# DESERET LYENING NEWS: SATURDAY, JULY 28, 1906

The Great Dry Farm Demonstration in Juab County

NEW era has dawned this year, will, that soil may be opened to re-upon Utah, but it has come in ceive the snows of winter, and scaled see, whose careful work with the soils see, whose careful work with the soils sons for his advice in each case. He Yours truly, Trouble in the snows of winter, and scaled see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale in the sole sole see the snows of winter and scale see field of grain, and as yet there mer sun; that harrowing is what seals present interest in reclaiming the desare only a few people sitting in the the land, and fail plowing is what erts. glow of its early morning sunshine and opens it for the winter mows; that the

willing with prophetic voice to cry deserts of Utah need only the tickling Its arrival to the state at large.

cus upon it slowly, and gradually its plows, doing 25 or 20 acres a day meaning, pow spelled out so clearly make the task easy and inexpensive, to a few, will be known to the mufil- and give great profit to the work; that tude. They they will look back upon weeds take molsture out of the land, this year as the beginning of the end as a loak takes water from a tank. of the sagebrush era of Utah, and and deep plowing lets moisture well was no self-seeking promoter, but one counting the state's wealth in larger | below the reach of the sunshine. terms than were last year thought possible, they will realize how true are a

few articles of faith in arid farming. pronounced this summer by devotees | creeds enunciated in Utah within the | last fall, and now heading out. Signs

of a disc plow and a harrow to laugh Investigation and interest will fo- a harvest of golden grain, that steam were expected, but they missed connections and could not be present. Driving out through the valley, something of the spirit of the man who had

wanted the people to use it to their PRACTICAL CREED CONVERTS. fullest capacity. The road led past There have been several new hundreds of acres of his grain, planted

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# MEN WHO BELIEVE THE DESERT IS DOOMED.

In the group which assembled to see the big steam plowing exhibition on the Levah rilge, were some of those who have long hoped for the day of big farms in Utah's sagebrush. From left to right the men are Wilhelm G. Danielsen of Logan, F. W. Weego of Denver, President J. W. Paxman of Nephi, who has 2,000 acres of wheat almost ready to harvest, Bishop Geo. L. Farrell of Smithfield, who has experimented with arid farming for the past 20 years, Isaac Russell, representative of the "News" at the demonstration, and Prof. D. M. Todd, who is developing with others, a large arid wheat farm in Dog Valley. Dr. Widtsoe who is more than anyone else responsible for the present interest in arid farming, had not arrived when the picture was taken.

who are living close to the soils of our | year, and each has gained its con- | at frequent intervals bore such legends

sagebrush valleys.

DRY FARM DEMONSTRATION. Last Saturday in Nephi valley, where there is no water, and where land was not worth the homestead. ing last year, there was held a demon. stration of plowing up sagebrush on the Paxman farms. This is what It was specifically, but in a general way

talking to us of the value of scenery as a commercial asset rivaling the mines, while O. H. Hewlett has sounded the clarion for a day of reciprocity in trade between Utah cities. To. these must now be added the appeal for a general adoption of arid farming, and converts must of course be expected only slowly, as the realiza- it was working in hilly land, and mov-

verts slowly. Fisher Harris has been as "Crop from First Plowing," and "Second crop in rotation," so that his farm really became a great exhibit for his neighbors in every department of arid farming.

WHERE THE TEST WAS MADE.

'Away in the distance a black cloud of coal smoke, with a gray cloud of dust below it, pointed the direction to the steam plow. When it was reached it was a first gathering of believers then of what is accomplished spreads ing along faster than an ordinary walking gate, pulling its great load of gang

to the acre, and bragged lustily of the joys of freedom from Irrigating ditches, horse corrals and the big "gang" of laborers needed on the old style large President Kerr of the Agricultural farm, also of the freedom from the college and Professor Yoder, head of the crop of weeds that usually float down experiment work, had been invited, and in seed form on the trrigating water.

ON DR. WIDTSOE'S FARM.

