



The Canadian Forces Dental Services Quarterly





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COVER

Student and staff members of the first Senior Officers' General Dentistry course held at the CFDSS in Borden from 19 Jan 77 to 2 Feb 77.

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Reverse Pin-Retained Cast Restorations

MAJOR C.H. HAWKINS, BSc, DDS.*



The reverse pin-retained casting technique is ideally suited for restoring severely broken down vital posterior teeth with little remaining clinical crown. It depends on the use of Harmony Cor-Pins¹ of the same type employed in the fabrication of cast backings for reverse pin porcelain facings. They are included in the wax pattern of the backing and have the property of being easily removed from the completed casting.

In the reverse pin-retained cast restoration the required tooth preparation can be done quickly, simply and with minimum tooth reduction. The resulting crown has proven to be highly retentive; hence it is not necessary to extend the preparation to extreme sub-gingival depths in an attempt to create sufficient length for retention.

PREPARATION

Unsupported areas of enamel and dentin are removed, adequate occlusal clearance is created, and a suitable finish line is established.

Sufficient Threadmate Regular TMS² pins (0.031" diameter) are placed in the tooth (usually no more than four are required). It is not necessary to make the pin holes parallel for reasons explained below, but normal care must be taken to avoid the pulp chamber and the periodontal ligament. The pins are cut so that at least 3mm remain exposed (Fig. 1).

A short length (approximately ½ inch) of orthodontic tubing (0.030" inside diameter) is placed over each pin. The tolerances are such that the 0.030" tubing fits snugly over the 0.031" pin. By observing these extensions in a mesial-

distal direction, then in a buccal-lingual direction, the tubing can be used to bend the pins and render them parallel. Because the pin length is increased by the tubing, parallelism can be readily assessed (Fig. 2).

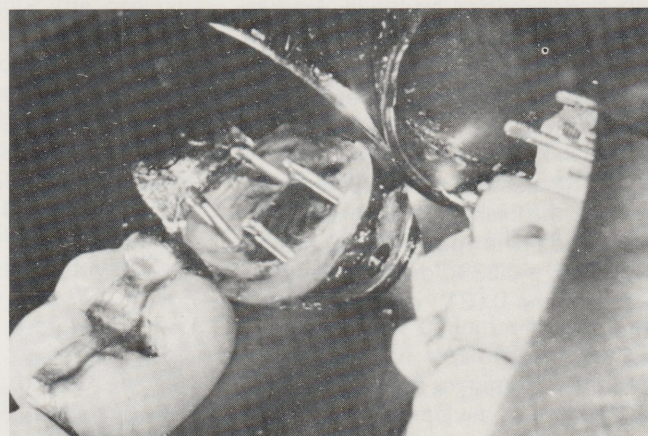


FIG 1

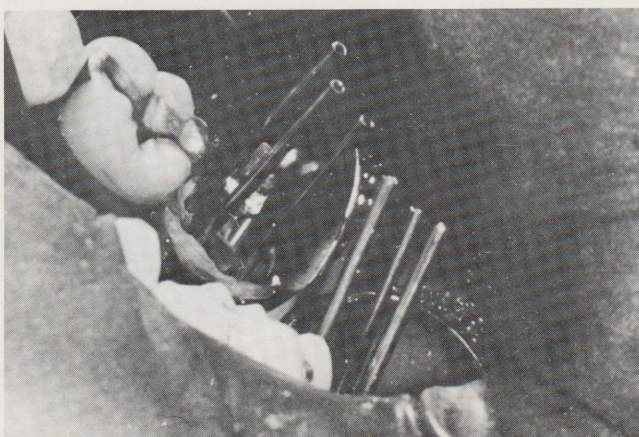


FIG 2

*Maj Hawkins is Base Dental Officer at CFB Gagetown. He wishes to credit LCol Clark McCoy, United States Army Dental Corps, for his suggestion of this technique.

IMPRESSION

The lengths of tubing are removed and a rubber or hydrocolloid impression is made in the usual manner.

Pieces of orthodontic wire (0.032" diameter) are placed in each pin hole in the impression to its full depth with about 1/4" left protruding from the hole (Fig. 3).

The impression is poured and the die recovered. The orthodontic wire now represents the pins in the tooth (Fig. 4).

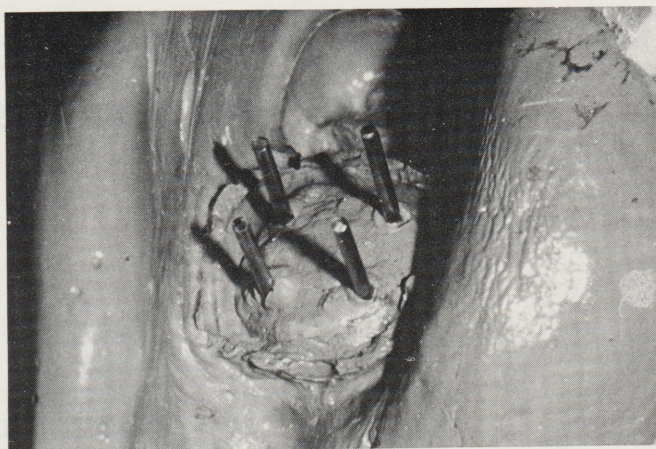


FIG 3

CASTING

The crown is waxed up on the die in the usual manner.

The wax-up is removed and "Harmony Cor-Pins" (0.033" diameter) are inserted into each pin hole in the pattern (Fig. 5).

The pattern is invested and cast.

The casting is recovered (Fig. 6) and the Harmony pins are easily removed with pliers. The casting now has a 0.033" diameter hole for each of the 0.031" diameter pins in the tooth.

The casting is finished and inserted.

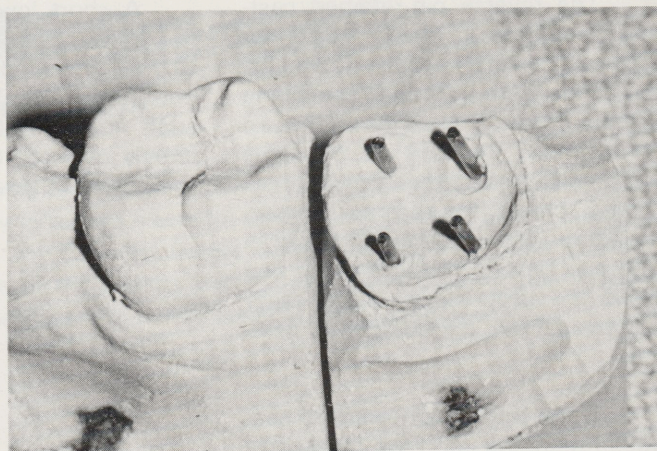


FIG 4

REFERENCES

(1) Harmony Cor-Pins, Harmony Dental Products Corp., 1118 El Centro Street, South Pasadena, California.

(2) Threadmate TMS Pins, Whale-dent International, 236 Fifth Avenue, New York, N.Y.

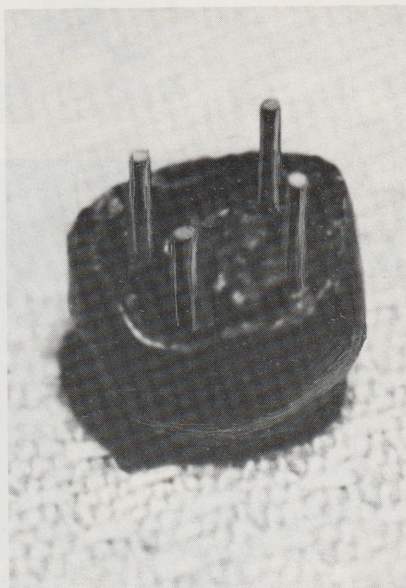


FIG 5



FIG 6



Temporary Duty in Moscow

*LCol J.H. Marion, CD, BA, DDS, MSc. **

Relatively few military dental personnel are aware that the CFDS has agreed, since 1972, to provide dental treatment to the Canadian Embassy staff and their dependents in Moscow. Every year the Division of Dental Services attempts to work out biannual visits by CF dental teams. The visits normally extend for ten working days and take place in early summer and late fall.

The Canadian Embassy staff in Moscow is composed mostly of personnel from the External Affairs Department. The Department of National Defence is responsible for providing military attachés and their supporting staff to the Embassy. At present, an air defence military attaché in the rank of colonel, a naval military attaché in the rank of lieutenant-colonel and another attaché representing the land element also in the rank of lieutenant-colonel are fulfilling the tasks of military attachés and of military advisers to the Canadian Ambassador. The supporting staff is normally composed of three NCO's usually of the rank of sergeant. They are kept busy with a wide variety of clerical duties.

FIRST IMPRESSIONS

Service stations or dealer's garages, such as we know them in Canada, are non-existent in the USSR. During our two week stay in Moscow, we never saw a garage providing the routine lubrication and

grease job service so common over here. We were told that the twenty taxi fleets servicing the capital city possess one thousand (1,000) cars each and their own servicing and maintenance facilities. The same applies for the large fleet of state staff cars. How does the ordinary citizen cope with this situation? Well, usually, he does not have that worry since he does not possess a car; and if he does, he would be wise to be mechanically inclined! The Canadian Embassy possesses over a dozen staff cars mostly Canadian or American built. These cars, operated by Russian drivers get their greatest use out of driving Canadian Embassy personnel to and from work.

