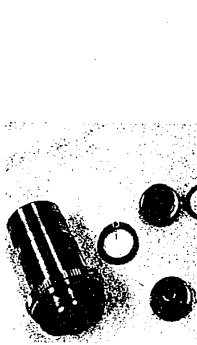


Taking it apart is only part of a microscope repairman's job. Putting it back together is the other half.



Ready for a routine cleaning, this microscope could be taken apart further since each section can be dismantled. (Staff photos by Harry Mauthe)



Jim Ensminger repairs microscopes for hospitals in the Pontiac area. An occupational hazard is the question, "What can go wrong with a microscope?"

Farmington firm offers hope

Lab life mangles microscopes

By LOUISE OKRUTSKY

Microscopes, the gateway to a world inside a world, take on a look of indestructibility when they're placed on a black laboratory bench.

But Jim Ensminger, of Midwest Microscope Service in Farmington, knows better.

There's a lot that can go wrong with a microscope.

Ensminger, the company's service manager, makes house calls to doctors with ailing microscopes. Schools, hospitals and private owners of microscopes are on the company's list of clients.

Together, Midwest's clients manage to spill acid on microscopes, drop them down a stairway and clog delicate lenses with oil.

In addition to accidents, normal wear and tear take their toll on microscopes. Each year, Midwest repairs about 3,000 microscopes. The company charges anywhere from \$10 to \$4,000 for a repair job depending on how many parts they must remove from the instrument.

The nine-employee company takes to the road to service regular accounts with hospitals and laboratories throughout Michigan and parts of Ohio, according to Ensminger.

While some of the scopes undergo routine repairs without being removed from their location, others are taken back to the shop.

READY to be returned to Mercy College is a top of the line Zeiss microscope. It found its way into Midwest when someone poured acid over it. The \$3,000 microscope underwent a \$400 repair job to get it back into working order. In addition to work on the mechanism, the body of the microscope was given a new coat of paint.

"I'm not totally happy with the job," admitted Ensminger as he eyed the microscope now safely covered with a plastic bag.

"But it's an improvement."

When workers at an auto company dropped a bench metalgraph, used to check for pits in metal casting, down a flight of stairs, the pieces ended up in the Midwest workshop.

Now housed in a cardboard box, the cracked industrial microscope faces an uncertain future. If Midwest obtains a similar model that is badly damaged, it may be able to rebuild it.

That's the procedure the company uses when high school students take apart microscopes in their lab classes. If the scope is badly damaged, Midwest owner Ron Ensmitt advises

teachers to keep the remains in a cardboard box. Repairmen might be able to collect enough parts from a number of broken instruments to rebuild one or two microscopes.

USUALLY, the crew at Midwest dedicates its time to more frequent adjustments of microscopes.

Oil in the lenses is a common problem. Lab technicians use oil to help focus a slide. The oil clarifies the slide, it damages the lenses. While some lenses are specially built to withstand the oil, most become clogged.

When the clogged lens hampers a technician's job, then Midwest cleans the small pieces of convex or concave glass. Without cleaning, the seals on the lenses break down and affect focus.

"Lab techs using the microscopes daily don't notice it at first," Ensminger says. "But in six months it becomes a problem."

Another problem resulting from microscope daily use is the gradual wearing down of the stage, the platform under the lens where the slides are placed. If the stage wears down enough, it will affect the microscope's ability to focus. Since microscopes are set to focus at a certain angle, a change in the position of the slide will

affect the instrument's performance.

If a microscope takes a spill in the line of duty, its prisms might be jarred out of line.

PRISMS allow the user of a binocular microscope to see the same thing through both eyes. If the prism is knocked out of line, the image presented to each eye becomes uneven.

If lab technician uses a microscope with poorly aligned prisms, he's asking for a headache, according to Ensminger, because the technician's eyes try to compensate for the slight unevenness in the image.

It takes a repairman about four hours to readjust an unbalanced set of prisms, Ensminger said.

Through the years, microscopes have become more sophisticated. But some lab technicians hang on to a favorite microscope even though it's 20 years old.

A lab technician at Henry Ford Hospital insists on using a 1930 model microscope. When she was transferred to the hospital's West Bloomfield facility, Ensminger said she insisted on taking her favorite microscope with her.

Some technicians believe that the older microscopes are made better.

(Continued on page 6A)

THE INSIDE * ANGLE

HAPPY BIRTHDAY, DEAR

HARRY. Harry Roberts, a Farmington Hills resident for nearly 23 years, celebrated his 80th Sept. 13 and challenged all comers 80 years and older at the Detroit Tennis and Squash Club in the Hills. No one took him up on the offer last Sunday so Roberts played his usual three sets of doubles and called it a day. As a five-year member of the club, it's obvious that Harry loves tennis—much to his advantage.

