

Engineering Pays Off at Work and at Home

By EILEEN POLEY

THE LITTLE GIRL stood staring at the brunette bricklayer, then solemnly said, "My mommy says ladies don't do that."

"Honey," replied the brunette bricklayer, slapping on some more mortar, "she has the wrong idea of what constitutes a lady."

Speaking was a woman who's unnettled by jokes like, "She's no lady, she's an engineer."

She's Dorothy "Dotty" Hoffman by name, engineer by pro-

fession, lady by nature. And the first female to be invited to membership in the exclusive, 84-year-old Engineers' Club of Philadelphia.

By weekends she's a do-it-yourself patio bricklayer, indoor plumber and occasional electrician, plus the perennial cook.

"Yes, I can cook. If there's one thing a chemical engineer learns it's to follow a recipe."

MRS. EARL Hoffman is an engineering and research project leader at International Resistance Co., and a pioneer

in the development of micro-miniature metal film resistors.

Instrumental in opening up the whole field of evaporative film technology in which IRC is now world leader, Mrs. Hoffman also had an important role in the continuing Air Force's Minuteman missile program.

For it the Philadelphia-based firm, where she has worked 11 years, has developed a new ultra high reliability fixed metal film resistor which must function faultlessly—only one failure is permitted in 250,000,000 unit hours of operation.

(Resistors, Dotty explains, are small electronic devices which regulate the flow of current to various parts of any electronic system.)

DISCOVERY, that day eight years ago, that her pet experiment had proven something, a new condensed metal characteristic capable of being marketed, came with no flash of lightning nor poof of chemicals. Dotty had a pencil in her hand, plotting the data and her deductions.

During those days (she worked in the research laboratory nine years before switching to process development) the dramatic, dark-haired engineer donned overalls to construct her own evaporative unit—putting in the pumps, working with wiring.

"My husband—he's a gradu-

ate engineer, too, but now has his own sales-by-mail business—thinks as long as I'm capable of doing a little plumbing and wiring at home, why discourage me," she said.

Most summer weekends found them clearing the woods ("we'd take turns sawing and lugging") on a lakeside lot in the Poconos, where they'd unfold their kayak-like German boat rigged for sailing to take a "boating break" from the trees. An avid swimmer, the tanned Mrs. Hoffman also shows a green thumb at gardening.

ABOUT HER admission last month to the heretofore all-male Engineers' Club, she comments, "I thought it was about time someone broke the ice and jumped in, so I filled out an application."

Treasurer of Delaware Valley Engineering and Technical Societies Council, which represents 24 scientific groups and 15,000 local members, Mrs. Hoffman also heads the city's Society of Women Engineers, whose initial goal of equal opportunity has now been switched to recruiting women for their craft.

"Engineering is one of the best educations. It teaches you to think logically," believes Dotty whose greatest compliment was paid last year when IRC hired not only another woman engineer but a female physicist.

They were a rarity when she entered Rensselaer Polytechnic Institute in Troy, N. Y., and emerged four years later with a fiance and Bachelor of Science. "I liked math and chemistry, so was steered into chemical engineering—even got a Master's in it at Bucknell but haven't used it since. This is really experimental physics."

CURRENTLY a technical consultant for microcircuits, she rarely wears either coveralls or a white coat over her self-sewn dresses—"They're too darned hot." A non-smoker, she's adamant about the no-smoking signs in the laboratory, where ash-flicking would clutter metal condensed by high vacuum technology to as tiny as one-hundred millionth of an inch strips.

In one corner of her lab is a kiln used by the Lunchhour Ceramics Club she organized.

But once she reaches the city's northeast border and the house shared with her husband—they have no children—the New York-born engineer is apt to practice golf, singing (she's a former Olney Graduate Chorister) or listen to their vast collection of classical records.

"Or sometimes I just collapse on the patio and Earl reads to me," she said, patting the bun at the back of her head. "Then I can REALLY be a lady."

