

RECENT INVENTIONS.

Mr. Jeppe Jeppesen, of Provo City, Utah Ter., has patented an improved machine for dressing both sides of boards at once for dressing the edges at any angle desired, for tonguing and grooving, cutting mouldings, and other varieties of work in wood. The inventor makes use of two endless chains of links, fitted with cutters, combined with an adjustable bed, above and below which the chains are fitted to move in adjustable guides. A feed bed and feeding device are combined with circular saws, for carrying the material to the cutters and squaring the ends at the same time. The links of the chains are of peculiar construction, each being a plane having cutters adapted for doing the work required.

Mr. Bernard H. Hilmes, of Altamont, Ill., has patented a screw-cutting machine or implement, the dies of which are reversible and so held and operated that after the formation of the thread the bolt may be removed from between the dies without the necessity of unscrewing the bolt or turning the machine back.

An improvement in biscuit machines has been patented by Mr. Daniel M. Holmes, of Cincinnati, O. The object of this invention is to crimp the sheets of dough upon the under side or upon both sides before the sheets are cut into cakes. The invention consists in a biscuit machine with two crimping rollers placed at different levels, and in such positions that their faces can be brought into contact with each other, or nearly so, and a smooth roller placed above the upper crimping roller, so that a sheet of dough will be crimped upon both sides or upon the lower side, according as it is passed between the two crimping rollers or between the upper crimping roller and the smooth roller.

An improvement in thrashing machines has been patented by Mr. James C. Keith, of Battle Creek, Mich. The object of this invention is to prevent winding of the straw upon the thrashing cylinder when the machine is being used where the straw is long and flexible. It consists in a novel construction and arrangement of a revolving comb and stationary but adjustable comb shield combined with the thrashing cylinder, so that any straw which may be disposed to wind upon the cylinder is arrested and combed out and thrown into the separator.

In making coffeepots the lip or spout has usually been constructed separately from the body and attached thereto by means of solder. This method involves skilled labor, and is also expensive, and the attachment is in a measure insecure, besides detracting from the appearance of the vessel. Messrs. Gibson T. Ayer and Benjamin W. Taylor, of Delaware, Ky., have patented an improved coffeepot, in which the body and spout of a coffeepot are made from one piece of sheet metal without stretching, spinning, or swaging the metal for that purpose.

Messrs. S. M. Wilkes and W. H. Hyer, of Staunton, Va., have patented a bed lounge having a seat or bottom which is adapted for reversal, so that it may be conveniently and quickly adjusted with the mattress side uppermost, thus temporarily converting the lounge into a bed. The head of the bed or bottom is swiveled to a bifurcated support formed of a metal rod whose ends are pivoted in the sides of the frame of the lounge, so that by drawing the seat back from the head of the lounge it will be raised on the support, and may then be reversed.

An improved anti-chafing gear for horses and mules has been patented by Mr. Wheelock Winspear, of Mount Pisgah, Ohio. The invention consists of an endless band, of leather or other suitable substance, shaped to fit upon the shoulders and neck of the animal, beneath the collar, and held in place by attached straps that buckle to the surcingle.

An improved instrument for taking observations at sea, either at day or night, to determine the ship's position, has been patented by Mr. Charles M. Hellberg, of Jersey City, N. J. The invention consists of a frame having an arc of 180°, suitably and adjustably mounted, in combination with a day and night binocular telescope and reflecting glasses, the instrument being designed as a substitute for the ordinary sextant or quadrant.

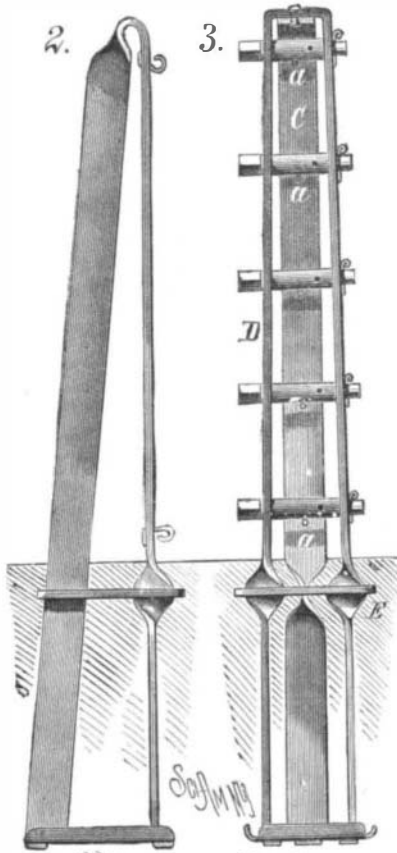
Mr. Charles J. Gustavson, of Salt Lake City, Utah, has patented an improved spur having simple strap connection, so that a heavy strap may be employed that may be readily connected or disconnected from the foot. The improvement consists in securing a pointed hook or horn upon the end of the rim in a peculiar manner, that may be readily inserted into unslit perforations through the heavy leather.

