cylinders—which had been tried in India, and he asserted that none of them equalled the native "churka." The cotton gins required for the East Indies are the small (hand) sort, and with the churka or native gin, one man can only clean 20 lbs. in twelve hours. It appears to us that this new double cylinder gin is well adapted for all kinds of short staple cotton; and from the advertisement of the company on another page, we learn that they manufacture hand as well as power gins. With a small double cylinder gin, one man will clean 200 lbs. of cotton in the same space of time that he will clean twenty pounds with a churka. We think that if the agents of the East India company were to witness these improved American gins in operation, they would meet with the same favor from them that the "Excelsior Sea Island Cotton Gin" received in Egypt. Small gins of this character are also well adapted for the use of those farmers who have begun to cultivate short staple cotton in Southern Illinois, Indiana, and Kansas.

THE ANNUAL EXHIBITION OF THE ACADEMY OF DESIGN.

The National Academy of Design opens this year with a full and fine display of pictures, and the names of those artists who have become celebrated at home and abroad are well represented by their works. McEntee, Casilear, Cropsey, Hart, Durand, Beard, Bierstadt, and many other famous artists contribute of their genius and people the long green room with patches out of the cool heart of the forest, with scenes by the way, with groups of still life, and all the busy or silent transactions of the world of nature and of art. There are doubtless technicalities to carp and sneer at, and flaws which might be picked and pointed out by those profound critics who *do* the columns on art in the daily papers; but as for us, though we lose forever the opportunity of passing judgment on an art we are not at all familiar with—though we pass over the learned stock-in-trade of gibberish about shadows, and middle ground, and fore ground, of depth, distance, treatment, gray skies, cool tones, and a multitude of other swash-buckler phrases employed by critics to conceal their ignorance—though we omit them, we did not enjoy any the less the real effect of the artists' skill. A great improvement is manifest in the character of the exhibition over that of former years; not indeed because the critics have been so profuse in their adjectives, but by reason of the inevitable refinement and cultivation which attends and hedges about a true artist. Though groping blindly at first, and seeing nature as through a glass darkly, yet he comes sooner or later to know her face to face, and the result of such communion is that nature, dwelling in the heart of the painter, sits upon his canvas and beams upon the eyes of the visitor at the gallery like a leaf out of the early memories of his youth. There are a myriad of summer days embalmed in that narrow green room, and there are cool green lanes that wind in and out; and groves of trees; so vivid and distinct do these stand out that one listens with uplifted ear, half expecting to hear the susurrus and murmur of the soughing pines, or the shivering of the maples that bend to the soft south wind. There are battle scenes too, wherein the terrors of the war are reproduced. A cavalry charge in Virginia, in which the brave young Lieut. Hidden lost his life; above the cut-and-thrust of the scene depicted so faithfully on the canvas, the hero of the fight, Lieut. Hidden, looks down from another frame, and one can scarcely believe that his slight form could have performed such a feat as it did, dispersing two companies of rebel infantry with a squad of fifteen men. Those who delight in spending a quiet hour would do well to avail themselves of the attractions of the gallery.

BURNING OF AN OIL TRAIN.—The Philadelphia *Ledger* states that recently a train of truck cars on the Pennsylvania road, laden with petroleum, was ignited by a spark from the locomotive, somewhere near Kittanning Point, Pa., on the mountains. In a few minutes four of the cars were in flames. The rest of the train was cut loose and saved. The heat of the fire was so intense and consuming that the cross-ties of the track on which the cars stood, and also the track adjoining, were burned through, and the rail so warped as to render it difficult for trains to pass. The axles of the cars were melted down until they almost touched the road bed, and the wheels were bent inward.

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list:—

Press for forming Dies.—This invention consists in the arrangement of two hinged levers acting on a vertically sliding plunger, and acted upon by adjustable slides guided by grooves in the inner side of the frame of the press in combination with two arms projecting from the main or upper follower and acting on the adjustable slide, and with an adjustable press box in such a manner that the metal or alloy in the press box can be subjected simultaneously to a pressure from top and bottom, while, at the same time, the press box prevents the metal spreading, and consequently produces a clear and distinct impression or a die of the desired shape and size; it consists further in the employment of a press acting simultaneously from top and bottom for the purpose of forming dies by pressing the matrix or pattern on a red-hot body consisting of an alloy of tin and copper; it consists further in making the sides of the press box, removable and adjustable, so that the same can be set to suit dies of various sizes and shapes. Max H. Stein, of New York city, is the inventor of this improvement.

Fire-arm Primer.—This invention relates to primers the magazine of which, containing the percussion caps or pellets, is in the head of the hammer and the delivery of the caps or pellets from which is effected by a feeding slide actuated by the descent of the hammer. It consists, first, in a certain mode of applying the spring by which the feeding slide is drawn back as the hammer is raised, whereby the construction of the primer is simplified; and, second, in the application of a spring stop in connection with the lever which works the feeding slide, whereby the primer, while its magazine is full or partly full of caps or pellets, may be rendered inoperative, and the hammer be made to operate as an ordinary hammer upon caps applied to the nipple in the usual way, thereby enabling the caps or pellets in the magazine to be held in reserve. A. F. Tait, of Morrisania, N. Y., is the inventor of this primer.

