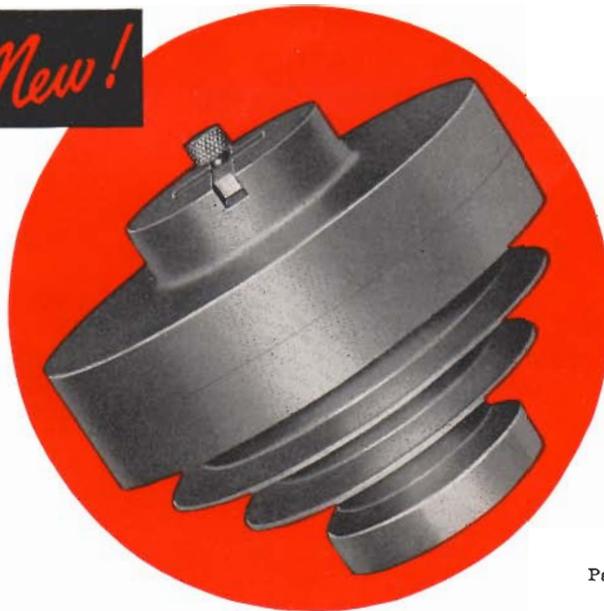


New!

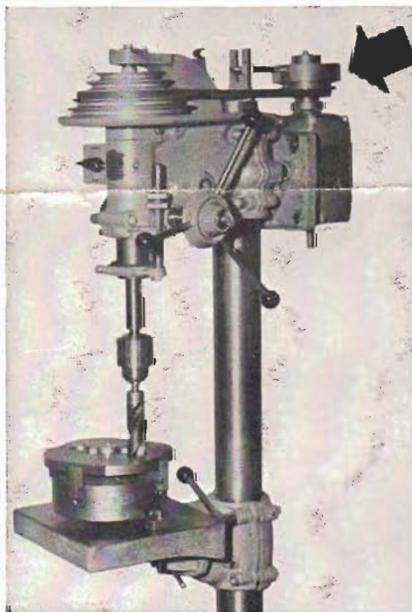


Pat. #2,856,797

INCREASE THE CAPACITY OF YOUR SMALL DRILL PRESSES

WITH THE *Pull-Gear* SPEED REDUCER

More than **DOUBLE** the capacity of your present small drill press with the new revolutionary Pull-Gear speed reducer. Reduced speeds permit the effective use of larger drills without burning or stalling motor. The low speed attainable with Pull-Gear is usually possible only with machines costing thousands of dollars. Will operate in any position on all types of machinery.



The above photo illustrates a 4½-1 unit, mounted for operation.

How It Operates

PULL-GEAR is a compact, fully-enclosed, gear-driven speed reducer. It is designed to operate efficiently on all types of drill presses and other machinery using a V-belt drive.

The speed of the pulley is automatically reduced 4½ times or 7 times, depending on the unit used, by simply turning a key at the top of the unit. This brings into play a positive gear reduction drive that works as a back gear.

The unit is ruggedly constructed to give trouble-free service and, being entirely self-contained, requires no mounting brackets. It is installed in a few minutes by simply placing it on the motor shaft and tightening a set screw.

A spindle speed range of approximately 45-3000 RPM is obtainable on standard light type drill presses depending on model Pull-Gear, type of press and speed of motor used.