MWO M. Fediuk and myself were fortunate enough to be the members of the CF dental team to visit Moscow between 14 Jun — 1 Jul 1976. After a direct 11½ hours Air Canada flight, during which our DC 8 airliner travelled 7000 miles, we landed at Sheremetyevo, the Moscow Airport, situated at approximately 35 kms from the city. Our first strong impression of Russia came early, more precisely at de-boarding time. The presence of numerous soldiers on the tarmac, was a rather unsettling sight. However we soon discovered that such a display of uniforms is a rather

familiar scene and had nothing to do with our arrival!

Members of the CFDS dental team wear civilian clothes while in Moscow. The identification of the Canadian Air Defence Attaché who came to meet us at the airport did pose a slight problem since he was also dressed in "civvies". We were informed later that Embassy military personnel in Moscow don uniforms on but two or three occasions in the year. Those special occasions consist of the celebration of the Soviet Armed Forces Day, Revolution Day, and the attendance of state funerals.

Given the diplomatic status of our host, the custom formalities were kept to a minimum and we soon found ourselves in a staff car en route to Moscow. If you think that driving is bad anywhere in Canada you would consider it a haven compared to Moscow. The speed limit is officially 60 km / hr but very little effort is expended to enforce it. Taxi and Embassy drivers are common offenders. On many occasions we saw the speedometer fluctuate between 100 - 120 km / hr right in the middle of Moscow! Admittedly, the USSR's Capital City does display a great number of unusually wide avenues. These larger boulevards, many of which fan out from the Kremlin, the heart of the city, are interconnected by a broad inner ring road, while an outer ring encircles Moscow at its periphery.

*One of two CFDS specialists in orthodontics, LCol Marion is currently BDentO at CFB Petawawa.

ACCOMMODATION

Hotel selection is not an individual's prerogative in Moscow. The state controlled travel agency In-tourist decides in which hotel you will be lodged. In all likelihood it will not be your choice, and it will do absolutely no good to argue the point. Their hotels are substandard when compared to ours. Cozy lobbies displaying wall to wall carpeting, comfortable arm chairs and coffee tables are nowhere to be seen. Their's are bare and rather austere in appearance. They look more like our train station lobbies.

We were left with that impression after visiting two of their best hotels, namely the Ukraine and the Rossija. The Rossija (Photo 1) is their newest hotel. The Russians boast, and rightfully so, of it being

the largest in the world; it contains the astronomical figure of 6,000 beds! We visited these hotels in search of a refreshment and a newspaper. We were disappointed on both counts. Foreign newspapers in various languages are indeed available... if one will settle for a Communist paper. The quality of service on the other hand is rather indifferent.

Previous dental team units were lodged in commercial establishments. We were fortunate in that the Naval Military Attaché, on leave at the time, graciously offered us his apartment for the length of our stay. With the apartment came a Russian maid, by the name of Nina, who proved to be a wonderful and helpful person. She made tasty "borsch" soup and a variety of typical Russian dishes. Her cooking was delightful and much superior to

meals obtained in commercial establishments.

The apartment was located in one of those huge apartment blocks wherein most Muscovites live (Photo 2). Our apartment block, on Kutuzovsky Avenue, was situated only five buildings down from Comrade Brezhnev's own block. We were amazed to find out that the facade of those massive apartment blocks presents no entrance doors. The only access to the apartments is through a narrow archway provided through the building. The apartment block we were in was referred to as a diplomatic ghetto, since it exclusively houses diplomatic personnel from various embassies and their families. The courtyard featured a sentry box manned around the clock by a uniformed guard.

One day, as we were waiting for a chauffeur to pick us up for an afternoon at the beach, the guard called us over to his sentry box and to our gasping surprise offered us a capped bottle of beer to take along. Although Russian beer is somewhat sour and watery, Merv was not about to turn down such an offer! This friendly gesture on the guard's part was accompanied by a broad glittering smile whereby he displayed all of his dental work. A cursory examination convinced us that the individual must have been yellow coded prior to his dental rehabilitation. The majority of his teeth were covered with complete stainless steel crowns, including his maxillary incisors. As a matter of fact, we found this type of dental work rather prevalent in Moscow, whether it be of necessity or as a status symbol. Gold is also used but less frequently since the patient is financially responsible for the quantity used.

DENTAL ASPECTS

Up until now, CF dental teams have operated in a dental clinic situated in the US Medical Dispensary of the American Embassy. Although equipped reasonably well, the clinic is completely inadequate spacewise, measuring roughly 5 X 7



Photo 1 - The Rossija Hotel in Moscow



Photo 2 - Typical Russian apartment blocs

feet. Our Canadian contingent, comprised of the Embassy staff and their families, totals approximately 85 people. The first day and a half at the clinic consists of dental examinations. The dental condition of most of the personnel is understandably good. Before leaving for a two year assignment in Moscow, everybody is required to present a clean bill of dental health. The prerequisite makes sense on the part of both the Canadian Government and the patient since dental emergencies have to be evacuated to Helsinki if North American dental standards are to be maintained. Such a trip represents a sixteen hour journey which can be exaggeratingly long when one is suffering from a dental abscess! The Canadian Government also stands to gain considerably from such a dental fitness policy since it must absorb the costs for any "dental" evacuation deemed necessary by the British physician. The average travel claim for a dental appointment in Finland adds up to \$350, excluding the dental bill which is the patient's responsibility.

Our treatment phase started with a rather unpleasant experience. Approximately one month prior to our visit in Moscow, the dental compressor in the US Medical Dispensary became unserviceable. Although a new compressor, to be used in the interim, was rushed to Moscow via DGDS channels, the American physician did not particularly agree with such a temporary solution. After a fair amount of shopping around, a local compressor was purchased and installed. To our dismay, we found out that the compressor delivered a pressure equivalent to 60 lbs / sq in. instead of the desired 30 lbs / sq in. The Russian technicians summoned to our help informed us that no adjustment was possible. They encouraged us not to worry and assured us that there was "niet problem". We proved them wrong. After a short period of operations with the airtor we were amazed, upon lifting our eyes, to see a heavy mist fill the entire dispensary. The tremendous pressure generated by the

compressor had mixed the airtor oil with water droplets, with the result that these fine droplets were suspended in mid air and dispersed throughout the room. Fortunately, the Canadian technician servicing the Embassy, managed to adjust the compressor and after proper airtor maintenance, we were once again ready for operation.

The possibility exists that the next CF dental team will operate out of the Canadian Embassy. Since the various authorizations required have to be obtained from different departments, it could be a long drawn-out process. However, accommodation for a dental set-up is available at the Embassy and the DGDS staff is working on the project. *Plans for a new Canadian Embassy in Moscow already exist and provisions have been made therein for a dental clinic. However

the target date for the erection of the new building is 1981.

*As of Feb 77, arrangements have been completed by the Division to have CFDS dental teams operate out of their own clinic in the Canadian Embassy (Ed).

TOURING MOSCOW

Our first opportunity to tour Moscow came early. One of the members of the Embassy staff invited us to see Red Square soon after our arrival (Photo 3). It is impressive by its gigantic size and by the beautiful display of architecture surrounding it. The "pièce de résistance" is without a doubt St Basil's Cathedral, with its colourful onion domes (Photo 4). This church was commandeered by Czar Ivan the Terrible. Legend has it that when the church was completed, the Czar was so impressed with it that he requested both architects responsible for this masterpiece to come



Photo 3 - The famed Red Square



Photo 4 - St Basil Cathedral

and see him. After being assured by them that they would in all likelihood build a replica of St Basil, he ordered them to be blinded so that such a monument of rare beauty would remain unique!

Opposite St Basil, at the other end of the square, lies an imposing red building known as Lenin's museum. The sides of Red Square are lined on one side by huge government buildings and on the other by the red crenellated Kremlin wall. The square is a centre of attraction and a place of reverence for all Soviets since it harbours Lenin's mausoleum. Within this massive granite structure, backed against the Kremlin's wall, lies, admirably preserved, the architect of the Communist Revolution. Queuing, a commonplace in Moscow, is particularly noticeable at this location. In fact, line-ups up to a mile long are not uncommon. As a reward for past achievements, peasants and workers are bussed into Moscow from all over the country in order to catch a glimpse of their hero. National costumes of the inhabitants of the various socialist republics are a common sight in the winding queue to Lenin's tomb. It must be remembered that Russia is only one of the fifteen republics making up the USSR. It is of course the largest and most important.

Moscow is one of the youngest capitals of Western Europe. Its

origin is traced back to less than 900 years. It started as a fortress, or "Kreml", on a hill overlooking the Muskova River. The city of Moscow, today rich with a population exceeding 7,000,000, radiated from the Kremlin, now the heart of the city. The Kremlin is surrounded by a crenellated brick wall approximately 20 feet high and 1½ mile long. Sixteen guard towers project from the wall at various points along its perimeter. Some of these provide entrance ways to the Kremlin. This fortress, once the residence of the Czars, is nowadays the home of the Supreme Soviet. Besides the government buildings, it harbours many administrative, cultural and historical buildings (Photo 5). It also contains what is referred to as Cathedral Square. The cathedrals, now museums since the October Revolution, are closely associated with the Czars' reign. The monarchs used to be crowned in Assumption Cathedral, worshipped in Ascension, and buried in Archangel. These churches still exhibit on their walls well preserved and valuable Russian icons.

