

light commences the trace left by the lightning, in the form of a wound (*plaie*), 1 to 1½ inches in width and from 2 to 2½ inches in depth. This wound descends as far as the ground, turning round the trunk in the form of a screw, and describing four fifths of the complete circumference of the tree. Fragments of wood of various sizes were projected to distances as far as 50 yards. Some are pierced by jagged holes, indicating a violent eruption of the electric fluid from the interior to the exterior, the track of the fluid having probably been in the layer which separates the alburnum from the old wood or duramen. The places where the emission of the fluid occurred are sometimes indicated by spots of a red color, similar to the effect which might be produced on wood by the application of a hot iron. They correspond to a slight depression of the surface of the wood. The wound of the tree is turned from the shore of the lake, lightning striking more readily plants which grow near watercourses, visible or underground.

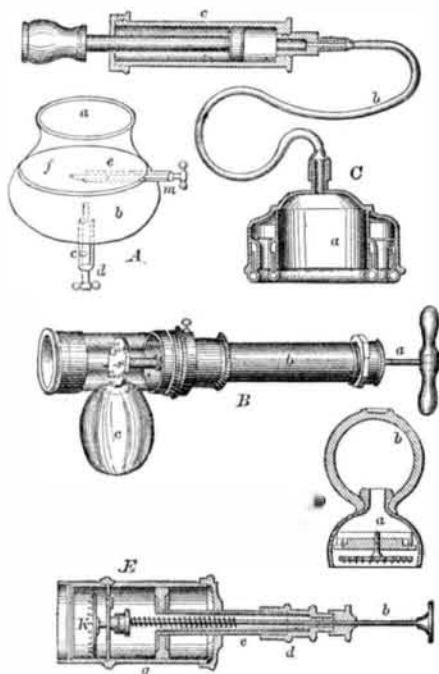
MEDICAL AND PHILOSOPHICAL INSTRUMENTS.

Our extract, this week, from Knight's "Mechanical Dictionary,"* includes descriptions and illustrations of a number of improved surgical and philosophical instruments. One of the oldest

CUPPING DEVICES

known is that described by Hero, of Alexandria, and represented at A, Fig. 1. It consists of a glass vessel, having an

Fig. 1.



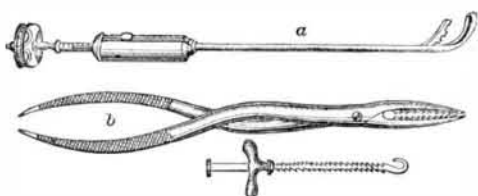
Cupping-Instruments.

inner chamber divided from the former by a diaphragm, *f*. *m* is a valve which governs the opening, *e*, in the diaphragm. The valve, *d*, controls the aperture, *c*, by which the chamber, *b*, is connected with the external air. The valve, *d*, being opened and the valve, *m*, closed, the mouth is applied to the opening, *c*, and a powerful inspiration is taken, rarefying the air in chamber, *b*. The opening, *a*, is then applied to the skin of the patient, and the cupping operation follows. Another apparatus of modern date is shown at B. The glass cylinder has a lip attached suitably for application to the skin. A central rod, *a*, has a disk with lancets which act as scarifiers, and the air is exhausted from the cylinder by means of a piston in the tube, *b*, attached. *l* is the blood receiver. In the instrument, C, the receiver, *a*, is connected by a flexible pipe, *b*, with the nozzle of an ordinary syringe, *c*. The sides of the concentric chamber afford an extended bearing for the cup, and prevent its being driven into the body by the pressure of the atmosphere. In D, the glass has an elastic bulb, *b*, by which the partial exhaustion is effected, and has also an adjustable disk provided with puncturing points to lance the skin. The scarifier, in E, is placed exactly within the hollow piston rod, *e*, which works in a stuffing box on the cylinder, *g*. In using, the air is exhausted from *g* by the motion of the piston, *e*, operated by the handle, *d*. To puncture, the needle bar, *b*, receives a quick downward thrust, forcing the needles on X, into the protuberant flesh within the cup. The spring returns the needle bar and disk into position. The

LITHOTRIPTOR AND LITHOTOMY FORCEPS,

Fig. 2, are instruments for crushing into small fragments

Fig. 2.



