

Where an original machine and an improvement upon it are both patented, neither patentee can use what does not belong to him without the requisite authority from the owner. The appellants have embodied all the ideas of Blake's invention in their machine, the valve which supplemented it, whether good or bad, is outside of the case, and cannot effect the result.

We think the infringement is clearly made out. It remains to consider the question of damages. A few remarks upon that subject will be sufficient.

The proof is meager and indefinite. The infringers made but four machines. No license fee charged by the complainant is shown. The burden of proof rests upon him. Damages must be proved; they are not to be presumed. The complainant made a profit of forty dollars an inch on the width of the jaws of the numerous machines he had sold.

But inventions covered by other patents were embraced in those machines. It was not shown how much of the profit was due to those other patents, nor how much of it was manufacturer's profit. The complainant was, therefore, entitled only to nominal damages. This the court gave him. It was all the state of the evidence warranted. It would have been error to give more.

The decree of the circuit court is affirmed. The costs of each appeal are adjudged against the party taking such appeal.

#### United States Circuit Court—District of Massachusetts.

PATENT LAMP.—CHARLES E. ASHCROFT vs. WILLIAM HOLLINGS.

[In equity.—Before Shepley, J.—Decided April 13, 1877.]

The patent for a lamp, can, or barrel, packed in part with an absorbent or finely granulated material, and over them a body of wire gauze or perforated thin plate, either rolled up like paper scrolls or put flat together like book leaves, is not infringed by the use of a lamp containing cotton covered with a layer of asbestos or porous fireproof cement, and covered with one thickness of wire gauze.

The invention patented to Wm. Beschke, August 14, 1866, includes as a necessary ingredient wire gauze or perforated thin plate in the form of scrolls or of layers like the leaves of a book.

#### OPINION OF THE COURT.

Shepley, J.:

The defense in this case is based upon the alleged want of novelty in the invention described in the letters patent granted to William Beschke and others, August 14, 1866, No. 37,245, "for an improved method of using explosive fluids for the production of light and heat," and also upon a denial of any infringement of the Beschke patent. The question of infringement depends upon the construction to be given to the Beschke patent.

In view of the state of the art at the date of the patent, as well as upon what is clearly described in his specification and claimed in his claims, it appears to be clear that the invention of Beschke is described and claimed as consisting in a lamp, can, or barrel, packed in part with an absorbent or finely granulated material (excluding sand and including sawdust, cotton, beads, shot, gravel, asbestos, and their equivalents), and over them "a body of wire gauze or perforated thin plate, either rolled up like paper scrolls or put flat together like book leaves."

The defendant sells a lamp for heating purposes, manufactured under letters patent issued to Thomas W. Houchin, May 4, 1875, called Houchin's patent pocket cook stove. The lamp is made of metal, and is filled with cotton covered with a layer of asbestos, or of porous fireproof cement of which asbestos is an ingredient. The upper opening is covered with one thickness of wire gauze. There is no tube as distinguished from the body of the lamp, and there is no "body of wire gauze or perforated thin plate, either rolled up like paper scrolls or put flat together like book leaves."

Wherever in the Beschke patent wire gauze or perforated thin plate is alluded to, it is in the form of a scroll or of layers, like the leaves of a book, and after constantly repeating this description throughout the patent, and never using the words without some description of a scroll or layers, except in one instance, and then "wire gauze combined and shaped as mentioned," the patentee adds, "I disclaim also the simple use of mere wire gauze or perforated thin plate not rolled up like paper scrolls or put flat together like book leaves." The wire gauze or perforated thin plate, described in the claim of the Beschke patent, must be construed as referring to wire gauze or perforated thin plate rolled up like paper scrolls, or put flat together like book leaves, as described in the specification, and upon this construction of the claim in the patent the defendant does not infringe.

Bill dismissed with costs.

### Recent American and Foreign Patents.

#### Notice to Patentees.

Inventors who are desirous of disposing of their patents would find it greatly to their advantage to have them illustrated in the SCIENTIFIC AMERICAN. We are prepared to get up first-class WOOD ENGRAVINGS of inventions of merit, and publish them in the SCIENTIFIC AMERICAN on very reasonable terms.

We shall be pleased to make estimates as to cost of engravings on receipt of photographs, sketches, or copies of patents. After publication, the cuts become the property of the person ordering them, and will be found of value for circulars and for publication in other papers.

### NEW MECHANICAL AND ENGINEERING INVENTIONS.

#### IMPROVED CAR AXLE BOX.

Edward L. Colman, Vandalia, Mo.—This relates to an improved car axle box, with anti-friction and self-oiling devices; and consists of the journal revolving in an elongated box, which is made of a top and bottom section, secured by bolted face and back plates. A number of friction rollers pass around the journal and around a guide channel below the same, taking up the oil by a bottom inlet from the outer box.

