

# OGDEN DEPARTMENT

Manager - E. A. Larkin.  
Telephone 127-2.

Circulator - M. H. Thomas.  
511 Grant Ave. Telephone 127-2.

Advertisements for the Daily, Saturday and Semi-Weekly News accepted on the same terms as at the Salt Lake office.

OGDEN, UTAH, JULY 16, 1904.

## SALOON MAN SHOT THROUGH LUNGS.

James Bothner Takes Revenge on Pat Smythe for Supposed Grievances.

## ORATORICAL RECITAL JULY 21

Biggest Gets Divorce—Harry Moss Unable to Raise Reduced Ball—Briefs and Personals.

Pat Smyth, proprietor of the Royal Exchange saloon, on Twenty-fifth street, was shot about 5 o'clock last night, the bullet entered just below the right breast and passed through his body, coming out just below the shoulder blade. Smyth's assailant was James Bothner, a laborer, who has been employed on the Ogden Lucin cut-off.

The shooting affray took place in Smyth's saloon, with a number of men in the place. Bothner entered the saloon about 5 o'clock and without any warning pulled a .38 caliber revolver and shot Smyth, but before he could fire again bystanders interfered, who took the pistol from him and telephoned for the police. Capt. Brown and Detective Bailey were soon on the scene. Bothner was standing in the doorway of the saloon with another man, who held the gun he had used, and made no resistance when the officers arrived and placed him under arrest. When taken to the police station, Bothner was replied with an oath, "Yes, I shot to kill. He robbed me of several hundred dollars. He doped me and got my money."

When seen at the jail last evening by the "News" representative, Bothner gave out the following statement: "Last March he came to Ogden with eight identification checks each worth about \$47, that he placed in the saloon, but when he called for them Smyth refused to give them up. Bothner then employed Alty Joseph, who succeeded in getting back the checks on the deposit with Smyth at his saloon, but when he called for them Smyth refused to give them up. Bothner then employed Alty Joseph, who succeeded in getting back the checks on the deposit with Smyth at his saloon, but when he called for them Smyth refused to give them up."

Bothner was placed in a closed carriage and taken to his home where Mrs. Dickson and Conroy attended him. They thought that the bullet had passed through his right lung, making him very weak, but the physicians probed and found it was not so. Bothner was very quiet and said little about his case. He said he was a laborer and was working on the Lucin cut-off. He said he was a laborer and was working on the Lucin cut-off.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

Bothner is in a critical condition but his physicians stated this morning that he thought with proper treatment would pull through all right. James Bothner, the man who shot Smyth, has been charged with murder in the first degree.

Bothner has no family. He is 35 years of age and has worked around Ogden in the railroad yards for a number of years and has a number of friends.

**STOP**  
**HUSLER'S**  
**FLOUR**  
Is the flour that makes  
**GOOD BREAD.**  
**LOGAN.**

The agent of the Deseret News in Logan is C. B. Robbins, 19 North Main St., to whom all payments of accounts should be made. Daily News 75 cents per month, Saturday and Semi-Weekly News \$2.50 per year. Complaints, changes of address, orders for advertisements and church works for given prompt attention.

**HELD TO DISTRICT COURT.**  
**Bankhead-Rock Nuptials—Dispute Over Water—Educational Lecture.**  
Special Correspondence.  
Logan, Cache Co., July 14.—The examination of John Andrews charged with assault, was concluded in Justice Smith's court today and defendant was placed under \$1,000 bonds pending trial in the district court.

**DISPUTE OVER WATER.**  
Chris Beritson and Julius Tolson had a slight misunderstanding today over the right to use an irrigating stream. In the wrangle Beritson made use of a piece of board to enforce his argument, as a result Justice Cardon assessed him \$5 and costs.

**BANKHEAD-ROCK NUPTIALS.**  
Frank Rock and Nellie Bankhead of Avon came to town today with matrimonial intent. Clerk Larson issued the permit, performed the ceremony and sent the young couple away happy.

**TEACHERS ELECTED.**  
A number of new teachers were elected at last night's meeting of the board of education. They are Millicent Bingham, as teacher of German in the high school, Charles E. Manning, Misses Saurman, Mary and Edna, and Misses Maude Nelsbitt and Lois Peirce.

