

Moneyed Men.

The Cleveland *Herald* said, twenty years ago, during a stringency of the times, that moneyed men are the veriest cravens on earth: so timid, that on the least alarm they pull their heads, turtle-like, within their shells, and, snugly housed, hug their glittering treasure until all fear is removed. The consequence is that a few days' disturbance of the monetary atmosphere brings on a perfect dearth of not only the precious metals, but even of paper money, their representative. Moneyed men never adopt the tactics of mutual support; hence, as soon as a shot is fired into the flock, they scatter, each looking out for himself, each distrustful of the other, and each recognizing only the great law of selfishness, which is to take care of number one. Courage has saved many an army, even when ammunition was low; and many a foe has been scattered by one yell of defiance when there was not a cartridge left.

NEW BOOKS AND PUBLICATIONS.

ARCHAEOLOGY, OR THE SCIENCE OF GOVERNMENT. By S. V. Blakeslee. Price \$1.25. New York and San Francisco: A. Roman & Co.

This book is a very metaphysical treatise on theories of government and the duties of citizens to the law, each other, and themselves. Theoretical politics are little in favor with thinking men of this day; and the social difficulties of our age will have to be solved by practical wisdom founded on experience. The people that knows that a certain course of legislation has destroyed an empire, and that a contrary policy has developed one, will care little as to whether or not "the will controls the feelings by mediate and indirect force." We are unable to find in this book any attempt to apply the finely worded theories stated to practical use and popular instruction in political science.

GRAPHICAL ANALYSIS OF ROOF TRUSSES, FOR THE USE OF ENGINEERS, ARCHITECTS, AND BUILDERS. By Charles E. Greene, A. M., Professor of Civil Engineering in the University of Michigan. Chicago, Ill.: George H. Frost.

The author of this work truly says that any designer who fairly tries the graphical method will be pleased with the simplicity and directness of the analysis, even for apparently complex forms. The hindrance to the general use of the method is the want of knowledge of the higher mathematics, which are largely used in most treatises on the subject. Professor Greene has avoided this stumbling block, and given us a treatise which may be understood and appreciated by any one of common school education. We therefore give his work a hearty commendation, and we hope that every carpenter and builder may be induced to analyze the stresses which affect the different parts of structures, which he can readily do by carefully reading this volume.

THE HUB: a Journal devoted to the Carriage Building Trades. Published monthly. Subscription price, \$3.00 a year. New York city: The Hub Publishing Company, 323 Pearl street.

This journal is widely known for its accurate and extended information as to carriage building, trimming, lining, painting, etc.; and since its first issue it has maintained its reputation, and given the public an immense amount of instruction in a spirited and practical manner. The illustrations and typography are excellent, and every number shows how extended an area it serves as an authority on the important industry to which it is devoted.

ASSIGNATS AND MANDATS: the Money and the Finances of the French Revolution of 1789. By Stephen D. Dillaye. Price, free by mail, 30 cents. Philadelphia, Pa.: Henry Carey Baird & Co., 810 Walnut street.

Mr. Dillaye differs with the Hon. A. D. White, President of Cornell University, as to the relative merits of money and promises to pay money; and he begins with the assertion that the President's "object is to depreciate American credit, stability, and honor." Further perusal, to ascertain the meaning of this attack on a patriotic and useful member of society, shows us what Mr. Dillaye thinks he means. He talks of credit being the vital element of national power; and from this he argues that the more "credit" a nation has—that is, the deeper it is in debt—the more powerful it becomes. In short, he confuses credit as opposed to discredit with credit as opposed to cash—a grievous blunder, surely. A nation's credit is like a merchant's; it becomes greater only as his debts become smaller; and people trust a government for the same reason as they trust an individual, mainly because every previous obligation has been honorably observed. It is gratifying to know that persons of Mr. Dillaye's way of thinking are few and unimportant, and their number is diminishing daily.

