

We were shown to-day, by Bro. George Teasdale, of Zion's Co-operative Mercantile Institution, three specimens of wheat which have been imported by that Institution from California, for the purpose of supplying a superior quality of seed to our farmers. Their names are: White Excelsior, White Mediterranean, and White Club. Besides these, there are two other kinds imported which we did not see, the Sonora and Chili. Complaints have been made of late by millers and others about the quality of our wheat, and there has been difficulty about procuring good seed; being made acquainted with this, the Z. C. M. Institution sent to California for specimens of the best wheat produced there, and these were forwarded. The appearance of the wheat is certainly very fine, and the millers who have seen the samples admire them, especially the White Excelsior and White Mediterranean.

The disposition to import good animals, fruit, grain, machinery, &c., has increased surprisingly in the community since the railroad has furnished such facilities for speedy transportation. The effect of this upon the Territory will be very excellent if proper care be taken. For awhile, at least, we shall have superior animals, better cereals and vegetables, and finer manufactures. But when these are all imported, and the Territory is supplied with them, how long will it be until there will again be a necessity for importing new blood to grade up our stock, and new kinds of seed to produce the quality of grain and vegetables which we need? Since this Territory was settled we have had as fine grain, vegetables and fruit produced here as can be found in any part of the United States; we have also had some very fine-blooded horses, horned stock and sheep. There has been no lack of these things. We have had enough, if we had taken proper care of them to have supplied the Territory and to have exported. But we have not taken care of them. Our system of stock-raising has been a most shiftless one. Men who have had good stock, and been desirous of keeping it pure have not been able to do so. If a man had a herd of good animals he had either to let them run on the range with the risk of being mixed with poor and comparatively worthless stock, or to keep them up in pastures and feed them. Circumstances, heretofore, have prevented the majority from doing the latter; their stock has, therefore, been turned loose to mix with any other as it happened, and the result has been they have lost their value for beef, work or milk. Through this system our stock is almost every part of the Territory has degenerated, and there is a cry for new blood and of better quality to grade up with. While we had a stream of emigration coming into the Territory every season over the Plains, bringing with it horses, cattle, sheep, etc., we did not feel this want. We could be careless, for the influx of stock every year prevented us from experiencing the effect of our carelessness, as we have felt it since the railroad has been completed and the travel across the Plains has been stopped.

To longer pursue the system of stock-raising that has prevailed among us in the past, under our changed circumstances, would be simply ruinous. No community in the world could do it and prosper. The time has come when there must be a thorough and radical change in our system. We have been taught the necessity of it long enough without complying with the counsel; but now circumstances are forcing us to adopt it. We published yesterday an offer made at the meeting of the Parent Society for the Improvement of Stock, &c., on Monday evening, of one hundred dollars for any calf of two weeks old of three cows lately brought here by Bro. Rydahl; also the statement of Bro. Jennings, who owns some of this recently imported stock, that he would not take one hundred dollars for his calves of two weeks old. His reason for placing so high a value upon them was an excellent one. Such calves as he had at two weeks old were worth, he said, more than one hundred dollars each in the East, and if they were brought from there here, the purchaser had to run the risk of their being killed or injured on the cars besides paying for their transportation; but his calves were here where he wanted them, and he thought they were too valuable to sell at one hundred dollars each. Valuable stock like this it will pay the owners to take care of; and all this fine-blooded stock must be kept up, fed properly and kept select, or the money invested in it will be a loss. Let the finest stock in the world

be turned out and suffered to run at large, and it will only be a few years until a new supply will be needed. Let the best grain and vegetables that can be procured be permitted to mix with poor varieties, and soon the cry will be heard again that we must have imported seed. By pursuing a judicious system of selecting the best animals and the best grain, fruit and vegetables for propagating purposes, we can soon produce as good varieties as we need or as can be found in the world. It is by pursuing this system that the famous strains of horses, horned stock and sheep have been brought to their present perfection, and that articles belonging to the vegetable world have reached such excellence.

The spirit with which these subjects are taken hold of by many of our leading men at the present time, causes us to anticipate a great change in our management of stock, farms, &c. The Bishops and other leading men in every settlement have before them an immense field of usefulness in this direction. Societies are being organized for the special purpose of fostering these interests. They should be maintained and encouraged. Measures should also be adopted in every county to prohibit the running loose of entire animals of an inferior quality. If a committee were appointed by the Stock Society in every neighborhood or county to say what animals of this kind should run at large, and to prohibit all others, it would be a great boon to the people. Where co-operative herds are organized, this matter can be easily reached. The same system should be pursued in relation to grain and vegetables. Private individuals have rights; so has the community. It is a wrong to a neighborhood where sorghum is a staple crop, for one man to plant broom corn contiguous to the fields planted with sorghum. It is a wrong to a neighborhood for a farmer to sow seed plentifully intermingled with cockle; or to sow seed of an inferior quality that will injure or produce a deterioration of his neighbors' crops; or to let his farm or lot run to weeds. There are many wrongs of this kind, which no right-spirited man, when he understands matters, will perpetrate. Let the people be taught on these points, and they will soon perceive that it is to their interest to avoid these wrongs, and that in union of action there is strength, in stock-raising, farming and every other industrial pursuit.