**BRIEFS AND PERSONALS.**  
Prof. and Mrs. W. M. McKendrick are home again, after a 10-days' sojourn at Provo.

**PROVO.**  
The Daily News is delivered by carrier in Provo early every evening (Sundays excepted) for 75 cents per month. All complaints, requests for changes of address and payments of accounts should be made to H. Dugdale, 312 West North St., Provo. Advertisements and orders for church works also received.

**POSTMASTERS' CONVENTION.**  
Wedding Bells—Delicate Surgical Operations—News Briefs.

**Special Correspondence.**  
Provo, Utah Co., July 16.—The first annual convention of the Utah State Postmasters' association will be held in this city July 20 and 21. A large number of delegates from all parts of the state are expected to be in attendance, and an enjoyable social time, as well as a profitable discussion of the troubles of the country postmaster, is expected.

**WEDDING BELLS.**  
A marriage license has been issued to Charles E. Davidson, 28, of American Fork, and Clara A. Bramble, 23, of A. Pike.

**GARDEN CITY NOTES.**  
The quarterly stake conference of the Utah stake opened this morning and will continue in session today.

**SUIT IN EJECTMENT.**  
An action has been filed in the Second District court by Hugo L. White against J. Foster to get possession of certain

**Murray Department.**  
The News is delivered in Murray and vicinity from the branch office every night. J. S. Barlow, agent. Orders for Church Works and advertisements received.

## MURRAY NEWS.

The death of Mrs. Warner of Bingham Junction occurred at the Murray hospital Saturday last.

Mr. James H. Gilbert and Miss Louisa Wright were united in the bonds of matrimony at the residence of the groom's parents, Mr. and Mrs. James Gilbert, Thursday last. After the ceremony a grand reception was given.

The Sandy baseball team defeated the machinist team of Murray Saturday afternoon.

Mr. Orson Dyer of Gilbert's Mercantile Co. and Miss Britt of Z. C. M. I. were married last week.

A large celebration is planned for Pioneer day, to take place at Hill's Park.

Mr. Robert Hoyer was treated to a pleasant surprise Thursday evening, the first anniversary of his birthday.

The Highland Boy people are preparing for an outing at Lagoona.

Mrs. Nellie E. Olsen, daughter of Dr. Olsen, has returned from a trip to Juab county.

Mrs. Orle Baker and family are visiting her parents, Mr. and Mrs. William Atwood.

Mr. Hunter and sister left for their home in Tennessee last week.

Geo. Tingley, manager of the Hub, left for the east Tuesday to purchase goods.

The Murray hospital management has received the services of a professional nurse who is a graduate of one of the Philadelphia colleges.

A Salt Lake man lost a purse containing \$400 last week on a Murray car.

Mrs. White, the milliner, will leave in a few days for one month's vacation in the country.

Miss Birdie Olsen, who had typhoid fever in Sacramento, Cal., is now at home in Murray.

W. H. Boundy of Nevada has been visiting his sister, Mrs. Draper.

Robert Glase, a student of the Rush Medical college, Chicago, is spending his summer vacation at his home in Murray.

## WHEN IN MURRAY

Call at The Palace for McDonald's Chocolates and Specialties.  
We make a specialty of supplying ice cream and candies for parties and socials. All orders promptly filled.  
GEORGE BROCKBANK, Prop.

## Why? Do Travelers Stop at "The Beck."

BECAUSE.  
It is the only up-to-date hotel in Murray. Hot and cold baths in connection.  
MRS. M. E. GRAHAM, Prop.

## FRED. WACH.

Hardware, Fishing Tackle, Notions, Ammunition, Etc.  
"WAVERY" BLOCK, Murray, Utah.  
Office rooms for rent in the new "Wavery" Block, at reasonable rates, to desirable tenants.

## TAILOR SHOP.

JOHN P. WRIGHT, MANAGER.  
The oldest reliable tailor of Murray. You know him. Clothes cleaned and pressed.

## DAVID M. HAIGH, LAWYER.

City Attorney. Office, Waverly Bldg., Murray.

## MURRAY'S NEW SHOE SHOP.

All Kinds of Repairing Neatly Done.  
H. NILSEN, Murray Street, Murray.

## HELD IN RESERVE

Chicest Lots in Murray City.  
We will build your house and furnish ground, on easy payments.