#### IMPROVED BRICK MACHINE.

Thomas McNicholas, Memphis, Mo., assignor to himself and Thompson Walker, of same place.—The moulds are similar to hand moulds, except that they have notches formed in their bottoms to receive springs attached to the bottoms of the channels in which said moulds slide, to hold them in place exactly beneath the discharge holes in the bottom of the mud box, and prevent them from being drawn back by the withdrawal of the pushers. The drive wheel causes pushers to bring the moulds beneath the discharge holes of the mud box, when the scrapers are in proper position to force out the clay, so that there may be no loss of time, and so that there may be no break in the passage of clay into said moulds to form imperfect or scamed brick.

#### IMPROVED LIFTING TONGS.

John T. Campbell, Rockville, Ind.—This is an improved device for lifting, carrying, dragging, or otherwise handling logs, timber, lumber, railroad ties, stone, etc., which is so constructed that it may be readily adjusted, as the character of the work to be done may require. It consists in a lifting tongs in which the handles are connected with the shanks of the jaws with an adjustable and reversible joint.

#### IMPROVED HAIR SPRING STUD FOR WATCHES.

Francis M. Martin, Cambridge, Ill., assignor to himself and John A. Hart, of same place.—This is an improved hair spring stud for the balance wheel of watches, by which the hair spring may be shortened or lengthened with great facility, and adjusted higher or lower, so as to be placed at a perfect level above the balance. The stud fastens to the hair spring without changing the same at the least at that point, so that it retains equal strength all around and moves in perfect isochronism. The invention consists of a stud, composed of a fixed and movable jaw, projecting downwardly, and clamped to the hair spring by a screw with tapering or eccentric head. The jaws are made to fit the curvature of the outer coil of the spring, so as to clamp the same without bending it out of its true shape.

#### IMPROVED CAR COUPLING.

Edward B. Middleton, Charleston, S. C.—When the cars are brought together, the projecting end of a hook enters the mouth of the opposite drawhead, strikes the beveled portion of a catch, raises the latter, together with its rod, and engages with the shoulder of a recess, thus completing the "lock" automatically. The parts are held so engaged so long as required by the gravity of the catch block.

#### IMPROVED RAILROAD TIE.

Alexander H. Campbell, Liberty, Ind.—This invention consists of a metallic cross tie of double T-shaped cross section, of which the bottom flange is cut out at the center. The tie is provided with sockets having bottom wedges for wooden filling blocks, retained by a central key driven down upon the wedge.

#### IMPROVED CUT-OFF OR VALVE FOR PUMPS.

Job Mansir, Richmond, Me.—This is a cut-off for the suction pipe of a pump, which is capable of making connection with either of two branch pipes, or both, as may be desired.

#### IMPROVED PIPE-CUTTING MACHINE.

Nehemiah Watson, Arcadia, R. I.—This invention consists, essentially, of a revolving circular saw, capable of cutting iron, and of a clamp for grasping the pipe and holding the machine in place during the forward feeding and cutting of the saw.

#### IMPROVED FLYING MACHINE.

Frank Barnett, Keokuk, Iowa.—This consists of a kite or horizontal sail provided with a boat or basket for passengers, which is placed on wheels, and is provided with propeller wheels for moving the apparatus, and with a device for guiding.

#### IMPROVED PITMAN CONNECTION.

Joseph Warren Blood, Minneapolis, Minn.—This is an improved pitman connection for that class of mowing and reaping machines that have a hinged finger bar and tilting device. It is so constructed as to admit of the different movements which occur while in operation without binding.

#### IMPROVED CIRCULATING DEVICE FOR STEAM BOILER.

Henry S. Coleman, Chelmsford, Eng.—This consists in the employment in a boiler of circulating tubes suspended within the tubes connecting the two shells of the boiler. The said circulating tubes are straight vertical tubes of about half the sectional area of the outer tubes, and extend upward a short distance into the upper shell, and downward to the bottom. They are so supported as to be readily removable out of the way for cleaning the boiler, and for this purpose a rotating shaft is mounted, to which in the upper shell all the tubes are connected, so that they may be raised simultaneously. The tubes are also constructed in two parts, one sliding within the other.

#### IMPROVED WINDMILL.

William Ap Williams, Cambria, Wis.—The object here is to diminish the friction in the working parts of the mill, and thus enable it to be run with a lighter wind than would otherwise be possible. The construction is such that the leverage is the same when lowering and when raising the pump rod.

#### IMPROVED BARK MILL.

William F. Mosser, Allentown, Pa.—This is an improved mill for grinding bark, provided with a safety device to prevent breakage should a foreign substance get into it. The breaker serves as a coupling, and is of such strength as to drive the runner under ordinary circumstances; but should any hard substance get into the mill, the collar will break and thus prevent the mill from being injured.

