MELPAR-A-GRAPH

MELPAR, INC. • A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE CO.

Volume 1, Number 3 February, 1956

ALL SIGNS POINTED UP IN 1955

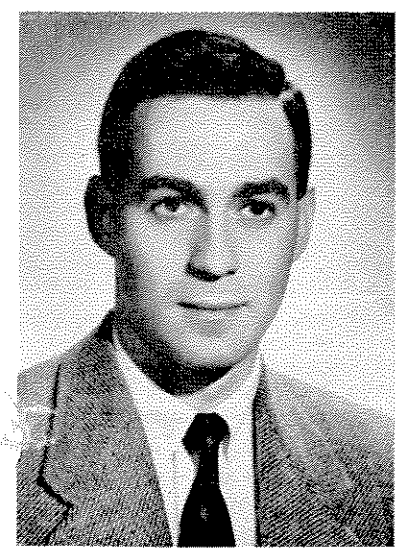
MELPAR FELLOWSHIP FOUNDED AT M.I.T.

The first Melpar Fellowship for graduate study at Massachusetts Institute of Technology has been awarded to Donald A. Savitt of the Illinois Institute of Technology. The appointment, effective with the February term, was announced by Professor Gordon S. Brown, Head of the Department of Electrical Engineering at M.I.T.

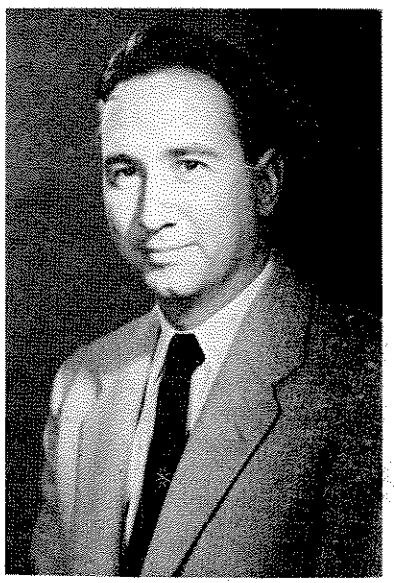
The Melpar Fellowship is a grant made by the Company to M.I.T. "without strings". The Institute has sole control over the screening of candidates and bestowal of the award.

The nature of its own work makes the Company especially aware of a growing shortage of properly trained engineers, considering the technological progress which is a mainstay of our national economy and sovereignty. The Melpar Fellowship expresses the Company's conviction that higher education must, and can, be encouraged by industry.

Professor Brown's announcement revealed that Mr. Savitt ranked first in the January class in the Department of Electrical Engineering at Illinois. Among other honors, Mr. Savitt was chosen as Illinois' outstanding engineering student by the ASME.



Donald A. Savitt



W. C. Purple, Jr.

W. C. PURPLE NAMED ARLINGTON HEAD

W. C. Purple, Jr. has been appointed Manager of the Company's Arlington Division, effective March 1, 1956, succeeding A. N. Corner, who joins another company on that date. Mr. Purple was Manager of Project Services at Falls Church, and is a veteran employee of Melpar, having joined the Company as a Junior Engineer in February, 1947.

Promoted to Project Engineer in 1952, and to Engineering Section Head in 1955, Mr. Purple has long been identified with the series of communications devices known to Melpar people as "the Fax program". Equipments developed under Mr. Purple's guidance resulted in one of the Company's earliest large-scale production efforts.

Appointed Manager of Project Services in September, 1955, Mr. Purple carried out a plan of scheduling the shop facilities at Falls Church which significantly increased their effectiveness.

A graduate of Princeton University, Mr. Purple received his B.S. in Electrical Engineering in 1947 and has since done graduate work in the same field at the University of Maryland.

SALES TOTAL 16.5 MILLION; EMPLOYMENT REACHES 1850

Pointing to sales of 16.5 million dollars during 1955 compared to sales of 9.6 million in 1954 is a handy, statistical way of applying a yardstick to the Company's progress during the year just past. Putting it another way—closing the year 1954, Melpar's backlog totalled 20.5 million dollars; as 1955 ended, the backlog had risen to 31.1 million.

In more human terms, we began the year 1955 with a total of 1305 people employed, and closed it with 1850. Most of the plants scattered through Alexandria were vacated, and we took up a more pleasant life in the 265,000-foot Falls Church laboratory and in the Arlington Division concentration, itself expanded by 50,000 feet during the year.

