

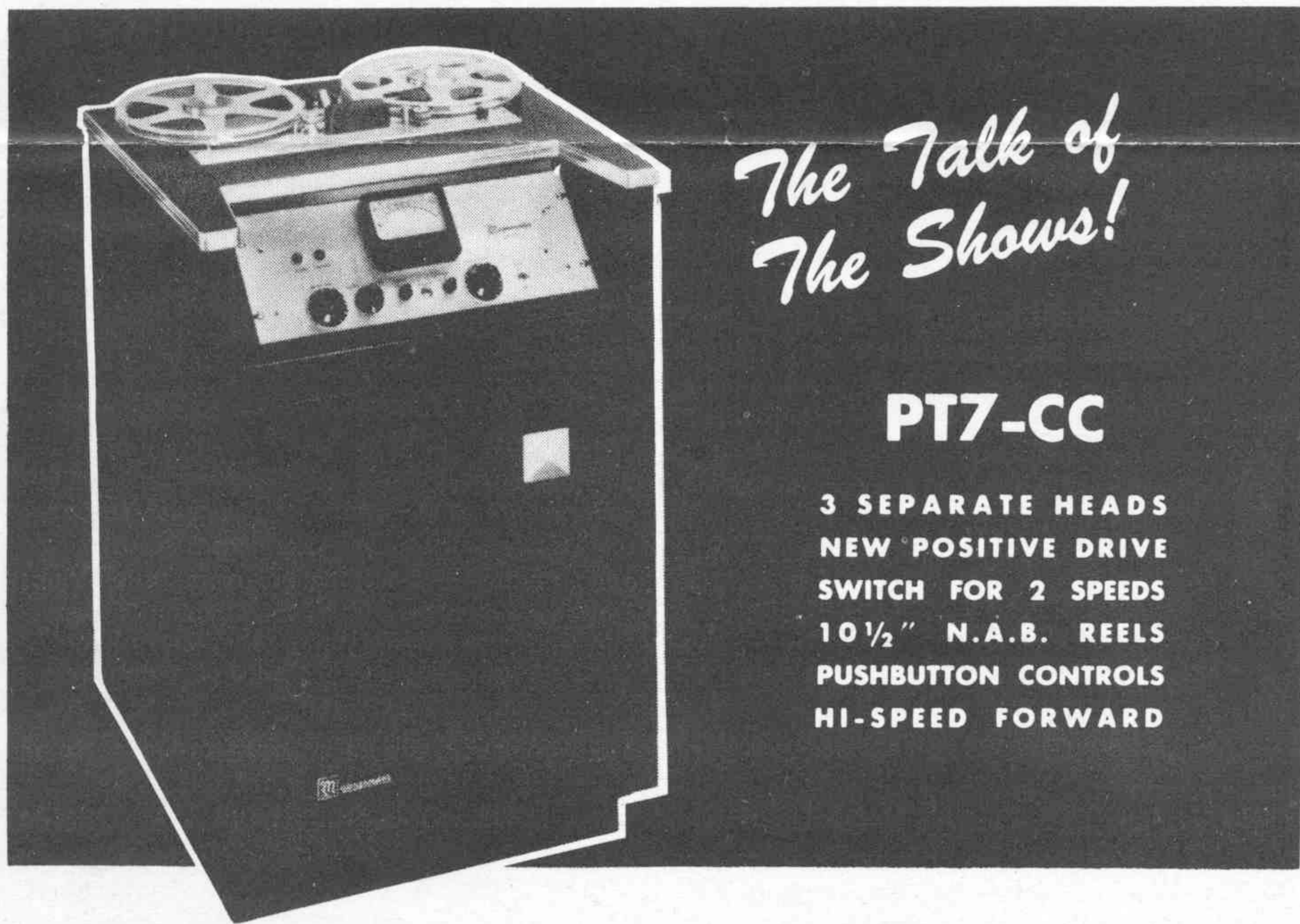
Magnecord Inc

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MARCH-APRIL 1950



*The Talk of
The Shows!*

PT7-CC

- 3 SEPARATE HEADS
- NEW POSITIVE DRIVE
- SWITCH FOR 2 SPEEDS
- 10 1/2" N.A.B. REELS
- PUSHBUTTON CONTROLS
- HI-SPEED FORWARD

THE NEW MAGNECORDER CONSOLE

Outstanding Value Makes Bow at IRE and NAB Shows!

Shown for the first time at the IRE Show in New York on March 6, the new Magnecord line now offers one of the most complete and unbelievably low-priced CONSOLE tape recorders on the market today! Although the complete PT7-CC Console sells for only \$950.00, it offers more features and flexibility than can be found in recorders costing up to twice as much.

Using the new PT7-A basic recorder mechanism, this new Console model is extremely versatile since the same PT7-A mechanism can also be used as a portable unit or for rack mounting in the studio. By combining the recorder mechanism with various amplifiers in the PT7 line, a complete tape recorder can be obtained to suit every need and purpose.

The PT7-A recorder mechanism has 3 heads. Contained in a single housing, there is a separate Erase, Record and Playback head . . . the latter of which can be used for

monitoring from the tape. The heads are alignable and can be individually replaced.

Another feature of the PT7-A is a new 2-speed hysteresis synchronous motor that changes tape speeds from 15" per sec. to 7 1/2" per sec. by the turn of a switch on the control panel. The capstan on this new machine is driven by a new positive drive which uses a flexible gear coupling instead of the usual puck idlers, belts or gear systems. This new approach to speed reduction completely eliminates slippage and the resultant timing errors. Only Magnecord uses this new non-slip, non-friction speed reducer system.

Additionally, the PT7-A permits the use of 10 1/2" NAB reels on Console, Rack and even Portable units. This gives you twice the tape capacity previously offered . . . up to one hour on a single reel at 7 1/2" per sec.

The Forward . . . Stop . . . and Rewind operations are pushbutton controlled and can

(Continued on back page)

STOLEN MAGNECORDER ABANDONED IN CREEK --- STILL OPERATES!

Last month we featured an article which told of Magnecord equipment operating dependably in the heat, dust and desert sands of Timbuktu. Now, as a sequel, here's a Magnecord that was stolen and later abandoned in a creek on the Tennessee countryside. Sounds "all wet" we know—and believe us, it was for weeks!

We're proud of the story Harold Fee of Chemcity Electric Co., Knoxville, Tenn. wrote us and, being opportunists, would like you to hear it . . . we know it's not likely to happen again!

Ten weeks ago, while in service with a local radio station, a Magnecord PT6-A and PT6-J disappeared from the premises. Not even diligent police work, personal sleuthing or posted rewards were able to solve the case of "The Missing Magnecord."

Last week, over two months later, some kids were playing near a culvert in the country 15 miles from Knoxville. One of the boys spotted something shiny in the creek and there it was . . . The "Missing Magnecord" . . . water-logged and mud spattered!

The boys notified the police and the unit was soon returned to its rightful owners. Since we don't recommend this treatment for Magne-corders we can't say it was in perfect working order . . . but little had to be done to revitalize its well-soaked workings.

It was returned to our Chicago plant for servicing after it had been thoroughly dried out. Although apparently exposed to water and winter elements for weeks, the only replacement required was one output transformer, one copper oxide rectifier and the case. Even the motor was salvageable and after reconditioning worked like new!

Today the Magnecord is back in service. Here's a real example of dependability and ruggedness. Imagine—it might even record under water! If you are acquainted with any of those fellows who write under water with ball-point pens, let us know. Might be a new market for magnetic recorders.

