ates to a new and useful improvement in the mode of raising and lowering the backs of barbers' and other chairs, whereby the adjustment as to hight is made in the most gentle and perfect manner.

ROCKING-HORSE,-Jesse A. Crandall, Brooklyn, N. Y.-This invention relates to a new rocking horse, which is operated by means of springs concealed within the body, and by levers connecting the said springs with the of a hard, granular character. A bar of this hard iron and one of tough pivoted supporting standards, or legs.

SAW GRINDING MACHINE,-George Walker, Middletown, N.Y.-This invention relates to improvements in machines for grinding long saws, and consists in an improved arrangement of apparatus for holding the saws whilegrinding, from springing under the action of the stone and the pusher orifeeder. It also consists in an improved arrangement of the presser, for adjusting the plates to grind thinner towards the back; and it also consists in an improved automatic belt shifting apparatus.

CHURNS.-FloydHamblin, Madrid Springs, N. Y.-This invention relates to improvements in churns, and consists in the arrangement on a horizontal shaft, within a suitable case, of two or more rows of scoops or cup-shaped paddles in spiral lines in opposite directions around the shaft, and in connection therewith, a series of parallel cream-breaking bars, around the space above the paddles, against which bars the cream taken up by the paddles, will be thrown with sufficient violence to break the small particles, whereby the formation of the butter will be accelerated. The object of the scoop or cup form of the paddles is, besides the advantage of the greater agitation they impart, to force the air into the cream in a greater measure, which is found in practice to be the case. And the object of the arrangement of the spiral lines in opposite directions is to import a forcible movement of the cream from end to end of the churn, at the same time that the agitation due to the movement in the direction of the rotation is going on.

MILL STONE DRESS .- G. W. Loy, Nacogdoches, Texas .- This invention relates to improvements in mill stone dress, and has for its object to provide an arrangement of the furrows calculated to give greater draft in to the other side, the lower portion of which fits into the neck of the rail the bed stone from the center, about one third the distance to the skirt | like the former, but its upper portion extends up and around the outside where, in the dress as commonly arranged, it is less than in the remaining portion, in which latter part are arranged the long furrows tangential or nearly so, to the eye of the stone, the direction from the said eye being opposed to the direction of motion of therunning stone. The invention also comprises several modifications of the furrows and lands for adaptation to stones of different sizes, and for grinding different kinds of grain; also certain modifications of the furrows adapted for the bed stone when used as the runner. The upper stone is provided with a curved dress possessing some of the characteristics of the dress of the bed stone

FAUCET .- Francis M. Bachman and Samuel Ricker, Fredericksburgh, Pa. -This invention has for its object to furnish an improved faucet, which shall be so constructed that it will entirely prevent leakage through it, and will enable the cask to be easily and quickly tapped without the loss of any of the liquid however great may be its pressure.

PROCESS FOR BLEACHING PAPER STOCK AND OTHER SIMILAR SUBSTANCE S. -J. W. Goodwin, Petersbargh, Va.-The nature of this invention relates to improvements in bleaching paper stock, the object of which is to pro vide a means for accomplishing the same more quickly, in a better manner, and at less expense than can be done by the means at present in use. It consists in first submitting the substance to be bleached to the action of dilutenitric acid, well heated; second, boiling it in alkali in an open ves. sel; and finally submitting it to a bath of chloride of lime and sulphuric acid.

FLUE FOR DRY HOUSES .- Wiley B. Hix, Rome, Ga.-This invention has for its object to furnish an improved flueforuse in a dry house for drying fruits, vegetables, lumber, and other substances, which shall be simple in construction and effective in operation, allowing the heat to be regulated and controlled at will.

POLE-ASCENDING APPARATUS.—George Fleming, New York city.—This invention relates to improvements in apparatus for ascending telegraph and other poles, and consists in an arrangement of rigging for hoisting masts up by the side of the poles, on the top of which masts are carried pulleys and cords, the latter hanging to the ground by which cords with pulley blocks are swung over the arms of the poles, through which pulley blocks the cords of platform are rove by which a person may be drawn up. The invention also consists in an improved rigging for attaching to the top of the pole for suspending the pulley for the platform for use when the pole has no armat the top over which the cord can be swung.

TIRE UPSETTING MACHINE.-P. G. Avres, Lindsav, Canada West.-Thi invention relates to improvements inmachines for upsetting tire and metal bars, and has for its object to provide a simple and efficient apparatus, especially adapted forreadily applying and removing the tires. The invention comprises a main bed of cast metal with a vertical fixed pillar, a sliding bed with another pillar, a pair of clamping dogs, a pair of supporting linksfor the pivots of the dogs, and an eccentric operating lever.

FLAT-IRON HEATER.-G. O. Honks, Addison, Vt.-This invention relates to a new and useful improvement in the mode of heating flat or smothing ronsforironing clothes, and consists in a rectangular-shaped box open at the bottom side with apertures for the admission of the flat irons, and with shutters for each arranged in a convenient manner.

CAR COUPLING .- Wm. J. Evans, Homer, Iowa .- This invention relates to new and useful improvements in car couplings, whereby a simple and efficient device may be obtained by which the cars may be coupled self-acting-ly when the said device has been properly set. The invention consists in the arrangement, with a coupling pin, having a vertical guide, of a hinged setting lever, for holding the pin above the opening for the link and for being tripped by the link to let the pin fall when the link has passed in. Also in an arrangement with the same of a balancing tongue to hold the links in a horizontal position so as to enter the mouth of the drawhead of an approaching car.

CARWHEELS .- John N. Farrar, Pepperell, Mass .- This invention has for itsobject to furnish an improved wheelfor steam and horse cars, engines, etc., which shall be strong and durable, and, at the same time, so constructed as to avoid the constant jarring and noise now attending railway traveling, and reducing the liability of accidents from breaking of wheels. etc., and also in a great degree preventing the battering of the ends of the rails by constant hammering of the car wheels.

