

elements in combination: the lowering drum and cord, the high speed fan retarder, and the winding up spring, substantially as described. 2nd. The combination, with the basket of a fire-escape, of a flexible cord or speaking tube, attached at one end to the basket, and adapted for dropping the other end from the basket to the ground preparatory to using the basket for escape, substantially as described. 2nd. The combination, with the lowering drum in a fire-escape, of the bell cord working lever, actuating tappets and a retracting spring, substantially as described.

### No. 29,882. Washing Machine.

(Machine à blanchir.)

Henry C. Glinsmann, Bayonne, N. J., U. S., 17th September, 1888; 5 years.

**Claim.**—1st. The combination of frame *a*, suds box *b*, levers *d*, cross-bar *e*, and roller *c*, with the inclined lugs *m* secured to frame *a*, and with the tubes *f*, and plugs *g* secured to levers *d*, substantially as specified. 2nd. The combination of frame *a* having tapering bars *at*, and sockets *s*, with the handle *r*, adapted to engage said sockets, substantially as specified. 3rd. The combination, with a tub or suds box having journal bearings, as described, of a reciprocating rubber composed of slotted levers, a transverse bar connecting the upper ends thereof, spools arranged on the said bar, and a lower transverse bar having short branches provided with eyes to receive the said upper bar, substantially as specified.

### No. 29,883. Seat or Couch Spring.

(Ressort de chaise ou de canapée.)

William F. Rippon, Cranston, R. I., U. S., 17th September, 1888; 5 years.

**Claim.**—1st. The spring *A*, post *D*, threaded at one end, hub *d* and disk *B*, said disk being loosely pivoted upon said post and having free rocking movement thereon, all combined with each other and with the frame or slats of a seat, couch, or analogous article, as shown and described and adapted to serve as specified. 2nd. The clamping plate *L*, auxiliary springs *A2* and disks *B1*, *B2*, combined with a central disk *B*, post *d* and main spring, as *A*, to form a cluster spring for seats, couches and analogous articles, said auxiliary springs radiating from said central disk, and said auxiliary disks *B1* having each independent free rocking movement pivotally upon upwardly-turned ends of said springs *A2*. 3rd. A spring for seats, couches and analogous articles, consisting of a main spring and central disk, as shown, combined with one or more springs radiating from said central disk, in planes parallel with that of the main spring, and a disk loosely pivoted upon each of said radiating springs, and having free rocking movement thereon yieldingly to pressure applied at any angle to its pivotal axis, all arranged substantially as shown and described for joint operation, and adapted to serve as specified. 4th. In a seat, couch, or analogous article, the spring *A* adapted to be secured at one end to the frame of the chair or couch, and a post *D* tapped into the other end of the said spring, combined with each other and with a disk *B* carried on the free end of said post, all arranged and adapted to serve to raise or lower said disk to increase or lessen the tension of the seat or couch upholstery.

### No. 29,884. Dress Cutting System.

(Système de coupe d'habillement.)

Thomas Hawkins, San Francisco, Cal., U. S., 17th September, 1888; 5 years.

**Claim.**—1st. A chart, the outlines of which form rules for drawing the front shape, outer sleeve shape, inner sleeve shape and side body, and upper outer end of the sleeve, substantially as described. 2nd. The chart having the outer edges or boundaries in the form of curved rules and pattern outlines, the inner curved rules cut out of the body of the chart, as shown, at *I* and *J*, in combination with the interior lines forming the body portion and the outer and inner sleeve portion, substantially as described. 3rd. The double curved outline forming the dart rule, and side form as shown at *m*, in combination with the interior outline forming the arm-shape *o*, and the front and back shoulder shapes *p*, substantially as described.

### No. 29,885. Sulky Plough. (Horse à sègle.)

William Hewitt, London, Ont., 17th September, 1888; 5 years.

**Claim.**—1st. In a sulky harrow, a harrow section formed with a bracket *k*, in combination with harrow section formed with a knuckle *L*, the bracket *k* of the former passing through the knuckle *L* of the latter, and the bracket *k* formed longer than the knuckle *L* to permit one section to move back and forth independent of the other, as and for the purpose set forth. 2nd. In a sulky harrow, the chain *C* and pulley *E*, in combination with a sulky frame *F*, harrow section *H2*, and eveners *E*, as and for the purpose set forth. 3rd. The chain *C*, pulley *E*, eveners *E*, and doubletree *D*, in combination with the chains *D1*, *D2*, frame *F*, harrow section *H2*, and tongue *T*, as and for the purpose set forth. 4th. In a sulky harrow, the vertical standards *S1*, *S2*, and harrow section *H2*, in combination with a frame *F* formed with apertures *G*, and axle *A*, as and for the purpose set forth. 5th. In a sulky harrow, the vertical standards *S1*, *S2*, harrow section *H2*, and braces *J1*, *J2*, in combination with a frame *F* formed with apertures *G*, and axle *A*, as and for the purpose set forth. 6th. The harrow sections *H1* and *H2*, and handles *I* formed with loops *et*, in combination with the standards *S1*, *S2* formed with hooks *e*, and central harrow section *H2*, as and for the purpose set forth. 7th. The self-locking lever *L* formed with an arm *H1*, bracket *L* and chain *K*, *K*, in combination with the central harrow section *H2*, as and for the purpose set forth. 8th. The self-locking lever *L* formed with an arm *H1*, bracket *L*, chains *K*, frame *F*, handles *I* formed with loops *et*, and standards *S1* and *S2* formed with hooks *e*, in combination with the harrow sections *H1*, *H2* and *H3*, as and for the purpose set forth. 9th. The pivotal tongue *T*, end pivotal pin *t1*, in combination with the frame *F* and socket bracket *N*, as and for the purpose set forth. 10th. The pivotal tongue *T*, pivotal pin *t2* and pin *t3*, in combination with the frame *F*, and socket bracket *N*, as and for the purpose set forth.

