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**Freight Clerk and Stevedore**  
 Old Reliable Again on Deck.  
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 1474-4f

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 17

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 DEALERS IN LUMBER AND COAL AND  
 BUILDING MATERIALS OF  
 ALL KINDS.  
 Queen Street, Honolulu.

**TIMELY TOPICS.**

Honolulu, July 21, 1900.

**WINDMILLS.**

If you want a windmill to be oper-  
 ated by the least possible wind

**Buy an Aermotor**

If you want a windmill that has  
 little machinery and that little  
 of the very best quality

**Buy an Aermotor**

If you want a windmill that does  
 not get "cranky"

**Buy an Aermotor**

If you want a windmill that will  
 pump water to your house and  
 your barn, that will run the  
 feed cutter, cornsheller  
 and Buzz Saw

**Buy an Aermotor**

The AERMOTOR will last longer  
 give better satisfaction and is cheaper  
 than any other windmill on the  
 market. For sale by

**The Hawaiian Hardware Co., L'o**  
 Fort Street, opposite Spreckels &  
 Co.'s Bank, Honolulu, H. I.

**LONG BRANCH BATHS**

WAIKIKI BEACH, --- Honolulu, H. I.  
**C. J. SHERWOOD, Proprietor.**  
 There earth and air, and sea and sky,  
 With breaker's song, give lullaby.  
 King Street Tram-Cars pass the door  
 Ladies and children specially cared for.

**SALE OF LAND IN MANOA VAL-  
 LEY, HONOLULU, OAHU.**

**OPPORTUNITY IS GIVEN TO**  
 purchase in Manoa Valley a  
 beautifully situated property con-  
 taining all the necessary essentials  
 for a homestead and where healthful  
 climate and picturesque scenery are  
 in the midst of historic surroundings  
 and all in contact with improved  
 grounds, planted with various for-  
 eign fruits as well as supplied with  
 fruits trees indigenous to Hawaii.  
 The acreage of 45.64 acres in fee  
 simple and 31.16 acres under long  
 and favorable leases.

Included in the improvements on  
 the fee simple portions, is a roomy  
 modern dwelling-house furnished  
 with sanitary and other conven-  
 iences; there is also situated thereon  
 a roomy carriage-shed and stable.  
 The celebrated Waiakukua (Water  
 of the Gods) Falls is in near prox-  
 imity and the cool, clear, sparkling  
 water therefrom flows through the  
 grounds, supplying ample oppor-  
 tunity for increased irrigation to the  
 acreage already planted and which  
 is capable of considerable improve-  
 ment.

For further information apply to  
**J. H. BOYD,**  
 Interior Department.  
 Honolulu, March 28, 1900.  
 1493-4f

**WM. G. IRWIN & CO.**

(LIMITED.)  
**AGENTS FOR**

WESTERN SUGAR REFINING CO.,  
 San Francisco, Cal.  
 BALDWIN LOCOMOTIVE WORKS,  
 Philadelphia, Penn., U. S. A.  
 NEWELL UNIVERSAL MILL CO.,  
 (Manf. "National Cane Shredder"),  
 New York, U. S. A.  
 N. OHLANDT & CO.,  
 San Francisco, Cal.  
 RISDON IRON & LOCOMOTIVE  
 WORKS,  
 San Francisco, Cal.

**LOCOMOBILE FOR SALE.**

One New Locomobile, No. 377,  
 Style 2, made by The Locomobile  
 Co. of America, of Newton, Mass.,  
 U. S. A., patented Nov. 14, 1899.  
 Very little used, the property of the  
 late Joseph Heleluhe, and run by  
 gasoline.

**One Bicycle,**

in very good order.  
 For particulars, apply to Mrs.  
 Heleluhe, at Washington Place, or  
 to F. J. Testa, this office.

**ROCK FOR BALLAST.**

(White and Black Sand  
 In Quantities to Suit)

**EXCAVATING CONTRACTED.  
 — FOR —  
 CORAL AND SOIL FOR SALE.**

Dump Carts furnished by  
 the day on Hour's Notice.  
**H. R. HITCHCOCK.**  
 Bethel St., next to P. O.  
 1590-4f

**NOTICE.**

M. R. Counter, practical watch-  
 maker, jeweler, and optician, personal  
 attention given to repairing, watch,  
 clock and jewelry, over 30 years ex-  
 perience. Gold and silver jewelry  
 manufactured by experienced work-  
 man on short notice, quality of goods  
 and work guaranteed as repre-  
 sented.  
 M. R. COUNTER.  
 73 ff.

**LOST.**

A large dark California bay mare,  
 large long head, unbranded, weighs  
 about 900 lbs. Supposed to have  
 strayed to the pasture back of Tan-  
 talus. A reward will be paid to any-  
 one finding the mare by reference to  
 this office. 81-4f

**NALOWALE.**

He lio wahine ulaula haultuli Ka-  
 leponi nui, poo nui lohi, sohe i  
 kuniis, a he 900 paona paha kona  
 kaumaha. Ua manao wale ia ua  
 hele auwaha no ke kula ma ke kua  
 aku o Puu Ohia. E loa no he uku  
 makana i kekahi mea e loa ia ma  
 ka ui ana mai ma keia keena.  
 158-4f

**FOR SALE.**  
 Large Warehouse in good location.  
 Apply to **WILLIAM SAVIDGE,**  
 1317-4f 206 Merchant Street.

**TELEPHONING**

Via Mother Earth Without Wires—  
 System Being Perfected.

