

The Cadillac Runabout

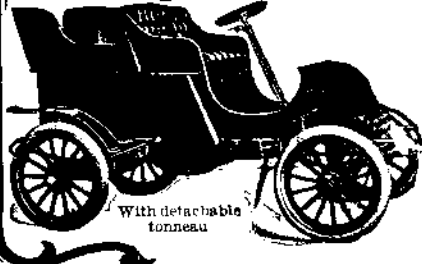
The Cadillac

The Automobile that Solves the Problem

Until the Cadillac was made, all automobile construction was more or less experimental. This machine is made on a new system developed from the experiences of all previous makers: the faults and weaknesses of the old methods have been avoided and a new ideal of motor travel developed that gives a perfect vehicle for comfort, speed, absolute safety, greatest durability, simplicity of operation, wide radius of travel, and reliability under all conditions of roads. You should not buy before examining this wonderful new machine. Price f. o. b. at factory, \$750.

The new tonneau attachment, at an extra cost of \$100, gives practically two motor vehicles in one, with a seating capacity of two or four, as required—a very graceful effect in either use. Write for illustrated booklet N.

CADILLAC AUTOMOBILE COMPANY,
Detroit, Mich.



With detachable tonneau

REVERSING STEAM TURBINE.—PARSON'S recently perfected turbine for boats. Illustrations showing details. Contained in SCIENTIFIC AMERICAN SUPPLEMENT, No. 1158. Price 10 cents, by mail, from this office, and from all newsdealers.



A Universal Rotary Pocket Measure

It is the only practical all-around measure ever made. Measures curves of all kinds as easily as straight work. As simple as a rule. In fact it is simply a revolving rule. A time and brain-saver that is praised by all who know its merits. Accurate, and anyone can use it. For detailed description, send for circular.

STECKENREYER MFG. CO.,
96 Lake St., Chicago, Ill.



EVANS Vacuum Cap

Will Make Hair Grow. This appliance will massage the scalp, and force a beneficial circulation. It will stop hair from falling out and restore a normal growth where live follicles exist. We refund the full purchase price if it does not give satisfaction within thirty days. For full particulars address

EVANS VACUUM CAP CO.,
Fullerton Bldg. St. Louis, Mo.



I PRINT MY OWN CARDS

Circulars, newspapers, Press, 85. Larger size, \$1.00. Money saver. Big profits printing for others. Type setting, easy, rules sent. Write for catalog, presses, type, paper, etc., to factory. The Press Co., Meriden, Conn.

50 YEARS' EXPERIENCE

PATENTS

TRADE MARKS DESIGNS COPYRIGHTS & C.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. 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, 625 F St., Washington, D. C.