BALANCED WATER ELEVATOR .- William L. Thomas, Wadsworth, Ohio. This invention relates to a new and useful improvement in apparatus for elevating water, to be operated either by hand or other motive power, by

BARBERS' CHAIR.-Anthony Abel, New York city.-This invention re- is prepared for drawing down by composing the uppper or inner side of the bar of any good quality and any required thickness of homogeneous iron, to give strength and to admit punching of the nail holes of horseshoes. For the lower or entire portion of the bar a hard quality of iron is used, to render horseshoes more durable. This quality of iron is produced by arresting the process of puddling at that stage which leaves the product quality are piled together, heated and welded by rolling. These bars are then drawn out and formed into blanks for horseshoes by suitable machinery. Faggots for axles are formed by placing in contact the ends of bars

of iron and steel, around mandrels, and supporting their central portions at some distance asunder by means of I-shaped bars. One end may then beheated and rolled, or both ends may be heated simultaneously and completed in a single rolling. The rolling mill has an engine at each end, with a fly wheel having a hollow shaft through which air is forced to keep the journals cool, and otherwise of peculiar construction. Rotation is impart ed to the rolls from the fig. wheel shafts by belts and pulleys, one of which is fixed to the fly-wheel shaft, and the other to one of the rolls. The rolls are geared together as usual. At each end of the mill a driving belt passes loosely around the pulleys, and only communicates motion when tight ened by a steam piston tightening device. One engine may be employed to drive the rolls one way, and the other to give them reverse motion. The dies employed are removable and adjustable so that they may be made of any suitable shape to point or head spikes, etc., and so that they may be readily reshaped and repaired. Suitably formed dies produce railway or other spikes at one operation.

FAN BLOWFR.-Patrick Clark and J. R. Shotwell, Rahway, N. J.-This invention is fully described and illustrated in another column of this issue. JOINT FOR RAILROAD RAIL.-Joseph Adams, Fairhaven, Vt.-In the neck of the ordinary T-rail a tongued or grooved joint is formed, and this joint extends extends entirely through the neck. A stay of any desired length is made to fit into the neck of the rail, and a supplementary rail is added of the rail, and its upper edge is sufficiently elevated, to take the tread of the wheels of the locomotive, cars, or trucks so that the ends of the rails will be, in a measure, relieved from pressure, and the wear and disagreeable jolt occasioned by the striking of the ends of the wheels against the the ends of the rails will be avoided. The stay and the shortrail are firmly bolted to the rail by bolts which pass through slots so as to allow for the expansion and contraction of the rail.

ESCAPE VALVE FOR STEAM BOILERS .- Jas. C. Cochrane, Rochester, N. Y. $-{\rm This}$ invention consists of a hollow metal cylinder, with a valve seat in the head thereof, communicating with a tube extending to the bottom of the boiler. A valve is placed in this cylinder, and consists of a metal spindle and piston-preferably made hollow-and on the spindle above the piston is a projecting bulb or cone. The lower end of the spindle is made to fit easily into the tube, so as not to prevent the flow of water or steam. When the cylinder extends above the boiler, a cap is placed over it and firmly fixed to the head of the boiler. In the top of this cap is an aperture to match the bulb of the spindle, so that when the piston is pressed up, the bulb will enter and fill the aperture, and the valve is then closed. The head of the cylinder is made tight with packing, so that no steam can pass ex cept through the tube. The lower part of this tube is made funnel-shaped, and pierced with holes up to low-water mark. This tube may be made shorter so as only to reach down to low-water mark, and then no holes would be pierced in the sides of the tube. When the water in the boiler is above low-water mark the pressure of the steam will cause the water to rise into the valve chamber and close the valve, and vice versa. A whistle may be used if desired.

LEVER ESCAPMENT FOR WATCHES .- Julius Hietel, John W. Hietel, and John L. Geissler, Philadelphia, Pa.-This invention consists in constructing the lever of a watch escapment of two arms, which are connected at their outer ends by a spring, and fitting it around the staff, which has a grooveformed in it for the reception of the short arm. The application and arrangement of this self-regulating spring lever will, when the watch is shaken, allow the ruby pin to pass, and will therefore permit the balance to turn freely under the influence of such shock or motion so as to prevent the breaking of the ruby pin or pivots, frequent in ordinary lever escape ments, and at the same time it avoids the complication of the chronometer escapement.

PUDDLING IRON.-Charles Hewitt, Trenton, N. J., assignor to A. S Hewitt, New York city.-Thisprocess consists in mixing cast iron divided into coarse granules, varying from one fifth of an inchin bulk, with oxide of iron, then melting, stirring, and boiling them together. The process is completed by boiling the iron, thus obtained in a puddling furnace.

LIQUID METER.-James P. Smith, Cleveland, Ohio.-This invention consists in the combination of a conical and needle valve, and their adapta-tion to the ingress and egress pipes of a liquid meter. The liquid enters the body of the meter through a pipe projecting into the body of the ter, larger than the egress pipe, so that the body of the meter is keptfullof liquid under pressure. A cone is placed in the inner end of the ingress pipe, the stem of which passes through guides to secure vertical motion To this valve is attached an arm carrying a needle valve, slightly tapered, whichenters a small pipe, so that however much or little the inner end of the ingress pipe may be opened by the inward pressure of the water, the mouth of the small pipe will be opened in exactly the same ratio: and the amount of water entering the ingress pipe is exactly proportional to the amount escaping from the mouth of the small pipe. By measuring the latter, the amount discharged by the former is determined.

REVERSIBLE PARASOL .- Joseph E. Banks, New York city .- This invention consists in so arranging the ribs, stretchers, and cover of a parasol that when spread the ribs will project at right angles from the stalk, forming a flat top with central conical extension above or below the flat part. stretchers and ribs are connected with two runners, by either of which the frame may be spread, one being connected to the stalk near the top, and the other below. The lower one is most convenient forthis purpose, the upper one being fixed by a spring or other device. The frame, or parachute may be closed by moving the runners in either direction on the stalk. The spring catches are arranged to facilitate the movements of the runners over them in either direction. The frame, with its runners, is reversible, so that the central conical projection of the cover which was upwards will be downwards when the parasol is opened.

and William McFarland,

Official List of Batents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING March 8, 1870.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES:	
On each caveat On filing each application for a Patent (seventeen years)	\$10
On filing each application for a Patent (seventeen years).	\$15
On Issuider each original Patent	\$20
On appral to Commissioner of Patents	\$20
On application for Beissne	1 20
On application for Extension of Patent	\$50
On granting the Extension	\$50
On an application for Design (three and a half years)	
On an application for Design (three and a half years)	\$10
On an application for Design (seven years)	\$10
On an application for Design (fourteen years)	\$30
In addition to which there are some small revenue-stamp taxes. Res	idents
of Canada and Nova Scotia pay \$500 on application.	

