

Salt Lake's Young Edson And His Inventions

TEN years ago a little boy of 13 years, then a student in the sixth grade at the Seventh ward school, saw a doctor using an electric battery to cure his mother of rheumatism. He was studying under Principal A. S. Martin, who is now in charge of the Grant school, and perhaps because he didn't enjoy his lessons or perhaps because electricity was his natural bent, he became interested in the doctor's battery, and set about to duplicate it.

In the 16 years that have passed since then, Charles P. Madsen—now known in the laboratories of the university as "Carley"—has worked away by himself trying to solve the secrets of the mystic fluid that is coming to play so important a part in general affairs. Now he has announcements to make.

MUSIC TO ORDER.

One of them is that by next fall, any person in Salt Lake can place a rod up from the roof of his home, and pull down through it musical tunes which he can hear in his parlor with exactly the force and volume in which they are played at any place designated.

Another is that the rasping, weakened and unnatural tones of the phonograph are unnecessary, and that he can produce a phonograph without a horn, which will reproduce a tune in exactly its tone shades, its volume and its strength, and that he can reproduce it in an organ theater while it is being played in a Salt Lake theater, either with a wireless or a wire device forming the connections.

Still another is that the day of the kitchen range is about passing. This feature of his announcements already has a commercial aspect, for a com-

pany located in a south West Temple building is shipping electric frying pans and electric heaters west to Portland and east to Denver, and has hopes of a business extending to national scope.

NEW SYSTEM OF HEATING.

The most interesting thing about the frying pans to the business house handling them is that they promise to sell. To Mr. Madsen interest centers in the fact that he has developed a new system of electric heating that can be applied to any device, and that so far is his own secret which he is having fully protected by patents before he lets it get out. Once before he worked for years on acetylene gas, and the results of his work went to the benefit of a Cleveland concern which is now manufacturing his device after sealing them without credit to him. The electric device, he shows you, heats in about half the time consumed by the electric heating apparatus already on the market. In explaining the reason for that he points out that there is no mica insulation in his, that the coils for heating lie flat against the object to be heated, and that this is the important thing to him—the coil is held in place by a cement made of Utah material that he picks up in a gunny sack near his home that hardens to the brittleness of flint, and resists even the highest temperature. "Heat will not travel," he says. "The ordinary flat iron tries to make it travel, and consequently loses much current and heat energy. This cement, holding the single strand wire coil solidly in place, eliminates the need for most of the current, and gives the instantaneous heat."

YEARS OF EFFORT.

The sale of Mr. Madsen's frying pans gives the young inventor a chance to live from his work, and the

