

vertical plane in a take-up apparatus, preferably consisting of lever C, rod C₂, and roller C₃, the combination being such as described; 6th. Combination with a hook K, provided with projections p, q, and r, to prevent the lifting up of a bobbin and revolved by means of apparatus which gives it a differential motion in a needle operating with a pause in its motions, the combination being as set forth; 7th. Combination with a needle actuated by mechanism which causes it to pause after it has risen a short distance, in a hook rotating in a vertical plane by means of mechanism which imparts to it a differential velocity and a take-up apparatus; 8th. A revolving hook K, made with projections p, q, and r, to prevent the lifting of the bobbin q, and a guard s, overlapping the seizing hook m, in a rotating hook for operating upon the needle-thread of a sewing machine constructed in all respects as described.

No. 2011. ENOCH B. WOOD, Toronto, Ont., 25th January, 1873, for 5 years: "Double Frame V Spring Bed." (Lit à ressort en V à double cadre.)

Claim.—The application of the V spring F, to the spring bed-frames A, and B, for the purpose of preventing lateral motion.

No. 2012. THOMAS S. SARNEY, & FREDERICK EVANS, Ottawa, Ont., 25th January, 1873, for 5 years: "A Spring Bed Bottom." (Un fond de lit à ressorts.)

Claim.—1st. A bed-bottom formed and constructed of a series of flat steel elastic curvilinear springs B, combined with elliptical or other shaped truss springs C, having a suitable number of bearing slats D; 2nd. Combining with the curvilinear springs B, tie-springs E, to form an elastic raised pillow-rest or bolster.

No. 2013. WILLIAM MORLOCK, South Easthorpe, & JULIUS MORLOCK, Crediton, Ont., 25th January, 1873, for 5 years: "A Fall-Wheat Drilling Machine." (Machine à sillons pour le blé d'automne.)

Claim.—The combination of the grooves and bevelled flanges of the roller D, both in their shape and adaptation to the purposes described.

No. 2014. LYMAN R. BLAKE, Brooklyn, N. Y., U. S., 29th January, 1873, for 5 years: "A Boot and Shoe Sole Pegging Machine." (Machine à cheville les semelles de chaussures.)

Claim.—1st. In combination with shoe supporting and nail driving mechanism the contrivances by which the nails are automatically cut from a wire with such points as will ensure their entrance into the sole in inclined directions in the line of the seam; 2nd. In combination with a shoe supporting and nail-driving mechanism the contrivances by which successive nails are cut with oppositely inclined or bevelled point, to ensure the entrance of adjacent nails into the sole at opposite inclinations in the line of the fastenings; 3rd. The cutters a, p, formed with two pairs of cutting edges for alternately severing the wire and forming nail-points with opposite inclinations; 4th. The nail-cutter blades having an intermittent forward and back movement for alternately bringing the two pairs of blades into position to sever the wire; 5th. The toggle mechanism for imparting the inward or nail severing movement to the cutters; 6th. The nail-tube and presser-foot bar or rod made as one piece or to be in the same vertical line; 7th. The nail-tube foot placed between the presser-foot checks f, and swinging on the pin s; 8th. The relative arrangement and combination of the nail-tube, the swinging nail-tube-foot, the presser-foot and their actuating mechanism; 9th. The specific construction and combination of the mechanism for variably cutting and feeding the wire variably moving the presser-foot and variably moving the nail-driver all by and in accordance with the varying thickness of the parts to be united; 10th. The nail tube-foot formed of the two grooved plates; 11th. The nail forming wire made lenticular in section and with the projecting spurs; 12th. The nail-driver formed from round steel wire having the nail driving shank drawn to shape by rolling; 13th. Uniting the soles and ramps of boots and shoes by nails pointed upon one side, so that the nails assume an inclined position as they are driven; 14th. In uniting the soles and ramps of boots and shoes by nails pointed alternately at opposite sides so that alternately driven nails assume opposite inclinations as they enter the sole.

No. 2015. EDWARD J. CHAPMAN, Toronto, Ont., 29th January, 1873, for 5 years: "Art of Producing Paint during the Treatment of Auriferous Mispickel for the Extraction of its Gold." (Art de produire de la peinture durant le traitement du mispickel aurifère pour en extraire l'or.)

Claim.—The direct production of soluble arsenical matters from auriferous mispickel or arsenical pyrites, during their preparation for the extraction of the gold they contain: these soluble matters being subsequently convertible into green or yellow paint materials as set forth.

