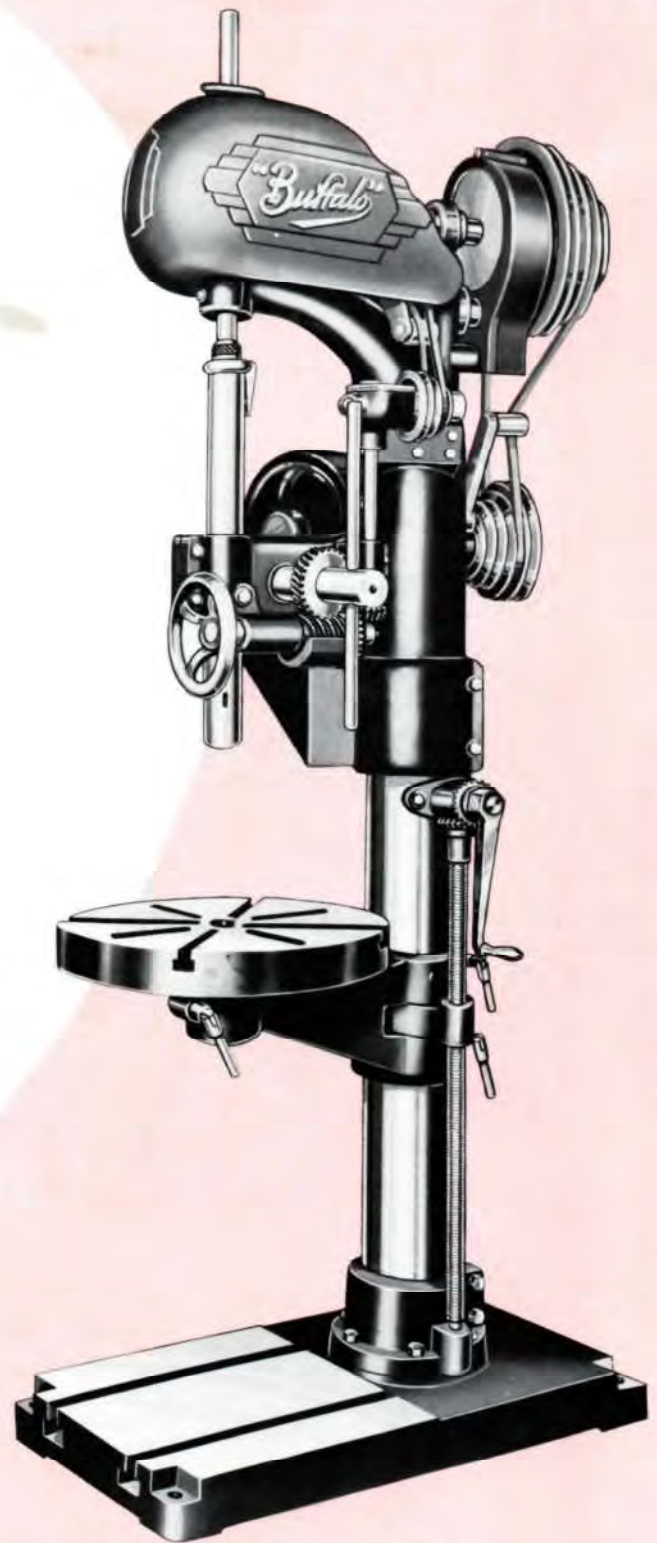


*“Buffalo”*

**No. 21**  
**Back-gearred**  
**8-speed**  
**DRILLING**  
**MACHINE**

- ★ *Eight Speeds—Three Feeds*
- ★ *Direct or Back-gearred Drive*
- ★ *Lever and Hand Wheel Feeds*



**Buffalo Forge Company, Buffalo, N. Y. 14204**

**Canadian Blower & Forge Co., Ltd., Kitchener, Ont.**



## For General Machine Shop and Maintenance Work, the No. 21 Drill Meets the Requirements of Many Shops

**B**UFFALO'S 21" Drill is a well-balanced machine with 8 speeds, 3 feeds, lever and hand wheel feeds. The feed is disengaged by an automatic trip when the drill reaches a predetermined depth. The machine can be changed instantly from direct to back gear drive. Both speed and feed drive are V-belt.

The motor drive (or tight and loose pulley drive) are mounted at the side of the machine—off the floor at a convenient height easily accessible to the operator.

The spindle has a ball thrust bearing and is accurately ground. The feed sleeve is also ground and graduated to indicate the feed travel. The crown gear is mounted in a bronze bushing. Both the crown gear and pinion are machine-cut alloy cast iron or semi-steel. The main drive shaft is of tough alloy steel and is mounted on ball bearing pillow blocks. There are no babbitted bearings to wear out.

The column is steel tubing, ground accurately to size. The table and base are accurately machined and provided with T-slot to hold the work. The table-raising screw is fitted with a hardened thrust bearing for easy operation. Both feed and speed drive are equipped with idler pulleys so V-belts can be easily changed from one step to another. The entire machine is a high class machine tool finish. The crown gear and back gear are adequately guarded. Regularly furnished with a No. 4 Morse taper spindle, it also can be furnished with No. 3 as an extra.

We recommend a 1 HP—900 RPM motor for general use.

