

different degrees of curvature, substantially as set forth. 5th. The T-shaped brace *n*, in combination with the cross-bar *F*, and seat *T*, for the purpose specified. 6th. The combination of the brace *n*, braces *o*, *o*, cross-bar *F* and seat *T*, substantially as and for the purposes herein specified. 7th. The combination of the braces *n*, *p*, *v*, *s*, cross-bar *F*, axle *D*, cross-bar *H*, and seat *I*, substantially as and for the purpose herein specified.

**No. 21,213. Truss.** (*Bandage Herniaire.*)

Elbridge Howe, Peterborough, N.H., U.S., 5th March, 1885; 5 years.

*Claim.*—In a truss, the combination of a plate secured upon the pad and forming a concavo-convex cup upon its outer end, provided with corrugations upon its convex side, and having a large central aperture, a plate secured upon the end of the spring and forming a concavo-convex cup upon its outer end, provided with corrugations upon its concave side, and having a small central aperture, a set-screw fitting in the smaller aperture and playing in the larger aperture of the cup.

**No. 21,214. Spring Shade Roller.**

(*Bâton de Rideau à Ressort.*)

Stewart Hartshorn, Milburn, N.J., U.S., 5th March, 1885; 5 years.

*Claim.*—1st. In spring shade rollers, the combination of the shaft or spindle and spring around the same, with the roller and the cavity therein, substantially as described, so that any support for the inner end of the spindle and any connection of the inner end of the spring with the roller is dispensed with. 2nd. In spring shade-rollers, the combination, with the roller, of the spindle *R* attached thereto only at its outer end, the end-plate *P*, and spring *S*, secured at its inner end to the spindle, and at its outer end to the plate, substantially as described and for the purposes set forth. 3rd. In spring shade-rollers, the combination of the spindle *R*, the end-plate *P*, and the spring *S*, attached to the spindle at its inner end and to the end-plate *P*, by its outer end, substantially as and for the purposes set forth. 4th. In spring shade-rollers, the combination of the spindle spring and end plate, substantially as shown and described, the spindle connected by its outer end to the end plate, the spring attached by its outer end to the spindle, and the end-plate end spindle provided with a pawl and ratchet, as and for the purposes set forth. 5th. In spring shade-rollers, constructing the flattened or bracket-end of the spindle with a shoulder and screw tap, substantially as described, for attaching said spindle, the end-plate of the roller and the spring-carrying shaft together, as and for the purposes set forth. 6th. In spring shade-rollers, constructing the shaft or spindle, on which the spring is mounted, with an open slot or groove in its inner end, substantially as and for the purposes set forth. 7th. In spring shade-rollers, the combination, with the roller of a slotted spindle and spring, the latter connected at one end to the spindle by the slot therein, and at the other end to the roller, substantially as and for the purposes set forth. 8th. In spring shade-rollers, the combination, with the spindle having a grooved cut in its inner end, of the end-plate and the spring attached by one end to the spindle by means of the groove therein, and by the other end to the end-plate, substantially as and for the purposes set forth. 9th. In spring shade-rollers, the combination of the spindle *R*, having a groove cut in its inner end, the plate *P*, having the collar *c*, and the spring *S*, attached to the spindle by means of the groove, and to the collar *c*, substantially as described and for the purposes set forth.

**No. 21,215. Automatic Liquid Measure.**

(*Meure-Liquide Automatique*)

Pierre Sagasin, Montreal, Que., 5th March, 1885; 5 years.

*Réclame.*—1o. Dans un mesureur automatique pour liquides, le robinet *K*, en combinaison avec le robinet *M*, la mesure *D* et le tube *J*, *L*, et *I*, tel que ci-dessus décrit et pour les fins sus-mentionnées. 2o. Dans un mesureur automatique pour liquides, le robinet *H*, en combinaison avec le robinet *K*, la mesure *D*, les tubes *J*, *K*, et *I*, tel que ci-dessus décrit et pour les fins sus-mentionnées. 3o. Dans un mesureur automatique pour liquides, le double fond *C*, en combinaison avec le réservoir *A*, *B*, *E*, et le système mesureur *D*, *J*, *K*, *L*, *M*, tel que ci-dessus décrit et pour les fins sus-mentionnées. 4o. Dans un mesureur automatique pour liquides, la porte *N*, en combinaison avec la cloison *H*, le compartiment *G*, et le réservoir *A*, *B*, *C*, *E*, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées.

**No. 21,216. Bench Vice.** (*Etau d'Etabli*)

Henry A. Hyle, Redwood, N.Y., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. The jaws *A*, recessed as shown at *a*, in such manner as to remove a portion of the faces of the jaws, in combination with the cylinders *C*, placed in the said recesses, the cylinders being formed with cavities of various shapes and adapted to be turned in the jaws, substantially as and for the purposes described. 2nd. The combination, with the recessed jaws *A*, of the cylinder *C*, formed with the longitudinal and transverse recesses or cavities for holding objects in horizontal and vertical positions, substantially as described. 3rd. The cylinder *C*, formed with cavities or recesses and with the flat portions *c*, substantially as and for the purposes described. 4th. The cylinders *C*, placed in recesses made in the jaws, and formed with the narrow slots for holding flat or edges objects, as set forth. 5th. The cylinders *C*, placed in recesses made in the jaws, and formed with shallow and short recesses *s*, *j*, for holding pointed objects, as set forth. 6th. The combination, with recessed jaws *A*, and cylinder *C*, placed in the jaws, of the plates *D*, for holding the cylinders in place and for preventing the entrance of dust, etc., substantially as described. 7th. The cylinders *C*, formed with cavities and placed in recesses *a*, and provided with handles *b*, for revolving the cylinders, substantially as described. 8th. The combination, with the cylinder *C*, placed in the recesses *a*, of the key-pins *m*, arranged for holding the cylinders, substantially as set forth. 9th. The jaws *A*, holding recesses *a*, formed in them for receiving the cylinders *C*, in combination with the removable staples *E*, for strengthening the jaws and for preventing them from spreading, substantially as described. 10th.