CROTON WATER SUPPLY FOR THE CITY OF NEW YORK: an Address by George B. Butler to the New York Municipal Society. New York city: Published by Order of the Society, 87 Madison avenue.

A review of the whole subject of our water supply, its sources and the area they drain, the geographical features of the district, and the works erected by the city. Mr. Butler maintains that the Croton valley, with proper storage reservoirs, can abundantly supply the whole city; and that no new aqueduct need be constructed in the present condition of the public debt.

EINE KURZE ALLGEMEINE EINLEITUNG ZU DEN AROMATISCHEN NITROVERBINDUNGEN. Von Peter Townsend Austen. Leipzig, Germany: Winter, Publisher.

We are glad to see that an American is able to publish a very useful chemical treatise in Germany, the great head center of chemistry. Dr. Austen, one of our most distinguished young chemists in the field of original research, has produced a work which bears the marks of much patient thought and study. The book is dedicated to the renowned German chemist, Professor A. W. Hofmann.

OUR YOUNG FOLKS' MAGAZINE: a Monthly Journal of Instruction and Amusement. Subscription price, \$1.60 a year. Boston, Mass.: Post Office Box 3090.

A readable little periodical, well calculated to amuse the little ones for whom it is intended.

GLASS FOR THE STUDIO AND DARK ROOM. By Thomas Gaffield. Philadelphia, Pa.: Bennerman & Wilson.

There is much useful information in this little pamphlet, and photographers especially should read it. The matter first appeared in the Philadelphia *Photographer*.

Recent American and Foreign Patents.**NEW AGRICULTURAL INVENTIONS.****IMPROVED GANG PLOW.**

Ezra Peak, Montana, Kan.—This invention is so constructed that it may be easily raised from and lowered to the ground, and adjusted to work at any desired depth in the ground. It is claimed to be of lighter draft than plows constructed in the usual way, also to be simple in construction and inexpensive in manufacture. The wheels, the faces of which are notched to give them a slight up-and-down movement as they are drawn forward, slightly jar the plows, and thus cause them to be easier drawn than when smooth wheels are used. The shaft can be provided with a ratchet wheel and pawl to hold it in any position into which it may be turned; and to it is attached a rope or chain, the other end of which is attached to the forward end of the frame, so that by turning the shaft the plows may be raised from, lowered to, and adjusted to work at any desired depth in the ground.

IMPROVED PLOW.

James Willis Hendley, Cedar Hill, N. C., assignor to David N. Bennett and Samuel T. Wright, of same place.—The objects here are simplicity and cheapness of construction, and such arrangement of parts as will prevent the plow becoming clogged with weeds, etc. The mold-board is welded to the land side, or cast in one piece with it, so that no brace or other connection is required between the mold-board and standard; secondly, the curved beam is attached to the heel of the land-side and supported by a brace, which is bolted to the middle portion of the latter, and arranged in such relation to the mold-board that a space is left between them, into which the trash will fall, and thus be drawn into the furrow and covered.

IMPROVED GRAIN DRILL.

George W. Osborn, Parkville, Mich.—This is an improved attachment for seed drills, for gaging the depth at which the grain shall be deposited in the earth. It consists in an adjustable spring gage bar attached to the shank of each drill tooth, whereby the teeth may be made to enter the ground a greater or less depth. It is claimed to ensure the planting of seeds at equal depth in hard or soft ground, and to diminish the draft.

IMPROVED HORSE HAY RAKE.

Joseph B. Wakeman and John L. Wager, Deposit, N. Y.—The construction of this implement is such that a large space is afforded beneath the rake head for the collection of hay. The pivots of said rake head back are also brought back, so that the teeth may be readily raised to discharge the collected hay. By an ingenious lever arrangement the driver is enabled to hold the rake to its work by the pressure of his foot, and also readily to discharge the hay gathered.

IMPROVED BEE HIVE.

