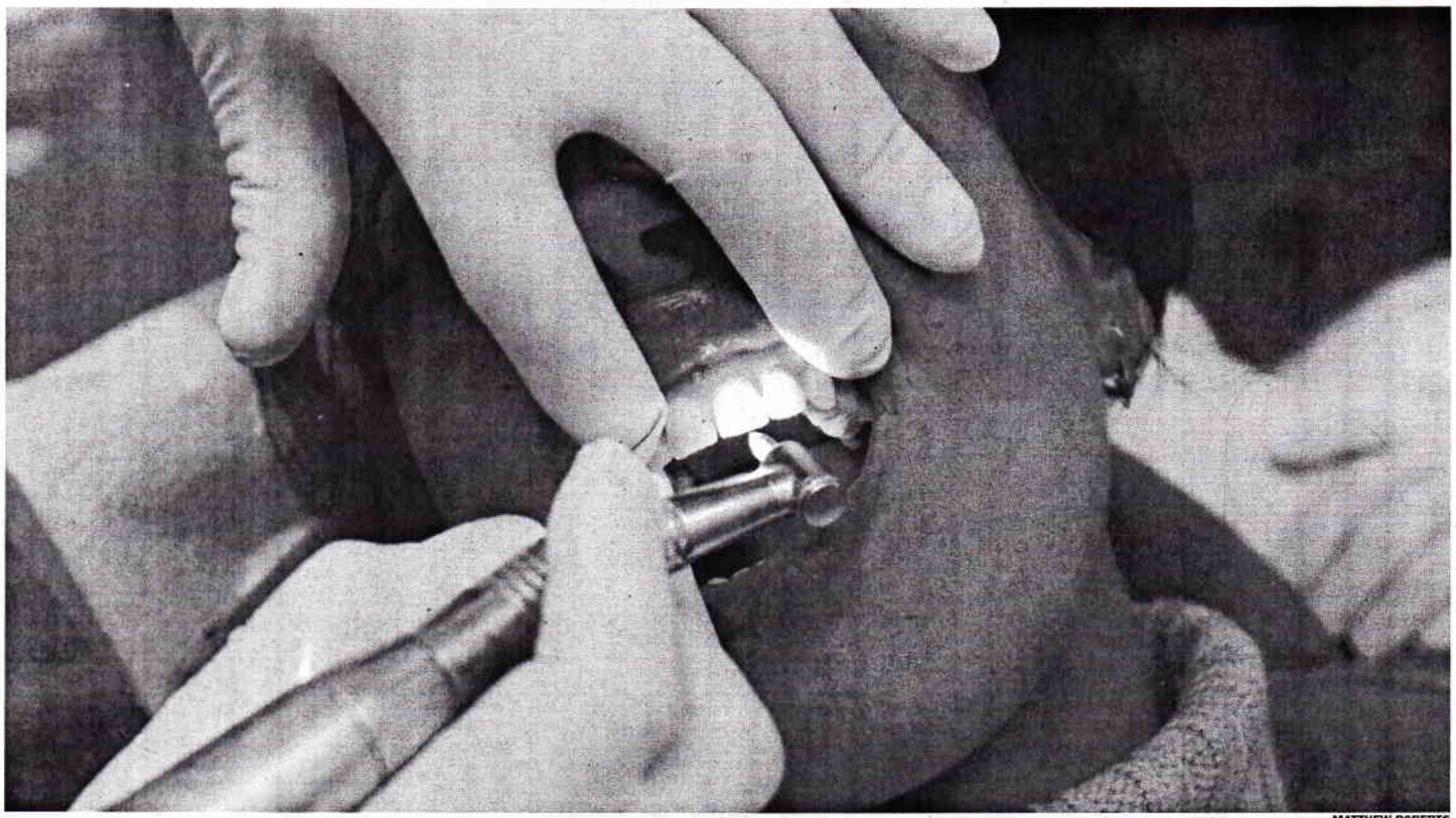

MATTHEW ROBERTS

Crowning Achievement

Smile! Your visits to the dentist are about to become less stressful BY STEVE DITLEA

What is it about the dentist's office that prompts half of all adult Americans to avoid regular dental care and more than one in 10 to stay away entirely?

For some, it can be the nerve-jangling, high-pitched whine of the drill. For others, it the fear of excessive exposure to X-rays. And still others lament the inconvenience of repeat visits to fix a single tooth.