WORLD'S LARGEST AND OLDEST MANUFACTURERS OF PROFESSIONAL MAGNETIC RECORDERS

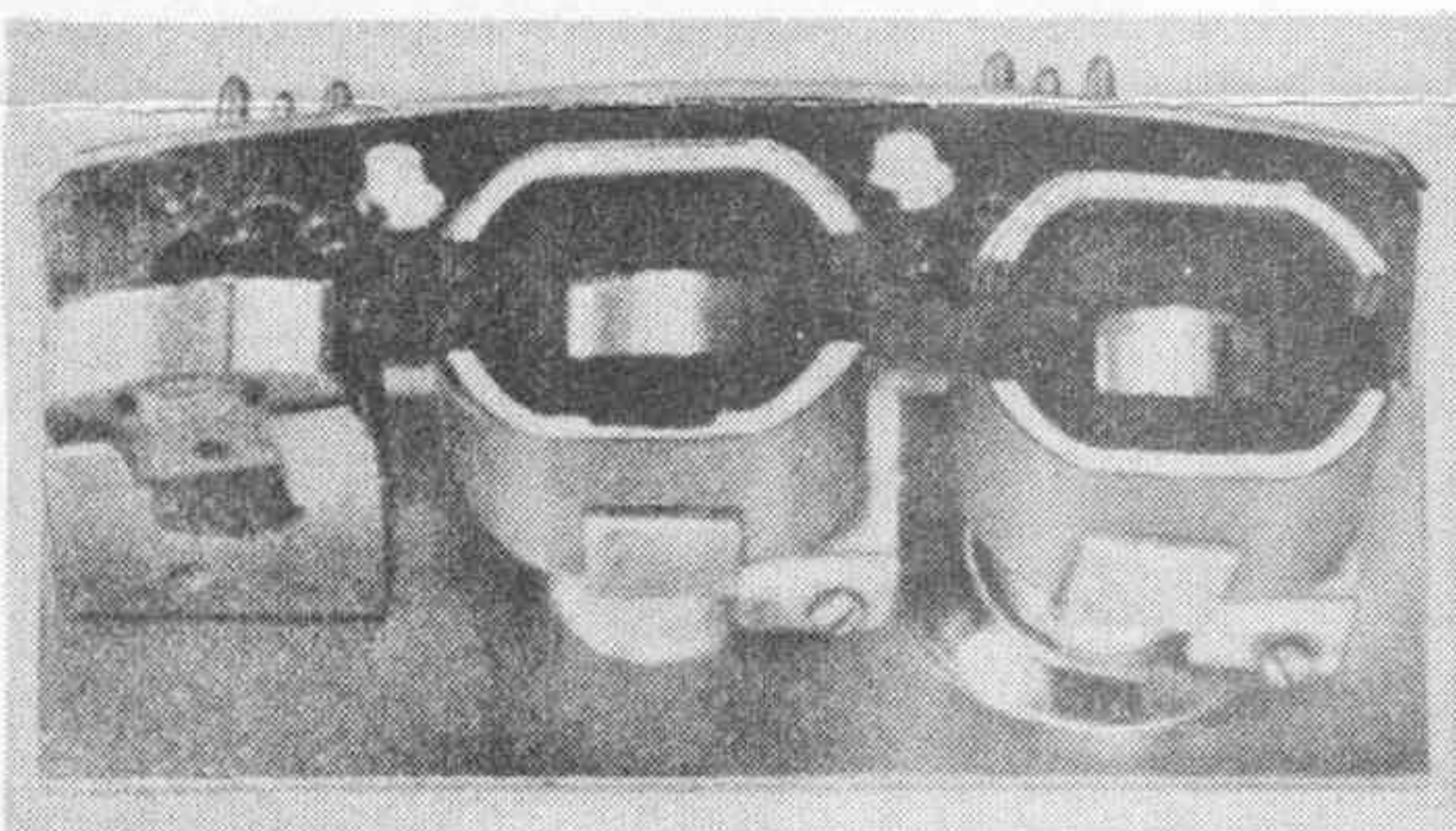
still work fine too! - all blobs in line - still work fine too! - still work fine too! - still work fine too! - still work fine too!

NOW! THREE HEADS FOR YOUR MAGNECORDER

New Conversion Kit to Monitor from Tape on PT6-A

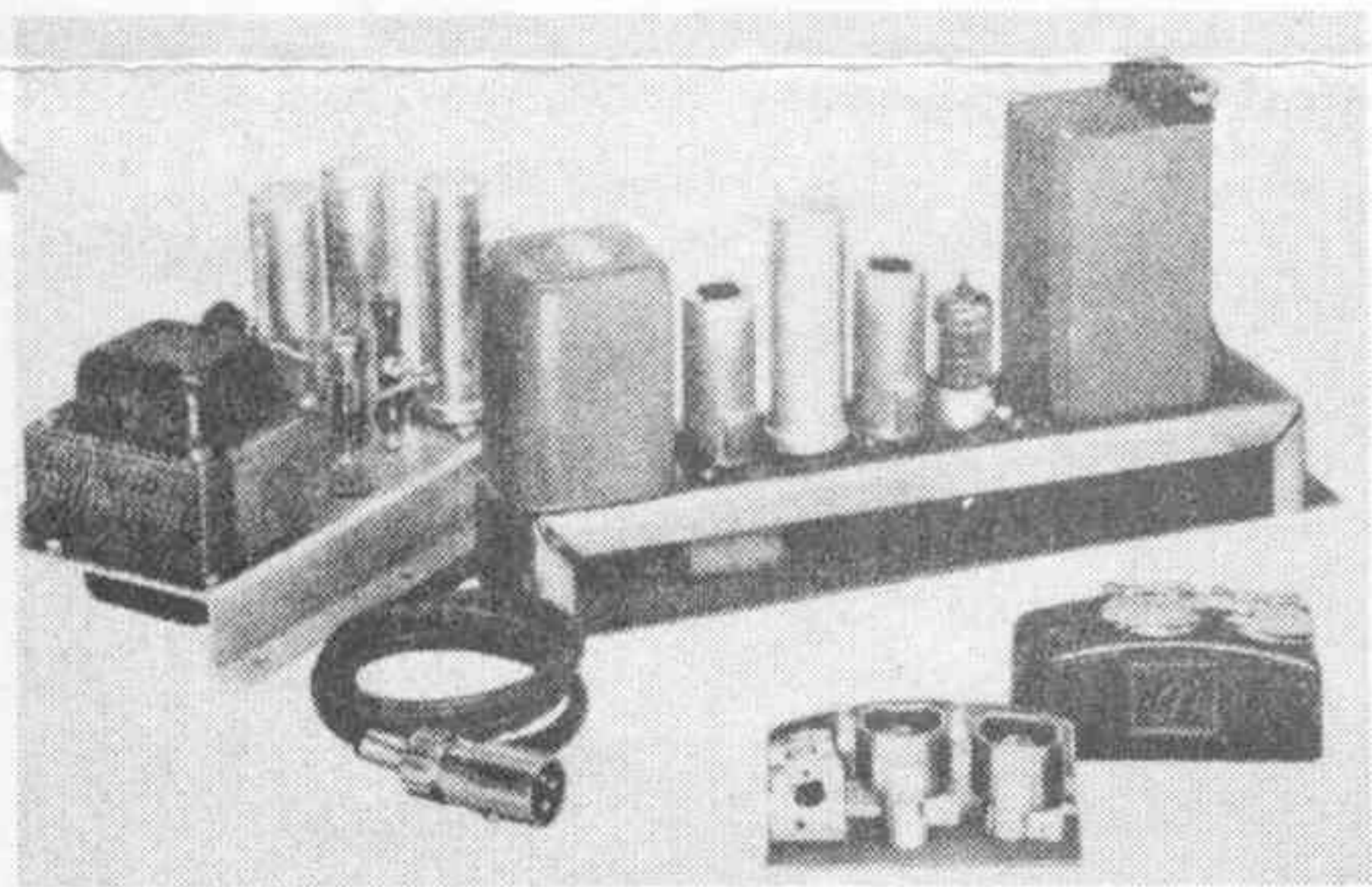
In response to the demand for 3 heads on PT6 Magnecorders now in the field, a low-cost conversion kit is now available!

An outstanding success since its announcement at the IRE and N.A.B. shows, the new PT7-A has brought about this additional development for your present Magnecorder equipment. Proud of their reputation not to obsolete present equipment when developing new lines or models, Magnecord now offers you a complete conversion kit that will enable you to install 3 heads on your PT6-A so that you can monitor from the tape while recording.



