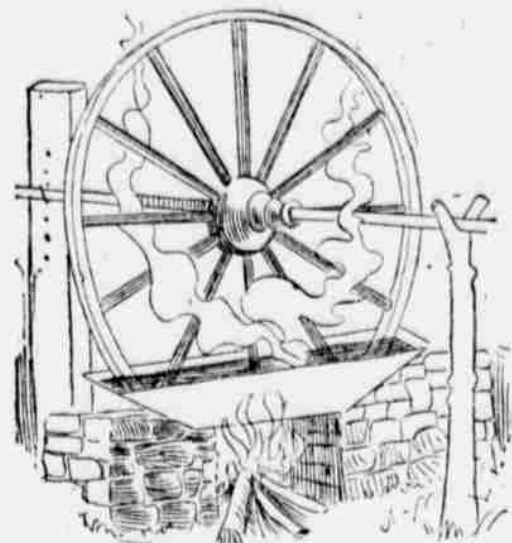




SETTING WAGON TIRES.

Farmers Can Do This Work More Effectively and Cheaply Than the Blacksmith.

There are many jobs that a farmer can do for himself, if he only makes the attempt. One of these is the setting of the tires on the wheels of his vehicles. The usual charges at a shop for one wheel will exceed the cost to the farmer of setting all four, and the time spent in hauling them to and from the shop, to say nothing of the trouble and vexation of unsatisfactory work or ruined wheels, is far greater than it would be to do the work himself. To do this it requires an outlay of only the cost of a metal trough and lused oil, about



WHEEL IN POSITION FOR SETTING.

half a gallon to a set of wheels, though more than enough to do the work will be needed, as the trough, while boiling, must be filled so as to cover the felloes.

This trough (a) can be made of galvanized iron by a tinner. It should be about 28 inches long, three inches wide and five inches deep at the middle. By making the bottom only 16 inches long and slanting the two ends to the top, the bottom will nearly conform to the circumference of a wheel. Set this pan on brick or stone in such a way that a fire can be built and kept up under it. Put in enough oil to cover the felloes, and let come to a boil. You are now ready to put in the wheels.

To prepare the wheels, let them soak in water until the tires are tight, washing out all the mud and dirt possible. On one side of the trough drive a stake, the top of which is to be about the height of the hub of the wheel when set in the pan. A stake with a fork at the top will be found the most convenient. On the other side, set in the ground a 2x4 in which a row of half-inch auger holes have been bored, ranging from a few inches below to a few above a level, corresponding with the stake on the opposite side. By running a piece of sapling through the wheel, and laying one end in the fork of the stake, letting the wheel hang in the pan, just free of the bottom, and inserting a pin in the auger hole of the 2x4 that is at the desired height, as a rest for the other end, the wheel can be easily managed. If it is wedged on the sapling, it can be turned by that means.

After being placed in the oil the wheel should be slowly turned to prevent charring. The length of time required to boil a wheel depends on its condition, as does the amount of oil it takes for a set. Two sets of wheels can be easily set in half a day. This job will prove far more satisfactory than one performed by a blacksmith, who, often on account of the dry wood swelling after he has shrunk the tire, ruins a wheel by dishing it.—Orange Judd Farmer.

Teaching Calves to Drink.

Nature teaches the calf to turn its mouth upward to get its food. The unwillingness of the calf to put its head down into a pail is the result of instinct. Some have thought to offset this instinct by never allowing the calf to suck its dam even once. But we think this injures the calf. It needs stimulation when first born, and should be allowed to get it in the way most natural to it. In sucking the teat the milk comes slowly, and a good deal of saliva is mixed with it. But after once sucking its dam the calf should be taught to drink out of a pail, and to put its head down when eating. It will need to be pretty hungry to do this readily, and the finger should be used, placing it first in the calf's mouth, and then putting the finger into the milk. So soon as the calf gets fairly to drinking the finger should be withdrawn.—American Cultivator.

Big Income from Forests.