A WIDE RANGE OF USES

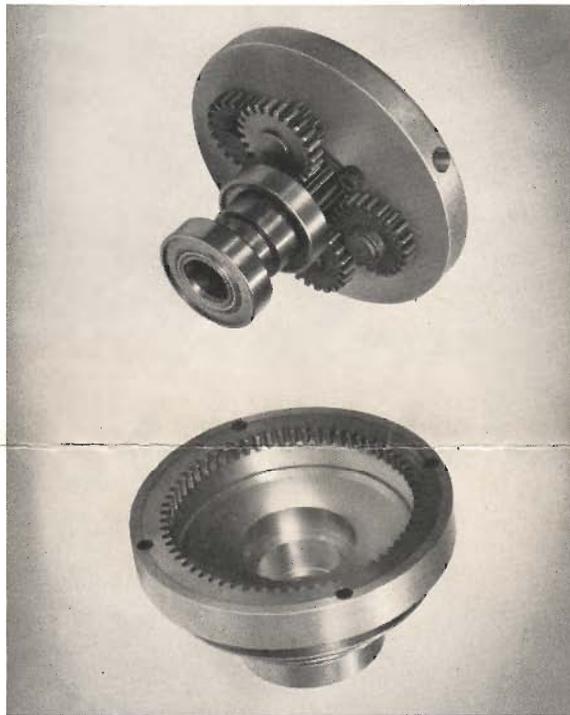
Heat treated alloy steel gears and pinion.

Standard approved ball bearings.

Bronze ring gear.

Body and Cap machined from aluminum castings.

Engineered and built to produce greater efficiency on light type machines at low cost.



Pull-Gear provides the correct speed and power on light-type drill presses to perform efficiently the following operations:

Drill up to 1 3/8" in steel.

Tap up to 3/4" in steel.
(with reversing switch).

No tapping attachment required.

Ream and bore up to 3" in steel.

Spotface, counterbore and other miscellaneous operations requiring slower speeds than normally obtainable on standard machines.

Your light type drill press will easily do the above, plus all the usual operations for which it was designed if it is equipped with a PULL-GEAR speed reducing pulley.

ECONOMICAL: Tooling costs greatly reduced by more efficient use of your drill press.

EFFICIENT: More power, greater flexibility and correct speed for the job.

Saves You Money

Pull-Gear units now working throughout the country doing jobs on light type machinery that formerly had to be done on heavier, more expensive equipment, thereby saving thousands of dollars in the purchase of new equipment and

at the same time releasing the heavier equipment for the heavier jobs. For more efficiency and productivity at lowest cost, the answer is Pull-Gear.

It is no longer necessary to pay \$3000 for a drill press just to obtain slow speeds for a light job. Pull-Gear will do the same job in many cases on a press costing less than \$300. This, of course, releases the larger presses for the heavier jobs with a resultant saving in machinery costs.

No Loss of Power

The Pull-Gear speed reducing pulley was designed to efficiently reduce the speeds on light type machinery without loss or waste of power. The simplicity of this unit is itself an outstanding feature.

In principle it operates the same as a back-gear on a lathe. Those familiar with this principle will instantly visualize the greater power and reduced speeds attainable by this type of reduction.

Durably Built

Quality bearings and gears are used throughout the entire unit. Shafts and pins are heat treated and ground. The pulley sheave is machined from an aluminum casting. All of this, plus quality workmanship, insures long trouble-free service.

CHOICE OF 3 MODELS

MODEL PG-4 $\frac{1}{2}$. Physical size, 5 $\frac{1}{8}$ " dia. x 4 $\frac{1}{2}$ " high. This model gives 4 $\frac{1}{2}$ to 1 reduction ratio with six spindle speeds and approximately 75 to 3000 RPM, depending on type of press and motor speed used.

\$69⁵⁰

MODEL PG-7. Physical size, 5 $\frac{1}{8}$ " dia. x 4 $\frac{1}{2}$ " high. This model gives 7 to 1 reduction ratio with six spindle speeds and approximately 45 to 3000 RPM, depending on type of press and motor speed used.

\$72⁰⁰

MODEL PG-7B. Same as PG-7 except that it is used with a standard "B" belt. (2 step pulley)

\$72⁰⁰

NOTE:

Reducing sleeves are required for $\frac{1}{2}$ " and $\frac{5}{8}$ " motor shafts (at prices below).

Reducing Sleeves, $\frac{3}{4}$ " to $\frac{5}{8}$ " \$1.60
 Reducing Sleeves, $\frac{3}{4}$ " to $\frac{1}{2}$ " \$1.80

F. O. B. factory. Individual orders C.O.D. less 2% . . .
 All models adaptable to $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " motor shaft sizes. (Specify model and shaft size when ordering).
 Dealers in most principal cities.