Following the demonstration in the afternoon, the vast concourse of wagarranged the event was apparent. He ons and buggies departed, each in its own direction to the farming houses in who knew he had a good thing and Sanpete and Nephi valleys. A few of the more interested drove over to Dog valley on the west, where Dr. Widtsoe's farm of 6,000 acres is located, and saw the 800 acres that was seeded

last fall waving quietly in the air. Mr. Todd, a member of the company which owns the farm here pointed out the principle on which the farm succeeds. By digging a foot in the untilled soil it was found to be dry and crumbly, but when I sank my hand into the plowed and harrowed soil that had been drinkin in the winter's moisture I found it was damp at the depth of a foot, and a handful of soil could be pressed into a ball. Riding back to Nephi the theory was demonstrated all over again, for in the muddy weather teams had left the main road and stirred the surface soil along the sides. Wherever this had Leen done the sunflowers still were green, while elsewhere they were burned and dry.

A GREAT NEW PLOW.

The Paxman farm demonstrated how powerful is the new plow and traction engine in doing away with labor. The engine used was a Reeves cross compound, double cylinder, built by Reeves & Co. of Denver, Manager F. W. Weege of the company, who was present, explained the various parts of the engine, and how it worked, and what it had done in other trials. Its great weight and horsepower, he said, gives it pulling power enough to plow, harrow, and seed at one time, where that is desirable, and it showed there what it could do when given a sharp upgrade. pulling 18 discs.

An oldstyle horse disc plow does with a team and one man, about two acres a day. The new plow runs off from 25 to 35 acres, and needs an engineer, a wa terboy, and a fireman. On the Widtson farm a small shanty was all the head quarters required to operate the 6,000 acres. Here was located a "force" of six men, two water haulers, a coa hauler, a cook, an engineer, and a fireman. When the day's work was done was only necessary to turn off the steam and walk to the house, with all



GEORGE L. FARRELL.

### MR. PAXMAN'S VEIWS,

Nephi City, Utah, July 21, 1906 .-Messrs, Reeves & Co., Columbus, Ind. Gentlemen: The 25-horse cross compound double cylinder engine recently surprise to all who have witnessed its work. It certainly has the pulling quality and will do all that it is claimed been plowing on sagebrush land after being grubbed and has pulled three sixfeet wide and plowing 10 to 12 inches

a revival of interest in arid farming,

and in a great many counties of the state there have been companies formed with the purpose in view of reclaiming these arid lands. The writer has been over practically all of these lands in this state, and believes that he can see installed upon my farm is a veritable in Juab, Millard, Iron, San Juan, Boxelder and Tooele counties vast stretches of land that will be made to produce sufficient wheat to supply the needs to do. During the past week it has of this whole intermountain country. Failures in this industry in the past

can be largely attributed to the fact disc gang plows, cutting a swath 15 that the farmers did not understand the proper methods of selecting their deep, doing the deepest and best plow- | seed, and of handling and cultivating

excellently adapted for this farming. In Cache county Coin introduced by Mr. H. of Cache Junction, and th Selle wheat introduced Louse of Paradise are the

SELECTION OF SEED.

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Experienced and farmers have past experimented with a large ber of varieties. Too often the

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## THE REEVES CROSS-COMPOUND DOUBLE CYLINDER ENGINE.

Plowing on the Farms of J. W. Paxman, Nephi, Utah, at a Big Demonstration of Farming on a Large Scale, as Sagebrush Land, July 20, 1906.

ng ever seen on lands in this neigh- | their soils. In many instances wheat | borhood. Every root of the sagebrush was cut clean and the land laid up in good shape. We demonstrated some on the sugebrush land before grubbing and found that we could cut a swath 11 feet wide and nine inches deep and get almost every brush. This was in ordinary brush where it stood from one to two feet high. The one thing that impressed us all in its work was its steady start after all the plows were et in the ground. It seems to move as carefully as any horse could do and do the pulling too. Should we come to an extra heavy pull the engine can be converted into a simple double cylinder and increase its pulling power 50 per cent and in this case, something has la move.