No. 2016. JOSEPH C. TILTON, Pittsburg, Pa., U. S., 29th January, 1873, for 5 years: "A Washing Boiler." (Une chaudière de blancherie.)

Relates to the arrangement and shape of the passages leading from the under side of the false bottom to the top of the boiler. Claim.—1st. The movable perforated bottom H, in combination with the false-bottom B; 2nd. The perforated false-bottom B, having ribs C, C₂, and I, guards F, and movable bottom H, together with the passages L, L, in combination with wash-boiler A.

No. 2017. JAMES TELFER, Blenheim, Ont., 29th January, 1873, for 5 years: "Oiler for the Shafts of Loose Pulleys and other Bearings." (Graisseur des fusées de poulies folles et autres axes.)

Claim.—1st. The hollow-sleeve A, A, to be made of metal or other suitable material and the collar, oil-channel K, and oil-holes H, H, of any number and size; 2nd. The combination of oil-sleeve with the shaft B, B, and the pulleys C, or other suitable bearings.

No. 2018. ALVEN K. GILMORE, Bath, Me., U. S., 29th January, 1873, for 5 years: "Machine for preparing Wood for Paper Pulp." (Machine à traiter le bois pour la pâte à papier.)

Claim.—1st. The conical grinder and grinder-stone supporter or wheel as made or provided with the flange h, and with the stone or stones arranged with such wheel and the flange h; 2nd. The grinder as provided with the drip-flange or lip i; 3rd. The wood-holder as made of the inner and outer tubular rims, the oblique partitions and the scrapers arranged as specified; 4th. The pressure mechanism composed of the plates a, b, the f, -ranted standard c, the screw d, the rest e, arm f, pawl g, screw h, screw-sleeve i, shaft j, pull y, h, rope m, and its weight n, arranged, combined and supported as explained; 5th. In combination with said pressure mechanism, the mechanism for effecting the winding of the weight-rope on the drum B, same consisting of the wheels o, p, and the lever q, or mechanism for moving the shaft i, so as to carry the said wheels either into or out of contact; 6th. The brake mechanism or its equivalent, in combination with the pressure mechanism and the mechanism as explained for effecting the winding of the weight-rope on its drum; 7th. The wood-holder as provided with the recesses r, r, arranged in its outer rim, in manner and with respect to the wood receptacles, and for the purpose set forth; 8th. The combination and arrangement of the connection-arch t, with the wood-holder and grinder and its shaft A.

No. 2019. JAMES WHITE, Fredericton, N. B., 29th January 1873, for 5 years: "A Spring Bed." (Un lit à ressorts.)

Claim.—1st. The arrangement and combination of the elastic eyed staples or band supporters F, F, with the cross bands D, D, the conico-helical springs A, their support bars B, and slats E; 2nd. The elastic staples to prevent lateral sway of the slats when a person is reclining thereon and to prevent the springs from being thrown out of place together with the leather fastening of the springs to the slats.

No. 2020. BENJAMIN C. TILGHMAN, Philadelphia, Pa., 29th January, 1873, for 5 years: "Method of Cutting Hard Substances." (Méthode de tailler les corps durs.)

Claim.—1st. The cutting, sawing, boring and grinding of stone, glass, pottery, metal and similar hard substances by grains or globules of iron or steel or other tough and hard metal forcibly rubbed against them under pressure; 2nd. A new article of manufacture, in a cutting, grinding or abrading material for stone, glass, pottery, metal and similar hard substances, consisting of grains or globules of iron or steel or other tough and hard metal.

No. 2021. OLIVER S. GARRETSON, Buffalo, N. Y., U. S., 29th January, 1873, for 5 years: "A Blind Hinge." (Une pèture de persienne.)

Claim.—1st. A blind hinge in which the two leaves or wings are coupled together one above the other, the arrangement of the locking flanges a², a², formed respectively at the adjacent ends of the two wings so as to engage with each other and lock the blind when in an open position. 2nd. A blind hinge when one of the parts thereof is provided with a spur or marker so arranged that when said part is fastened in place to the blind or window casing it will serve to mark or indicate the proper position for setting the other half of the hinge.

No. 2022. GEORGE O. FREEMAN, Chatham, Ont., 1st February, 1873, (Extension of Patent No. 1537.) for 5 years: "A Tent Spring." (Un ressort pour les tentes.)

Claim.—The cylinder "A," with the slot "B, B," the spring D, and the combination of said cylinder, slot and spring with the bent pole "C," as specified.