The forests are considered one of the most valuable national possessions in the old countries. In Bavaria the forest area is about one-third of the total area of the kingdom. One-third of this area is owned by the government, which has spent since 1850 about \$8,000,000 in acquiring forest land. A regular system of forest culture is employed. The yield per acre is generally large, valued at about \$1.92, and the net income of the state amounting to about \$4,000,000 per year.

IMPASSABLE ROADS.

A Story from Michigan Which Should Teach a Needed Lesson to Every Mossback.

No one who has given the subject close thought can doubt the moral and sentimental value of good roads. The successful maintenance of schools and churches and the spreading of their good influences is directly dependent upon the character of the highways. The social life of the country is quickened or suppressed as the roads become good or bad. The youth of the country leaves the farms mainly for the reason that the social advantages are so often sadly hedged about by impassable mud roads. Isolation, ignorance, crime, is the universally accepted course of things.

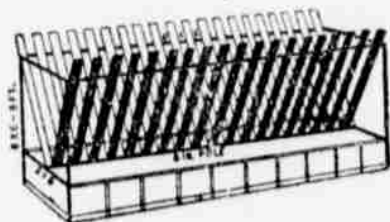
But alas! sentiment is something that it is difficult to deal with in a statistical way. The business side of the road question appeals to all. The following from the Bay City (Mich.) Tribune tells the story—the old, old story: "A farmer from Saginaw county brought in a load of grain yesterday to be ground. Although living much nearer Saginaw than this city, he stated that it was impossible for him to draw a load of grain to Saginaw on account of the condition of the roads. He came into the city without any trouble on Bay county's stone roads, and he is positive that the failure of Saginaw to get a sugar factory was due to the poor condition of the roads in that county. While in the city this farmer made arrangements to rent 20 acres of land west of this city for six dollars per acre, and he will grow ten acres of beets and ten acres of chieory. He will rent his farm near Saginaw for two dollars an acre, there being a difference of four dollars per acre in the relative values of the two farms on account of good roads and a market for products in Bay county."

The same conditions are to be found in thousands of localities, and the people are beginning to ask if there is never to be any advancement along the lines of road making and road keeping?—Good Roads.

RACK FOR CATTLE.

Animals Cannot Get Caught in It, Nor Can They Waste the Feed Set Before Them.

Having seen an inquiry some time ago for plan for cattle rack that cattle cannot get fast in, break nor waste feed from, I herewith send you a rudely drawn plan for a rack that I have been using for two years, and that I find has all the above points. This rack is five feet wide at bottom and top, and can be made any length. Corner posts 6x6 or round poles nine feet long, set in the ground two feet. Top end pieces 2x6 pinned or spiked to posts. Top side pieces 6x6, or six-inch pole the length rack is wanted, placed on inside of posts. Notch in a 2x6 piece 18 inches from the ground in posts at each end, and on the center of end



IDEAL CATTLE RACK.

pieces lay a six-inch pole; this pole makes the bottom of the rack; then take 1 1/2 x 6 boards seven feet or flat rails and make a V-shaped rack by nailing one end to bottom pole and top end to top pieces or poles. Board up the ends with any scrap lumber, and on each side put 12-inch bottom board and ten inches above this place a six-inch top board, and by this you will have a manger to catch any hay the cattle may drop in pulling their hay out of the rack and by stripping this manger sheep can be fed when not used for cattle.—Stockman and Farmer.

No Fear of Competition.

No one need fear an overproduction of really good dairy products. Such a thing is possible, but there is such a small proportion of the men engaged in dairy work that are willing to take the pains always to produce what is really excellent that the supply of the best butter and the richest, purest milk which keeps sweet a long time will always be far less than the demand, and will consequently always bring a good price. The producer of these does not have to exchange them for high priced goods nor hawk them about the streets. He can have his regular customers and a contract price, a good one, for all he can produce.—Journal of Agriculture.

Science of Cheesemaking.