#### IMPROVED TURBINE WATER WHEEL.

Nathan H. Gould, Oakfield Centre, Mich.—This is an improvement in the class of water wheels having guides for directing the water against the buckets. The desk or surface of the throat plate is flat and smooth, so that little impediment is offered to the free passage of the water through the outlet holes, and the guides are so constructed as to aid materially in directing the water at right angles against the buckets of the wheel.

#### IMPROVED BOOT AND SHOE SOLE TRIMMING MACHINE.

William E. Forster and Willard C. Tolles, Nashua, N. H.—This consists of a revolving cutter in combination with a feed table and adjustable gauge. The cutting knife is keyed to the shaft in such a manner as to be readily taken off for sharpening, and projects about the thickness of the sole or heel above the table on which the boot or shoe rests. The table is provided at the front part with a straight or concave throat plate, on which the sole or heel of the shoe rests when being exposed to the action of the knife. The shoe is run along the gauge, which bears against the upper of the shoe, the heel or sole being turned on the throat plate and trimmed off by the cutter.

### NEW MISCELLANEOUS INVENTIONS.

#### IMPROVED ICE CREAM FREEZER.

John Salter, Baltimore, Md.—This invention relates to an improvement upon that form of ice cream freezer having a stationary scraper in a revolving cylinder, which scraper is held stationary by its connection with a top plate, while the cylinder is revolved through a horizontal shaft with a bevel wheel that engages with corresponding beveled teeth on the top or cover of the cylinder. The improvement consists mainly in making the horizontal drive shaft hinged or jointed, and fixing its outer extremity in an outside independent bearing, so that the inner portion of the shaft with its bevel wheel and the top plate of the freezer may be together lifted off the tub and supported away from the same whenever it is desired to remove the cylinder or inspect its contents.

#### IMPROVED FILTERING APPARATUS.

James Gainey, Augusta, Ga.—It consists of an adjustable plunger, to effect the compression of the filtering material in adapting the device to filter under varying degrees of pressures, in combination with the means for passing the water through the filtering chamber in the opposite direction to cleanse the filter without reversing the position of the same. It also further consists in locating an expansible spring directly in the filtering material, so that when the pressure of the plunger is relieved the movement of the spring in expanding loosens up the filtering material to adapt it to be thoroughly cleansed by the passage of the water through it. The apparatus is designed to be used in both double and single form, and is adapted to all kinds of filtration, but more especially to the filtering of water for household purposes.

#### IMPROVED LADLE FOR METAL FOUNDING.

William Fawcett, Omaha, Neb.—In the manufacture of car wheels, iron of high specific gravity has to be used in order to procure the necessary depth of chill. In wheel foundries a large ladle holding from five to ten tons of molten metal is placed in front of cupola and allowed to run full before pouring off. During the time of melting and casting, the hard, dense, and close metal will settle to the bottom by its own gravity, while all impure and light metal will rise to the surface. The wheel cast with metal from the top cannot have the proper chill, while those cast from the bottom iron are so hard and brittle as to be unsafe to be placed under a passenger car. By drawing the metal first from or near the bottom, a uniform chill is procured all through the heat, and to this end the invention consists in constructing the ladle with a vertical conduit in the side thereof which opens into the bottom of the ladle, so that as the latter is tilted the purer and denser metal at the bottom of the ladle passes up said conduit and discharges first into the mould, leaving behind the lighter metal and the scoria floating in the top of the ladle.

#### IMPROVED SAFETY POCKET.

Frederick Wendt, Utica, N. Y.—This consists of a pocket having a small interior pocket of the inner top part, in connection with a top flap, fitting into the small pocket, so as to close or open the main pocket.

#### IMPROVED ROWLOCK.

William Spelman, Portland, Me.—This oarlock is so constructed as to diminish the friction between the oar and lock. It is made square, with its corners cut off, and there is an opening in its rear upper corner for the blade of the oar to be passed through. It is journaled to a block which is suitably pivoted to the gunwale.

#### IMPROVED HOP DRYER.

Samuel R. Templeton, John C. Templeton, and Joseph H. Templeton, Brownsville, Oregon.—This is an improvement in the class of drying apparatus in which a furnace and fan blower are combined, the one to impart heat and the other to impel the heated air through or in contact with the substance to be dried. The hops to be dried are placed upon a cloth, laid upon racks in layers of any desired thickness, so that the hot air may be forced up through them, expelling the moisture and drying the hops quickly.

#### IMPROVED REAR SIGHT FOR FIREARMS.

Charles F. Robbins, Brooklyn, N. Y.—This is a gauge for adjusting the rear sights of rifles from a zero point to the maximum of windage, at either right or left hand.