LIFE IN MOSCOW

Muscovites are eager for entertainment of all kinds. Tickets for ballet performances, operas, puppet theatres, circuses and sporting events are extremely hard to come by. One of the reasons probably lies in the fact that tickets for these vari-

ous activities are very inexpensive, running between 1 to 3 rubles (1 ruble = \$1.30). But after two weeks spent in Moscow we would be inclined to think that sheer boredom with their way of life might be the prime motive. Muscovites in general do not appear carefree, nor happy of their lot. They seem constantly worried about the bare necessities of life, hurrying to and from work, rushing into stores which have very little to offer, queuing on the sidewalks awaiting their turn to get in a store to make a purchase; and all that without exchanging a smile or indulging in mild chatter. Daily life appears like a constant struggle.

Taxis are plentiful in Moscow but unpredictable when you need transportation. One late afternoon, we were unsuccessful in obtaining a taxi ride home even after approaching four different cab drivers who seemed otherwise available. We learned later that taxi drivers work every other day and have a certain distance to log during their twelve hour shift. They stand nothing to gain from any additional trips thereafter.

While riding in a cab one day, we made an interesting observation; the windshield wipers were missing and the windshield wiper arms were wrapped in a piece of cloth to protect any scratching of the glass. Our driver was prompt to enlighten us; pilferage is rampant in Moscow, and given the chronic shortages that plague the state stores, it is worth one's while to lock up those attractive wipers in the trunk of the car until they become necessary!

SHOPPING IN MOSCOW

Tourist shopping in Moscow is best done at special hard currency stores called "beryozba." They number approximately eight for the city of Moscow and offer quality Soviet goods. Soviet currency is not accepted in those hard currency stores and only Russians with special permission may shop there. The other state stores display few



Photo 5 - Buildings within the Kremlin

goods that could appeal to Westerners. As one Canadian tourist aptly remarked on our way back to Canada: "Never have I had such a hard time to spend my money shopping." The main department store in Moscow is the GUM store. Although impressive with its balconies and archways, it had very little to offer in terms of selection and quality. Shopping for the average Muscovite is tantamount to a struggle. Considerable time is spent everyday in lineups. The art of queuing is ingrained in every Russian and he accepts it as a matter of fact. As Nina, our maid, told us, refrigerators and canned foods are not a common thing in USSR and therefore Soviet housewives need to shop everyday. The conveniences of supermarkets are also unknown. A multitude of stores have to be visited to round up the average shopping list; milk is only found in dairy product stores, meat in meat stores, vegetables in a fresh produce store and bread in a bakery. Ancient wooden abacuses are still widely in use to add up the sales.

The average household spends the greatest portion of its income on food and clothing. Both commodities are more expensive in USSR than in Canada, and by roughly 30% at that. Salaries on the other hand are much lower than here. They fluctuate between 100 to 250 rubles per month, including productivity bonuses. It would be impossible to make both ends meet if the other items that make up the family budget were comparably expensive. Rent is very low, ranging between 12 and 20 rubles per month. Medical and dental care is free, as is education. Public transportation is far from costly; it costs three cents to take the bus and five cents to take the subway. Their transportation system is efficient and fast.

DENTISTRY IN USSR

The delivery of dental care in Moscow is accomplished in large clinics, called polyclinics, disseminated all through the city. Each polyclinic is responsible for a well de-

fined district. If you live in that district, you will receive your dental care at that specific clinic and at no other. We were fortunate in that our request to visit a dental polyclinic was granted by the Minister of Protocol. The polyclinic in question served 103,000 Muscovites. It employed fifty dentists on a two shift schedule: 0700 - 1400 hrs and 1400 - 2100 hrs. The director of the polyclinic was a female dentist, as were many others in various departments. An atmosphere of suspicion prevailed at the onset of our visit, but it was soon replaced by an attitude of friendliness when it was ascertained that the object of our visit was strictly professional in nature. Their state of dentistry is not as sophisticated as in America. Equipment as a rule is antiquated. The clinic director manifested great pride in showing us their most recent acquisition: a modern dental set-up, comparable in fact to dental set-ups that have been in use for some time in the CFDS. As is often the case with quality equipment found in the Soviet Union, it was not made in USSR but in Czechoslovakia.

The staff at our Canadian embassy had told us that in the polyclinics extraction of teeth took place without "freezing". We were therefore highly interested in finding out whether local anaesthetics were in common use. Our interpreter insisted, at our request, that they show us a cartridge or a sample of their local anaesthetic agent. Although they assured us that they used it routinely, such an agent was nowhere to be seen and our request was never granted. On the other hand, the use of ether as a general anaesthetic seemed to be widespread as well as IV sedation. A point of interest was the fact that "freezing" as we know it is not used for operative procedures. They showed us a contraption that makes "freezing" unnecessary in their own words. That piece of equipment resembles a pulp tester in size and contains two electrodes. One of them is clipped to the handpiece while the other is held by the patient, rendering drilling proce-

dures seemingly painless. How does it work? Apparently it would have to do with the electrical current causing a change of polarity in the tooth, thus preventing the transmission of pain impulses. At the end of the visit, we were invited at our great surprise, to go back as often as we wanted to during our stay in Moscow.

Before we knew it, the two weeks of our working holiday had come to an end. One cannot overcome a sensation of relief after clearing the last control check point at the Moscow airport. As beautiful as the capital of Russia is to visit, it is highly doubtful whether a Westerner would ever consider living there. Moscow is in a land where regimentations and controls hamper one's freedom in just too many subtle ways.



Conventional VS High-Speed Rotary Instrumentation in Conjunction With Surgical Procedures

*Capt. R.B. Johnson, CD, DMD**



INTRODUCTION

The problem of removing bone, whether overlying impacted third molars, or for prosthetic and other reasons, has been of concern for the dental profession for many decades. The day of the traumatic procedures, i.e. mallet and chisel, are all but gone. Today we have at our disposal two main techniques for the removal of bone and teeth. These are the conventional and the high speed rotary instruments.

RESEARCH DATA

Many studies have been done with high and low speed rotary instruments regarding the histologic response, periosteal reactions, bony healing, etc., of soft and hard tissues in surgical procedures.

One of the first studies done by Thompson¹ in 1958 had to do with the development of aseptic thermal necrosis of bone attributable to excessive speeds of drilling. These studies were done on dogs using a sterile technique but with no water spray. Also part of the study was the effect of the various speeds and temperature. Speeds of drills were from 125 to 2,000 rpm. Histologic reactions in bone were hyperemia, degeneration of osteocytes, change in bone stainability, and tears and fragmentation of the bone edges around the drill holes. Thermal changes in the bone increased with the increase in drill speeds. This evaluation suggested a desirable speed in the neighbourhood of 500 rpm with the power drill.

Kilpatrick² in 1958 did a study utilizing speeds of up to 200,000 rpm for the removal of third molars, stating the advantages of greater patient acceptance, reduced procedure time by at least one third, and far less unfavourable post-operative sequelae, i.e. pain, swelling and T.M.J. soreness. He made two important points, one of coolant consideration and the other of expertise. If too much coolant was used, the surgical area bled profusely due to slaking of blood cells; but if too little coolant got to the bone, the osseous structures became overheated. From the expertise standpoint, a far lighter touch is required for high speed than conventional equipment.

Moss³ did a study to determine the effects of ultra-high speed cutting upon the cellular response of bone in mongrel dogs. Three ranges were selected: 40,000 to 80,000 rpm; 100,000 to 150,000 rpm; and the ultra-high speed 250,000 to 300,000 rpm. Further, a combination of different burs was used under water spray. By developing an index of viability he was able to measure microscopically the burs' effect upon the cellular elements of the bone. The results, listed next, appear to justify the use of the ultra-high speed cutting technique. These are:

- a. cooling agents reduce bone damage,
- b. increased bone damage was

not produced by cutting in ultra-high speed ranges of 250,000 to 300,000 rpm, and

- c. ultra-high speed cutting effects in bone are similar to, or even less than, those observed at lower speed ranges of 40,000 to 80,000 rpm with adequate coolants.

Another study undertaken to show the effects of high speed rotary instruments on bone repair in dogs was done by E.R. Costich et al.⁴ When bone is cut with rapidly rotating instruments, there is mechanical and thermal injury. In this study cuts were made in mandibles of adult mongrel dogs, using an air turbine rotary instrument with and without a water coolant and a conventional handpiece with and without a water coolant. Radiographically, the ultra-speed cuts made with a water coolant showed a more advanced degree of healing than the other three types of cuts. Microscopically, the heat effect was less and the initial repair response was faster and progressed more rapidly in the cuts produced with the ultra-speed instrument with a water coolant. In clinical practice this might reduce the potential for a localized osteitis and enhance the patient's comfort in the early phases of healing.

*Capt Johnson graduated from the Faculty of Dentistry of U of M in 1974 and is currently employed at CFB Calgary, Alta.

Another serious consideration when doing surgery with high speed rotary instruments is tissue emphysema. Surgical emphysema may be defined as the introduction of air into the subcutaneous tissues either as a result of operator technique or patient action. This entity may become a post-operative problem in dentistry and the gravity of surgical emphysema is emphasized by the research of Rickles and Joshi. These authors showed that even death can result from air forced into the root canals of the dentition of dogs. This air can be delivered with either the air-turbine handpiece or the modern three-way syringe.

In 1900 Turbull recorded a case of subcutaneous emphysema in a bugler who had a tooth extracted and who immediately played his musical instrument; there was subsequent inflation of the tissues adjacent to the extraction site.