Mr. Joseph P. Smithers, of Brooklyn, N. Y., has patented an improved electric lamp. This invention relates mainly to carbon-point lamps, but a portion of it is also applicable to incandescent lamps. The invention aims chiefly to pro-

vide an electric lamp of the former class with such regulating mechanism as will be sensitive to slight changes in the carbon points, and cause them to approach or separate, as their condition may require, by frequent but infinitesimal motions, so as to maintain the relative positions of the points uniform, and consequently render the light absolutely steady.

NEW IRON FENCE.

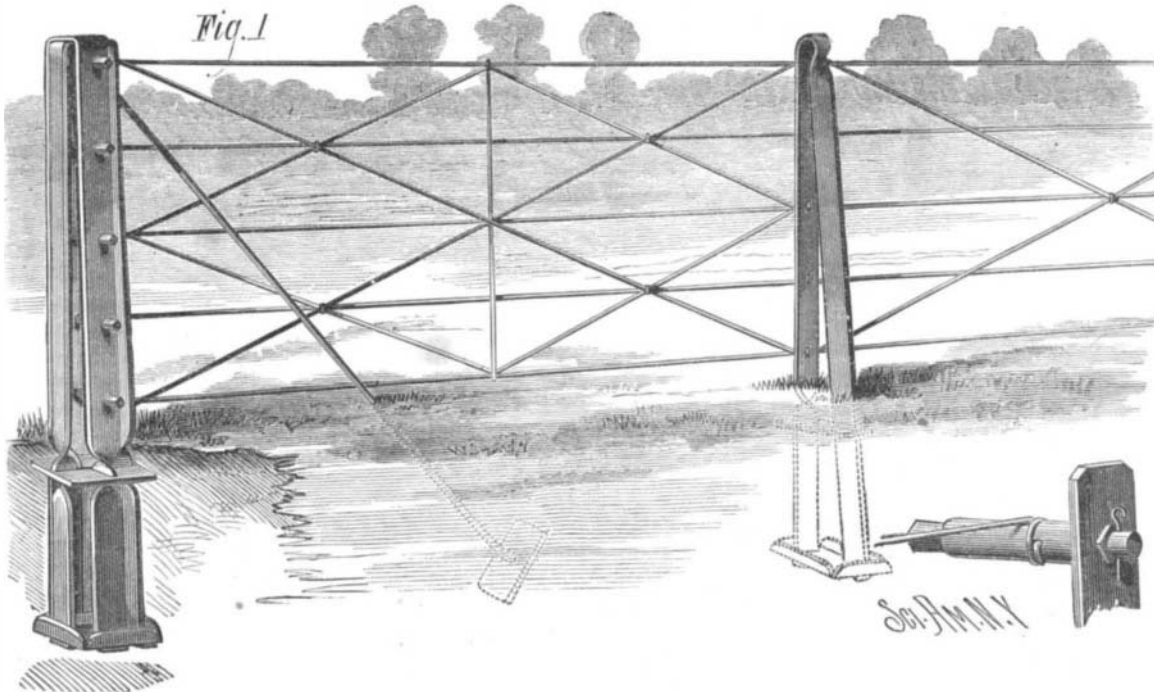
The fence shown in the annexed engraving is light, strong, and equally well adapted to the requirements of town or



PANEL AND TERMINAL POSTS.

country. When used on farms the panels will generally be composed of long stretches of wire, but for gardens and city places the panels are shorter, and diagonal wires are stretched across them to render them more showy and ornamental. In a farm fence the posts may be set and then horizontal wires may be run to inclose a given area, and if after a time it is found desirable, two more horizontal wires may be added, and the fence may finally receive diagonal wires if it is found necessary or desirable. It will thus be seen that the fence may be completed by degrees, and by the extension of the system of diagonal wires the fence may be made as close as necessary for the confinement of the smaller animals.

