# SCIEN René Bache

Convright, 1821, by Public Lodger Company

#### Deserts Becoming Playgrounds of Motorists

The automobile has opened a new playground to the people of the United States. It is the river, and its apex in north central Oregon. Covering about half a million square miles, it represents nearly one-sixth of the total area of the United States.

The motor car, combining the of a locomotive with the ready convenience of a family carriage, has made this region easily accessible. With its pure air, vast distances and weirdly interesting scenery, it offers attractions which are nowhere else to be found.

Water, of course, is scarce. Tourists must depend on wells, springs or natural tanks, often separated by a hard day's journey with team and wagon. Here the motor car's speed gives an important advantage. But it is necessary to know where the, water holes are located. Only the other day, in the Mohave desert, an automobile got lost, and a whole family perished of thirst within five minutes of a plentiful water supply.

For the purpose of safeguarding tourists and other travelers signs pointing to the nearest water are being put up all along the principal roads that run through the desert. This work was first undertaken in the dryest and hottest part of it, embracing 60,000 square miles in southern California and southwest Ari-

The United States Geological Survey has undertaken the task in cooperation with the state of California and automobile associations. It was next extended to the Mohave desert, south and west of the area above mentioned.

The Mohave has long held an unenviable reputation as one of the most horrible deserts in the world. It has only two important streams, which, when they emerge from the mountains, spread out fanwise and disappear in the sands. Scattered over it are 50-odd closed basins, from half a mile to 10 miles in diameter, in the bottoms of which are "playas," or dry lakes, soft and

## This Powerful Compressed Air Motor Utilizes Enormous Energy of Waves

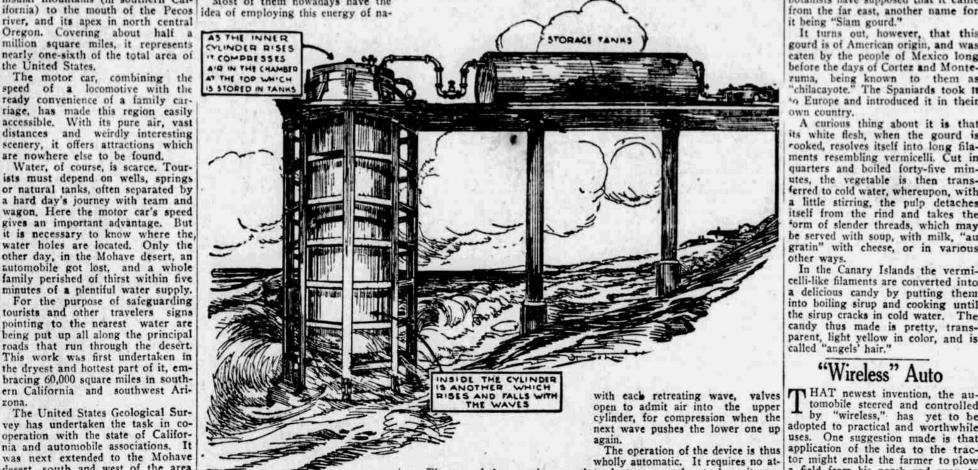
THE problem of getting utilizable power from the tides or the so riginal with Charles N. Hare of waves of the sea is bound to Lima, O. It provides for an open the air inside the upper cylinder and

of the United States. It is the region of bare desert that forms a great triangle, the base of which is the Mexican border from the Pensistence.

Most of the waves of the sea is bound to this, or the sea is bound to the solved sooner or later, and, with this expectation in view, the induced vertically, the lower cylinder tank on the pier.

As the lower cylinder descends the mouth of the Persistence.

Most of them nowadays have the lower cylinder descends the mouth of the Persistence.



wholly automatic. It requires no at-ion. The top of the cage is secured tendant or caretaker to keep it runto the end of a pier that runs out ning, and thereby expense is reput the machine away without taking into the ocean.

ture to compress air in big tanks or into the ocean.

The cement base of the cage is tear on the apparatus. sure the air is available for the pro- anchored in the ocean bed so that it The air compressed in the storage aerials of any kind. It can be steer-

## Modern Warriors Protected by Improved Body Armor WHEN body armor "came back" ten, nickel or vanadium. The other of its most notable advantages as during the late war, our mili- was machinery.

there are many springs of good viously out of the question. But the drinking water, if one knows where modern war experts were quick to In t to find them. Signs along the roads now point them out and new and now point them out and new and accurate tourists' maps indicate then ordinarily hard with allows of tunes.

ordinarily hard with alloys of tungs- weight of modern armor being one blower.

In the war good alloy steel hard- vent the helmets from reflecting

#### Ever Eat "Angels Hair?" Product of Gourds

N SPAIN and the Canary Islands has long been grown a kind of gourd, the size of a small water-melon, green blotched with white, which is very good to eat. It is called "pantama," and until recently octanists have supposed that it came from the far east, another name for it being "Siam gourd."