100,487.—BARBER'S CHAIR.—Anthony Abel (assignor to him-self and Adam Schwab), New York city. 100,488.—TIRE-UPSETTING MACHINE.—P. J. Ayres, Lydon,

100,489.—FAUCET.—F. M. Bachman and Samuel Ricker, Fred-

100,489.—FAUCET.—F. M. Bachman and Samuer Mickel, Frequericksburg, Pa.
100,490.—BOOT-LASTER.—Lewis Barnett (assignor to himself and J. D. Boal), Leechburg, Pa.
100,491.—BED BOTTOM.—Wm. Bowen, Dayton, Mich. Antedated March 1, 1870.
100,492.—COFFEE-CLEANING MACHINE.—J. W. Brady (assignor to M. W. Brady), Catonsville, Md.
100,4/3.—COFFEF-CLEANING MACHINE.—J. W. Brady (assignor to M. W. Brady), Baltimore, Md.
100,494.—PRINTING PRESS.—James M. Brownson, Brooklyn, N.Y.

100,495.—CORN PLANTER.—S. B. Buck, Elyria, Ohio. 100,496.—FRUIT JAR.—Ira Buckman, Jr., Williamsburgh,

100,497.—DESULPHURIZING ORES.—Elizabeth A. Burns,

100,499.—DESCRIPTIONALING COMMENSION COMMENSIONAL COMMENSIA COMMEN

100,500.—CULTIVATOR.—Horace Carr, Wooster, Ohio. 100,501.—CULTIVATOR.—Horace Carr, Wooster, Ohio. 100,502.—MORTISING MACHINE.—F. G. Chapman, Chicago, 100,503.—MACHINE FOR POLISHING WOOD.—F. G. Chapman

(assignor to Dennis Beach), Chicago, Ill. 100,504.—BRACELET.—D. D. Codding, North Attleborough,

Mass. 100,505.—SASH BOLT.—J. C. Cooke, Bridgeport, assignor to De Witt C. Sage, Middletown, Conn. 100,506.—PAPER CUTTING MACHINE.—A. W. Currier, Grand Rapids, Mich. 100,507.—SLATE FRAME.—Charles B. Dickinson, New York

100,508.—School Desk and Seat.—J. D. Diffenderfer, Lewisburg, Pa, 100,509.—STOP FOR BILLIARD WIRES.—E. O. Dow, Chicago,

100.014.—GUN CARRIAGE.—John Ericsson, New York city.
100.515.—RAILWAY CAR COUPLING.—W. J. Evans (assignor to himself and Charles Warner), Homer, Iowa.
100.516.—MEDICAL COMPOUND OR OINTMENT.—G. D. Field,

100,516.—MEDICAL COMPOUND OR OINTMENT.—G. D. LIGH, New Orleans, La.
100,517.—WINE AND CIDER MILLS.—W. K. Foltz and W. A. McCool, Ashland, Ohio.
100,518.—HORSE HAY FORK.—R. S. Frame, Washington, Ohio. Antedated Dec. 31, 1869.
100,519.—HIDE MILL.—J. P. Friend, Peabody, and B. R. An-nable, Salem, Mass.
100,520.—TANNING.—A. D. Fullmer, Buffalo, N. Y.
100,521.—Dry FOR FORMING SHOVELS.—H. O. Ganyard (as-

100,522.—DIE FOR FORMING SHOVELS.—H. O. Ganyard (as-signor to Ami Hills), Rochester, N. Y. 100,522.—HANDLE OF FOLDING UMBRELLA.—Louis Gehlen,

New York city. 100,523.—PROCESS OF PULPING AND BLEACHING PAPER STOCE.-J. W. Goodwin, Petersburg, Va. Antedated Feb. 26, 1870. 100,524.—BEEHIVE.—Henry Grems, Westmoreland, N. Y.

100,525.-SADIRON HEATER.-Gordon O. Honks, Addison,

100,526.-- COTTON SEED PLANTER AND FERTILIZER DISTRIB-UTER.-H. C. Harris, Fort Valley, Ga. 100,527.-- ICE CHAMBER FOR REFRIGERATOR.-- J. W. Hazlett,

New York city. 100,528.—EVAPORATING SALT BRINES AND OTHER LIQUIDS. Jacob Heim, N

100.529.-STUMP EXTRACTOR.-Johnson Higgins, Friendship,

100,530.—Flue for Dry-House.—W. B. Hix, Rome, Ga. Antedated March 2, 1870. 100,531.—STEAM GENERATOR.—G. P. Hunt, United States

Navy. 100,532.—GRAIN AND STRAW-CARRYING ATTACHMENT FOR SEFARATORS.—Byron Jackson and B. F. Jackson, Woodland, Cal. 100,553.—LAMP SHADE.—W. H. Johnson, Springfield, Mass. 100,534.—CARBURETING AIR.—Charles Lawrence, Cincinnati,

Ohio. 100.535.--Corrugations of Boot and Shoe Uppers.-Wm. Lee, New Haven, Conn. Antedated Feb. 26, 1870. 100,536.—STOVE GRATE.—Erastus C. Loud, Springfield,

