

INDEX OF INVENTIONS
For which Letters Patent of the United States were Issued for the Week Ending June 16, 1903, AND EACH BEARING THAT DATE.

Table listing inventions with their respective patent numbers and brief descriptions. Includes categories like 'Acid of aromatic aldehyde', 'Draft equalizer', 'Lathes', 'Friction Disk Drill', 'Auto Educator', 'The Sharer', 'Perfection Gas Engine Igniter', 'Gas Engine Igniters', 'Shoe Blacking', and '6 H. P. Automobile Motor'.

'Star' Foot and Power Lathes
FOR FINE, ACCURATE WORK
SENECA FALLS MFG. CO.
695 Water Street, Seneca Falls, N.Y., U. S. A.

ENGINE & FOOT MACHINE SHOP
LATHES TOOLS & SUPPLIES
SEBASTIAN LATRE CO. CINCINNATI, O.

FRICITION DISK DRILL
FOR LIGHT WORK.
Has These Great Advantages:
The speed can be instantly changed from 0 to 1600 without stopping or shifting belts.

'AUTO EDUCATOR' \$2
HOMANS' AUTOMOBILES
POPULAR EDITION.
Gasoline, Electric and Steam Automobiles thoroughly and comprehensively explained.

THE MIETZ & WEISS KEROSENE and GAS ENGINE
burns KEROSENE cheaper and safer than gasoline. Automatic, simple, reliable.

B. F. BARNES UPRIGHT DRILL.
The tool here illustrated is our 20-inch Drill, and we guarantee it to drill up to 1 inch in steel and 1 1/2 inch in cast iron.

'The Sharer'
A new foot power that can be applied to all light machinery. A kick starts the machine and an occasional kick keeps it going.

SAVE YOUR FUEL
You will find our GASOLINE Hoisting Engines a great saving over steam and a perfect economical boom where wood, coal or water are scarce and high priced.

'PERFECTION' GAS ENGINE IGNITER
Fully Guaranteed Price \$12.50
Runs in either direction. Brushes of carbon or woven wire. Commutator easily accessible from top.

POTTER'S 'SPRING' BRAKE BLOCKS
Adapts the whole length of shoe to wheel under all circumstances. Does not squeak, rattle, jump, or freeze up.

GAS ENGINE IGNITERS
LATEST TYPE. BEST MADE
For Marine, Automobile or Stationary Engines. Fully Guaranteed. Write for Circular.

SHOE BLACKING FORMULAS
Liquid and solid blacking are given in SUPPLEMENTS Nos. 1214 and 1219.

6 H. P. AUTOMOBILE MOTOR
complete with transmission and foot feed carburetor.
\$185.00
Pierce Engine Co., Racine, Wis.

POWER AIR PUMP
ADDRESS: 11 CLINTON ST. BROOKLYN, N.Y.

Table of patent numbers and descriptions for various inventions including draft equalizers, lathes, drills, motors, pumps, and other mechanical devices.

HINTS on Negative-Making
G. CRAMER DRY PLATE CO.
These plates are especially adapted for Tourists using Hand-Cameras

Offices in ST. LOUIS, MO.
New York: 32 East 10th Street
Chicago: 1211 Masonic Temple
San Francisco: 819 Market Street

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.

MATCH FACTORY.—DESCRIPTION of an English factory. SCIENTIFIC AMERICAN SUPPLEMENT 1113. Price 10cents. For sale by Munn & Co. and all newsdealers.

'CUSHMAN' CHUCKS
All styles and sizes.
Send for Catalogue.
THE CUSHMAN CHUCK CO., 189 Allyn St., Hartford, Conn.

IGNITION BATTERIES
Investigate the 'Champion Accumulator'
Perfect in all details for this work. Descriptive booklet free.
H. C. MACRAE, 315 St. Paul St., BALTIMORE, MD.

SPLITDORF SPARK COILS
25 VANDEWATER ST. N.Y.

Little Wonder TELEPHONE
FOR \$6.00
We will send 2 telephones, 200 feet of wire and all necessary staples, with full instructions how to put them up and operate.
HIPWELL MFG. CO., Allegheny, Pa.

STEEL HARDENS AND TOUGHS IRON
IMPROVES STEEL AND PREVENTS RUST
STEEL COMPANY, 405 EAST 124 STREET, NEW YORK, U. S. A.

The MEDART BOAT BUILDING MATERIALS
Bring best construction within the range of amateurs, at a small cost.
Scafts, Launches, Row Boats.
Send stamp for catalog.
FRED MEDART, 3545 DeKalb St., St. Louis, Mo.

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.
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.