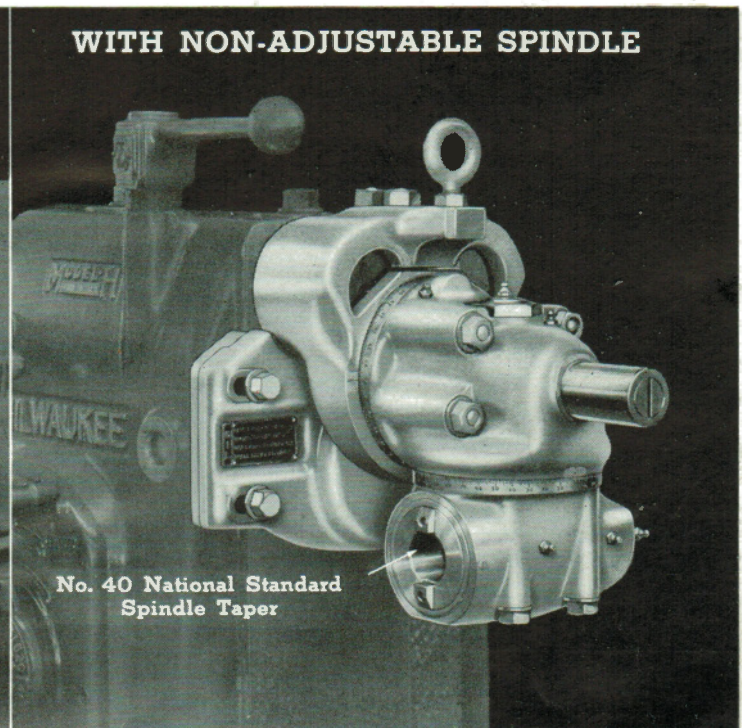
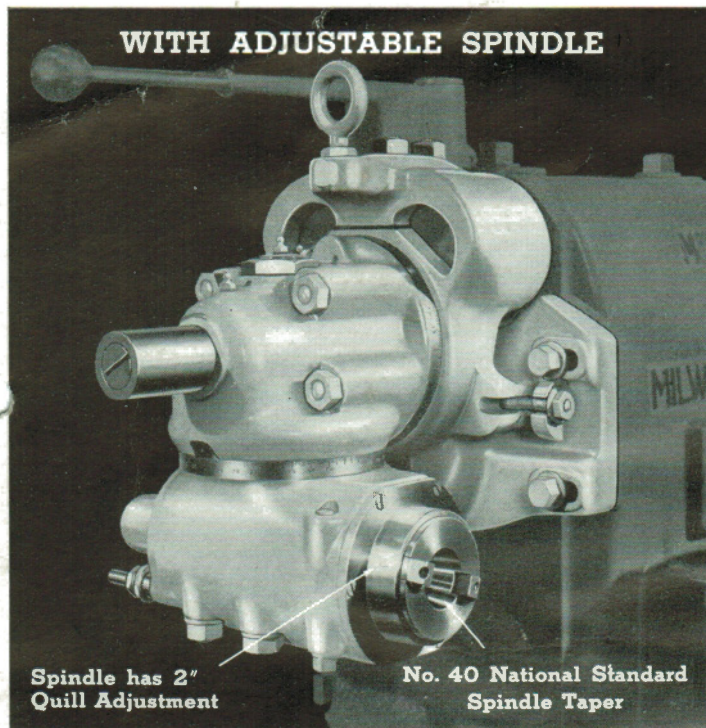


Standard HIGH SPEED ADJUSTABLE UNIVERSAL MILLING ATTACHMENT



For Models H, KM, K and CSM Horizontal Kearney & Trecker Milling Machines

The versatility of Standard High Speed Adjustable Universal Milling Attachments adapts them to a wide variety of uses in tool and die shops and for general manufacturing. They have many applications for milling on dies, metal patterns, templates, T-slots, dovetails and other milling operations. When used in connection with a rotary table, circular milling operations can be performed. When used with a dividing head with lead attachment spiral milling operations can be performed.

