

## 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:—

**Slide Valve of Steam Engines.**—In slide valve steam engines it is desirable, more especially in those of large size, to obtain a full opening of the port with the smallest practicable movement of the valve. To obtain this result it has been common to make the valve double-ported; but in making the valve double-ported, both for steam and exhaust, a difficulty has arisen, viz: the want of an effective mode of applying a cut-off, the arrangement of the ports having rendered it impracticable to apply a cut-off valve or valves riding on the back of the main valve. This invention consists in the combination with a slide valve which is double-ported, both for steam and exhaust, of a cut-off valve or valves riding directly on the back thereof. It also consists in a certain arrangement of the ports in such double-ported valve whereby the application of the cut-off valve or valves riding directly upon its back is made practicable. Isaac V. Holmes, of New York City, is the inventor of this improvement.

**Seam-holder for Machine Sewing.**—In sewing two or more thicknesses of cloth together by the sewing machine, the thickness which is near the feeding surface always tends to move faster than the other thickness, and the work is thus caused to be drawn. The object of this invention is to obviate this, and also to dispense as far as practicable with basting, and to this end it consists of a rod having attached to it two hooks or teeth, one or both of which are movable lengthwise thereon, so that by inserting the said hooks through the cloth and drawing them as far apart as possible they will keep the seam stretched even. The said seam-holder also obviates in a great degree the necessity of the operator reaching out to hold the work while sewing. George Fowler, of Waterbury, Conn., is the inventor of this improvement.

**Baling Press.**—This invention relates to an improved baling press of that class in which side levers are employed for operating the plunger. The invention consists in a novel and simple means for elevating the plunger at the commencement of its work whereby the levers at such time may be nearly or quite in a horizontal position, and several advantages obtained over the ordinary baling presses. The invention also consists in a simple means for ensuring a horizontal movement of the plunger, and also in an improved arrangement of the head or cover of the press-box whereby the filling of the latter and the removal of the bale therefrom is greatly facilitated. Peter Philip, of Hudson, N. Y., and Peter J. Stophilben, of Schodack, N. Y., are the inventors of this improvement.

**Percussion Fuse.**—This invention relates to percussion fuses, the fulminate of which consists of a glass capsule which is filled with a liquid and the exterior of which is coated with or enveloped in a chemical substance which is caused to take fire by the contact of the liquid on the breaking of the capsule by the percussion produced by the striking of the projectile against any resisting body when fired from a gun. It consists in certain means whereby the capsule is prevented from being broken in the handling of or by the accidental dropping of the projectile, but its breakage is insured when the projectile strikes on being fired from the gun. George P. Gansster, of New York City, is the inventor of this improvement.

**Sewing Silk.**—In the manufacture of sewing silk it is essential that the strands or cords, while being twisted to form the thread, be of an equal thickness throughout and the cords or strands also kept at an uniform tension in order to form an even or uniform twist of the same. This has not hitherto been perfectly done and the sewing silk after manufacture is necessarily sorted and divided into several qualities according to the evenness or regularity of the twist. The reason for this imperfectness of the manufactured article is due in the first place to the stock, the irregularity in the imported thread, the filaments of which, as they are unwound from the cocoons are not matched and kept in an even state, filaments not being added to compensate for breakage and their gradual

diminishing thickness as they are unwound from the cocoons. Another reason is carelessness in the matching operation, that is, the twisting of the cords or strands to form the thread of silk. The duty of the attendant of the matching frame consists in watching the cords or strands as they are unwound from the spools or bobbins and twisted, and if one cord or strand becomes thinner or thicker than another, to break it off and put another in its place equal in thickness to those on the frame. If this be neglected, and it almost invariably is to a greater or less extent, uneven thread is the result. To obviate these difficulties, the silk is subjected, after being twisted and moistened and before being deprived of its natural gum, to as great a state of tension as it will bear without danger of breaking, and thereby draws or stretches the several cords or strands to form an even and first quality of merchantable thread. J. E. Atwood & G. Holland, of Mansfield, Conn., are the inventors of this improvement.