*These
my idea*

This new kit, featuring THREE HEADS, contained in a single housing, plugs into the same 2 receptacles provided for the present two heads on your Magnecorder PT6-A. The heads within the plug-in unit are separately alignable and can be individually replaced as required. There is a separate head for Record . . . Erase . . . and Playback so that you can monitor from the tape while recording. Extra care has been taken to keep cross-talk and hum to a minimum through the use of triple shielding of the record and playback heads. This new head unit is the same that is installed in the PT7 series Magnecorders.

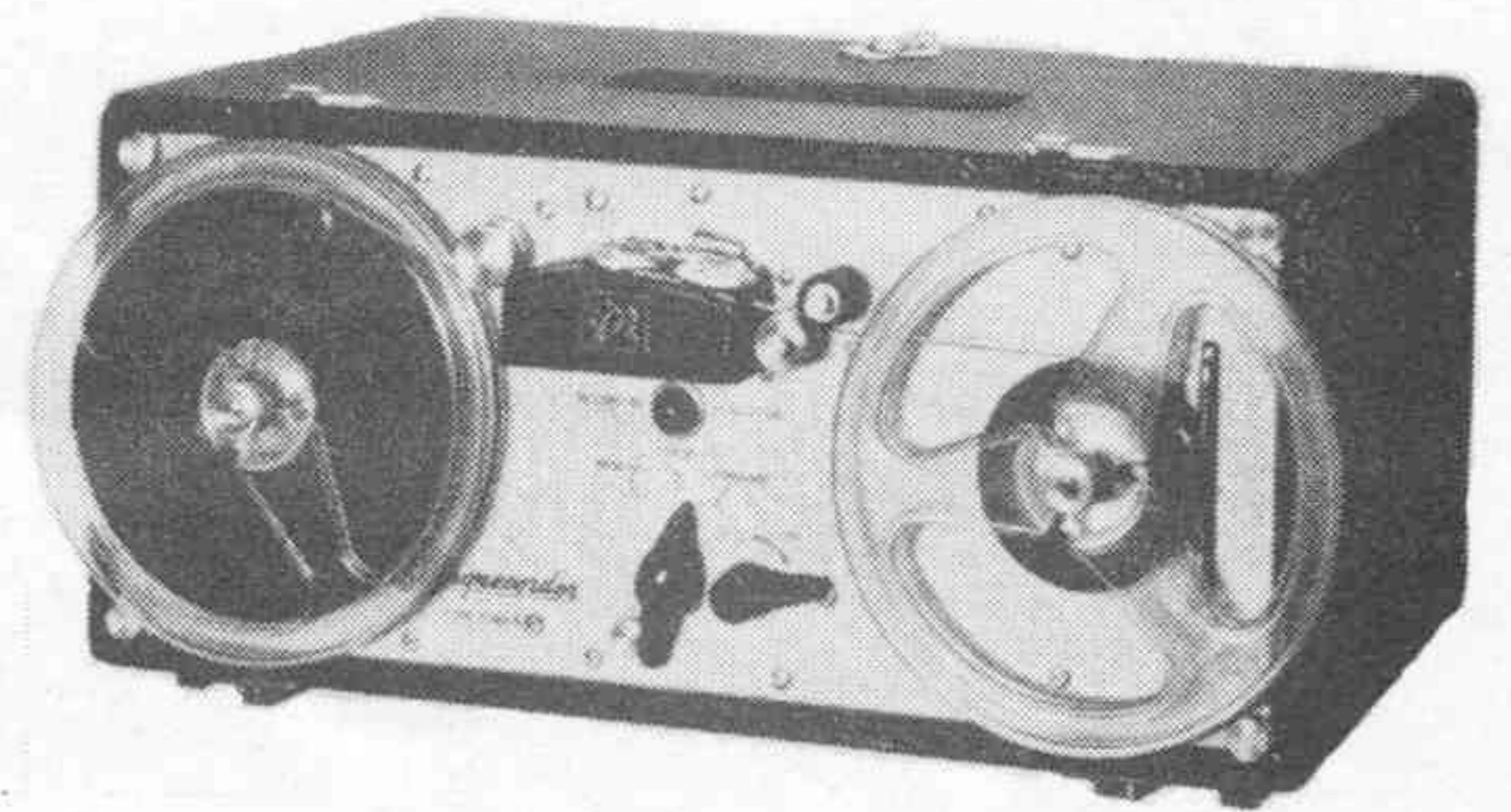


With the 3-Head plug-in unit, the kit also contains a small line and headphone output amplifier for monitoring from the tape. This amplifier and power supply mounts inside the portable case of your PT6-A or if your present equipment is rack mounted it may be installed on a separate rack strip.

Because there are no changes required in the wiring of your PT6-A or its amplifier, you can still use the playback amplifier on your Magnecorder PT6-J or PT6-P. Since the center head of the new 3-head unit is still a combination record-playback head you can play back recordings through either the record or the monitor head. However, all monitoring is accomplished by the 3rd head (at right) and the associated kit amplifier has an output of +12 dbm from a fully modulated tape.

Low in cost, the new 101 Conversion Kit contains everything you need for change-over to 3-head monitoring operation. The complete kit, including the head assembly, the amplifier, and the power supply is available from your local Magnecord distributor. It was officially previewed at the N.A.B. Show at the Stevens Hotel on April 12 in exhibit room 535A.

If you have put off buying a new PT6 Magnecorder because you require 3 heads for monitoring, the PT6 is now available with these new features. It has been designated as the PT63 series Magnecorder and is shipped complete with the 3-head unit installed. In addition, a new PT63-J10 amplifier has now been completed for use with the PT63-A. This fine new portable Magnecorder amplifier, which can double as a rack mount amplifier, has many features found in the PT7 amplifiers — Yet it costs only slightly more than the present PT6 series.



PT63-A MAGNECORDER 3 Heads to Monitor from Tape

A third new addition to the Magnecorder line is the new PT63-A. This new magnetic tape recorder hits the happy medium between the PT6 and the PT7 which was introduced at the recent IRE show in New York.

Employing all the fine features of the PT6 — world's most widely used professional magnetic recorder, the new PT63-A now offers 3 separate heads . . . one for erase . . . one for record . . . and a third for playback or monitoring from the tape. The three heads are contained within a single housing and both the record and the playback head are individually triple-shielded. This same head unit is featured on the new PT7 series of Magnecorders.

A new amplifier has also been designed for use with the PT63-A. Designated as the PT63-J10, it contains separate record and playback amplifiers. Zero-level input and +8 db output are available from Cannon receptacles. There is also a 10 watt audio amplifier with provisions for an external speaker, that can be used for playback or to monitor from the tape. Like the PT6-J, the new PT63-J10 accommodates one low impedance microphone unless a separate multi-channel mixer is used.

Both new models were officially shown for the first time at the N.A.B. show at the Stevens Hotel in Chicago on April 12.

JOHNNY GREEN'S HARMONY HOUSE



Mr. Johnny Green, popular composer, gives his Magnecorder the most prominent spot in his richly-appointed music room. His home . . . "Harmony House" . . . was featured recently in the Los Angeles Examiner and is located in Cheviot Hills, California. For fine high fidelity recordings and reproduction, Green has selected the Magnecorder PT6 as a valuable aid to his work. Installed with an electrical control system, Green is able to record various AM-FM radio programs even when away from home for the day. It was installed by Valentino Electronics of Los Angeles, California, specialists in custom-built sound installations.