The attachment is provided with anti-friction bearings, and consists of two units — a drive bracket and a spindle carrying head. The drive bracket is gibbed to the column of the milling machine. The gibs have side adjustment to permit removal of the drive bracket from the column without completely removing the gibs and screws.

The spindle carrying head is composed of two swiveling units and is carried on the double overarms of the milling machine. The swiveling units are each graduated and capable of swiveling through 360 degrees. The attachment is available in two styles — with or without and an adjustable spindle. The latter has 2" of hand movement.

Power is transmitted from the main spindle of the

machine by helical gears in the drive bracket through a spline shaft to the spiral bevel drive gears in the spindle carrying head of attachment.

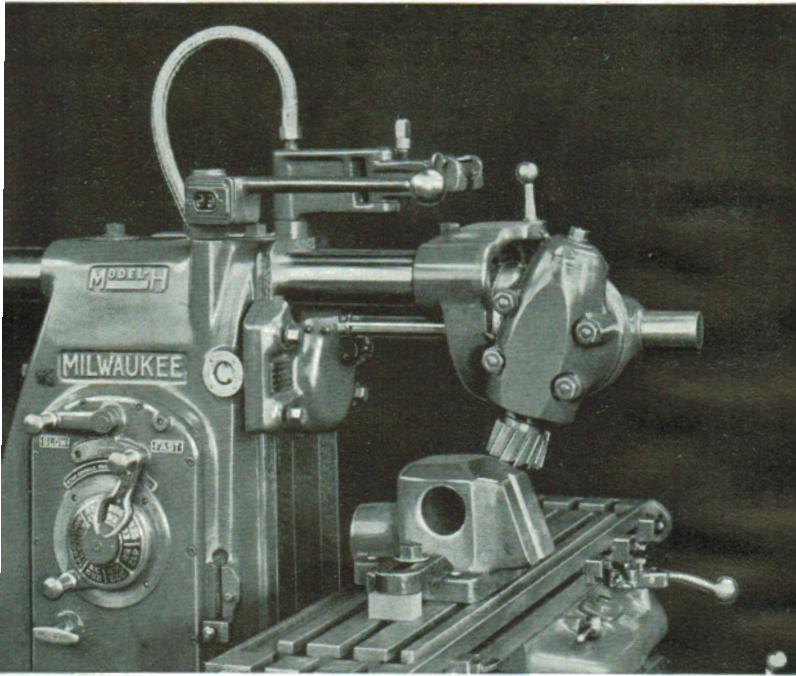
The spindle carrying head is provided with 10" of cross adjustment by lateral movement of the double overarms. Model 2H and larger horizontal Kearney & Trecker Milling Machines are regularly equipped with pilot wheel for lateral adjustment of the double overarms. Those machines not regularly equipped with pilot wheel can be furnished with this mechanism at an extra price.

The spindle of the attachment has No. 40 National Standard taper hole, $3\frac{1}{2}$ " per foot taper, and is mounted on taper roller bearings. It is designed for face milling cutters and shell end mills up to 4" diameter which are carried on Style C arbors in the taper hole. Short Style B arbors can be used. End milling cutters and other tools with taper shanks can be applied with suitable adapters. Spindle speeds up to 2500 rpm are available, depending upon the speed range of the machine used with the attachment.

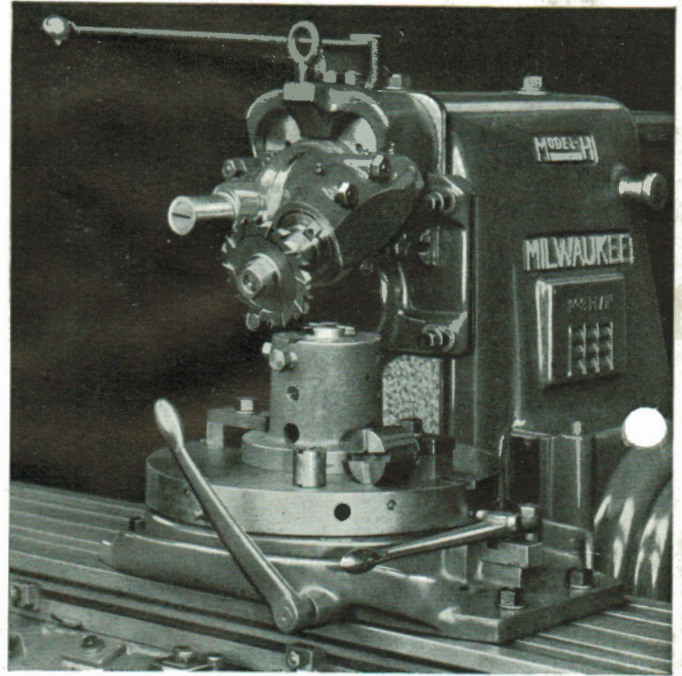
An attachment crane and "parking" bracket unit which facilitates transferring the attachment from working position at front to storage position at side of machine or vice-versa can be furnished if desired.