In a little workshop not a hun-  
 dred feet away from Independence  
 Hall, in Philadelphia, a young in-  
 ventor has devised and is fast per-  
 fecting a system of telephony where-  
 by the human voice, as well as the  
 signals of the Morse alphabet, is  
 transmitted through earth and air  
 without the use of wires.

Here, almost at the very spot  
 where rare old Ben Franklin con-  
 ducted his experiments with his  
 kite and Leyden jar, a practical  
 demonstration of wireless telephony  
 was given last Tuesday and a stock  
 company organized to exploit the  
 system named after Professor A.  
 Frederick Collins, an electric engi-  
 neer, formerly of Chicago, but now  
 residing in Philadelphia. The Col-  
 lins plan is quite distinct from the  
 Marconi system. This coherer is a  
 very delicate device, that must be  
 adjusted to the minutest nicety and  
 is very liable to become deranged.

Out of door tests have been made  
 under favorable and unfavorable  
 conditions, and apparently the new  
 wireless telephony and telegraphy  
 is a success. Though still in a crude  
 state, the verity of the principle  
 that terrestrial waves of electricity  
 are as inductive as the ether waves  
 utilized by Marconi. Dolbear and  
 others seems to have been proved.  
 Larger machines are to be built at  
 once, and tests of the most rigid  
 character will follow.

Professor Collins is not yet thirty-  
 five, but he has been a worker of no  
 mean sort in the field of electrical  
 endeavor for a good many years.  
 After taking the scientific course at  
 Chicago University he joined the  
 Thompson-Houston Electric Com-  
 pany and did a great deal of experi-  
 mental work for them. In his spare  
 moments he studied telephony.  
 When Marconi's system of wireless  
 telegraph was brought out, several  
 years ago, Professor Collins read a  
 description of it in an English en-  
 gineering journal.

He promptly set to work to con-  
 struct a similar apparatus to him-  
 self and succeeded in duplicating  
 Marconi's feats on a small scale.  
 These instruments, by the way, are  
 now in his laboratory at No. 132  
 South Sixth street, Philadelphia.

In response to a request for a not  
 too technical account of his system  
 for the benefit of the lay reader,  
 Professor Collins dictated the fol-  
 lowing:

"It is really too soon to set myself  
 up as an Edison or a Tesla, and I do  
 not want to pose as anything else  
 than a student of telephony. Since  
 Marconi perfected his system men  
 everywhere have been studying the  
 problem of wireless communication  
 of articulate sounds. Such success  
 as I may have attained is due in  
 no small degree to my wife. Since  
 our marriage, three years ago, she  
 has constantly encouraged me, and  
 by her knowledge of mathematics  
 and interest in telephony has aided  
 me with practical suggestions, and  
 unflinching sympathy.

"In the first place it should be  
 said that while the earth is a poor  
 conductor of electricity the cur-  
 rents projected through it meet with  
 no such resistance as the ether  
 waves utilized by Marconi. The  
 network of telephone, telegraph and  
 electric light wires, trolley wires,  
 tall steel skeleton structures, and  
 the hundred and one obstacles that  
 divert and disrupt air currents are  
 not encountered under ground.  
 Again, some strata of earth are  
 pretty good conductors of electri-  
 city, while others are non-conduc-  
 tors. Thus, it is possible to project  
 two currents, say at different depths  
 and to secure perfect insulation.

"Now, as to syntony, or electric  
 tuning, a term the layman does not  
 understand usually, let me explain.  
 In listening to a phonograph, say,  
 one may distinguish the notes of a  
 certain instrument in a band if he  
 tries to. He simply attunes his ear  
 and his mind to the vibrations pro-  
 duced by that one instrument. So  
 also in wireless telephony. Every-  
 body understands how a tuning

ork will respond, that is, will sound  
 to a certain note struck on the  
 piano. A scientist would say it vi-  
 brated when something with the  
 same rate of vibration was set in  
 motion.

"Electric tuning is analogous.  
 A given receiver properly tuned  
 will respond to a certain number of  
 either or air vibrations per second.  
 So it will to terrestrial vibrations,  
 but it will remain unaffected by  
 another rate of vibrations. Thus,  
 any number of either or terrestrial  
 waves vibrating at different rates  
 would not interfere with one an-  
 other, nor would any set of vibra-  
 tions affect any receiver, except the  
 one especially attuned to its rate.

"Now," continued Professor Col-  
 lins, "we take an ordinary Bell re-  
 ceiver and pick up the vibrations  
 set loose at a distant point with no  
 connecting media save mother earth.  
 Each instrument (transmitter and  
 receiver) is connected by wire with  
 two copper plates, or, rather, a cop-  
 per coil and a copper plate proper.  
 The plate is buried in the earth at  
 varying distances from a foot to  
 thirty feet. The copper coil is in-  
 cased in the cabinet. The sounds—  
 that is, the vibrations—are trans-  
 mitted over the wire to the sunken  
 plate, thence through the earth to  
 the corresponding plate buried at  
 the receiving point connected with  
 the receiving instrument. Of  
 course, the layman will understand  
 that there are batteries attached to  
 the cabinets, and a Crookes tube  
 as well.

