

Maker Healing Ultra-Violet Rays Independent of Sun.

New York-The perfected method f making fused quartz in quantities, in mounced recently by the General Electric company, is expected to make man'indemendent of the sun's rays so tar as biss ability to obtain ultra-viorays are concerned, according to the opinion of scientists now engaged in experimenting with the newly developed material.

E. R. Berry, assistant director of the Thom son research laboratory of the General Effectric company, annourneed that he had enlisted the servicess of Dr. W. T. Bovie, professor of bio-physics at Harvard medical school, and Dr. Clarence C. Little of the Uni-

vermity of Maine and their institutions to further important experiments in the use of fused quartz. The pro-perty which makes fused

quastz stand out above all others is its mbility to tramsnit ultra-violet rays, the healing chempical rays which, emitted by the sun, cause sunburn. These ray are excluded by ordinary window 19.5

Now that Mr. Berry has made it possible to produce fused quartz in quantities, efforts are being made to learm-whether it will be practicable to use the material in the extensive manutacture of electric bulbs.

Independent of the Sun. "If we can provide artificial illumimantes that will emit ultra-violet rays we won't have to depend on the sun. which is so uncertain in winter," said Dector Bowle. "We can get the sun's effects on cloudy days by using quarts bulbes or tubes with incandescent the ultra-violet ray is sufficiently well light "

Derctor Bovie is planning to erect on the grounds of Harvard univer-lidence in regions overcast for long pesity a greenhouse glassed with quarts riods, need not be so hazardous in the in which will be determined certain effects of the rays upon growing plants tists are to be accepted. Mr. Berry with a view to applying any knowledges thus mained to improving human heith or preventing buman diseases.

Experiments with a similar object are to be made in the University of Maine laborratories, where conditions are conafdered especially favorable.

While those who have undertaken the experiments with quartz desire to refracin from raising false hopes as to the possibility of curing of preventing certmin stub-bern cliseases, they feel encourse ged that in fant mortality from rickets, particularly in crowded cities, long been used for research with canmay be further reduced as a result of the work.

firiment stiftion exposed hens to ulraviolet rays ten minutes a day and doubled their egg production. Furher, the weight of the individual egg us increased 20 per cent. "I am personally convinced that pine trees in our forests, deprived of light,

suffer from rickets just as humans do. We shall hang ultra-violet quartz lights about the woods in the course of our experiments and see what the

result is.' Doctor Bowie pointed out that the employment of ultra-violet rays is not new, that they were used by Egyptians, Romans and Greeks, but that their chemical nature was not known. Their identification and control are of recent accomplishment. Among others, Finsen in Copenhagen succeeded in curing a skin form of tuberculosis and in showing the beneficial effects in the treatment of smallpox.

"In America, however, progress has been retarded and some such event as the production of this quartz has been needed to redirect attention to the subject," said Dr. Bovie. "American doctors did not understand the scientific side of ultra-violet therapy Its use developed into a bad form of quackery. Apparatus called ultra-violent lamps which did not emit any of the rays Finsen relied upon were

Up 60.08 used. The result has been that many Crest. reputable physicians of America have

refused to have anything to do with Essence of Stanlight the Year Round Those conducting experiments with fused quartz point out that if the new quartz merely makes it possible eventually for the average home to have the essence of sunlight, artificial or

natural, the year round, in bad weath er and good, its meaning in health to countless thousands who, "grown un der glass" have been deprived of the peneficial qualities of sunlight, heat excepted, is likely to prove measureless. It is believed that the action of known to make this possibility a pre-

diction and that indoor living, or resfuture. If the views of some scienwill be regarded as the man who made "perpetual sunshine" possible.

"There are now opened possibilities of studying the effect of ultra-violet rays on the fundamental instinct of migration and hibernation and upon the inherited characters of animals and plants," according to President Little. "It will be possible also to compare the effect of ultra-violet and K-rays on identical material.

"Also, the fact that strains of mice at the university's laboratory have cer lays open a field of prospective value in the relation between ultra-



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The Red-Eyed Vireo was dressed in his gray suit with black triminings.

Above his reddish eves there were white stripes. He was singing and warbling and making a great



and the louch of the yellow at the tip of the tall.

"But they don't make much noise. And they're so polite to each other, passing each other bugs, and having such good manners. "They bow and make such a fuss and when anything surprises them, instead of making a noise up goes the

crest upon their heads. "They don't raise their voices and even the great excitement of a cherry orchard which they dearly love does not make them noisy in their joy.

