the stem, but is adapted to be driven home by means of an operating nut *F* that is threaded upon the stem. The expander is provided with lugs at each side, which carry setscrews adapted to be screwed into engagement with the pipe after the expander has been adjusted to proper position. A cap *G* serves to close the end of the tubular stem. In applying the plug to a pipe, the cup *A* is first inserted, after which the expander is mounted on the stem and, by operating the nut *F*, forced into the cup, causing the latter to engage the walls of the pipe so firmly as not only to insure a hermetic connection, but also to avoid the possibility of the cup being thrown out of the pipe by the pressure therein. The setscrews will then serve merely as an additional precaution against dislodgment. To aid in centering the expander when it is introduced into the cup, a flange is formed on its periphery which lightly engages the inner walls of the pipe. A patent on this test plug has just been granted to Mr. A. Redenbaugh, of Brown Street and Allegheny Avenue, Allegheny, Pa.

Brief Notes Concerning Inventions.

A new type of rifle sight and wind gage has been brought before the British military authorities. It is the invention of the Australian government architect, and is already in use in Australia. With this appliance greater certainty in marksmanship can be assured. With the existing system of sighting, in the excitement of firing the marksman is liable to move on his vernier scale either more or less divisions than his commanding officer instructs, with the result that his shot becomes useless. With this new appliance, however, every time the soldier moves the governing screw of his scale to mark one "vernier," a slight click is emitted by the sight, thereby indicating that the scale has been moved, a similar click being made for every revolution of the screw corresponding to one division of the scale. When the sight clicks as the result of a turn of the screw, it becomes locked and cannot be moved until the marksman alters the screw. Thus on the command "two to right" or "four to left," the soldier turns the screw in the required direction until he has heard the sight click twice or four times as the case may be. Moreover, the soldier can always tell immediately when his rifle is upright, as the "ladder" sight in this device is always vertical. In allowing for wind force, too, the marksman need not twist his rifle in the slightest. Instead, by turning the screw the ladder containing the V sight is moved until the "barleycorn" at the end of the gun barrel is in the correct position. One feature of the device is that it can be easily and quickly removed when desired, its removal rendering the rifle useless, while the sight is not liable to damage when on the march, being carried in a small case in the pocket. The efficacy of the instrument, and its influence upon more accurate shooting, have been strikingly demonstrated by the results of the Victorian Rifle Association, whose aggregates since the adoption of the sight have been higher than before.

When the Prince of Wales visited a block of artisans' tenements that had been erected by the municipal authorities of one of the London boroughs, he suggested that an immense advantage might be bestowed upon the tenants by designing a range the fire in which could serve for either or both of two adjacent rooms, thereby dispensing with the necessity and expense of maintaining two fires, which is at present incurred, the range being requisite for the cooking of the meals and the other for the living room. The Prince's suggestion was accepted by the architect, Mr. C. S. Joseph, who has now succeeded in designing a double fireplace especially for the equipment of such dwellings for the laboring classes. The invention is of a simple character. In the division wall separating the living room from the kitchen one flue is placed, and the fire grate comprises two combined grates, the one being of the ordinary open type for the living room, and the other a closed range for cooking and heating purposes. The combined grate is divided by a shutter which slides up and down in the center between the two sections of the grate. If a fire is desired only in the range or open grate the shutter is lowered, thereby shutting off the unrequired section; if the fire is required in both rooms, then the shutter is left open. Should the fire be required only in the open grate, the shutter is raised upon the completion of cooking. By a simple movement the fire burning in the range can be discharged into the required open grate, and the dividing shutter again lowered. The arrangement for operating the shutter is simple, and can be easily manipulated from either of the two rooms. The successful embodiment of the royal idea has resulted in still another useful boon for tenants. The stove has been provided with a small boiler, by means of which a supply of hot water can always be maintained, whether the fire is burning in the open grate or range. This enables each tenant to have a bath fitted with both hot and cold water in his own tenement, instead of using the facilities for this purpose that are provided in one quarter of the building for all the tenants. For economizing space the bath has been provided with a portable cover, so that it may be used as a table. The invention has been greatly appreciated by the tenants of the buildings, and it will be generally adopted for all future tenements.