There are many branches of science that are intricate and very difficult to acquire and understand, and if there is one more difficult than another the manufacture of cheese seems to be that one. When we consider the hidden power of rennet action, the active effect of fermentation and bacterial influences, the varied unknown conditions of milk as received at cheese factories and the intricate combinations that any or all of these form to effect the final result, we see the many difficulties the cheesemaker must overcome.—D. M. McPherson, in Farmers' Review.

GRANT THE SOLDIER.

His Greatness Burst Forth When Great Deeds Were Needed.

A Life History Which Probably Has No Equal—Ever Ready for Duty, He Never Neglected the Smallest Details.

[Born, April 27, 1822; Died, July 23, 1885.]

Much that has been written and published concerning the life of Grant prior to the civil war may be ascribed to rhetorical license. Like every illustrious man from Moses to Bismarck, he has been made to suffer in the house of his friends. In the campaigns of 1868 and 1872, which resulted in his election, successively, to the presidency, he was declared to have been a tanner, and, indeed, his admirers substituted this name of a trade for his own, transparencies and the headings of newspaper articles using in big black letters the words, "Grant, the Tanner." As a fact, he knew no more about the tannery business than he did of the languages of the orient. His father owned and operated a number of tanneries, but the only connection which Gen. Grant had with the business was as a clerk in an office at Galena, Ill., where he purchased hides for his father, shipping them to the tanneries in Ohio.

Perhaps no great man who has lived afforded in his life until his thirtieth year so few of the evidences of dormant genius as the victor of Donelson and Appomattox. Born of eminently respectable parents, his youth was passed without exciting incident of any kind. Accident brought him an appointment as cadet at West Point, and so little did the congressman who bestowed this favor know of him that he actually made the blunder of writing his name "Ulysses S.," instead of his rightful one, "Hiram Ulysses." When the young cadet reached West Point and learned that a correction of the error involved labor, time and



GEN. GRANT.

trouble, he philosophically accepted the situation and was known no longer as "Hiram."

Grant at West Point was an earnest, quiet pupil, but was regarded as somewhat dull. The only thing in which he really excelled was horseback riding. In this he had no equal among all his schoolmates. He graduated nearly at the foot of a very large class.

His career in the army was unmarked by any event worthy of record until the Mexican war, when he was honorably mentioned for heroism on the field of battle. When that war was over the tedium of camp life bore upon him heavily. He chafed under the inaction of his life and longed for employment that would call into play the energies of his nature. He had married and a child was born to him, and, finally, he resigned, being then a captain.

But his military training had unfitted him for other work. Then followed eight years of trial and privation that never have been told. Doubtless a record of them will never be made. Those who know the facts are loth to relate them. In his failures there is nothing which reflects upon his manhood; but they were tristful days—days of worry and unrest on his part, days of privation for his devoted and uncomplaining wife. He went to St. Louis and tried the real estate business, in which he was unsuccessful. Equally unhappy was he in an insurance venture. Now and then a little surveying came his way. Yet money reached him slowly, and he had great difficulty in providing for the needs of his increasing family. From his father-in-law, Judge Dent, he received a little land a few miles out from St. Louis. He settled upon this, but there was in him not one trait of the farmer and weeds were more plentiful than growing grain upon his acres. Through more than one winter he supported his family by hauling wood to St. Louis and selling it in the streets.

Finally his father came to his rescue and tendered him a position as clerk and manager in his Galena office at the poor compensation of \$50 per month. He was receiving this sum when the attack was made upon Fort Sumter.

Most quiet and reserved, he made but few acquaintances at Galena. When a mass-meeting was called to endorse the administration and promote volunteering, some one knew him as "Capt. Grant, late of the United States army," and proposed him as chairman, and he was so elected. Elihu B. Washburne, member of congress from that

district and a resident of Galena, was present, and he had never heard of Capt. Grant, having to ask who was the presiding officer.

It is evident that his record in the regular army had made no impression upon the authorities at Washington, for when he addressed a letter to the president offering his services in any capacity in which he might be made useful, and this he did at the beginning of hostilities, the communication was unanswered. Ulysses S. Grant, ex-captain and then a tanner's clerk, was too obscure a person that he should be noticed by those in authority.

