

DECISIONS OF THE COURTS.

United States Circuit Court—Southern District of New York.

THE BACHELDER SEWING MACHINE.—JOHN BACHELDER vs. WILLIAM J. MOULTON et al.

BLATCHFORD, J.:

The renewed letters patent granted to the plaintiff December 12, 1865, for an improvement in sewing machines, and on which the motion for a provisional injunction in this case is made, were the foundation of the suit of Potter vs. Braunsdorf (7 Blatchf., C. C. R., 97,) decided by this court on final hearing. Every question necessary or pertinent to the decision of the present motion was considered in that case, and disposed of adversely to the defense. Since that time such renewed patent has been, by an act of Congress, approved July 14, 1870 (16 U. S. Stat. at Large, 656), extended for seven years from the 8th of May, 1870.

The sewing machine of the defendants in the former case was called the *Ætna* machine, and employed, as a perpetual feeding device, a cylinder moving intermittently by revolving on a horizontal axis, and so arranged that the cloth laid horizontally upon it and was partially supported by it. Such cylinder was situated immediately in front of the needle, and was provided with a roughened surface, which acted from below, through an aperture in a horizontal table, upon the under surface of the cloth to be fed, and operated, in feeding, in combination with a yielding curved pressure foot, which was pressed from above, by a spring, upon the upper surface of the cloth, such foot also acting as a needle stripper. The *Ætna* machine was provided also with the other devices necessary to make up the combinations covered by the first, second, third, fourth, fifth, sixth, and eleventh claims of the Bachelder patent—namely, a reciprocating eye-pointed needle and a reciprocating needle carrier, moving substantially in vertical planes; a horizontal holding surface provided with a throat for the passage of the needle; a holding surface forming part of the supporting base; and a table, a part of which was so arranged with reference to the feed, as to receive and aid in supporting the material in its passage from the feed. In the *Ætna* machine the material could be fed perpetually while it was supported horizontally, and a seam of any length could be sewn without requiring the sewing to be stopped at any time to attach a fresh portion of the material to the feeding instrument. This is a material feature distinguishing the Bachelder machine from those which preceded it. The *Ætna* machine had, it is true, a capacity beyond that of the Bachelder machine—namely, that of sewing a seam of any desired curvature, arising from the fact that, in the Bachelder machine, the material is impaled on pins, while, in the *Ætna* machine, the roughened surface of the feeding cylinder engaged with the material only to such extent as was necessary to move the material forward, but not to such extent as to prevent the free lateral turning of the material by the operator during the process of feeding, so as to produce a curved or angular seam. But this, though an improvement on Bachelder's invention, embodied that invention.

The machine of the defendants in the present case is known as the Whitney sewing machine, and uses, as a perpetual feed, what is known as the feed of Allen B. Wilson. That feeding arrangement was covered by two patents issued to Wilson, which have now expired. One of them, reissue No. 346, issued January 23, 1856, was extended, and expired November 12, 1871. It covered, in its claims, four features of invention: First, the described method of cutting the material to be sewed to progress regularly by the joint action of the surfaces between which it is clamped, and which act in conjunction; second, holding the material at rest by the needle, or its equivalent, in combination with the method of causing it to progress regularly; third, arranging the described surfaces in such relation to the needle that they, or one of them, shall perform the office of stripping the material from the surface of the needle, and attaching one of the feeding surfaces to some other part of the machine that it may be removed or drawn away from the other surface at pleasure. The other patent, reissue No. 414, issued December 9, 1855, was extended, and expired November 12, 1871. It covered, by one of its claims, a combination of three elements—namely, a table or platform to support the material to be sewn, holding it in place by means of a pressure foot, and presenting it properly to the grasp of the feeding apparatus—a sewing mechanism proper consisting of a needle and shuttle, or their equivalents, and a mechanical feed, automatic, and causing the cloth to progress regularly, to which the cloth is not attached, and so grasping the cloth that it may be turned and twisted by the hand of an operator, such twisting not interfering with the regular progression of the material, and the feeding of two surfaces of the material, which clamp the material. The material is advanced and moved forward under the needle, to receive the stitches, by the joint operation of two such surfaces or bars. One of such bars has a rough surface and a lateral motion. The other has a smooth surface and no lateral motion.

The machine of the defendants has Bachelder's horizontal holding surface in having a small horizontal receiving plate, through slots in which the reciprocating feed bar project upward, on which plate the material immediately about the needle rests, so as to be borne up horizontally under the thrust of the needle, such plate being perforated with an opening or throat for the passage of the needle.