More than signing new contracts and hiring new people was entailed in racking up a new set of numbers for the record books. The Company invested $1,106,842 during the year in additional tools and equipment of all sorts, to aid in getting the current job done and to lend strength to all hands for the ever more competitive struggle ahead.

Though it is not true that we have more telephones than people, we did keep the Bell wires hot in 1955, at a cost of some $160,000. A portion of that amount was spent by our Purchasing sections, in the course of spending $4,928,000 for materials and parts. It is probable that those few items not described as RUSH were procured via $14,000 worth of postage stamps.

The year's finer details would rouse the wrath of the Security Officer. Those details involve the many and varied development contracts completed during the year, and the many tons of production equipments, born of development work in past years, shipped out. So, to appease the Security Officer, those details will not be mentioned. Let a final statistic close the book on 1955: the Company's payroll exceeded 8 million dollars for the year, including more than $500,000 paid out in lost-time benefits.

OPINION

"The Growth-Name In Electronics" is the phrase used by a New York investment firm to describe Melpar in a recent survey of the diversified activities of Westinghouse Air Brake Company. We accept the title with thanks. It fits us. Growth—in physical plant, in personnel, and in range and volume of work—has been the Company's watchword from the day of its founding.

Melpar is a part of a young industry—a volatile, fast-moving, risk-taking industry. Unworried by tradition, unhampered by tales of what grandpa used to do, our industry and our Company look always toward tomorrow. And indeed, we must. In electronics, yesterday's miracle development is tomorrow's museum piece.

We must stay light on our feet, be ready to change direction at need. The new idea, the new way of doing things, the attitude of "let's try it for size"—these are vital parts of our stock in trade. Almost weekly, new electronics firms come into being: all young, all aggressive, all happy to offer competition at the drop of a hat—and anxious to supply the hat.

We had better not dissipate that stock in trade. Let our Company be bound down with restrictions on who dots the i and who crosses the t, and we lose that essential characteristic of mobility.

Organization, for the purpose of sensibly applying individual skills to the task at hand, and procedures designed to smooth the flow of work are necessary aspects of any group endeavor. Without them, you have chaos. But organization is no kin to regimentation. The fine print which dictates who talks to whom about what is not a procedure; it's a straitjacket.

Keeping the Company's organization in good running order is one of the never-ending jobs of its management staff. That job is best done in the working climate in which Melpar has thus far flourished—a climate in which the best way and the best man may freely be sought out and put to use for our common benefit.

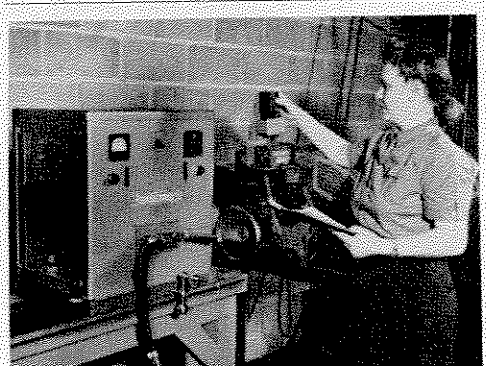
Our task tomorrow will differ from today's—by how much or how little, we don't know. We do know we must be ready to meet it, adapt to it. Otherwise, someone is sure to drop that hat.

TOOLING LIGHTENS TASKS IN ARLINGTON ASSEMBLY

One of the most tedious and time-consuming tasks involved in the assembly and wiring of MSQ-1A equipments at Arlington Division is on its way out, victim of the persistence and imagination of Sub-Assembly Foreman W. E. Meyer and Methods Engineer Omer Kennel.

After the first few thousand stripped ends of hair-thin No. 27 stranded wire had been laboriously twisted and crimped into a condition suitable for tinning, the suspicion grew that this was not the most sensible approach to the job. The notion was heartily supported by the eight or more assembly operators whose weary and sometimes blistered fingers were the only tools available.

