/>
	\$433,448 55
It is said the profits on the liquor business are enormous, but to be within bounds say 25 per cent.....	108,362 14
To which we add for fines, penalties, storage, rents, etc.,.....	58,189 31
	<hr/>
Making a total of.....	\$600,000 00

expended in the year 1881.

Now when we consider that such a sum as this is expended in what is now a legitimate business under the present laws, it seems as if this money was worse than wasted, for it brings ruin and poverty to many who use it besides ruining both body and soul.

The above figures were submitted to a gentleman to-day who is well posted in the business and his remark was: "You would be way inside of the line if you put the profits at 50 per cent." Another gentleman whose business has been largely statistical says: "The sum is altogether too low, it reaches not less than three-quarters of a million of dollars."

Of this immense sum, \$246,000 (being costs and freights) is sent out of this country. It is contributed by those who use liquor, and in many cases the wives and children are denied these necessaries of life to make up this contribution. This business is largely on the increase as will be seen by the following statements:

LIQUORS TAKEN OUT FOR CONSUMPTION.

1861.....	9,079 gallons.
1871.....	18,717 "
1881.....	68,391 "

VALUE OF IMPORTATION.

1861.....	\$ 19,464 40
1871.....	60,995 89
1881.....	223,475 02

RECORD FOR DUTIES.

1861.....	\$ 27,347 01
1871.....	53,521 79
1881.....	177,126 03

The above figures show an alarming increase in the last twenty years without any increase in population. In 1861 there was a large floating population consisting of crews of whaleships who were the largest consumers in those days.

The Minister of Finance in his report issued yesterday estimates the total receipts for the next two years will be \$1,915,251 05. Of this sum he expects to receive from licenses and duties on spirits \$299,750; over 15 per cent. of the entire revenue of the Government to be collected from this source. He estimates that the expenditures in the next biennial period will be \$2,923,860 50.

As I am not the Minister of Finance it might be presumption on my part to suggest ways and means to provide for the deficit in case the law prohibiting the importation and sale of liquors should go into operation. But I take the liberty of suggesting that by the passage of this law the expenses for the police force must be greatly reduced, it would not necessitate the enlargement of the prison as is now contemplated, and material wealth added to this country would easily make up the loss in revenue; besides which many valuable lives would be saved, which cannot be computed in dollars and cents. Or if the expenditures were reduced 10 per cent. that alone would make up the deficit.

It is with pleasure we read in the Minister of Interior's explanation about the hotel, that he leased that property for a long term of years on

the *basis of prohibition*, and we may infer from this fact that His Excellency has committed himself in favor of this measure.

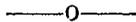
And now my friends, in view of these figures presented to you, and for other reasons, which to me are of greater importance than the money side of this question, I pledge myself and my influence in favor of a *Total Prohibitory Law*.

Let such a law be passed and we may feel assured that our prisons and hospitals will be largely depopulated, the life of the people prolonged, the country at large enriched, made happy and prosperous, the independence of this nation preserved, and that Hawaii will stand prominent before the nations of the earth honored and respected by all, and then shall our national motto be indeed and in truth, "Ua mau ka ea o ka aina i ka pono."

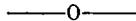
S. E. Bishop spoke chiefly upon the obligations resting upon us toward the native people. The removal of the present evil not merely concerns the prosperity and improvement of the Hawaiian race, but involves their very existence. The speaker felt identified with this people, and bound to their service by birth and training, and wished to plead their claims upon us. Perhaps few realize under what incalculable obligations we are to the Hawaiians for the existence and growth of our present prosperity. We owe it to the valor and statesmanship of Kamehameha and his noble phalanx of chieftains, that the group was united under one orderly government, rendering the growth of a peaceful civilization possible from the outset. We owe it to the magnanimous friendship of the earlier chiefs and people to the incoming foreigners and missionaries; we owe it to their cordial, uniform hospitality that we have so prospered, and that so high a civilization, and such a charming home life has grown up here. A savage, jealous, hostile race would have made this impossible for a long time. Our Hawaiian brothers have very heartily and steadily co-operated with us in all good things, and while we may feel that we have been largely their benefactors, certainly they have most abundantly returned the benefit, else we should not be so happily settled in their land, and feeding upon its abundance with them. There has been mutual kindness and help from the outset, establishing claims of brotherhood and friendship of the strongest nature. When, in all the history of men, did ever a people so kindly receive aliens and strangers, and so heartily work with them for the common good? Even when disturbances of feeling arise, and partial alienations, as in these transitorial times we are liable to, how little serious apprehension we feel, knowing as we do, the kindly, generous nature of the Hawaiians.

