

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.

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.

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-FEED WINDING-UP APPARATUS.—A. G. P. WINGGAARD, 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.

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.

MICROMETER-GAGE.—L. MASTRANGEL, 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 bosh 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, coconut 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.

LIFTING DEVICE.—J. P. RENNEKER, 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 irreparable 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.

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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.]

Table listing various inventions and their patent numbers, including items like Account keeping system, Adjustable gage, Aerial tramway, and many others.