The machine of the defendants has Bachelder's yielding pressure holder, in having a spring pressure foot near the needle, which rests on the upper surface of the material, and holds the material to the bed on which it is supported, the pressure foot adapting itself to variations in the thickness of the material.

The machine of the defendants has a reciprocating eye-pointed needle, and a reciprocating needle carrier, substantially like those of Bachelder. In all these particulars in which the *Ætna* machine was like the Bachelder machine, the defendants' machine does not differ from the *Ætna* machine. This embraces all particulars except the feed. In the defendants' machine the cloth is advanced regularly and horizontally, by an intermittent motion, and the rough surface of the feeding cylinder is placed beneath and the surface of the pressure foot above. It is apparent that, in the arrangement and operation of the defendants' feed, and its relations to other co-operating parts of the machine, there are the following material features in common with Bachelder's machine: The cloth lies horizontally on the feeding device, and a portion of the surface of the cloth which is intended for the passage of the needle and of the horizontal holding surface, is supported by the feeding device during the act of feeding. The material is fed perpetually, so that a seam of any length can be sewn without removal or replacement of the parts of the machine. The material is delivered, with a seam sewn in it, upon the receiving plate.

In the Bachelder machine, different portions of the belt are feeding at different times, and in the defendants' machine the feeding device is always feeding at different times, while, in the defendants' machine, the same part of the feeding bar always acts in feeding. But this difference is immaterial. The action, in feeding, of the parts employed at one time in feeding, is the same in the two machines, so far as the essence of Bachelder's invention of a perpetual feed is concerned. So, too, it is an immaterial difference, that, in the Bachelder machine, the feeding device is always in contact with the material, and always aids in supporting it, while, in the defendants' machine, the feeding device is not always in contact with the material, and, therefore, only aids at intervals in supporting it. Equally immaterial is it that, the defendants' feeding bar being provided with a roughened surface instead of with impaling pins, seams of any desired length can be sewn in the defendants' machine, while such seams cannot be sewn in the Bachelder machine. But this is the same difference which existed between the *Ætna* machine and the Bachelder machine. The increased capacity given to the machine by the facility of turning and twisting the material, due to the absence of impaling pins, is an improvement, but the vital features of Bachelder's arrangement are retained. The feeding device of the defendants has a horizontal surface, which, at the time of feeding, aids in supporting the material, and thus makes the feeding possible, and is a perpetual feed, and delivers the material to and upon the receiving plate.

The point most strenuously urged on behalf of the defendants is that heretofore suits have been brought in many of the courts for infringements of the renewed patents of Wilson, before mentioned, Nos. 346 and 414; that the defendants in those suits have set up the prior existence of the Bachelder machine, and the prior granting of the Bachelder patent, as destroying the novelty of the above recited claims of the Wilson patents; and that it has been uniformly held that there was nothing in the Bachelder machine or the Bachelder patent to invalidate those claims. These decisions of the courts are urged as applicable to the feeding arrangement of Wilson in the present motion, and as a familiar one in the patent law. Bachelder had no right to use Wilson's improvements without Wilson's consent. Wilson, on the other hand, had no right, in constructing a machine containing his own improvements, to embody therein the improvements patented by Bachelder, without Bachelder's consent.

Nothing is shown which antedates Bachelder's inventions on the point of novelty. The plaintiff's title and the validity of his claims are free from doubt, and have been established, and the infringement by the defendants' machine is clear.

An injunction must issue on all the claims.

Solomon J. Gordon and George Gifford, for complainant.

Theodore Cuyler and Andrew Boardman, for defendants.

Recent American and Foreign Patents.

Improved Car Coupling.

Richard Lloyd, Cleveland, Ohio.—The invention consists in the coupling bars, provided with V-shaped and inclined or dovetailed shoulders upon their upper and lower sides, and at different distances from their points, and jointed to the ends of the drawbars. It was illustrated and fully described on page 395 of the current volume of the SCIENTIFIC AMERICAN.

Improved Spike Bar.

George Douglass, Bridgeport, Conn.—Bars for drawing spikes on railroad tracks and in other places are very liable to be broken, and they fall first in the claws. The object in this invention is to provide a remedy; and it consists in making the claws in separate pieces and attaching them to the bar, so that if either claw fails it may be renewed without trouble or delay.

Improved Land Roller.

William H. Grow and Crawford M. Sloan, Darlen, Kan.—Each roller is formed of wooden staves or sections, secured together by means of rods, which pass through them. Both ends of each of the rods pass through the section or stave, and are provided with screw nuts, which fit in recesses formed in the edges of the stave. A central transverse groove is formed in each stave, which adapts the cylinders to be applied to the wheels and firmly secured thereto. When this is to be done, the nuts are removed from the ends of the rods, and the staves separated from each other, so as to make the cylinders large enough to admit the wheel. When the latter have been adjusted in the grooves, the staves are again brought close together and clamped around the wheels by means of the rods and nuts. The wheels are mounted on an axle provided with a tongue forming a running gear, such as is ordinarily used as the front running gear of farm wagons.