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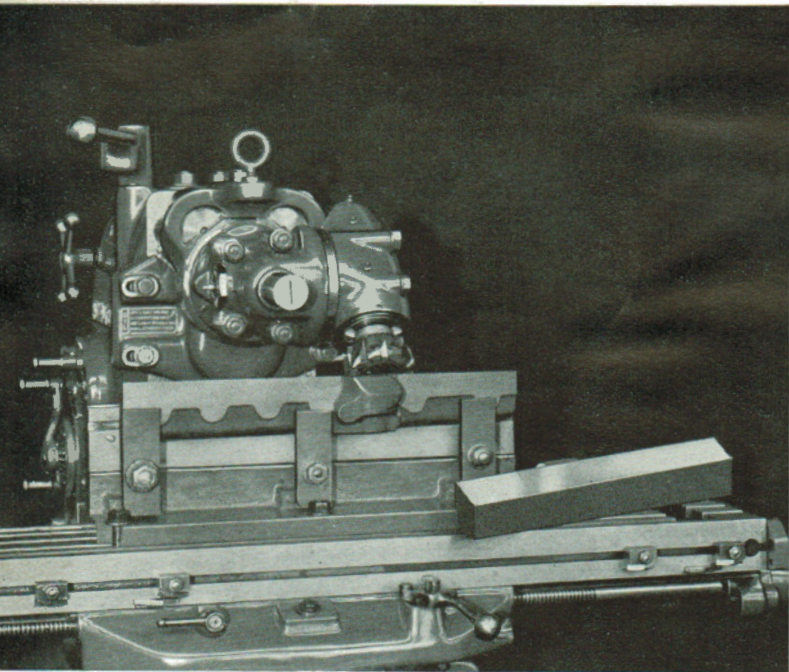
"A Few Applications that Demonstrate"



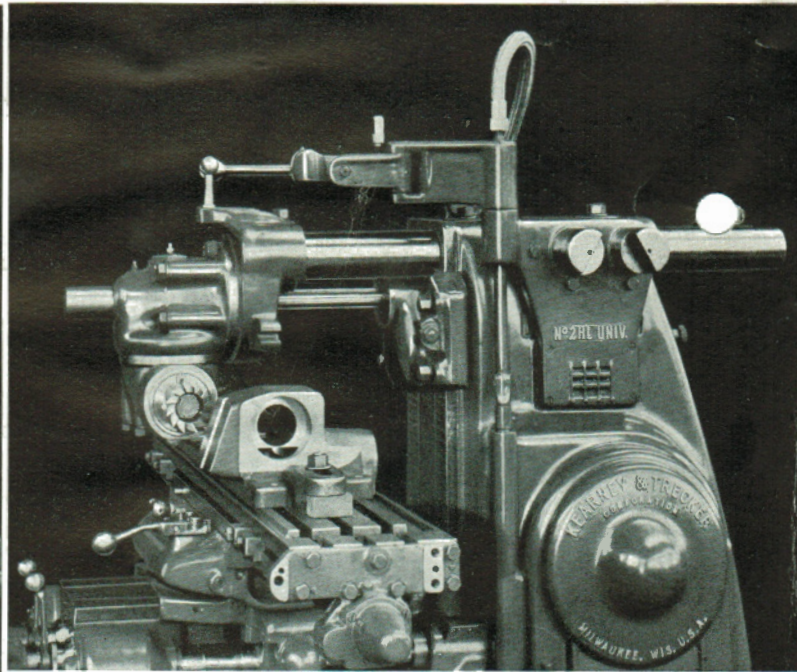
The flexibility of this attachment permits a number of operations without disturbing the original setting of the workpiece. This not only makes it convenient but economical as well.