It turns out, however, that this gourd is of American origin, and was eaten by the people of Mexico long before the days of Cortez and Montezuma, being known to them as "chilacayote." The Spaniards took it to Europe and introduced it in their

A curious thing about it is that its white flesh, when the gourd is rooked, resolves itself into long filaments resembling vermicelli. Cut in quarters and boiled forty-five minutes, the vegetable is then trans-ferred to cold water, whereupon, with a little stirring, the pulp detaches itself from the rind and takes the form of slender threads, which may be served with soup, with milk, "au gratin" with cheese, or in various

into boiling sirup and cooking until candy thus made is pretty, transparent, light yellow in color, and is called "angels' hair."

#### "Wireless" Auto

open to admit air into the upper cylinder, for compression when the next wave pushes the lower one up again.

Litomobile steered and controlled by "wireless," has yet to be adopted to practical and worthwhile uses. One suggestion made is that

The contrivance has no masts or duction of power, which may be converted into electricity and turned to account for any useful purpose.

Shall be slightly submerged at low tank is used to drive an air engine ed from as far away as the eye can which is connected to a motor for position and stationary, but the producing electrical energy. justment is so delicate that the radiocar can be directed with a variation almost unbelievably small, whether in a straight line or along an irregu-

lar course.
Our military authorities are introops before the war's end. To pre- every living thing in its near neigh-

## New Type of Hand Washer Invented by Californian



NEW kind of washing machine is the invention of Clifford G. Sweet of other ways.

In the Canary Islands the vermicelli-like filaments are converted into a delicious candy by putting them.

A San Diego, Cal. It is supported by a wooden "horse" and an attachment known technically as a "dog" controls the revolution of a large horizontal ratchet-wheel on which is a circular board that supports the washtub. An extension of the "horse" provides a seat for the operator. who (as shown in the picture) yanks back and forth one of two pivoted the sirup cracks in cold water. The levers. Each lever carries a pounder. As the operator does the yanking candy thus made is pretty, transwheel. At the same time rollers beneath the ratchet-wheel give the tub a tilting motion back and forth. Thus the pounders, descending alternately, but would (the inventor claims) attack the clothes in all parts of the tub, while they and the suds in which have a greatly increased brilliancy they are immersed slosh about in a way that gets results.

#### Oil Dumped in Harbors Kills Fish; Proposals Made to Skim It Off Water

of mischief. It has become a nuis- their breeding grounds. ance in many ways, so much of it | Vast oil patches are often seen at

vents many finny species from running up the streams to spawn. Along the seashore it drives away the migrating schools when they approach the coast, depriving the fisherman of his prey. It sickens or kills oysters, and electricated with oil.

Sea birds have recently been found dead and dying by hundreds off the British coast, their feathers saturated with oil.

The worst offenders are gas plants are a couple of triggers. The meaning the first strength of the provides for an electrically actuated going alarm inside of a money-carrying case. In the handle are a couple of triggers. The meaning the first strength of the provides for an electrically actuated going alarm inside of a money-carrying case. In the handle are a couple of triggers.

water, and fishes die for lack of to the dumping of oil from ships in later. By that time the bandit will oxygen. The mischief is particularly harbors, in the neighborhood of be making his getaway; but he canserious in harbors, where, because spawning grounds, or near fishing not have gone more than a few steps The seventh international fair of of gas plants, oil-burning ships and banks at sea. Also, it is hoped to en- before the thing begins to make a automobiles, the discharge of waste courage an increased use of wastes noise, and it will keep on ringing

IL cast upon troubled and un- the gateways through which shad Other fished waters is making a lot and other fishes must pass to reach The robber goes off with the loot.

that finds its way into rivers pre-vents many finny species from run-

oil is greatest. These harbors are for by-products derivable from them. for six hours.

#### Way to Make Gems Shine in Dark Patented

H OW desirable it would be if diamonds and other gem stones could be made to shine in darkness! Charles G, Smith of Cambridge, Mass., has recently patented certain means for accomplish-ing this result. He proposes that they shall be applied to artificial as well as to natural gems; and an additional and important advantage claimed is that the stones will be rendered far more brilliant in the

Take a glass diamond and cut in the bottom part of it a recess to contain a tiny sealed transparent tube containing a gas under pres-sure, together with a minute quantity of radium. The radium will make the gas luminous; and, if the gas be hydrogen, it will emit red rays. If it be helium, it will color the crystal with golden yellow rays.

The same method of treatment applied to a real diamond will vastly augment its brilliancy, and the stone—as would be the case with the glass imitation-will shine in the

Another idea is to drill one or nore holes in the bottom of a real or imitation gem and coat them inside with luminous radium paint. Yet another is to make imitation diamonds of glass through which

fine particles of gold are distributed. They would not shine in the dark, in the daytime.

