DESERET EVENING NEWS SATURDAY MAY 15 1909

Utah Inventor Perfects The Multiphone

recently, has been protected by letters patent. Compressed air supplies the energy for producing the intensified sound. delicate flow of air from an air chamber into an amplifying horn, and means for operating the valve in accordance with sound wave vibrations. The result is that the compressed air issues from the horn in pulses correspondfing to the original sound waves. There is thus produced a copy of the original sound, the intensity being determined by the pressure of the air, size of valve, etc.

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In the figure, 1, represents a receiv-ng chamber from which the air passes brough the double valve into the horn 3. In the walls 8, 8, which separate

N interesting and useful device for inareasing the loudness of sound, invented by Nathaniel Baldwin, of Heber City, Utah, thy has been protected by letters t. Compressed air supplies the y for producing the intensified The instrument comprises a te valve which infercepts the of air from an air chamber into nplifying horn, and means for ing the valve in accordance sound wave vibrations. The re-t the horn in pulses correspondslightest impulses will operate the

valves. When the valve rod is connected to a diaphragm, as in the figure, and sound beats upon the diaphragm, the valves vibrate in accordance with the sound waves, and a much louder sound is given out from the horn. Used in this way, spoken words have been dis-tinctly heard a mile away, but the range of the instrument is not limited to one mile, nor to five miles, as the sound from one valve may be used to operate the diaphragm of a second alves. sound from one valve may be used to operate the diaphragm of a second larger valve and the loudness again multiplied. Thus the device is useful in speaking, singing, or playing music at long range or to very large au-diences; and by using a secondary valve, spoken words may be used for locomotive signals, fire alarms, etc. Instead of a diaphragm, the valve Instead of a diaphragin, the valve rod may be connected to the stylus of a phonograph, a shown in the lower part of the figure. The valves then operate in accordance with the record and the instrument serves as a repro-ducer. With this reproducer, the pho-nograph plays with surprising purity

of reproduction, and louder than a brass band. Of course the loudness can be reduced to the desired degree by placing a suitable shutter in the horn. The valve rod may be connected to the diaphragm or other armature of a telephonic magnet, and the instrument becomes a receiver of high power. This is the most difficult application of the device, as the vibrations of the telephone receiver are very feeble, but the inventor has succeeded in making it audible at a distance of 600 feet. Means are thus provided for a man to sit in bip office or at his home and deliver a kecture or render a musical selection to an audience in a distant city.

WON BY REFRAINING FROM BLOWING OWN HORN

Out in the middle west there is luge manufacturing company, the argest in the world in that line, it is aid, but it has numerous enterprising competitors, all of whom advertise lib-

Infiger in the word in the max interprising said, but it here numerous enterprising competitors, all of whom advertise liberally.
But this company havertises, too, and for years its appropriation has been made on an unusual plan. The rule generally with such expenditures is to set aside a stated sum each year -sometimes an arbitrary amount, sometimes a marbitrary amount, sometimes a percentage of profits for the last tweivementh.
This concern, however, recognizes that publicity money is to be spent to influence next year's business—not last year's. So the gross amount of next year's trade is estimated as closely as possible, and then a certain percentage of that constitutes the advertising appropriation.
Before the depression of 1907-08 developed, says the Circle, this company's busines had grown at such a rate that the annual percentage yielded more mongy than could be spent to advantage along the established lines to the house.
"Now, had we better reduce our percentage?" asked the directors. "Or shall we seek new channels for spending the surplus of the same percentage?. If so, what channels are best?" They wanted information—honest advice.

writing, English, Penmanship, Com-mercial Arithmetic and kindred subvice. A dozen questions calculated to bring it out were drawn up and submitted to jects. it out were drawn up and submitted to every advertising firm in the country. catalogue.

Some did not give any opinion. Most of them replied, however, and usually at considerable length. Among the latter was just one, it is said, that gave full replies to the ques-tions and said nothing about itself. Other advertising firms saw an oppor-tunity to set profitable new business. They therefore gave full particulars about themselves, and in some cases sent salesmen to see the manufactur-ing concern's directors. A few were so intent on explaining who they were that they neglected the questions. In the end it was decided to spend the surplus, not reduce the percentage. The firm that said nothing about itself got the account.

FOR SALE.

Kitchen cabinet and range, almost new. Must be sold quick. Phone, Bell 1100-y, or call 60 So. 1st West.

RUMMAGE SALE. By Bhai Israel Auxiliary Society on Thursday, May 12, at 10 a. in, at Unity Hall (140 S. Second E2st.)

LOGAN EXCURSION.

Saturday, May 15th, via Oregon Short Line for STATE TRACK MEET. Round trip \$2.50. Special train leaving Sait Lake at \$350 a. m., will return, Leaving Logan 8:30 p. m.

Flower and Garden Seed Bailey & Sons Co., 63 East 2nd So.

Go to the All Star Minstrel Show May 17th, Salt Lake Theater,

SUMMER SCHOOL The L. D. S. Business College con-

ducts a ten weeks' summer school, com-mencing May 31, and continuing to Aug. 6. Special instruction in Civil Service, Bookkeeping, Shorthand, Type-English. Penmanship, Com-

Terms, ten dollars. Send for



SPRINGVILLE HIGH SCHOOL

of nearly \$23,000, without the cost of the ground or furniture. The building was to have been finished in Janua but delays occurred through plans being changed and an early winter. The structure is modern in every partilar, and one of which the citizens of Springvills are proud. The opening of the building for school work on M 3, was celebrated by the ringing of the Washington school bell early in the morning and the parading of the stree by the school band. The exercises at the building later in the morning were participated in by the school bas

The accompanying cut shows a view of the Springville High school, which was recently completed at a and a number of citizens, as well as the students and teachers.