Lithotripter and Lithotomy-Forceps.

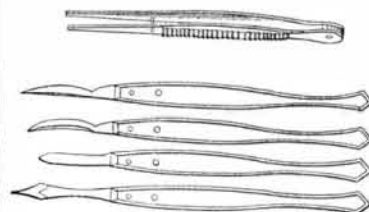
and removing stone from the bladder. The device, *a*, is made in halves, one sliding within the other, and is of the size and shape of an ordinary catheter when closed. It is introduced into the bladder and then, by means of a screw or rack and pinion, worked on the outer extremity, the movable part is made to slide back, thus forming two jaws by which the stone is grasped. By turning the screw or handle, the blade

is propelled onward by short jerks, thus breaking the stone into such small fragments that it may easily be voided. The lithotomy forceps, shown at *b*, is used for extracting stone from the bladder through the opening previously made by lithotomy. Its blades are concave and corrugated, and, through their crossed shanks, may be fully opened when inserted, without expanding the wound. Various forms of

DISSECTING KNIVES

are shown in Fig. 3. The forceps, also in the figure, is designed to extend or tighten the flesh at the point of division and to aid in removing divided parts. The shapes of the knives need no special description. The dissection of the human body for purposes of Science was first ordered by Pto-

Fig. 3.



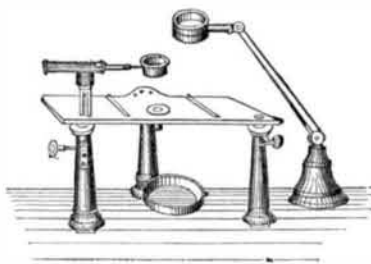
Dissecting-Knives.

lemy Philadelphus, in the college of Alexandria, Egypt, who even authorized the vivisection of criminals condemned to death. Fig. 4 represents

DISSECTING MICROSCOPES.

The stage of the upper figure has rack adjustment for focus,

Fig. 4.



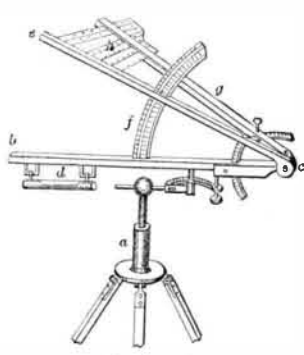
Dissecting-Microscopes.

spring clips to hold object slide, diaphragm, movable arm for carrying the lenses, and separate jointed stand on which any of the sets of lenses can be placed. The lower figure is of a binocular microscope of moderate power. It is made to close up in a box, the top and front of which contain loops to hold the knives, scissors, etc. Beneath the glass is a gutta percha stage and an illuminating mirror.

THE DENDROMETER,

Fig. 5, is an instrument for measuring the height and diameter of trees, in order to estimate the cubic feet of timber therein. The surveyor elevates the limb, *e*, until that part

Fig. 5.



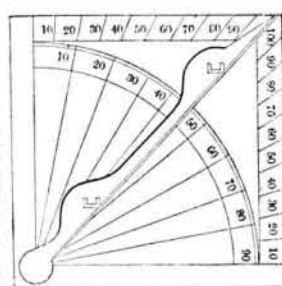
Dendrometer.

of the tree to which the measurement is designed to extend is exactly cut by the line of observation, and the angle subtended between that and the horizontal limb, *b* (which is set by the spirit level), is shown upon the vertical arc, *f*. The gradations on this arc are marks answering to feet and inches of a tangent line extending from the horizontal point upward, taken at a given distance from the tree. The horizontal angles, which are to determine the diameter of the trunk, are ascertained by the limb, *g*, which slides on an arc, *h*, which is marked similarly to *f*. The length of the trunk and its diameter at several parts being thus ascertained, recourse is then had to tables, etc., for finding the corresponding solid contents. The

GEOMETRIC SQUARE,

Fig. 6, is an instrument for measuring distances and heights.