Cardo et al⁵ report a case in detail of surgical emphysema in a 16 year old girl. Because this disease is derived from dental manipulation, they term it "iatrogenic dental-air emphysema." They list the problems that can arise in order of severity:

facial swelling, severe pain, infection, respiratory embarrassment, mediastinal emphysema, and death. Treatment for each of these sequelae should be in accordance with the severity of problem.

A further research by Trummer and Fosburg of the medical literature found thirteen separate sources of mediastinal emphysema and they further reported that the medical literature fails to list the high speed air turbine dental handpiece as a source of this problem. Interestingly, surgery is not always the causative agent. Similar conditions may result from root canal therapy and even operative dentistry.

It must be pointed out that differentiation of this entity from hematoma, abscess, angioneurotic edema, and gangrene is essential in the institution of a proper treatment plan.

CONCLUSION

High speed bone reduction with water coolant has the following advantages:

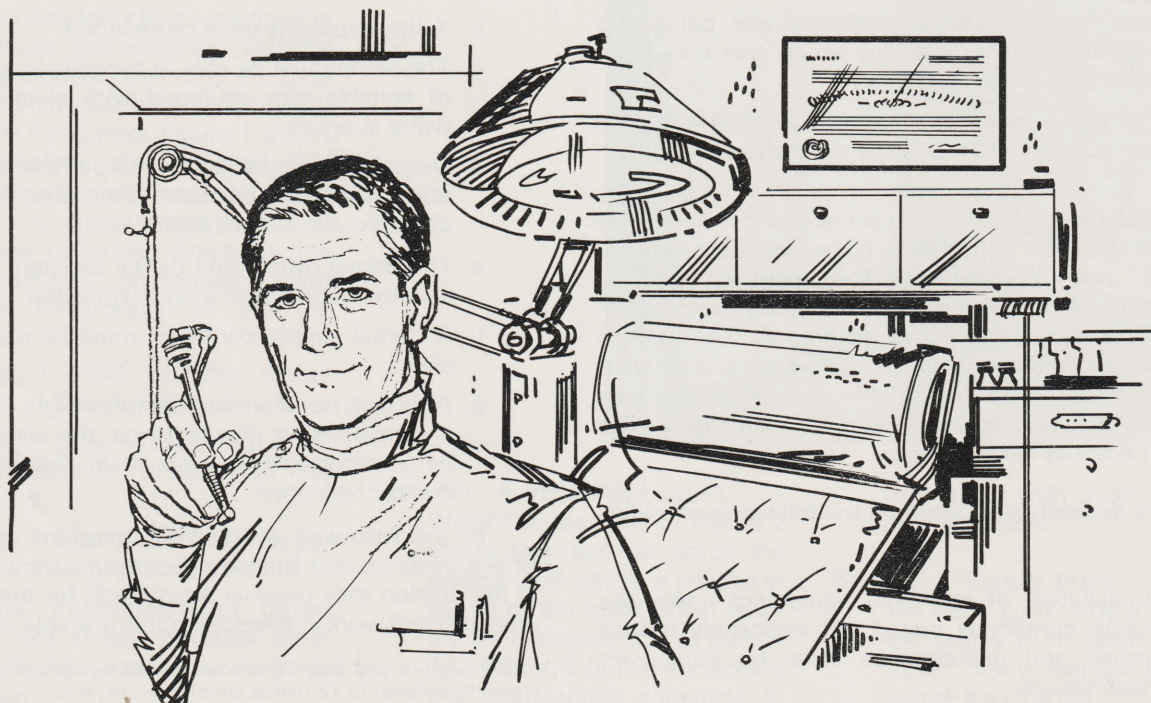
- a. greater patient acceptance,

- b. less unfavourable post-operative sequelae, and
- c. less procedure time.

The use of the forced-air type turbine is to be avoided.

REFERENCES:

1. THOMPSON, H.C. — Effect of Drilling into Bone, *J Oral Surg* 16: 22-30, 1958.
2. KILPATRICK, H.C. — Removal of Impacted Third Molars Utilizing Speeds up to 200,000 R.P.M., *J Oral Surg, Oral Med and Oral Path* 11:364-69, 1958.
3. MOSS, R.W. — Histopathologic Reaction of Bone to Surgical Cutting, *J Oral Surg, Oral Med and Oral Path*, 17: 405-413, 1964.
4. COSTICH, E.R. et al. — A Study of the Effects of High Speed Rotary Instruments on Bone Repair in Dogs, *J Oral Surg, Oral Med, and Oral Path* 17: 563-571, 1964.
5. CARDO, V.A. and MOONEY, J. W. and STRATIGOS, G.T. — Iatrogenic Dental-air Emphysema: Report of Case, *J Am Dent Ass* 85: 144-147, 1972.





WO M.D. LONGFORD, CD
MCPL C.C. SHAVE, CD*

**INTRODUCTION BY COL D.H. PROTHEROE,
COMMANDING OFFICER OF 12 DENTAL UNIT**

12 Dental Unit is responsible for providing dental services at seven locations on a part-time basis. Following personal visits to these locations and subsequent assessment of reports submitted by different dental teams certain facts became obvious:

- a. Dental equipment in our part-time clinics was in some instances obsolete or unsuitable for modern sit-down dentistry. Many dental officers complained of this situation.
- b. Dental equipment had a tendency to deteriorate when left idle for months at a time; additionally, the start up time was excessive and frequent breakdowns occurred.
- c. A disproportionate amount of dental equipment technician time was being used to maintain and repair this equipment.
- d. Much needed accommodation was being tied up for dental equipment which was only used four to six weeks per year.
- e. All part-time clinics were over-stocked with dental supplies and this led to excessive wastage.

These facts indicated that some changes needed to be made and there appeared to be two possible options. The first was to update the equipment in part-time clinics with better equipment displaced from static clinics (through re-equipping programs). The second option was to remove obsolete equipment and develop a complete and modern portable clinic that could be set up in available space at part-time locations. The latter choice was decided upon.

This decision was based on the following considerations:

- a. Installation of improved equipment under the same conditions would not noticeably reduce repair and maintenance visits by equipment technicians.

A Complete Portable Dental Clinic

- b. The equipment which would be installed, although better, was not always designed for modern sit-down dentistry.
- c. Installation of equipment would continue to tie up accommodation for a part-time service.
- d. On the positive side, the use of portable equipment would be equivalent to field training which was sorely needed.
- e. Supply containers would be incorporated in the portable clinic and eliminate the wastage previously referred to.
- f. Development of the portable clinic would be a challenge and good training for Unit equipment technicians.
- g. A dental service could be provided on short notice and at locations where equipment was not previously installed.

The instructions given to WO Longford and MCpl Shave were fairly general but the following guidelines were to be applied:

- a. The ADEC field unit, chair, light and compressor would be the basic components.
- b. X-Ray capability must be included.
- c. The setup must be able to function in any space of suitable size equipped with electricity and water supplies.
- d. Dental teams must be able to perform any operation with the portable clinic that could be carried out in a static clinic.
- e. The dental officer and dental assistant must be able to operate from a seated position.
- f. A dental supply container must be part of the clinic.
- g. Although not a primary factor, weight was to be a consideration. For instance, the clinic should be transportable by truck, train, fixed-wing aircraft or helicopter.

In the following article WO Longford and MCpl Shave describe and illustrate the result of their efforts. In my opinion they deserve great credit for their ingenuity and hard work in developing this portable clinic.

*WO Longford and MCpl Shave are dental equipment technicians presently assigned to 12 Dental Unit in Halifax, N.S.

A great deal of thought and planning was necessary following receipt of instructions from our Unit Commanding Officer, Col Protheroe. Essentially the problem, as it was presented to us, was to develop a complete portable clinic using existing equipment, which would permit dental teams to function in any location at the same level as in a static clinic.

To satisfy the requirements of modern dentistry, it was necessary that both the dental officer and the dental assistant be seated on casted stools, beside a low thin-backed lounge chair near a low profile dental unit. The ADEC field unit, chair and compressor met these specifications except for a second operating stool which had to be incorporated into the overall setup.

Other items considered necessary to give the dental team the desired capability included: X-ray machine, processor and illuminator, ultrasonic scaler, surgical suction, amalgamator, sterilizer, operating light, pulp tester, instrument cabinet, extension cords and dental supplies.

After much planning, trial and error, frustration and liaison with the CO, dental officers and dental assistants, a complete clinic contained in eight boxes and weighing 1075 lbs was developed. The total package may be increased by a second supply trunk if required. Figure 1 shows the complete clinic packed and ready for shipment from the repair section. A cursory description of each box or trunk, which by the way contains photographs and packing instructions in the lid, follows:

Box No. 1 ADEC portable dental unit — Weight 65 lbs, 3 cu ft.

Box No. 2 DEN-TAL-EZ field chair and stool — Weight 180 lbs, 8 cu ft.