"They are very sociable and friendly and such quantities of them meet and have dinner parties.

"But their voices are so quiet that it makes me feel like a great, bolsterous fellow."

"I wouldn't like it if you had a low voice," said Mrs. Red Eyed Vireo. "And every one thinks your voice is beautiful and your songs exquisite." Vireo, "but in the summer time they lean toward Elida, who sat nearby, "True enough," said Mr Red Eved get tired of my singing so much.

"In the spring they say: "'Oh, do listen to that dear little

ed-eyed vireo.' "But in the summer they say

"'Did you ever know a bird make such a noise as that red-oyed vireo? and & nervous tremor crossed her face. He is singing from morning until night al courses bacilly bear the his voice is so much louder

"Sometimes I wish I had a nice little low voice such as Mrs. Dove's husband has. He waits on her and feeds her and his actions seem doubly deoted and beautiful because

The spring is here. I know.

The spring is here T know.

The spring is surely here

The spring is surely here.

It certainly fills mo with glee.

Warble, warble, warble

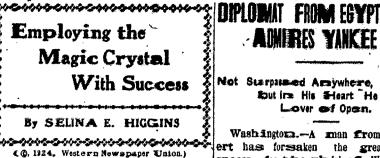
Oh me, oh my, oh me.

warble.

Warbie, warble, warble,

Oh, oh. oh.

Dear. dear. dear.



spaces for the whirl of Washington DOR a whole day our darling had social and diplomatic life. maoved about the house as one in But for A. M. ELassancein Bey, first

some dreamlike trance. Elida was listiess. She would sit moonlight mights, sandistorms and for an hour gazing at seeming noth-hardships of the desert are more at-

Ingreess. tractive than the elaborate ballrooms I, her aunt and guardian, wondered and colorful receptions which are inif it was anxiety for her absent lover, separable adjuncts to diplomatic life Willard Hull, that had brought on ha America.

this deep abstraction. -Hassanein Bey is one of Egypt's fa-It was early that evening when a vorite sons. While only in his thirty- funerals, Weddings, Christenings, "The Waxwing warm friend of the family dropped in. fourth year, he has won distinction as family," he said. She was a music teacher and quite an a soldier, attalete, adventurer, scholar are go pollte. attraction at local social entertain- and horseman. He is a true Egyptian They dress beautifully with their ments. She had been out late the and his love for the desert and for his evening previous at a solvee that I people is profound. soft gravishknew Miss Evans had also attended. If you were to meet Hassanein you

We were close friends with the would see a young man of medium little music teacher, and in my anxiety and height, slender and wiry of body. A perplexity I spoke of the strange mood neat black mustache, a pair of plerc-0 12 that had heid Elida in a strange thrall. Ing jet eyes and a head of neatly their wing វេទ "My dear Miss Nettleton," spoke my groomed, coal-black hair give his lean, visitor, when I had concluded. "I came olive-complexioned face the stamp of purposely to see Elida. You under oriental rome nce.

stand me well emough to know that it would not be from any idie curion are reflected In his speech. His Engity, but from motives of the purest lish is as nearly perfect as his native friendly interest. Something hap-language. He is now writing a book pened at the soirce last evening that in the English language of his advenwas fnexplicable. "Something happened?" I repeated. 5.000 miles of desert waste. triffle fearsomety.

"Yes. A young man, his name was Bypt. Each day you may find him "Yes. A young man, his trained the solree Bypt. Each usy you may man at the practicing with his instructor at the last evening. He came with the Racquet club, preparing himself for tally. He is a wonderful conversationalist and a marvel at the pinno." ing that something might shadow the love and loyalty of my darling and her finnce.