SPEED REDUCER SYSTEMS FOR MAGNETIC TAPE RECORDERS

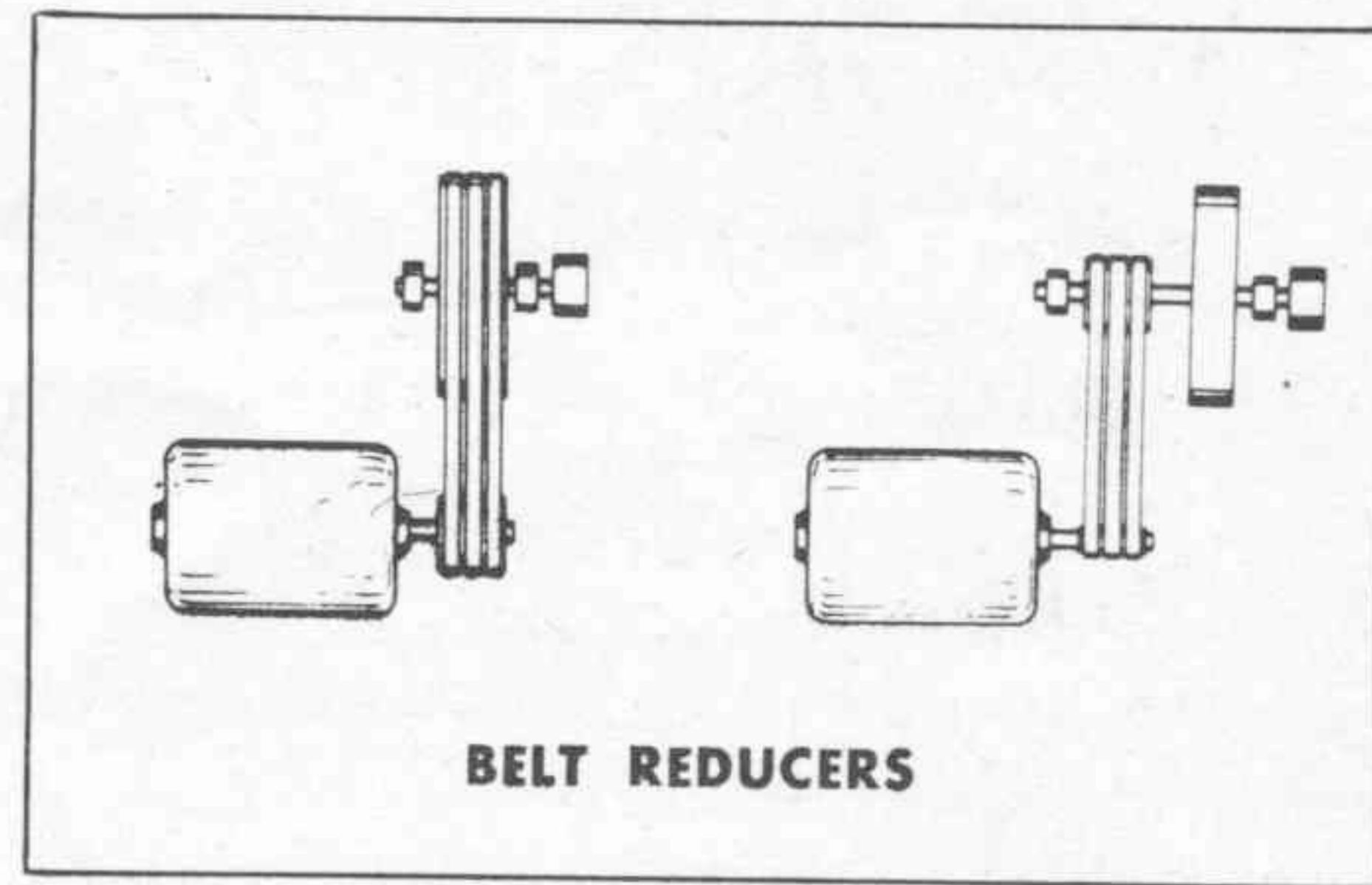
As discussed in our last issue, capstans, when direct-driven from the motor shaft, must of necessity be small in diameter for the NAB tape speeds. However, as these diameters become smaller, capstan eccentricities increase proportionally, due to manufacturing limitations. This indicated the necessity of making the capstan larger in diameter to reduce the effect of these eccentricities. When the capstan is made larger, a speed reducer must be employed between motor and capstan to provide the proper tape speed.

There are three main classes of speed reducers used in all types of recording equipment. They are (a) gear reducers, (b) intermediate idler rollers, and (c) belt drives. Each has certain sub-class variations. Each has certain advantages and disadvantages.

Note: For the sake of clarity, in the sketches accompanying this article, no specific decoupling (compliance) has been shown. Such compliance is generally introduced between the driven member and the flywheel-capstan assembly. In the case of puck idlers or belts they serve as their own decoupling means.

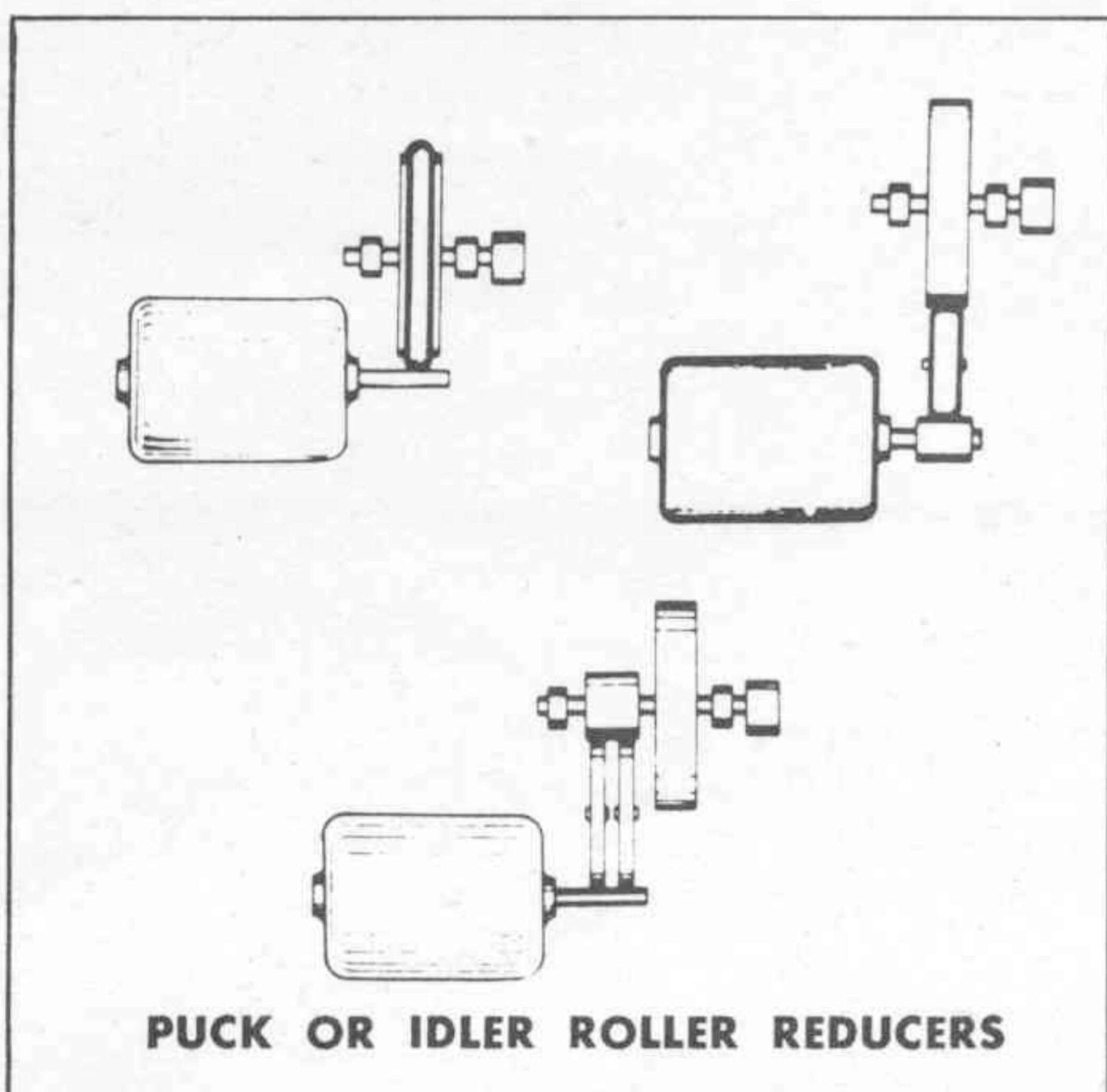
of this type of drive is the slip due to deformation of the rubber at the contact points between motor shaft and driven member.

