

SCIENCE TELLS US

By René Bache

Hawaii's Tapestry Forests Rich In Color

THE Hawaiian islands were thrown up ages ago from enormous volcanic chimneys that opened in the Pacific floor. Even to this day the eruption has not ceased. Two mountains of the archipelago, with the passage of a great length of time, have been weirdly worn by torrential rains, so as to present to the view fantastically carved canyons and gorges, flanked in many places by almost vertical cliffs.

Upon the faces of these cliffs, *torii*s, a dense growth of "tapestry forest," as it has been called, composed of many species of trees, strangely dwarfed in order to enable them to cling, supported by a shrubby undergrowth, which grows into a continuous mantle. The soil on the cliff faces is necessarily thin, and, to save themselves from being blown off, the trees develop an intricate system of anchoring and bracing roots, forming in many a steep place natural ladders up which the natives climb.

The tapestry growth is saturated with water like a sponge, the rainfall in the parts of the islands where it flourishes being extraordinary. To the eye, with its variations of gray-green, yellow-green, olive-green, silver-green and scores of indefinable shades, it has a rich, mottled, velvety effect, as if of a wondrous woven drapery. Now and then land slides occur, making great rents in the drapery, which are slow to heal. The repair work begins with grasses; other humble plants follow and eventually, when enough soil is available, trees sprout and establish themselves.

Brewing of "Potheen"

EFFORTS on the part of the British government to suppress illicit distilling in Ireland have always met with determined resistance.

What we call "moonshine" whiskey is "mountain dew" in the Emerald Isle, or, as it is otherwise called, "potheen"—the latter word meaning a little pot. A century ago it was estimated that there were in Ireland at least 150,000 illicit stills regularly at work. Mostly they were hidden in mountain glens and other secluded places, and the government was powerless to suppress the industry. The neighborhood of Innishowen was famous for its "potheen," which was of superior quality that the British authorities sought, though vainly, to induce the licensed distillers to make whiskey equal to it. The Innishowen liquor had a peculiar smoky flavor (from the peat used for fuel) which was much liked by connoisseurs.

A curious point here concerned was that the makers of illicit whiskey could afford to produce a better article than the licensed distillers could profitably manufacture, inasmuch as they had no overhead expense to meet, furnished their own labor and used the grain they grew themselves.

An Electric Toothbrush



Soon we will all have an efficient rotary toothbrush that runs by electricity and really cleanses the enamel and thus preserves the teeth.

Why bother to agitate a toothbrush when electricity will do the scrubbing for you? The electric toothbrush is a new idea, originated by Louis A. Gable, of Harrisburg, Pa. A motor runs

Glue Made From Dried Blood

A NEW kind of glue, very valuable to cabinetmakers and for various other purposes, is made of dried blood albumin. It is a dark crystalline substance, and, with the addition of simple chemicals, furnishes the most waterproof glue known. It is used for airplane parts and "plywood"—the latter term relating to articles which are made by gluing pieces of wood together.

Plywood is a great economy, rendering practicable the utilization of small stuff which used commonly to

Uncle Sam Now Breeding Bats By Thousands to Kill Off Malaria Mosquitoes

THE breeding of bats to kill off malaria-carrying mosquitoes has of late been seriously advocated.

Not long ago the Carnegie institution said: "Bats devour large numbers of mosquitoes. Flying at dusk and after dark, and capturing all night-flying insects on the wing, they are important mosquito-destroying animals."

