

RECENTLY PATENTED INVENTIONS.
Pertaining to Apparel.

CLOTHES-HANGER.—H. K. SMITH, Union S. C. The invention provides a hanger which can be used for hanging up suits, jackets, etc., and which will dispense with the ordinary hooks in connection with the body or main bar of the hanger. The hanger will prevent snagging or tearing of garments resulting in the rush of business from the use of hooks in suspending the garment hangers.

Of General Interest.

MOLD AND MEANS FOR MAKING THE SAME.—E. A. CONNER, Tacoma, Wash. The mold is more especially designed for use in making concrete columns such as are used in buildings and other structures to permit of its being conveniently and quickly built up and each part accurately placed in position and firmly secured one to the other, and parts of the mold being readily removable after the column is built.

FIREPROOF WALL.—W. DRYDEN, New York, N. Y. The invention relates to fireproof construction, and the object is to produce a wall which will resist the passage of flame through it. It concerns itself not only with the construction of the wall itself, but also with the blocks out of which the wall is constructed.

COLLAPSIBLE PACKING-BOX.—M. T. LYNCH, Jr., New York, N. Y. The aim in this instance is to provide a packing box, more especially designed to take the place of expensive wooden packing boxes, and which is durable in construction, capable of standing hard usage in shipping and the like, and at the same time fully protecting the contents of the box.

Machines and Mechanical Devices.

CLOCK COMBINED WITH COIN-FEEDED WINDING-UP APPARATUS.—A. G. P. WINNIGAARD, Romersgade 3, Copenhagen, Denmark. The present invention pertains to a clock in which a clock combined with a winding up mechanism is provided with a stop device arranged in the clock, which device when in the normal position prevents the clock from being wound up. This device is released by means of a coin introduced into the clock through a coin chute.

CHANGEABLE-SPEED GEARING.—W. MORROW, Fremont, Neb. The gearing is such as used in connection with motor cycles or any other types of machinery where it is desirable to increase or decrease the speed rapidly while the machine is in motion. One object of the invention is to provide a changeable speed belt driver which may be adjusted while the machine is in motion.

MICROMETER-GAGE.—L. MASTRANGE, New York, N. Y. The invention provides a standard serving as a support for a laterally-extending arm, and at the end of the arm an indicating mechanism is provided whereby the distance between the end of a movable member at the end of the arm and the base for the standard may be read on a suitable dial carried by the arm.

APPARATUS FOR FEEDING FLOUR IRON ORE TO BLAST-FURNACES.—E. L. HARPER, Jr., Big Stone Gap, Va. This invention refers to improvements in the apparatus for use in feeding of flour iron ore, that is, ore in an extremely fine state of subdivision, to blast furnaces, in such a manner that it will not be blown out immediately by the blast, but will become amalgamated with the molten mass in the bos of the furnace.

DIPPING-MACHINE.—W. B. CROCKER, New York, N. Y. This invention relates to confectionery machines, and its purpose is to provide a machine, more especially designed for coating marshmallows held on biscuits or cakes with chocolate, icing, cocoanut or other coating material and without submerging the biscuits or cakes in the material.

BREAKAWAY-CLUTCH FOR ELEVATORS AND MINE-CAGES.—M. C. HUTCHINGS, Bozeman, Mont. The invention relates more particularly to self-detaching hooks such as are already known for use in the attachment of shaft cages or the like to the swing chains. An object is to provide a self-detaching hook which will automatically release the cable-hold when the elevator car or cage has been drawn too high, as, when the engine which operates the winding drum is beyond control.

Railways and Their Accessories.

RAILWAY-WHEEL MOUNTING.—J. H. BROWN, New York, N. Y. The purpose here is the minimizing of the friction incident to, and the power required in, rounding curves, and reducing lateral stress on rails tending to spread the gage. To this end the wheel is pivotally supported at one side to swing in a horizontal plane, which admits of the turning of the wheel, by the contact of the flange with the rail, in the direction of the track. This is preferably done by journaling the axle in a bearing-box at the outside of the wheel, having substantially vertical trunnions.