Adaptable to all types of machines such as drill presses, band saws, lathes, mills and other miscellaneous machine tools. Pull-Gear units can be quickly and easily installed on such machines as Delta, Walker Turner, Craftsman, Boice Craine and other similar machines, greatly increasing their capacity and output.

IN NATION-WIDE USE

The Pull-Gear Speed Reducer is used extensively in automotive, aircraft and industrial plants—also by tool and die shops, power and light plants, testing laboratories and branches of the Army and Navy. Below is a partial list of users:

Aero-Lite
 Allis Chalmers
Aluminum Co. of Am.
 American Watch
 Arabian-American Oil
 Avco
 Bell Telephone
 Bendix
 Bethlehem Steel
 Boeing Aircraft
 Bonneville Power Adm.
 Bulova Watch
 Burroughs Corporation
 C. B. S. Hytron
 Continental Can
 Corning Glass
 Curtiss Wright
 D. B. M. Research
 Douglas Aircraft
 Dow Chemical
 Dupont

Eastern Air Lines
 Eastman Kodak
Federal Mogul
Ford Motor
 Freed Transformer
 Gallmeyer & Livingston
 General Electric
 General Motors
 Goodyear Aircraft
 Internat'l Bus. Machines
 Kraft Foods
 Lever Bros.
 Link Aviation
 Marchant Calculators
 Minnesota University
 Mohawk Carpets
 Monsanto Chemical
 Morse Instrument
 Nash Engineering
 Ohio Rubber
 Phillips Petroleum

Princeton University
 Remington Rand
Republic Steel
Rockwell Mfg.
Rohr Aircraft
 Rotary Elec. Steel
 Sharples
 Shell Oil
 Sylvania Electric
 Toledo Scales
 United Control
 United Air Lines
 U. S. Gypsum
 U. S. Pipe
 U. S. Radium
 U. S. Steel
 Vickers
 West Bend Aluminum
 Western Electric
 Westinghouse

Akron, Ohio—Reliance Equip. & Engr. Sales Co.
Anniston, Ala.—Southern Tool & Machine Co.
Adrian, Mich.—Beal Supply Co.

Baltimore, Md.—Electric Tool & Machy. Co.
Baltimore, Md.—W. L. Reynolds Co.
Benton Harbor, Mich.—Brammal Supply Co.
Birmingham, Ala.—Moore Hadley Hardware Co.
Birmingham, Ala.—Scott Supply Co.
Boston, Mass.—Chandler & Farquhar
Bridgeport, Conn.—Brown & Stuart

Canada—A. R. Williams Machy. Co. Ltd.
Chicago, Ill.—Chicago Supply & Tool Co.
Chicago, Ill.—McMaster-Carr Supply Co.
Chicago, Ill.—AAA Saw & Tool Service & Supply Co.
Chicago, Ill.—Atlas Sales Co.
Chicago, Ill.—Pederson Bros. Tool & Supply Co.
Cincinnati, Ohio—Queen City Supply Co.
Cleveland, Ohio—Reynolds Machinery Co.
Columbus, Ohio—Osborne & Sexton Machy. Co.
Columbia, S. C.—Stier Supply Co.
Charleston, W. Va.—Wm. S. Bolden Co.

Dallas, Texas—Machinery Sales & Supply Co.
Denver, Colo.—Johnson Supply Co.
Detroit, Mich.—Waterston's
Des Moines, Iowa—Globe Machinery Co.

El Paso, Tex.—Smith Machinery & Supply Co.
Erie, Pa.—Modern Machinery Co.
Everett, Mass.—C. S. Conant

Grand Rapids, Mich.—Grand Rapids Supply Co.

Hamden, Conn.—Gilbert & Richards, Inc.
Hartford, Conn.—R. E. Morris
Hartford, Conn.—Laurel Supply Corp.
Hartford, Conn.—H & B Machinery Co.
Hillside, N. J.—Tool Specialties Company
Houston, Tex.—Rex Supply Co.