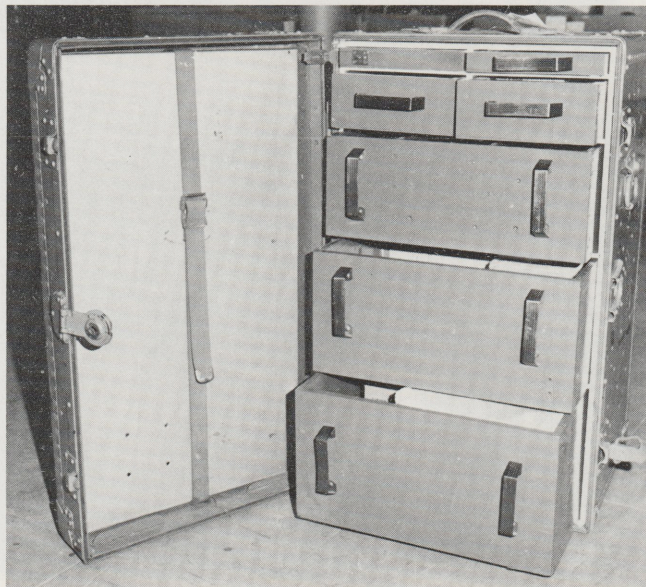
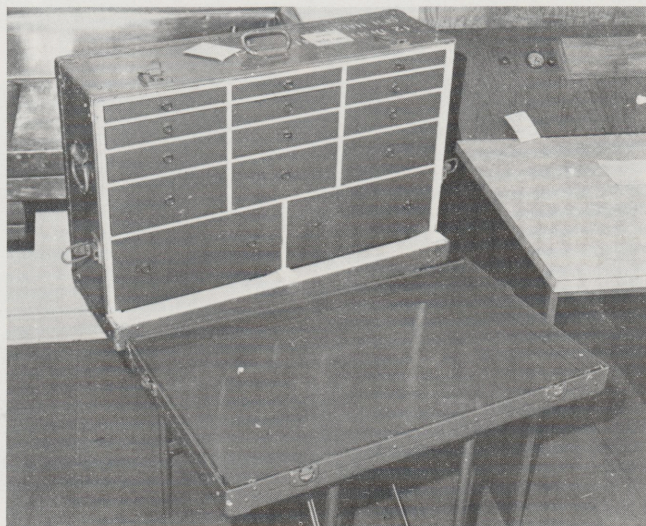
Box No. 3 Gast portable compressor — Weight 120 lbs, 5 cu ft.

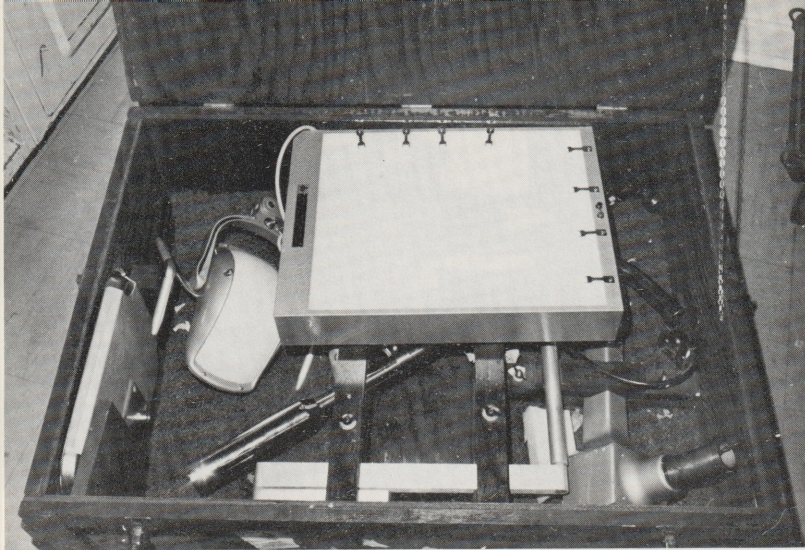
Note: Photographs of boxes 1-3 are not shown because most personnel are familiar with this equipment.

Box No. 4 Instrument trunk — Weight 85 lbs, 5 cu ft. Figure 2 shows this item set up on the folding table which is packed in the lid of the trunk. Most readers will recognize this as the old "A" Kit. It is hoped to replace this arrangement sometime in

the future with some type of mobile cabinet.

Box No. 5 Supply trunk — Weight 145 lbs, 7 cu ft. Figure 3 shows the supply trunk open for use. Again many readers will recognize it as the old "C" trunk.





- c. Head-rest and post
- d. Clarimat Auto Developer
- e. Sterilizer solution
- f. Protective apron
- g. Dental assistant stool

Figure 5 shows the X-ray box with trap doors open for the X-ray support post and head-rest support post. Figure 6 shows the box open with its contents. Figure 7 shows the X-ray apparatus and box in their operating configuration.

Box No. 8 Accessory Box — Weight 170 lbs, 9 cu ft. This box contains the following items:

- a. Gomco suction apparatus
- b. Cavitron ultrasonic scaler unit
- c. Toothmaster amalgamator
- d. Harvey sterilizer
- e. Pulp tester
- f. All necessary cords, foot controls, tips, etc.

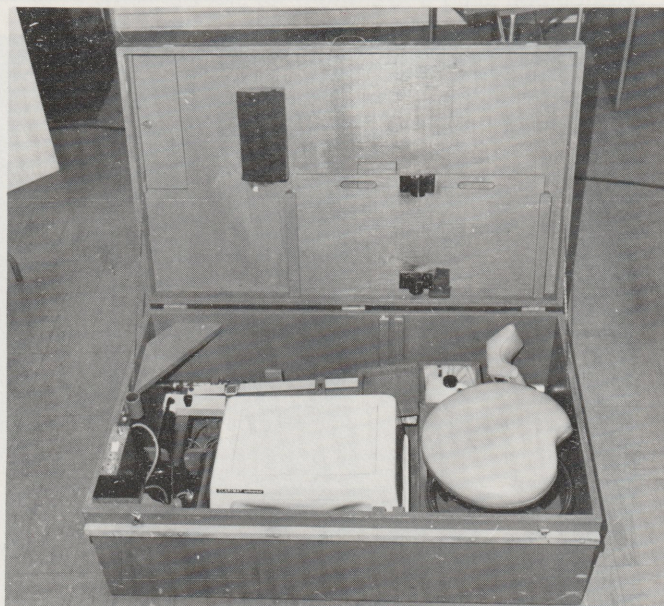
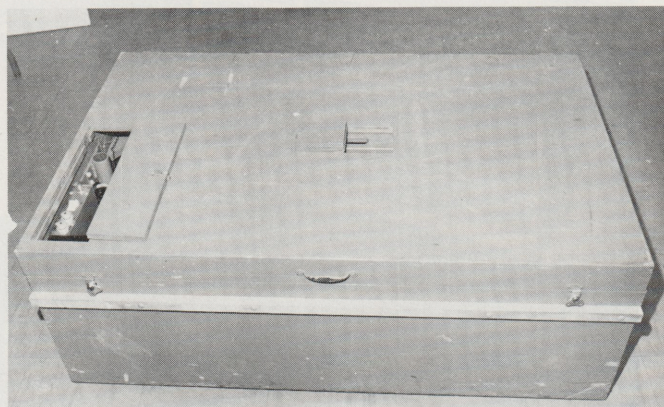
Figure 8 shows the box with equipment in position. Figure 9 shows the equipment removed from the box. Each item is readily identifiable. The sterilizer slides out for separate use.

It will be noted that boxes 1 to 6 were either available through CFDS sources or pre-designed by the manufacturer. It became our task to modify equipment and design boxes 7 and 8 in such a way as to ensure that the portability concept could be maintained. Further comments on these items follow:

The X-ray Box (Figures 5, 6 and 7)

It was decided that the X-ray box must fulfill certain conditions:

- a. It must require no tools for assembly.
- b. The X-ray head and arm must remain in one piece.
- c. The box must feature a head-rest and serve as an X-ray chair.
- d. The X-ray head must be fully protected.
- e. The box must be long enough for the support posts.



Box No. 6 Box contains the operating light, support post, instrument tray and X-ray illuminator. Weight 95 lbs, 8 cu ft. The X-ray illuminator which had just been received is not secured in position (Figure 4). The box was constructed at

the Dental Equipment Depot by CWO Everett.

Box No. 7 X-ray Box — Weight 215 lbs, 16 cu ft. This box contains the following items:

- a. X-ray, Phillips Oralex
- b. X-ray support post

- f. The box must provide a stable base for the X-ray unit.
- g. It must be strong enough to withstand rough usage and handling.
- k. The arrangement must incorporate an X-ray control panel and line cords which would be accessible with the box lid closed.
- i. Extra space must be available to contain other equipment.