Slip has been reduced to a minimum by the use of multiple puck idlers with narrow faces as in the Magnecorder PT6-A. A single idler with a wide surface of contact doesn't always bear uniformly over the entire surface because of possible misalignment and, therefore, is subject to more probable slip. Furthermore, rim drives, or drives on the outer diameter of the flywheel, damp out the very action the flywheel is supposed to impart to the system: that of smoothing out the rotational and surface imperfections of the reducer system. This rim drive kills the flywheel effect to a large extent. In its most practical application, the twin puck idler system of the PT6-A Magnecorder has its drive near the center of flywheel rotation so that the "moment" of forces of these imperfections present in all friction drives are reduced to a minimum.



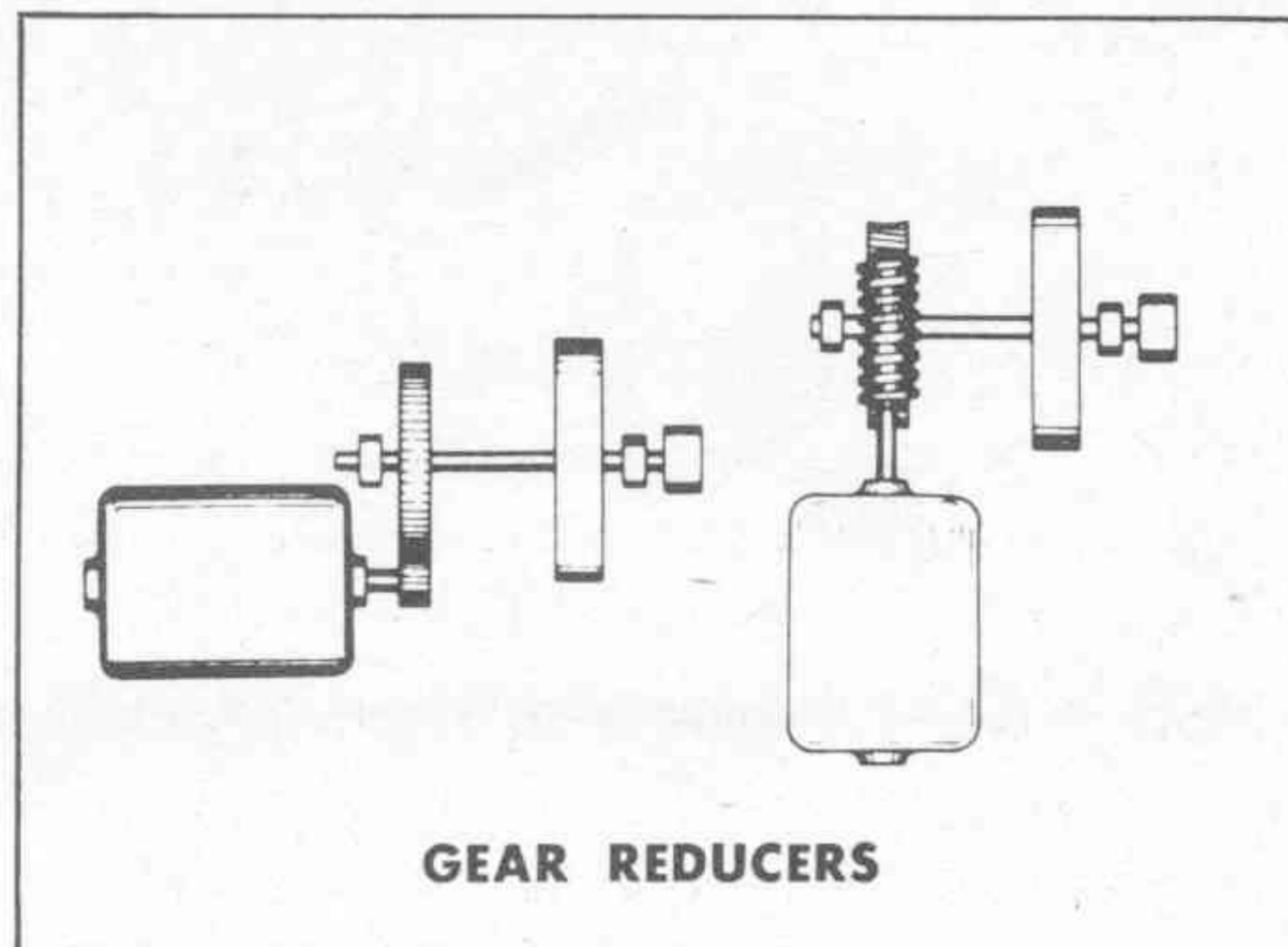
BELT REDUCERS

Single or multiple belt drives are quiet, require no lubrication, and, if of the proper kind, serve as part of the decoupling system. Flat and round belts have been used, but normal belts stretch, slip and sometimes allow the flywheel to "hunt" in starting. Proper tension adjustment to overcome these faults is tedious and difficult. Here again those belts which drive on the rim, damp the flywheel action excessively, and are poor design.