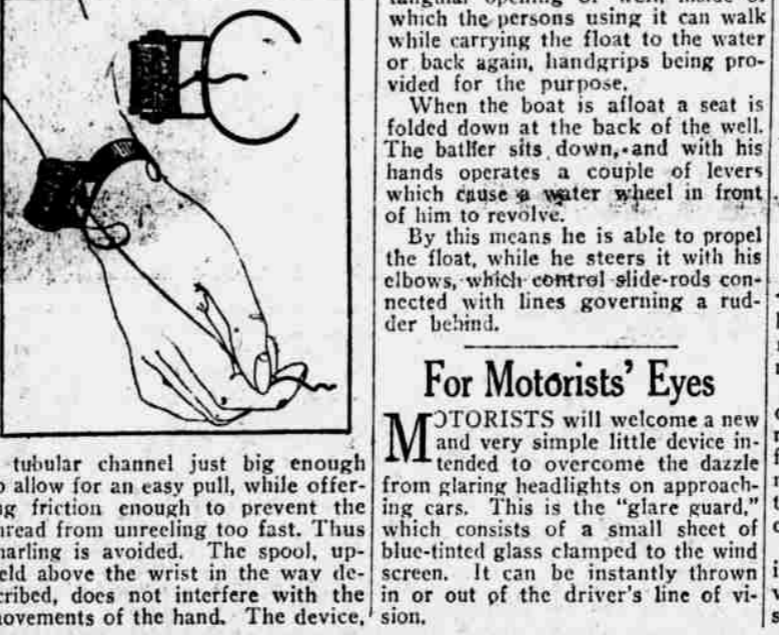
The mosquitoes that carry malaria are night-fliers. Hence the idea might seem a good one.

It was with this object in view that a "battery"—in other words, a bat roost—was built on the experimental farm of the Department of Agriculture six miles south of San Antonio, Tex. Another was established at Mitchell lake, not far from the same neighborhood, which is an attractive body of fluid formed by sewage from San Antonio, its margins offering excellent breeding places for 'skeets.

These structures are about 20 feet high, upheld on posts, with slanting walls, a projecting roof slightly elevated to allow the bats to pass in and out, and an additional entry

Way to Keep Your Spool Handy

FOR the woman who sews it would be very convenient to have a spool of thread attached to her wrist in such a way that she can draw upon it as she needs it. A contrivance newly patented by John W. Oliver of New York City, seems to meet the requirement admirably. It is simple, the spool revolving on a little rod set between two upright plates which are erected upon a clasp that may be sprung over the wrist, holding the affair securely. The thread passes from the spool through



New Help for Housewife

THE most laborious of all domestic tasks is scrubbing floors. Any woman will testify to that. It breaks the back and wears out both temper and stocking knees. Hence it may be considered that Charles F. Oliver of Sherbrooke, Quebec, Canada, has proved himself a benefactor through the invention of a stoopless scrubbing brush which he has newly patented in this country.

The brush has a long handle; therefore the operator doesn't have to stoop. On top of it is a rectangular box containing water and a cake of soap. Sharp metal points projecting from the bottom of the box scrape the soap constantly as the brush is pushed back and forth. A dribble of soapy water falls continually in front of the brush through a row of small holes provided for that purpose. Thus the scrubber has nothing to do but to shove the long handle to and fro, soapy water being fed out in advance of the brush. The performance is almost automatic.



Inventor Patents House of Cards

PHILADELPHIA inventor, Hobart de Lancey Rapson, has patented a cardboard dolls' house which ought to meet the demand of the most luxury-loving nursery tenants.

One advantage it has is that it is collapsible. Another is that its rooms open back and front (with no front or rear walls), so that children may move the dolls and their furniture freely about. Doors, of course, connect the rooms.

In these days ready-made dwellings for grown-ups are rather in vogue. They are delivered in such shape as to be put up offhand. No

Suns Bunched In Constellation Hercules

IN THE constellation Hercules is an object that looks like a hazy star. Not until very recent years was it supposed to be anything else. As revealed to the new high-power telescopes, however, it is a congeries of suns.

The distance of this cluster of suns is so great that a ray of light, traveling 186,000 miles a second, would require 360 centuries to reach us. In other words, as we may view it tonight, we behold it as it was 36,000 years ago—a date since which mankind has emerged from the cave-dwelling period, acquired the use of tools and developed all of his successive civilizations.

The cluster is not even a part of our universe, properly speaking—that is to say, of what we call the Milky Way. It is a distinct and isolated system. At least 36,000 of the suns contained in it are individually brighter than our own sun, and the most brilliant of them exceed in light-giving power 1,000 suns like our own.

The distance of the cluster from the earth is about 200,000,000,000,000 miles. It seems to be egg-shaped and may rotate about its shorter axis. Observations have proved that it is moving directly toward us at a speed of something like 200 miles a second.