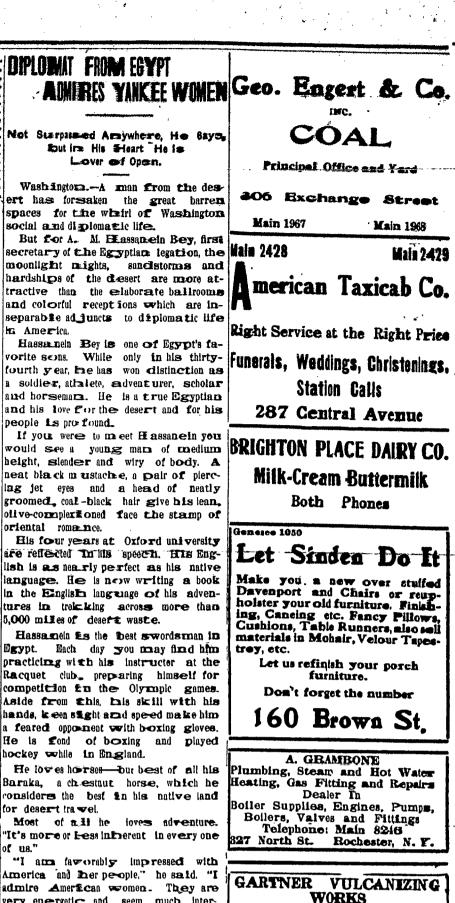
"Oxnly as he did the others, as t gentleman of great attainments, courteous to everybody. He had just tin. considers the best in his native land ished a brilliant musical composition for desert travel. of his own, however, when I saw him |

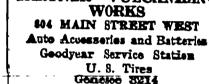
and fix his eyes upon her A light shone in them, I cannot describe." "You are alarming me," I said timorously.

"I am sorry, but I must tell you all." replied Miss Evans, "I saw Elida start ested in community work. I don't She was like one enrapt, fascinated.

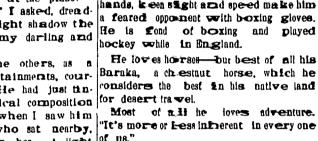
was a stand containing a fragile glass

Suddenly, but without removing his ***** **** **** **** **** lance, this Dalziell dashed both hands down upon the keyboard of the plane There was a strain of wild, uncarth ly Vitamine Ever Crystallized music A look I cannot describe passed over Elida's face Near to her





U. 8. Tires Gonosco 3214 Established 1890



"I am favorably impressed with America and her pe-ople," he said. "I admire American women. They are very energetic and seem much inter-

think they are sumassed anywhere."

Discoverer of the First

competition fo the Olympic games. Aside from this, his skill with his hands, keen sight and speed make him He is fond of boxing and played

"We all know that exclusion of light results in the blanching of plants." said Doctor Bovie. "They may become more succulent for table purposes, but their tissues are not stout and well developed. This is because calcium and phosphorus salts are not deposited in the massage of the ultra-violet rays in suralight.

"SEmilariv, if Dahies - are submitted to the same absence of sunlight, or of ultra-violet_rays, their bones do not a "friendship trip" through Europe, 20; grow and Lance rickets set in. This American boys will constitute the first is a common disease, how common is not generally realized. It is perhape national amity in accordance with a little realized, either, that it is provalent among the bables of the well-todo who are not allowed to play in the stree-ts.

"Remember that playing in the sun. behind window glass, does not expose the children to these beneficial rays. However, quartz windows which do admit these rays are now entirely within the bounds of possibility as a result of Mr. Berry's work.

The Haveo of Mickets.

"But to get back to rickets. Autopsies on babies in Dresden showed that suit of plans made at last year's of theose when were born in the fall and "world conference of workers among died in the spring 96 per cent had boys," at Portschach, Austria. It is rickets. Of those who were born in part of an effort to help establish betthe spring and clied in the fall only ter understanding and more friendly a very small percentage had rickets. relations among nations, as well as The bables born in the spring were being a new feature in the educational outdeoors in the sunlight during the work of the association. summer."

S. 9. . 1.1

After remarking that the sun's ef of the international committee of fects could be obtained on cloudy days Young Men's Christian associations, is by the use of quartz buibs, Doctor general director of the trip. He will Boyhe addled: "Certain foods act be assisted by Harry J. Center of sympathetically to sunlight. It is not Flint, Mich., and Ernest P. Roberts of incomceivable that we could light our Brooklyn, N. Y., both experienced in restmurants with sources of ultra-vio boys' work, as well as in foreign let Eight so that while partaking of travel. foodm tich in phosphorus and calcium | The itinerary includes, besides the

we could partake of light energy that Norwegian cruise, trips to England would mabie us to utilise these saits France, Belgium, Holland, Sweden in normal manner.

and Denmark.