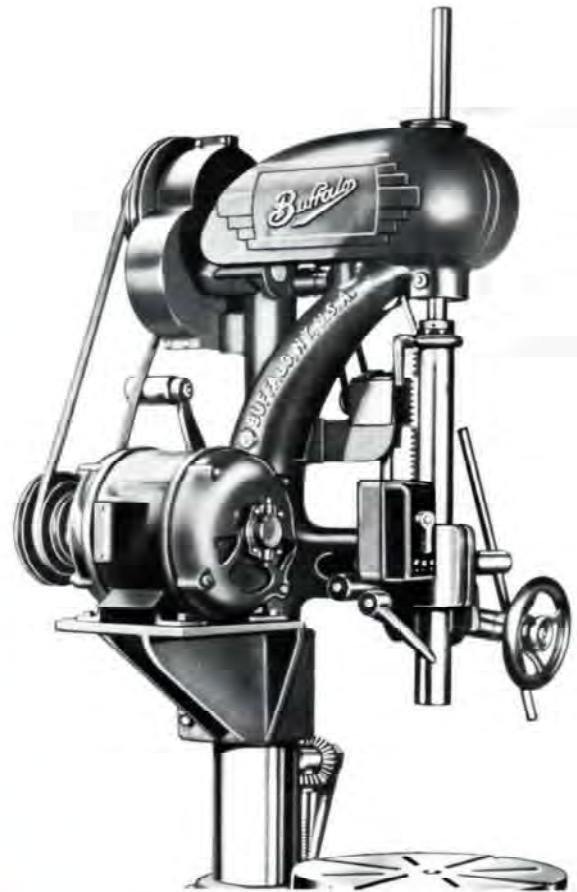
## Coolant System and Complete Belt Guards

Coolant system includes tank, pump, oil trough table and necessary piping as illustrated. Guards for drive or feed belt are provided at a nominal extra cost. When both are specified, the feed gearing guard is included.



## Reverse Tapping . . .

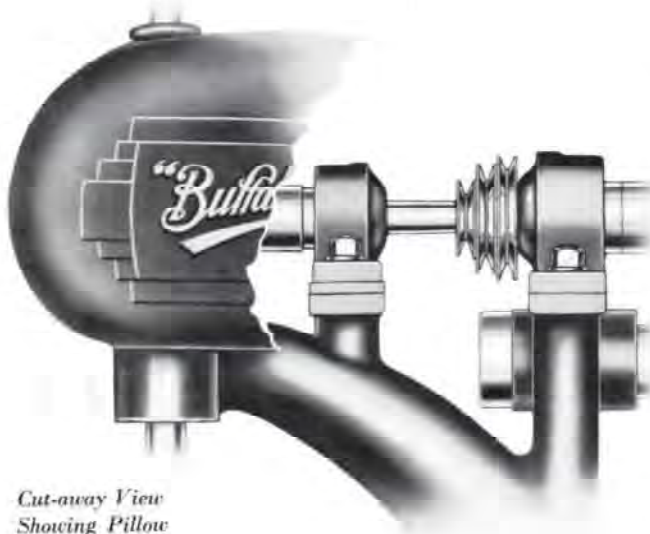
Taps  $\frac{1}{2}$ " and smaller are usually tapped with a mechanical tapping attachment. For taps  $\frac{1}{2}$ " to 1" we suggest motor reversing. A magnetic reversing control is used to reverse the motor rotation and is actuated by a lever station mounted on the spindle arm, convenient to the operator.



*Reverse Tapping with Magnetic Reversing Control and Three Position (Forward-Off-Reverse) Lever Station*

**"Buffalo"**

## Dependable Drilling Machine



*Cut-away View  
Showing Pillow  
Block Bearings*

### Drive Shaft Mounting on Ball Bearing Pillow Blocks

The drive shaft on the Buffalo No. 21 drill is made of chrome nickel alloy steel so that its diameter can be held to a size which can be mounted on ball bearing pillow blocks.

This makes for quiet trouble-free operation and eliminates the babitted bearings which are a source of trouble in machine repair. The use of these ball bearings is the biggest improvement on this type of machine in half a century.

### GENERAL SPECIFICATIONS

Height of Drill.....	86"	Spindle Speeds With 900 RPM Motor:	
Capacity, in cast iron.....	1 1/2"	Back Gear.....	34-52-85-112
Drills to center of circle.....	21"	Direct.....	160-250-390-560
Greatest Distance Spindle Nose to Table.....	26 1/2"	Spindle Speeds With 1200 RPM Motor:	
Greatest Distance Spindle Nose to Base.....	40"	Back Gear.....	45-70-115-150
Spindle Travel Without Depth Stop.....	12 1/2"	Direct.....	210-340-510-750
Diameter of Table.....	16 3/8"	Feeds—per revolution.....	.003-.006-.012
Working Surface of Base.....	16 x 16"	Floor Space.....	35 x 28"
Diameter of Column.....	5 1/2"	Net Weight, lbs.....	Approx. 1100
Spindle Diameter.....	1 1/4"	Crated Weight (less motor), lbs.....	Approx. 1200
Morse Taper of Spindle.....	Std. #4		

We reserve the right to change the design and construction of any machine of our manufacture without incurring any obligation to purchasers or users of Buffalo equipment.

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