I consider that steam plowing is the now learned, however, that in order to scale. It is the only thing that wil do us the work at the proper time or when it is most needed. Very respectfully

was taken directly from the irrigated farms and sown broadcast on land that had been merely scratched, and usually the seeding was done in the springtime, The seed germinated, and for a few weeks gave promise of making an excellent yield. The plant by the very nature of the thing was shallow rooted, had not been trained to endure drouth and in consequence as soon as the hot, dry weather came on the plants wilted, the farmer became discouraged, and from that time henceforth has maintained that arid farming, at least in his section, was a dismal failure. We have

variety. The experiment station? wheat introduced some years r known as the Turkey, which is a m hard red wheat, that is making an ellent account of itself in compa with these other varieties of and t wheat. The arid farmer, who is g nto this business will make no take in selecting any of these varie and right here we desire to say e can afford to pay several cent bushel more for a carefully sel clean standard variety that has known to grow for years on dry h than for wheat of which he has not ord, and that has likely been grown up der other conditions.

### PREVENTING SMUT.

Only the ignorant farmer who st believes in the "signs of the moon grows smutty wheat in these -to-date arid farmer secures a of formaline, pours it into a barre faining 50 gallons of water and inte mixture he immerses his wheat aree to five minutes, churning wheat about until the is absolutely r hat every kernel comes in contact the solution. The wheat can remain a burlap sack if not more than a bush placed in the sack. It can then a taken out and dried and is ready is use. By this method smut is sur prevented.

nouncement to the general public that results have been achieved, and need only to be seen to be believed.

### WHAT IT WILL DO.

The demonstration in the sagebrush of Nephi valley was not of a theory, or a promise of future results, but an exhibition of facts that when they are comprehended, will send hundreds and thousands of Urah people into the arid farming business, and will transform the state's sagebrush vistas into wheat fields. While the men of the valley talked of a new and bright future, an immense steam traction engine dragged 18 discs on three gang plows through the sagebrush, rooting it up, and dragging it . out flat on the land, while the startled lizard scurried from his home of centuries, and the jack rabbit found the lair was no longer a refuge that had sheltered him and his kind ever since ple of Nephi and Sanpete valleys to

bared the breast of central Utah to the sagebrush seeking nurture. In as a "news" event of special value, the path of the engine was plowed but a visit to the farm, and a glance soil, loose and level, and inviting the at what is being done, left an impreswheat that will go in this fall to cre- sion that all the great dreams for the ate new wealth.

#### WHAT HAS BEEN DONE.

To add a convincing link of proof thusiastic belief of the experts who Faxman, Widtson and other converts were watching the demonstration, was | to the new style of farming. the vistas of wheat already heading out in the distance. These fields were the plantings of last fall, and against that Mr. Paxman had his engine and the yellowish gray of the sagebrush plaws, and to reach the place buggles hills the golden brown of the heading and wagons had been provided for the wheat waved a benediction over the visitors from Salt Lake and Logan. creed of arid furming as it was demonstrated there by the plows, and pro. Agricultural college, representative nounced by Dr. Widtson. His ex- farmers from different parts of the planation of what it all meant was state, W. G. Danlelsen, inventor of the

the further boundaries of the sagebrush. THOSE WHO SAW.

At the demonstration Saturday there were present a group of, maybe 10 men, who were believers before the day of demonstration, then maybe 50 more who were being converted, and thousands who came to get their first impressions of arid farming, and to shake the heads of wisdom, trained long to believe in the irrigating ditch. These were from the more remote districty, and were not in close touch with the developments of the Paxman form within the summer, or on the Widtsoe and Merrill farm over the ridge into Dog valley.

A SURPRISING PROOF.

When the word first came to the "News" office that President J. W. Paxman of Nephi had invited the peothe receding waters of Bonneville witness a steam plow work on his farm, it did not impress the writer state were not indulged in by the pioneers, and that from today on bigger things than those they planned for, in one direction at least, will be realized

to the view of the puffing engine and by a younger set of men under the leadthe twisting sagebrash, and the en- erchip of such pioneer blood as that of

The Levan ridge 1s south of Nephi towards the Sevier river. It was here This party included professors of the that wheat will grow where sugebrush. Danielsen disc plow which was being 1 a crop too thin he advised harrowing

plows that stopped neither for sagebrush or for hills, but dug down for twelve inches through every kind of ground. Later in the day, in heavy sagebrush land, every alternate disc was taken off, and a 9 disc series thus created to replace the 18 disc sets. This gave more room for the large sagebrush to slide between the blades, and was meant to demonstrate how to remedy any tendency towards clogging in the brush.