"The induced current passes  
 simultaneously with the earth  
 current.

"At present I am working on a  
 system of electrical resonance or  
 syntony where two, two hundred or  
 two thousand subscribers may talk  
 without conflicting. I do not  
 think this problem will be harder  
 than articulate speech without  
 wires. A more or less mechanical  
 device I am giving time and thought  
 to is a bell for signalling, all devices  
 extant not being applicable to our  
 telephone. On each telephone we  
 will have to place a couple of discs  
 resembling the combination lock  
 on a safe. Then, when Smith want-  
 to call Jones, whose number is 142  
 for instance, he will turn the dial to  
 142. This will put his 'phone in  
 tune with Jones'. That is, the  
 number of ohms resistance regulated  
 by this combination lock illustra-  
 tion anywhere between two thousand  
 and a hundred thousand ohms will  
 equal the resistance indicated by  
 Jones' instrument, and then Jones'  
 signal will be rung.

"Brown and Robinson are talking  
 in the same locality they will not  
 hear Smith, and Jones nor be heard,  
 for the resistance on their circuit  
 is different, and so on."

Mr. Crossdale, electrical patent  
 attorney, of Philadelphia, has had  
 charge of the acquiring of patents,  
 and Charles Chase, the corporation  
 counsel, has had charge of the for-  
 mation of the development com-  
 pany, besides tendering the use of  
 his extensive country seat at Lin-  
 wood for further out-of-door tests  
 by Professor Collins. The enter-  
 prise is entirely a private one. No  
 stock is for sale, and the inventor is  
 modestly denying himself to those  
 who would exploit his efforts, for  
 he says there are many details to be  
 worked out yet.

**Per AUSTRALIA, for Camarinos**  
 Refrigerator—An extra fresh supply  
 of Grapes, Apples, Lemons, Oranges,  
 Limes, Nuts, Raisins Celery, Fresh  
 Salmon, Cauliflower, Rhubarb, As-  
 paragus, Cabbage, Eastern and Cali-  
 fornia Oysters (in tin and shell),  
 Crabs, Turkeys, Flounders, etc. All  
 game in season. Also fresh Rock-  
 ford, Swiss and California Cream  
 Cheese. Place your orders early.  
 prompt delivery.

**CALIFORNIA FRUIT MARKET**  
 Honolulu Messenger Service deliv-  
 er messages and packages. Tele-  
 Phone, 378.

When you want a hack ring up  
 191. On that stand you will get a  
 reliable and good driver, a fine hack,  
 and no overcharging.

Kentucky's famous Jesse Moore  
 Whiskey, unequalled for its purity  
 and excellence. On sale at any of  
 the saloons and at Lovejoy & Co.,  
 distributing agents for the Hawaiian  
 islands.

By the Barks - - -  
**J. C. PFLUEGER and**  
**"M. E. WATSON"**  
 we have received a large  
 assortment of

**Morton's**  
 — AND —  
**Crosse & Blackwell's**  
 Groceries.

Bicarbonate of Soda, Wash  
 Soda, Caustic Soda, Paints  
 and Oils, Corrugated Iron,  
 Ridging etc., Cement and  
 Firebricks, Carbolinum  
 Stockholm Tar, Tubs, Buck-  
 ets, Tinplates, Saucepans,  
 Tea-kettles, etc.

**H. HACKFELD & CO.**  
 (Limited.)

**HOFFSCHLAGER CO.,**  
 Limited,

— SUCCESSORS TO —  
**ED. HOFFSCHLAGER & CO.**  
 King and Bethel Streets.

**Baby Carriages.**

**Household Sewing Machines**

Strongest and Best Sewing  
 Machine in the Market with  
 the Latest Attachments.

**Each Machine Guaranteed**

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 M. H. Whitney, Jr.....Treasurer & Secretary  
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 Of San Francisco, Cal.

**Bruce Waring & Co.,**  
 Real Estate Dealers.  
 505 Fort St., near King.

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 HOUSES AND LOTS, AND  
 LANDS FOR SALE**

Parties wishing to dispose of their  
 Properties, are invited to call on me.

**THOS. LINDSAY,**  
 Manufacturing Jeweller.

Call and inspect the beautiful and useful  
 display of goods for presents or for per-  
 sonal use and adornment.

Love Building, Fort Street.  
**TO LET.**

Cottage on Alapai Street  
 Cottage on Beretania Street.  
 Apply to  
**WILLIAM SAVIDGE,**  
 1317-4f No. 109 Merchant Street.

**FOR SALE.**  
 A good investment in fee simple on  
 Punchbowl Street, near Mormon Church.  
 Brings in \$30 per month. Apply to  
**WILLIAM SAVIDGE,**  
 1317-4f No. 206 Merchant Street.