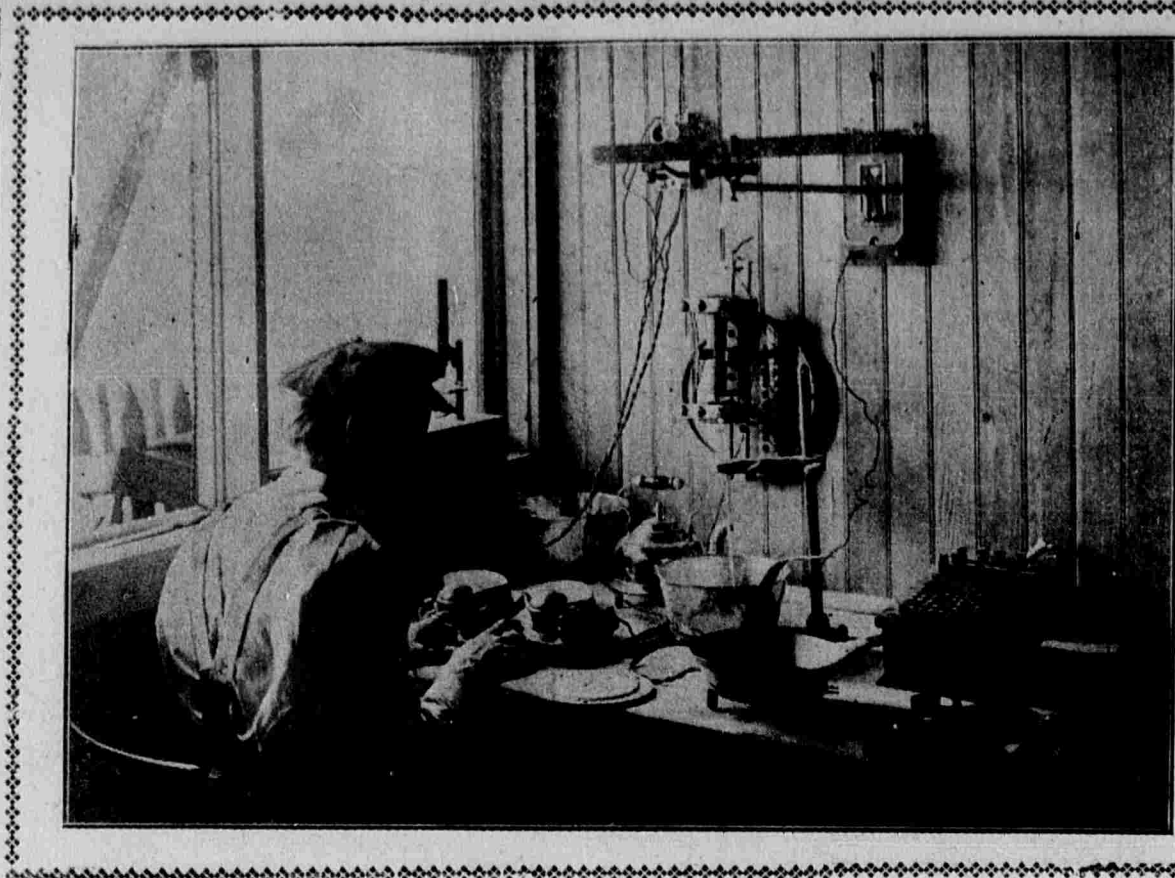


Photo by Johnson.

MR. MADSEN AT WORK.

In His Laboratory on West Temple He is Trying to Make a Phonograph to Operate Without a Horn, a new Kind of Arc Light, and a Heating Plate that is Already a Demonstrated Commercial Success.

story of struggle and effort through the years leading to this point in his career make an interesting narrative. The meaning of commercial success to him is that he can work all his time now at electrical problems, and maybe some day can have a laboratory. The device which he hopes will eliminate the weakness and rasping quality of phonographs he made during a Christmas vacation in the University of Utah laboratory. All of his electrical experiments have been made in his spare time after working perhaps at putting in house bells during the day, or assisting a laboratory technician at the university, or at Stanford, where he succeeded in getting in two months of work.

BUILT A LABORATORY.

Since the income began to arrive from his factory, he has built a little laboratory in the rear of his home, and there is now at work on the problem of developing a substitute for the porcelain insulation caps, used in so much electrical work. "Porcelain is too brittle," he says, "and fused pieces whenever lightning strikes wires where it is used. I am confident I can develop from the cement I am using on these pans, a material that can be molded instead of cast or saved, that will work perfectly, and cost very little compared to porcelain. In some instances it can even be painted on and left to harden."

TWO PERIODS OF STUDY.

Mr. Madsen's studies may be divided into two periods, one in which he struggled along with his own theories, and failed, and another in which he sought the learning of those who had preceded him in electrical experiment, and began to win.

After making his battery, with induction coils and all, such as the doctor used on his mother, he started to do electrical rasping and to install door bells. With this work he kept himself in high school for two years, and then he began to seek work repairing electrical appliances in the offices of physicians, for these devices interested him most, and he wanted a chance to study them.

DEVICE IN THEATER.

Unable to continue in high school, young Madsen turned his attention to practical electricity, and became electrician at the Salt Lake theater. This gave him a laboratory in which he learned much, and when the great Iriquois fire occurred in Chicago, he told the management he could make a device that would prevent such panics as occurred there on account of the sudden darkness following the burning out of the fuse boxes by the flames on the stage.

INSTALLED SWITCH BOX.

The management told him to try, and even sent him east to inspect the new electric system being installed as a result of the fire. When he returned he rewired the Salt Lake theater, and installed an elaborate switch box which he declares will keep the electric lights burning for half an hour after the hottest kind of a fire breaks out on the stage. The principle was to encase

all fuses in a big steel vault, completely insulated, with switches operating them brought forward through a marble slab with a dead air space behind it to prevent the transmission of heat to the fuses.

WORKED ON CATALINA.

Leaving the theater in 1905, Mr. Madsen, now thoroughly disheartened through the failure of the acetylene gas business in which he had sought to establish himself, tried to get connected with the big electric laboratories of the world. Los Angeles offered an opportunity at the headquarters of the Pacific Coast Wireless Telegraph company. He worked here for a time and was among the electricians who built the wireless station on Santa Catalina island.

SOME INVENTIONS.

