

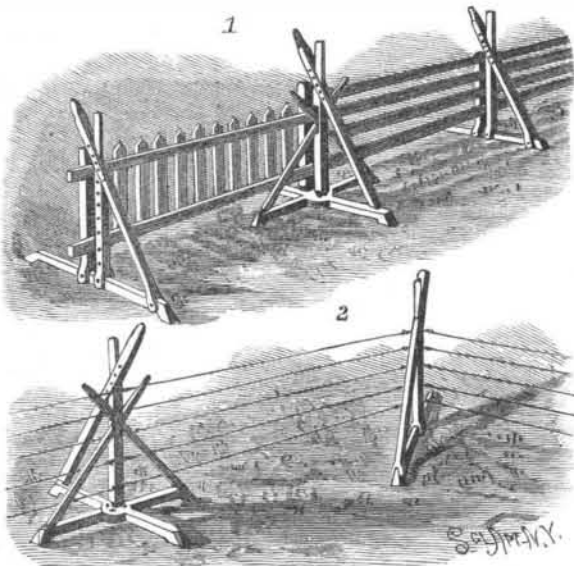
The water works are the property of a private corporation; the sewage works belong to the township. With these two improvements added to its beautiful residences and macadamized and telfordized roads, East Orange may claim to be a model community. Not the least striking feature is the fact that these improvements were executed when it was only a township, possessing the simplest forms of administration, not having reached even the dignity of a village charter.

#### Coffee and its Effects.

Coffee owes its stimulating and refreshing qualities to caffeine. It also contains gum and sugar, fat, acids, casein, and wood fiber. Like tea, it powerfully increases the respiration; but, unlike it, does not affect its depth. By its use the rate of the pulse is increased and the action of the skin diminished. It lessens the amount of blood sent to the organs of the body, distends the veins and contracts the capillaries, thus preventing waste of tissue. It is a mental stimulus of a high order, and one that is liable to great abuse. Carried to excess, it produces abnormal wakefulness, indigestion, acidity, heartburn, tremors, debility, irritability of temper, trembling, irregular pulse, a kind of intoxication ending in delirium and great injury to the spinal functions. Unfortunately, there are many coffee tipplers who depend upon it as a drunkard upon his dram. On the other hand, coffee is of sovereign efficacy in tiding over the nervous system in emergencies. Coffee is also, in its place, an excellent medicine. In typhoid fever its action is frequently prompt and decisive. It is indicated in the early stages before local complications arise. Coffee dispels stupor and lethargy, is an antidote for many kinds of poison, and is valuable in spasmodic asthma, whooping cough, cholera infantum, and Asiatic cholera. It is also excellent as a preventive against infectious and epidemic diseases. In districts rife with malaria and fever, the drinking of hot coffee before passing into the open air has enabled persons living in such places to escape contagion.—*Journal of Commerce (Boston).*

#### AN IMPROVED FENCE.

A fence of novel construction, which may be set plumb on rolling or sloping lands, and readily erected or removed, is illustrated herewith, and has been patented by Mr. John M. Fellows, of Burlington, Ind. The main posts, and the intermediate or corner posts, are adapted for use either with rails or pickets or wires. The base of the main post has four arms, the extremities of the arms being bent down to form feet, and at the center of the base is an eye bolt engaging loosely the lower end of the upright, or post proper, the upper end of which is cut away to form a tenon, and on the shoulders thus provided on the main post rests the upper slotted end of an inside side brace. The tenon passes through the slot in the upper end of the brace, and is connected therewith by a nutted bolt or pin, passed through one of a series of holes in the brace, to allow of the latter being set at different angles, according to the nature of the ground. Other braces, pivoted to the opposite base arms which lie parallel with the fence, have their upper ends passed

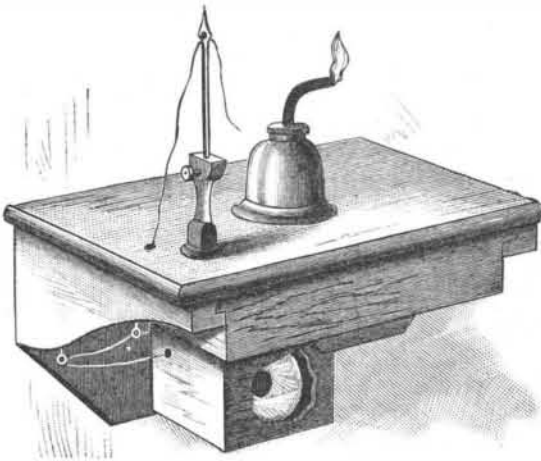


FELLOWS' FENCE.