means of which water may be elevated to any required hight, while the action of the working piston will be balanced.	lyn, N.Y -This invention is fully described and illustrated on page 385, Vol. XX., of the SCIENTIFIC AMERICAN.	Mass. 100,537.—MILLSTONE DRESS.—G. W. Loy, Nacogdoches, Texas.
PROGRESS OF AMERICAN INVENTION IN EUROPE.	ACTUATING SHIPS' PUMPS.—Almon Koff, Southport, Conn —This inven- tion was fully described and illustrated on page 20. Vol. XXI., of the SCIEN- TIFIC AMERICAN.	100,538.—WIND-WHEEL.—Charles Mahler, San Francisco, Cal. 100,539.—Base BURNING FIREPLACE HEATER.—John Mar- tino Philodelphia Pa
The following Patents for American Inventions have recently bæn obtained in England through the Scientific American Patent Agency. WATER AND GAS METER.—Joshua Mason, Paterson, N. J.—This meter consists of a cylinder provided with a plunger, and having a chamber at one end in which there is a valve chamber, containing a sliding valve, which consists of a rod with two circular disks of heads upon it, and a cir- cular plate at one end. This plate is perforated to open communication between the valve chamber and the small chamber. The valve chamber is open at both ends and provided with three ports, communicating respec- tively with the supply pipe, the water passage to rear end of the cylinder and the discharge pipe. Two rods, parallel with each other, are attached to the plunger, and pass loosely through flanges or bent ends of two plates connected by a pin or pivot to one end of a rod which passes loosely through the valve, and has a head on its outer end. A toothed segment is suspended within the cylinder and gears into a pinion, through which mo- tion is transmitted to a registering apparatus. When the inlet part is open the water passes alternately into the rear end of the cylinder, and behind the plunger, as the valve is changed by the action of a spring. MANUFACTURE of BAE IRON, AND MACHINERY FOR ROLLING THE SAME	GUN LOCES.—Randal D. Hay and James M. Hill, Crooked Creek, N. C.— A hollow case or guard is hinged to the side of the lock, so that when closed up against the side of the lock, the top will project over the nipple, This guard is moved out of the way of the fammer, in discharging the gun, by a lever, bell-crank, and link, actuated by the trigger, so as to throw the guard out of the way of the trigger. Springs throw the guard back again after the hammer is raised, and the gun is thus prevented from be- ing accidentally discharged. FRICTION MATCHES, AND MATCH BOXES FOR HOLDING THE SAME.—Wm. H. Rogers, New York eity.—These matches are made by combining any of theordinary friction match compositions with gutta percha, or caout- chouc, which makes a flexible match cord. The second part of the inven- tion is a metallic case like a pencil case, to contain the flexible match, out of which it is slid as wanted. This case is also provided with a cap to ex- tingnish the match, when it is no longer wished to keep it ignited. CITCY SUBSCRIBERS.— The SCIENTIFIC AMERICAN will be delivered in every part of the city at \$350 a year. Single copies for sale	 100,541.—BEVEL-JAWED VISE.—Austin Z. Mason (assignor to R. B. Robins), Adrian, Mich. 100,542.—INSTRUMENT FOR COUPLING RAILWAY CARS.—Abner McOmber and Mina Ward, Schenectady, N. Y. 100,543.—RAILROAD CAR HEATER.—William Meller (assignor to himself and Joseph Sutton), McKeesport, Pa. 100,544.—COFFEEPOT.—Sante Mento, Alliance. Ohio. 100,545.—MEAT-POUNDER BLOCK AND CHOPPING BOWL.— (B. Buil, Buffalo, N. T. 100,546.—PRESS FOR HAY, COTTON, ETC. —Samuel Miller, Mount Union, Pa. 100,547.—REVOLVING HARROW.—H. H. Monroe, Thomaston, Me. 100,548.—PREPARING BUTTON-HOLE TWIST.—Robert Morrison, Yonkers, N. Y. 100,549.—LIGHTNING ROD.—David Munson, Indianapolis, Ind. 100,550.—DAMPER ACTION FOR UPRIGHT PIANO-FORTES.— G. W. Neill (assignor to Chickering & Sons), Boston, Mass. 100,551.—SCROLL SAW.—GOVERNEUM M. Nickason, Ellenville,
INTO VARIOUS FORMS. James Montgomery, New York city. The material	burgh, and by most of the News Dealers in the United States.	son Ogborn, Richmond, Ind.

DESIGNS.

city. 3,886.—BARRED BRIDGE, RATCHET-CAP BASE, AND ARBOR CUP OF WATCHES.—F. S. Giles (assignor to Giles, Wales & Company), New York city.

Long, Dayton, Ohio, 3,888.—CLOCK FRONT.—Nicholas Muller, New York city. 3,889.—TRADE MARK.—George C. Thilenius, Cape Girardeau,

3,893.—CARPET PATTERN.—Hugh Christie, Morrisania, N. 1. 3,893.—SPICE MILL.—Wm. Haslam (assignor to Henry Tro-emner). Philadelphia. Pa. 3,894.—COLLAR BOX.— John R. Jerauld and Henry L. Holmes, Providence, R. I.

EXTENSIONS. ORE WASHER.-W. L. Carter, of Marietta, Pa.-Letters Pat-ent No. 14,389, dated March 11, 1856,

[Communicated].

ROTATING AND FIXED TURRETS.

by the editors of the Army and Navy Journal, to whom it is addressed.

Please publish the following communication, which has been declined

SIR:-Your editorial contributor of the article published in your jour-

nal on the 1st of January, and entitled "Rotating and Fixed Turrets,"

seems to know that the defects of the monitors are becoming so well un-

derstood that their claim to be considered invulnerable cannot be supported either by the irrecordor by the intrinsic merits of their design.

dently thinks but one way is left to save the system from public disfavor

and that is by clamoring about the ignorance of those who have the tem erity to doubt its superiority over every other. Your contributor makes no denial of the justice of my criticisms when applied to the monitors provided with base rings, supported as they were by proofs from official reports; but admits that "the original small craft

which served us so effectually during the war, possessed defects, which in

later structures have been nearly overcome, and which in future structures may be wholly removed." He says, "these cardinal objections urged

on Mr. Eads'system of naval defense, are wholly groundless as regards

the Dictator. It was not this vessel, it appears, but the original batch of small monitors, which Mr. Eads criticised," and tells us "that these ob-

jections have been removed in the Dictator and Puritan classes, and consequently in the Kalamazoo class of turrets." He says: "The base ring

which was attached to the small monitors because the thin turret plating

was found inadequate, a matter to which Mr. Eads devotes much space,

we deem it was to of time to discuss. All that need be said is that the Dic-

tator and Kalamazoo class of turrets were built (these italics are mine) on

From these extracts it is evident he abandons the attempt to defend the vessels provided with base rings. These constitute the Monadnock, Can-

onicus, Passaic, and Yazoo classes, nearly forty monitors, all of which he leaves hors du combat, and concentrates his entire energies in defending

the monitor system with the turrets of the D ctator class, the Puritan

class and the Kalamazoo class. I therefore leave "the original batch" to

survey the field occupied by these invincibles. How many remain, then,

of these undemolished and acknowledged representatives of the monitor system? Will your readers, after all this ado about how our Kalamazoo class of turrets "were built," and all the bombast about the Puritan class,