## GATHERING THRONGS.

On the road towards the engine, vehicles began to congregate towards noon, and before 12 o'clock, the ridge resembled a country town on circus day. Mr. Paxman had dug a well on the ridge, and installed a gasoline pump." About this the great throng gathered for lunch, and in the afternoon witnessed the steam plow at work on stubble land, where, of course, there was easier running than through the brush.

Of all the spectators perhaps the most interested was the veteran dry farmer, Bishop Geo. L. Farrell of Smithfield, Cache county. Mr. Farrell has been dry farming for thirty years, and waiting for something like the steam plow to come along and make it practicable on a large scale. He gathered crowds of people about him while the steam plow worked and explained its advantages to them, its possibilities in making large farms, and the possibilities of these same large farms in turning out good money for the people. He bore his testimony that he wouldn't trade his dry farm for irrigated farms, and wouldn't sell his land for \$50 an nore, also that the secret of a good crop was thin seeding, as thick seeding made too many sprouts for all to be supported. For a crop too thick he advised harrowing to thin it, and for

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THE DANIELSEN SIX DISC GANG PLOW.

The Invention of a Utah Man Which Will do a Great Work in Transforming Sagebrash Wastes Into Fruitful Fields-The Piow Has no Equals in Either Breaking or Regular Plowing and is Protected by Three Patents.

W. G. DANIELSEN. Of Logan, Utah, Inventor of the Wonderful Disc Plow.

of the characteristic drudgery of farm tife cut off.

TALKED IT OVER

At Nephi following the demonstration nost of those who were interested got together to talk it over. Mr. Paxman wrote out an expression of his opinion of steam power in farming, which is given below, and Mr. Farrell did like-wise, W. G. Danielsen, inventor of the Danielsen disc plow, which was in op-eration, was the recipient of many compliments on the way it worked. Mr. Danielsen is the oldest implement dealer in Utah. He started to work on farm implements many years ago, and organized the Danielsen Manufacturing company in 1889. In 1899 the company was incorporated. Two years ago the capitalization was increased to \$50,000. and now employs 20 men in turning out implements. Besides the ploy for steam power, Mr. Danielser as invented a sulky, a simple disc, and a gang mole board plew, all of which protected by patents, the most recent patent being on a disc bearing and adjusting bolt, which is now in general

use throughout the west. For the information of farmers who may desire to investigate dry farming machinery, it may be stated that detailed information and catalogs of the Reeves plowing engines will be sent on application to the company at 1512 Fif-teenth street, Denver, Colo.

#### WHAT MR. FARRELL SAYS.

Nephi City, Utah, July 21, 1906. Messrs, Reeves & Co., Columbus, Ind. Gentlemen: 'I have had the pleasure of witnessing the demonstrution of your 25-horse double cylinder, cross compound engine on the Paxman farm near Nephl, Utah, having traveled about 200 miles to be present and am delighted to see the spisoidid work it did. It was surprising to nee the engine walk off with is disc plows in three gangs, cutting a swath 15 fest wide and about 12 inches deep and second to do it as cars as five horses would oull a double plow. If is smelling never before seen n Utah lo my wide experience. I bow 75 years young and have farmed in Utah for over 47 years and have seen work in all sorts of conditions, but this grandest revelation of all. 1 could have nothing but the highest praise to give of the grand work done by both the engine and plows in sage-brush and in stubble lands. There were several hunded people present at the demonstration and there was nothing but praise heard from every period Upon our dry farms deep plowing and subsoliing is the principle to and this engine and plows will to follo: plish this, it, in my opinion, being well adapted to do this work. One grand feature about the engine is, that in going up a steep bill or running into neavy clay soil, its power can be doubied by the simple pressure of the en-gineer's foot and it walks along as smooth as oil.

I consider the introduction of this engine has given the dry farm indus. try a big impetus, and has done much ARID FARMING.

J. W. PAXMAN.

Louis A. Merrill, Editor Deserct Farmer and Manager Utah Arid Farm Co.

