

A CURATIVE SERUM FOR SCARLET FEVER

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In the past, numerous investigators have sent forth claims for the discovery of the germ of scarlet fever. None of them, however, have succeeded in furnishing conclusive evidence sufficient to gain general acceptance of their claims. Most of the earlier workers succeeded in isolating from the throats of scarlet fever patients bacteria known as hemolytic streptococci. This organism was ascertained by many to be the cause of the disease. The hemolytic streptococci are chain-like cocci that have the power of breaking down the blood cells. But since it was shown that these streptococci were present in many other places besides the throats of scarlet fever patients their presence was generally regarded as that of a secondary invasion.

The streptococci have been studied serologically and are now classified into definite biological groups. This knowledge greatly substantiated the streptococcus theory and led to a renewal of earlier attempts to produce scarlet fever in animals by inoculation of a streptococcus culture. These attempts were not successful until Bochez and his co-workers discovered that if the inoculations were made in such a way as to produce a localized abscess in place of the usual widespread distribution, there followed a reaction of fever rash markedly resembling scarlet fever. Carrying this work a step further Bochez and his associates began the immunization of a horse for the preparation of a curative serum. They found that it would require several inoculations in order to produce a serum with curative properties.

Serum collected from the blood of this horse has since been tested on scarlet fever patients by injecting

minute quantities into the skin for what is known as the "blanching test" and by injecting large quantities into the muscles to note its curative effect. By the "blanching" test it has been shown that the horse serum produced the same effect as that produced by convalescent human scarlet fever serum, namely, that of causing the complete disappearance of the rash within an area of one-half to an inch in diameter. It was found, however, that if immune horse serum was first mixed with the serum of a patient in the acute stage of scarlet fever, the mixture was devoid of blanching power. This latter fact is taken to indicate that in scarlet fever, a circulatory poison is present in the blood stream, analogous to the toxin present in diphtheria, and that this poison may be neutralized by substances present in the anti serum in a similar way to the neutralization of diphtheria toxin by diphtheria antitoxin. Since this toxic substance is not found when the organism is grown artificially, it is presumed that the toxin is produced only by the growth of the streptococcus in living tissue, i. e., in the throats and adjacent tissues of scarlet fever patients and in the abscesses of the experimental animals. To determine the curative value of the serum, injections of 40 c. c. intramuscularly have been given scarlet fever cases. The cases were selected as being the most severe of hospital cases. In most of the cases the recovery was rapid and without complications.

From a public health standpoint the possibility of the development of a laboratory diagnosis presents itself as being of even greater benefit in the control of the disease than the discovery of a curative serum. With the mild character of scarlet fever as it is now occurring in this country satisfactory isolation is al-

most impossible, because of the large number of cases that escape isolation. The "blanching" test, though apparently quite reliable in cases with a definite rash, obviously can be of no service in those cases in which the rash is very scant, transitory or absent—in other words, in just those cases in which a test is most needed. Diagnosis by the taking of throat cultures on the other hand, if such a test could be made practicable should turn out to be fully as great in value as the similar test so long in use for diphtheria. At the present time, however, the process of grouping of the streptococci obtained from the throat cultures takes far too much time and

trouble to be practical for diagnosis on a large scale.

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HOME POINTERS
(From G. A. C. Home Economics Department.)

Yellow and rose are the best colors for lampshades and lampshade linings. Blue and green give an unpleasant light when used as linings.

Buff and cream are the satisfactory colors for window blinds. Dark green shades with cream interiors are good to modify brilliant light.

Tan and gray are most successful in rooms with a northern exposure. Gray must have furnishings of enough brightness to give color.

Plates are no longer used as decoration in small houses and seldom in large ones. Plate rails overcrowded with china give a room a tedious appearance and are dust

collectors.

To avoid having the ice man enter the house while filling the refrigerator, have the refrigerator placed against an outside or backporch wall so an opening may be cut in the wall opposite the ice chamber. The ice may then be placed in the refrigerator from the outside.

Porches are most attractive when furnished in shades of brown, gray, and light and dark green. Red and yellow are effective when carefully handled.

Chintzes, when of good quality, color, and design are good in any room. Silks and velours are more often used in formal rooms, however. Chintz is associated with the country home.

EXPENSIVE ROUTES

Grubb: "What's this I hear about trouble between Biggs and his wife?"

Smaker: "The usual story. She's crazy about dry goods and he's crazy about wet goods."

A fleshy lady asked if she could go into the park through the gate. I told her that I thought so, for I saw a load of hay go through this morning. I wonder why she don't speak to me now when we meet.

RADIO HINTS

A crystal is a better detector than a tube. That is why crystal detectors are used in most reflex sets and in many other radio frequency sets. A tube is valuable because you get regeneration and amplification at the same time you get detection, which means a louder signal, but the tube is beaten by the crystal when it comes to quality.

Keep the solution of your storage battery at a level of 1/4 inch above the plates, otherwise the plates will corrode and buckle, ruining the cell.