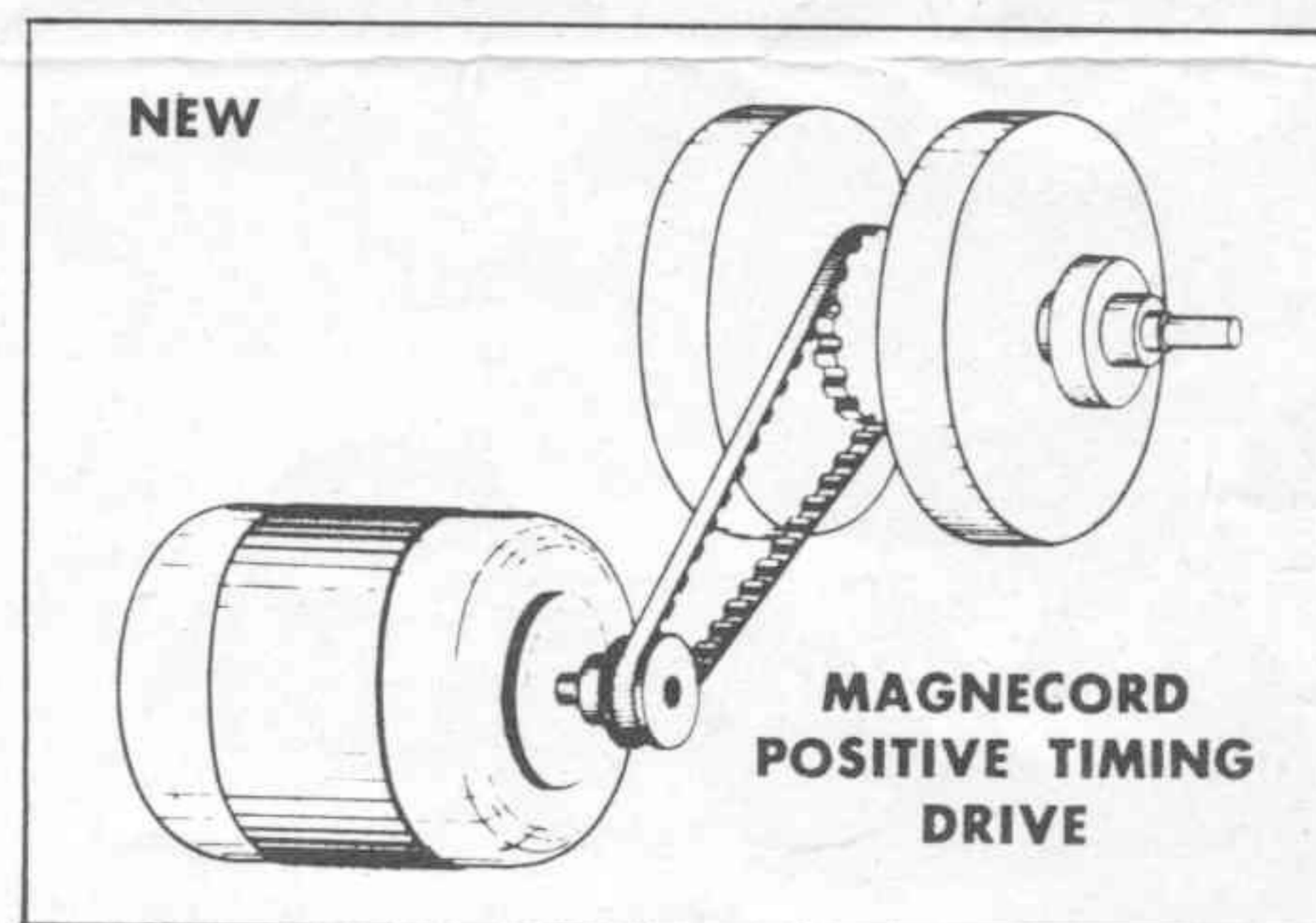
PUCK OR IDLER ROLLER REDUCERS

Intermediate rubber-covered idler roller drives have been most popular because of their low cost and smoothness of operation. Decoupling and damping of "hunting" are inherent. This type of drive presents no lubrication problem. The principal disadvantage



GEAR REDUCERS

Gear reducers generally have the advantage of positive, non-slip drive between the synchronous motor and the capstan. But spur or helical gears are noisy and require special enclosures for oil baths. The precision required in tooth spacing accuracy makes the cost per gear impractical for moderately priced equipment. Elaborate decoupling (mechanical filter) is required to eliminate tooth ripple and wow. Worm and worm gear drives are less noisy but suffer from the same disadvantages.



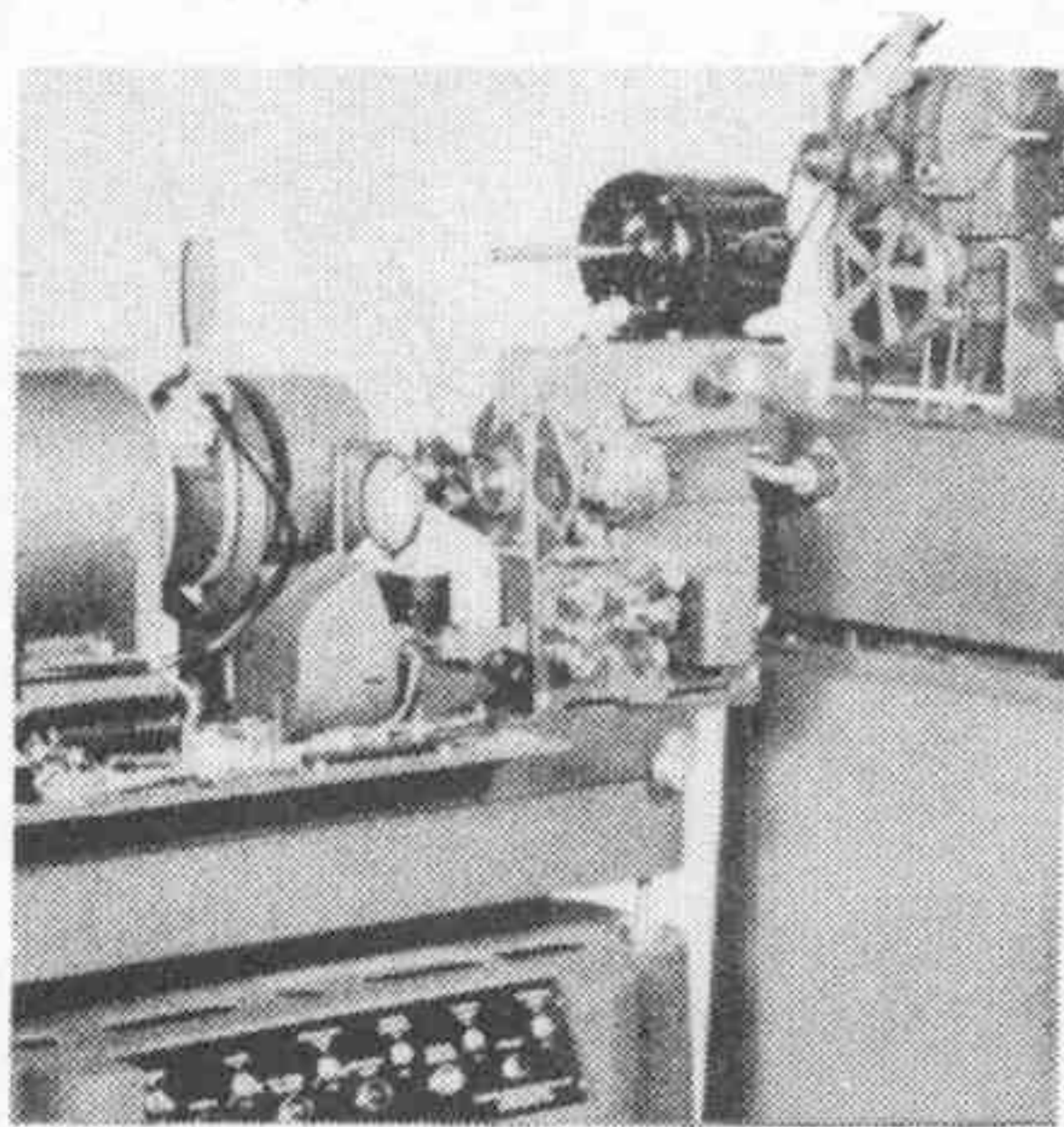
NEW
MAGNECORD
POSITIVE TIMING
DRIVE

The Magnecorder PT7-A incorporates a new concept in speed reducer systems. Basically, a combination of a gear and belt system, this new PT7 speed reducer utilizes the advantages of a belt reducer, which is quiet and free from lubricating problems. It also has the advantage of a gear reducer which provides positive coupling (no possible slip) between motor and capstan. The beauty of this system is that it has none of the disadvantages associated with either belts or gears.