Fig. 6.



Geometric Square.

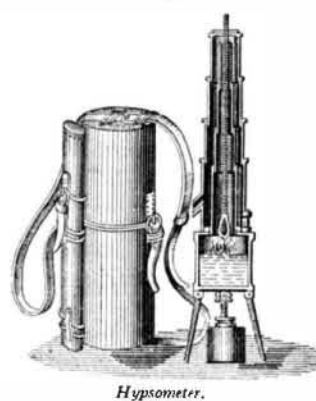
It is made 12 or 18 inches square, and the quadrant is graduated in each direction. The two sides opposite to the axial point of the alidade are graduated to 100 equal parts, with major divisions of 10 of said parts. The 100 point finishes at the angle obliquely opposite the center from which the arc is struck. One side represents the horizon, and the alidade with two sights is equal in length to the diagonal of the square. The alidade has divisions equal to those on the sides of the square. In measuring vertical heights, the distance is measured from the station in the base, and by moving the ali-

dade the angle subtended by the object is observed. The

HYPSONETER,

Fig. 7, is used for measuring heights by observing differences

Fig. 7.



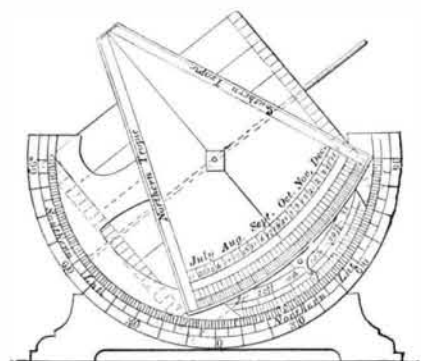
Hypsoneter.

in barometric pressure at different altitudes. This is usually done by noting the boiling points of water. The temperature is shown by a mercurial thermometer with a very large bulb and stem, which has a length of 1 inch for every degree of the scale. This is read by a vernier to 1,000ths. It is found that a difference of barometric pressure of 0.589 inches is equivalent to 1° in the boiling point or 530 feet of ascent at moderate elevations.

THE HELIOMETER,

Fig. 8, serves to ascertain the solar time in all latitudes, and

Fig. 8.



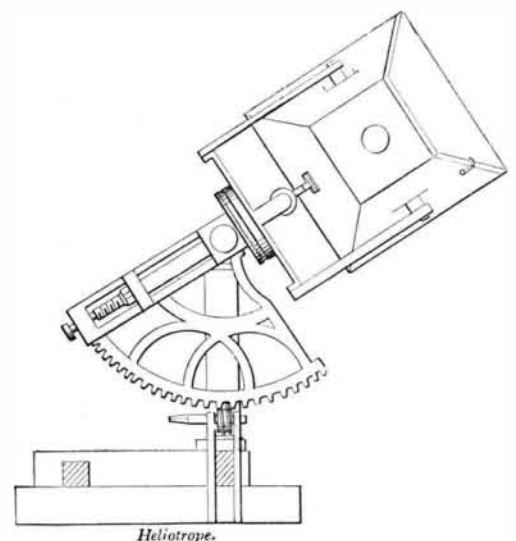
Heliometer.

for ascertaining the latitude when the apparatus is set at noon according to the date. It also is used for finding the date and length of day, sunrise and sunset (other conditions being established), the difference of time between two places, the position of the earth's axis in relation to the level at the point of observation, etc. It does not admit of a brief description.

THE HELIOTROPE,

Fig. 9, is a geodetical instrument used to reflect a ray of light

Fig. 9.