A new type of telegraph receiver has been devised by Mr. Ernest Oldenburg, a well-known English electrical engineer, the most noticeable feature of which is its extreme sensitiveness, the faint impulses of a pocket battery being easily detected. This receiver, to which the name "capilliform" has been given, is based upon the capillary action of mercury in a vertical tube under the influence of electric impulses, on somewhat similar lines to the capillary receiver employed in the Orling-Armstrong system of low-tension wireless telegraphy. The influence of an electric current upon the surface tension of mercury, and consequently the form of its meniscus, has long been known, and the success of the "capilliform" receiver as devised by Mr. Oldenburg depends upon the ingenious methods he has adopted for magnifying the impulses, and contriving the device in such a way that it can be utilized as the receiving instrument of an ordinary telegraphic installation. It is anticipated that the instrument will be of great utility for those phases of work where a delicately sensitive receiver is required, more especially in connection with submarine and etheric telegraphy, since it responds to far fainter currents than any appliance at present in vogue, a small fraction of a volt being quite sufficient to operate the instrument. Moreover, the complete apparatus is confined within such small limits that it can be carried in the pocket.

RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

SAFETY-PIN.—R. DOUGLAS, New York, N. Y. One purpose in this invention is to provide a construction of safety-pin whereby the device may be turned end for end, taking the material from the pin or thrust member thereof onto its body member, thereby preventing the device from leaving the material even should the pin or stick member leave the head of the device, since when the latter is reversed it cannot be withdrawn unless returned to its initial position.

HOSE-SUPPORTER.—L. C. STUKENBORG, Browns, Ala. One of the objects of this improvement is the provision of means to support the hose at diametrically opposite points, especially avoiding the use of metal or other parts that would be uncomfortable to the wearer. It keeps the sock smooth and tight around the leg, ankle, and foot.

Of Interest to Farmers.

MUD KNIFE AND SHIELD FOR HARVESTER-WHEELS.—W. D. TAYLOR, Hartford, Kan. The invention consists of a knife-blade disposed adjacent to the edge of the wheel-tread and parallel to the vertical plane of the wheel and a shield projecting laterally from the knife to prevent mud, straw, or trash being carried upwardly by the wheel and also to prevent these materials being carried above the knife and deposited on the driving mechanism of the harvester.

COMBINATION INCUBATOR AND BROODER.—VERONICA HARTNETT, Sutton, Neb. In the operation of this invention when the chicks commence to hatch the brooder is placed in position on the incubator and the chicks as hatched removed thereto, thus utilizing all the waste heat from the lamp in warming the brooder. The heating pipes are arranged above the egg-trays, and in the brooder the heating-pipes are above the chicks. Space between the walls of the boiler provides a dead-air space, thus diminishing the loss of heat by radiation from the boiler-walls.

GRANARY.—E. G. WARE, Emporia, Kan. The object here is to produce a granary, which is formed of a plurality of matched parts which may be quickly assembled to form the complete structure or disconnected if the structure is to be moved to another place. While the granary is in its nature portable, a further object of the invention is to construct the parts so that it may readily have its capacity adapted to the particular requirements under which it is to be used.

Of General Interest.

RANGE-FINDER.—H. C. PERCY, Natchitoches, La. This patentee employs in connection with a sighting telescope means for computing the sides of a triangle having a known base line. This consists of a triangular frame having a base line adapted to be brought into coincidence with the known base line, the sides of the triangle being movable into positions corresponding to those of the triangle with respect to the known base line. In connection with the frame there is provided a bar for computing east or west departures, the bar being arranged parallel to the base line with its center in line perpendicular to the center of the base line; graduations each side of center indicating east and west departures.

ILLUMINABLE SPECULUM.—R. H. WAPPLER, New York, N. Y. The invention is more particularly employed for examining cavities in various parts of the human body. It relates to means whereby focal range of the cystoscope is modified in such manner that the particular length of the tube used for the sight barrel may be varied to suit different conditions and whereby the clearness of the image brought to view is greatly increased.