THE American Gatlin gun, or mitrail-leuse, has recently been the subject of experiments in England, under the auspices of the War Department; and the results have been so favorable that it has been decided to introduce it into the British army, and sixty batteries, amounting to between three and four hundred guns, have been ordered at Colt's armory, at Hartford, Conn. The merits of this weapon, as described by a British journal are, in brief, as follows: It has a bore of forty-two hundredths of an inch, and weighs only a trifle over three hundred and fifty pounds; the carriage weighs nearly five hundred pounds. The bullet weighs a hundred grains less than an ounce, and the charge of powder is only one-sixth of an ounce. The experiments at Shoeburyness and Plumstead Marshes show, that at a range of from 200 to 1000 yards, batteries of these weapons have a hitting, wounding and killing power of 900 a minute among broken infantry, on uneven ground; and in close columns of 1,200 a minute. Within ordinary rifle range—up to 1400 yards, the small Gatlin gun was decided to be superior to field guns; but in longer ranges the latter were superior. The following is a summarizing up of the points of excellence: a maximum of destructive power with a minimum of weight and size, easy to maneuver, and can be fired with accuracy of aim without recoil thousands of times.

The use of these weapons will form a special branch of the Royal Artillery, their batteries being distinct from those of the field guns.

THE first English colony was planted at Jamestown, Virginia, in 1607, from that time until about 170 years afterwards, or about 160 years after the landing of the *May Flower*, every Bible read or heard read in the English tongue on this side of the Atlantic was brought across the ocean. This period embraced almost the entire reign of eight sovereigns in succession. The printing press was set up in the colonies as early as 1639, and other books were printed; but the Bible could not be printed, for had it been attempted the printers and pub-

lishers would have been subject to a prosecution from those in England and Scotland who published it by a patent from the Crown, *cum privilegio*, as did the universities of Oxford and Cambridge. In 1664 the Rev. John Eliot had printed at Cambridge, Massachusetts, the Bible in the language of the Natick Indians; but this not being in the English language it was not requisite that he should obtain a patent for doing so. In 1768 Christopher Sauer, or Sower, at Germantown, Pennsylvania, published the first German edition of the Bible. It was three years in press. After independence had been declared, however, such was the scarcity of Bibles that Dr. Allison, pastor of the First Presbyterian Church in Philadelphia, and others, memorialized Congress on the subject, and that body, in 1777, appointed a committee to confer with printers, with the view of having published 30,000 copies at the expense of Congress to be reimbursed by the sale of the books. [Journal September 11, 1777.] The difficulty of obtaining type and paper induced the committee to recommend to Congress to direct the Committee on Commerce to import, at the national expense, 20,000 English Bibles from Holland, Scotland, or elsewhere, and Congress ordered the importation. But afterward, when the unsettled state of the country and its commerce prevented the execution of this order, Congress resumed the subject of printing, which was referred to a committee of three. And the first American edition of the Bible, in the English language, was printed in 1781-2, in small duodecimo form and brevier type.

We have seen close times for type and paper in this Territory; but we are consoled by the reflection that we will not always be so cramped. If, when the population of the young Republic numbered three millions, they could not raise type and paper enough to publish an edition of 30,000 copies of the Bible, we may be consoled under the difficulties we have had to contend with in publishing here. Like them, we hope to overcome all obstacles of this kind, and with type-foundries and paper-mills, issue from our presses thousands of copies of the various works, for religious, scientific, school and every other purpose, to supply our people and Territory with all they need.

VARIOUS attempts have been made since the discovery of petroleum to use it for heating; it having been felt that if it could be utilized, its immense heat-producing power would effect a great revolution in the mechanical arts. In 1867 three different plans of burning it were tested by the Navy Department; but they failed, and the reason given in each case was—carbonization. From the *Chicago Tribune* we learn that two citizens of that city have at last produced a machine which fulfils every requirement that can be conceived of, as necessary to perfect combustion of the petroleum. The machine has been in operation in several of the eastern cities for more than a year, but has only recently been put up in Chicago. The reporter of that paper saw the machine working in connection with a lime-kiln in Chicago. It was attended with special interest, because it was the first application of the patent to the burning of lime. We will let him describe the machine and its operations in his own words:

"The apparatus consisted of a cylinder, like a small locomotive boiler set on end, with a smaller cylinder within it, the intervening space being filled with petroleum. The smaller cylinder is filled with 600 small copper tubes, and through these the superheated steam passes, producing vapor from the oil that fills the interstices between the tubes. This vaporized oil rises through a layer of prepared sponge, and just at the point of exit is mixed with superheated steam in any required proportion, thus producing hydrocarbon gas. This gas passes through iron tubes to the point where the fuel is needed and is then burned, very much like common gas. In the case which was shown, the kiln was filled with stone, and, in a very short time after the fire was lighted, the heat was more intense than can be expressed by comparison, and formed a very vivid idea of the materialistic hell. All this time the fire was under perfect control, and by a simple turn of a screw the combustion was made more or less intense. The experiment was varied by admitting a greater or less proportion of steam into the pipes, so that in some cases the fire was fed with 50 per cent or more of water, and the remainder of vaporized oil.

One of the most curious results of this mixture, or at least to the unscientific, is that the more steam—or water—that is added, the greater is the heat and the less the expense. General Blunt, who has had a wide notoriety from his connection with

the Indian raids, as well as from his services during the war, has had no little trouble in his endeavors to apply this machine to the burning of lime. He has been beset with all manner of obstacles, and has pushed through them all with a determination which could only have been inspired by a firm belief in the merits of the invention. The results of this particular application of the principle have been highly satisfactory so far. General Blunt stated that his conclusions, based on the results already obtained, were that, with the expenditure of \$25 per day for wood, he could burn 120 barrels of lime. The same sum expended for oil would, with the aid of this machine, turn out from 250 to 300 barrels per day, and one machine would be amply sufficient to supply fuel for three kilns. The saving in time was so great that he could produce the same effect with oil in three hours, starting with a cold kiln, that he could with wood in twelve hours."

Arrangements are being made in Chicago to have the process tested in its application to motive power. In the East, where it has been tried, it is said to have saved as high as 50 or 75 per cent. of the cost of fuel.

AN exchange says that the narrow gauge system of railroads, after the Festiniog line, in North Wales, is about to be inaugurated, in this country, by the construction of a line from Elko to Hamilton, Nevada. The track at Festiniog is only twenty-three and a half inches wide, but upon it, it is said that trains a quarter of a mile long are hauled thirty miles an hour by engines only five tons in weight; and the cost of construction and running is only about one-third that of the present system. The cost of the construction of the line from Hamilton to Elko is estimated at less than a million dollars, while it is believed that it will fully answer all the demands of trade.

The construction of a main and branch line, through Utah Territory, we think, might be greatly expedited if built upon this plan. If millions of money could be saved, and the demands of traffic and travel be fully complied with as well on lines constructed on the narrow as the broad gauge, the completion of a network of railways through the whole Territory might be effected much sooner, because so much cheaper than on the present expensive plan.

THE *Chicago Tribune*, while utterly condemning the extravagant and futile oburgations of Frank P. Blair, Jr., against the reconstruction Acts of Congress, cannot look upon his election to the United States Senate from Missouri as an unmixed evil. It believes "that most of the thinking and reflecting men in the Republican party will agree that the party has been, for some time past, too strong, numerically, in the Senate for its own good that the minority party has been too weak to operate as a check upon the majority—that the existing feuds and divisions in the party, as represented in Congress, could not have existed if there had been a vigorous and healthy opposition—and that many profligate and indefensible measures would have been defeated—or, rather, would never have been brought forward if—such an opposition party had been present to take advantage of the blunders and excesses of the majority."

The *Chicago Evening Post* takes a different view of this election. It says, "the election of Frank P. Blair to the United States Senate is a national disgrace; it is one of far too many instances of the kind." It closes its remarks on the subject in the following language: "We protest against making the Senate a rendezvous of political bummers. It is a place where, above all others, the character and dignity of the nation should be faithfully represented. The presence there of such men as the recently-elected Senator from Missouri is a shameful thing. It demonstrates the fact that the power of mere politicians in this land still exerts an influence which the best men of the world had supposed to have passed away with that terrible institution which so long darkened the minds and debauched the morals of the American people."

COOL!—The Reese River *Reveille* says that in a Wyoming tavern, a mountain rough, venomously drunk, was practicing with his revolver at various objects in the bar-room. An ox teamster entered, called for a drink and a ball from the rough's pistol shattered the glass at his lips. Without a word the bull-whacker put his hand behind his back, produced his pistol, levelled it at the ruffian's head, and remarked as the body dropped to the floor: "That d—d scoundrel would have hurt somebody pretty soon." He then filled another glass and drank the contents, strode out as deliberately as he had come in, and with a "Whoa, haw, there," started his oxen up the road.