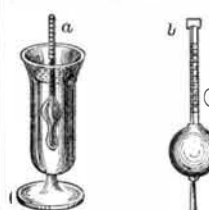
Heliotrope.

to a distant station. That used in the British triangulation has a silvered disk, and has been seen at 100 miles distance, from Cumberland to Ireland. The

HYDROMETER,

Fig. 10, is employed for determining the relative densities of liquids as compared with distilled water. It consists essentially of a float weighted at the bottom so as to keep upright, and having an elongated stem, which in Sykes' instrument,

Fig. 10.



Sykes's Hydrometer.

here shown, is graduated into 11 equal parts, which are again subdivided into 22. Eight different weights, numbered respectively 10, 20, etc., to 80 are used in connection with it. The proper weight to be employed depends on the strength of the spirit, etc., to be tested. It is placed on the lower

projecting stem, sinking the instrument to a depth corresponding to some one of the gradations on the upper stem. This is noted, and also the temperature of the liquid; and the corresponding strength per cent of spirit is then found from tables constructed for the purpose.

PEAT.—At Clay, N. Y., near Syracuse, the Dodge process for drying and condensing peat into fuel is now in successful operation. \$1 a ton is alleged to be the labor cost of production. The specimens we have seen are excellent.

THE French Academy of Sciences has awarded a prize of \$4,000 to M. Paul Bert for his original researches on the effect of barometric pressure on the phenomena of animal life.

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Parisian Toy-Making--Utilizing Waste.

Any one who has ever walked through one of the great toy-importing houses in this city at holiday time, and perhaps wondered at the taste and ingenuity displayed by the French workmen in devising many of the most beautiful playthings, would hardly imagine that waste and refuse materials, very odd ones too sometimes, are largely used in the Parisian toy industry. Elegantly dressed dolls, tricked out in all the refinements of the latest fashion, and which fetch incredible prices on this side of the Atlantic, are frequently costumed from the cast-off stage clothes of actresses in the theatres, purchased for a mere song, or from the useless garments remaining in theatrical wardrobes after a play has had a long run. The coverings of old purses and pocket books, fished out of the gutters by sharp-eyed ragpickers, furnish the material for the doll boot maker. Old sardine boxes and cans yield their plate to the manufacturer of barrels for toy guns. The little wooden or metal wheels which support movable toys are obtained from the refuse of any industry in which articles having circular openings are made. French cruet stands, usually of wood and having holes for bottles, provide thousands of such disks, removed in making the apertures. All the solder and pewter that can be extracted from old roofing and waterspouts, or workshop scraps is pressed into service for the manufacture of dolls' knives and forks, tea sets, etc.; and even the ancient lead coffins dug out of the old cemeteries at Nuremberg, the French toy maker utilizes in the manufacture of lead soldiers. No other nation equals the French in converting the ordinary refuse of the street and workshop into useful and ornamental products. It is this characteristic for saving which makes the French nation so prosperous.

Cooking by Cold.

It is a curious fact, not generally known, that the action of intense cold on organic substances is similar to that of a high degree of heat, and that, when subjected to a very low temperature, meat can be brought to a condition similar to its state when cooked by actual warmth. Quite recently a Hungarian chemist, Dr. von Sawiczewsky, who, it appears, has investigated all the various ways suggested for preserving meat (by chemicals, cooking by heat and hermetically sealing, etc.), and has found points of objection to all, has attempted the preparation of the material by subjecting it in a perfectly fresh state to a temperature of 33° below zero, Fahr., and sealing it afterwards in tins. The results obtained have been highly satisfactory; the meat on being removed from the cans appears, in point of smell and color, as fresh as if just taken from the butcher's stall. Although partially cooked, and thus requiring less fuel to complete its preparation for the table, it is entirely without the taste of meat which has been partially subjected to any heating process, and may be roasted, boiled, or otherwise treated, the same as if it were fresh. A commission appointed by the German governments has lately conducted a series of careful and successful experiments upon the process; and as a final test two corvettes of the German navy, being about to circumnavigate the globe, have been supplied with a large stock. An extensive factory is being erected in Hungary for its manufacture.