George W. Akins, Bridgeton, Pa.—In this hive, holes are bored in the sides of the compartment for ventilation, and windows are flared for the purpose of inspecting the inside of the hive. A frame is used whenever it is desired to have the honeycomb of any particular shape. It consists of a form of tin or other suitable material, placed on a frame or slide, and having the shape required in the comb. Bees will build inside of the form, leaving about one fourth inch space between the form and the comb. The tin sheet receives a portion of the refuse matter, and can be readily taken out and cleaned. On the 1st of May the bees are driven out into another hive and the frames examined. Three frames are taken out and set in a new box, and three empty frames are put in their place. The old queen must be put with the new colony, and half of the bees must be put in each box and shut up, and put on a stand. The hives are to be opened the next morning. At the next natural swarming time the swarms can be again divided. The hive cannot freeze, and it is proof against mice.

IMPROVED PLOW STOCK.

Robert Weber, New Ulm, Texas.—In this invention, by loosening a nut, the point of draft attachment may be raised and lowered to cause the plow to work deeper or shallower in the ground, or turned to one or the other side, to cause the plow to take or leave land, and may be secured in place when adjusted by again tightening the nut.

IMPROVED COMBINED HAY TEDDER AND SIDE RAKE.

John Huber and Henry Snell, Girard, Ill.—This machine may be used simply for stirring up and turning the hay, or for turning the hay and gathering it into windrows. The shaft of a reel revolves in bearings attached to the side bars of the frame near their rear ends. To the bars of the reel are attached spring teeth, which, as the machine is drawn forward, take hold of the hay, carry it up and over the reel, and drop it to the ground in the rear of the machine. A carrier takes the hay from the teeth, when it has been brought to the top of the reel, carries it over the shaft, and discharges it into a trough, down which it slides, and is deposited in a windrow along one side of the path of the machine.

IMPROVED GRUBBING MACHINE.

Ira Burley, Redwing, Minn.—This invention consists in the combination of wheels and axle, tongue, adjusting bar, adjustable brace, uprights, cross bar, two ropes, and four pulley blocks with each other. To the forward end of the tongue is attached a loop or clevis, to receive an iron pin, to be driven into the ground to keep the machine from moving about while being used. To the pulley block is swiveled a hook, to be hooked into a loop, attached to the forward end of a lever. The rear end of the lever passes through a slot in the upper end of a fulcrum post, and has a notch formed in its lower side to receive a bolt or pin, attached to said post to serve as a fulcrum to said lever. Several notches are formed in the lever to receive the fulcrum bolt, to enable the position of the fulcrum post to be adjusted to regulate the leverage, and as circumstances may require. To the lever is attached a strong clevis, to receive the hook of the chain, that is secured to the stump to be pulled.

IMPROVED SEED PLANTER.

Daniel J. Davis, Red Boiling Springs, Tenn.—In this invention two wheels revolve upon the journals of the axle. Upon the end parts of the axle are attached the rear ends of side bars, the forward ends of which are bolted to the outer sides of the forward ends of the plow beams. The forward ends of the beams are bolted to the ends of the front bar, to the center of which is secured the forward end of the central bar. To the beams are attached the plows for opening furrows to receive the seed as it passes from the conductor spouts. The lower ends of the spouts or tubes pass in through the sides of the plows, so as to conduct the seed into the bottom of the furrows before they have been partially filled by the falling in of the soil. The dropping plate is concealed around its dropping holes, and is provided with a plate that may be adjusted to cover one set of dropping holes to drop the hills twice as far apart as when both sets of holes operate.

IMPROVED ANIMAL TRAP.