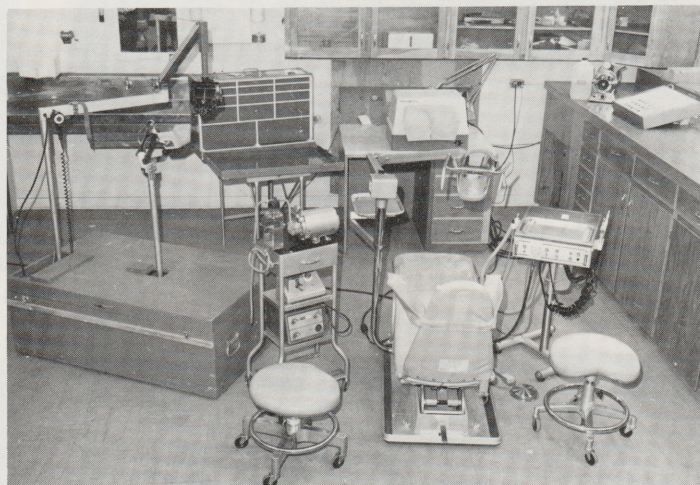
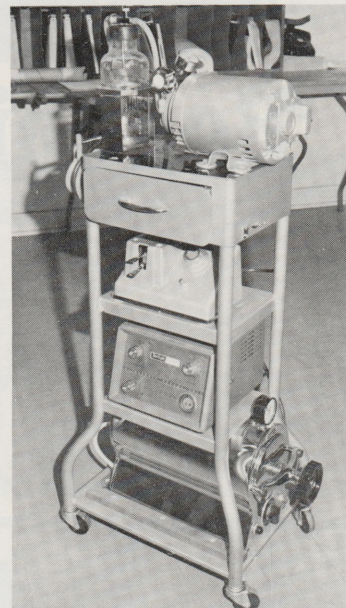
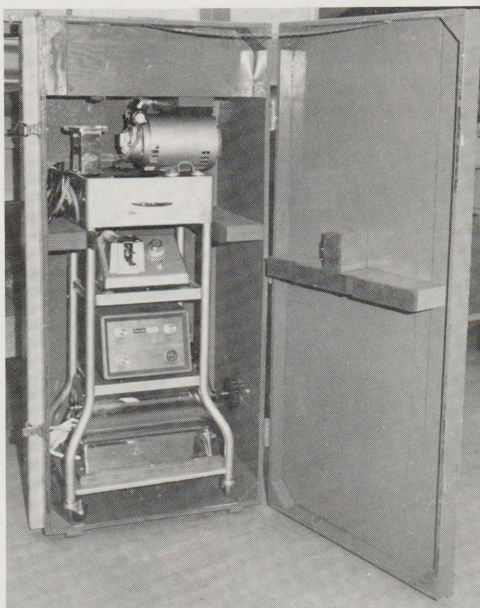
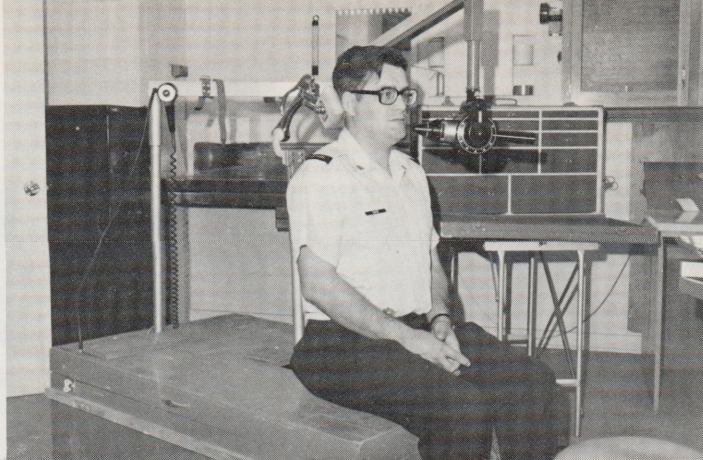
The Accessory Box (Figures 8 and 9)

We decided that remaining accessory items could, with some modifications to a Gomco cart, be incorporated into one mobile accessory unit. First, two extra shelves were welded up to the legs of the cart. The one inch plywood top was removed and replaced with Arborite. The casters were replaced with smaller ones. The complete cart was repainted to match the equipment it supported. Finally, the Gomco motor was repositioned on the cart top to make room for the bottle holder.

An amalgamator was mounted on the first shelf, with an ultra-sonic scaler on the second and a sterilizer on the third. The latter is removable, while the others are permanently mounted, with the wiring for all components concealed in one of the rear legs.

Completed Clinic

With the completion of the accessory box the clinic was ready for operation (Figure 10). As previously stated, the total weight is 1075 lbs. Setting up or dismantling the clinic requires the use of one eight-inch adjustable wrench and about two hours work. The kit has undergone extensive use for nearly two years and has proven itself very versatile. Dental assistants (male and female) have encountered little difficulty in setting it up and it has been transported by truck, Hercules aircraft and helicopter with no damage to the equipment.



We are very gratified by the favourable acceptance of this equipment by both dental officers and dental assistants. Nearly every report submitted by dental officers following dental team visits to part-time locations has included a comment on how much they enjoy

doing dentistry with this mobile setup. In some instances it is actually preferred to the equipment in their static home clinics. We are now working on a second clinic and hope to make improvements based on the knowledge gleaned from our first experience.

15 th Annual Bonspiel



Winners "A" Event



Left to right are WO N. Highfield (2nd), LCol D. Jones (Skip), MWO M. Kidd (3rd), Sgt G. Bowser (Lead).

Runners-Up "A" Event



Left to right are Mr. J. Clint (Skip), Dr. R. Bryant (3rd), Mr. G. Kempt (2nd) and missing Mrs. H. Evans (Lead).

Winners "B" Event



Left to right are LCol F. Begin (Lead), LCol M. Donely (3rd), WO J. Schultz (Skip), Col J. Wright (2nd).

Runners-Up "B" Event



Left to right are Mr. Batten (3rd), Mr. Pollock (Lead), Mr. Kennedy (Skip), Mr. Tait (2nd).

Winners "C" Event



Left to right are WO H. Ayerst (Skip), MWO R. Todd (3rd), WO M. Arbour (2nd), Cpl D. Hurley (Lead).

Runners-Up "C" Event



Left to right are CWO R. Matheson (Lead), Sgt R. Lindsay (3rd), MWO E. McFadden (Skip) and missing Sgt H. Bigras (2nd).



Gen Kearney presenting Horse's End award to the 15 Dental Unit team.



Left to right are Gen Evans, Gen Thompson, Gen Kearney and Gen Baird.



Gen Evans presenting Horse's Head award to 35 Field Unit team (Maj Ayotte accepting).

Horse's End Award — 15 Dent Unit Team

Horse's Head Award — 35 Field Dent Unit Team (for making it to the event!)

The Dean's Knob — Dr. J.W. Neilsen (Dean of the Faculty of Dentistry, University of Manitoba)



Maj W. Budzinski presenting Dean's Knob award to Dean Neilsen.



CFDS NEWS

COLONEL J.C. BRICK RETIRES

Colonel John C. Brick, Commanding Officer of 14 Dental Unit, has retired from the Canadian Forces after a long and conspicuous career involving some 41 years of military service.



Born and raised in Windsor, Ontario, Colonel Brick first enrolled in the Non Permanent Active Militia in March 1936. He was commissioned as a Lieutenant in the Essex Scottish Regiment in April 1939, and on the outbreak of World War II was appointed Battalion Signals Officer and proceeded overseas with the Regiment in 1940.

After two years of training in England, Colonel Brick landed on the shores of France as part of the Canadian troops involved in the Dieppe Raid in August 1942. Colonel Brick was taken prisoner of war the day after landing and spent the next three years in various POW camps throughout Germany. Colonel Brick was the last member of that famous raid still serving in the Regular Forces.

On his return to Canada in 1945, he enrolled in the Faculty of Dentistry at the University of Toronto. He graduated with a degree in dentistry in 1949. Although Colonel Brick's father was a practising civilian dentist, the call to arms beckoned once more and Col Brick enrolled in the Royal Canadian Dental Corps as a dental officer in 1949.

Highlights of his career have included being the first dental officer posted to the Air Division in Europe on its formation in 1952, a position as a staff officer at Mobile Command Headquarters in 1967, the first such appointment for a dental officer, a tour with the Dental Services Division at NDHQ, and his last position as Commanding Officer of 14 Dental Unit with concomitant appointment as Command Dental Officer for Air Command Headquarters.

Of significant importance to those serving in Europe today is the fact that the dental service presently provided to dependants is a direct result of Colonel Brick's initiative and personal concern. On arrival in Gros Tenquin in 1952, he recognized the desperate situation that existed for the dental care of dependants of the airmen serving in Europe; so he designed and set up a system for hiring a civilian dentist to work on the Base, a most unorthodox idea at the time. The idea worked so well that the system has survived to this day and is used in Canadian Forces Europe.

Next to his professional ability as a dental officer, Colonel Brick's foremost interest lies in the field of competitive shooting and he is ranked among the most informed

people in that domain. The Minister of National Health and Welfare requested his services for the Olympic Games through the auspices of the Federal Cabinet and this was approved in 1974. He took part in the Games as the Assistant Technical Director for Shooting. Although the shooting officials were all experienced personnel, the support personnel were not. Under Colonel Brick's direction terms of reference and sequences of command were instituted and the Game finals were conducted without a single hitch, incident or protest. This was publicly acknowledged by the president of the Union of International de Tir in the closing ceremony of the shooting sports.

In the marksmanship department, Colonel Brick's most outstanding achievement was the organization of an army headquarters rifle team on the direction of the Adjutant-General (then Brigadier W.A.B. Anderson). He not only formed and trained the team but they won the regular army championship and represented the Canadian Army at the Commonwealth matches in England in 1964. He is one of three officers in the Canadian Forces today entitled to wear the Letson Trophy Badge. In civilian shooting competitions Colonel Brick has represented Canada at national matches in Australia and in New Zealand in 1968 and 1972. He has shot for Canada on the National Rifle Team in England in 1970, 1971 and 1973. In 1972 he was chosen to be commandant of the Canadian Rifle Team to compete in England. He represented Canada at the matches held in the Caribbean in 1970. He has been nominated as a life member of the National Rifle Association of Great Britain, the

National Rifle Association of United States and the National Rifle Association of South Africa. Recently he was given the highest shooting honour in Canada when Lieutenant-General W.A. Milroy (Ret'd) presented him with the Life Governor's medallion of the Dominion of Canada Rifle Association (DCRA).