Milling angular slots in a coupling using a formed cutter. Quick, accurate indexing is accomplished with a Plain Indexing Table having four stations. Tables can be ordered with 2, 4 or 8 stations.



Finish milling an angle of a gib bracket with a 4" Tungsten Carbide face milling cutter, mounted on a style "C" arbor. The arbor is locked securely into the spindle taper with the draw-in rod.

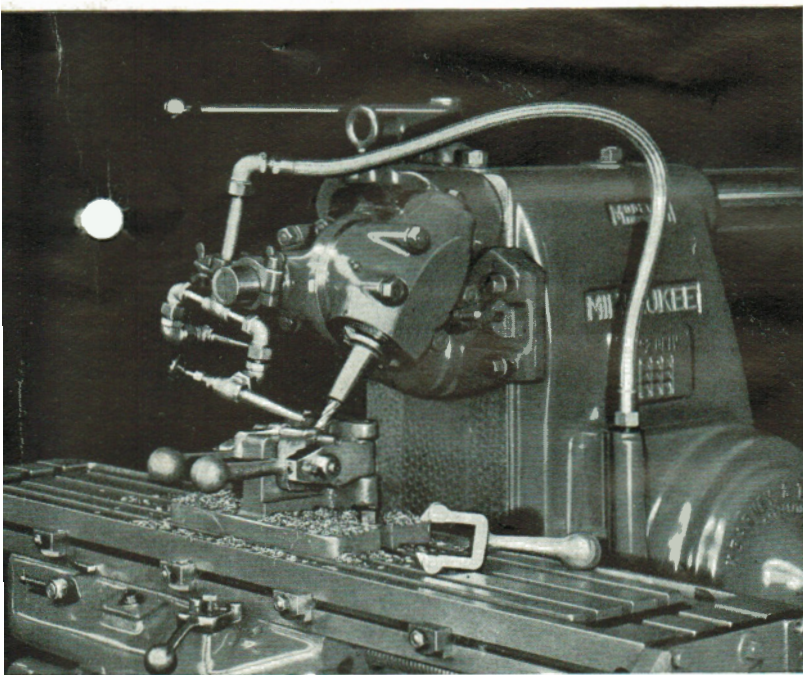


The head mounted on overarms but disconnected from the crane and the drive bracket, thus permitting the correct lateral adjustment to suit the operation which here is a face milling job.

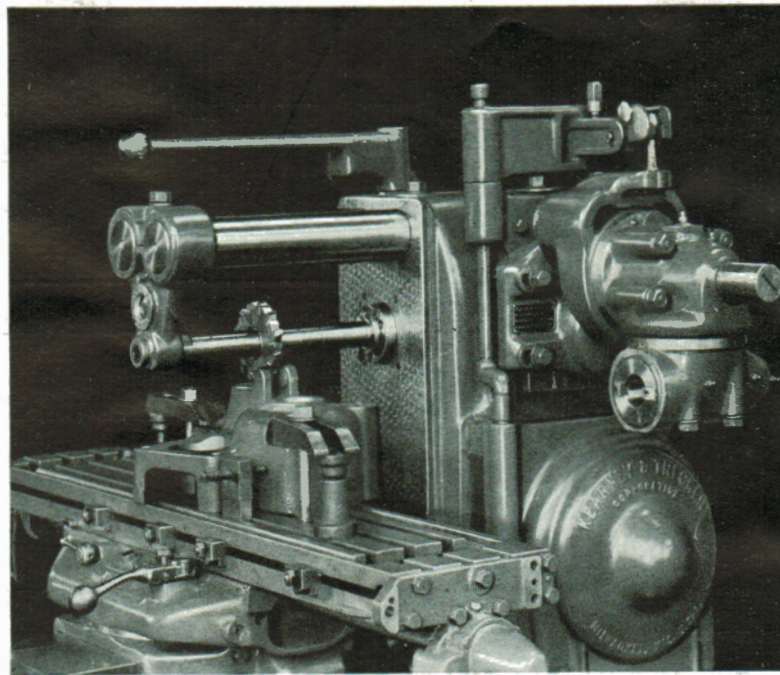
te the Versatility of this Attachment''