Mask for Batter

IN THE noble game of base ball serious injuries are sometimes inflicted by pitched balls. Discharged from so small a distance with tremendous velocity and deceptively curved, they are not always easy for the batter to dodge. Once in a while a man is killed. There is even such a thing known in the game as a "bean ball," which is thrown with the deliberate intention of hitting the batter's head or coming near enough thereto to frighten him and "get his goat."

To provide against such dangers, Herman H. Polmann of St. Louis has invented what he calls a "side mask," which is meant to be worn by the batter, not in front of his face, but to protect the side of his head that is turned toward the pitcher. It is a framework of strong wire, which is secured around the upper part of his head by an elastic band and fastened about the lower part by a strap and buckle. The frame carries four pads, which, when the device is adjusted, are brought into firm contact with his forehead, the upper part of his head at the back, his cheek and the part of his head just behind and below the ear. This protected, he has nothing to fear from a pitched ball, while the arrangement of the wire is such that there is no obstruction to his sight. Inasmuch as the "side mask" can be put on or taken off at a moment's notice, one will serve for all the pitched balls in the game. A left-handed batter, of course, would wear it on the right side of his head.

The Married Life of Helen and Warren

An Amazing Message From the Spirit World Leaves Warren Undisturbed.

"Now, dear, don't make cynical comments—try to be responsive," urged Helen as they entered the office building in which Mrs. Irene Moore held her Tuesday night spiritualistic meetings. "Let's go in a sympathetic mood."

"Well, you can supply the sympathy. Don't expect me to get lit up over this sort of thing," irritated at having been dragged there against his will.

"Mrs. Stevens says she's wonderful—she told her some marvelous things."

"Huh, she'd fall for anything," granted Warren. "She's always chasing some new fad. Last year it was palmistry—now it's spiritualism."

The elevator not running, they climbed two flights of dimly lit stairs, and turned down the hall to an open door through which shone a strip of light.

It was a long, narrow room filled with rows of chairs. On the platform sat the medium—a stout, florid woman with heavy gray hair. On a table beside her were a bowl of flowers, a pitcher of water, a glass and two silver plates.

Warren, refusing to go in front, peremptorily waved Helen into the very last row, the chairs creaking loudly as they sat down.

The collection came first—the passing of the silver plates. Then the medium rose to make an announcement.

"For the benefit of those who have never been here before, I will state that my control is Little Lottie—a child of seven. When she questions you, please answer promptly as a child is apt to be impatient." Then bowing to a young woman on the front seat, "Now, Miss Ellis."

Crossing to the piano Miss Ellis favored them with an unintelligible song in a shrill, metallic soprano, while Mrs. Moore sat with closed eyes, motionless except for an occasional twitching of her muscles.

"There are the Stevens up front—the third row," whispered Helen.

As the last tortured note died away, and Miss Ellis returned to her seat, the medium gave a violent twitch and started up, still with closed eyes.

"Good evening" everybody, in a child's piping treble. "My! I see a lot of spirits here tonight—and they all wish to give me messages for you. I'll do best I can. I know

you all want to talk to your dear ones."

The medium had also assumed a child's mannerism. She was fidgeting and twisting her handkerchief.

"That little girl over by the wall, pointing to an elderly woman in the third row. 'Is a message for you. Do you know Mary in the spirit world?'"

The woman, leaning tensely forward, nodded a breathless, "Yes."

"She was young, wasn't she? Not well, she looks young. And I got a awful pain here," clasping her large jeweled hand to her throat. "Didn't she pass out with sumpin' the matter with her throat?"

"Not that I know of," was the tremulous answer.

"Oh, yes, she did," shrilly. "Ooo-oo! It hurts me all down my leg. He had rheumatism. My leg hurts sumpin' awful. Didn't he walk with a cane?"

The woman hesitated, evidently not able to place the spirit.

"He stoops and has gray hair. And he wants to tell you you mustn't worry. There's going to be a change in your affairs. You goin' to take a long trip somewhere. California, I think—yes, I see the palm trees and bougainvillee. Oh, I know now! You write for the movies?"

"I haven't yet—but I'd like to."