Improved Eaves Trough Hanger.

Thomas G. Williams, Akron, O., assignor to William Warner & Co., of same place.—The invention is an eaves trough hanger having a prolonged end, adjustable vertically in a clamp, and turned over to hold the trough at any elevation desired, thus avoiding the use of an adjusting screw.

Improved Machine for Cutting Cloth.

Nathaniel C. Fluck, Gloucester, Eng.—This invention consists of a movable cutting table or board on a stationary bed, a guide for the cutting knife, a pawl for moving the cutting table, and an adjustable stop and a gage for regulating the movement, all combined in a manner by which the cutting of cloth strips into sample pieces of any size required is simplified and facilitated. The extent of forward movement of the board and the cloth upon it is regulated for the required length of samples by a stop against which the shoe of a pawl strikes, and by which it is arrested. A guide is then swung back down on the cloth, ready for guiding the knife for cutting off the sample, and a gage shows where to fix the stop for samples of the length required.

Improved Ventilator and Pipe Hole Plate for Tents.

Robert Brien and William Brien, Jersey city, N. J.—This invention consists of a metal plate, provided with an aperture of sufficient size to afford proper ventilation or allow the exit of a stove pipe, and which is fastened to the tent cloth, or to a suitable patch in the latter. A valve is arranged for closing the orifice, provided with springs and a cord and pulley.

Improved Belt Hole Cover.

Toppin P. Rodgers, Taunton, Mass.—The stationary part of the cover is made in two parts, which fit closely upon each other, and are secured together by bolts passing through the sides of the case. The bottom plates of said case are secured to the floor. The upright plates project upward at any desired angle, according to the direction of the belt, and are made in the form of segments of circles. Curved flanges are formed upon the lower part of the inner sides of the uprights, near their edges. The inner edges of these flanges correspond with and fit upon each other, where they are secured in place by projecting points which interlock. The upper or movable part of the belt cover has a base plate which is curved upon the arc of a circle to fit and slide upon the arched flanges as a seat. In the middle part of the base plate is formed a hole of sufficient size for the belt to pass through freely, and which is surrounded by an inclined flange, making the opening hopper-shaped. By this construction the belt can carry the upper part of the cover with it in its lateral movements, and the said part will stand in any position into which it may be moved, preventing the belt from being rubbed and chafed.

Improved Toy Horn.

William A. Harwood, Brooklyn, N. Y.—The mouth piece is cast in two parts, in one of which is formed a little slot in which the reed is inserted at one end and wedged in so as to be held. The other piece is in the form of a conical tube, and fits on over the one in which the reed is fitted and is secured by wedging. In the second place, the part having the reed is formed with a conical tubular portion on the end, to be attached to the body of the horn, and secured by forcing it on the conical end, so as to be held by friction. It may also be soldered, if desired.

Improved Balance.

Edward C. Pickering, Boston, Mass.—The object of this invention is to produce, for the purposes of scientific investigation and the use of the public in general, an improved balance, which consists in arranging a spirit level and adjustable weights with one end of a scale beam carrying a weighing pan at its opposite end. All the weights, large and small, are put on the scale pan, which will then balance the weight of the beam, so that the bubble of the level will come to the center of the tube. If not, a loose nut is adjusted till the exact balance of the weights is obtained. The body to be weighed is then placed on the pan and the weights removed gradually until the bubble is again in the center. The weights removed are equal to the weight of the body. The weights may also be taken off and added in the usual way till the beam is again horizontal. Those remaining give the weight of the body.

Improve Slide for Extension Table.

Jesse King, Oswego, N. Y.—The object of this invention is to so improve the slides for extension tables that the splitting of the slide bars is prevented by transferring the strain to the center instead of the sides, and allowing the construction of the slide bars in half the thickness of the slide bars in common use. The invention consists in arranging the ends of the slide bars with arched side plates having short extensions, which are inclined toward the longitudinal axis and slide in similarly inclined grooves of the adjacent slide bars.

Improved Car Starter.