IMPORTANT FEATURES

1. All shafts are multiple splined, heat treated and ground.
2. Heat treated helical drive gears transmit the power from the milling machine spindle to the head.
3. Spiral bevel gears within the head.
4. The bearings in the drive bracket, and the head are lubricated with Sovarex No. 1 grease or equivalent by a grease gun through the two pressure fittings at left side of the bracket. One grease gun and one pound of grease are furnished with the attachment.
5. A swiveling coolant bracket is mounted on the front of the head to carry the coolant distributor.
6. The head and drive bracket can be locked together permitting the entire unit to be applied to the machine or removed as one piece.
7. An eye bolt screwed into the top bracket of the head facilitates handling when the machine is not equipped with a crane attachment.
8. When this attachment is furnished for a Kearney & Trecker Milling Machine equipped with the crane and parking attachment, the top bracket of the head is equipped with a ball joint stud.
9. The spindle nose is equipped with driving keys, providing a positive drive for collets and arbors.
10. Anti-friction ball and roller bearings are used throughout the attachment.



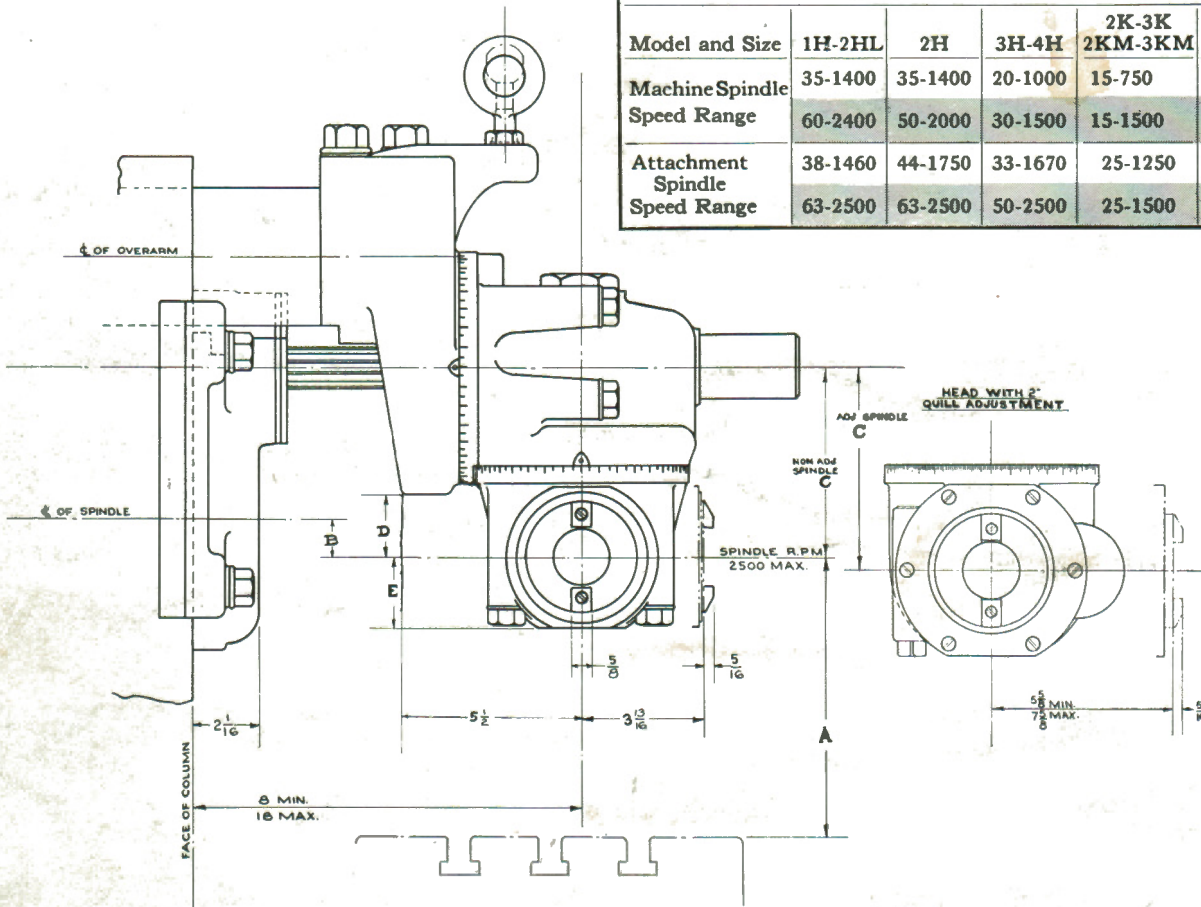
Milling an angle on a table directional lever, with a spiral end mill cutter carried by a reducing collet. The standard machine coolant nozzles are mounted securely on the clamping stud.