All aerial for a crystal set should be made long as the crystal has no amplifying power and only picks up

energy imposed on it, not having a local battery to assist it. About 150 feet is best.

A one-tube regenerating set will bring in all the stations that a three-tube set will, the only advantage of a three-tube set being that it will operate a loud speaker. An audio frequency amplifier merely amplifies the signal after the detector has made it audible.

Three dry cells will have to be wired in series for use with the UV-199 and C-209 tubes, and if more cells are added they will have to be wired in parallel to the first three. In the first case, the series



connection will give a voltage of 4 1/2 volts and the amperage of one cell, while the parallel connection added to this will still retain the 4 1/2 volts, but will raise the amperage of each cell added to it.

Don't let your set squeal. Use a copper shield back of the condenser to the ground post. The shield should not touch the condenser shaft, should be square in shape, with an arm running to the ground and shielded to the panel.

This Week



By Arthur Brisbane

Florida—Great Empire to Be.
Two Political Questions.
Deep Plowing Pays.
Dress Up, Girls, Dress Up.

The stock of the Atlantic Coast Line in Florida reaches a "new high." Big profits are made, and the stockholders exult. If Florida interests you, or railroad profits, find out what S. Davies Warfield, president of the Seaboard Air Line, is doing with his new railroad in Florida. When he finishes the short cut from the West Coast of Florida across to Palm Beach and other points, establishing direct connection between New York and Southeast Florida, over his own rails, there will be an active flight for business and profits.

There will be plenty of business for both roads, however. No imagination can foresee what the prosperity of Florida is to be.

That State, which, as the Jacksonville Journal tells you, Jefferson could once have bought for five cents an acre, and ultimately did buy for fifteen cents an acre, is not one day to be in several different ways the greatest State in the Union.

Two questions that interest politicians are these:
Can the Democrats be persuaded to give up the rule that compels a man to get two-thirds of all the delegates before he can be nominated?

And will the Democrats put in their national platform a plank denouncing the Ku Klux Klan, and thus outlawing many Southern States on whom the Democrats must depend to win?

It is a delicate question and may be solved by some vague generalization concerning all secret societies.

In Baltimore, a farmer named Meyer is said to be plowing up a good wheat field, with a subsoil plow, having been told there is gold in his land. He won't find gold, but if he plows deeply enough, and plows his wheat under, he will improve his soil, and increase his farm's value.

In the second part of Faust, Goethe tells of the farmer plowing deep because under the Emperor's law he was allowed to keep all buried treasure, "turned over by the plow." That was probably an ingenious scheme to make the farmer plow deeper, make his soil richer, and thus be able to pay heavier taxes.

The State of Kentucky killed three men by electricity, two white, one colored, one white man seventy years old. Forty-six minutes after they began walking to the death chair, one after the other, all were dead. Only one spoke, as he was strapped into the chair. It was Frank Thomas, white man, who said, as the light was shut out from his eyes forever by the electrocution mask, "Good night, I'm going home."

Wouldn't it be interesting to know where, how, in what home those three men will awake—if at all. Will the black man still be black, when he comes to and dimly remembers he died? Will the gray-haired murderer still be seventy years old, or begin again as a new baby? Interesting questions.

College young ladies, of the Young Women's Christian Association, tell working girls to dress "plainly and demurely" for their souls' sake and to impress possible husbands with their good qualities. Sensible Helen Gwynne, retiring president of the Y. W. C. A., who in a factory worker, and has presided over an assembly of 30,000 factory girls, tells these girls to dress as conspicuously as they can, "even flashily."

The rich girl, says Miss Gwynne, can afford to dress plainly. That sets her off in her luxurious surroundings. But the working girl, in her plain home, must dress as well as she can, by way of contrast with her surroundings, if she wants to marry. Sensible Miss Gwynne.

An automobile smash-up with Jesse James hurt reveals the fact that the son of the great highwayman now works as a patrol to prevent highwaymen holding up automobiles.

Everywhere you see verified Fourier's saying "Contrast in character between father and son."

Poem by Uncle John

The crisis in an industrial like digging coal, you know—gives rise to apprehensions of the winter, with its snow, and the crisis in the vast supply, or grain that makes our bread, keeps the average consumer in a constant state of dread. . . . And—it sends the prices skyward, every time the crisis frowns,—when the life preserver's out of reach, of course the wreckin' crew is patchin' up more economic laws, the panic devil tears us with his unrelenting' claws. . . . I have watched the operation through so many gloomy days, that I harbor my suspicions of the fellow that it pays.

There's a reason, at the bottom of each economic mess,—and when a trouble's chronic, it is hard to cure I guess. . . . Ain't it time for changin' doctors—when the treatment seems to fail? Can small-pox treat itself without the drugs a-growin' stale? We'll never find the remedy in self-inflicted laws, while the pestilence is spreadin' under treatment by its cause!



Jessie's Job

BE SURE YOU'RE RIGHT THEN GO AHEAD - BUT ALSO BE SURE YOU'RE WRONG BEFORE YOU STOP!



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