Advances in technology are producing less stressful visits and better care. Though the new systems can be found in only a few dozen offices throughout New York, it may be just a matter of time before they make some of today's dentistry seem as primitive as pulling a tooth in a barber's chair.

Mouth Whisperer

"It's so annoying, like hearing fingernails on a chalkboard," says Manhattanite Micki Gilbert about the usual sound of a dental drill. Recently, though, she changed dentists and her visits became far more peaceful. "You hear almost nothing," she explains. "It's amazing."

Her dentist, Dr. Larry Rosenthal, has a posh practice on the upper East Side, treating the likes of Donald Trump and countless supermodels. The whisper-quiet drill, known as an "electric handpiece," is just one of the tools he uses to put his patients at ease. Most of them also wear headphones and watch movies. Micki Gilbert, who would rather close her eyes, is comfortable with just the sound of one handpiece whooshing.

For Rosenthal, the instrument has other advantages. "It vibrates less and is much smoother in drilling against the tooth," he says. "It gives a superior cut." The standard dentist's drill is powered by a flow of compressed air whirling a tiny turbine; hence the loud whine. The electric handpiece, as its name implies, uses a much quieter electric motor.

Electric handpieces have been available for more than 20 years in Europe, where noise codes are stricter. The whispering drills have been introduced here in the past five years but remain more expensive than air-driven ones. With patients becoming aware of them and dental schools teaching students how to use them, electric handpieces could become standard in three to five years, Rosenthal says.

Instead of the chilling whine of the electric drill, "You hear almost nothing."

The Light Fantastic

Weighed down in the chair by a lead apron while the hygienist rushes out of the room, many patients are reminded of the dangers associated with exposure to X-rays. New digital X-ray systems require only one-tenth the amount of radiation, but none at all would be even more reassuring.

Now there's a safe, white-light diagnostic tool called DIFOTI (for digital imaging fiberoptic transillumination). The business end looks like an oversized toothbrush handle with a tiny light source and a hooded mirror for capturing the light that shines through the tooth onto a sensor. This signal goes to a computer for processing and magnified display on a monitor screen.

In his office on the upper West Side, Dr. Alan Goldstein points to the computer screen and a black spot of decay on a tooth's surface layer of enamel. At this early stage it can be treated noninvasively with fluoride to remineralize the tooth. "X-rays frequently won't show decay until it's more advanced and the tooth has to be drilled," he says. Also invisible to X-rays but viewable with DIFOTI are stress lines characteristic of tooth grinding.

DIFOTI can't entirely replace X-rays because it doesn't penetrate below the gum line. And since dental insurance doesn't reimburse yet for its use, there is less of an incentive for dentists to adopt this system.

Nonetheless, Goldstein, who was the first New York dentist to deploy DIFOTI several years ago, feels it will gain wide acceptance. "It's consistent with the latest philosophy in dental care: to aggressively diagnose and conservatively treat," he says.

Fast Work

Rosalina Augustine may work at the front desk of a doctor's office, but she admits to being afraid of dentists. "I'm hard to get numb," she says. "I want dental work done quickly, without return visits."

So she's happy to travel from Soundview, the Bronx, to Washington Heights, where her dentist's office has a computerized system that can make a crown or an inlay in 20 minutes, instead of the weeks it can take for work sent out to a dental lab.

"I don't have to wear a temporary crown or get numb again," she adds. "I just read a magazine in the waiting room while the crown is done."

Dr. Chaim Wexler, her dentist, not only relies on the CEREC ceramic dental restoration system in his practice but also teaches its use at nearby Columbia University School of Dental and Oral Surgery. He demonstrates how a picture of a tooth is fed into the CEREC computer; manipulating the outlines with a trackball, he selects the best fit. He then picks a small ceramic block, matching the color of the patient's teeth, and places it in a tabletop cutting unit. Once turned on, a tiny lathe spins the ceramic while two diamond-tipped drills sculpt it into the right shape.

To criticism that the monochromatic blocks don't duplicate the natural color gradations of teeth, Wexler responds that layers of color can be added on. He admits the system is still costly, but he adds that should change as competing manufacturers enter the market this year.

This technology may also lead to the next stage in dental care. "We're not there yet, but someday computers will control more precise cuts directly in the patient's mouth," Wexler predicts.