DECISIONS OF THE COURTS.**United States Circuit Court--Southern District of New York.**

PATENT CORSET LOOM.—HUGO CHASTANT vs. THE UNITED STATES CORSET COMPANY.

The defendant's mechanism does not infringe the first or third claims of the patent. The defendant's take-up is materially unlike the corresponding parts of the plaintiff's machine, and their needle bar is not in combination with the sectional rollers or wheels, which are described in the plaintiff's patent.

The take-up, which is mentioned in plaintiff's second claim, does not mean every kind of take-up, or the take-up in every kind of loom, but refers only to take-ups which are designed for or adapted to the weaving of irregular fabrics.

The plaintiff's needle bar is placed in such relation to the cloth and to the take-up, and by means of such position it is enabled to accomplish a result which had previously been unattained in corset weaving.

SHIPMAN, J.:

The patent which is alleged to have been infringed by the defendant was granted to the complainant on March 30, 1869, for an improvement in take-up mechanism for looms for weaving irregular fabrics, and was reissued on November 19, 1872. The patented machine was designed expressly for the weaving of corsets. In weaving articles of irregular size, it is necessary to give greater fullness to one side or portion of the woven articles than is given to another portion. The cloth, notwithstanding this irregularity, is woven in one piece, so that sometimes the weaving proceeds regularly across the whole width of the fabric, and sometimes irregularly across an increasing part of the width.

The defendant's mechanism is also a take-up mechanism, which is adapted to irregular fabrics, but is not sectional in its character. A sectional take-up is one which takes up the cloth only on some parts of the fabric, while the rest remains unmoved; that is, the rolls which are used to take up the cloth are divided in sections, and can be used independently of each other. The defendant's take-up consists of an endless sheet or sheets of rubber, pressing the fabric against a roller.

It is strongly contended by the defendant that the complainant's needle bar is antedated by the needle bar which is described in the French patent, dated October 2, 1846, to Messrs. Bender, Bandler, and Madame Gobert. The devices mentioned in the patent, and exhibited in the drawings, are somewhat complicated; but the needle bar, which in one part of the specification is styled a rotary bar, seems to have been either a rotary bar or a fixed bar attached to a movable traction box, or traction slide, and not in any proper sense of the word a stationary bar; it did not, therefore, anticipate the bar of the complainant's patent.

As the patent of William P. Brown, and his knowledge and use of the plaintiff's invention, were not set up or referred to in the answer, the testimony in regard to the Brown take-up was not considered.

Let there be a decree for an injunction against the use of the needle bar, and for an account with costs.

[J. Van Santvoord, for complainant.

Geo. Gifford, for defendants.]

United States Circuit Court--Southern District of New York.

THE GOODYEAR DENTAL VULCANITE COMPANY AND OTHERS vs. EBEN M. FLAGG.

The courts have determined that the construction to be given plaintiff's patent was India rubber, and the compounds commonly employed therewith reduced to a soft plastic state, capable of vulcanization, and subsequently vulcanized.

In the process described by defendant, he does not use India rubber, or any substance capable of vulcanization. The substance used by him is rendered plastic, and not hardened by heat.

Blatchford, J. I do not find that any decision has been made in regard to the plaintiff's patent, which gives to it such a construction as necessarily includes the process and substance used by the defendant.

In the Gardner case the defendant did not compound India rubber with sulphur, but he compounded India rubber with iodine, and he employed heat to harden the rubber (Goodyear Dental Vulcanite Company vs. Gardner, 4 Fisher's Patent Cases, 224, 231.)

In the Smith case the view of the court was that the material to be used under the plaintiff's patent in carrying out the invention patented was to be India rubber, and the compounds commonly employed therewith reduced to a soft plastic condition, capable of vulcanization and subsequently vulcanized. Goodyear Dental Vulcanite Company vs. Smith, 5 Official Gazette of Patent Office, 585.)