The task of reviving a cadet competition known as the Youth of the Empire was also given to Colonel Brick. He wrote new terms for the matches which were accepted by the Director of Cadets and the National Council of Cadet Corps of Great Britain. Through personal liaison with the secretary of the National Council in Great Britain, the matches were fired again under the name of Youth of the Commonwealth. They have continued to this day. To further cadet marksmanship in Canada, Colonel Brick presented the Army Cadet League with a new and completely equipped outdoor target rifle for their use.

In 1974 at the request of NDHQ, Colonel Brick organized the first National Cadet Indoor Rifle Matches. Cadet teams from every province took part (119 competitors) in two days of matches. Colonel Brick conducted the matches as Chief Range Officer. These matches were repeated in 1975 with the Minister of National Defence in attendance. The latter met the young cadets and was overwhelmed by their enthusiasm. To Colonel Brick's credit, he expressed strong appreciation for the support and instruction given to these boys and girls.

Colonel Brick leaves the Canadian Forces to take a position as Assistant to the Registrar of the Royal College of Dental Surgeons of Ontario.

To the Colonel and his gracious wife Jo, all members of the Dental Services bid a fond farewell and wish them every happiness in their future endeavours. It has been a pleasure to know Colonel Brick and to have served with him, the finest officer, gentleman and compatriot one would want to know.

Division News

DGDS CONFERENCE

The annual DGDS Unit Commanders Conference was held at the Government Conference Centre in Ottawa on 3-5 May 77. All Unit COs, accompanied by their Adm Officers, and Division staffs were in attendance to discuss a myriad of topics of importance to the CFDS. The deliberations were ably chaired by Col J.N. Wright (DDTS) under the leadership of BGen Thompson (DGDS).

The gathering was climaxed by a mixed mess dinner which took place at the CFB Ottawa (N) Officers' Mess on 5 May 77. The DGDS and other members attending took advantage of the opportunity to say farewell to Col J.C. Brick, Commanding Officer of 14 Dental Unit. Col Brick will be retiring from the Canadian Forces in early summer after a long and distinguished career in the Dental Services. He will be assuming the position of Assistant Registrar for the Royal College of Dental Surgeons of Ontario. The DGDS and his staff at the Division would like to express their deep appreciation to John and Jo for their continued loyalty and support throughout the years and to wish them happy days in all their future endeavours.

OTHER NEWS

The Director General of Dental Services travelled to Copenhagen on 24-27 Mar 77 to attend a Fédération Dentaire International executive meeting. As reported previously, BGen Thompson is the current Chairman of the FDI Commission on Armed Forces Dental Services. From 28 Mar to 1 Apr, General Thompson proceeded on visits to the dental facilities at Supreme Headquarters Allied Powers Europe (S.H.A.P.E.) in Belgium and at 35 Field Dental Unit in Lahr and Baden, Germany. Here at home, he attended a specialty course in Cardiology for Oral Surgeons on 22-23 Apr 77 at Mount Sinai Hospital, Toronto.

Col J.N. Wright proceeded to CFB Borden to discuss CFDS and CFDS involvement in the FDI / CDA Congress to be held in late October 1977 in Toronto. While in Borden, Col Wright also represented the DGDS at an FDI / CDA organizational meeting in Toronto.

On 19-20 Apr 77 Col Wright acted as chairman for the Stores Committee Meeting which was convened in order to consider the Unit COs review of the CFP 203 Catalogue and to assess all stores investigation projects completed since the last meeting. Over 360 items were scrutinized by the Committee members which included LCol F. Begin (DDTS-3, secretary), Maj E Foley (13 Dental Unit, Kingston), Maj W. Budzinski (CFDSS), Capt L. Hatcher (DDPR-2), and MWO E. McFadden (1 Dental Unit, Ottawa).



LCol M. Donely was appointed chairman for the Course Training Standards (CTS) Board which was assembled at the CFDSS during the period of 28 Mar - 1 Apr 77. On-job training standards were also on the agenda; other members of the Board were Capt W.A. Jackson (CFTSHQ), MWO J.M. Patterson (1 Dental Unit), MWO W.R. Dawson (12 Dental Unit), and WO L.H. Pion (CFDSS).

Dental Officer Training Program (DOTP) recruiting visits were undertaken by LCol V.J. Lanctis at l'Ecole de Médecine dentaire de l'Université Laval on 1st Mar 77 and at the Faculty of Dentistry of the University of Toronto on 18 Mar 77. The topic of DOTP recruiting was addressed during the DGDS Conference and it was unanimously agreed that a concerted effort in the form of a multi-faceted and personalized approach will have to be maintained in order to reach a greater proportion of the student bodies. This could involve greater individual dental officer participation in the various presentations at their respective alma maters.

LCol F. Begin journeyed to Trenton on 10 Jan 77 and presented a paper to the laboratory Workshop entitled "Laboratory Productivity and Efficiency Ratings" which served as background information for subsequent discussions on centralization of CFDS laboratories. On 21-22 he attended a two-day session of the CDA Committee on Health Care held at CDA headquarters in Ottawa. LCol Begin then took in three days of the Senior Officers' General Dentistry Course to hear Dr. D. Smith and Dr. A. Hargreaves speak on dental materials and preventive dentistry (fluorides) respectively.

The Division Project Officer, LCol J.Y. Cyrenne, has also had his work cut out for him in the past few months with the re-writing of job descriptions for the Division staff officers, amending a number of CFAOs and CFDOs, reviewing and redesigning various dental documentation forms, assisting in translation activities, and, finally,

maintaining a working liaison with his replacement in the PCO / Dent office in order to ensure adequate continuity in personnel career matters.

Capt L. Hatcher (DDPR-2) was present on a number of visits as a member of the NDHQ Study Team on centralization of dental supply facilities. He travelled to 1 DED CFB Petawawa on 3 Mar 77; 15 DUSS, CFB St Hubert on 22 Apr 77; 14 DUSS, CFB Edmonton on 26-27 Apr 77; and No 1 CFSD, CFB Toronto on 11 May 77. For his part, WO J. Schultz (DDPR 2-2) journeyed to CFB North Bay on 27-28 Jan 77 to assess the new Weber equipment in that clinic; he then travelled to Trenton on 21-22 Feb to evaluate modifications carried out on Ritter Units; and finally Jack got "his hands dirty again" when he installed various ADEC equipments at CFB Trenton on 28-29 Apr 77.

CFDSS News

VISITS

Members of the Niagara Academy of Dentistry visited the CFDSS in mid-February.

A group of dental practitioners belonging to the Toronto Academy of Dentistry visited the CFDSS on 9 Mar 77. As an added feature for this event BGen Beattie, Base Commander CFB Borden, addressed the group and spoke about the Canadian peace-keeping role in Cyprus.



Dr. Anco (L) and Dr. Wagman of the Toronto Academy of Dentistry are shown with BGen Beattie (Base Commander CFB Borden) and Col Richardson (Comdt CFDSS).

Maj W. Budzinski, Maj E. Cragg, WO H. Ayerst, MWO R. Todd, WO M. Arbour, and Sgt G. Bowser attended the Dent Lab Tech Workshop at Trenton 10-14 Jan 77.

Two outstanding guest lecturers were recently welcomed to the School: Dr. Denis Smith spoke on dental materials while Dr. Anthony Hargreaves presented an update on fluorides, during the Senior Officers' General Dentistry Course which was held from 19 Jan to 2 Feb 77. Student participants in this "first edition" course included Col L. Pierce (13 Dental Unit), Col H. Protheroe (12 Dental Unit), LCol V. Lanctis (Division, Ottawa), LCol M. Deyette (1 Dental Unit), LCol H. Wood (12 Dental Unit), and LCol R. Kettlys (14 Dental Unit).

Candidates on the TQ6A Hygiene Course visited George Brown College in Barrie on 23 Feb 77.

MWO GEORGE BRADLEY RETIRES

On 13 Mar 77 a valuable and much admired member retired from the Canadian Forces Dental Service. MWO Bradley spent 37 years with the Canadian military and his retirement left an enormous gap to be filled. His worth was well recognized and the two successive extensions he was granted are a tribute to the nature of his commitment.



MWO Bradley enlisted as a private in the Canadian Army in 1940. He served with the Dufferin and Haldemand Rifles of Canada from 1940 to 1942. From 1942 until 1952, MWO Bradley served as a dental assistant at various locations across Canada. For the next five years, he was tasked with instruc-

tional duties with a Militia Cadre in British Columbia, where he instructed a Junior NCO course. From 1957 until the present, Borden became his home. George's service at the CFDS included both hygiene and assistant training as well as hygiene treatment duties. He has held the senior dental assistant position here and it was he who organized the Preventive Dentistry programs for DND public schools and high schools.

All members of CFDS salute MWO Bradley. His drive and dedication provided inspiration for us all. We wish him the fullest and most rewarding of retirements.

1

Dental Unit News

TRAVEL

The Ottawa winter has taken its toll again and forced a few of our personnel to seek sunnier climes. MWO June Patterson and her husband decided to be sure and find the sun, and headed for Hawaii. Upon her return, it is rumored that she indicated this area on her PER as her first posting preference!

Mrs. Jewers and Mrs. Mantle also checked the weather reports, and as a result decided on California and Mexico respectively. It was mentioned in a previous submission that Florida was to be the "in place" this winter, but unfortunately, as everyone knows, it turned out that parkas were the dress of the day down that way!

MISCELLANEOUS

Congratulations are in order for Sgt. Glen Hildebrandt on his promotion to Warrant Officer and

to Cpl Pat Searle and Cpl Dick Kosakowski promoted to Master Corporal.