#### IMPROVED VERMIN TRAP.

Jean M. A. Berger, Charleston, S. C.—This consists of a frame or base of willowware, provided with boards having proper interstices attached to cross strips in close proximity to the willow frame. The trap is placed in position either at the head or foot end of the bed, or between the mattress and slats, or between bedstead and bedding, or at any other place where the insects are apt to congregate. The bugs, roaches, or other vermin are attracted by the large number of recesses and cavities of the trap, and are fond of hiding in the same.

#### IMPROVED CIGAR CUTTER.

H. Friedrich Schultze, Philadelphia, Pa.—This is an improved device for cutting off the points of cigars by the use of one hand only, the tips being dropped into a storage receptacle. It consists of a storage receptacle having a swinging and guided lid, with gauge holes for the points of the cigars, and resting on a spring cutting-knife, that passes below the gauge holes and cuts off the points by pressure on the lid.

#### IMPROVED FOUNTAIN PEN.

Henry N. Hamilton, White Plains, N. Y.—This fountain pen is so constructed that it may receive and hold enough ink to write one or more pages of manuscript. It also may be adjusted to let down the ink more or less freely, and it may be carried in the pocket, if desired.

#### IMPROVED ENGRAVING MACHINE TABLE.

Augustus E. Ellinwood, Garrettville, O.—This is a table for holding the patterns or forms used in engraving machines by means of a elastic lip, secured in a groove in the table, which receives one of the edges of the pattern, and a longitudinal slot that receives a lip formed on the other edge of the pattern.

#### IMPROVED SHOTBAG AND CHARGER.

Thomas J. Jolly, Etna, Mo.—By this shotbag and charger any given quantity of shot may be uniformly and quickly taken out from the bag for the purpose of loading shotguns. The bag has a perforated bottom and a sliding pivoted plate, with a downward extending tube, having a bottom flange, interior charger, and plug fitting into the bottom hole to close the same and lift the charger.

#### IMPROVED BOOT OR SHOE.

Thomas J. Greenwood, Warren, Ill., assignor to himself and Thomas D. Thornton, of same place.—This is an improved seamless-back shoe. It has a quarter, which is cut of one piece of leather, along a center line and symmetrical curved side lines, and with holes near the highest point of the instep, to produce front sections and back tongue. The front sections are spread or sprung forward, and a top quarter of corresponding shape is placed between the same and stitched to the edge of the quarter. In this manner a shoe with seamless back is produced that may be made with any style of top quarter or vamp.

### NEW TEXTILE INVENTION.

#### IMPROVED STOP MOTION FOR LOOMS.

Fred. Christen, Homestead, Iowa.—The object of this invention is to provide a simple and effective weft stopping device for fancy looms using two or more colors of thread. It consists in a novel arrangement of fingers, between which the filling passes as it runs out of the shuttle, one series of which, on the breaking of the filling threads, moves so as to actuate a stopping device. The improvement is designed for that class of looms that weaves fabrics from threads of several colors, which are introduced into the warp in succession; and it is intended for stopping the loom or the pattern-forming mechanism of the same.

### NEW AGRICULTURAL INVENTIONS.

#### IMPROVED STUBBLE GUARD FOR PLOWS.

Benjamin F. Phillips, Lowden, Iowa, assignor to Nicodemus Henry, of same place.—This is an improved device for clearing a plow of stubble, weeds, and other trash. By it the plow can be cleared by the plowman while standing erect in his place, and without stopping the team. It is a pivoted bar, attached to the beam, having pronged ends which rest on the mouldboard. It is operated by a suitable lever.

#### IMPROVED CULTIVATOR.

John Rhodes Tillee, Demerara, British Guiana, South America.—The new features include means to enable the plows to be raised from and lowered to the ground, and adjusted to work at any desired depth in the ground. Also devices whereby the cutting knives are given a slow rearward motion beside that caused by the forward progress of the machine.

#### IMPROVED STRAW CUTTER.

Eric M. Hesselbom, Riceford, Minn.—This machine for cutting straw and hay for feed for stock is so constructed that the straw or hay will not be fed forward when the knives are cutting. It may be readily adjusted to cut the feed coarse or fine.

#### IMPROVED SULKY PLOW.

Albert A. Fowler, Plano, Tex.—This invention relates to the construction and arrangement of parts whereby the tongue and connected devices may be adjusted laterally according to the number of plows employed at one time, or according to their respective positions when used; also, whereby the plow beams are held rigidly parallel, although adapted for adjustment laterally and allowed free vertical movement.

### NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

#### IMPROVED METHOD OF FORMING BLANKS FOR BOOTJACKS.

Henry A. Brown, Toledo, O.—This consists of taking a continuous strip of wood of suitable length, and of the width and thickness of the main piece of the common bootjack, and cutting the same alternately at suitable oblique angles, so as to produce separate pieces with tapering ends and a thicker intermediate point or seat for the cleat. The tapering ends of the bootjack allow the more convenient packing for shipment.