It appears from the description of the process used by the defendant in this suit that he does not use India rubber or any substance capable of vulcanization; that the substances he uses are one which is rendered plastic by heat, and is not hardened by heat; that heat is used in the process to soften the substance, and render it plastic, and not to harden it, and that the substance, after being molded, is hardened by being cooled. It is not sufficiently clear that this process is embraced in the claim of the plaintiff's patent to warrant the granting of an injunction until one is awarded as the result of a decree for the plaintiff on final hearing.

[E. N. Dickerson and B. F. Lee for the plaintiff.
W. D. Shipman, C. A. Seward, and E. Luther Hamilton for the defendant.]

Recent American and Foreign Patents.**NEW MECHANICAL AND ENGINEERING INVENTIONS.****IMPROVED STONE-DRESSING AND SAWING MACHINE.**

Silas Steinbeck, Chicago, Ill.—This invention consists of rotary sawing and surfacing cutters, having recesses or notches of peculiar form, to admit the sand between them and the stone; and it also consists of improvements in means for feeding the sand to the cutters, which consist of a slowly rotating screw, which throws the sand over the edge of the trough on to conductors down which it flows to the stone at the cutters.

IMPROVED SPRING MOTOR.

Edwin Lambkin, Sebewaing, Mich.—This is an improved spring power for running street cars, railroad hand cars, road vehicles, and driving machinery. The invention consists in the peculiar construction of a spring drum, and in means for applying a brake and operating a shifting mechanism, the whole of novel and ingenious construction, but hardly possible to explain clearly without the aid of drawings.

IMPROVED CROSSCUT SAW HANDLE.

Samuel Boone, La Gro, Ind.—We have here an improved mode of attaching saw handles to the saw. There is a ferrule, with a perforated rubber block in the closed end thereof, a saw-binding clamp-piece, which is securely attached to the handle by a binding block, with saw-fastening clamps, and a shank with threaded end that extends into a perforation of the handle to be screwed thereon. A rubber cushion and washer at the bottom of the ferrule produces the secure attachment of handle to ferrule and block. The saw is recessed both at the back and side edge, to apply the handle longitudinally or at right angles to the saw.

IMPROVED BACKLASH SPRING.

Thomas Alsop, Elkhart City, Ill.—This inventor proposes a new back lash spring for mill spindles, shaftings, etc., which bears equally on the pinion at both sides of the shaft, and takes up the backlash uniformly throughout the whole length of the spring. The invention consists, mainly, of one or more springs, coupled together and applied at one end by a fixed sleeve or clutch to the shaft, and at the other end to a loose disk that engages, by stops or pins, the pinion that transmits the power to intermeshing gearing. The springs are rendered durable, as no friction or tensile strains are exerted thereon.

IMPROVED SAW GUMMER.

Jason W. Mixer, Templeton, Mass.—This inventor now improves on the saw gummer for which letters patent have been granted to him under date of June 23, 1874, so that the carriage, which is formed with a quadrantal slot at each end, is allowed to swing freely upon screws which pass through said slots and enter the main frame, admitting thereby the changing of the line of cut from the horizontal to the perpendicular without moving the cutter from its place, and without necessitating the readjustment of the machine.

NEW AGRICULTURAL INVENTIONS.**IMPROVED BEE HIVE.**

William L. Hamilton, Glasgow, Ky.—This bee hive is provided with the latticed frames, working in and out of the upper chamber on slides, and held detachably together by wires, to be opened readily for taking out the honey.

IMPROVED HAY RAKER AND LOADER.

George Lambert, Hill Grove, O.—This is a new machine for gathering hay and loading it upon a wagon in a compact form. The hay is elevated by an endless apron having cross bars and swinging arms with spikes to collect the hay. Guides raise the arms from a horizontal to a vertical position as the apron lifts the hay, thus compressing the same.

IMPROVED PLOW HANDLE.

William A. Couch, Hannibal, Mo.—This is an open work metal handle, easily attached to the upright of the plow stock by a single bolt. The novelty lies in the construction, which is such as to ensure strength as well as lightness.

IMPROVED GANG PLOW.

