

moving each carrier or transferer automatically into and out of operative position, and two gangs of nail-driving devices adapted to be brought successively into operative position and operated. 3rd. In a nailing machine, the combination of a last or work support, the nail carriers or transferers *d*, *dt*, a cam, and connecting devices for revolving or operating the carrier and a cam, and connecting devices for reciprocating successively the said carriers or transferers, and two gangs of nail-driving devices adapted to be brought successively into operative position and operated. 4th. In a heel-nailing machine, the combination of a post or support, a carriage, carrying the plate *c*, the templets supported by said plate, a cam and connecting devices, the nail-driving devices and a top-lift spanker. 5th. The combination of the plate *c*, bearing or supporting two templets, *c*, *c2*, a cam *cs* and connecting devices, whereby the templets are moved successively into operative position, and are then moved and held out of operative position, while the top-lift spanker or heel-breasting knives, or either, are being reciprocated, all substantially as described. 6th. The combination of the plate *D*, supporting the nail-carriers *d*, *dt*, and devices for automatically revolving and reciprocating the same, substantially as described. 7th. The combination of the plate *D*, carrying or supporting the nail-holders *d*, *dt*, a cam *c11*, lever *c12* and arm *c13* connecting the lever with the pin and said pin, all substantially as described. 8th. The combination of the plate *c*, having ways upon which the nail-carrier is reciprocated, devices for automatically turning the plate and a cam, and connecting mechanism for reciprocating the nail-carrier upon said plate at predetermined intervals, all substantially as described. 9th. In a nailing machine, the combination of the nailing devices, the nail-carriers *d*, *dt*, and the nail-holders *E*, *E1*, adapted to deliver nails automatically to said nail-carriers, all substantially as described. 10th. The combination in a nail-carrying machine, of the nailing devices, the nail-carriers *d*, *dt*, the nail-holders *E*, *E1* and the covering plates *e5*, adapted to be automatically and simultaneously moved by the nail-carriers in one direction, and by the springs *e7* in the opposite direction, all substantially as described. 11th. The combination of a nail-holder *E*, having the covering-plate *e5*, provided with a downward-extending V-shaped extension *e5*, a pin *e4*, supported by a nail-carrier and adapted to come in contact with the edge of the said extension and the spring *e7*, all substantially as described. 12th. The combination, in a nailing machine, of the nailing devices, the nail-carriers *d*, *dt*, and a nail-distributor for receiving nails and distributing them in two separate gangs, or groups for delivery to the nail-carriers, all substantially as described. 13th. The combination, in a nailing machine, of the nail-driving devices, with a nail-distributor having the block *F2* and the two sets of tubes or passages *e2*, *e3*, one set adapted to deliver a gang or set of nails of one arrangement, and the other set to deliver a gang or group of another arrangement, all substantially as described. 14th. The combination, in a weighing machine, of the nail-driving devices and nail-distributing devices, comprising the block *F*, intermittently moved in one direction to receive nails from a nail-making or sorting machine, the plate *F2* having holes and two sets or groups of tubes or passages *e2*, *e3*, all substantially as and for the purposes described. 15th. In a nailing machine, a nail-distributor, comprising the perforated nail-receiving and delivery block *F*, the plate *F2*, having holes corresponding with holes in the nail-receiving and delivery block, and the tubes or passages *e2*, *e3*, arranged in two or more gangs or groups for dividing or separating the nails received from the nail-receiving and delivery block into two or more separate gangs or groups, all substantially as described. 16th. The combination of the table *c*, carrying the templets *c1*, *c2*, and adapted to be moved vertically and to be automatically revolved, and provided with the latch-blocks *f*, *f1*, with the latch *F*, and the latch-releasing arm *f2* and cam *f3* for operating the same, substantially as described. 17th. The combination of a templet or templets, with the plate *H*, supporting top-lift holding devices, and means for moving them automatically and successively into and out of operative position, all substantially as described. 18th. The combination of the plate *H*, carrying or supporting top-lift holding devices, a cam *c8*, and connecting mechanism for automatically turning it into and out of operative position, substantially as described. 19th. The combination of the heel-blank carrying devices, supported by a plate *c*, a cam and connecting devices for automatically turning or revolving the plate to move the said carrying devices into and out of operative position, all substantially as described. 20th. The combination, in a nailing machine, of the jack or work-support, two templets, two nail-carriers, the reciprocating nail-driving devices, the main shaft of the machine and intermediate mechanism connecting it with the two templets, and with the two nail-carriers and with the nail-driving devices, all substantially as described.

No. 27,362. Heel Attaching Machine.

(Machine à assujétir les talons.)

Freeborn F. Raymond, 2d, Newton, Mass., U. S., 8th August, 1887 : 5 years.

Claim.—1st. In a machine for compressing heels and attaching them to boots and shoes, the combination of a support or jack, and a last mounted thereon for holding the boot or shoe and presenting it to the heel-compressing and heel-attaching devices, horizontally-movable, heel-compressors and nail-driving devices, whereby the heel blank is compressed by lateral and vertical pressure upon the sole of the boot or shoe to which it is attached, and while it is being attached, all substantially as and for the purposes described. 2nd. In a machine for compressing heel-blanks and attaching them to the soles of boots and shoes, the combination of a jack or support, and a last mounted thereon for holding the boot or shoe and presenting it to the heel-compressing and heel-attaching devices, with horizontally-movable heel-compressors, a vertically-movable pressure-plate or templet, and nail-driving devices, all adapted for successive and conjoint action in an organized machine, substantially as and for the purposes described. 3rd. In a machine for attaching heels to boots and shoes, the combination of a jack or support, and a last mounted thereon for holding the boot or shoe and presenting it to the heel-attaching devices, with horizontally-movable shoe centering and holding devices, adapted to be automatically moved to centre and