"Well, you will," brightly. "That's why you goin' to California—I see lots of papers. You writes and tears up—and then you writes sumpin' you don't tear up—and it's goin' to bring you lots of money."

"Oh, thank you, Lottie, thank you."

"Now, let's see. My! They's so many spirits here—I dunno which way to turn. Oh, yes, that little

boy way back—they's some ore here for him."

"Dear she means you!" whispered Helen, nudging Warren excitedly.

"It's a tall old lady with gray hair. She's got on a black silk dress with white at the neck. She holds a big 'S' before her. Maybe your mother or a aunt—she don't say—but her name begins with 'S.' You know who I mean?"

"Yes," lied Warren to Helen's amazement.

Our old friend, Gilbert the Goat, was in here the other day, complaining. Gilbert has just been working his way through one of our prominent penitentiaries.

He has a new suit of clothes, and \$20, and a new trade. But he isn't happy. He's homesick.

The world he finds much changed since that sunny autumn day 15 years ago when he packed his little grip and set off with the sheriff up the river.

Some of his old friends have married. Others have turned honest. There are still a few opportunities for a person of Gilbert's skill and application, but they are nothing like what they used to be.

In the old days master burglars always could use three or four bright torches and pneumatic drills and T-N-T. capsules and other appurtenances to the profession suggested by modern fiction writers a burglar can do his own work.

That requires capital, of course. Gilbert hasn't any capital. Twenty dollars wouldn't buy a twist drill, say nothing of an acetylene torch or an aluminum pocket step ladder.

It isn't that he complains about, though.

It's homesickness.

Nobody knows him any more. His name, which won him instant recognition and respect in the penitentiary, has never been heard of by the present generation.

Times Do Change.

Once he had only to walk along the street and the officer on the beat and three plain clothes men would fall into his wake and dog his footsteps.

Now if he walked right into a police station they'd think he'd come

"She wants to talk to you about your business. Don't you send out a lot of letters? And don't a lot of people write you and come to see you?"

Then encouraged by Warren's affirmative nod,

"You're a promoter, aren't you?"

"I could hardly repress an audible gasp, as he repeated his obliging 'yes.'"

"You send out a lot of circulars through the mail. I see them folded

three times in long envelopes. Well, this spirit says to be very careful what you say in those circulars—so you won't get in trouble with the mail authorities. You understand what I mean?"

"Do."

"Well, that's all right, then—she just says to be careful. That's all sort of hazy. There's sumpin you more next time."

Helen flushed indignantly. Warren

a promoter! And in trouble with the postal authorities! Why had he led her on to such preposterous statements?

Then with a start she realized the woman was talking to her.

"Yes, you! The little girl next to the little boy I just talked to. There's a curious condition about you—all want to do—but you're afraid. Well, don't be afraid. You understand?"

"I—I—don't think I do," faltered Helen.

"Well, you ought to," crossly. "You think about it when you get home. Didn't some one just try to persuade you from sumpin you wanted to do?"

"Not that I know of," painfully conscious of many backward glances.

"Yes, they did!" with an impatience she always showed when contradicted. "Now I'm goin' to talk to somebody else. That little lady right here in front. You came to find out 'bout a young man. Yes, you did—very nice—but he's not the marryin' kind. Isn't that so?"

"I don't know," stammered the rather pretty blond, much embarrassed.

"Well, it's better to have a true friend than a fickle husband. And you're not satisfied with other conditions surrounding you? Isn't that so?"

The girl admitted that it was.

"They're going to improve. But be careful about signing any papers—I see the word 'Insurance.' Then irreverently, "Don't your bed face east?"

"Why—no," after a moment's consideration. "It faces west."

"West? Wait a minute," her hand to her head. "Oh, yes, I was looking at the foot. That faces east—that's what I meant. Now, tonight, you turn it 'round so the head faces north. Your vibrations will be better."

Other readings, all padded with glittering generalities, followed. Always she touched on poor health and unsatisfactory financial conditions—that were soon to improve. Som. Mary, John, or William from the spirit world was there to help almost every one.

If the messages were a little vague, more definite ones were promised for next week. And for the sum of five dollars a private seance could be had in which more detailed and intimate advice would be given.