and the Dictator class, credit the fact that excepting the Dictator, there is

not at this time, and never has been, a turreted vessel of either class in ex-

l once read of an urchin at school (not "one of our young friends at West Point and the Naval Academy"), who, having his coat closely buttoned up, wasasked, "Where is your shirt?" "Mother is washing it." "Have you

but one shirt?" continued the astonished interrogator. To which the in-

dignant lad replied, "Would you expect a body to have a thousand shirts?" When your contributor is asked, "Have you but one of these

wonderful vessels?" I can imagine his indignation as he replies, "Would

I shall not quarrel, however, with him because of the paucity of his Kal

amazoos, but will briefly proceed to examine the merits of his last remain-

ing hope-the Dictator. I will first state, however, that the turrets of the

Puritan and the Kalamazoo classes, which he takes so much pains to tell

us, "are composed (my italics again) of two distinct cylinders of plate

The Department is evennow maturing plans for completing as casemated

you expect a body to have a thousand Kalamazoos ?"

iron," have never been constructed at all.

JAMES B. EADS.

ST. LOUIS, January 29, 1870.

To the Editor of the New York Times ;

a plan requiring no ring at the base."

istence?

-TRADE MARK.-O. C. Maxwell, T. L. Neal, and C. L.

3.887.-

100,553.—PURIFYING ACETIC ACID.—T. L. Olden, Brooklyn, 100,634.—CHECK FOR GAS BURNERS.—J. H. Jennings, New

- city. 100,555.—GRAIN DRILL.—Hiram Pulse, Waldron, Ind. 100,556.—LOCK.—Daniel B. Read and J. H. Clapp, Providence, R. Laussigners, by messe assignments, to C. C. Dickerman, Boston. Mass. 100,557.--STOVE PIFE DRUM.—Edmund D. Roberts, Hartford,
- 100,558.-WINDOW-SHADE HOLDER.-E. J. Robinson, Syra
- 100,559.—GASOMETER.—Thomas F. Rowland. Green Point,
- 100,560.—SLED BRAKE.—G. W. Sanborn (assignor to J. W.
- Sanborn, Glimanten, N. H. 100,561.—SELF-CLOSING FAUCET.—Carl Schultz and Thomas Warker, New York eity. Anteiated February 21, 1870. 100,562.—CALKERS' MALLET.—Sanual C. Searles, Wilming-
- ton. Del. 100,563.—FELTED FABRIC.—S. P. Siver, Danbury, Conn. 100,564.—Toy MONEY BOX.—F. W. Smith., Jr., Bridgeport,
- Conn. 100.565.—RIDING SADDLE.—Eugene Spedden, Astoria, Oregon.
- 100,566.—FURNACE FOR SMELTING, AND FOR OTHER PUR-POSES.—John Thomas (assignor to himself, William Bacon, Harrison Groves, and Hugh Chaytor), Middlesbrough, Eng. Patented in England, July 18, 1868.
- JULY 18, 1895. 100,567.—BALANCED WATER ELEVATOR.—W. L. Thomas, Wadsworth, Onio. 100,568.—SEAL LOCK.—Gustave Ulman (assignors to C. R.

- 100,568.—SEAL LOCK.—Gustave Ulman (assignors to C. R. Goodwin), Ivry-sur-Seine, near Paris, France.
 100,569.—BED BOTTOM.—W. W. Wait, Richmond, Ind.
 100,570.—MACHINE FOR MAKING HORSE SHOES.—Edwin Wassell, Wood's Hun, Pa.
 100,570.—MACHINE FOR MAKING HORSE SHOES.—Edwin to himself and Hiram Watson), Coatsville, Pa. Antedated March 1, 1870.
 100,572.—VAPOR BURNER.—Henry Wellington (assignor to himself and T. P. Doane), Chlcago, Ill.
 100,573.—FERTILIZER SOWER.—T. J. West (assignor to himself and T. P. Doane), Chlcago, Ill.
 100,573.—FERTILIZER SOWER.—T. J. West (assignor to himself, and T. P. Doane), Chlcago, Ill.
 100,573.—FERTILIZER SOWER.—T. J. West (assignor to himself, and A. C. Frisby), Alfred Center, and Joel Morekess, Pallam Newsham (assignor to Morris, Tasker & Co.), Philadelphia, Pa.
 100,652.—COMPOUND FOR STUFFING LEATHER.—J. Merrill, Bostion, Mass.
 100,653.—LAMP BURNER.—Rufus Spaulding Merrill, Bostion, Mass.
 100,654.—MACHINE FOR TURNING BALLS OR MANDRELS.— William Newsham (assignor to Morris, Tasker & Co.), Philadelphia, Pa.
 100,654.—MACHINE FOR TURNING BALLS OR MANDRELS.— William Newsham (assignor to Morris, Tasker & Co.), Philadelphia, Pa.
- And over, N. Y. 100,574.—MACHINE FOR MAKING HORSE SHOES.—Chas. W.
- 100,574.—MACHINE FOR MARINE HORSE SHOES.—Chas. W. Wettengel, Pittsburgh, Pa.
 100,575.—LOOM CAM.—George O. Wickers, Lawrence, and Thomas J. McClary, North Andover, Mass.
 100,576.—STEAM PLUMP DEVICE.—Martin Wilcox, Sacramento, Cal. Antelated December 30, 1869.
 100,577.—SASH HOLDER.—James Wilkinson, Albany, N. Y.