Desiccating Apparatus.—The object of this invention is to effect the desiccation of fruits, vegetables, meats, fish and other substances at so low a temperature as not to impair their flavor or nutritious properties; and to this end it consists in the employment, in such desiccating process, of a pan or vessel of suitable depth to contain such substances, arranged within or over a vessel containing water and heated by the vapor rising from or through said water at a temperature not above the boiling point; the said water being heated by steam or by the direct application of fire to its containing vessel, and the latter vessel being open to the atmosphere. It also consists in the employment, in combination with such desiccating vessel, of rollers for crushing and spreading out, and rakes, scrapers or stirrers for stirring up the substances to be desiccated; such rollers, rakes, scrapers or stirrers being attached to and driven by a rotating shaft arranged in the center of the vessel. W. K. Lewis, No. 93 Broad street, Boston, Mass., is the inventor of this improvement.

Improvement in Pianofortes.—This invention consists in an improved construction of what is termed in pianofortes the full metallic plate, whereby the bringing any of the string bearings on any such plate is avoided; thus bringing the connections of the strings with the tuning pins on wooden bearings, and so close to the wrest plank as to prevent the leverage and great strain on the pins, which is unavoidable when the strings pass over the plate, as has commonly been the case when the plate has been used. By these means the only objection heretofore existing to the use of such plate is obviated, which is so advantageous in all other respects. David Decker, of the firm of Decker Brothers, No. 91 Bleecker street, New York city, is the inventor of this improvement.

Letter Envelope.—The object of this invention is to produce a letter sheet which can be conveniently folded up and sealed the same as an ordinary envelope, and which can be cut out with little waste of paper, and its whole surface, or nearly so, can be made available for writing. It consists, first, in extending the side flaps over the whole width of the sheet, and overlapping the same with or without gum, in such a manner that said side flaps, before folding, form an essential part of the letter sheet to be written upon the same as the central portion of the sheet, and that the contents of the letter when the same is folded, cannot be read by pressing the edges of the letter and peeping in sideways; second, in the arrangement of marks or notches at the ends of the side flaps and opposite to the head flap, in such a manner that, in folding over the side flaps, two points are provided to serve as guides in creasing, one point being the junction of the head and side flap, and the other the notch or mark opposite to that junction, and thereby the operation of folding the letter is rendered easy. William Murphy, of 438 Canal street, New York city, is the inventor of this improvement.

Device for moving Goods and Merchandise.—This invention consists in the employment of two endless chains having crossbars attached to them and fitted over rollers or pulleys which are secured to a plank or skid, the latter having guards attached to its sides and ways to either or both of its surfaces, all being so arranged that the freight or merchandise may be moved with the greatest facility for loading and unloading vessels, and for similar or analogous purposes. Robert Bragg, of San Francisco, Cal., is the inventor of this apparatus.

Railway Car for carrying Petroleum.—This invention consists in the construction of the body of a railway car of corrugated or other sheet iron in the form of a cylinder, whereby it is made of the greatest strength with the least practicable weight of material, and is rendered especially applicable to the transportation of petroleum and other liquid substances; it also consists in the combination with such car body, of a system of pipes running under the whole or any portion of the length of the bottom of the car, near the sides thereof, and furnished with a series of cocks and flexible branch pipes for drawing off the liquid contents of the car into several barrels or other vessels at once. And it further consists in the protection of the said cocks by means of boxes so constructed and arranged as to allow the flexible branches to be stowed away within them and furnished with suitable doors through which the cocks may be reached to open and close them, and through which the flexible branch pipes may be drawn out for filling the barrels or other vessels. S. J. Seely, of Brooklyn, N. Y., is the inventor of this improvement.

OIL A PRESERVATIVE AGAINST THE PLAGUE.—It is a singular but undoubted fact that as often as that fearful and contagious malady, the plague, has broken out and decimated the population of Smyrna, Constantinople, Candia and other parts of the Levant, there is not a single case on record of any one of the numerous kamalides or porters employed in the loading, unloading or transportation of oil ever having been attacked by, much less succumbed to, that dreadful scourge of the human species in the East. Indeed, so well is this known by the men themselves, that they fearlessly offer their services to carry the sick to the hospitals, bury the dead and attend on the sufferers.

THE DIGNITY OF LABOR.—The Connecticut House of Representatives is composed of 109 farmers, 15 merchants, 14 manufacturers, 13 lawyers, 9 mechanics, 3 clergymen, 3 physicians; teachers, editors, lumber-dealers, clerks, tobacconists, hotel-keepers, 2 each; ship-masters, printers, mariners, surveyors, glass-blowers, 1 each.

[The reader will notice that farmers come first, and bringing up the tail end of the list are *editors*, glass-blowers and lumber-dealers in very close proximity. It is an old saying that misery makes strange bed-fellows.—EDS.

BY the latest statistics of Australia, we learn that there are only 2,500 Americans in those British Colonies. Five years ago there were about 10,000: but most of them have returned to California.