Enoch C. Eaton, Pinckneyville, Ill.—This invention includes several new and ingenious devices by which the plows can be readily adjusted to work deeper or shallower in the ground, which will hold the plows from lateral play when at work. Suitable new arrangements also enable the plows to be easily raised from the ground.

IMPROVED GUANO DISTRIBUTER.

Richard A. Barrett, Newsome Depot, Va.—This relates mainly to combining with the distributing cylinder an axle having long journals, frame bearings, flanges, and nuts. When nuts are screwed up, the distributing cylinder is compelled to turn with the axle; but when the nuts are loosened, the weight of the distributor will hold the axle still while the wheels revolve upon its journals.

NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.**IMPROVED REFRIGERATOR CAR.**

Arnold W. Zimmerman, Denison, Tex., assignor to Samuel Pillsbury, New York city.—This inventor has devised a new refrigerator car for preserving fresh meats, vegetables, and other perishable articles while transporting them over great distances. There is an ice receptacle at the top of the car, provided with flat top and curved and inclined bottom. Above the ice receptacle an air space is formed, that communicates, by side spaces, with the main part of the car, for conveying the warm air and vapors to the ventilators above the air space. The condensed moisture is collected by a longitudinal inclined trough below the lowest part of the ice receptacle, to be conveyed to the outside. The ice water of the receptacle is drawn off by end pipes and stop cocks.

IMPROVED SHAWL STRAP.

Frederick Turner, Frankford, Phila., Pa.—This consists in a combination of straps with a handle, which terminates at each end in a spring hook for connecting the straps, so that they can be connected and disconnected readily. It also consists in the combination of a cross bar, having a hook, with the handle and strap.

IMPROVED SPRINKLER.

John C. Melcher, Black Jack Spring, Tex.—This is a short drum, with the inlet for receiving the water on one side and the orifices for discharging the water on the opposite side. The device has the effect of causing the water to emerge in solid jets, capable of reaching over a wide range of area.

IMPROVED CENTER BOARD.

William Austin, Apalachicola, Fla.—These center boards do not differ from the usual single center boards, except they are each placed obliquely to, instead of parallel with, the keel of the vessel or boat. By virtue of the angle at which the center boards are placed the vessel is set to windward, and made to run much closer to the wind than vessels having the ordinary center board.

IMPROVED SPARK ARRESTER.

Royal P. Faries, Wichita, Kas.—This consists of a wire netting section in the smoke stack for the escape of the smoke. The cinders are allowed to pass above into a trap formed by a close cover over the pipe and a contraction of the top of the latter, from which they are conducted back into the smoke arch through pipes passing down the side of the smoke pipe through the saddle.

IMPROVED SCHOLAR'S COMPANION.

William A. Harwood, Brooklyn, N. Y.—The object of this invention is to provide for use of school children a pocket companion or case for pencils, pens, etc., which shall possess a shape best adapted to enable it to withstand the rough treatment to which it will ordinarily be subjected in actual use, and to prevent rapid wear of the pocket in which the case is carried. The box is formed of a single sheet of tin, bent to form rounded sides, the bottom being nearly flat. The ends are formed of separate pieces of conical forms, and are fastened on said body so as to inclose its ends. The cover is a mere strip of tin with parallel edges, and is fitted to slide forward and backward in grooves.

IMPROVED MUZZLE.

August Miller, Salina, Kas.—This is an improved muzzle for calves, by which they can be effectively prevented from sucking the cows when in the same inclosure with them, without being hindered from grazing or getting other food. A full top muzzle frame with a swinging front plate has hinged and spurred side plates, the whole being attached to the head by suitable fastening straps. The swinging side plates have inward projecting catches, that bear on the top frame, and prevent the front and side boards from swinging away from the mouth.

IMPROVED LIFTING JACK.