BEFORE *a better way was found, these Arlington Division assemblers faced the tedious task of processing miles of wire—in little pieces. Nearest the camera is Imogene Meadows; down the line with her are Ruth Revelli, Task Leader Hilda Scott, Bertha Thompson, Patricia Kessinger, and Claudia Potter.*



AND AFTER *the machines were put in place, skilled hands were freed for other, better work. At the push-button (much kinder to the fingers) is Task Leader Nellie Tacey.*

The first question provoked by study of the operation triggered the final solution. "Why do we have to twist the

(Continued on Page 3)

SPECIALIZED COURSES OFFERED BY WATERTOWN ENGINEERS

An intensive eight-week course on Servo Design, recently concluded at Melpar-Watertown, aptly illustrates a type of "post-graduate" instruction growing in popularity through-out the Company. Conducted by Senior Engineer Robert Gordonstein, the Servo course offered its students a review of present-day theory and practice in a complex subject.

A course in Gear Design, given by Senior Engineer J. J. Staller with the same intent, also has been held at Melpar-Watertown. These capsule courses are acknowledged to be an excellent means of renewing or maintaining contact with aspects of our industry which frequently out-run the newest textbooks.

G. D. CAMP AT CHICAGO MEETINGS

Dr. Glen D. Camp, Falls Church, was a speaker at two scientific meetings held in Chicago on January 23-25. Dr. Camp addressed the Operations Research Society of America on the theme "Waiting-Line Theory and Application". Before the American Management Association, he discussed "A New Look at New Development and Application".

CRUSCO ARTICLE EXPLAINS ELECTRONICS BUYER'S JOB

The inside story of military electronics procurement is told by L. J. Crusco, Melpar Purchasing Department Buyer, in an article soon to be published in Purchasing Magazine.

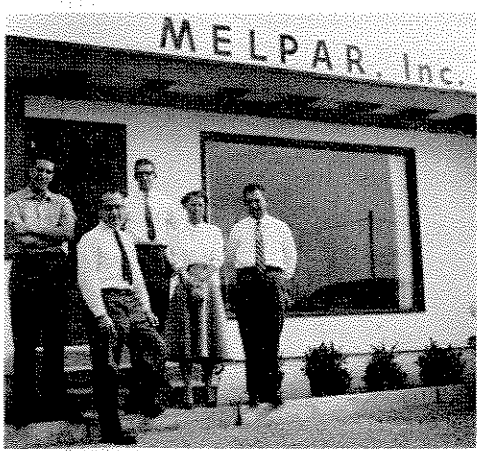
Mr. Crusco's article discusses various aspects of Government contract work—its rigid quality control demands, adherence to complex specifications and regulations, and the requirements of industrial security—as they affect the purchasing function.

Reviewing the activities of a components buyer in military electronics, the article points up the specialist's role such men must play.

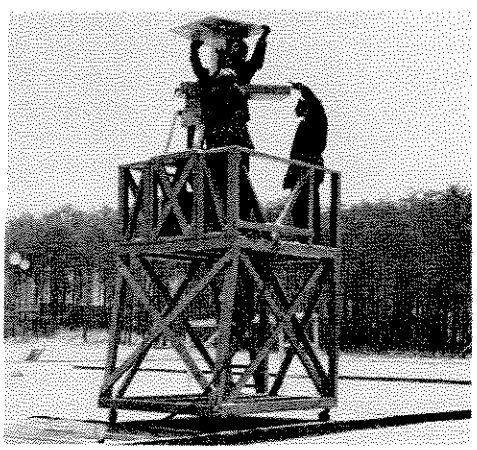
WATERTOWN BUILDS SIMULATOR

Melpar-Watertown will design and construct a Radar Target Simulator for the Air Force Cambridge Research Center, under the terms of a contract recently received by the Company. The new simulator expands the scope of a program of design and development in the field of training aids which has been in progress at Watertown for several years.

BIGGER THAN YOU THINK . . . *That handful of Klystron and cavity bears quite a price tag: $1,750.00. The other gadgets shown range in cost from $12.50 for the Bolometer at lower right to $360.00 for the Klystron tube at upper left. All are high precision test components—a small fraction of the Company's $300,000.00 investment in such tools of the trade.*



ING SUNSTROKE *for the benefit of photographer is Melpar's Tucson, Arizona plant staff. In the usual order are Frank Mercurio, R. M. Scott, J. E. Swafford, Mrs. Mary Hermes, and N. R. Smith. Immediately following this picture, they retreated to their air-conditioned quarters.*



FRESH AIR *is bracing and healthful. There is nothing like a little outdoor activity in clear, cold weather to bring a sparkle to the eye and a tingle to the cheeks. Tingling on the roof at Falls Church are R. P. Myers, A. Maestri, Jr. and (back to camera) H. D. Quigley.*

TOOLING *(Con't from Page 2)*

wires before tinning"? "Because the cutting and stripping operation on the Artos wire stripper produces splayed ends".