Heating can for fruit or vegetables, etc., G. S. Jewett	720,435
Heel for footwear, safety, H. C. Karpenstein	720,440
Heel seating machine, spring, B. E. Morrison	720,171
Hinge, separable, R. G. Winter	720,304
Hinge, spring, W. J. Cowan	720,116
Hinge, spring, W. J. Keene	720,254
Hoisting or lowering material, apparatus for, J. F. Cook	720,329
Horseshoe, C. Glaum	720,130
Horseshoe, W. M. Dickey	720,409
Horseshoe calk, detachable, A. Corcoran	720,115
Hose clamp, F. Straub	720,296
Hose reel attachment, automatic, J. H. Couch	720,228
Hose supporter, T. E. Taylor	720,193
Hose supporter clamp, M. B. Hammond	720,244
Hotbed, W. S. Bodley	720,318
Hub, wheel, A. Schoth	720,185
Hydraulic apparatus, automatic, A. B. Lawther	720,162
Hydraulic machinery, apparatus for automatically regulating the supply of water under pressure to, L. Lucien	720,261
Hydraulic power machine, G. W. Shem	720,494
Illuminating prism structure, F. L. O. Wadsworth	720,386
Insulator, H. R. Sargent	720,184
Iron. See Sad Iron	
Ironing table, L. O. Kelly	720,033
Knife, F. White	720,202
Knitting machine, H. Clarke	720,405
Knitting machine, Dodge & Rice	720,514
Knob attachment, B. W. Norton	720,056
Knockdown house, canvas covered, J. H. Hagedorn	720,344
Labeling machine, F. C. H. Strasburger	720,295
Lamp, electric arc, H. Baggett	720,312
Lamps, etc., globe holder for arc, J. J. Wood	720,300
Lantern, signal, Moore & Lewis	720,271
Lantern slide shifter, magic, T. S. Barbour	720,099
Lap robe or storm apron, roll, Keutcher & Adams	720,260
Latch door, C. P. & F. E. Howard	720,349
Ledger, bank, E. Ford	720,414
Level, R. W. Hodgins	720,145
Light rays, coloring screen for white, Schroeder & Lauffer	720,491
Lightning arrester, J. P. Coleman	720,226
Linotype machine, means for setting tabular matter in, T. Martin	720,270
Lithographic or other purposes, manufacturing artificial stones for, F. Heuber	720,142
Lock and latch, Rodney & Parkes	720,284
Lock and latch, combined, E. More	720,455
Locket, W. H. Blaney	720,317
Logs, means for raising sunken, B. H. Harris	720,137
Loom, automatic filling replenishing, E. S. Wood	720,209
Loom, multiple shuttle, L. E. Salisbury	720,181
Loom pick ball holder or guard, J. Blanchette	720,316
Loom stopping mechanism, J. V. & E. Cunniff	720,117
Looms, knife sled motion for pile fabric, E. H. Ryan	720,285
Looms, tip support for automatic filling replenishing, E. S. Stimpson	720,189
Looms, web feeder for replenishing, T. McAuliffe	720,457
Lowering persons or dead weights, apparatus for, A. Wyss-Baumgartner	720,310
Lubricating device for car axle journals, Harrison & Williams	720,026
Lubricating press, W. Michalk	720,047
Magnetic separator, J. Kirschweg	720,156
Mail bag holder, D. S. Baldwin	720,097
Mail box, rural delivery, M. S. Norton	720,279
Mandrel for conduit sections, R. W. Lyle	720,369
Mast, automatically lowering, C. Schwanebeck	720,074
Match safe, W. A. Patten	720,060
Matches, device for the ignition of slow, J. von der Bosch	720,104
Mattress filling, S. J. Stevenson	720,292
Measuring electric currents, means for, G. N. Eastman	720,335
Measuring vest, R. W. Grendon	720,019
Mechanical movement, J. E. Hausfeld	720,140
Medicinal battery, F. Grimshaw	720,020
Metal atomizing apparatus, W. H. Rowley	720,382
Metals, etc., compressing, W. Holzer	720,348
Metals from their ores, recovering and separating, H. A. Frasch	720,235
Milk jar protector, R. E. Gatter	720,341
Mine cage, D. F. Lepley	720,265
Mine ventilator, D. F. Lepley	720,264
Molding apparatus, E. Cross	720,408
Molding machine, R. Campbell	720,220
Monothe construction, Lyon & Berle	720,165
Moth bag, self sealing, S. L. McMillan	720,461
Motive power engine, H. Pysan	720,470
Mowing machine, J. W. Limer	720,392
Napping machine, H. S. Greene	720,018
Newspapers, etc., machine for folding, wrapping, addressing and assorting, L. A. Agnew	720,212
Nut lock, B. Tucker	720,505
Oil burner, C. W. Slevert	720,495
Oil can, R. P. Hardy	720,424
Oil from seeds, apparatus for automatically extracting, A. B. Lawther	720,532
Ore separator, Emmons & Miller	720,338
Ores, reducing, M. Ruthenburg	720,490
Pails, etc., attachment for, F. P. Mahon	720,041
Paper bags, manufacturing square bottom, W. A. Lorenz	720,366
Paper, device for holding loose or removable sheets of, R. G. Whitlock	720,548
Paper feeding apparatus, E. J. Hallberg	720,243
Paper feeding machine, Fuchs & Fisher	720,546
Paper, manufacture of, W. T. Armistead	719,982
Penholder, pen ejecting, B. B. Goldsmith	720,236
Perforating machine, J. W. Hedgepeth	720,425
Phonograph vibratory membrane, V. L. Garcia	720,127
Piano player tune sheets, perforation spacing device for automatic, A. S. Seville	720,075
Pick, mining, G. T. White	720,203
Pipe, apparatus for making butt weld, P. Patterson	720,061
Pipe, apparatus for the manufacture of butt weld, J. H. Matheson	720,046
Pipe connection, L. G. Collins	720,407
Pipe coupling seal lock, R. D. Tittle	720,196
Pipe covering, steam, S. W. Curtiss	720,003
Pipe joint, sheet metal, J. B. Wallace	720,538
Pipe, manufacture of butt weld, J. H. Matheson	720,045
Pipe wrench, O. Skirle	720,385
Pipes with sand, mechanism for packing, C. R. McKibben	720,053
Pitman connection, J. L. Taylor	720,192
Placket closure, L. W. & S. M. Luellen	720,450
Planter, corn, H. P. Adams	720,211
Planter, corn, T. Adams	720,391
Platinum contact substances, regenerating, Krauss & Von Berneck	720,361
Plow, C. R. Davis	720,118
Plow, W. T. Ellis	720,412
Plow attachment, E. Marsalis	720,453
Plow fender, J. J. McManmon	720,173
Pneumatic despatch system terminal, Ash & Woltman	720,395
Pocket case, R. Oertel	720,467
Pole or post anchor, I. E. Clum	720,225
Pool table return ball attachment, P. Lapp	720,446
Portable bath, C. H. York	720,089
Post brace and anchor, J. H. Harbold	720,025
Potato digger, R. J. Thompson	720,503
Poultry or birds, self locking leg band for, C. C. Schild	720,286
Preserving device, T. L. Martin	720,043
Preserving jar, M. E. Perley	720,471
Preserving jar, vacuum, Giles & Gray	720,129
Printer's base and attachments, T. Wensei	720,387
Printer's base clamp, T. Wensei	720,388
Printing or other machines, sheet separating and feeding mechanism for, Fuchs & Fisher	720,547
Printing paper bags and wrapping paper, apparatus for, Purdin & Haskins	720,481
Printing press, G. H. Pierce	720,064
Printing press, C. R. Cully	720,331

(Continued on page 144)

"HENDRYX"
It's a Guarantee of Quality
2,000,000 Sold in 12 Years
EVERY REEL WARRANTED
Booklets mailed free
The Andrew B. Hendryx Co.
NEW HAVEN, CONN., U. S. A.