**Telegraph Register.**—In all telegraph registers heretofore constructed, the style or steel pen is so attached to the pen lever as to be immovable laterally; and in order to write upon the paper in as many lines as practicable the paper has to be moved laterally and the working surface of the rollers has to be of a length almost equal to twice the width of the paper. As one of the rollers is pressed upon the paper by means of springs bearing on each end of the roller, every time the paper is moved laterally these springs have to be re-adjusted else the pressure of the roller will be greater on one edge of the paper than on the other, causing it to run untrue in its passage between the rollers. The main object of this improvement is to obviate the necessity of moving the paper laterally and thereby obviate the above difficulty; and to this end it consists in the arrangement of the style or pen in a holder which is movable in a direction parallel with the length of the rollers, by which means also the machine is enabled to be made much narrower, requiring less pinion wire for its construction, and the clock train is made to run more truly by reason of the axles being shorter. This movable pen necessitates the provision of several grooves in the roller against which the pen operates, instead of only one groove as in the rollers of the registers heretofore constructed, the said grooves corresponding in number and in distance apart with the lines of writing desired to be made on the paper; and the invention further consists in a certain mode of combining the movable pen-holder with the pen lever, and adjusting it relatively to the several grooves of the roller whereby the said pen is enabled to be brought exactly opposite to the said grooves and the lines of writing on the paper are always made at equal distances apart, so that a greater number of lines are enabled to be made upon the paper and the paper thereby economized. Robert Henning, of Ottawa, Ill., is the inventor of this improvement, which has been assigned in full to Judge Caton of the same place.

**Saving Silver.**—This invention consists in the employment or use, either in combination with the basin or sink into which persons using solutions of gold or silver suffer them to be wasted, or in place of said sink or basin, of a vessel so arranged and constructed that the waste solution while running through said vessel shall be brought in contact with such chemicals or metals which will cause the whole or any part of the silver or gold contained in said solutions to be precipitated and retained in said vessel, while the worthless material is allowed to escape; it consists further in the use of a partition or its equivalent in said vessel or sink, for the purpose of forcing the precipitated silver or gold to the bottom and preventing it from being drawn by the force of the current directly to the filter or outlet; it consists finally in the employment of a filter or its equivalent in combination with the sink or vessel in which the waste solution collects in such a manner that said filter will retain such particles of silver or gold, which might still float in the liquid after being brought in contact with the chemicals and passing under the partition. Jehyleman Shaw, of Bridgeport, Conn., is the inventor of this improvement.

**SHUTTLES OF ALUMINUM BRONZE.**—Messrs. Paul Morin and Co., manufacturers of aluminum at Paris, have just taken out a patent for the use of aluminum bronze in making shuttles.



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42,151.—Corn Planter. John Agnew, Bath, Pa.:

I claim the sliding or adjustable crank-shaft, I, connected with the bar, G, of the slides, F F, by means of the pitmen, H H, in combination with the bar, J, provided with the beveled projection, A, the shaft, K, lever, M, and cranks, h h, connected with the furrow-openers, O, all being arranged to operate substantially in the manner as and for the purpose herein set forth.

[This invention relates to a new and improved seed-planter of the class which are designed for planting seed in hills and in check rows. The invention consists in a novel and improved seed-dropping mechanism with means for turning the same out of gear simultaneously with the elevating of the shoes or furrow-openers, whereby the seed-dropping drill is placed under the complete control of the driver, and is capable of being manipulated by him when the machine is being drawn along. The invention also consists in the employment or use of a marking device arranged and applied to one of the wheels of the machine, whereby the latter may always be started correctly at the commencement of each "bout" or movement across the field, and the seed planted in check rows so that the plants may be plowed the ways at right angles to each other.]