How to eliminate those splayed ends became the question. A weeks-long search of the equipment market ensued, at last turning up a 1 KW output induction heating generator manufactured by Reeve Electronics of Chicago. Electrically connected ahead of the Artos stripping machine through a simple microswitch, the generator penetrates the insulating surface and bonds the primary tin coating of the wire at intervals dictated by the cutting length setting of the Artos. The result—a pre-tinned stripped end, and an end to the "roll your own" routine.

Another problem which has long plagued the electronics industry has been whipped in Arlington's Sub-Assembly Department, this time by a team effort enlisting Methods Engineer Kennel, R. C. Stacy of the Technical Services Department, Senior Engineer D. C. Grigg, and P. E. Ritt and E. L. Ditz of the Chemistry Laboratory at Falls Church.

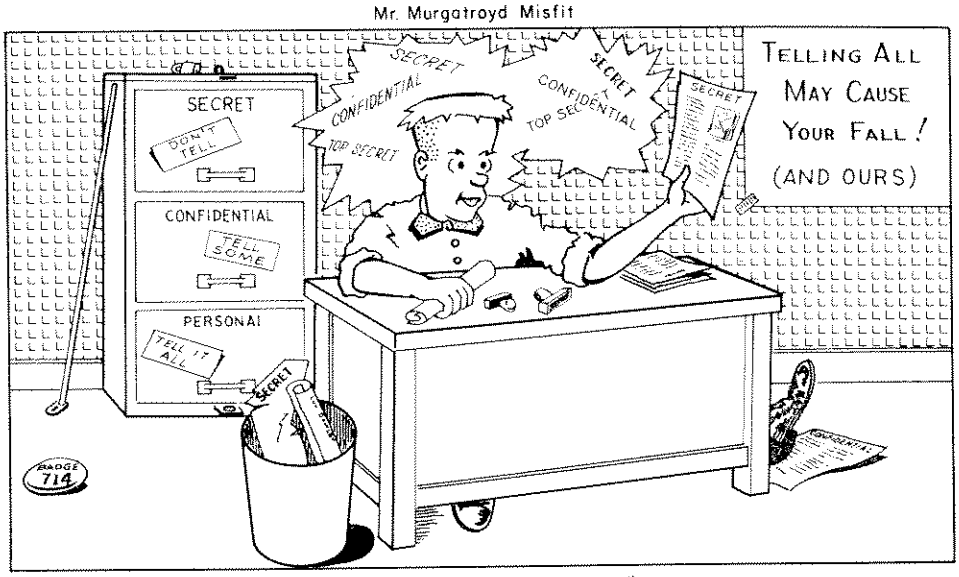
Grounding shielded wire has ever been a slow and painstaking operation, involving a whittler's skill at carving away the wire's outer insulation without nicking the braided shielding. Compounding the problem, the critical nature of many of the circuits in MSQ-1A required that the ground connection be made in the center of the wire length for precise electrical balance, rather than conventionally at the ends.

As tooled and processed now in Arlington Division, the operation is fast, simple, and insures a thorough ground connection where it counts. The device used consists of a loop of Nichrome resistance wire mounted in a small holding fixture and fed with 3.5 volts through an ordinary transformer. Shielded wire, rolled over the resistance loop under this controlled temperature, is hot stripped of its outer insulation to expose the metal braid in seconds and with certainty.

WEIHE ATTENDS CALIFORNIA MEETING

V. I. Weihe, Technical Assistant to the Vice President and Chief Engineer, attended the Western regional meeting of The Institute of Navigation held January 21, 1956. The event took place at March Field, Riverside, California. Mr. Weihe is Honorary Vice President of the Institute.

Mr. Murgatroyd Misfit



"We're going to miss this boy"...

GOING UP!

Promotions in the Drafting Department at Falls Church saw A. G. Thompson and A. F. Ryan rise from Draftsman to Senior Draftsman.