### No. 29,886. Telephone Transmitter.

(Transmetteur de téléphone.)

John F. Bahr, Jersey, N. J., U. S., 17th September, 1888; 5 years.

**Claim.**—1st. The improved telephone transmitter herein described, combining therein a box or case having a perforated cover or lid, a partition separating the interior of said box into two chambers plates *f*, *e*, one of which is secured to said partition, and the other of which lies under the influence of gravity upon the first one, and is provided with projections *i*, and suitable conducting wires, all said parts being arranged and adapted to operate substantially as set forth. 2nd. The improved telephone transmitter, combining a case or box with a perforated cover, a sounding board secured therein, a carbon plate secured upon said sounding board, a carbon plate provided with projections and lying by gravity upon the first, said plate, and conducting wires *g*, *g*, said parts being arranged and combined substantially as and for the purpose set forth. 3rd. The improved transmitter substantially as described, combining therein a case or box, a hinged and perforated cover, a partition secured in said box at the edges and forming upper and lower chambers, a carbon plate *f* secured upon said partition, and having depressions *k*, *k*, *e*, an upper carbon plate *e* having contact points *i*, *i*, corresponding with said depressions, said plate *e* lying on said plate *f* by gravity, and conducting wires *g*, *g*, and an induction coil arranged in said lower chamber, all said parts being arranged and adapted to operate substantially as and for the purposes set forth.

### No. 29,887. Trouser Stretcher.

(Forme de pantalon.)

William F. Hutchinson, Lynn, Mass., U. S., 17th September, 1888; 5 years.

**Claim.**—As an article of manufacture, a trousers stretcher consisting essentially of a tapped handle, two rods provided with screw-threads to fit said handle, and hinged cross pieces fitted to the ends of said rods, substantially as and for the purposes hereinbefore set forth.

### No. 29,888. Foundation for Cards.

(Fondation des cartes.)

Joseph Moseley, Manchester, Eng., 17th September, 1888; 5 years.

**Claim.**—1st. In a card foundation, a layer of parallel yarns or threads, substantially as and for the purpose described. 2nd. In card foundations, the combination of one or more layers of parallel yarns or threads, with one or more layers of cloth, felt, or similar material, substantially as described.

### No. 29,889. Air Mattress. (Matelas à air.)

John R. Hargin, Elizabeth, N. J., U. S., 17th September, 1888; 5 years.

**Claim.**—1st. The combination, with the covering of an air mattress, of a pump chamber enclosed therein provided with a movable lid, and having an inlet valve admitting air to such chamber, and an outlet valve discharging the air from such chamber within the mattress to inflate the same, substantially as herein set forth. 2nd. The combination, with the covering of an air mattress, of partitions dividing the interior of the mattress into separate air-tight compartments, a pump chamber enclosed within said covering provided with a movable lid having an inlet valve admitting air to such chamber, and a series of outlet valves connected with the separate compartments, as and for the purpose set forth. 3rd. The means of connecting the partitions to the covering of the mattress, consisting in the stays *B1* folded longitudinally and secured to the partitions by the doubled portion *B2*, and to the covering by the extended edges *B3*, substantially as set forth. 4th. The combination, with the covering of the mattress, of stays *p* passed through slits in the same, and having feet *t* folded upon the outside of the covering and cemented thereto, and the washers *q* secured to the covering over the feet and around the stay inside the covering, substantially as herein shown and described. 5th. The combination, with an air mattress, of the bands *r* secured to the edges of the mattress, and to one another at their intersections, as and for the purpose set forth. 6th. The combination, with an air mattress, of the lock attached to its edge consisting in the sections *s* and *t*, provided respectively with the spring bolts *s1* and the sockets *t1*, the whole arranged and operated substantially as herein set forth. 7th. The combination, with an air mattress, of the lock sections *s* and *t*, provided respectively with the spring bolts *s1* having studs *b*, and with the sockets *t1*, and the wedge *e* adapted to separate the bolts by pressure between their studs *b*, as and for the purpose set forth.

### No. 29,890. Safety Appliance for Car Trucks. (Appareil de sûreté pour châssis de chars.)

Gavin Rainnie, Portland, N. B., 18th September, 1888; 5 years.

**Claim.**—1st. In railroad car and other like trucks, the combination with the frame of the truck, of an attached bent safety guard adapted to loosely straddle the stationary bolster or bolsters of the car or body carried by the trucks, substantially as specified. 2nd. The combination, with the car or other like body having stationary bolster, or bolsters, *C*, and the swivelling trucks carrying said car or body, of the safety guards *D* secured to the frames of the trucks, and bent to loosely straddle the tops and sides of the bolsters, essentially as and for the purpose or purposes herein set forth.

### No. 29,891. Thill Coupling. (Armon de limoniere.)

Daniel Murray, Salem, Mass., U. S., 15th September, 1888; 5 years.

**Claim.**—1st. In a thill coupling, the clasp *a* and its bearing piece *a1*, having the semi-spherical recess *a2*, and upwardly projecting slotted and externally screw threaded sleeve *a5*, in combination with