FENCE-POST AND SOCKET THEREFOR.—W. L. WELCH, Jamaica, N. Y. The post proper is particularly intended and adapted for use for attachment and support of clothes-lines, and the latter may be conveniently secured to or hung upon the cross-bar of the post proper. It is an improvement in that class in which the post proper is supported in a metal or other socket fixed in the ground by cement or otherwise.

CLOSURE FOR BOTTLES, ETC.—J. W. HULL, San Antonio, Texas. The object in this case is to produce a simple, cheap, and efficient closure which can be readily applied to the bottle and which cannot be removed without evidence of such fact. Owing to the ductibility of the metals used and the different relative thickness of the edge and body of the stopper, the stoppers can be readily locked into the groove in the bottle-neck and form a hermetic seal at that point.

WELL-BUCKET.—J. F. HOLMAN, Neosho, Mo. A drilled well-bucket is employed of special construction at each of its ends, by which the same is prevented from encountering any part or parts of the joints between the superposed sections of the lining of a well either in lowering the bucket within or elevating the same from the well. It is constructed entirely of a single piece of metal or other suitable material, and formed to work in a well without hindrance or obstruction to its movements up or down.

STEP-LADDER.—H. B. FORBES, Ogden, Utah. The invention consists of novel sheet-metal brackets forming the union between the ladder-steps and its front legs, combined with a sheet-metal bracket for connecting the upper ends of the legs with the top board, also affording means to which the rear legs of the latter are pivoted. The front and rear legs are adjustably connected together by strips, adapting the legs to be folded when not in use.

CALENDAR-CHART.—J. B. LINDSEY, Lockwood, Mo. The purpose of the invention is to provide a calendar device or chart so arranged that the number of days from a given date to any other date in the past or future and maturity dates can be readily and expeditiously found and accurately read in days. Twelve charts or leaves are provided and attached to the board in such manner that they may be removed when desired.

WINDOW.—S. U. BARR, New York, N. Y. In the present invention the object of the patentee is the provision of a new and improved window which is simple and compact in construction, completely air-tight and dust-proof, and arranged to permit the convenient opening or closing of the sash. By the arrangement of the packing warping of the sash is avoided.

ATTACHMENT FOR HORSESHOES.—J. W. BUCK, New York, N. Y. Mr. Buck's improvement relates to an attachment for horseshoes, the principal objects thereof being to provide means for preventing slipping, said means being attachable over an ordinary horseshoe, and to provide means for securing it properly in position and adjusting it upon the hoof of the horse.

Heating and Lighting.

BURNER.—P. MISCHKE, East Rutherford, N. J. The object of the invention is to provide a burner arranged to prevent the undesirable backflash, especially when lighting the burner, and to insure a proper mixture of the gas and air, and hence the production of a powerful flame. It relates to gas-stoves, incandescent gas-burners, and like devices in which a mixture of gas and air is burned.

Household Utilities.

DEVICE FOR SUPPORTING FOWLS.—H. M. VANDERBILT, Suffern, N. Y. One object of the inventor is to provide simple means to support in an elevated position a fowl with its breast down during the roasting period, thereby admitting of the uniform circulation of heat about it and its retention in a convenient shape, also to make provision for the adjustment of the device, enabling it to be used for fowls of varying sizes.

COMBINED SINK, BATH, AND WASH TUB.—W. J. MINNS, New York, N. Y. The purpose here is to provide a structure especially adapted for use in a small flat, tenement, or apartment house where there is little available room for necessary single plumbing and wherein in a single article will be combined a sink, a bath, and a wash tub, each adaptation being as perfect and as convenient for use as a series of equivalent independent devices.

DOUBLE-ACTING WINDOW-SHADE.—M. ECKER, Boston, Mass. The object of the invention is to produce a construction and arrangement of parts which will enable the shade to be quickly moved into any position before a window and to enable the shade to cover any portion of a window, extending upwardly from the bottom or downward from the top.