FARMINGTON'S HERITAGE is the pastime of members of the Farmington Historical Society who will hold their first meeting of the 1978-79 year at 8 p.m., Sept. 27, in the downtown Farmington Library. Connie Lektzian, educational director of the Wisner Home in Pontiac, will be the guest speaker. The Wisner home, Fine Grove, was the residence of Moses Wisner, Governor of Michigan from 1859-61. The home consists of a large Greek Revival house, greenhouse, carriage house, and barn. The historical society also is keeping busy preparing for the Tri-County Historical Conference held this year by the Farmington group. Scheduled for 9 a.m. to 4 p.m., Nov. 4, in the library, usually between 75-100 persons gather for the event.

WAS THE CORN AS HIGH as an elephant's eye? John F. Henige of 26120 Springdale might know. He attended a two-day "fly-in" in Perry, Okla. recently. As superintendent of motor transportation for Detroit Edison, Henige inspected equipment used for installing underground services such as utility and phone lines.

WE'RE ALWAYS WRITING

ABOUT BLOOD, and that's because nothing replicates blood but the real thing. There's no synthetic, and blood donors are needed for the annual Farmington Community Blood Drive scheduled for 3-9 p.m., Sept. 28 at the Farmington Elks Lodge No. 1985, 23656 Orchard Lake Road. The Elks are hoping to collect 100 pints of blood this year, to help supply the 900-1,000 pints needed daily in southeast Michigan. For information or an appointment, donors can call 476-1986.

MUSIC, MUSIC, MUSIC, is the aim of the Livonia Community Band, which begins its third season and is looking for additional musicians. Rehearsals are held from 7:30-9:30 p.m. on Wednesdays beginning Oct. 4 in the Jefferson Community Center, 5601 Henry Road, Livonia. Auditions for seating will be arranged, and prospective members should have some concert band experience. All ages are welcome, and Livonia residency is not required. For information about the band under the direction of Alex Duke, call 427-5383.

MONTHLY MEETINGS FOR

ARTHRITIS patients and their families help to provide information about the disease through

accurate literature and professional lectures. James Lesser, M.D., an arthritis specialist, will be speaking on "Drug Therapy of Rheumatoid Arthritis, Osteoarthritis, and Gout" at 7:30 p.m., Oct. 9 at St. David's Episcopal Church, Twelve Mile between Greenfield and Southfield. The free programs are sponsored by the Michigan chapter of the Arthritis Foundation, Oakland County Volunteer Unit.

AN AUCTION-DINNER-DANCE for Dominican High School alumnae, parents, faculty and friends is scheduled for Nov. 4 to celebrate Dominican's 38th birthday. A silent auction will begin at 5 p.m., to be followed by an oral auction at 7:30 p.m. Dinner and dancing to the music of the Notre Dame Dance Band will complete the evening from 9 p.m. to 1 a.m. An open bar will be featured from 5 p.m. throughout the evening. The anniversary party requires reservations, which can be obtained by calling Dominican High School at 882-8500. Tickets are \$35 per couple or \$17.50 single.

GETTING A HEAD START ON

EDUCATION is the aim of, quite obviously, the Head Start program administered by the Oakland County Livingstone Human Service Agency. Head Start is an educational program for 3-5 year-olds, including career development for parents and supportive services, such as health and nutrition, to families. Families must meet federal low-income guidelines, be receiving public assistance or have a Head Start aged child with a handicap, which includes learning disabilities as well as physical and emotional handicaps. More information can be obtained by calling the Farmington School District, 477-1300.

THE FRIENDS OF ORCHESTRA

HALL have a reason to celebrate. This summer's renovation and restoration of the celebrated concert hall in Detroit will be on display from noon to 7 p.m. Oct. 1 for the second annual rent party. The party takes its name from a type of fundraising social event common during the 1920's and 1930's. At such events the host would stock up on refreshments, ask one or more friends in to entertain, then invite the neighbors in for a donation to the party. In keeping with the tradition, a variety of musical performances will be offered simultaneously in the hall, including chamber music, solo instrumentalists, and jazz and blues. Admission is \$7.50 for adults, and children under 16 accompanied by an adult are free.

DEADLINE

Material for the Inside Angle (22170 W. Nine Mile, Southfield 48034) should include the name and phone number of the sender and should be typed if possible. Items should be received at least one week before publication and photographs cannot be used in this column. All materials become the property of the Farmington Observer, but all information is open to the public.

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Made of 65% SEF modacrylic/35% polyester, these sleepers are Wear-Dated® and will be replaced if they wear out before a year is up under normal use. Just keep your proof of purchase. SEF flame safe fabric, they're soft, cuddly and so cozy warm. Hiber Nater Gro Bags in solids or prints. \$7 and \$8; solid or print Jama Blankets, \$7.75 and \$8.50. All in pastels, all with knit necklines and cuffs for extra warmth. Hudson's Infants, Babies and Toddlers.

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