The principal feature of the fence is the post, which is made in two forms, one for the ends or corners, another for the panel. In both of these forms the post is made with the smallest quantity of material consistent with the requirements, and the metal is so disposed as to insure great strength and rigidity.



REICHENEKER'S METALLIC FENCE.

A glance at the engravings will give an idea of the construction of the post and the manner of setting it. The corner post consists of two metal bars, each bent midway of their length to form the two sides of a rectangular shaft. These bars thus bent are placed together, the top of one coming beneath the top of the other, and the sides of the

one partially closing the sides of the other, so that when secured together at their tops the two united form a rectangular post having corner openings through most of their height. The portion C of the post (Fig. 3) is perforated at a for the reception of the wires, and the part D is provided with transverse rotating tighteners having their bearings in the side bars as shown. The bars forming the posts are provided with half-twists just below the ground line of the posts, and at this point is placed a knee plate, E, which is slotted for each arm of the post. Each arm of the post is first given a quarter twist to the right, and then, by slightly compressing the lower ends of the four arms, the slotted plate may be slipped upon them and pushed up until the twists in the arms have been reached. When releasing the arms will expand and bind the knee plate, G, in place. Each arm of the post is then given another quarter turn to the right below the knee plate, which brings their faces back in line with the upper portions of the arms and securely locks the knee plate in place, thus dispensing entirely with the use of bolts or screws to secure them.

The lower ends of the arms of the post are provided with nibs, and a slotted foot plate is secured to the foot of the post by passing the nibs through the slots and clinching them on the under side.

The tighteners (shown in detail in Fig. 1) are provided at one end with a post for the wrench or key by which they are wound to tighten the wires. Near the other end of the tightener a square portion is formed, which enters a square opening in that side of the bar; and at the extreme end of each tightener is a cylindrical portion having a perforation through which a key is passed to lock the square portion in its rectangular opening in the arm of the post. When it becomes necessary to tighten the wire the key must be withdrawn and the tightener pushed inwardly from that end until the square portion leaves the rectangular opening in the post, when the tightener may be turned until the wire is sufficiently taut, when the tightener is pushed back to its normal position.

After what has been said in regard to the corner post, the construction of the panel post, shown in Fig. 2, will be readily understood.

Of course either plain or barbed wire may be stretched on the posts, and the metal ribbons, either plain or twisted, may be applied with equal facility.

This improved fence was recently patented by Mr. William C. Reicheneker, of Denver, Col. Further information may be obtained by addressing the inventor, at present at Kansas City, Mo.

Capacity of Cathedrals and Churches.

In Forbes' "Tourists" the capacity of the larger European churches and cathedrals is given as below: St. Peter's Church, Rome, holds 54,000 people; St. Paul's, London, 35,000; St. Sophia's, Constantinople, 33,000; the Florence Cathedral, 24,300; St. Petronius, Bologna, 24,000; St. Paul's, Rome, 32,000; St. John Lateran, 22,900; Notre Dame, Paris, 20,000; the Pisa Cathedral, 13,000; St. Stephen's, Vienna, 12,400; St. Dominico's, Bologna, 12,000; St. Peter's, Bologna, 11,500; the Cathedral of Vienna, 11,000; St. Mark, Venice, 7,000; the Milan Cathedral, 7,000. These figures, it will be remembered, do not refer to seating capacity.

The "Cry of Tin."

If a piece of tin be bent, it emits a sound; this, being regarded as a property peculiar to tin, has been termed the "cry of tin." This phenomenon is explained by the peculiar crystalline structure of the metal. Reasoning that if this explanation be the true one, then other metals, obviously crystalline in structure, should also exhibit the phenomenon, Mr. J. C. Douglas, who records his observations in the *Chemical News*, heated a piece of rolled zinc for a few minutes to a temperature somewhat below its melting point, when the metal became much less tough, and its fracture decidedly crystalline. On bending a piece so treated, it emitted a sound weaker than that emitted by tin, but of the same nature. Cast zinc cannot be bent readily; but if pinched between the teeth or with pliers, it emits the sound distinctly. The conclusion, therefore, is that the cry of tin is due to crystalline structure, and may be emitted by zinc and probably by other metals when crystalline in structure. The practical application is, that by the sound a metal emits "we may draw conclusions as to its texture, and hence its fitness for certain purposes, or, by the sound emitted by a beam when bent, we may draw conclusions as to its safety, the microphone or other appliance being called in to aid us where the sounds are exceedingly weak."