

RECENTLY PATENTED INVENTIONS.

Engineering.

MOTOR VEHICLE.—Henry W. Heaton, Olneyville, R. I. This is a four-wheeled vehicle, in which oil or gas may be used to actuate the motor, the vehicle being easily started, stopped and steered.

DESULPHURIZING MATTE OR OTHER FURNACE PRODUCTS.—James L. Wells, El Paso, Texas. An apparatus for reducing low grade matte and other furnace products, producing high grade matte or metal in a very simple and economical manner, has been devised by this inventor.

Electrical.

LOCK CIRCUIT CLOSER.—Charles E. Pierce, New York City. In an electric alarm to be operated when an attempt is made to force the lock of a door, according to this invention, a frame piece is employed carrying two normally disconnected contact points and a lever movable to engage them and thus close the circuit.

Bicycles, Etc.

HANDLE BAR.—Henry W. Heaton, Olneyville, R. I. To reduce to a minimum the transmission of vibration through the handle bar from the frame of the bicycle, in riding over rough places, is the object of this invention.

DIFFERENTIAL BICYCLE GEAR.—Guy R. Balloch, Centerville, Canada. To allow a rider to readily and conveniently change from a high gear to a low gear, and vice versa, this invention comprises principally a hollow drive wheel hub provided with differential gear wheels.

DETACHABLE CARRIER FOR BICYCLES.—William M. Tegart, Moosomin, Canada. To facilitate carrying a camera, baggage, etc., on a bicycle, this inventor has devised a carrier which may be conveniently attached to or removed from a bicycle.

Agricultural.

REAPING MACHINE.—Mihail Alexandrescu, Bucharest, Roumania. This is a machine adapted to be pushed along by a draught animal, when it grasps the corn to be cut, bends it down and conveys it to the knives.

Miscellaneous.

RACE STARTING MACHINE.—Victor Carandini, Calcutta, India. According to this invention a fence or barrier is mounted transversely to the track, in connection with means for raising and lowering it quickly, so that upon raising the barrier the horses may pass.

NECKTIE FASTENER.—Gustave Selowsky, New York City. This is a simple and inexpensive device to be applied to any necktie necktie, and which can be quickly and accurately adjusted to fit the tie to any size of neck.

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Inventions developed, models and experimental work. Charles Crook, 144 Centre St., New York.

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Notes & 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.

(7242) E. E. S. asks: Will the galvanometer, described in "Experimental Science," show how many volts and amperes of a current, with proper scales? If it will, will you give me proper instructions how to make proper scales? A. The tangent galvanometer of "Experimental Science" will measure amperes; but no permanent scale reaching amperes could be attached to it.

(7243) W. F. R. ask: Is there any direct way, that is, by means of converters and the like, of changing an alternating current into a continuous one? A. The only way to transform an alternating current into a direct current is to run a motor with the alternating current, and with this motor drive a direct current dynamo, which will give the voltage and amperes required.

(7244) H. C. C. writes: Please explain how nitrate of gold may be separated? A. It is very doubtful if there be a nitrate of gold. If there be, it is an unstable compound which is reduced at once to oxide of gold or to metallic gold. Fuming nitric acid will dissolve fine gold leaf, but even by shaking the solution with water, the precipitation of gold oxide takes place.

(7245) E. Y. M. writes: I am making the tangent galvanometer described in "Experimental Science." Please inform me what size and kind of wire, also length, to use for the different coils of same? A. For the coils of the tangent galvanometer, as described in "Experimental Science," use No. 27 Am. wire gage copper wire (cotton-covered magnet wire will answer).

Table with 3 columns: Ohms, Ft. In., and weight. For coil b... 1... 19 5. For coil c... 9... 174 7. For coil d... 40... 776 0. For coil e... 100... 1940 0. Total... 2900 0.

The weight required is a little more than 1 1/4 lb. (7246) J. G. B. asks: What is the difference between an incandescent light of 100 volts, 16 candle power, at 3 1/2 watts per candle power, and one of the same voltage and candle power but of 2 1/2 watts per candle power?

at any higher rate of power, but you will burn your lamps out a great deal faster than the decrease of power at 2 1/2 watts will balance. It is more economical to consume three or more watts per candle than to consume the carbon filament so fast and thus shorten the life of the lamp.

(7247) W. H. F. writes: I have come across a substance that I think is a compound of acids. If you put a drop of water on this substance, it ignites immediately. Will you please tell me the name of this substance and how it is made?

(7248) W. M. M. asks: Is there any chemical that will cause the silver on an electric print to disappear? We know that the chloride of lime will do it, but it will not remain away. I want something that will be permanent.

(7249) V. W. writes: In your SUPPLEMENT there is a description of a Wimshurst electrical machine, with directions to make it, and in the directions it says to use for the accumulating Leyden jars the hock bottle, and I do not know where to procure these, cannot get them here and do not know to whom to send for them.

TO INVENTORS. An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS. For which Letters Patent of the United States were Granted NOVEMBER 16, 1897, AND EACH BEARING THAT DATE.

Table listing inventions and their patent numbers. Adding register, C. H. Bigelow... 593,715. Advertiser, automatic, Petsch & Soukup... 593,754. Alarm, W. Lancaster... 593,690.

Table listing inventions and their patent numbers. Box fastener, J. W. & C. A. Myers... 593,753. Box fastener, Sherrill & Foy... 593,615. Bracket, See Curtain pole bracket. Fan motor bracket. Brake, See Elevator brake. Wagon brake.

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