- 100,578.—LANTERN.—Arnold Withmar, St. Louis, Mo. 100,579.—METHOD OF LAYING OFF PATTERNS FOR STITCHING ON LEATHER.–William P. Wolfington, Louisville, Ky. 101,580.—INLAYING METALLIC SURFACES.—E. G. Wright,
- Boston, Mass. 100,581.—BOLT MACHINE.—John R. Abbe, Providence, R. I.
- ntedated March, 1, 1870. 582.—UMBRELLA.—Edward Adams, Boston, Mass. 100.582 -
- 100,583.—VEGETABLE AND FRUIT PEELER.—É. D. Averell
- and Jeseph Malan, Brooklyn, N.Y. 100,554.—CARRIAGE WHEEL.—James, R. Baird, Vincennes,
- 100,585.—EXPANSIBLE CORES FOR CASTING IRON, GLASS, ETC. -Anson Balding, Wheeling, West Va. 100,586.-MUSTACHE GUARD FOR DRINKING VESSELS.-E.
- 100,586.—MUSTACHE GUARD FOR DRINKING VESSELS.—E. W. H. Bass, Quincy, Mass.
 100,587.—COMPOUND TO BE USED AS AN ARTICLE OF DIET.—C. G. Baylor, Quincy, assignor to E.S. Tobey, Richard Soule, and Chass. Soule, Boston, and Louisa D. Baylor, Quincy' Mass.
 100,588.—PAINT COMPOUND.—Ezra Blakeley (assignor for one half to Peter Pierson), NePonset, Ill.
 100,589.—RAILROAD[®]CAR VENTILATOR.— Isaac Bonnell, Jr. (assignor to himself and H. G. Lumbard), Chicago, Ill.
 100,590.—BRICK MACHINE.—G. C. Bovey, Cincinnati, Ohio.
 100,591.—WATER-PROOF FABRIC.—Thomas Bracher, Rahway, N. J. Antetated February 26, 1870.

- N.J. Antedated February 26, 1870. 100,592.—REDUCING GEAR FOR STEAM ENGINE INDICATORS.
- -H. L. Brevort, Brooklyn, N. Y. 100,593.—BLIND.—W. E. Brock, New York city. 100,594.—ADJUSTABLE WINDLASS.—John S. Brown, Sche-

- nectaty, N. T. 100,595.—PUMP.—James Byran, New York city. 100,596.—LET-OFF AND TENSION DEVICE FOR SPOOLS OF BRAIDING MACHINES.-James D. Butler, Lancaster, Mass. February 26, 1870.
- Peoruary 20, 180. 100,597.—DITCHING MACHINE.—James Calliham (assignor to David M. Calliham), Baton Rouge, La. 100,598.—PRINTING PRESS.—Adam Campbell, Brooklyn, N. Y. 100,599.—ANIMAL TRAP.—Henry C. Case, Pekin, Ill. 100,600.—School DESK AND SEAT.—Wesley Chase, Buffalo,

- 100,601.—LAUNDRY INDICATOR.—Robert Clarke, Macon, Ga.
- 100,602.—WRENCH.—A. G. Coes, Worcester, Mass. 100,603.—HAND RUBBER FOR WASHING CLOTHES.—G. F. J. Colburn, Newark, N. J.
- 4.—Machine for Picking Curled Hair.—N. L. Cole, 100,604.-
- (assignor to himself and A. N. Uphani), Norwich, Conn. 100,605.—BRAD SETTER.—M. D. Converse, London, Ohio. 100,606.—FLOATING SHIP.—G. W. Corey and T. Losie, New York city. Antedated Feb. 28, 1870. 100,607.—PRESS.—Dexter Curtis, Madison, Wis. Antedated
- 100,007.-FREDS.-DOACH CLAIM, FEB.26, 1870. Feb.26, 1870. 100,608.-COMPOSITION FOR PRESERVING TIMBER AND WOOD. -Edward J. De Smedt (assignor to N. Y. Improved Anthracite Coal Co.) New Yorkcity. 100,609.-WELL BORER.-S. H. Dickerson, Hudson, Mich. 100,609.-WELL BORER.-S. H. Dickerson, Hudson, Mich.
- 100,610.—MACHINE FOR MAKING SASH.—S. C. Ellis, Jersey City N.J 100,611.—(-COMBINED HAY KNIFE AND PRUNING HOOK .--- D.
- Fasig, Rowsbury, Ohio. 100,612.—BALANCE SLIDE VALVE.—James Fitzgerald, Brook-
- 100,612.—BALANCE SLIDE VALVE.—James Fitzgerald, Brooklyn, N.Y.
 100,613.—POLE ASCENDING APPARATUS.—George Fleming, New York city.
 100,614.—CORD HOLDER FOR WINDOWS, ETC.—G. S.Gladding, Construction of the construction of the second seco
- Cuester, Conn. 100,615.—HARVESTER RAKE.—William F. Goulding, Provi-
- dence, R. I. 100,616.—Door RETAINER.—Charles T. Gravatt, Philadel-
- phia.Pa. 100,017.—MACHINE FOR REFITTING CONICAL VALVES.—C. F.
- Hall, Boston, assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, assignor to himself and Joseph W. Haskins, Charlestown, Mossi Antedated Feb 5, 1820 H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, Assignor to himself and Joseph W. Haskins, Charlestown, H. Hall, Boston, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, Haskins, Haskins, Charlestown, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, Haskins, Charlestown, H. Hall, Boston, Haskins, Ha

- 3,872.- APPARATUS FOR THE MANUFACTURE OF GAS.-W. J. 5,872.—APPARATUS FOR THE MANUFACTURE OF GAS.—W. J., Nichols and A. C. Rand (assignces, by mesne assignments, of L. D., Gale, assignors to W. J. Nichols, A. B. Rand and R. H. Brown), New York city.—Patent No. 25,028, dated November 5, 1859.
 3,873.—MANUFACTURE OF GAS.—W. S. Nichols and Alonzo C. Rand (assignces, by mesne assignments, of L. D. Gale, assignors to W. J. Nichols, A. B. Rand, and R. H. Brown), New York city.—Patent No. 26,039, dated November 8, 1859.
 2974. Conput Sensity Cumput. G. W. Colo. Tearmington III N. J. 100,554.—WOOD PAVEMENT.—A. Warner Platt, New York 100,635.—SPRING BED BOTTOM.—T. W. Johnston, Richmond,
 - 100,636 .- FURNACE FOR DRYING SAND .- I. D. Johnson and
 - A. V. Hartwell, Chicago, Ill. 100,637.—LAMP CHIMNEY. Edward Jones, South Boston,
 - No. 26,080, dated November 8,1859.
 3,874.—CORN STALK CUTTER.—G. W. Cole, Farmington, Ill. -Patent No. 39,214, dated July 14, 1868.
 3,875.—WATER WHEEL.—William Foos, John W. Book-walter, Mary A. Leffel, Springfield, Ohio, and Lamar Foos, New Haven, Conn., assimees, by mesne assignments, of D. K. Kraatz.—Patent No. 20,921, dated July 13, 1853.
 3,876.—HORSE HAY FORK.—J. K. O'Neil, Kingston, N. Y.— Patent No. 55,528, dated June 12, 1866.
 3,877.—LIME KILN.—C. D. Page, Rochester, N. Y.—Patent No. 22,289, dated December 7, 1855. 100,638.—TABLET, TOKEN, OR CHECK, TO BE USED IN LIFE INSURANCE.-H. A. JONES, BROOKLYN, N. Y. 100,639.—PEANUT CLEANING AND POLISHING MACHINE.—J.
 - M. Keuting, Norfolk, Va. 100,640.—MUCHAGE HOLDER.—James M. Keep, New York
 - 100,641.—STOVEPIPE DAMPER. William J. Keep, Troy,
 - N.Y. 100,642.—CLAMP.—G. D. Lambert, New Haven, Conn. 100,643.—MOTIVE POWER FOR CARRIAGES.—S. L. Langdon,