## THE PROBLEMS OF IRRIGATION.

In the July issue of the Irrigation Age appears the first of a series of articles by Prof. John A. Wight, director of the Utah Agricultural Experiment Station, on the irrigation investigations of that station. This article is of special interest to all western farmers, as showing the numerous and intricate problems that confront the irrigation farmer. The article is a fitting introduction to Utah Experiment Station bulletins, Nos. 49 and 58, on "The Right Way to Irrigate," which every Utah farmer should read and study. Dr. Wight says:

**THE PROBLEMS OF IRRIGATION.**  
To many who have given this subject little thought, it seems strange that anything needs to be discovered about irrigation. They say, "If we have good soil and the water in the right position and the right kind of seed, all that needs to be done is to let the water flow over the ground and nature does the rest." In view of the neglect which the art of irrigation has suffered at the hands of scientific investigators, such a reply is only to be expected, yet it is an emphatic fact that the problems that irrigation offers for solution are very numerous and most intricate in their nature.

Irrigation problems may be grouped into three great classes:  
First, The great problems pertaining to the storing of the mountain waters in large reservoirs, to be led to the farms during the growing season when the plants most require moisture. These problems are almost wholly of an engineering nature, though some of them concern themselves directly with questions regarding the maintenance of water of the forest and range growth upon the mountains.

Second, Following the building of reservoirs, is the construction of the canals through which water may be carried to the farms. Here again numerous problems are involved, but these are also almost exclusively of an engineering nature.

Third, The farmer who receives water from the canal to be applied upon his farm also finds himself confronted by numerous problems of a vital nature, so far as the profitability of his operations is concerned. These problems are, in complexity and difficulty of solution, no whit behind those of the first two classes.

The problems of the first two divisions are much better understood than those of the third. This is due largely to the fact that dams, reservoirs and canals have been built in all countries and in all ages for purposes other than those involved in the art of irrigation.

**SOME SOIL PROBLEMS OF IRRIGATION.**  
It is to the problems that confront the farmer in the actual application of water on the farm that the investigations undertaken by the Utah Experiment Station in 1903 have been devoted. In the experiments it has been clearly kept in mind that, in an arid region, the land itself has little value unless accompanied by a water right; and, moreover, that the amount of available water, even when all possible reservoirs shall fraction of the arable reservoirs shall have been built, will be sufficient to cover only a small fraction of the arable land. Water has been studied, therefore, in its relation to both soils and crops.

The water applied to different soils—sandy, loamy, clayey and calcareous—has been followed in its downward movement and it has been shown that by proper precautions drainage may be avoided and the danger of forming alkali in the lower lands diminished or altogether eliminated. The lateral movement of water has likewise been investigated to determine to what extent the water applied to a field disappears by the lateral flow of soil moisture. The upward movement of soil after an irrigation has been traced, with reference to the nature of soils found in the arid regions, the total moisture in the soil and the kind of crop growing on the soil. It has been found that the rate of loss of water from bare soils depends upon the nature of the soil, the depth of the soil, the hardpan or gravel bottom, the percentage of moisture in the soil, the meteorological factors, including temperature, sunshine and showers, the time after irrigation, the condition of the top soil, and the method of irrigation.

The rate of loss from soil on which crops are growing has been found to depend upon the same factors, and in addition upon the kind of crop grown and the age of the crop. In studying all these conditions it has been found that there is a method of treatment which is better than all others in the conservation of soil moisture.

The relations of soil fertility to irrigation have also been studied with reference to the composition of the irrigation water and the nature of the soil. The addition of various natural and commercial fertilizers and artificial drainage. The results of this branch of the work have also been very interesting in showing that there is a mutual dependence between soil fertility and use of water by plants. In connection with the question of soil fertility, the reclamation of alkali lands by means of underdrainage has been investigated briefly, with the result that it seems probable that alkali lands may be reclaimed by underdrainage and salt, by proper methods of irrigation, they need no longer be subjected to alkali conditions.

The conservation of the moisture, already in the soil, has been studied with reference to the sowing of the top soil, the addition or removal of soluble salts, the quantity of water to be added at each irrigation, subirrigation, standing water near the surface, and the crops. The conservation of the moisture has been led to conclusions which, if applied by the farmer, may lead to the saving of one-third to one-half of the water now ordinarily used for the production of the common field crops.