It was his work here that started him back to the schools, for he found to progress that he had to read up the original experiments of the greater electrical things you should get an idea of knowledge of calculus and trigonometry. He came back to the University of Utah, secured a position as assistant to Dr. Hartman in the department of physics, and while he did laboratory work for him, he studied mathematics. Meanwhile his work in the wireless had given him an idea on phonographs and he set about in a

Christmas vacation at the end of 1905 to build an aluminum disc which would reproduce sound like a phonograph, only instead of depending on a needle and the production of sound directly from a plate, he depended on creating electrical waves, which would be transmitted to the sounding board by means of currents from electric batteries. He now has the device completed, and declares that he can fill the entire Salt Lake theater with music from it by merely increasing the amount of current, and that on account of having no horn, it has no less of tone qualities or distortion of them.

WENT TO STANFORD.

In the fall of 1906 Mr. Madsen found an opportunity to go to Stanford. He registered there, and in two months was grasping the Stanford manner of attack on scientific study. Then his father died. This brought him home in the middle of his first semester, with the problem of providing for his family before him, and a feeling that he never could get ahead again at his chosen field. Dr. Merrill, however, opened to him the use of the university laboratories, and gave him an assistantship in his department.

"I am especially grateful to the university," he says, "for its help. C. S. Burton has taken much interest in my work, and helped me a great deal. The university professors have done the same, and to them I owe all that I have received in the way of practical help. If things keep on next year as good as they have begun this year, I hope to turn all of these ideas I now have into practical electrical use, and amenable to workers. To do this I need electric light, just the size of the small lights you use now, but white instead of yellow, and operating like an arc instead of like an incandescent light.

A light of this kind will cost half as much as an incandescent does, and will be of twice the efficiency." The little laboratory which is the center of so much work in electricity and of so many hopes, is located at Mr. Madsen's home, and it has been built since Jan. 1 of this year. Among the interesting things that indicate the nature of his work is a stack of a dozen fry pans, burned up in efforts to perfect the heating coil that he uses in them.

PRESIDENT WITHOUT SALARY.

F. A. Heinze Devotes Time to Mercantile National and Receives No Pay.

F. Augustus Heinze, former copper warrior of Montana and now president of the Mercantile National bank, No. 135 Broadway, is probably the only bank president in the United States who serves without salary. Probably it is because Mr. Heinze is not an experienced bank official that he does not draw a salary of even a nominal sum, but the fact is that he is learning the banking business rapidly. He devotes considerable time to affairs of the Mercantile National, and as a rule can be found there between 10 o'clock and 2. The vice president, Miles M. O'Brien, who takes charge of the details of the business, in reality draws the salary of the president of the institution. His salary is \$25,000 a year. Mr. Heinze is, however, one of the largest stockholders in the Mercantile National.

Try the Vienna Walnut Bread. Fresh every day. Ask your grocer for it.



Photo by Johnson.

CHARLES P. MADSEN.

A Young Salt Lake Electrician Whose Inventions Promise to Become Important.

FIRELESS COOKING.

If there is anything that the housewife dreams about in the summer time it is a fireless cooker, and that is just what the department of agriculture is introducing to the farming community in one of its bulletins. Of course, it sounds almost too good to be true, but the department says that experiments have been made, and the fireless cooker has delivered the goods. The theory is that many vegetables, especially those that are boiled, are better when cooked for a long time at a low temperature than they are cooked for a short time at a high temperature. The theory is that many vegetables, especially those that are boiled, are better when cooked for a long time at a low temperature than they are cooked for a short time at a high temperature.

newspapers, with a close fitting nest that will hold a tightly covered bucket. The bucket contains a chicken or a piece of meat or anything else that is to be cooked. The bucket is placed on a fire, its contents brought to a boil, and then the bucket is tightly covered, dropped into its nest in the hay cooker and covered up. It is allowed to stay there, without any other source of heat, two or three times as long as would be ordinarily required. The heat of the boiling water is retained by the hay filled box, and the cooking is done at a minimum expenditure of fuel and labor.

The bulletin says that the scheme of slow cooking is an old one, Count Rumford having devised a cooking box of much the same sort many years ago. It has also been found that eggs placed in boiling water, covered and allowed to stand were perfectly cooked by the time they were cool enough to eat.