Thomas N. Hughes, Muddy Creek, Tenn.—This trap is for animals of all kinds, as rats, mice, and larger animals, as foxes, minks, coons, etc., that are allured by bait, and is automatically set again by the animal caught, to be ready for the next animal attracted by the bait. It is divided by a longitudinal partition into two main sections, in which the working parts are disposed. The entrance at the end of one section has a drop door, which is arranged back of the same, resting, when closed, on side strips in inclined position, and being supported on an upright arm, of a centrally pivoted treadle door, at the bottom of the trap, when the trap is set. The treadle door is only required to swing sufficiently on its pivots to release the drop door from the arm, suitable seats at the under side of the trap, at both sides of the treadle door, preventing the door from swinging farther than necessary. The bait is placed in a grated receptacle, near the treadle door, and entices the animal to pass in, so as to close the drop door when it arrives at the part of the treadle door near the bait. The back end of this section is perforated or grated to admit light, which attracts the frightened animal and induces him to pass toward the light. The top part of the trap may be grated to admit air, and the glass door at the end made to slide, to admit the taking out of the animals for killing them.

NEW MISCELLANEOUS INVENTIONS.**APPARATUS FOR THE HYDRATION OF CHLORINE GAS.**

William Maynard, New York city.—This invention relates to an improved construction of apparatus for the hydration of gases, and more particularly chlorine gas for the manufacture of chlorine water for use in the industrial arts of bleaching, etc. It consists mainly in a case having an inlet for the water above, an inlet for the gas below, and provided with an intermediate water-percolating medium; combined with a reservoir located below the level of the case and having a water-sealed communication there-

with, which reservoir receives the hydrated gases, and which water seal prevents the heavy gas in the case from passing out through the bottom inlet. The case for the percolation of water and the absorption of the gas is made of conical shape, with the largest diameter at the bottom, to produce the greatest absorption of the heavy gas when first admitted; while horizontal partitions, or shelves, in said case are provided with upwardly projecting tubes which hold a permanent surface of water on the said partition or shelves. The tubes permit, by their peculiar shape, the water to pass down on one side and the gas up on the opposite side of said tube, while their alternating arrangement in the alternating shelves gives a zigzag and long continued passage to the gas and water in moving in opposite directions through the case.

IMPROVED PROCESS OF PREPARING GAS FUEL.

Martin N. Diall, Terre Haute, Ind.—This inventor saturates wood by immersing it in any hydrocarbon oil for from six to twelve hours, as required by the nature of the wood, so that it may take up the necessary quantity of oil for the required strength of gas. The wood is then immersed in a bath of water, for taking up a quantity of water outside the oil, and is then charged in the retorts, the same as coal, and distilled in the same way. By this process the inventor claims that he produces fixed gas equal to coal gas, much faster, and with less expense, the wood and water furnishing the hydrogen, and the oil furnishing the carbon.

IMPROVED FISHING LINE LEADER.

Welmer T. Jahne and Anthony Moors, Jersey City, N. J.—This consists of a leader made of spring wire, bent into V form, provided with a swivel and eye at its middle part, and with eyes or loops at its ends to receive the line and snells. By this construction the snells and hooks will be kept apart however the line may be thrown, and however they and the leader may be turned about by the tide or current. The device is one well calculated to meet with a favorable reception from fishermen.

IMPROVED ABDOMINAL CORSET.

Christina Lascell, Newark, N. J.—The object of this invention is to furnish an improved abdominal corset, which supports the weight of the abdomen in a perfectly comfortable and easy manner, and throws the strain on the shoulders and hips of the wearer. The corset is adjustable to the varying conditions of the abdomen, does not interfere with the motion and different positions of the body, and is readily put on and taken off. It has adjustable elastic shoulder straps, and opening at the sides by laces and elastic bands and buttons. The front part of the corset is stiffened by a stay that slides in a pocket to provide for stooping. A central front and lacing admit the front part of the corset to expand. The lower extension part of the corset has short stiffening stays, and it is connected independently of the upper stays by short side lacing and elastic straps to the side or hip parts of the corset. A hernial band extends from the lowermost part of the corset-extension between the legs to the rear, and is attached by adjustable hip straps to the sides of the corset.

IMPROVED FIRE ESCAPE.