HE efforts of the Deseret News to create an interest in the arid | tion. farming industry are ceretainly to be commended. From present

indications arid farming is likely, in the very near future, to transcend in importance all other agricultural industries of the state. The work of reclaiming the vast stretches of sagebrush land is one that commends itself to the young man who inherits in any demost of our desert lands were des-

tined to forever remain idle and unproductive, but in recent years the hope has been entertained by some of our most practical and scientific authorities that these lands can be rendered productive. In the fruition of these hopes there are possibilities undreamed of as yet by the most enthusiastic advocate of this method of soil culture. To make the waving fields of grain replace the worthless sage brush is work worthy of the efforts of those who truly love Utah and desire to see her become great and foremost among her sister states.

Many years ago that great modern ploneer Brigham Young foresaw the, possibilities of this industry. In public addresses and in private conversations he frequently made the statement that the wheat fields of the future, would be found above the lines of the high lying canals. Many years ago the industry was started in Davis, Cache, and Salt Lake counties, but the area devoted to dry farming has up to the for the succeeding crop. During the present time been limited. Few there summer the soil should be constantly voted to dry farming has up to the

make arid farming a success we must obtain seed that has been for long years inured to drouth and other adverse Plants, like animals, are conditions. induenced by their environment. We now know that many of the standard varieties used on arid farms send their toots down deep into the soil, 19, 12, and even 14 feet, in search of moisture, and we find that if there should be a period of a few weeks when there is no precipitation, the plants are able to use the moisture down deep in the soil, and thus go through to a successful produc-

#### THE METHODS USED.

We have further learned that in order to store up the precipitation that falls, either as snow or rain, that it is necessary to plow deep. "Plow deep file the sluggard sleeps" is a motto that must be adhered to strictly by the successful arid farmer. We know that the water that is made use of by the plant is held as a thin film around gree the spirit of the pioneers. For a the duty of the arid farmer to make as long time it has been thought that many of these particles of soil in a given space as it is possible to obtain By breaking up the soil finely and pulveriging it, he is enabled to use all the moisture of not only one season but for two whole seasons. We thereore have learned that it is a good hing to allow the soil to test every other year and to use the soil as a storage reservoir in which to accumu inte moisture for the crop that is to be grown. When we realize that over 1,200 pounds of water are necessary in the reduction of a single pound of the dry matter of wheat, it is obvious that large quantities of water must be stored in the soil. The arid farmer must therefore have twice the acreage

of his neighboring irrigation farmer It has also been found that it is abso lutely essential that as soon as the crop is removed that the land should be plowed deep the same fall, and allowed to remain rough during the winter. In the spring the disc harrow is set to work followed by the smoothing These implements of tilinge harrow. pulverize the soil and render it so fine and dusty on top that the moisture that is already in the soll cannot escape. If sun flowers and volunteer wheat shall grow, the arid farmer knows that these must he instantly removed, as experience has taught him that they will use the moisture so much desired

#### DRILLING THE SEED.

The old method of sowing the se broadcast is now being abandmed this kind of farming it frequesty necessary to put the seed downing five inches into the soil. If there dusty mulch on top, the seed has a placed below this mulch and his This can only be done by the of a press drill. So on the molern farm a large press drill that will from 20 to 25 acres per day is Contrary to the old i nethod of min to 2 bushels of seed per acre, suc arid farmers depend in a large ! ure upon the use of not pounds of seed per acre, and so ur best authorities, notably Hansen of Collinston and Geo.

rell of Smithfield, claim that 3 plump, well selected seed is necessary. After seeding noth nains to be done until the nexts when the ground is to be gone carefully with spike toothed harn rder that the crust may be broke the escape of the moisture h prevented. Until harvesting tim nothing more to be do

By following these roper fallowing, there thy at least 25 bushels per acres t be grown on the gro ie land in this state with he profits to be derived 'ustry are best illustrated cerience of a successful that recently came unde tion. With the results car's crop he paid for land, the labor in clearing Larvesting, and for a ments that were used, T tional case, but is an what can be done and the time is not far thousands of young m are now going away other places, will find right of our own borders nities for gaining a " making an independent live





THE REEVES TRACTION ENGINE. Built Specially for Steam Plow Work and Which Will be an Important Factor in Reclaiming the Arid Lands of 214 Great West-This Powerful Engine Insures Deep and Uniform Plowing, Which is so Essential to Successful Results.