#### Beating the Bandits

NOTHING seems to be easier in these days than for a bandit to hold up a bank messenger and rob him. Intimidated by a pistol. the messenger does not even at-

But suppose that, a few seconds later, ance in many ways, so much of it being thus disposed of that a proposal has been made to skim it off some harbors and by treatment render it utilizable.

Vast oil patches are often seen at a loud alarm starts inside the stolen bag, a gong ringing and continuing to ring, so as to attract attention? To the bandit, nothing could be ways until batched. After hatching render it utilizable.

It is death to fishes. It suffocates them and poisons their blood. Oil

"playas," or dry lakes, soft and mushy and sometimes covered with alkali.

There are waters that are death of during the armor at the Metropolitan Museum sulphate (which is Glauber salt), carbonate of so soapy taste and burns the gives a soapy taste and burns the mouth) or common salt, mouth) or common salt, wevertheless, in the Nevertheless, in the Nevertheless o This is the idea of a new inven-

## Sea Tragedy of the Wild Orang-Outangs

beasts.

are a tailless breed of monkey, rather made sufficient profit, merely in presrare and extremely difficult to tige, both with their own people and catch. Once captured, they become with the resident. I made them my affectionate pets and they command agents in their districts and took a good price for that reason. They them with me to the offices of the have soft, downy, light brown, silvergray or yellow hair, black faces and to have any animals they brought to

large, round, expressive eyes.

The work of trapping and snaring went along steadily during the 10 they were in their boats alongside, time the orang-outangs were ready to travel we had three gibbons, four baby orang-outangs, one proboscismonkey, 10 black monkeys, 18 longdays I spent with Omar. By the waving and yelling. tailed monkeys, 28 pigtailed mon-keys, three pythons, which averaged eight feet in length, two sambur deer, one sun bear, three wildcats, four civet cats, four porcupines, one ant

them securely with rattan ropes. I went to the cable office and sent to her. Since the boats at the kampong were the Antwerp Zoological Gardens

When everything was ready we boarded the boats and rafts and started down the river. The people lined the banks, shouting and wishing us a safe journey; others followed us in boats. At each village the natives swarmed out to see the animals and wish us luck. I can still hear them calling: "Tuan, bila balik? Salaniat jalan! (Sir, when will you come back? Safe journey!") We stopped at Mahommed Munshee's village, and then at Sintang I found that Dr. Van Erman had gone down to Pontianak. Another swarm of natives met us when we arrived there, and I had to station my men around the rafts to keep

them from coming aboard. Leaving Ali in charge of the animals, I went ashore and found that a steamer was sailing for Singapore the next morning. I made arrangements for shipping, and then went to the resident's house to pay my respects. Dr. Van Erman was there and, after luncheon, I took the resident and the doctor out to see my catch. The resident was profuse in his congratulations and he confirmed my belief that the orang-outangs were the

largest ever captured in Borneo. Omar and Munshee assisted in the work of loading the crates on the steamer, because they felt that their obligation to me did not end until we had the animals clear of Borneo. I felt of course, that I was under obligation to them for all the fine work they and their people had done for me, and I wanted them to accept some money for their services. They refused at first, but finally gave in.

rived. I made all the arrangements From their point of view, they had but that the orangs would not be able to stand the voyage. I sent another message to Antwerp, saying that I was sailing and requesting that arrangements be made for shipping by rail from Marseilles. steamship company while I arranged

Pontianak shipped to me at Singafor the animals.

From the moment the steamer called upon the police to keep the crowd back, for I was afraid the excitement might be too much for the At my animal house, I put them in rapidly. Finally she slumped down

One morning she curled up on the

as to what the answer to my cable-gram would be, and, before it ar-not help feeling relieved. She had some natural history museum would for shipping. Antwerp offered \$10,- ing! I have often wondered if the harbor at Marseilles with the male 000 for each of the animals delivered. male had any idea that she was still alive, and I thought that there out to the cage that had been built I knew that I could get offers of \$25,000 or more in the United States, but that the was an even chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of getting him that the was a large was a chance of fellow was dying.

A few days later the cages were swung aboard and we started eastward. Ali accompanied me to care

better, but the female lost strength

been so abjectly miserable and she had seemed so human in her suffermounting. We steamed into the and he became morose. Many days to Antwerp if the people there had of anxiety followed; every minute I followed my instructions and arexpected the message that the poor ranged transportation. An agent ranged transportation. An agent ang came out slowly, like a tired met me at the dock. Everything was and sick old man. He was not in-The ship's carpenter built a vat, prepared for us, and we lost no time and we "pickled" the body of the in getting the beast to the train.

