

## 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:—

**Sewing Machine.**—This invention relates to a cloth guide for a sewing machine, which is composed of a fork with three or more prongs, so that the strain on the material to be sewed, as the same is drawn through the guide, produces the requisite friction, and no basting is required. By giving to the prongs of the forked guide an oblique position, the material to be sewed is carried up against the gage, and by using two or more guides placed side by side, or one above the other, two or more pieces of material can be sewed together, and a straight seam can be produced without basting. An adjustable gage, applied to the prongs of the guides, serves to regulate the position of the different pieces of material in relation to each other. The guide or guides are used in combination with the ordinary gage, which is adjustable, on an angular guide bar, in such a manner that when the guides and gage are not needed they can be pushed back and turned up on the side of the standard supporting the needle slide and mechanism for operating the same, and when said guides and gage are required, they can be readily adjusted in the desired position. Albin Warth, of Stapleton, N. Y., is the inventor.

**Fan.**—This invention consists in forming the body of a fan of one or more thin sheets or veneers of any desired kind of wood, fastened together by glue, cement, or by any other proper means, and attached to a suitable handle or stick, and also in imparting stiffness and strength to any and all kinds of fans, whether made of paper, card, silk, wood, etc., by forming and placing upon and entirely around their outer edges or rims a proper-shaped metallic band or bands, which are securely fastened thereto in any suitable manner. Benj. M. Smith, of New York City, is the inventor.

**Attachment for Locks and Latches.**—The object of this invention is to obtain a simple, economical, and burglar-proof attachment, which may be applied to all kinds of locks and latches without injury to the door, and which will render any ordinary lock or door to which said lock may be applied secure against burglary—the device being capable of being used as a night latch, or as an auxiliary attachment, or so as to form the only means for operating the bolt. Alonzo E. Dietz, Brooklyn, N. Y., is the inventor.

**Turn-table for Railroads.**—This invention relates to a new and improved manner of pivoted turntables for railroads, whereby the former are allowed to turn with but little friction, and the pivot kept in a proper lubricated state at all times. The pivot consists of a ball and socket, the latter being composed of two parts, and the lower portion made in the upper end of a fixed standard, the upper part of the socket being in a metal plate connected by rods to the standard, and all arranged and covered by a cap. J. I. Kinsey, of South Easton, Pa., is the inventor.

**Well.**—This invention relates to wells which are made by sinking or driving a tube into the ground without first digging or boring a hole for it. One mode of making such a well is to drive into the earth a tube whose lower end is brought to a point, and which end is perforated, so that after the tube has been driven down to the place where water is found, such water can enter the tube through its perforations, and can then be pumped up by a piston in the ordinary way. This invention is meant as an improvement on that mode, and it consists in driving down a soil pipe of sufficient length to reach a vein of water, and which pipe is lessened in diameter at a certain point near its lower end within it by a tapering swell. The cylinder or pump barrel is made conical or tapering at its lower end, and is, moreover, perforated in that part. On letting the barrel down into the soil or driving pipe, which pipe constitutes the well tube, its conical perforated end passes the said contracted part, but the part of the barrel which is of full size is stopped at the throat of the contraction and becomes wedged fast. The piston works in that part of the pump barrel which is above the contraction. The upper end of the pump

barrel is contracted within, or has an internal flange against which the piston strikes when it is pulled up higher than its working stroke, and thereby loosens the barrel from the well tube, so that it can be drawn to the top of the well. James H. Bump, of Unadilla, N. Y., is the inventor.

**Tobacco Cartridges.**—This invention consists, essentially, in stiffening their bottoms so that they can be screwed down upon a tube leading to a smoking pipe or tube, and be sustained thereon without a bowl. The bottoms of the cartridges may be made of stiff thick paper, or other material, having a perforation through their centers, to enable them to be connected to a smoking apparatus. The perforation may be covered by a perforated diaphragm which will allow air and gases to pass, but will arrest fine particles of tobacco and ashes. A. C. Breckenridge is the inventor, and has assigned his patent to H. J. Hale, of No. 16 Beekman street, New York.

**Hat.**—The object of this invention is to improve gentlemen's hats, especially that class of hats whose bodies and brims are flexible, or made of flexible material, although it is applicable to all kinds of men's hats. It consists in placing around and attaching to the body of a hat at the place of its junction with the brim, or of incorporating in or with the body of a hat at that place, a wire spring, whose ends are united to form an unbroken ring. When the spring is placed on the outside of the hat, it is securely tacked to the body in or along the joint, where it will be concealed by the hat band, which is next placed over it. D. W. Gitchell, of No. 63 Broadway, New York, is the inventor.

**Self-acting Brake.**—This invention relates to an improved self-acting wagon brake, and it consists in having the brake shaft connected, in a novel way, with the front bolster of the vehicle, the bolster applied to the vehicle, the front end of the perch or reach slotted, and all arranged in such a manner that the front bolster will, under the gravity of the load, in descending an eminence, be made to serve as a lever to actuate the brake shaft and apply the shoes to the wheels. The invention further consists in applying and arranging the shoes in such a manner that they will not interfere with the backing of the vehicle. C. A. Smyth, of Charleston, Ill., is the inventor.