John F. Werner, New York city.—The terrible disaster in the Brooklyn theater is serving as a stimulus to induce the invention of devices looking to the prevention of a like occurrence. The present inventor has devised a new fire escape for theaters, concert halls, and other public places of amusement, by which the space at the upper parts of the entrances, halls, or vestibules of the buildings is utilized for the purpose of forming additional passage ways for the persons in the buildings, to be used in case of fire for the more convenient and less dangerous exit of the same. The invention consists, mainly, of a movable floor, suspended by chains, pulleys, and weights, near the ceiling of the entrances, and lowered in case of fire. It is supported on projecting rests of the side walls, at suitable height above the floor. Sliding extensions and swinging stairs and rear sections connect with the ground outside of the door, and with the staircases of the gallery, so as to form separate exits above the regular entrances.

IMPROVED ELECTRO-MAGNETIC DENTAL PLUGGER.

James E. Dexter, New York city.—This invention consists, first, in a magnet having a centrally bored iron core, surrounded by a magnetic coil, which is enveloped by an iron shell that is concentric with the central core, and is attached to a flange formed on the lower end of the said central core. One side of both shell and core are split for the purpose of obviating residual magnetism. The invention also consists in combining a spring yoke, a vibrator, and a spring contact piece, as hereinafter particularly described. The third part of this invention consists in the arrangement of the key for completing the circuit, which is made with an insulating exterior, and is provided with one of the termini of the magnet coil, and bears against the side of the key to insure a constant contact of the surfaces. The various parts of the plugger are combined, so that pressing the key with the finger makes the circuit, and a succession of regular strokes is produced, the force of which may be varied by an adjusting screw.

NEW MECHANICAL AND ENGINEERING INVENTIONS.**IMPROVED COTTON GIN.**

Joseph W. Thorn, Iuka, Miss., assignor to himself and M. W. Beardley, of same place.—In this machine there is a new construction of the brush drum for simplifying the same, and facilitating the application of the brush wings, so that they can be readily taken off and put on; also, an arrangement of the ribs between the saws for facilitating the separating of the seed from the cotton without breaking and injuring the fiber. There are also ingenious devices for preventing the seed from gathering and clogging at the ends of the saw drum.

IMPROVED SAFETY CHECK FOR ELEVATORS.

Nathan H. Fogg, Boston, Mass.—When the car is suspended normally from the rope, the rubber balls, arranged in sockets near the lower part of the car, are supported on their seats in a state of rest, but the instant that the rope breaks or gets detached from the bolt the action of a spiral spring throws an actuating plate downward, and levers and ball-carrying rods upward. The balls are thus thrown off their seats and wedged between the inclined sides of the pockets and the guide posts of the elevator so as to stop thereby the car.

IMPROVED COMBINATION LOCK.

Achille Parise, Naples, Italy.—This is a new combination lock for doors, trunks, safes, etc., that admits of a large number of combinations, and may be opened and closed quickly. It consists of sliding tumbler plates, having longitudinal slots and a number of perforations placed at different relative positions to the slots of each tumbler. The trunks are connected by screw set pins attached to face slides, and passing through any one of the perforations, admitting the setting of the tumblers and opening of the lock by outer projections or buttons of the slides to fixed exterior guides.

IMPROVED MACHINE FOR WIRING AND BINDING HATS.

Mari A. Cuming and Judson Knight, New York city.—This is a machine for binding hats, felt skirts, and similar articles, by a uniform and parallel pressure on the rims, and by facilitating the applying and taking off of the articles from the machine, and accomplishing the cutting of the binding or braid and wire in a reliable and improved manner. Pressure rollers attach the binding and the wire, if one is required, in connection with a grooved gage that is supported on a seat of the shaft of the lower pressure roller. The wire is guided by annular recesses or chamferings at the rear circumference of the pressure rollers and the groove of the gage. The gage is so connected to its seat that it may be turned and another guide groove of the same be exposed to face the pressure rollers, so as to adapt the same for a variety of work.