OIL--SMELTER--MINES
Dividend Paying Mining, Oil and Smelter Stocks, Listed and Unlisted, our Specialty.
DOUGLAS, LACEY & CO.
Bankers & Brokers, Fiscal Agents, Members N. Y. Consolidated Stock Exchange.
66 BROADWAY & 17 NEW ST., NEW YORK.
Booklets giving our successful plan for realizing the large interest and profits of legitimate mining, oil and smelter investments, sub. blanks, full particulars, etc., sent free on application.

The SUN
Typewriter No. 2
Built on standard principles with superior advantages. A revelation in every feature, including
Price, \$40.00
SUN TYPEWRITER COMPANY,
239 B'way, New York.

YOU ARE EASY
If you need a carpenter to help you repair your roof with Warren's Natural Asphalt Stone Surfaced Roofing
Has 8 inch lap edge. The best and most serviceable prepared roofing on the market. It is durable, fire-proof, and does not require painting. Comes ready to lay in rolls containing 108 sq. ft.
Warren Chemical & Mfg. Co., 172 Broadway, New York

Engineering Taught By Mail
An opportunity to gain, at home, many of the educational advantages of a resident technical school
Instruction under Supervision of Members of Faculty of Armour Institute of Technology
Correspondence Courses in Electrical, Mechanical, Locomotive, Stationary, Marine, Civil and Sanitary Engineering, Navigation, Architecture, Mechanical and Perspective Drawing, Sheet Metal Work, Textile Manufacturing. Also 40 Short Special Engineering Courses.
In addition to their regular instruction papers, students in full Engineering Courses are furnished a Technical Reference Library (in ten volumes) as a help in their studies. Catalogue sent upon request.
American School of Correspondence
at
Armour Institute of Technology
Chicago, Illinois.

CONTROL OF FIRE.—VALUABLE PAPER on fire extinguishment. SCIENTIFIC AMERICAN SUPPLEMENT, 1134. Price 10 cents. For sale by Munn & Co. and all newsdealers.

KLIP-KLIP The Pocket Manicure
Trims, files, shapes and cleans, and keeps the nails in perfect condition. A complete manicure for man, woman or child. Silver steel, nickel-plated. Sent post paid on receipt of price of your dealer here. **25c**
KLIP-KLIP CO., 563 So. Clinton St. Rochester, N. Y.

For Men who Must Know
and must keep their facts up to date, in compact, convenient form, there is just one invaluable work:

17 Volumes THE NEW INTERNATIONAL ENCYCLOPEDIA 15,000 Pages

EDITED BY
Harry Thurston Peck, Ph.D., L. H. D., Professor in Columbia University.
Daniel Coit Gilman, LL.D. President of Johns Hopkins University (1876-1902), President of Carnegie Institution.
Frank Moore Colby, M. A., Late Professor in New York University.
(Assisted by Nearly 200 Eminent Editors and Contributors)

You Ought to Know and Own
the only New Encyclopaedia in English. New census figures, new inventions, new discoveries, new facts in the sciences and arts, new classification, abundant cross-references, the perfection of methods for convenience, the highest standard of accuracy. **New in its Entirety**

THEODORE HOUGH, Biological Dept. Massachusetts Institute of Technology, Boston, Mass., says:
"The NEW INTERNATIONAL is exactly what I have long desired in an encyclopaedia, and I cannot say more in commendation of the work than that it gives exactly what it professes to give in the preface. In my own Department of Biology I can judge critically of the accuracy and comprehensiveness of its articles. They are all that can be desired in this respect."

Profusely Illustrated
Thousands of illustrations in the text, and hundreds of full-page plates in black-and-white and in colors, form an invaluable feature putting the NEW INTERNATIONAL on a par with the great German Encyclopaedias. Maps showing latest data, statistical charts and tables, supplement the text fully.

Send For Sample Pages—FREE
Showing type, methods of treatment of the subjects specimen plates of maps, colored and plain, illustrations, names of contributors and describing our

Special Discount to Those Who Subscribe Now
with our Little-at-a-Time Payment Plan

DODD, MEAD & CO.,
372 FIFTH AVENUE
NEW YORK

Name.....
Post Office.....
State.....

SEND US THIS COUPON AT ONCE FOR A COPY OF IT.

DODD, MEAD & COMPANY
New York
Please send, without cost to me, the sample pages of the New International Encyclopaedia containing descriptions, sample pages, colored illustrations, maps and information regarding discount and little-payment plan for SCIENTIFIC AMERICAN readers.