Such a friendly, helpful people have worthily become as they are, the wards of the civilized and Christian world. Is not also our own relation to them one that calls for the most considerate regard and loyal friendship? If we see them weak in some things in which we are stronger, then our strength should become their shield and support. In honor and fraternal regard, how can we too strongly feel the obligation to make every sacri-

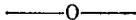
vice needful to strengthen this people, and build them up in this beautiful land of their fathers? How can we too diligently or devotedly labor to save them from extinction? I think you will all agree with me that the continued existence of the Hawaiian people has never been so alarmingly threatened as it is at the present time by the pervading traffic in liquor which has reached the terrible proportions shown in the facts and statistics presented here to-night. What a shame it would be to let this destroying process go on without our most determined efforts to arrest it. I feel assured that these considerations have been largely present in your minds in promoting this effort for a Prohibition Law. I am confident that in the action of the Planters' Convention, not purely selfish business principles ruled, but that a wise and manly regard for the welfare of this people had a share. In the settlement of this question, the natives themselves hold the reigns of power, and it is most encouraging to see and know how widely and heartily they are welcoming the proposed measure of total prohibition. I trust all foreigners who feel amenable to motives of honor or kindness will not hesitate to sacrifice their own luxury, when it is needful to deliver our Hawaiian brothers from peril. And I feel assured that the Hawaiian will most heartily respond, and most gladly do his part in the common movement for better things.



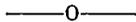
THE employer who is not respectful to his workmen should not expect them to be respectful to him.



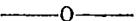
THE manager of a plantation has heavy responsibilities and many cares, anxieties and annoyances. The laborer also has his care, burdens and anxieties.



ANY MAN can get along when things move smoothly and well; but when everything seems to go wrong and the perplexities are great, his merits and worth are tested.



We often profit more by our failures than by our successes.



A LITTLE system is worth a great deal of money.

BARK *Earl Dalhousie*, Captain Davis, arrived at Honolulu on Monday, March 27th, 113 days from St. Michaels, with 94 men, 82 women, 12 children above 14 years, 107 children 2 to 14 years and 27 infants; 322 souls in all. Five born on the passage, of whom one died.

Immigrants all landed comfortably on Tuesday morning, and quite a number sent per steamers the same day to the other Islands. They were distributed as follows, care being taken, that families and friends should go together to their respective destinations :

	<i>Men.</i>	<i>Women.</i>	<i>Children.</i>
J. Austin & Co., Paukaa, Hilo.....	10	9	11
Alexander & Baldwin, Maui.....	6	12	8
Star Mill Co., Hawaii.....	12	12	21
Hitchcock & Co., Hilo.....	7	4	3
Koloa Sugar Co., Kauai.....	4	6	5
W. Lidgate & Co., Laupahoehoe.....	8	7	5
Haiku Sugar Co., Maui.....	10	11	14
R. Halstead, Oahu.....	4	2	6
J. M. Alexander, Maui.....	4	4	8
Hilea Sugar Co.....	22	18	20
Costa, Hilo.....	6	2	4
Honolulu, domestics.....	2	5	...
Honolulu, to marry.....	...	4	...
G. Silva, Oahu, a family.....	3	3	1
Honokaa, to join relatives.....	1	...	...
Kohala Plantation, to join relatives.....	...	2	1
Onomea Plantation " ".....	...	2	2
	104	103	115

The above includes minors from 12 years up.