The cylinders *C*, adapted to be placed and revolved in the recesses *a*, of the jaws *A*, and formed with angular cavities or recesses for holding angular objects, as set forth. 11th. The cylinders *C*, adapted to be placed and revolved in the recesses *a*, made in the jaws *A*, and formed with the concave recesses for holding round objects, substantially as set forth.

**No. 21,217. Pen-Holder.** (*Porte Plume.*)

Frederic M. Libby, Portland, Me., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. The combination, with a hollow pen-stock having a solid portion to receive the screw *a*, of the screw *a*, and head *b*, the said head being shaped as herein set forth. 2nd. The tube *a*, having wings or spring *b*, *b*, when inserted in the hollow of a pen-stock, as herein set forth, and secured as described, for the purposes specified.

**No. 21,218. Improvements on Carburetting Machines.** (*Perfectionnements aux Carbureteurs.*)

Oakes Tirrill, New York, N.Y., and James P. Wilson, Newark, N.J., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. In a gas machine, the combination of a generator, a pump for inducing a current through the generator, and a regulator having a movement under control of the pump, substantially as specified. 2nd. In a gas machine, the combination of a generator, a pump connected with the generator, so as to draw gas therefrom, a pipe or conduit, through which the pump draws air from the atmosphere, and a regulator having a movement controlled by the pump and serving to govern the quantity of air which passes through the pipe or conduit, substantially as specified. 3rd. In a gas machine, the combination of a generator, a pump connected with the generator, so that it will draw gas from the generator, a pipe or conduit, through which the pump will draw air from the atmosphere, a regulator, serving to govern the quantity of air passing through the air pipe or conduit and means connecting a pump and regulator and made capable of adjustment, so that the operation of the regulator may be varied relatively to that of the pump, substantially as specified. 4th. In a gas machine, the combination of a generator, a pump connected with the generator, so that it will draw gas from the generator, a pipe or conduit through which the pump will draw air from the atmosphere, a regulator serving to govern the quantity of air passing through the pipe or conduit, a rotary disk deriving motion from the pump, and means for transmitting motion from the disk to the regulator, substantially as specified. 5th. In a gas machine, the combination of a generator, a pump connected with the generator so that it will draw gas from the generator, a pipe or conduit through which the pump will draw air from the atmosphere, a regulator serving to govern the quantity of air passing through the air pump or conduit and having a reciprocating part, or parts, and also having valves, devices connecting the pump with the valves of the regulator, and means whereby the stroke of the reciprocating part, or parts, of the regulator will be controlled, substantially as specified. 6th. In a gas machine, the combination of a generator, a pump connected with the generator so that it will draw gas from the generator, a pipe or conduit through which the pump will draw air from the atmosphere a regulator serving to govern the quantity of air passing through the air pipe or conduit and having a reciprocating part, or parts and also having valves devices connecting the pump with the valves of the regulator, and means whereby the stroke of the reciprocating part, or parts of the regulator will be varied in length, substantially as specified. 7th. In a gas machine, the combination of a generator, a meter wheel-pump *A*, connected with the generator so that it will draw gas from the generator, a pipe or conduit through which the pump will draw air from the atmosphere, a regulator *R S N P*, provided with valves and serving to govern the quantity of air passing through the pipe or conduit, the cam disk *I*, the arm *L*, the rod *K*, the rock shaft *n*, for operating the valves of the regulator, the arm *p* on the rock shaft *n*, and the lever *J*, substantially as specified.

**No. 21,219. Bit-Holder.** (*Vilbrequin.*)

Arthur H. Armstrong, Plainville, Ct., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. A tool-holder having holding jaws, a sleeve or thimble, and connecting screw-threads, for gripping said jaws to a certain extent, in combination with a cam or equivalent additional mechanism, for operating in connection therewith, for gripping said jaws to a further extent, substantially as described and for the purposes specified. 2nd. The combination of the head *B*, the holding jaws, the screw thimble for gripping said jaws to a certain extent, the sliding block and the cam, for operating said block and gripping said jaws to a further extent, substantially as described and for the purpose specified.

**No. 21,220. Method of Extracting Oil from Oil Wells and Oil Bearing Rock and Tube Thereof.** (*Méthode pour Extraire l'Huile des Puits et des Roc Contenant de l'Huile et Tube pour cet objet.*)

William Richards, Balltown, Penn., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. The improvement in the art of extracting oil from oil bearing rock and land, herein described, consisting in supplying to the oil therein, by means of compressed air, gas or fluids injected thereto, an upward propelling power equal to that of the wasted natural gas, and in supplying said air, gas or fluids under a pressure sufficient to force the oil within the rock out of the crevices thereof, and to the surrounding wells. 2nd. The herein-described improvement in the art of extracting oil from oil-bearing rock or earth, and forcing the same to and up a series of wells simultaneously, by means of a single forcing apparatus, consisting, first, in anchoring a tube within the central well of a series or lease, and packing the space between the lower end of said tube and the sides of the well, then, connecting the upper portion of said tube with a force pump, and, finally, forcing air, gas, or fluids in a highly compressed state down said