Wearied of waiting, he went in person to Springfield and offered his services to Gov. Yates. That official had no use for him and plainly told him so. But Grant was persistent and held on. Many raw recruits were coming into Springfield, and it occurred to the governor that the ex-army officer might make a good drill master, and it was in this capacity that Grant first served his country in the civil war.

Yates was an observant as well as a most able man, and he saw that the men committed to Grant learned their duties rapidly. Presently a regiment arrived which grew rebellious and chased away its colonel and other field officers. Yates was in a strait. Here was rank revolt, which must, in the interest of discipline, be promptly put down, but how to do it was beyond his ken. Then he bethought him of the quiet but efficient drillmaster, and he asked Grant if he would take command of the regiment. Coolly and laconically Grant said he would, and his commission was promptly made out.

Within two weeks this recalcitrant regiment was one of the best ordered and disciplined in the state of Illinois. In effecting this wonderful transformation he indulged in no heroic and meted out no severe punishment. In his own quiet way he introduced order, and the men appeared to know that in him they had a master whom they will might honor and obey. It was with this regiment that he proceeded to Belmont and snatched a victory in the face of defeat. And it was his conduct here that indicated to the authorities that Grant was a man who might be trusted safely with command of men.

Until Belmont Grant had afforded no proof that his life might be in any sense eventful. He had tried army life and given it up as a failure. He had assumed one civil calling after another only to fail in it. Now, at 39 years of age, he was colonel of a volunteer regiment, as hundreds of other men were, and the war was before him. Still his ability had stamped itself upon the governor of Illinois, and shortly afterward he was made a brigadier general. This promotion did not come, though, until he had won it by the thoroughness of his organization of the army gathered at Cairo.

And now all things changed in the life of this marvelous man. On a sudden, like a meteor, he flashed upon the war sky; yet, unlike the meteor, his brightness remained, increasing until the end of the great war. He proceeded against Fort Donelson, and when asked by the beleaguered generals what terms he had to offer, replied in these two words, which became the slogan of all the federal armies: "Unconditional surrender." Fort Henry came next and then Shiloh. Jealousy placed him under arrest after Donelson and after Shiloh, but his name had become national and the people were sounding his praises. But yesterday a tanner's clerk, to-day the conqueror of four memorable battles. This, too, while federal generals elsewhere were losing battles to the enemy. He was released from arrest and proceeded on his way from conquering to fresh conquest. He gave Vicksburg to the nation and then proceeded to the relief of Rosecrans at Chattanooga.

In all these battles, a succession of victories, he made no complaints, never called for any additional troops, and his reports to Washington were models of brevity. Fame did not turn his head. He was as modest, as unassuming, as quiet and reserved after Lookout Mountain as he was when a private citizen at Galena.

The youth and earlier manhood that were unpromising were really preparation days for the great responsibilities of his after life. His army life gave him experience for generalship; his privation schooled him to patience and persistence of purpose. The great reserve force was present in him and only required the exigencies to bring them out. He failed in no requirement of the civil war. When Lincoln gave him command of all the armies he was as ready for these added duties as he was for those of a simple drillmaster under direction of the governor of Illinois. The greatness in the man burst forth when great duties were needed to be performed.

WILLIAM ROESER CORBEE.

His Noisy Brides-a-Bride.

Bliss—Wigwag has a collection of beer mugs decorated with all the college yells. Queer idea, isn't it?

Hobbs—Not at all. Didn't you ever hear of the cup that cheers?—Town Topics.

Wise Precaution.

"Why do you say that you will marry only a widow?"

"Well, I think it is the part of wisdom to get some one who has already discovered that men are not angels."—Chicago Post.

ROUND ABOUT JERUSALEM.

The Wall of Lamentation, as Described by a Famous French Painter.