 - 100,643.—MOTIVE POWER FOR CARDINGER OF CARDING CONTINUES FOR CARDING CONTINUES OF CARDING CON -Orzio Lugo, Baltimore, Md. 100,648.--WATER WHEEL.-Samuel Martin, York, assignor himself and B. F. Manifold, Lower Chanceford, Pa. 100,649.--FLATIRON POLISHER AND HOLDER.--W. B. Mason, Borton Maco

 - Boston, Mass. 100,650.—HORSE HAY FORK.—J. M. McDonald, McCoysville,

 - W. H. Merrick, Philadelphia, Pa. 100,652.—COMPOUND FOR STUFFING LEATHER.—J. Merrill, Boston, Mass. 100,653.—LAMP BURNER.—Rufus Spaulding Merrill, Cam-bridge, assignor to himself, William B. Merrill, and Jeslina Merrill, Bos-ton, Mass. 100,653.—LAMP BURNER.—Rufus Spaulding Merrill, Cam-bridge, assignor to himself, William B. Merrill, and Jeslina Merrill, Bos-ton, Mass. 100,653.—CARPET PATTERN.—Hugh Christie, Morrisania, N. Y.

 - 100,655.—CULTIVATOR.—Walter Notman, Deerfield, Ohio. 100,656.—CARD RACK.— Leverett H. Olmsted, Brooklyn,
 - 100,657.—DISH WASHER.—Merrill S. Orton and P. B. Stiles,
 - 100,658.—PAPER BOX.—Bennett Osborn, New York city.
 - 100,659.—EMERY WHEEL.—J. L. Otis, Leeds, Mass. 100,660.—SAWING MACHINE.—Andrew G. Park, Leon, N. Y.
 - 100,661.—COMBINED LATCH AND LOCK.—Frank P. Pfleghar (assignor to himself and McLagon & Stevens) Hew Haven, Com.
 100,662.—CLOTHES DRYER.—Russell Phillips, Boston, Mass.
 100,663.—MODE OF SUSPENDING MIRRORS TO FURNITURE.— LeviPierce, Charlestown, Mass.
 100,664.—DITCHING MACHINE. Willard Pierce, Truxton, N Y

 - 100665.—UNION COUPLING FOR PIPES.—R. M. Potter, Jer-
 - Beiter of the Army and Navy Journal:
 Beiter of the Army and Navy Journal:
 Signification of the Army and Navy Journal:

 - West Va. 100,668.—MANUFACTURE OF ILLUMINATING GAS.—A. C. Rand (assignor to William J. Nichols, Alden B. Rand, and Richard H.Brown), New York city. 100,669.—REVERSIBLE SHIRT.—Charles O. Richter, New
 - York eity. 100,670.—Dye VAT.—T. E. Rogers, Dexter, Me. 100,671.—LUBRICATING THE TRAVERSING GUIDE IN MA. CHINES FOR FEEDING CARDING ENGINES.—Bozil S. Roy, Olneyville
 - 100,672.-MORTISING MACHINE.-Anton Schmackers, Cincin-
 - 100,673.—WATER-CURRENT MOTOR.—J. Q. A. Schoonover (assignor for one half to J. S. Totten), Lebanon, Ohio. 100,674.—STUMP EXTRACTOR.—Henry Schwartz, Fayetteville,

 - Ohio. 100,675.—STOP MOTION FOR SPOOLING MACHINES.—Samuel Semple, Jr., Mount Holly, N. J. 100,676.—FRUIT TRANSPORTATION BOX.—Walter Shaw (as-signor to himself, Jonathan Vincent, and Seldon R. Redman), Newfane,
 - 100,677.-HEEL OF RUBBER BOOTS AND SHOES.-F. M. Shep-
 - ard, New York city. 100,678.—SOLE OF RUBBER BOOTS AND SHOES.—F. M. Shep-

 - ard, New York city.
 100,679.—WOOD-SPLITTING MACHINE. R. D. Silverwood (assignor to Wm. Silverwood), Baltimore, Md.
 100,680.—SPOON HOLDER AND BELL.—Samuel Simpson Wall-ingford, Conn.
 100,681.—APPARATUS FOR REFRIGERATING AND PRESERV-
 - 100,081.—AFFARATOS FOR ALL AND AND ALL AND AND ALL AND AND ALL AND ALL
 - Washington, D. C. 100,683.—Apparatus for Cooling and Preserving.—D.
 - E. Somes, Washington, D.C. 100,684.—GAS MACHINE.—Theodor G., Springer, St. Louis, 100,685.—MACHINE FOR BENDING FELLIES.—D. A. Sprinkle,

Leoti, Ind. 100,686.—TOOL FOR LACING BELTS.—J. M. Stamp (assignor

to himself and Peter Johnston), Grass Valley, Cal. 100,687.—HAY AND COTTON PRESS.—George W. Swift, Memphis, Tenn., assignor to himself and E. G. Graham, De Soto county, Miss.