Bird's Calls Tell Time

"There are discases other than rick- Outstanding features will be visits ets which are disc to faulty metabol- to Oxford, Stratford-on-Avon and the the 'mischine gun sneeze' is one. British empire exhibition in England, Such diseases might be alleviated by the Olympic games in France and the feeding calcium Instate and using ul International boy scout jamboree tra-wildet iEsht in connection with it. which is to be held in Copenhagen

"Altogether, the availability of from August 15 to 20. quaris suggrests wery interesting possi- Future similar tours are planned if bilities. With Doctor Little we are this summer's experience is success undertaking the investigation of the ful. effects of the ultraviolet rays on the Other plans under consideration call calcium metabolism of milch cows. for an educational "friendship trip" of The object, of course, is to see if older boys to Japan and the Far. the stays can have any effect on the East, tours in the United States for mills we feed our bables. It is not im- European boys, and a possible cruise probable Other animals feel the of around the world, occupying an entire

feet of the lack of these rays. Deep voe. tien fish do not produce bones, though - in mille productive star 100

with calcium alts. Fish of the same species living in the upper water, where the sun rays strike through, have bones in profusion. . Ultra-Violat Bays for Poultry.

Likewies confirmen in the North in anihie to grow checkens for early an anihie to grow checkens for early when a series could for the dark from his could be the dark from his could be the dark to be the series of the series of the series of the series of the

pounding like faint bugie petos

violet rays and blology and medicine. and coos so prettily. **AMERICAN YOUTHS TO** "But then-it is true-in the spring very one is so glad to bear me. VISIT FOREIGN LANDS "And it is spring now. It is spring

So excited did Mr. Red Eyed Vireo To Try Its Hand at Promotbecome about that that he sang a little song to Mrs. Red Eyed Vireo, and this ing International Amity. was the song:

New York .- Embarking June 21 on group of this kind to advance interresolution adopted by the League of Nations assembly. The tour, which will occupy ten weeks, will be under the auspices of the Young Men's Warble Christian association,

warble It certainly fills The boys, ranging from sixteen to nineteen, are selected on the basis of me with glee outstanding leadership qualities.

In nearly all other cases the trip The wood duck nuternn Airs will be financed by the boys' families. As food with his Special arrangements have materially mate he shares. reduced the usual cost of such a tour. Warble, warble, warble.

The tour has been arranged as a re-As food with his mate he shares. We love the

woods, we do, And along the roadside too Warble, warble warble. And along the roadside too

J. A. Van Dis, boys' work secretary I love to sing it a true. Songs both old

and new. Warble, warble, warble, Songs both old and new

And, as it was springtime, people heard Mr. Red-Eyed Vireo and said: "On, do listen to that dear little

vireo and his sweet voice."

A Sinner That Repented A school presided over by a very

He Walts on

6

ones.

harsh and bad-tempered teacher had a visit one afternoon from the bishop of the diocese. The bishop called before him a white-faced urchin who was wery much cowed and depressed by punishment he had received that morning "My boy," said the bishop, "who made this great and glorious earth of ours, and set the sun, moon and stars in the wonderful firmament?" The boy began to blubber. "I

did," he said, "but I won't do it again." -Western Christian Advocate.



Little Harry wanted a dog. He had the subject. He was sent to a nearby grocery. He was gone so long that Hartford. Conn .- Scientists who his mother became anxious. Stepping have just returned from an exploration to a window, she saw Harry down the of uninhabited islands of the coast of street manfully pulling at a rope, the Chile declared they found a bird whose other end of which was tled around cry tells the time of day. This creathe neck of a small dog. The pup was ture, the jakar, is like a giant guines resisting every step. hen. With its mates it screams at 9

Presently Harry triumphantly en-tered the room. "Mother," he cried. Di maragain at midnight, and an hour before subrice, its distant screams won't you let nie keep this little dog? It followed me home."

receptacle for calling cards. She seared this, dashed it violently to the floor and it shattered to a thousand itoms. Then with a low cry she shrank back shuddering, covered her face with her hands"

"You astonish me!" was all I could ZIER OUT

"I glanced at young Dulziett," went n Miss Evans "There was a strange, veiral expression on his face. He lashed off Into a quick, lively Polish nazu rka "

the lyone two blocks from the house and was turning into an intersecting street, when I chanced to look back. A man was just going up the steps of our home In a flash I recognized him as answering the description Miss Evans had given me of Dalziell I hurried back to the house I paused to take up a small revolver kept for security in the drawer of the hall rack. Them I proveded to the parison entra mes