Indianapolis, Ind.—Indiana Mfrs. Supply Co.
Indianapolis, Ind.—Kenneth J. Galin Co., Inc.

Jackson, Mich.—F. P. Miller

Kalamazoo, Mich.—Robert M. Sourlie
Kalamazoo, Mich.—Henry Upjohn Co.
Kenilworth, N. J.—Stephenson Machinery Co.

Lexington, Ky.—Kentucky Supply Co.
Little Ferry, N. J.—Quad Machinery, Inc.
Long Island City, N. Y.—Midtown Mach. & Tool Co.
Long Island City, N. Y.—Travers Tool Co.
Los Angeles, Calif.—Almquist Brothers
Los Angeles, Calif.—Marshall Tool & Supply Co.
Little Rock, Ark.—Lyons Mchy. Co.

Manitowoc, Wisc.—J. J. Stangel Hardware Co.
Memphis, Tenn.—Lewis Supply Co.
Miami, Fla.—Lafayette Tool & Supply Co.
Milwaukee, Wisc.—Kel-Sir Company
Milwaukee, Wisc.—Putrow Ind. Service
Muskegon, Mich.—Factory Supply Co.
Muskogee, Okla.—Pate Industrial Supply Inc.

Newark, N. J.—Schultz & Anderson Co.
Newark, N. J.—Stevenson Machinery Co.
Newport News, Va.—Noland Co., Inc.
New York, N. Y.—Rudolf Bass
New York, N. Y.—Gray Motor & Tool Co.
New York, N. Y.—Morris Abrams Inc.
Norfolk, Va.—Henry Walke Company
Newark, N. J.—Morris Mchy. Co. Inc.

Oakland, Calif.—Delta Equipment Co.
Oklahoma City, Okla. Hart Industrial Supply Co.
Oakland, Calif.—Mechanics Tool & Supply Co.
Orlando, Fla.—Harry P. Leu Company

Passaic, N. J.—W. H. Mills & Co.
Peoria, Ill.—Couth & Heyle
Perth Amboy, N. J.—Madsen & Howell, Inc.
Philadelphia, Pa.—Delta Equipment Co.
Phila. Pa.—Industrial Supplies Co.
Pittsburgh, Pa.—Tri State Machinery Co.
Pittsburgh, Pa.—J. A. Williams Co.
Portland, Oregon—Cascade Tool Sales
Providence, R. I.—Reynolds, Inc.

Redwood City, Calif.—Riley Precision Tool Co.
Roanoke, Va.—Tidewater Supply Co.
Rochester, N. Y.—Ogden R. Adams Co., Inc.
Rockford, Ill.—Hill Tool & Supply Co.
Richmond, Va.—Industrial Supply Corp.

Saginaw, Mich.—Saginaw Tool & Supply Corp.
St. Louis, Mo.—Midwest Tool & Supply Co.
St. Louis, Mo.—Mill Supply & Machy. Co.
St. Paul, Minn.—Anderson Machine Co.
San Diego, Calif.—Acme Tool & Supply Co.
San Diego, Calif.—General Industrial Supply Co.
Sacramento, Calif.—Murray Industrial Supply Co.
San Francisco, Calif.—C. F. Bulotti Machy. Co.
San Francisco, Calif.—Miller & Stern Supply Co.
San Jose, Cal.—Industrial Tool & Supply Co.
Seattle, Wash.—Star Machinery Company
Seattle, Wash.—West Coast Machinery & Supply Co.
Seattle, Wash.—Aaronsons Hardware Co.
Spokane, Wash.—Hayden Tool Specialty Co.
Spokane, Wash.—West Coast Mchy & Supply Co.
Springfield, Mass.—Standard Ind. Supply Co.
Stamford, Conn.—Brown & Stuart
Syracuse, N. Y.—Barnes & Jordan, Inc.

Tacoma, Wash.—Washington Hardware Co.
Tulsa, Okla.—Marshall Supply & Equipment Co.