Archibald H. Crozier, New York city.—A bevel wheel is attached to a sleeve, and revolves freely on the axle. On the back of this wheel is a clutch with which a sliding clutch coupling engages and acts upon the axle when the spring is uncoiling. This spiral spring bears against the coupling, and forces it to engage with the clutch of the wheel. In winding up the spring, the teeth of the coupling clutch slip past each other without affecting the axle; but when the coil spring reacts they engage, and the power is conveyed to the axle. A frame is given a sliding motion beneath the bottom of the car by means of the lever, and is confined to the bottom of the car. A shaft is attached to this frame by journal boxes, and a bevel wheel on this shaft meshes with the clutch wheel, and another bevel wheel on the end of this shaft meshes with the wheel fast on the car axle. The coil spring is wound up around the shaft in stopping or braking up the car. One end of the spring is attached to the shaft, and the other end to the frame. In braking or stopping the car, the two miter wheels are thrown into gear, which winds or coils up the spring and stops the car. Should the momentum of the car be greater than required for winding up the spring, a brake may be applied to the wheel by the driver. When it is desired to start the car, the driver moves a lever to the other end of a stop plate, which throws the bevel wheels out of gear. The clutch wheel, being engaged with the coupling and axle, receives the reactive force of the coil spring and transmits it to the axle, thus starting the car.

Improved Nut Lock.

Casper Dittman, Leacock, Pa.—This invention relates to that class of nut locks which by some elastic substance take up the longitudinal expansion of the bolt, and provide at the same time for a corresponding contraction. It consists in placing rubber balls between a washer and the flanges of nut, and holding them together temporarily by upsetting an annular projecting lip of the one upon the opposite wall of the other.

Improved Machine for Forming Hat Frames.

Biagio Ertola and Angelo Caselli, New York city.—A vertical shaft, pivoted to a cross bar of the frame and its upper end revolving in bearings in the table, is rotated by a lever worked by the foot of the operator. To the upper end of the shaft is attached a circular table, to which is secured the lower form or mold. The upper form or mold, which is secured to a circular table, is rigidly attached to a short shaft which passes up through a hole in the cross bar by which it may be raised. The cross bar is connected with the foot lever so that the operator can bring the upper mold down upon the lower mold to form the hat by pressing down the lever. The material from which the hat frames are formed, and which is wound upon a rod, is dampened by a suitable arrangement of water vessel and sponges.

Improved Combined Extension Measuring Rod and Divider.
George H. Discher, Mobile, Ala.—The object of this invention is to facilitate the taking of measurements between rigid surfaces and striking circles, arcs of circles, and ovals and ellipses. In each of two opposite sides of the center piece is a dovetail groove. Near the inner ends of the extension pieces are metallic dovetails, which fit into and slide in the dovetail grooves of the center piece, and guide and hold those pieces to the center piece. Bands are attached to the center piece, which admit the extension pieces so that they may slide back and forth therein, and are held in any position by thumb screws. These extension pieces are graduated or marked off into inches and fractions, so that the length of the rod in feet and inches may be, at any time, readily ascertained. A removable point and pencil, each fastened in place by a thumb screw, are provided when the rod is used as a tram for striking circles, arcs of circles, ovals, or ellipses. In the latter case, the third point is attached to the end of the center piece. When not used as a tram, the points and pencil may be disposed of in the ends of the pieces.

Improved Blackboard.

James Reber, Nebraska, Ohio.—This invention consists, mainly, in arranging the blackboard with hinged leaves in a strong standard or stock, in which it may be raised or lowered by rack and ratchet arrangement, to be inclined by hinged arm and bow construction, and folded open by pivoted levers.

Improved Extension Trunk.

Gustav Engelsman, New York city.—This invention has for its object to furnish an improved trunk, which shall be so constructed that it may be extended to form a trunk of large size, or contracted to the size of an ordinary trunk. The sides and the end parts of the extension are made with an offset upon their outer and inner sides, the outer shoulder being designed to rest upon the upper edge of the sides and ends of the lower part of the trunk, so that the outer surfaces of the said parts may be flush with each other. The inner shoulders are designed to receive the till. The edges of the ends of the extension are rabbeted upon their inner sides to fit upon rabbeted angle blocks, which have a metallic plate attached to their outer sides to overlap the outer surfaces of the ends. With this construction the hinges that connect the top part to the lower part of the trunk are so formed that they can be readily attached to and detached from the upper part, or rear extension piece, as may be required. The hasp of the lock is made long, and should have two keepers attached to it to enable the trunk to be locked when extended and when contracted.

Improved Grinding Mill.