100,688.—ROOFING COMPOUND.—F. C. Tegeithoff, Cleveland,

200,002. Charles Tellier, Paris, France, assignor to Leopold Bouvier, New York city. 100,690.—GROOVING CHISEL.—H. G. Terwilliger, Scranton,

100,692.—DAMPER.—J. F. Tuttle, Watten, Okologi, 100,693.—RAILWAY RAIL SPLICE.—Jacob Valentine, Bound Brook, Francis Harris, Jr., Elizabethtown, N.J., and C. Barnes, New York city, assignors to D. R. Pratt, New York city.
 100,694.—SASH HOLDER.—A. Van Patten and J. F. Kelsey, Weyauwega, Wis.
 100,695.—PLANING MACHINE.—Loudus B. Walker, Chicago, Dubble Statement Science Scienc

Pa. Antedated February 28, 1870. 100,691.—SUN DIAL.—L. I. Trueg, St. Vincents, Pa.

100,692.-DAMPER.-J. P. Tuttle, Warren, Ohio.

-MANUFACTURE OF ICE AND COOLING AIR, LIQUIDS,

Mass.	Boston, Mass. Antedated Feb. 25, 1870.	
100,619.—VARIABLE CUT-OFF VALVE GEAR.—Wm. Harsen,	100,698.—Spring BED BOTTOM. — William Wells, Salem,	The fact that their turrets were once contracted for, and that the Depart- ment compounded with the contractors and canceled theagreements whil.
Green Point, N.Y.	Mass.	the work was in progress, together with its subsequent course in the prem
100,620.—FARM GATE.—Calvin Hart, Farmington, Ill.	100,699.—CONSTRUCTION OF STOVE PLATES.—August Wer-	ises, would seem to prove its want of faith in the system; but this will,
100,621.—PAPER-BOX MACHINE.—C. B. Hatfield, Philadelphia,	net and John Kershaw, Canton, Ohio.	doubtless, be all explained by your contributor. The motive which
Pa., assignor to himself, Horace B. Heilman, Joseph Willcox, and H. B. Willcox.	100,700.—FLOOR CLAMP.—George Wood, Philadelphia, Pa. 100,701.—Collar and Hames.—J. L. Wooden, Greensburg,	prompted him, however, to endeavor to lead the public to believe these
100,622.—SELF-WAITING TABLE.—W.W. Hawley, Mount Mor-	100,701.—COLLAR AND HAMES.—J. L. WOODER, OTEEnsburg,	turrets "were built" and "are composed," etc., when they are not yet
ris N.Y.	100.702.—PUMP.—Wm. Wright, New York city.	built, together with certain questions of ethics, to which the use of these
100,623.—WATER GATE.—Marshal Hays, Fostoria, Ohio.	100,703.—MUFF AND COLLAR BOX.—Henry Fowler, Detroit,	deceptive phrases give rise, I leave for him to settle with your readers,
100,624.—PLOW.—Daniel Heiges, Cashtown, Pa.	Mich., assignor to Jason Crane, Bloomfield, N. Y.	while I proceed to examine the merits of the <i>Dictator</i> . The impregnabil-
100,625.—SLIDE VALVE.—Abraham Hemingway, New York	100,704.—DOVETAILING MACHINE. — Henry H. Bashore,	ity of the joint between the base of the pilot house and the turret roof of
city.	Philadelphia, Pa.	the <i>Dictator</i> is thus set forth by your contributor: "We stated in our arti
100,626.—CARRIAGE SPRING.—Benj. T. Henry, New Haven,		cle that shot could not strike the base of the pilot house of the Dictator
100,627.—BOBBIN FOR SEWING MACHINES.—J. B. Herreshoff,	Kleckner, Mottville, Mich.	because the turret wall of that vessel (we might have added the turrets of
Bristol, assignor to G.A. Williamson and Samuel T. Shattuck, Provi- dence, R. I.	AND FOR CONSTRUCTING FLUES AND OTHER PARTS OF BUILDINGSJ.	the Kalamazoo class) is carried to such a hight that shot cannot thus
	Kleckner, Mottville, Mich.	strike." The top of her turret wall is 26% feet in diameter. The pilot house
100,628.—ASPIRATOR FOR PREVENTING OVERHEATING OF GRAIN, ETC.—T. A. Hoffman, Beardstown. Ill.	100,707.—RAILWAY SWITCH.—Joseph J. Shaeffer and Curtis	placed in the center of it is not over ten feet. This leaves about 8 feet all
, , ,	C. Steinmetz, Middletown, Pa.	round from pilot house to turret wall. The turret wall of the Dictator is
100,629.—TREATING BLOOD FOR THE PREPARATION OF FER-		projected only six inches above the turret roof, consequently a roll of the
TILIZERS, AND FOR OTHER PURPOSESH. A. Hogel, New York city, as- assignor to himself and C. G. Bruce.	REISSUES.	ship of four degrees would bring the top of the turret wall below the level
100.630MACHINE FOR PUNCHING THE LEAVES OF ELLIPTIC		of the base of the pilot house.
SPRINes.—George Hopson, Bridgeport, Conn.	Boston, Mass., assignee of John Burk.—Patent No. 31,052, dated January 1, 1861; patented in France, Oct. 29, 1856; reissue 2,054, dated August 22,	This protection would then cease to exist against shot moving in that hor-
100,631HOLLOW GRATE FOR STEAM BOILERC. E. Hutson,	1, 1861; patented in France, Oct. 29, 1856; reissue 2,054, dated August 22,	izontal plane, and this plane would be no higher than the guns of several
Commerce, Mo.	3.870.—TUMBLER WASHER.—G. D. Dows and Calvin Dows,	English iron-clads already afloat. To make this boasted protection avail-
100,632 HEAT-RESISTING MATERIALS FOR SAFES, BANK	Boston, and G. S. Cushing, Lowell, Mass, assignees, by mense assign-	able against them at short range, it would be necessary that the contest be
VAULTS, ETCTheo. Hyatt, New York city.	Boston, and G. S. Cushing, Lowell, Mass, assignees, by mense assign- ments, of Albert HallowellPatent No. 52,565, dated February 13, 1866.	fought on a perfectly smooth sea. Even in such a sea, this six-inch belt
100.633.—DEVICE FOR PACKING AND TRANSPORTING EGGS.—	3,871.—PACKING CASE FOR TOBACCO.—S. F. Hess, Rochester,	would be too low to protect this joint against their guns if they were only
Benj. Illingworth, Freeport, Ill.	N. YPatent No. 99,188, dated January 25, 1870.	a few hundred yards distant, for the elevation of three or four degrees re

100,689.-