BEATER OR MIXER.—E. J. SCHUIRMANN and T. R. SCHUIRMANN, Chenoa, Ill. In this patent the invention has reference to machines capable of use as egg-beaters, cake-beaters, cream-whippers, or churns, and the object of the invention is to provide a device wherein all of the operating parts, save the crank, are completely inclosed during the operation of the device.

Machines and Mechanical Devices.

MACHINE FOR CORING AND SLICING FRUIT.—P. HANSEN, Jersey City, N. J. One purpose in this case is to provide a machine for simultaneously coring and slicing apples in such manner as to be rapidly and cleanly accomplished and so that the slices will be of uniform thickness. Another is to provide a machine in which the operations will be automatically done and so timed that there is no danger of mishap to the fruit and so that but one attendant, a feeder, is required.

ROCK-DRILL.—F. E. GLAZE, Victor, Col. The drill is more particularly intended for use in boring or drilling rock. The object had in view is to provide or construct boring and drilling tools with means rendering them self-cleaning—that is, adapting them for removal of the dust and chippings during operation thereof.

MECHANISM FOR OPERATING AWNINGS.—W. O. CALMAR, San Francisco, Cal. The object in this instance is to provide a simple construction for locking the gearing to hold the awning in any desired position. The device is applicable either on the right or left side. Ratchets and other devices are dispensed with, and the spring-pressed block entering the crank-aperture from the inside locks the gearing in the simplest manner.

Prime Movers and Their Accessories.

AUTOMATIC CLUTCH-COUPLING FOR SHAFTS.—J. F. THOMAS, New London, Wis. The invention pertains to shafting; and the object is to produce a coupling adapted to be placed in driving-shafting which will be ineffective when the driving-shaft is rotating at low speed, but which will come into operation automatically when the speed is sufficiently increased.

Pertaining to Recreation.

PUZZLE.—C. C. HAYHURST, Barberton, Ohio. The invention relates to puzzles in which one or more balls and devious runs or pathways are employed for conducting the balls from a starting-point to a goal. The object is to provide a puzzle which is simple in construction and arranged to require considerable skill on

the part of the player to solve the puzzle in a comparatively short time.

HUNTING OR SHOOTING GARMENT.—F. PETMECKY, Austin, Texas. The inventor provides a coat, sweater, or like hunting or shooting garment for the use of hunters, marksmen, and other persons and arranged to take up and absorb the recoil of the gun, rifle, or like firearm and to form a cushion for protecting the user's shoulders against abrasion when carrying the firearm over the shoulder.

Pertaining to Vehicles.

TRUCK.—A. SCHAFER and G. WANEE, Red Bluff, Cal. In the present patent the invention has reference to trucks, more particularly hand-trucks, and has for its object the provision of a novel construction permitting the truck to be wheeled up and down stairs or steps, as well as on a plane surface.

BICYCLE-PUMP.—A. GENELLY and B. GILBERTI, Los Banos, Cal. This pump is adapted for inflating bicycle-tires, and an object of the improvement is to incorporate a pump in the frame of the bicycle, so that the pump will always be convenient for use and readily accessible and will obviate the necessity of carrying a separate pump, which would be liable to be mislaid or lost.

WHIFFLETREE-HOOK.—O. B. HAGA, Dogden, N. D. This invention refers to improvements in hooks for attaching harness-traces to whiffletrees, the object being to provide a device so constructed that the cockeye of a trace may be readily engaged therewith or detached therefrom, but cannot be accidentally detached.

BICYCLE.—T. SWINBANK, Senath, Mo. The invention relates to bicycles. The object of the inventor is to produce a bicycle having improved driving mechanism which will enable the driving forces to be advantageously applied to the driving mechanism. Advantageous means are provided for diminishing the vertical "gear," and applying the brake in this bicycle.

Designs.