Even Helen squirmed a little over some of the most obvious evasions, and she had to keep nudging Warren to subdue his disgusted grunts.

"Wish I could play piano," Coily sidling over to the instrument, "Lottie" fingered the keys. "I likes a piano. Don't that sound pitty?" pouncing one note. "Well, I must go now. Be sure to come next

Tuesday—I'll have more messages. Goodnight, everybody, goodnight," waving her handkerchiefs.

"Goodnight, Lottie," chorused several women, evidently habitues.

"Let's get out of here," Warren snatched up his hat and stick.

As they were in the last row, he was out in the hall before Helen could protest.

"Oh, it seems rude to go off without speaking to Mrs. Stevens," reluctantly following him down. "I'm afraid she'll be offended."

"She'd be a lot more offended if I told her what I thought of that performance. That Lottie stuff was too much for me!"

"Warren, why did you lead her on? Why did you keep saying 'yes'?"

"Wanted to see how far she'd go. She sized me up for a promoter—so I thought I'd help her along a bit."

"But it wasn't a ball team she had, as they came out on the street."

"Fair! Why, the whole thing's bunk from start to finish. She isn't even a good actress. Half the time she forgot her baby talk. One minute she'd be babbling about the 'pitty liver'—the next she'd come out with some jaw-breakers. And her slang was up-to-the-minute."

"Yes, that wasn't very convincing—yet she did get some things right. That old man in front of us—she told him—"

"What'd she tell him? That he was in poor health and financial difficulties. I could've told him that much without ringing in Little Lottie."

"But that woman she told about the money coming from China—"

"Oh, she had a line on her—she'd been told she'd come out with it by the way she kept chirping. 'Yes, Lottie—Thank you, Lottie.'"

"But, dear, there must be something in it. Think of Sir Oliver Lodge, Conan Doyle—and all the really big people interested in spiritualism."

"I'm not talking about scientific investigators. But that show tonight was pretty raw. What did Lottie say to that blond—better have a true friend than a fickle husband? How's that for an infant prodigy? No wonder she's in the spirit world. Much too bright to live. Little Lottie must've passed out with combustion of the brain!"

Next week: An Adventure In Greenwich Village.

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Times Have Changed

By JAMES J. MONTAGUE

used to "come up and lecture and read from their writings, and give trilogues.

Some of them were poets, of course, but that happened now and then, so nobody minded it.

Lots of Entertainment.

He heard a great editor give 18 weeks of keeping out of the penitentiary, all of which he had tried himself with much success.

A distinguished mathematician

sure to be useful later on.

In the evening there was always music, and close harmony in intervals between band concerts.

There was a penmanship class conducted by a celebrated forger, and a financial school directed by a former Wall street man who had found shelter there during a general demand for an interview with him by former owners of his fortune.

It was all entertaining and profitable.

Gilbert would like to go back. He has written out an application for another term. But just now all the places are taken, so he will have to go on the waiting list.

It is a sad case, but there didn't seem to be anything he could do about it, so we bade him good-bye.

When he left our watch was gone. Perhaps he will realize his hopes sooner than he expected. He will if we have any influence with the police.

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Ashes of Hoosier Poet Are Scattered to Four Winds

Oakland, Cal., Oct. 15.—To carry out the dying wishes of Richard Lew Dawson, Indiana poet, that his ashes be scattered to the four winds from the same funeral pyre from which the ashes of Joaquin Miller, Poet of the Sierras, were cast in 1913, a pilgrimage of friends recently visited "The Heights," Miller's rustic home in the hills, and there carried out the ceremony.

Dawson, a true lover of nature, was a great admirer of Miller, and it was one of his last requests that, if possible, his remains be finally consigned to the ground on the spot made so beautiful by the love and care sanctified as the last resting place of his old friend

ment, he has to sleep in cheap lodging houses. Anyone can break into a lodging house room with a jack knife.

His neat cool cell was burglar proof, which was a real comfort. At night he slept the sleep of the just, knowing that his valuables were safe and his privacy proof against invasion.

Now if he walked right into a police station they'd think he'd come