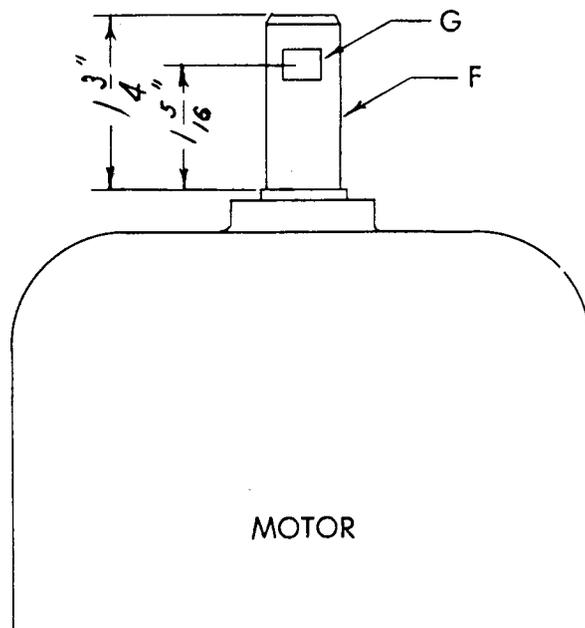
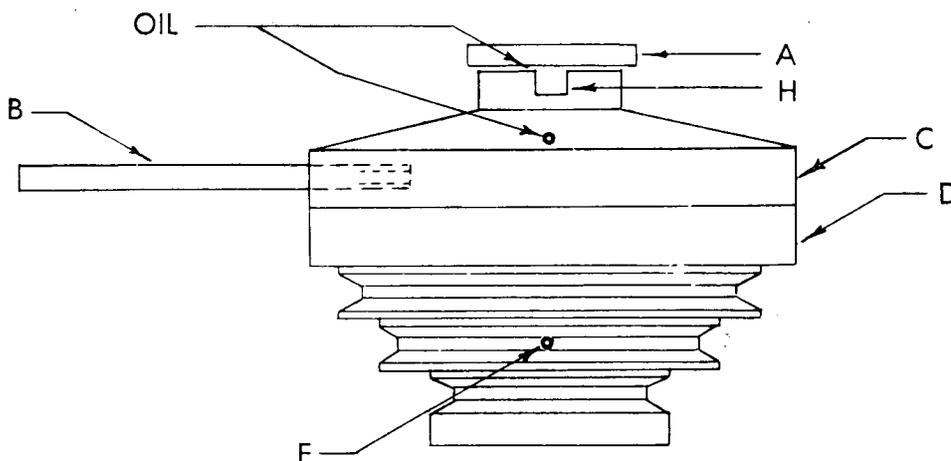
Washington, D. C.—Fries, Beall & Sharp Co.
Wichita, Kas.—Dorow Machine Tools Co.
Wichita, Kas.—L. D. Supply Co.
Worcester, Mass.—Brierly & Lombard Co., Inc.

York, Pa.—York Machinery & Supply Co.

CANADA—

Toronto, Ont.—A. R. Williams Machy. Co., Ltd.
Vancouver, B.C.—A. R. Williams Machy. Co., Ltd.
Victoria, B.C.—A. R. Williams Machy. Co., Ltd.
Winnipeg, Man.—A. R. Williams Machy. Co., Ltd.

OPERATING INSTRUCTIONS
for
PULL-GEAR
Speed Reducing Pulley



1. Check shaft "F" for length (saw off if necessary) and file flat "G" for set screw.
2. Rotate "C" and "D" until hole "E" lines up with screw in center shaft.
3. Place on motor and tighten set screw.
4. To operate at slow speeds, key "A" should be seated in small cross slot at end of shaft as shown. Shaft "B" should be inserted as shown and brought to rest against machine column. Under load, shaft "B" will tend to rotate in opposite direction of spindle. Unit should now operate at slow speed.
5. To operate at high speeds, key "A" should seat at bottom of slot "H" and shaft "B" should be removed from unit. If unit appears locked, check set screw at "E" to make sure that it is not protruding out into pulley housing.

The Pull Gear Co.

25425 Mound Road

Centerline, Michigan