DESIGN FOR A VESSEL FOR TABLE USE.—A. PAROUTAUD, New York, N. Y. This ornamental design for a vessel for table use shows a biscuit jar, with a handle at each end. One end of the handle of the oval-shaped cover is unique in differing in height with the other. The base of the jar is flanged and at four points gives slight indications of feet. Mr. Paroutaud has invented another design for a vessel for table use, a chocolate pot. It is somewhat elongated in height and its base, cover, and handle have almost the same characteristic sweep of lines that mark and give grace to the jar mentioned above.

DESIGN FOR A BADGE.—A. H. KOPETSCHNY, Jersey City, N. J. This ornamental design for a badge comprises a crescent and a bastioned tower. The latter has a key-hole-shaped window and door, and is clasped by the crescent at its sides, the base of the tower resting down on the inner circle edge of the crescent.

DESIGN FOR RIBBON.—G. A. MORGAN, New York, N. Y. Two groups of picture cards of the four denominations in playing cards, then four aces, and then the two groups again, are gracefully placed along the ribbon in this ornamental design. The various groups spread out in fan-shape in opposing directions. Small scroll work runs principally back of the aces.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Notes and Queries.

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

References to former articles or answers should give date of paper and page or number of question.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(10504) R. L. M. asks how to make transferring varnish. A. Mastic in tears, 6½ ounces; resin, 12½ ounces; pale Venice turpentine, 25 ounces; sandarac, 25 ounces; alcohol, 5 pints. Dissolve in a clean bottle or can in a warm place, frequently shaking it. When the gum is dissolved strain it through a lawn sieve and it is fit for use.

(10505) G. N. O. asks how to make gravel and tar walks. A. Take 2 parts very dry lime rubbish and 1 part coal ashes, also very dry, and both sifted fine. In a dry place, on a dry day, mix them, and leave a hole in the middle of the heap as bricklayers do when making mortar. Into this pour boiling hot coal tar, mix, and when as stiff as mortar put in 3 inches thick where the walk is to be; the ground should be dry and beaten smooth; sprinkle over it coarse sand. When cold, pass a light roller over it; in a few days the walk will be solid and waterproof.

(10506) B. B. S. asks how to make glycerine of cucumber. A. White castile soap, ½ ounce; pommade de concombre, 1 ounce; rose water, 30 fluid ounces; glycerine, 2 fluid ounces. Cut the soap small and dissolve it in about 4 ounces of the water. Melt the pomade and put it in a hot mortar. Gradually add the hot soap solution, stirring until thoroughly mixed, then slowly add the rest of the rose water mixed with the glycerine. Keep well stirred until cool, then let stand for some hours, stirring occasionally. Properly manipulated, a perfect emulsion is obtained. When completed it may be perfumed as desired. The soap employed should be of good quality.

(10507) W. H. asks how to clean ink rollers. A. 1. Rollers should not be washed immediately after use, as they will become dry and skinny, but they may be washed one-half hour before using again. In cleaning a new roller, a little oil rubbed over it will loosen the ink, and it should be scraped clean with the back of a knife; it should be cleaned this way for about a week, when lye may be used. New rollers are often spoiled by washing too soon with lye. 2. To renew a hard roller.—Wash carefully with lye, then apply a thin layer of molasses. Let it stand all night, then wash with water, and let it hang until dry enough to use.

(10508) R. L. M. asks for a varnish for gun barrels. A. To make a good varnish for gun barrels, take: Shellac, 1½ ounce; dragon's blood, 3 drachms; rectified spirit, 1 quart. Apply after the barrels are browned.

(10509) W. P. G. asks how to make a pot pourri. A. Spread thinly the fresh collected flowers on porous paper placed in shallow trays, and expose them to the sun or warm air until sufficiently dry, then lightly crumple them up small between the hands, and the other dry odorous ingredients being added, with or without a little essential oil of the same kind as the dried flowers, thoroughly mix the whole together. Sometimes essential oils only are added to the dry flowers, but the fragrance of the product is then much less durable. As the basis of his finest dry pot pourri, the Continental perfumer usually substitutes either reindeer moss or ragged hoary evernia, in very coarse powder, for the dried flowers.