LIFTING DEVICE.—J. P. RENEKER, Logansport, Ind. The invention relates to lathes for turning a pair of car or locomotive wheels mounted on an axle, and its object is to provide a device arranged to permit of conveniently lifting the wheels to bring the axle in

axial alignment with the lathe centers, for the latter to engage the axle and allow the same to be rotated for turning the wheels.

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.



Kindly write queries on separate sheets when writing about other matters, such as patents, subscriptions, books, etc. This will facilitate answering your questions. Be sure and give full name and address on every sheet.

Full hints to correspondents were printed at the head of this column in the issue of March 13th or will be sent by mail on request.

(12055) E. E. B. asks: 1. Could a 24-volt storage battery in an automobile be replaced with 12 dry batteries of 2 volts each in case of emergency? A. A dry cell when fresh may have 1.4 volts. To replace a 24-volt storage battery will require as many dry cells as 1.4 is contained in 24 volts, or 17 dry cells. 2. Would the motor in SUPPLEMENT No. 641 run a bicycle if more cells of battery were used? A. The motor in SUPPLEMENT No. 641 is not adapted to be attached to a bicycle, nor has it power enough to drive a bicycle. 3. Please give me formula for bichromate battery, and also for chromic acid battery. A. For a bichromate of potash solution take water 1 gallon, sulphuric acid 1 quart, and potassium bichromate 1 pound. Pour the acid into the water slowly with constant stirring, and add the bichromate while hot. Use when cold. Bichromate of soda may be used in place of the potash salt; many think to better advantage. For a chromic acid solution take 6 quarts of water, 1 pint sulphuric acid, and 1.5 pounds chromic acid. Mix and use as above.

(12056) C. C. W. asks: Will you kindly answer and settle a very simple but confusing question? A horse running away attached to a four-wheeled wagon turns a corner sharply, and the wagon overturns. Which way does it tip over? That is, in or toward the corner or outward or away from the corner? It is not supposed that the wheels stick in striking an obstruction that overthrows the wagon or that it is overthrown by cramping the wheels so as to tip it over. In going around the corner, the corner being a curve, can the inside wheels get off the ground? Will not the outside wheels gradually rise from the ground until the wagon tips in or toward the corners? A. Under the conditions you mention, when the wheels lock against the side of the buggy, it must turn over toward the side upon which the wheels are locked, i. e., toward the corner it is turning. This is the only case in which a vehicle turning a corner too sharply overturns inward; in an automobile, for instance, turning a right-hand corner, the right-hand wheels leave the ground first and it turns over onto its left side from its momentum tendency to go straight on. The causes are different in the case of the buggy, the inner side being first retarded by the locking of the wheel.

(12057) C. B. B. asks: I have a problem to submit, the solution of which will confer a great favor upon the writer. There are two large public halls with practically no ventilation; one is illuminated by gas, the other with electricity. Both rooms are occupied by the same number of people. In which room, the former or latter mentioned, is the air purest? Does not the gas have a tendency to purify the oxygen by consuming a large percentage of the impure air or hydrogen? A. Although not at all for the reasons you give, it has been sufficiently proven that under equal conditions of ventilation (whether good or bad) the air at breathing level in any room illuminated by gas will, after several hours' occupation by a number of persons, be more healthful than if the same room was electrically lighted. The products of combustion of a gas flame in air are largely identical chemically and nearly identical physically with those of exhalation from human lungs, and as the least quantity of gas consumed by a single burner (say 4 cubic feet of gas per hour for an atmospheric incandescent mantle) produces 2 cubic feet of carbon dioxide per hour, while an average man breathes out only 0.6 cubic foot per hour, one gas burner vitiates the air of a room more than do three persons. As incandescent electric lamps not merely add nothing to the impurities of the atmosphere, but withdraw no oxygen from it, it has been assumed not unnaturally that it must be the most hygienic form of illumination to employ; but in the years which have elapsed since electricity was first used for lighting purposes, experience has increasingly proved the contrary. The burning of gas does not in any way purify the air or consume any irrespirable constituents—quite the contrary; but because the heating effect of gas in proportion to its lighting effect is so much higher than that of electricity, the carbon dioxide, otherwise much heavier than air, is heated sufficiently to rush