Samuel E. Mosher, Chillicothe, Ohio.—This is an improved lifting jack, which may be made entirely of cast iron, and adjusted to any suitable height to support the weight to be lifted in a safe and reliable manner. A hollow standard guides a tubular and toothed lifting bar, into which the toothed and lever acted block enters that raises the lifting bar to support the same on differential toothed spring pawls at any height. The actuating lever is made of two sections, fulcrumed to oscillating pieces of the main standard and pivoted to the lifting block.

IMPLEMENT FOR FORMING BARBS ON WIRE FENCES.

James H. Hill and William H. Jayne, Boone, Iowa.—This is an improved implement for forming barbs upon the wires of a wire fence easily and quickly, and in such a way that the barbs will retain their places securely. By suitable construction the barbs are firmly twisted around each other and around the fence wire.

IMPROVED HAIR RESTORATIVE COMPOSITION.

Mrs. Anness R. Kinyon, Downer's Grove, Ill.—This improved restorer consists of extract of wild grape vine, with which is combined salt and castor oil, to cleanse and heal and prepare the scalp for the restoring properties of the grape vine. The alcohol is combined in sufficient quantity to cut the oil and keep the preparation sweet.

EXTENSIBLE FRAME FOR WINDOW SCREENS, ETC.

John R. Simpson and George W. Simpson, New York city.—This improved frame, though designed especially for a fireboard frame, may be used for a window screen frame. It is so constructed that it may be readily expanded and contracted, to adjust it to fireplaces and windows of various sizes.

IMPROVED BOILER TUBE STOPPER.

Peter Walker, Jersey City, N. J.—This consists of a spring packing ring and a clamp for expanding it for each end of the boiler tube. The clamps are formed of a collar on each end of the tube. Other collars on a rod pass through the tube, and are fixed so as to clamp and expand the packing rings tightly into the tubes of the boiler. The rod and tube of the stopper are of suitable length to fasten the packing rings into the tube at the ends. A stopper of this kind can be put in a locomotive or marine boiler, by the aid of suitable tools, without stopping the fire.

NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.**IMPROVED DUMPING WAGON.**

Jacob Kramer, New York city.—This is a dumping wagon having the seat mounted upon the front truck, and the body hinged at or about the middle thereof to the rear axle, whereby the rear axle bears the greater part of the load, and the body turns clear of the seat.

IMPROVED WHIFFLETREE.

Remus D. Hale, Transitville, Ind.—This consists of a dovetail-shaped projection on the under side of the whiffletree sliding into a corresponding groove in the top of a stud pivoted in the evener, and fastening by a snap spring, so as to be easily and quickly connected and disconnected.

NEW HOUSEHOLD ARTICLES.**IMPROVED COFFEE POT.**

Louis C. Lomer, New York city.—In this coffee machine a liquid-holding vessel (provided with an internal arrangement of strainers and a discharge pipe leading from the bottom thereof) is supported in or upon a detachable stand or pedestal. The improvement relates particularly to the construction of the stand, which has semi-circular hinged covers, which are left open while the alcohol is burning, and closed to extinguish the flame.

IMPROVED DOOR AND GATE SPRING.

Levi Gallaher, Businessburg, Ohio.—This spring is so arranged as to throw back the gate whenever the latter is opened only sufficiently to allow passage through. When the gate is pushed open more widely, devices prevent the action of the spring.

IMPROVED IRONING TABLE.

John L. Young, Foxburg, Pa.—To this improved ironing board the shirts may be readily applied, and then securely retained in stretched state for ironing. There is a dovetailed recess at one end, to which the collar band is attached by a fastening key, and also a dovetailed stretching block, to which the lower part of the bosom is keyed. The block is guided in the recess at the opposite end of the board by a projecting bottom edge, and locked to the ratchet teeth of the recess.

IMPROVED BOILER WASHING MACHINE.

William B. Rodecker and Frank C. Pifer, Eureka, Ill.—This invention relates to the arrangement of parts, whereby the clothes are turned in the cylinder and prevented from becoming packed too closely against the sides thereof; also, whereby the cylinder is held in the middle of the boiler.