through a slot in the post, where they are adjustably held in position by a pin passed through one of a series of holes in both braces, whereby the post may be set plumb both ways, and locked in position by the pinned braces. A post to be alternately used has a cross piece or base ranging transversely to the fence, this post having a pivoted upright, a pivoted inner brace, and an outer pivoted face post or upright. All parts of these posts are preferably to be made of cast or wrought metal, to be light and strong, and give substantial support to the rail or wire stringers of the fence.

#### AN IMPROVED NEEDLE AND TWINE CUTTER.

A simple and effective device, whereby packages of paper, money, etc., may be expeditiously punctured and tied, is illustrated herewith, and has been patent-



WOOD'S NEEDLE AND TWINE CUTTER.

ed by Mr. Fremont E. Wood, of Yucca, Arizona Ter. It is designed for use preferably in connection with a little stand or bracket, to support a lamp for sealing purposes, and a drawer for wax, pens, cord, etc., the body of the device having at its lower end a threaded stud or pin adapted to be screwed in the support. It has a neck essentially diamond-shaped in cross section, making opposing cutting surfaces, above which is a longitudinal aperture, and a set screw, whereby a needle with spear-like head, in which is an eye, may be firmly held in vertical position. With this device twine or ribbon may be conveniently used, and readily cut off at the desired length after the package has been tied.

#### He Fastened Down the Safety Valve.

It is almost incredible that a man in his senses should walk up to a boiler which is discharging steam through its safety valve, and deliberately close that only avenue through which the surplus steam might escape to prevent a dangerous over-pressure.

And yet this thing is done with a frequency which is alarming. Only a few days since, we learned from an inspector that he had found a battery of boilers, every safety valve upon which was wedged down by a pine plug, "to keep them from leaking;" and now come the particulars of an explosion in this State, reciting that one Arthur Leavitt, annoyed because the escaping steam from the safety valve of his boiler made his horses restless, fastened the valve down with a heavy weight. The natural consequence ensued, and, although swift retribution was meted out to the offender, he carried into eternity another and innocent man, while as a result of his criminal act two men are suffering serious injuries, a pair of valuable horses and a large factory are destroyed, and a prosperous business seriously interrupted.

The man who will deliberately tamper with the safety valve of a steam boiler is a first-class rascal. If the consequences of his act reverted upon himself alone, he might be forgiven, but there is no knowing how widespread and disastrous may be the results of his folly, and he should be placed in the same category as the man who would put a fuse to a power magazine or lay the train to incite a conflagration.—*Power and Steam.*

#### What Constitutes a Faithful Employee.

An exchange says: Every faithful employe will constitute himself the guardian of his employer's property. The man who will either willfully waste what is intrusted to his care, or encourage such waste in others, is unworthy of confidence, and, should he ever become the head of a business, will deserve to be treated in the same way.

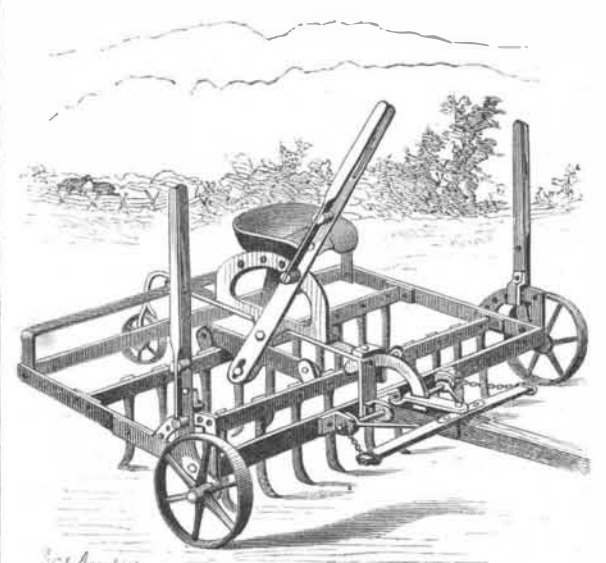
There is a vast deal of truth in the above, adds the *Industrial World*, and yet how many workmen there are who willfully squander not only the property of their employers, but, what is equally valuable, the time which the latter pays for.