to the ceiling of a room, where its descent upon cooling is prevented by diffusion. The explanation involves chemical, physical, and physiological considerations and cannot be at all completely given here, but you will find it admirably discussed in an article by Prof. Vivian Lewes, a high authority on this subject, in our SUPPLEMENT, Nos. 1661 and 1662, which we shall be glad to send for 10 cents each, postage paid.

Legal Notices

60 YEARS'
EXPERIENCE

PATENTS

TRADE MARKS
DESIGNS
COPYRIGHTS &c.

Anyone sending a sketch and description may quickly ascertain his opinion free whether an invention is probably patentable. Communication strictly confidential. HANDBOOK on Patents sent free. Oldest agency for securing patent. Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.
A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.
MUNN & CO. 361 Broadway, New York
Branch Office, 626 F St., Washington, D. C.

INDEX OF INVENTIONS

For which Letters Patent of the

United States were Issued

for the Week Ending

March 23, 1909,

AND EACH BEARING THAT DATE

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

Account keeping system, D. L. Cline.....	916,270
Adjustable gage, S. F. Atkinson.....	916,252
Adjustable mold, T. G. Johnson.....	915,863
Aerial tramway, marine, G. W. Jackson.....	916,158
Agricultural implement, E. Weerts.....	915,814
Agricultural implement, W. Wright.....	916,087
Agricultural implement, C. Schardt.....	916,202
Air and controlling its temperature, machine for humidifying and cleansing, D. P. Gosline.....	916,146
Air brake, fluid pressure, W. M. Austin.....	915,724
Air compressor, W. K. Richardson.....	916,019
Air compressor, G. Foll.....	915,759
Air compressor, Wilcox & Branson.....	915,815
Air conditioning machine, D. P. Gosline.....	916,147
Air regenerating apparatus, R. von Foregger.....	915,760
Aldehydes, making, Ellis & McElroy.....	915,946
Anchor, F. Baldt, Jr.....	916,384
Anchor, earth, F. B. Miller.....	915,783
Ash pan, locomotive, T. W. Heintzelman.....	916,150
Automatic switch, safety, F. M. Hall.....	915,854
Automaton, C. W. Clark.....	916,106
Automobile rear axle driving mechanism, Winton & Anderson.....	915,920
Automobile wheel hub, A. A. De Mars.....	916,118
Axle, J. E. Symons.....	915,902
Axle box and spindle, B. E. & M. E. Stevenson.....	916,213
Background support, J. A. Holmes.....	916,316
Bag filling machine, P. A. Frye.....	915,847
Bag holder, G. M. Clagett.....	915,740
Band saw guide, J. A. Ansley.....	916,248
Barrette, J. Wilcox.....	916,078
Battery. See Secondary battery.	
Battery chute, C. O. Poor.....	916,011
Bed canopy, J. N. Moody.....	915,785
Bed folding, P. G. Hubert.....	915,964
Bed press, F. C. Leethem.....	916,145
Beer-steak tenderer, G. C. Givens.....	915,791
Bell, electric signal, H. W. Eden.....	916,284
Bicycle pump, Speck & Henschen.....	916,211
Binder, C. E. Richardson.....	915,583
Binder, loose leaf, J. S. McComb.....	915,790
Binders, sheet for loose leaf, J. S. McComb.....	915,789
Board making machine, cellular, S. M. Langston.....	916,170
Book, cumulative, T. Scholes.....	916,034
Book rest, adjustable, L. Valentine.....	916,066
Book, such as ledger, order book, etc., loose leaf, A. T. Warre.....	915,812
Boot or shoe heel cushion, A. A. Meyer.....	916,350
Bottle sealing device, H. P. Roberts.....	916,198