Price Evans, New York city.—There is a rectangular bed frame on which is an upright frame near one end, consisting of two "bents," on the bridge trees of which is a horizontal shaft carrying the running stone, which overhangs the bridge tree, and runs in a case. In the upper part of the latter is a spout for the escape of hot air, and in the lower part is a spout for the escape of the meal. In front of the runner is a stationary stone, standing face to face with it, and is pivoted at its horizontal axis by trunnions, supported in the arms of a crotched standard, and said trunnions can be shifted forward and back to balance the stone. The arrangement forms a universal joint, on which the bed stone accommodates itself to the runner. The feed shoe, under the hopper, delivers the grain into the eye of the stationary stone, in which there is a projection of the shaft, with a coarse spiral screw thread, which conveys the grain to the runner, where it is met by the radiating distributing plates on the runner, which work it along between the stones and distribute it equally. The shoe is agitated by a tappet on the shaft. It will be seen that these mills can be geared by a direct belt from the driving shaft on the pulley upon the shaft in the most simple manner, and the spindle of the runner has not to support the weight of the stone on its end or step, but only the necessary pressure for grinding.

Improved Apparatus for Preserving and Forcing Beer.

This invention relates to an apparatus intended to preserve such fermented or other liquids, which may be deteriorated, decomposed, or in any way injured by coming in contact with the atmospheric air, or by coming under a less pressure than they were originally subjected to, or by attaining an improper temperature during the time said liquids are on draft. The invention consists in means for excluding the atmospheric air and replacing the same by a gas, indifferent and not injurious to the liquid to be preserved, and bringing said gas under a sufficient pressure to preserve, increase, or diminish the temperature, and thus keep them in their normal condition.

Improved Railway Switch.

William A. Slingerland, New York city.—This invention relates to means whereby the liability of a railway train running off the track in consequence of the misplacement of a switch is avoided. It consists in a peculiar mode of combining a three rail switch and two pairs of frog rails.

Improved Apparatus for Transferring Embroidery Patterns.

Charles Bordas, New York city.—The object of this invention is to facilitate the operation of transferring embroidered designs, patterns, etc., from a perforated original pattern sheet to other sheets of paper or other material. The apparatus for holding and giving tension to the pattern sheet consists of a frame and an adjustable clamp attached to one side of the table by hinges, so that it can be turned up to a vertical position. The adjustable clamp consists of a bed piece with a rib thereon and a hinged clamp, which has a groove which fits on the rib of the bed. The end of the sheet is laid on the bed over the rib, and then the clamp is turned down and fastened by means of the buttons. The clamp is now drawn back, so as to give the sheet the proper tension to hold it smooth and keep it in position. It is adjusted by means of cords, the ends of which are attached to the spiral springs, and the other ends are passed through the eyes. The tension is given by drawing the cords back. When the proper tension is given, the cords are secured around pins, and the clamp is fastened to the side pieces of the frame by the finger screws. By the ordinary process, this stamping, as it is called, through a perforated pattern, is done with colored powder, and the pattern is held by the hand. A single pattern can only be used in this manner, on account of the difficulty in keeping it smooth. By the improvement a number of patterns may be contained on the sheet, and stamped at one operation. Instead of using a powder, a liquid is employed, with which the brush is saturated. When the pattern sheet is properly stretched, the brush, which has been dipped in the liquid, is drawn over it and the impression is made. The frame with the pattern sheet is then raised, and the impressed sheet is removed. The frame is again closed down, and the operation is repeated, and so on for any required period of time.

Improved Spring Bed.

Samuel Smith and John H. Gill, Williamsburgh, N. Y.—This invention has for its object to improve the construction of spring beds in such a way that the bed will not crush down at the side, and that the bed will be level when two persons of unequal weight may be lying upon it. Ordinary coiled springs are interposed between, and the ends of which are attached to, the bottom and top straps. In the outer row of springs, upon both sides of the bed, every other springs composed of two cups, made in the form of truncated cones, placed with their smaller ends adjacent to each other, and with a partition in the neck or smallest parts. Two springs are coiled into conical form, so as to fit into the cups or case and have their smaller ends resting against the opposite sides of the partition of said case. The larger end of the lower spring is attached to the bottom straps, and the larger end of the upper spring is attached to the top straps. By this construction, any tendency to press the bed down or over at the side presses the sides of the springs against the sides of the case. This keeps the springs upright, so that the person upon each side of the bed will be supported by the springs of that side.

Improved Paper Hanger's Brush.

John M. McComb, Lancaster, O.—This invention relates to a novel construction of paper hangers' brushes whereby they may be made to place the paper in proper position upon the wall. It consists in applying a hinged spring-pressed clamp to the top of the brush, also in a novel mode of enabling the operator to open the clamp after the paper has been located upon the wall, by a lifter, connected by a cord or wire with his hand. It also consists in providing the lifter with an extension arm and subjecting this to the action of a crooked lever, which holds the clamp open until the brush is taken down from the wall.