hold the shoe, after the jack or support has been moved into operative position and the machine set in operation, substantially as described. 4th. In a machine for compressing heel blanks and attaching them to the soles of boots and shoes, the combination of a jack or support, and a last mounted thereon for holding the boot or shoe, and presenting it to the heel-compressing and attaching devices, shoe centering and holding devices, heel compressors, a templet and nail-driving devices, whereby the boot or shoe is automatically centered and held, and the heel-compressing devices then caused to compress and fit the heel upon the clamped sole, and the nail-driving devices actuated to attach the heel blank, while thus held compressed permanently to the boot or shoe, substantially as described. 5th. In a machine for compressing heel-blanks and attaching them to the soles of boots and shoes, the combination of a jack or support and a last mounted thereon for holding the boot or shoe, and presenting it to the heel-compressing and heel-attaching devices, heel-compressing devices, the heel-attaching devices, the main shaft of the machine, and mechanism for connecting it respectively with the heel-compressors, and devices are caused to be successively operated, all substantially as described. 6th. The combination, in a machine for compressing heel-blanks, and attaching them to the soles of boots and shoes, of a jack or work-support, and a last mounted thereon for holding the boot or shoe and presenting it to the heel-compressing and heel-attaching devices, the heel-compressors *G*, *G1*, and means for adjusting them vertically in relation to the jack or heel support and nail-driving devices, substantially as described. 7th. The combination, in a machine for compressing heel-blanks and attaching them to the soles of boots and shoes, of a jack or support, and a last mounted thereon for holding the boot or shoe and presenting it to the heel-compressing and heel-attaching devices, the heel-compressors, *G*, *G1*, and devices for adjusting them horizontally in relation to the last or work-support, and nail-driving devices, all substantially as and for the purposes described. 8th. The combination, in a heel-attaching machine, of the last or work-support, and a last mounted thereon, the sliding boot or shoe centering and holding devices *H*, *H1*, and devices for adjusting them horizontally in relation to the last or work-support, substantially as described. 9th. The combination in a heel-attaching machine, of a jack or work-support and a last mounted thereon, the sliding boot or shoe centering and holding devices *H*, *H1*, and means for adjusting them horizontally in relation to the work-support, substantially as described. 10th. In a heel-nailing machine, the combination of the shoe centering and holding devices *H*, *H1*, the sliding blocks *f1* and their operating levers *N*, all substantially as and for the purposes described. 11th. In a heel-nailing machine, the combination of the heel centering and holding devices *H*, *H1*, the heel centering or compressing dies *G*, *G1*, their supporting blocks *f1* and their operating levers *N*, all substantially as and for the purposes described. 12th. In a heel-nailing machine, the combination of the boot and shoe centering and holding devices *H*, *H1*, the heel-centering or compressing dies *G*, *G1*, their supporting blocks *f1*, and operating levers *N*, all substantially as and for the purposes described. 13th. In a heel-nailing machine, the combination of the blocks *f1*, supporting the heel-centering or compressing dies *G*, *G1*, and shoe-centering devices *H*, *H1*, the levers *N*, the toggles *o*, *o1*, the sliding block *o2* and the cam *o4*, substantially as described. 14th. In the heel-nailing machine, the combination of the block *F*, carrying the shoe centering devices *H*, *H1*, and the heel-centering devices or compressing dies *G*, *G1*, the levers *N*, toggles *o*, *o1*, lifting-block *o2* and cam *o5*, substantially as described. 15th. In a heel-attaching machine, the heel-compressing or centering dies *G*, *G1*, having the front sections *g* shaped upon their inner surfaces, as described. 16th. In a heel-nailing machine, the shoe centering and holding devices *H*, *H1*, comprising the movable blocks or holders *h1* shaped substantially as specified, and lined with rubber *h* or other suitable material, substantially as described. 17th. In a heel-nailing machine, the shoe centering and holding devices *H*, *H1*, attached, substantially as specified, to their holding-blocks, to yield horizontally in relation thereto, all substantially as and for the purposes described. 18th. The combination of the blocks *g3*, having a recess *g8*, substantially as specified, the die *G* having a projection entering the recess *g8*, and the spring *g10*, as and for the purposes described. 19th. A die *G* made in two sections *p*, *p1*, shaped substantially as described, and held together by a connecting pin or device *p2*, and a spring *p3* for closing and maintaining the sections closed, substantially as described. 20th. In a heel-compressing and attaching machine, the combination of a jack or support, a last mounted thereon for holding and presenting boots and shoes to the compressing and attaching devices, the heel-compressors *G*, *G1*, the templet-plate *D* having the downward projection *d* adapted to enter the die-space or recess and the heel-nailing devices, substantially as described.

No. 27,363. Steam Engine Governing Device.

(Gouverneur de machine à vapeur.)

Frank H. Ball, Erie, Penn., U. S., 8th August, 1887 : 5 years.

Claim.—1st. In a steam engine governor device, wherein the regulating parts are adjusted so as to give substantially an equilibrium to the opposing forces, the combination with said regulating parts of a spring, having a gradually-yielding connection applied to resist the action of said regulating parts, substantially as and for the purposes mentioned. 2nd. In steam engine governing device, the combination, substantially as shown, of a wheel upon the engine-shaft, centrifugally movable weights, adjusted in said wheel, springs connected with said wheel, and weights so adjusted as to substantially counterbalance the centrifugal force generated by the rotation of said weights around the shaft, and an auxiliary spring having a yielding connection at one end applied to resist both the inward and outward movement of said weights, for the purposes set forth.

No. 27,364. Process of Making White Pigments.

(Procédé de fabrication des pigments blancs.)

George T. Lewis, Philadelphia, Penn., U. S., 8th August, 1887 : 5 years.