An amazing spectacle met my view Seaterd at a little stand, her face pale but placid, her eyes dreamy and glazed was Elida. Standing before her was the stranger He held a piece of faceted crystal in one hand. On that Elida's eyes were fixed.

here?" I quavered impuisively, and the man turned to face the weapon in my rembling hand

placed a warning finger to his lip. never lowering the crystal. "For Willard Hull," was his aston-

ishing announcement in low musical "From Willard Hell!" I cried. "No-for him. Do not interrupt-fi

is a critical moment. Speak!" he added, directing the mellow insinuating Hunter Kills Cougar word at the transfixed Elids and fixing is a giande piercingty upon her. "The wall-is it east? And which

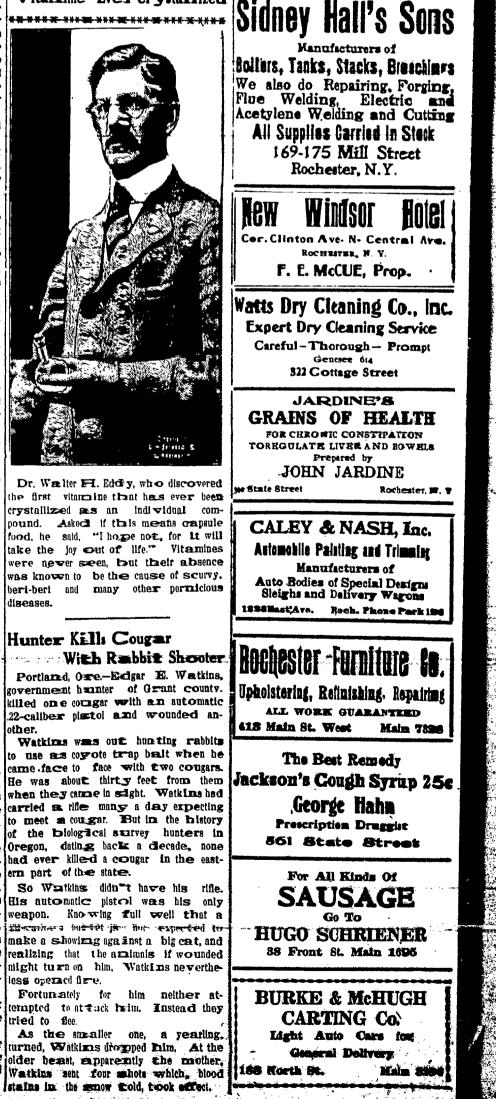
wall?" "No," came in a dreamy, faraway murmur from Elida. "Not a wall-but 22-caliber pistol and wounded ana well." other.

Watking was out hunting rabbits "Success !" gasped the stranger, and sank into the nearest chair as if ex- to use as corote trap balt when he hausted after some superhuman effort, came face to face with two cougars. In a few moments the man arose. He was about thirty feet from them He made some movements with his when they came in sight. Watkins had delicate hands toward Elida, whose carried a rife many a day expecting face renewed its usual expression. to meet a congar. But in the history Then he turned to me. of the biological survey hunters in Then he turned to me. "Miss Nettleton," he said, "I have Oregon, dating back a decade, none heard of you. I am a friend of WII- had ever killed a cougar in the eastlard Hull, who has gone to look up ern part of the state.

the hidden fortune of his dead uncle. So Watkins didn't have his rifle. He did not find it at any 'wall,' as His automatic pistol was his only many arguments with his mother on the bint was. I am credited with pos- weapon. Kno-wing full well that a willing wrenn or he power. Warmers mitter in hur expected to At least, my mind filled only with make a showing against a big cat, and honest motives, working on the pure realizing that the amimals if wounded crystal-clear mentality of this beauti- might turn on him, Watkins nevertheful young lady, has evolved a clew- less operacd fire.

well," not 'wall."" Fortunately for him neither at-It was a well, indeed-we know it tempted to at fuck heim. Instead they within a week, when Elida's fance tried to flee.

came back a rich man. As the smealler one, a yearling, And Dalziell, the strange, mystic turned, Watking fromped him. At the genius whom I at first so feared, we older beast, exparently the mother, all Love mow as a loyal, devoted Watkins sent four shots which, blood Ifriend. Istains in the senow wold, took effect.



"Who are you? What are you doing He was not in the least moved. He

take the joy out of life." Vitamines were never seen, but their absence was known to be the cause of scurvy. beri-beri and many other permicious diseases.