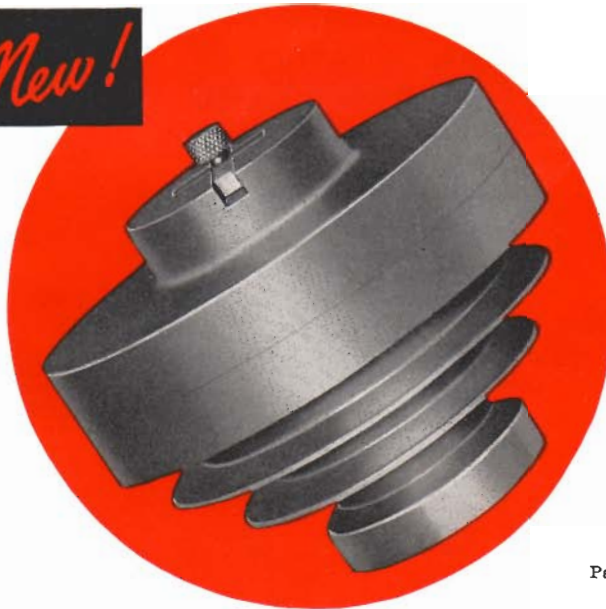


*New!*

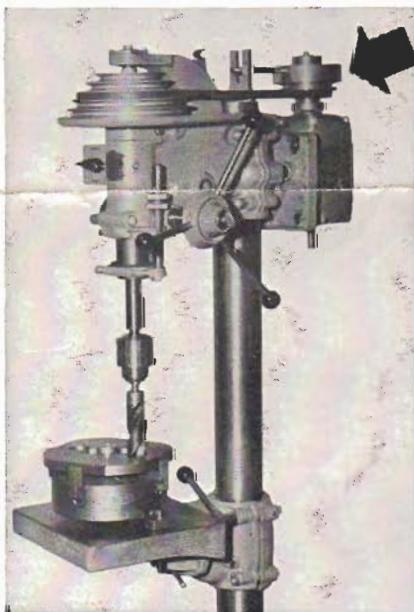


Pat. #2,856,797

## 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

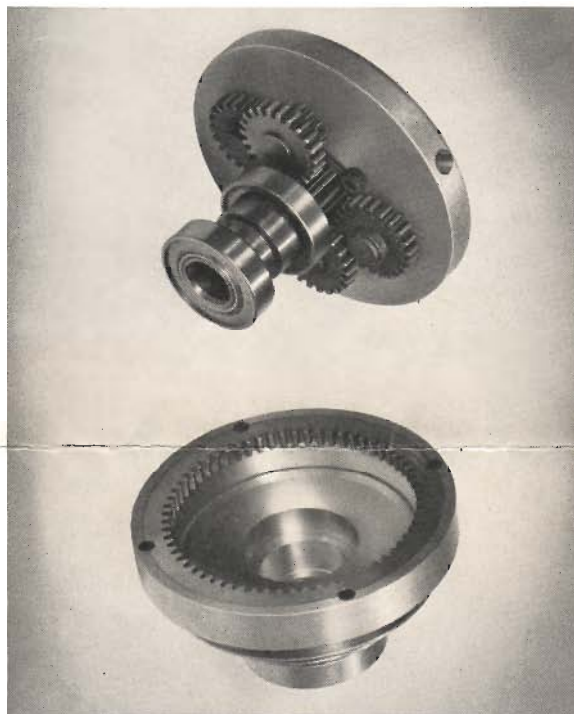
Heat treated alloy steel gears and pinion.

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-4½. Physical size, 5½" dia. x 4½" high. This model gives 4½ to 1 reduction ratio with six spindle speeds and approximately 75 to 3000 RPM, depending on type of press and motor speed used.

**\$69<sup>50</sup>**

MODEL PG-7. Physical size, 5½" dia. x 4½" 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.

**\$72<sup>00</sup>**

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

**\$72<sup>00</sup>**

## NOTE:

Reducing sleeves are required for ½" and ⅝" motor shafts (at prices below).

Reducing Sleeves, ¾" to ⅝" ..... \$1.60  
Reducing Sleeves, ¾" to ½" ..... \$1.80

F. O. B. factory. Individual orders C.O.D. less 2% . . .  
All models adaptable to ½", ⅝" and ¾" 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.

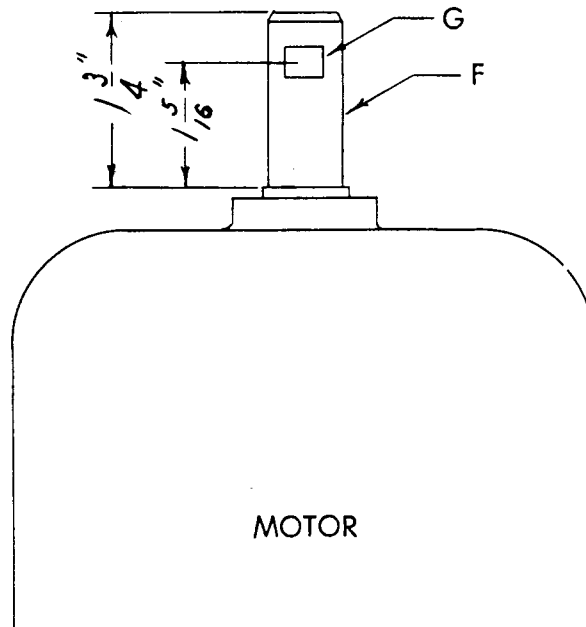
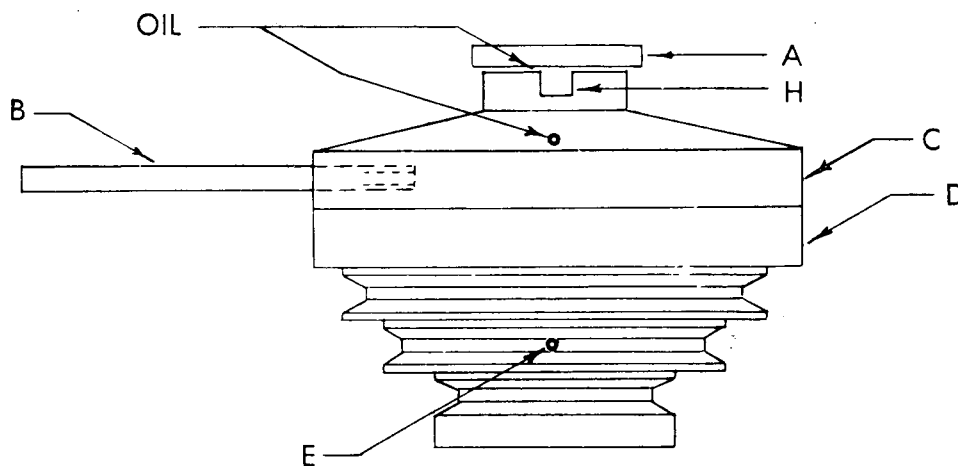
Washington, D. C.—Fries, Beall & Sharp Co.  
Wichita, Kas.—Dorow Machine Tools Co.  
Wichita, Kas.—L. D. Supply Co.  
Worcester, Mass.—Brierly & Lombard Co., Inc.

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