The various methods of irrigation, flooding, furrowing and sub-irrigation, have been tested with results that indicate plainly the relative merits of these methods of supplying water to soils.

**THE CROP PROBLEMS OF IRRIGATION.**  
The relation of water to crops has also been investigated systematically and exhaustively. The total yield of crops has been found to depend not only upon the total amount of water, but also upon the time of application, the frequency of application and the manner of application. The results of this investigation have been of a more surprising nature, and show the way to an economical use of water in the arid regions. However, there is much to be considered by the farmer besides the actual yield of crops obtained. For instance, with certain crops it may be very desirable to be able to hasten the maturity and the question of being able to delay or hasten the ripening of crops has been studied with most important results.

In another investigation, the relative proportion of the different plant parts—leaves, stalks and roots—as affected by irrigation has been determined, and it has been found possible to produce plants at will with a larger or smaller proportion of any one of these parts than is ordinarily found.

Of prime importance, also, have been the results obtained in the study of the quality of various crops as influenced by irrigation. It has been discovered that the various constituents of plant parts, such as gluten in wheat, starch in potatoes and sugar in beets, may be increased or diminished at will by suitable methods of irrigation. Incidentally, the milling quality of grains grown with different amounts of water, and the cooking quality of potatoes, cabbage, carrots and other vegetables as

depending upon irrigation, have been determined.

Of even greater interest than the questions already mentioned are the attempts to breed certain characteristics into plants by controlling irrigation. For instance, the best flour for human food is that which contains a high percent of gluten, and by irrigation it is possible to increase or diminish this percent. The attempt has been made to produce grain so rich in gluten that when grown in arid and semi-arid rainfall where irrigation is not practiced it will yield seed that is also rich in gluten. Can this be done in the case of wheat and other crops, and is seems very probable that it can be, will undoubtedly mean that the arid irrigated districts of the world will become the great seed producing centers for those parts of the world where irrigation is not practiced.

These are some of the problems that have been studied at this institution during the last four years and show the general character of the investigations. The crops investigated so far have not been very many, but include wheat, oats, barley, corn, lucerne, broom grass, timothy, Italian ryegrass, orchard grass, potatoes, sugar beets, peas, onions, cabbage, carrots, hemp, tomatoes and apples. As opportunity allows, other crops will be studied in a similar exhaustive manner.

**INCREASING THE IRRIGATED AREA.**  
As already remarked, back of all these more or less scientific problems lies the great practical problem of using the water at our disposal in the most economical manner, and the results obtained show, beyond doubt, that the application of scientific principles to the art of irrigation will do for irrigation what such appliances have done for the great science of agriculture. Specifically the results of our investigations lead us to assert that even under present conditions, but that the irrigation of water in arid or semi-arid regions is a very poor or adding to the present irrigation canals, the irrigated area may be increased one-third or one-fourth or one-half. With such results the elaborate irrigation systems of the future, in arid or semi-arid regions, are amply justified. When, in addition, it is recalled that there is a strong probability of raising the quality of crops by suitable methods of irrigation, far above the quality of crops in humid districts, it follows that all such investigations as those outlined cannot be supported too heartily.

**EQUIPMENT.**  
It is evident that such work as has been outlined requires a large and special equipment. In fact, the amount and quality of the work that can be accomplished almost altogether upon the means which may be placed at the disposal of the investigators. Three farms have been and are being used in the work—the college farm, containing one hundred plots, one-twentieth of an acre each, the Greenville farm, containing one hundred plots, one-twentieth of an acre each, and the Hansen farm, containing 80 plots, one-twentieth of an acre each. These farms have been laid off into plots so far removed from each other that the water applied to one plot does not affect the water of the adjoining plots. Large main and lateral flumes have been built so that the water may be conveyed at will to any portion of the farm and to any one of the plots. The flumes are built of the very best construction, is well for each farm to enable the measurement of the water to be made in the most accurate manner. The clock work recording devices for water measurement have been found to be unsatisfactory and have been discarded. Men are now employed to attend to the water and to measure the water at frequent intervals with micrometer gauges. All the plots are so rigid that all the water applied to one plot is compelled to soak into the soil of that plot. The plots are so constructed that the conditions under which the water is applied to these plots are possessed of almost mathematical certainty.