J. James Tissot, the distinguished French illustrator of the "Life of Christ," gives this picturesque description of a scene at the Wall of Lamentation:

"Let us now turn into the Jews' quarter and go to the Wall of Lamentation. Friday is the best day to choose for this, because on that day the Israelites are there in greater number, and one thus has a wider variety of types at hand. All along this old Solomonic wall, every stone of which is of the greatest antiquity, are leaning crowds of men, most of whom are clad in more or less shabby fur greatcoats. The majority of them seem to be poor, but one must not be certain as to that point. Some hold their heads in their hands and press their brows against the wall; others read. From time to time one will sob, whereat all the rest begin to weep and wail in the most doleful manner. I noticed one fellow in particular, who was as fat as though he had been fed from birth on sauerkraut and had drunk nothing but beer his whole life-long. He swayed to and fro and nearly choked himself in his efforts to provoke a few reluctant tears. He struggled vainly, making all manner of piteous and frightful faces; he then began moaning in a feeble voice, and finally, at the crescendo, the climax of his fictitious grief, he bellowed at the top of his lungs and shook from head to foot. His antics so disgusted me that I was forced to change my place. Notwithstanding such exhibitions as this, I saw among those present many who had real sorrows, profound griefs, several of whom were fine, dark, Jewish types, and who, I learned, had come from Portugal. What touched me most deeply, however, and that which at the time caused the tears to dim many an eye, was the sight of a group of Jewish women, who were easily distinguishable by their costume, the striking features of which consisted of black velvet bandeau about the brows and a yellow shawl thrown over the head and shoulders, half veiling their faces. They were moving slowly away, with tears streaming gently down their cheeks; they murmured softly to themselves or were quite silent. They would walk a few paces, then turn gracefully about, and, drawing their hands from their black mitts, they would throw a good-by kiss, a last adieu, to their beloved wall—their consoler, their confidant, their true friend. 'For,' said an honest Jew who often acted as guide for me in my many wanderings about Jerusalem, 'this wall is a friend to whom we confide all our sorrows; it has known our fathers when they were happy and prosperous; it sees us now in our misery and many troubles; it links us with the past, it consoles us, it comforts us, and we go through life aided, sustained, and uplifted by it.'"

WHY SAILORS QUARREL.

Sudden Freedom from Restraint in Shore Leave Induces Bribulousness and Fights Follow.

The list of casualties in the fight between Admiral Sampson's sailors and Jamaica boatmen at Kingston was greater than the losses of the American navy in the battles off Santiago and Manila, which proves that rocks and clubs and angry fists may be used with deadlier effect than 11-inch guns and armor-piercing shells.

The reason that American sailors and marines are inclined to fight in foreign ports is—first, that they are restrained from indulgence in liquor on board ship, and, second, because it is the time honored rule of the navy to fight anybody, anywhere, at the drop of the hat. There is always a convenient cause for combat when the sailor or marine lands, after an enforced abstinence from rum and succeeding the tedium of a long cruise or voyage.

There does not seem to be any way to remedy this condition unless it would be to take into the navy only persons of decorous conduct and abstemious habits, which would probably weaken the efficacy of warships in battle. Or a reform might be brought about by paying sailors and marines from \$75 to \$100 a month and then require good behavior on pain of being discharged. But that would make the navy cost so much that even the United States couldn't stand the expense. But it is certain that mere penned up in ships for months and deprived of intoxicants are bound to enjoy themselves by looking for trouble when they go ashore.—Kansas City Star.

A Wife's Privilege.

"How did you get this injury?" asked the doctor as he was dressing a scalp wound on the man's head.

"She broke a dinner plate over my head," was the reply.

"Your wife?"

"Of course. You don't think I'd let any strange woman come into my house and knock me about this way, do you?"—Philadelphia Press.

The Supreme Test.

Harold—I'm going to ask Marie to be mine, for I've discovered that she has the disposition of an angel.

Herbert—What test did you apply? "Stepped on her skirt as we descended the stairs and she smiled."—N. Y. World.