#### Mother Reunited With "Baby" Whom for Twenty Years She Had Believed Dead

been reunited with his mother, Mrs.

Further investigation, Rohlfing said, revealed the fact that he had Lucy Davis Simpson, of Joplin, after been born in Joplin and that his

Since the boats at the kampong were too small, I had two large rafts made of bamboo and I placed all the cages

There was no question in my mind of the capture.

One morning she curled up on the from a children's home in St. Louis cation of the notice brought a prompt by Mr. and Mrs. John Rohlfing of answer from his mother and a reunion.

We slipped the bars over the open ends of the cages in which the big fellows were to travel, and lashed fellows were to travel. By accident, Rohlfing learned two newspaper from St. Louis, with the years ago that he had been adopted request that it be published. Publi-

like standing on the platform and whooping. My job was finished. The men from the Gardens took charge and rushed the orang-outang to receive him. We ran the transportation cage up to the door and cut away the bars. The orang-outterested in his new surroundings and he pushed away the food that we put before him. Veterinarians could do nothing for him. Ten days Ali and I remained in Antwerp

for several weeks. It was Ali's first trip to Europe, and not a very enjoyable one. He was bewildered and seasick especially the female, and refused food. All and I were with them constantly, tempting their appetites with choice bits of food and doing everything possible to make them comfortable. The male grew that was not vouched for by me. When we boarded the boat that was to take us back to the far east, Ali's face brightened. He had had

a wonderful experience, but he said: "Oh, tuan, I am happy to go home. I would not live here." (Copyright, 1921, by Asia Magazine.)

When we reached Antwerp, I felt when it is time for the engineer to

the train to start.

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## Keeping 37,960 Trains a Year on Right Tracks

and purple lights, which shine forth in the night. These signals shift from horizontal to vertical

pull the lever." This exposition no doubt shat-ters the belief of the general traveling public that it's the conduc-tor's "A-ll a-bo-ard!" that causes

It seems this dwarf signal also is controlled by the aforementioned signal towerman; that until the switch movement for the outgoing train is complete and safe the pigmy signal to the right of the engineer's cab remains placid and calm, a small but effective barrier to any premature starting of the

Track Is Clear.

And when the little signal arm does move and the engineer pulls a lever which starts the giant drive wheels he is positive his route through the maze of tracks is clear

and safe, be it the darkest of

nights.

The next time you board a Pullman car at night and glance in the direction your train is to go, you'll see, far up by the engine, the purple and green lights of the dwarf signal. Still farther away you may be able to discern the signal bridge, with its many signal arms.

Thus assured that your departure from the station is made safe by mechanical perfection, you may crawl between the sheets of your berth without misgivings. But as you drowsily listen to the

clank-clank of the car wheels hitting the numerous switches don't forget that alert and skillful terminal men, as well as perfect mechanism, is making your departure safe.

There's always a clear track ahead, but these are the men who

If a lamp is placed so as to reflect properly a mirror will light up a dark corner.

## Twenty-Four Lessons in Piano Playing--Third Lesson: G Major

GROVE'S MUSIC SIMPLIFIER. Lesson No 3.

(Copyright, 1920, by W. Scott Grove, Scranton, Pa.)

The third lesson in this series of twenty-four lessons of the modern method of instruction for the piano or organ takes up the key of G. It is proposed to give in the complete series all of the fundamental chords used in musical composition. There will be twenty-one more lessons before this twenty-four lesson course in music is completed. The pupil is expected to learn these chords, so they can be played almost intuitively. This means diligent practice. When this lesson has been mastered the student will be fully qualified to take up the study of the

fourth lesson, which will be next presented. INSTRUCTION-Place the chart upon the keyboard of the piano or organ so that the small letter D with the dash above it at the bottom of the chart is directly over the key of D on the

keyboard. The white and black spaces will then correspond to the white and black keys. Each of the three horizontal series of letters represent a chord. Beginning with the upper row, play the white letter with the left hand and then play the three black letters in unison with the right hand, making the first chord. Then, in the same way play the notes indicated in the second horizontal series, then those in the third and then back to the first, forming a comple-

ment of chords in G Major. The first things necessary to become a good time before the next lesson the chord shown should be played over and over again until you memorize it and can play it without the chart. Memorize the letters also. You will find that before long you will be able to play simple accompaniments in this key to any melodies you or your friends may sing.

If you wish to go further in studying, learn the fingering of the scales shown on the staff in this chart, upper note being played with the one sharp.

player are patience and practice. During the | right hand and the lower with the left hand. Every triad in black letter is marked 1, 3, 5. Always read it so, no matter in what vertical order the notes may be written. Note that the small letter D with a dash above it must not be played.

Never play small white letter D with dash

NEXT LESSON-E Minor, which is the relative key of G Major, having the same signature,