(10510) M. G. W. asks how to make printers' rollers. A. 1. Take an equal quantity of good glue and concentrated glycerine; soften the former by soaking in cold water, then melt it over the water bath, gradually adding the glycerine. Continue the heat until the excess of water has been driven off, meantime constantly stirring. Cast in brass or bronze molds well oiled. 2. To 8 pounds transparent glue add enough water to cover it; let it stand with occasional stirring seven or eight hours. After twenty-four hours, all the water should be absorbed. Heat in a water bath, as glue is always heated as soon as melted, and when both rise, remove from fire, and add 7 pounds molasses that has been made quite hot. Heat with frequent stirring for half an hour. The molds should be clean and greased. Pour into molds after it has cooled a little, and allow to stand eight or ten hours in winter, longer in summer. Some use far more molasses, three to four times above quantity, and less water. In this case, after soaking one to one and a half hours, the glue is left on a board overnight, and then melted with addition of no more water, and three or four times its weight of molasses added. Two hours' cooking is recommended in this case. 3. Resin soap and small quantities of oil and earthy matters are occasionally introduced. The heating must be continued until the greater part of the water has been expelled, when the composition is ready for casting in copper molds, oiled and warmed.

NEW BOOKS, ETC.

THE ENGINEERING INDEX. Vol. IV. Five Years, 1901-1905. Edited by Henry Harrison Suplee, B.Sc., and J. H. Cuntz, C.E., M.E., in co-operation with Charles Buxton Going, Ph.B. New York: The Engineering Magazine, 1906. Large 8vo.; pp. 1,234. Price, $7.50.

The fourth volume of the Engineering Index represents the continuation of the work originally started by the late Prof. J. B. Johnson in the Journal of the Association of Engineering Societies in 1884, and turned over by that association to the Engineering Magazine at the close of 1895. The previous volumes, published respectively in 1893, 1896, and 1901, covered with increasing fullness and thoroughness the field of technical engineering periodical literature; and in the present volume every care has been taken to maintain and advance the standard set by its predecessors. The classification is substantially the same as that introduced in Vol. III. The use of cross-reference entries has been extended, so that every facility is afforded in the search for any article. This volume contains more than 50,000 entries as against 40,000 for Vol. III. The comprehensive extent of the index may be understood, when it is mentioned that the list of periodicals indexed covers 250 technical and engineering journals in six different languages, one-fourth of these being languages other than English. Much of the value of the index is due to the fact that it is a guide to the vast amount of information otherwise practically buried in the numerous files of engineering publications in the reference libraries of the world.

ELECTRONS, OR THE NATURE AND PROPERTIES OF NEGATIVE ELECTRICITY. By Sir OLIVER LODGE, F.R.S. London: George Bell & Sons. 8vo.; cloth; 230 pages. Price, $2 net.

Anything published over Sir Oliver Lodge's name is by nature authoritative, so the treatise under discussion should be given a place in all scientific libraries without delay. It covers the field of matter and electricity, as viewed in the light of the recent discoveries in radio-activity and the kindred phenomena; from the experimental, as well as from the purely theoretical standpoint. Whenever it is possible the methods used to arrive at conclusions are described in detail, making the book useful as a laboratory guide to the experimenter, as well as indispensable to those who are following the theory alone.

QUALITATIVE ANALYSIS AS A LABORATORY BASIS FOR THE STUDY OF GENERAL INORGANIC CHEMISTRY. By William Conger Morgan. 8vo.; cloth; 351 pages. Price, $1.90 net.

A very excellent work on qualitative analysis, embodying as it does both a description of the various compounds and their constituent elements, with a system of analysis possessing many refinements of methods. Directions for making up reagents and tables of great convenience complete the work.

METALLURGY OF CAST IRON. A Complete Exposition of the Processes Involved in its Treatment Chemically and Physically from the Blast Furnace Through the Foundry to the Testing Machine. A Practical Compilation of Original Research. By Thomas D. West. Cleveland, O.: The Imperial Press, The Cleveland Printing Company. 1906. Eleventh edition; 12mo.; cloth; 594 pages, 153 illustrations. $3 postpaid.