Bottles or other receptacles, machine for filling, T. Sr. & E. L. Barnes.....	915,725
Box, E. L. Ansorge.....	916,249
Box coupling, junction, E. S. Motrell.....	915,990
Box covering machine, T. H. White.....	916,078
Box folding machine, E. W. Labomarde.....	915,971
Box plane, core, C. E. Martin.....	916,344
Bronzing machine, H. Lamberger.....	916,330
Broom holder, L. J. Powers.....	915,886
Brush, K. Watanabe.....	916,071
Brush, H. Alexander.....	916,383
Brush holder, W. A. Turbayne.....	916,063
Bucket, dumping, J. H. Lance.....	916,331
Buckle, H. D. Sargent.....	915,798
Buckle, F. Loeb.....	916,173
Building construction, S. Toyé.....	915,908
Building, fireproof, M. J. Dawkins.....	916,278
Burial tie, J. E. Wright.....	915,922
Burial case or vault, McCormick & Kridler.....	916,182
Buoy for saving life and for communicating between ship and other objects on the shore, T. Bredsdorf.....	915,730
Burial vault, Weltner & Allebaugh.....	916,074
Butter cutter, J. G. & B. B. Carmichael.....	915,935
Cabinet, E. Keltz.....	916,326
Cable tension holder, E. J. Hoode.....	916,317
Cage lock, J. W. Unger.....	916,289
Calendar, perpetual, J. F. Stimson.....	916,051
Calk, detachable, W. J. Koontz.....	915,970
Camera finder, W. E. Shanley.....	916,205
Camera shutter operating device, chronometric, Martin & Petri.....	916,346
Camera tripod, W. C. Evans.....	916,288
Can cover, milk, R. Bray.....	915,825
Can top, H. L. Freeborn.....	915,931
Canning furnace, C. C. May.....	915,984
Capping machine, Mueller & Gwinne.....	915,992
Car coupling, D. Alford.....	916,246
Car door, passenger, Skov & Scullin.....	916,045
Car dump, F. Seaberg.....	915,800
Car hand propelled, C. D. Orcutt.....	915,880
Car passenger registering apparatus, J. J. McDermott.....	916,359
Car pipe line coupling, P. A. Seneca.....	915,894
Cars, etc., route or destination indicator for tram, A. K. Baylor.....	916,256
Cars, end gate for mine, F. C. Greene.....	916,401
Carbon black from peat, obtaining, J. E. Smith.....	916,049
Carbons, apparatus for forming perforated, M. W. Allen.....	916,088
Carburetor controller, A. C. Stewart.....	916,214
Castor wheel, J. F. L. Uni.....	915,909
Casting safe knobs, means used for, W. T. Baumschmid.....	915,820
Castings of aluminum and aluminum alloys, making, E. Blough.....	915,727
Castings of aluminum and aluminum alloys, mold for making, E. Blough.....	915,728
Cement, T. Jones.....	916,165
Centrifugal separators, automatic feed regulating float for, C. A. Edlund.....	916,398
Chain hoist, friction, R. E. Cross.....	916,111
Chair with adjustable seat, J. A. Wilkinson.....	916,080
Channelling machine, W. Freilwitz.....	916,013
Chimney cap and ventilator, R. T. Merrill.....	915,871
Churn, J. B. Mellinger.....	916,349
Cigarette holder, W. Beamish.....	915,726
Cigars, device for incising the ends of, C. G. Taylor.....	915,807
Circles, instrument for describing arcs of, A. W. Allen.....	915,926
Clasp. See Garment supporter clasp.	
Clay condensers for retorts, machine for molding, Garrison & Whipple.....	915,848
Clock, V. E. Duncanson.....	916,123
Clockwork pivot holes, hardening, C. Grivas.....	915,762
Clothes drainer, A. P. Shepherd.....	916,041
Clothes drier, J. Surprise.....	916,053
Clothes steamer, W. B. Grover.....	915,763
Clover seed buncher trip device, O. L. Kelser.....	915,773
Clutch, Potter & Johnston.....	9