Here the attachment is shown in its parking position securely held by the crane. In this position it is instantly available when needed, thus aiding the operator to improve his production time.

DIMENSIONS and SPECIFICATIONS

SPINDLE SPEED RANGES						
Model and Size	1H-2HL	2H	3H-4H	2K-3K 2KM-3KM	4K-5H	20-30-50 C.S.M.
Machine Spindle	35-1400	35-1400	20-1000	15-750	13-1300	50-1250
Speed Range	60-2400	50-2000	30-1500	15-1500		
Attachment Spindle	38-1460	44-1750	33-1670	25-1250	25-2500	96-2400
Speed Range	63-2500	63-2500	50-2500	25-1500		



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ZURICH

Machine Model and Size	NON-ADJUSTABLE SPINDLE						ADJUSTABLE SPINDLE						Wgt. (Approx.) Lbs.		
	A Plain	A Universal	B Plain and Universal	C	D	E	Code Word	A Plain	A Universal	B Plain and Universal	C	D		E	Code Word
1H-2HL.....	13 ³ / ₈ "	12 ³ / ₈ "	2 ⁷ / ₈ "				HELOW	12 ¹⁵ / ₁₆ "	11 ¹⁵ / ₁₆ "	3 ⁵ / ₁₆ "				HOXER	160
2H.....	14 ⁷ / ₁₆ "	13 ³ / ₁₆ "	2 ¹³ / ₁₆ "				HELZY	14	12 ³ / ₄ "	3 ¹ / ₄ "				HOXAT	165
3H.....	15 ⁷ / ₈ "	14 ¹ / ₂ "	1 ⁵ / ₃₂ "				HELAX	15 ⁷ / ₁₆ "	14 ¹ / ₁₆ "	1 ¹⁹ / ₃₂ "				HOXEM	180
4H.....	16 ¹⁵ / ₁₆ "	15 ⁵ / ₁₆ "	1 ⁵ / ₃₂ "	5 ¹³ / ₁₆ "	1 ¹⁵ / ₁₆ "	2 ³ / ₁₆ "	HELER	16 ¹ / ₂ "	14 ⁷ / ₈ "	1 ¹⁹ / ₃₂ "	6 ¹ / ₄ "	2 ³ / ₈ "	2 ⁵ / ₈ "	HOXUS	200
2K-2KM-20CSM	15 ⁷ / ₈ "	14 ¹ / ₂ "	1 ⁵ / ₃₂ "				HIZIM	15 ⁷ / ₁₆ "	14 ¹ / ₁₆ "	1 ¹⁹ / ₃₂ "				HOXXY	180
3K-3KM-30CSM	16 ⁵ / ₁₆ "	15 ⁵ / ₁₆ "	1 ⁵ / ₃₂ "				HIZLE	15 ⁷ / ₈ "	14 ⁷ / ₈ "	1 ¹⁹ / ₃₂ "				HOXON	200
4K-5H-50CSM	19 ¹ / ₄ "	17 ³ / ₈ "	1 ¹ / ₁₆ "				HYANT	18 ¹³ / ₁₆ "	16 ¹⁵ / ₁₆ "	1 ⁵ / ₃₂ "				HOXAY	230

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