42,152.—Ambulance.—G. W. Arnold, Morgantown, West Virginia:

I claim an ambulance provided with couches suspended on pins, g g, which are attached to slides, H, the latter being fitted on vertical rods, I, and resting on spiral springs, J, substantially as herein shown and described.

I further claim attaching the side curtains, F, to rollers, C, substantially as described, to facilitate the raising and lowering of the curtains as may be required.

[This invention consists in a novel manner of arranging couches within the body of an ambulance, whereby the couches are retained in a proper position when the ambulance is passing over inclined ground, the couches being also allowed to yield or give vertically under the jarring movement of the ambulance, and all so arranged as to afford the greatest possible degree of ease and comfort to the wounded, while being conveyed from the field of battle to the hospital designed for their reception and future treatment. The invention further consists in a novel and improved arrangement of the curtains of the ambulance, whereby the former may be readily raised and lowered by the device, as the state or condition of the patients may require.]

42,153.—Manufacture of Sewing Silk.—J. E. Atwood & G. Holland, Mansfield, Conn.:

We claim the process of giving sewing silk an uniform or evenly twisted appearance by subjecting the same, after being twisted and moistened and before being deprived of its natural gum, to a requisite degree of tension in the manner substantially as herein set forth.

42,154.—Slide Valve for Steam Engines.—John Baird, New York City:

I claim the combination of a face plate with a slide valve by means substantially as described, whereby an endwise or lateral motion of the former causes its acting face to recede from or approach the back of the latter, substantially as set forth.

42,155.—Manufacture of Paper Pulp.—Lucien Bardeux, Poitiers, France. French patent dated June 7, 1861:

I claim the above described process of making pulp for the manufacture of paper and pasteboard, adapted to vegetable as well as animal substances.

42,156.—Treating Animal Charcoal.—Edward Beanes, London, England:

I claim the employment of hydro-chloric acid gas, and chlorine in a gaseous state, in the preparation and treatment of animal charcoal, substantially as and for the purpose herein described.

[The object of this invention is to convert, by the application of hydro-chloric acid and chlorine gas, the lime and other earthy and alkaline matters in the charcoal into soluble salts, without producing any important action upon the phosphate of lime contained in the charcoal. Mr. Beanes can be addressed care of H. Medlock, 20 Great Marlborough street, London, England.]

42,157.—Ladies' Leggin.—Elizabeth F. & Sidney S. Bedford, Johnstown, N. Y.:

We claim the construction and arrangement of the ladies' leggin, as herein described and for the purposes set forth.

42,158.—Device for sewing Hat-linings in Sewing Machines.—Job W. Blackham, Brooklyn, N. Y.:

I claim, first, in combination with the operative parts of a sewing machine, the within described arrangement of the wheels, a a, anti-friction wheels, b b, and traversing carriage, B, adapted to support the part which carries the hat tip, and allow it to rotate and slide freely back and forth, as herein specified.

Second, I claim in connection with the above the employment of the two ovals, E and F, arranged at right angles to each other and adapted to act on the wheels, G H, or their equivalents, so as to give a positive motion in both directions, substantially in the manner and for the purpose herein set forth.

42,159.—Method of expanding Tubes in Tube Sheets.—Reuel Blackwood, Philadelphia, Pa.:

I claim the employment of a hydraulic press provided with a head, a z, on its projecting main stem, a', in combination with the frustum of a cone, E, and a suitable clamp, F, arranged to operate together, substantially in the manner described for the purpose specified.

42,160.—Clothes-dryer.—H. S. Blood, New Orleans, La.:

I claim, first, The employment or use of a series of poles, D, fitted to a platform, C, or to any suitable fixture attached to a window-sill, in such a manner that said poles may be capable of being rotated for the purpose of winding the clothes upon them and unwinding the clothes therefrom, substantially as and for the purpose herein set forth.

Second, The segment or curved bars, k l, attached to the platform,