It is hard to conceive of a more important subject than the one treated of by Mr. West in his book. With iron so extensively used, there is scarcely a field in the technical world in which a knowledge of this metal is not only useful, but necessary.

As Mr. West has had the widest and most intimate association with the iron industry, his word must be taken as authoritative on all subjects with which the smelter and foundryman has to deal.

Covering, as it does, among others of equal importance, the vital questions of molding, testing, mixing, and chemical composition, the work has proved itself well nigh indispensable, as is shown by the fact that it is now in the eleventh edition.

INDEX OF INVENTIONS

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AND EACH BEARING THAT DATE

[See note at end of list about copies of these patents.]

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Bracelet, I. M. Sylvester. 849,755
Bracket, H. E. Holland. 849,398
Brake shoe, C. W. Booth. 849,722
Branding machine, sheep, J. A. Magelssen 849,691
Brick handling implement, hollow, C. S. Hall. 849,897
Brick mold, F. Mueller. 850,038
Broiler, J. W. Ross. 850,058
Broom corn saw machine, A. J. Middleton. 849,804
Bucket for dredging purposes, scoop, C. Pay 850,096
Buckle and cockeye for harness traces, combination, E. B. Knapp. 850,115
Buckle attachment for straps, J. Van Cleve 849,516
Buckle, cross line, F. W. T. Mitchell. 849,486
Building block, S. T. Playford. 850,048
Building block for chimneys, E. C. Newell. 849,694
Building purposes, anchorage for, R. P. Smith. 849,817
Buoy, W. C. Beebe. 849,362
Buoy, life saving, W. F. Clark. 849,887
Burner, B. A. Baxter. 849,359
Button, A. J. Levy. 849,740
Button cutting and sawing machine, automatic, J. W. Miller. 850,033
Buttons, brooches, belt clasps, and buckle-fronts from horn and hoof, manufacture of, F. H. Grove. 849,608
Cables, steel supporting structure for electric transmission, A. K. Mansfield. 849,908
Calcining furnace, T. C. McNeal. 850,041
Camera stand, K. Nelson. 849,557
Can cover fastener, C. E. Bertels, reissue. 12,629
Can opener, A. G. Snowdon. 849,929
Can top, powder, J. H. Goss. 850,086
Canopy frame, I. E. Palmer. 849,808
Canopy, ventilating, W. L. Hofer. 849,611
Cant hook or peavey, P. Price. 850,051
Car, ballast, Proctor & Gnaegy. 849,854
Car construction, F. M. Brinckerhoff. 849,827, 849,828
Car construction, passenger, F. M. Brinckerhoff. 849,826
Car coupling, J. R. Mitchell. 849,412
Car cover, railway, G. A. Heimbucher. 849,785
Car draft rigging, railway, S. D. Wright. 849,619
Car draft rigging, railway, W. Slayden. 849,926
Car friction draft rigging, railway, J. F. O'Connor. 849,561, 849,562
Car friction spring draft rigging, railway, J. F. O'Connor. 849,560
Car mover, M. N. Shell. 849,923
Car, railway, D. L. Minier. 849,411
Car replacer, C. H. Hess. 849,393
Car roller side bearing, railway, F. B. Townsend. 849,515
Car roof, W. J. Wheeler. 849,518
Car roof frame, box, Emerick & Bundy. 849,382
Car seats and the like, rail connection for, E. G. Budd. 849,657
Car step, L. Yeager, Jr. 849,955
Car step, extension, N. Stevens. 850,072
Carbureter, P. Gaeth. 849,538
Card feeding device, automatic, W. A. Billman. 849,655
Card sorting device, D. Kent. 849,622
Carpet stretcher, C. Helm. 849,997
Carrier. See Barrel and box carrier.