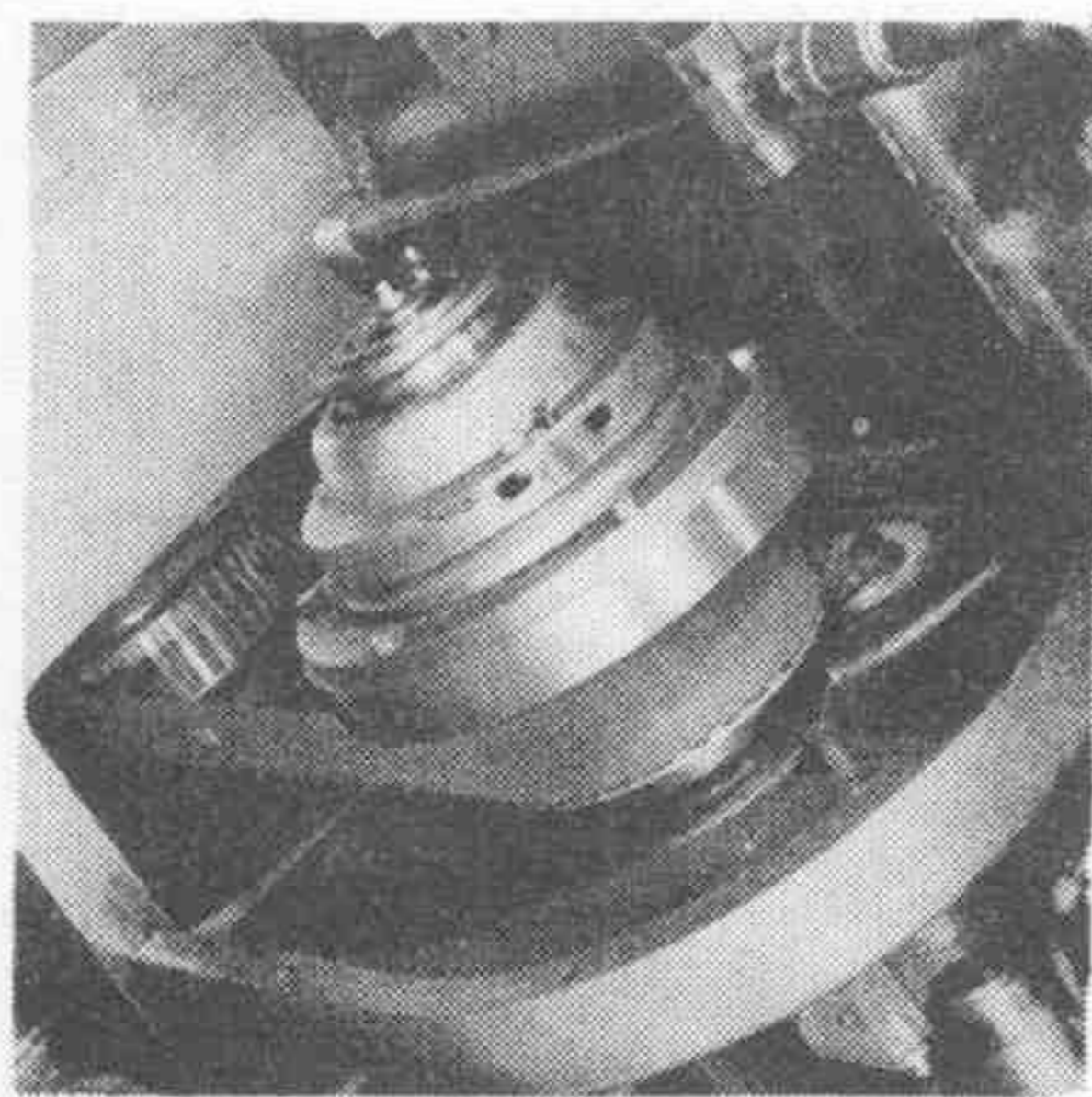
Developed for Magnecord by the L. H. Gilmer Company, Division of U.S. Rubber, this new positive drive is actually a "Timing Belt" made of molded Neoprene over a base of quality non-stretch cotton material. Precision gear teeth have been molded into the timing belt which engage toothed wheels on both the motor and capstan shafts. Because of the nature of Neoprene there is a certain amount of compliance which eliminates the noise and ripple generally associated with gear reducer systems. No lubrication is required, and elaborate decoupling devices are unnecessary. Tooth spacing accuracy, while important, is not as critical as in direct gear drives. Stretch and tension, usually associated with normal belt systems, become unimportant because of the non-slip gear feature and consequently wear or breakage have been virtually eliminated.

Originally designed for a leading manufacturer* of commercial sewing machines, these belts have been field tested and proven themselves in over nine years of hard usage. One leading automobile manufacturer*, contemplating the use of this flexible, oil-resistant

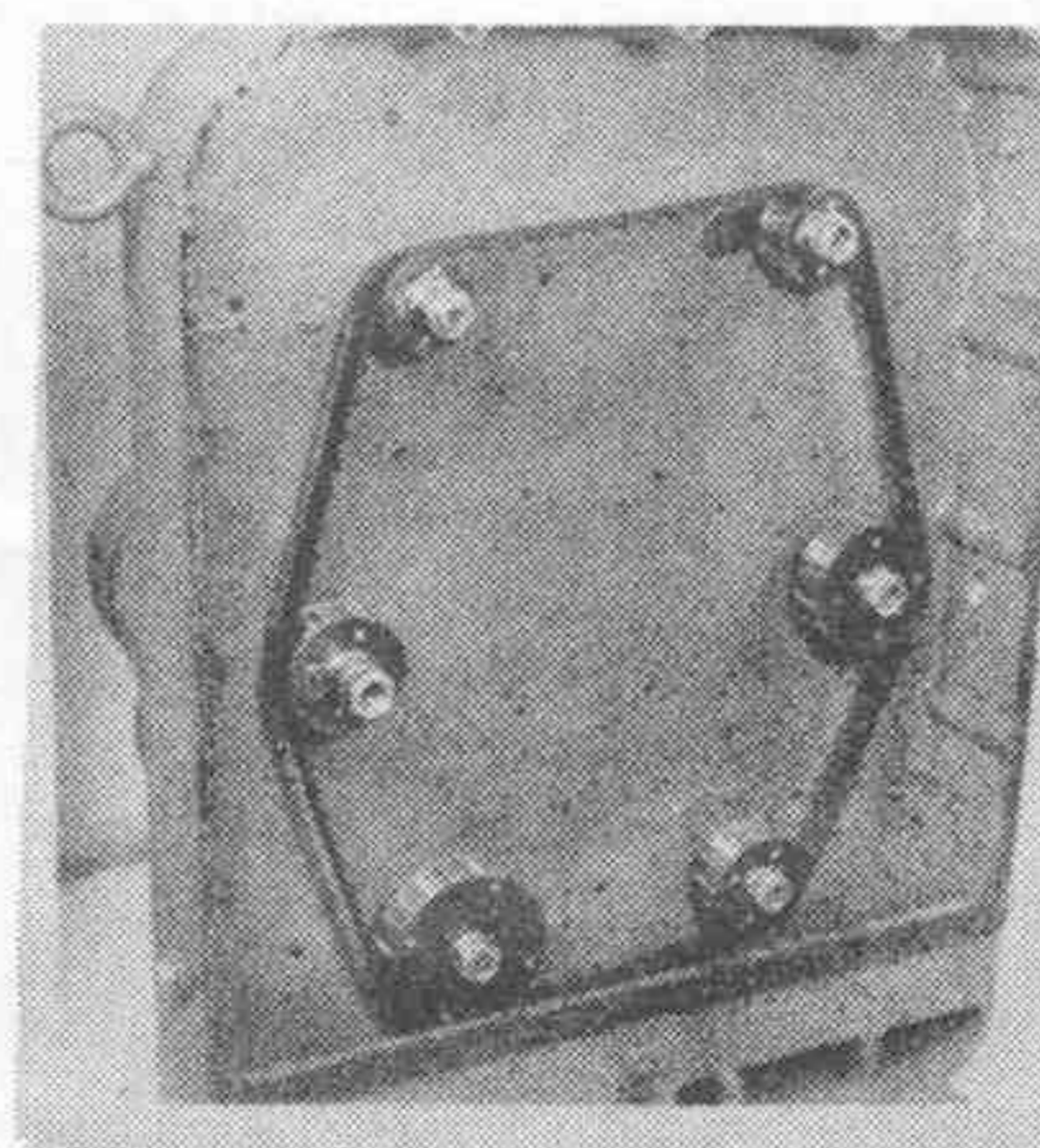
OTHER COMMERCIAL ADAPTIONS OF THE TIMING DRIVE



Television Projectors where precision and perfect timing are essential.



Turret Lathes—for strength and rugged performance of heavy machinery.