The practical application of the cooker to family economy is in the preparation of meats, vegetables, macaroni and cereals that are the better for long slow cooking. The water may be brought to a boil at night and the food placed in the hay cooker, where it will be hot and ready for breakfast in the morning. Soup made in the same way

in the early morning is in prime condition for dinner. In fact, almost anything that is wanted for dinner can be cooked in the morning and will be ready by the time dinner is wanted, without keeping up the fire at all. A single burner of an oil or gas stove that will boil the water will suffice for preparing a whole meal, and it can be set away in the hay box and allowed to cook itself, without heating up the diningroom or kitchen.

If several receptacles are to be used at the same time for meat and different sorts of vegetables more than one bucket needs to be used. In fact, an old-fashioned ice chest that will hold three or four buckets in rows can be divided off into nests, tightly packed with felt or paper, and with a thick felt covering inside the lid. The buckets must have light-fitting tin covers. With such an arrangement it is said that a whole meal can be easily and economically prepared with one boiling of water and without any smell or heat.

The German government has been experimenting with similar cookers for the benefit of poor families having to economize in their fuel bills. The American army has also been trying them, not from motives of economy, but for convenience. It has been found that beans, vegetables and anything else that the army wants to cook can be loaded into the fireless cookers when camp is broken in the morning, and these cookers can be hauled by the transport wagons all day and a hot, well cooked dinner produced, ready to serve, when camp is made in the evening. The commissary general says he has found that the fireless cookers work excellently for army purposes, and there seems no particular reason why they should not work even better in civil life.

Something of the same plan was advocated a number of years ago by Edward Atkinson, of anti-imperial fame, who produced the Aladdin cooker, that he said at the time would be used to revolutionize housekeeping all over the world. His cooker worked on the same slow-cooking principle, but instead of depending on boiling water for its heat, it was placed over an ordinary lamp. The cooker was the same sort of an insulated box with an inner compartment of tin sheet metal and an air space between.

There was a hole in the bottom for the top of the lamp chimney, and another opening at the top for the draft. Cooking was carried on in the box as in an ordinary oven, and all sorts of things from boiled onions to rice puddings could be cooked in the oven at the same time without any mingling of flavors.

Mr. Atkinson gave many demonstrations of his cooker in the larger cities and achieved some remarkable results. He required two or three times as long to cook anything in his insulated box as one required on a stove, but he would start it going in the afternoon in a large hall, and after lecturing would open the oven at the time wanted for his audience, all sort of meats, vegetables and puddings, and even bread, being cooked simply by the heat of an ordinary reading lamp.

The cooking box rested on thin iron legs over the top of the lamp, and Mr. Atkinson pointed out that it did not interfere with the use of the lamp for illuminating purposes, and that there was no smell. The wife could put on the breakfast in the evening and the family could sit around and read and then go to bed, leaving the lamp burning all night, awakening in the morning to find their meal ready cooked.

It was a beautiful scheme, and a good many of the cookers were sold, and some of them at least did all that was claimed for them. But for some reason they never secured any vogue and the slow cooking scheme languished. Whether the agricultural department's fireless cooker will have any better luck is a question. But there is no question at all that it will work.



COL. CHAS. G. PLUMMER.

Mr. Charles G. Plummer is the colonel of the First Regiment U. N. G., a responsible position which he has held since Mar. 7 last, succeeding Col. H. M. Lund transferred to the governor's staff as assistant adjutant general. Col. Plummer has proved a popular and effective regimental commander, and has taken hold of his duties with an enthusiasm that is an assurance of success. He was a lieutenant in the First Illinois Infantry in Chicago early in the eighties, and was instructor in military tactics at Highland Park school. Then for four years, he was in the U. S. life saving service. Col. Plummer is well posted in the military knowledge essential to success as a regimental commander, and is laboring earnestly for the advancement of the guard.

A FURTHER CUT OF 10 PER CENT

In the cost prices on the remainder of our stock

in order that we may close out everything by Aug. 1st

Daynes-Romney Music Co.

25 and 27 EAST FIRST SOUTH STREET

MUST CLOSE OUT AUG. 1ST

AND LEAVE THE STATE.

We will lease any of our Slot Machines to any reliable business place on a percentage basis.

ELECTRIC BANJO, SPRING PIANOETTE, ELECTRIC PIANO, REGINA SUBLIMA, Both Electric and Spring.

PIANOS & ORGANS

\$135 to \$300.

\$65 to \$90.

Victor Talking Machine Cabinets and Carrying Cases from 95c to \$18.00.

Needles 30c per thousand. Large Flower Horn, hand painted \$2.00. Brass Horns 50c

DAYNES-ROMNEY MUSIC CO.

25-27 E. First South Street.