At Melpar-Watertown, E. R. Bradshaw was promoted from Engineer to Senior Engineer grade. R. A. Schmidtke, of Falls Church, is now a Project Engineer, advancing from Senior Engineer. Also at Falls Church, R. F. Marshall moved from Junior Engineer to Engineer.

In the Arlington Division Receiving Department, H. T. Bowers has been named Lead Man, having been Material Review Clerk. T. M. Dobson moved up from acting Storekeeper at Arlington to Junior Procurement Planner.

W. F. Dupree is now Test Supervisor in the Quality Control Department, having been advanced from Engineer. M. F. Goldsmith, formerly Assistant to the Accounts Payable Supervisor, was appointed Assistant Supervisor of the section.

Two Falls Church men, R. D. Cathell and L. W. Tice, previously ranked as Technicians, have become Lead Technicians. E. E. Schneider and B. B. Clark were promoted to Secretary at Falls Church. Other recent Falls Church promotions brought R. I. Bryan from Spares Planner up to Senior Spares Planner, and R. L. McClelland from Duplicating Machine Operator to Detailer.

F. J. Vargo has been appointed Acting Manager, Project Services at Falls Church. Mr. Vargo succeeds W. C. Purple, Jr., whose appointment as Manager, Arlington Division is described on page 1 of the **MELPAR-a-graph.**

SUPERVISORY DEVELOPMENT IS THEME OF DISCUSSION SERIES

On-the-job supervisory problems, focussed on Melpar policies and aims, and intended to foster sound employee relations, will provide the material for a series of group discussions to be held weekly at Falls Church and Arlington. Conducted by T. L. Wood, Staff Assistant to the Personnel Director, the meetings are scheduled to begin in early February.

Since the sessions are to take place during normal working hours, department heads will be asked to schedule attendance of their supervisors to fit departmental work-loads. Planned to last no more than one hour each, the discussion series is expected to last at least six weeks.

Dr. Wood brings years of specialized training in personnel relations work to his role as moderator. He received his Master's degree in Business Administration at Columbia University, and followed it with a Ph.D. at American University.

IMPROVED COMMUNICATIONS DEVICE TO BE DESIGNED AT FALLS CHURCH

A contract providing for advanced developmental work in the field of radio-teletype communication has been awarded to Melpar by the U. S. Army Signal Corps. Assigned to the Falls Church plant, the task involves the design and construction of equipment supplementing standard radio-teletype systems to provide more reliable communications under adverse conditions.

1st MSQ-1A PASSES ITS FLIGHT TEST

"This is to advise you that we have viewed the flight test data taken on December 29, 1955 for system 105, and we are ready to accept delivery of this equipment . . ."

These opening phrases of a letter dated January 6, 1956, from Reeves Instrument Corp. to Melpar mark a giant step forward in the multi-million dollar MSQ-1A program being produced in the Company's Arlington Division.

After nearly three years' work on the part of hundreds of engineers, mechanics, technicians, assemblers, and supporting personnel, the first of the huge radar systems passed its flight test with a margin of error of less than 25% of the permissible limits. The acceptance on behalf of Reeves Instrument Co. was signalled by L. A. Cornell.

Under the supervision of Boyd V. Nichols, cognizant Project Engineer for the U. S. Air Force, the tests were conducted under weather conditions described as "a lot less than perfect". However, the test aircraft from Rome Air Development Center flew its prescribed missions without mishap.

Particularly gratifying to all those concerned with the technical aspects of the program was the fact that the system passed muster on its first "flight", and now requires only the usual variety of clean-up and touch-up operations. Back in the shops and assembly areas, where thousands of components and miles of wire are wending their way into chassis, reaction was "keep that airplane handy. There's plenty more where that one came from".

INGENIOUS DESIGN OF AN/DRA-2 FEATURED IN TRADE MAGAZINE

Co-authored by Falls Church Project Engineer J. A. Hohos and O. P. Schreiber of Metal Textile Corp., an article entitled "Efficient Heat Removal . . . A Key To Reliability" appeared as the feature story in the January issue of Electronic Equipment magazine.

Picturing the Decoder Unit of Melpar's AN/DRA-2 airborne telemetering system on its front cover, the magazine displays the authors' account of "an outstanding example of design inge[illegible] focussed on the problem of heat remo[illegible] in miniaturized equipment. Solution to the problem involved the use of knitted wire jackets as tube shields in place of the conventional metal covers.