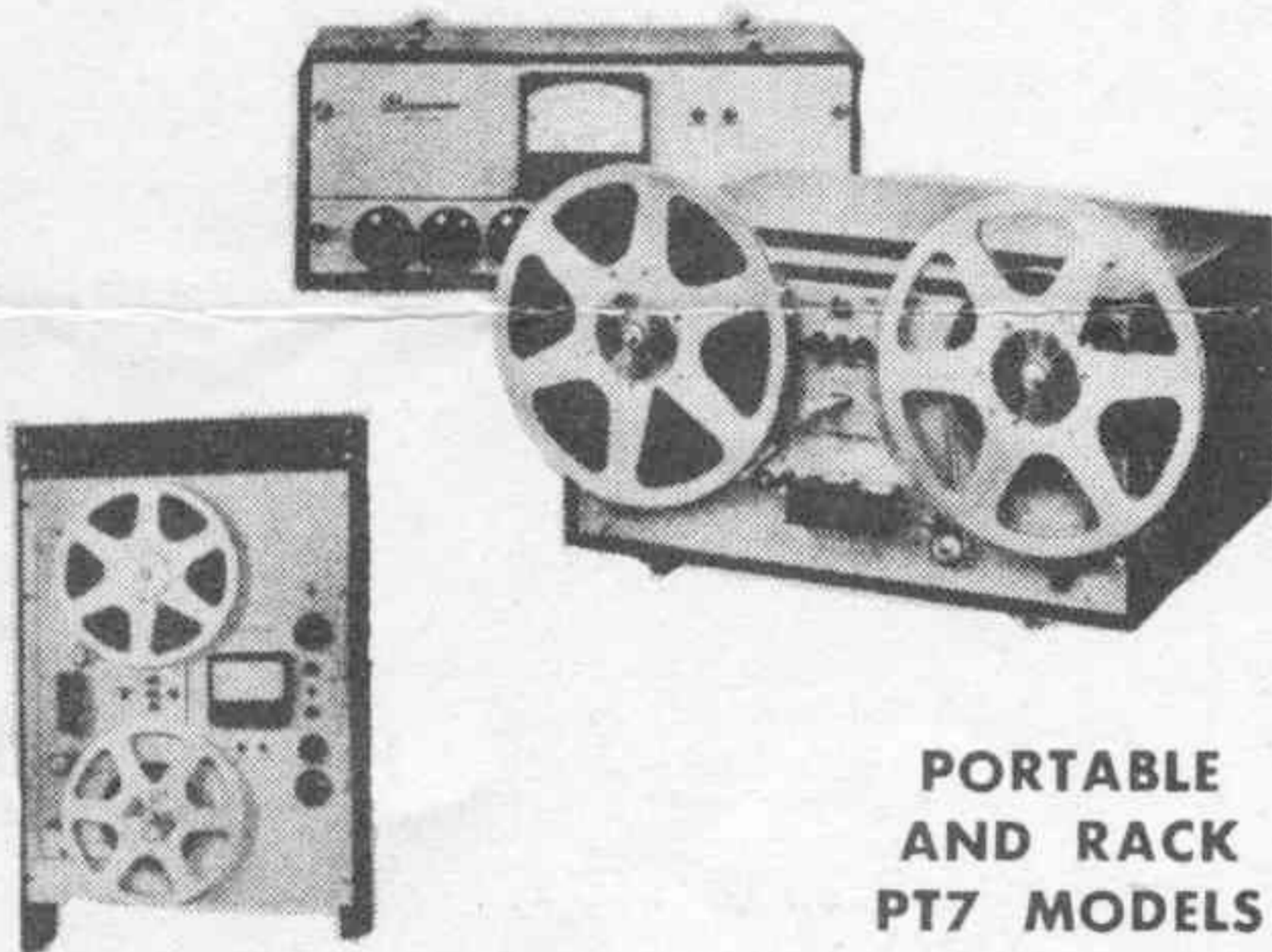
Automatic Bell Ringer for telephone exchanges—continuous operation.

(Continued on back page)

THE PT7 CONSOLE (Cont'd.)

be operated from a remote position. High speed forward is standard equipment on all units. The price for the new recorder mechanism alone (PT7-A) is \$468.00, complete with portable carrying case.

In the PT7-CC Console the recorder mechanism is mounted on its back in the top of a handsome black enamel cabinet that has a durable Formica top. Its overall size is 38" high x 25" wide x 23½" deep with considerable storage space. The console amplifier has line and headphone output, meter switch for bias reading, VU indication of recording or playback. Another switch permits selection of equalization for 15" and 7½" tape speeds. Large 4" VU illuminated meter is standard on this model.



PORTABLE
AND RACK
PT7 MODELS

Other combinations which can be made with the PT7-A basic recorder mechanism are as follows: For 3 microphones, the PT7-P10 . . . three channel high level mixer amp. with 10 watt audio amplifier and monitor speaker for playback and monitoring. For single microphone input, the PT63-J10 can also be used with the PT7-A recorder mechanism. Both Units are complete with carrying cases for portable or field operation.

The rack model is obtained by combining the PT7-A with the PT7-R rack amplifier and adapter. This rack amplifier is basically the same as the console amplifier but permits vertical installation of the PT7-A recorder and amplifier in a standard 19" rack. to prevent 10½" N.A.B. reels from overlapping other rack equipment. This amplifier also has 4" VU meter.

SPEED REDUCER SYSTEMS (Cont'd.)

timing belt states that it has out-lasted the conventional "silent" metal timing chain in actual test. Cement mixers and heavy turret lathes* prove the ruggedness of the belt. Magnecord's new PT7-A Timing drive, as well as its application to certain Television projectors*, proves the precision of the belt. Found only in the Magnecorder PT7-A, this new positive drive speed reducer system eliminates timing errors previously encountered with professional magnetic tape recorders on the market. This not only saves broadcast program time, but assures exact timing and interchangeability of tapes when operated on all PT7 equipment.

*Names on request.

SIMPLE HEAD DEMAGNITIZER MADE FROM INEXPENSIVE OUTPUT TRANSFORMER

Occasionally, an increase in the noise level of a reproduced tape is due to the record or reproduce head becoming magnetized after long periods of use. If you've encountered this problem with your recorder, our engineering department suggests this inexpensive head de-magnetizer which you can make in a few minutes with a Stancor A3878 Transformer or its equivalent.

This type of transformer is designed to match a single 6V6 tube to a 4 ohm speaker and consists of standard E and I laminations held together by a crimped-on strap.

To make the de-magnetizer, simply remove the crimped-on strap and take out the I portion of the core. This can be done with a screwdriver and a pair of long nosed pliers. The ends of the E stack which overlap the

I stack can be cut off or bent out of the way. Cut the secondary leads to the coil off short.

Connect the primary coil of the de-magnetizer to 110 volt 60 cycle power. This creates a very strong field between the outer and inner tips of the E stack. The field should be brought in contact with the magnetized head for 2 or 3 seconds and then withdrawn to arms length from the head before being turned off.

Since the de-magnetizer becomes quite hot, it should not be left plugged into the line for more than 20 seconds. CAUTION . . . The de-magnetizer should not be used when the head is connected to any amplifier equipment—particularly an input transformer! The voltage is likely to be considerably higher than that which will be tolerated by the amplifier.

Want proof of Magnecord superiority?

Ask The Man Who
OWNS A Magnecorder!



MARTIN BLOCK
20 East 50th Street
New York 22, N. Y.

PLaza 9-6154-5

March 16, 1950

Magnecorder, Inc.
360 North Michigan Avenue
Chicago 1, Illinois

Attn: Mr. Barker

Gentlemen:

I have just received one of your Magnecorder recorders from Harvey Radio in New York. This is the second machine I have ordered from Harvey and, since I'm so pleased with the performance of the first machine, I want to let you know about it.

I have been doing a program in New York, the "Make Believe Ballroom", which is broadcast over Station WNEW from 10:00 AM to 11:30 AM and from 5:35 PM to 7:30 PM, Monday through Saturday. For the past 15 years, this schedule has kept me tied to a microphone for a full 32 hours a day. Last July, I purchased my first Magnecorder and, from that date to this, my programs have all been recorded on your equipment. This may not seem very amazing to you until I tell you that the machine has been in continuous use 6 days a week from 10:00 AM to 7:30 PM, with no cooling off periods, for almost 9 months. During this time, it has never given one particle of trouble and is still down only 1 db at 15,000 cycles. The machine has traveled with me to the Pacific Coast and back as well as on 2 trips to Florida, a total of over 12,000 miles. My purpose in ordering the second machine is to enable me to take vacation trips to any place in the world and still have my show on the air at it's scheduled time.

I have had the pleasure of personally recommending the Magnecorder to many disc jockeys around the country who have asked me about it. I hope you may find some use for this letter to promote further useage of Magnecorder equipment with radio stations who want what I believe to be the last word in trouble-free, high fidelity recording and re-production.

Sincerely,

Martin Block

MARTIN BLOCK, popular disc jockey, wrote to tell us of the outstanding results he's had with his Magnecorder.—So good, he's just purchased another!