Workmen do not seem to know that the prosperity of a manufacturing concern oftentimes depends upon the observation of closest economy. The enlargement of the wage fund depends on this economy, and any fair-minded employer would rather expend in wages the amount saved by economical observance than have the amount wasted. The little waste here and there that seems so trivial to the workman, when scattered through a great number of hands amounts in the total to a large sum. When a workman, sees the first evidence of a machine getting out of order, by drawing the attention of the proper parties he may save an expensive bill of repairs and also a considerable loss consequent upon the idleness of the machine while undergoing repairs. The careless workman says, "It is none of my business whether the machine gets out of repair or not," and so he lets it run on until it is entirely disabled. A workman observes a quantity of material

carelessly left where it will deteriorate or be spoiled. Instead of taking care of it, or notifying the manager or superintendent, he allows it to remain and be destroyed or injured, consoling himself with the thought that "it is none of his loss any way." Perhaps he observes a brother workman willfully wasting or injuring the material upon which the latter is working. Duty would tell him to inform the foreman of such a dereliction on the part of his fellow laborer, but he does not, for lack of interest in his employer's welfare. He may see where a saving could be made in the manipulation of the material upon which he is working, yet for lack of interest he refrains from making any suggestions leading to the discovery of that fact. Not infrequently the workman refrains from protecting his employer's rights and property because by so doing it will entail additional labor or care upon himself, or impose a responsibility which he does not wish to assume. Some seem to think there is no obligation incurred by them when engaging themselves to work except such as is included in the rule of "doing the least work for the most pay." Such men shuffle through their labors, slighting the work here, wasting material there, squandering all the time they can, and thinking of no one's interest save their own. This class of workmen are the first to be dismissed when hard times come. When wages fall, theirs are the first to be lowered. If the force of the shop, by reason of slack trade, has to be curtailed, they are the ones selected to leave. Self-interest teaches the manufacturer to give the best places and the largest remuneration to his most faithful workmen. This is not only natural, but right and commendable. The employe who thinks most of doing his work well and of subserving his employer's interests, and less of combinations and strikes, will succeed the best and rise the highest and the most rapidly in the scale of prosperity.

#### AN IMPROVED HARROW.

A harrow adapted for conveniently adjusting the teeth to enter the ground any required depth, or at any angle, or in which they can be raised out of action as desired, and readily locked in any of their adjustments, is illustrated herewith, and has been patented by Mr. James M. Ulsh, of Steelton, Pa. To the outside of the side beams of the frame, near its front ends, are pivoted elbow levers, the shorter arms of which project forward and form at their ends bearings for the axles of the main supporting wheels, the longer arms projecting upward and forming handles, whereby the wheel bearings can be adjusted at any desired height, and the frame thus caused to travel at any desired height above the ground. Segmental plates are provided with which the elbow levers can be readily locked in any position to which they may be adjusted. On the front end of a central elevated brace is a keeper, receiving adjustably a segmental bar fixed to the draught tongue, by which the frame of the machine may be rigidly connected to the tongue at any height. In bearings on the inside of the side beams are mounted to turn the end pivots of two transverse tooth bars, the teeth being beveled and curved at their ends. The arrangement is such that the points of the teeth of each row will alternate in position with those in the other, and, by turning the tooth bars on their pivots, the teeth can all be swung up into the frame of the machine, so as to



ULSH'S HARROW.

be inactive, or held downward in an approximately vertical position, to cut the ground edgewise, or into any intermediate desired. The transverse tooth bars have upwardly projecting arms, connected together by a longitudinal bar, the latter connected to a lever pivoted to the elevated brace, and forming a handle by which the two rows of teeth can be easily adjusted together in any of the positions described, the handle lever having a segmental plate-locking device. A model of this machine may be seen at the office of Messrs. Bonner & Murguiondo, No. 186 Remsen Street, Brooklyn, N. Y.