In addition to the three farms, a large vegetable house has been built, containing seventy-eight pots each one twenty-four inches in diameter and two and one-half feet high. These pots are filled with various kinds of soils in which different plants are grown with varying amounts of water. The vegetable house experiments are to the work done in the field, and to furnish data concerning problems that can not well be solved directly on the farm. These pots are placed on small, specially constructed cars, and are moved on rainy days when they are sheltered under a glass roof. Weighing contrivances have been constructed whereby the pots may be weighed at stated intervals and the loss of water under different conditions may be determined.

Then several laboratories are in operation for the chemical, physical and biological studies of the soils and crops used in the investigation. Beyond question, the experimental plant for the study of irrigation at the Utah Experiment Station is the only one of its kind in the world.

**THE WORKERS.**  
Such elaborate experiments can not be conducted successfully by one man. The problems are so widely different that various specialists are necessary to handle them all. Three of the departments of the station are therefore engaged in the co-operative study of the principles underlying the art of irrigation. The seeding and harvesting of crops and all the field work are under the direction of the agronomist, Prof. L. A. Merrill. The application of proper measurement of water and all relative work were under the direction, during the first two seasons, of Prof. G. L. Swenson, now at the United States Reclamation Service, who was succeeded by Prof. W. W. McLaughlin, the present irrigation engineer. The soil moisture work and the chemical studies of the soils and crops are under the direction of the writer, who also has general oversight of the work. In addition to the heads of the different departments, numerous assistants and laborers are employed to look after the details of the work.

Beginning with 1904 these investigations will be carried on in co-operation with the irrigation investigations of the Office of Reclamation, under the direction of Prof. Elwood Mead. With the support thus given the investigations by the Washington office, it is expected that future investigations will be even richer and more valuable than in the past.

The field is so vast that many investigators must give many years to its study before the art of irrigation can be said to rest on a scientific basis. The report of the work done during the season of 1903, only, has been published (Bulletin No. 50 and 55). The report for 1902 will soon appear, and the report for 1904 will be published as soon as the mass of data can be systematized and digested.

**RETURNED MISSIONARIES.**  
Have you a friend or acquaintance in your former field of labor, to whom you would like to send a copy of the Semi-Weekly News? If so, take advantage of our special offer, made to aid the great missionary work. We send the paper one year to any point in the United States, Canada or Mexico, for the value of \$1.00. This does not apply to points where there are regular wards or stakes. Foreign postage

**UTAH, IDAHO, THE WORLD.**  
Three new maps, just issued, Utah and Idaho, and the World, on the reverse side, including population of countries and towns according to the 1900 census, with a brief sketch of every country in the world. Size 8 1/2 by 11 inches, value 75 cents; sent by address for \$1. Address: Deseret News Book Store, Salt Lake City, Utah.

Steinway,  
Mason & Hamlin,  
Steck,  
Kimball,  
Heller,

## PIANOS

The finest line of instruments in the

## WORLD.

We handle nothing but first class goods. Everything POSITIVELY GUARANTEED. Be sure to see us before buying.

## CLAYTON MUSIC CO.

Leading Music Dealers.  
109 Main St.  
Joseph J. Daynes, Mgr.

## HELD IN RESERVE

Chicest Lots in Murray City.  
We will build your house and furnish ground, on easy payments.

## MILLER-CAHOON CO.

(Pioneer Implement Dealers of Utah.)  
MURRAY CITY, UTAH.  
Dealers in  
COAL, LUMBER, FARM IMPLEMENTS, STOVES AND HARDWARE.  
L. C. MILLER, Manager.

## The ARTICLES

## of FAITH

By DR. JAMES E. TALMAGE.  
SECOND EDITION REVISED BY THE AUTHOR.

Designed as a text book for use in Church Schools, Sunday Schools, Improvement Associations, Quorums of Priesthood, etc.

Written by Appointment from the FIRST PRESIDENCY.

CLOTH.....\$1.00  
LEATHER.....\$1.50  
EXTRA LEATHER.....\$2.00  
Extra Morocco Gift.....\$2.50  
LIMP LEATHER GILT.....\$3.25

## Deseret News Book Store.