Cash checking machine, E. Guess. 849,473
Cash register, E. Van Camp. 849,869
Casket handle, W. T. Fisk. 849,669
Caster, W. Imbt. 850,009
Catamenial bandage, M. A. Cook. 849,725
Cement block machine, J. W. Herring. 849,392
Cement for resisting water, impermeable, G. Frollo. 849,778
Cement kiln, J. S. Wentz. 849,873
Cement post, W. E. Varney. 849,759
Cement post mold, W. E. Varney. 849,760
Chair and table, combination, C. O. Hoffmann. 849,397
Chair head rest, barber's, B. F. Buchanan. 849,595
Chalk line holder, M. A. Reare. 850,052
Chock, J. M. Thomas. 849,937
Churn and butter worker, G. J. Kaplan. 849,688
Cipher code, telegraph and cable, F. W. Lietzow. 850,091
Circuit changing mechanism, H. G. Webster 849,443
Clamp, J. C. Adams. 849,354
Clamp, J. B. Danforth. 849,980
Clamping ring, J. Clark. 849,370, 849,371
Cleaning apparatus, A. E. Sadler. 849,641
Cleat, wire, J. W. Steele. 849,930
Cleaver and meat tenderer, combined, F. White. 849,648
Clothes line fastener, L. C. A. Denlea. 849,983
Clothes line support, J. H. Ruehmling. 849,428
Clothes line support and holder, Windt & Matlika. 849,876
Clutch, A. J. Morse. 849,487
Clutch, Potter & Johnston. 849,697
Coaches, skirt guard for baby, Fiske & Smith. 849,839
Cocks, pressure regulator for gas, M. W. Longfellow. 849,406
Coffee pot, C. M. Overcash. 849,564
Coin operated mechanism, J. J. Wood. 849,447, 849,448
Coke separating and discharging apparatus, W. Schumacher. 849,429
Coking briquets, apparatus for, B. Wagner. 849,947
Column, metal, R. B. White. 849,951
Combination wrench, E. Ellingson. 849,891
Concrete block machine, A. O. Thomas. 849,704
Concrete blocks, curing, J. W. Jackson. 849,790
Concrete building blocks, manufacturing, S. W. Hendrickson. 850,112
Concrete ceilings, hanger support for, A. J. Perkins. 850,097
Concrete construction, reinforced, E. M. Scofield. 849,922
Concrete form, J. M. Carmody. 849,885
Concrete mixer, E. E. Flora. 849,739
Concrete wall mold, W. H. Anthony. 850,120
Condenser, sectional, W. Van den Heuvel. 849,944
Condenser, surface, C. N. Tatarnicoff. 849,866
Conduit box, C. A. Hinsdill. 849,395
Conduit coupling, electrical, J. A. Neth. 849,117
Conduits, plug for sealing underground, W. L. McGowan. 849,115
Connecting rod head, W. W. Sleeman. 849,642
Convertible table, F. A. Richter. 850,056
Conveyor, cross, C. Bradford. 849,594
Conveying apparatus, F. H. Wolever. 850,107
Cooker, A. Major. 850,028
Cooker, A. K. Schulte. 850,060
Cooling apparatus, W. Helm. 849,998
Cooling attachment, T. A. Aitou. 849,711
Core separator, J. P. Mallett. 850,116
Corn, apparatus for the treatment of seed, P. Paulsen. 849,567
Corn, device for testing the germinating power of seed, A. R. Francis. 849,671
Corn thinner, J. P. Bennett. 849,651
Corset attachment, N. Stoskopf. 849,583
Corset busk, R. E. Legge. 849,905
Counter die and making same, P. & M. Lehnert. 849,517
Crane, A. V. Kiser. 849,403
Creel, I. E. Palmer. 849,810
Cultivator, W. C. Hinton. 849,396
Cultivator attachment, J. J. Young. 849,956
Curtain fixture, A. G. W. Brown. 849,972
Curtain pole, J. C. Repp. 849,855
Curtain rod, C. W. Kirsch. 850,089
Curtain stretching and drying device, lace, A. Proctor. 849,853
Cushion wheel, J. P. Holder. 850,000
Cuspidor, N. R. Thibert. 850,076
Cut-off and drainage apparatus, W. H. Ellis 849,534
Cut-off, automatic, J. D. Patton. 849,637