**Process for Treating and Cooking Food.**—This invention consists in a new process of treating and cooking food, wherein the substances to be cooked are inclosed within tight cans or vessels and treated in a steam-tight vessel or boiler under a heat exceeding that which marks the boiling of water in the open air, and in such a way as to shut off the access of atmospheric air, and the escape of vapor or volatile matter and aroma from such substances; or such substances may be treated in the boiler without first placing them in cans. Samuel S. Fitch, M. D., of New York, is the inventor.

**Liquid Cooler.**—This invention relates to a cooler for beer and other liquids, composed of series of chutes placed in an inclined position, and communicating with each other by means of suitable curved aprons in combination with chambers secured to the under sides of the chutes, and communicating with each other by means of similar pipes, in such a manner that the beer or other liquid to be cooled can be made to run down successively over the several chutes, while, at the same time, water or other cooling liquid is caused to run in an opposite direction through the chambers under said chutes, and the beer or other liquid to be cooled, while running over the chutes, is exposed on one side to the cooling influence of the atmosphere, and on the opposite side to that of the water or cooling liquid, and the operation of cooling is effected rapidly, and with little labor or expense. Chas. P. Zimmerman, of Newark, N. J., is the inventor.

**Balance Slide Valve.**—This invention relates to a balance valve which is made in two parts, the bottom part being made to work steam-tight against the seat or bottom, and the top part steam-tight against the cover of the valve chest. The invention consists in the use of a follower and packing rings, in combination with the upper part of the valve, which is forced up against the cover of the valve chest by means of springs in such a manner that the valve is free to lengthen and shorten like a telescope, without allowing the steam to escape at the joint between its

two parts, and the upper part of the valve is free to work steam-tight against the cover of the valve chest, whereas the bottom of the valve, at the same time, works steam-tight against the seat or bottom of the valve chest, and the valve is perfectly balanced. This patent was issued Nov. 21, 1865, to Stephen D. White, of Centralia, Ill.

## Curious Obstacles to the Establishment of the Telegraph in India.

From an article in the *Atlantic Monthly*, for Dec., we extract the following passages:—

"The establishment of the electric telegraph in India presented some curious as well as difficult problems. In the first place, it was discovered that the air of India is in a state of constant electrical perturbation of the strongest kind, so that the instruments there mounted went into a high fever and refused to work. Along the north and south lines a current of electricity was constantly passing, which threw the needles out of gear and baffled the signalers. Moreover, the tremendous thunder storms ran up and down the wires, and melted the conductors; the Monsoon winds tore the teak posts out of the sodden ground; the elephants and buffaloes trampled the fallen lines into kinks and tangles; the Delta aborigines carried off the timber supports for fuel, and the wire or iron rods upon them to make bracelets and supply the Hindoo smitheries; and the cotton and ice boats, kedging up and down the river, dragged the subaqueous wires to the surface.

"In addition to these graver difficulties were many of an amusing character. Wild pigs and tigers, scratched their skins against the posts in the jungle and porcupines and bandicoots burrowed them out of the ground. Kites, fishing eagles, and hooded crows came in hundreds and perched upon the line to see what on earth it could mean, and, some times after a thunder storm, when the wires were wet, were found dead by dozens, the victims of their curiosity. Monkeys climbed the posts, and ran along the lines, chattering and dropping an interfering tail from one wire to another, which tended to confound conversations with Calcutta."

## Condensed Correspondence.

Messrs. Quarterman & Son write us, saying that a convenient way to keep cisterns clean is to insert a wire-cloth funnel in the top of the leader pipe, so as to prevent leaves from getting down.

Mr. W. McCracken, of Princeton, Ill., writes us a long letter on cotton cultivation, which we cannot publish entire. He says, however, that a great deal of the cotton grown at the South is upon hilly and stumpy ground, and in other situations which render the operation of a machine, as well as for picking the machine itself, an impossibility.

Mr. J. Henry Potter, of Bridgewater, Mass., writes concerning a small steam engine which he has built for driving a watchmaker's lathe; he being in the watch-repairing business. This steam engine is seven-eighths bore, and one three-eighths stroke, and has a horizontal cylinder. It has an oval boiler, thirteen inches greatest diameter, by eight inches high, which is worked by two kerosene burners. The engine makes about 300 revolutions per minute, works with great ease, and is a desirable and practical thing for small purposes. It carries ten pounds of steam.

## Objection to Iron Cars—Immense Coal Traffic.

The practical objection to the use of wrought-iron cars, in transporting coal, is not the extra cost over wood, for that is more than compensated for in their increased durability; but it is the difficulty in repairing them. When the frames get bent it is next to an impossibility to get them straightened into shape again.

Some idea may be formed of the extent of the wear and tear of the rolling stock on coal-transporting railroads when we state that, on an average, one car out of every ten in use is daily put aside for repairs; of course some of them require only slight attention. The Reading Railroad has about eighteen thousand coal cars, and between two and three hundred locomotives employed in their coal traffic alone, which, the past year, has amounted to over three millions of tons.