1 Dental Unit has had the opportunity to extend OJT to three young ladies from Algonquin College's Dental Assistant's Course, commencing 1 Mar 77, for a period of six weeks.

11

Dental Unit News

FIFTH ANNUAL DENTAL CARE SYMPOSIUM AND UNIT CONFERENCE

The highlight of 11 Dental Unit activities in the past three months was the symposium and conference held in Victoria 3 - 4 Feb 77. The one-day continuing education program on "Team Dentistry" sponsored by the Victoria and District Dental Society on 3 Feb was very popular. The Unit Conference took place in the exhilarating atmosphere of the Military College at Royal Roads on 4 Feb. The conference was followed by a luncheon in the castle's unique dining room.



11 Dental Unit officers and guests posing in front of the castle at Royal Roads during their annual conference.

ODDS AND ENDS

Maj Rod Carver, PCO / Dent, was a welcome visitor to the West Coast. His timely interviews and conference presentation on Career Development were well appreciated.

Sgt John Wesley attended the Training Systems writing board for the DET trade from 15-26 Nov. The board reviewed the trade specifications and drafted corresponding course training standards.

CWO Herb Bilbey commenced terminal leave on 4 Jan 77 as a result of his retirement from the Canadian Forces. After 35 years of service, Herb was anxious to devote himself full-time to completing his retirement home in Comox. Chief Bilbey was in charge of the HQ Lab in Victoria prior to retirement.

Dental personnel at Comox bade "Bon Voyage" to Sgt Wayne Cudmore who is making his contribution to peace-keeping in Egypt.

Sgt Doug Murley took his release in Dec 76 and is settling in Victoria. Doug has devoted himself whole-heartedly to his church.

Capt Jim Brass was the Santa Claus (no padding) for the Holberg Christmas parade this year. This entitled him to ride the fire truck and distribute gifts to 225 dependants..! His own family was increased with the birth of a daughter on 16 Dec 76.

WO Norm Cable was recently elected president of the Pacific Sea Searchers, a local scuba club. His position as president of the Vancouver Island Dental Hygienist Society has additionally led to his appointment on the planning committee for Dental Health Month 1977.

Maj Paul Kozak is the new president of the Totem Little Theatre in Comox.

Mrs Betts Teetzel of Chilliwack returned from an operation and is now more active than ever.

BONANZA

Five new Weber units were installed in the Naden Clinic along with a new MVS and a compressor. When one considers what this means in new handpieces and stools, added to two new cabinets and an X-ray developer. Whoop'ee!

ABOVE AND BEYOND

The Workpoint detachment's recent request for electric heaters to keep the building warm at night resulted in an amazing reversal of policy in that they now have permission to leave the oil space heater on at night; however it was emphasized that for safety sake bonfires were out of the question, at least as long as the oil supply lasts! (Who in the CFDS still uses oil space heaters?)

SPORTS

Capt Jim Casey, Mel Kropinak and Ken Howie were part of a team competing in the Pacific Region curling playdowns in Chilliwack. They feel that they curled well enough to hold their own but those all-important breaks when to the opposition.

Capt Tom Gordon and Clair Sproule along with MCpl Skip Solomon all participated in the Pacific Region squash playdowns.

12 Dental Unit News

CFDS BONSPIEL

12 Dental Unit did not have a large representation at the CFDS Bonspiel in February; however the quality of the representatives was high in the persons of Maj Harry Amos, Capt Jack Jury, Capt Ken MacDonald and Capt Betty Toporowski. (Some wit will probably say if the quality was so high why didn't they return with some silverware!).

DENTAL SAILORS

Our full-time sailors, Capt Ron Thomas and WO Paul Mehler aboard HMCS Protecteur, should return next month from their present cruise well tanned from having spent most of the winter in the Caribbean and South America. Part-time mariners Capt Rene Mensinga and Pte Remy Anctil returned to Halifax in mid-March looking great and full of stories about their two month cruise to various ports in the Caribbean.

BERMUDA DUTY

As everyone knows 12 Dental Unit is responsible for providing dental services at CFS Bermuda. The many stories written about the dangers of the Bermuda Triangle do not deter our gallant members from volunteering for this duty. The CO has gone twice to demonstrate his leadership! At present we have two of our most dedicated members, Capt Jean Gauthier and MCpl Chesley Shave, working long hours in the sun and heat to make another group dentally fit.

MOSCOW VISIT

Three members of 12 Dental Unit have visited Moscow recently. WO Malcolm Longford was there 31 Jan to 12 Feb to prepare equipment for the arrival of the dental team. The latter was comprised of LCol Pete McQueen and CWO Mike MacDonald who were away from 14 Feb - 4 Mar. They report an interesting visit but many frustrations due to changes of flight plans, etc. According to reports received CWO MacDonald looks very good in a gown.

WINTER WORKS PROGRAM WORKS IN 12 UNIT

Most CFDS Units have been suffering through the worst shortage of dental assistants in years, but not so in 12 Unit during Jan, Feb and Mar with 16 extra DAs and



Clinic staff at CFB Gagetown with their Unit CO, Col D.H. Protheroe (Capt Leek and Capt Whitmore are missing from this photo).

clerks obtained through the Winter Works Program. Unfortunately, the honeymoon will be over on 1 Apr when we join everyone else with dental auxiliary shortages. It was a great feeling while it lasted!

13

Dental Unit News

SPORT HIGHLIGHTS

The CFB Trenton staff proudly welcomed home their "A" division champions from the 1977 CFDS Curling Bonspiel. LCol Dave Jones (skip), MWO Mickey Kidd (vice), WO Nelson Highfield (2nd) and Sgt Gary Bowser (lead) made up the winning team.

Air Defence Group, located at CFB North Bay gained another pilot on 9 Feb 77 when Capt Barry Kendell received his Private Pilot's Licence from Voyageur Airways Ltd. From now on Barry will fondly be known as the "flying dentist".

Sgt Bob James ("Blades" for short) has been refereeing this season for the CFB Kingston hockey league, and is now involved in the final games for the Base Championship, being contested by Headquarters and 1 Canadian Signals Regiment. In these hotly contested games, he is finding it difficult to keep friends, and easy to gain unhappy acquaintances!

Early in December Sgt Chris Heather from our Kingston detachment obtained a second place showing with his "Late Conservative Dodge Van" at the Auto-Sports '76 show in Montreal. He followed this by entering the Van Sports '77 show held at the CNE in Toronto, where he won first place in his Van class.

January 1977 proved to be an unlucky month for Bobby Orr and Capt Tim Crosthwait. Tim broke his right wrist in a hockey game and wore a cast until mid-March.

SOCIAL NOTES

Contrary to recent rumours, the Trenton detachment does not have a satellite clinic in Florida. Capts' Brian Hamilton, Ron Smith, Greg Tucker and Sgt Richard Abfalter holidayed there on their own time.

Capt Larry St. Pierre was elected secretary of the Kingston and District Dental Society for 1977. He was promptly detailed to organize the next meeting. This is all part of the joys of being a "voluntary" volunteer — the only way to control your own destiny (with a little urging from others).

ANTICIPATION

Sgt Richard Abfalter has been observed running around the Trenton and Belleville drug stores buying up all available supplies of suntan lotion in preparation for his extended Mediterranean vacation on Cyprus from April to October 1977.

BON VOYAGE

Cpl Jack Dale will be leaving the Trenton staff to brave the joys of civvy street as his release becomes effective 18 July. We all wish Jack good luck in his future endeavours.

DENTAL LABORATORY WORKSHOP

CFB Trenton hosted the CFDS Laboratory Technician Workshop 10-14 Jan 77. MWO Doug Davies who co-ordinated the support requirements reports that the Workshop was a success. BGen W.R. Thompson, DGDS appeared as a guest speaker and officially opened the Workshop. A concluding Mess Dinner was organized for 13 Jan and guests from Trenton included Col L.R. Pierce, CO 13 Dental Unit,

LCol D. Jones, BDentO CFB Trenton, MWO V.R. Kidd, MWO L. Peverill, WO N. Highfield and Sgt R. Abfalter.

14

Dental Unit News

UNITED WAY AWARD

For the third year in a row Winnipeg members of 14 Dental Unit have won an award for their contributions to the United Way Campaign. This proves beyond any doubt that they have hearts as big as their wallets.

MISCELLANEOUS

Students from Red River Community College were employed at the Winnipeg Clinics to obtain practical experience prior to graduation. A student from the Pas Dental Assisting School took two weeks training at the Portage La Prairie clinic.

Sgt Don Roy, CFB Shilo, the recipient of a set of full silver mounted bagpipes, has spent another busy season playing for all and sundry. Don has played for everything from the Remembrance Day Service to the opening of the Communication Command Bonspiel, capping it all off by augmenting the Portage Pipe Band on the occasion of the CDS' visit to CFB Portage. Don plays for almost anything because he enjoys it. — It has nothing to do with the supply of hot air!

Capt Doug Vandahl, CFB Calgary, has entered the Canadian Ski Marathon for the second year in a row. After skiing 168 km last year for the Bronze Award, he will have to ski the same course this year carrying a 12 pound pack to qualify for the Silver Award.

Major and Mrs Headley, CFB Calgary attended the Montreal Dental Club Clinic and took part in the festivities of the McGill "Class of '56" 20th Anniversary reunion. Randy says his presence in Quebec at the time of the provincial elections had nothing to do with the outcome.

Members of the Cold Lake detachment were congratulated by the Base Commander on leading all units of CFB Cold Lake in physical fitness. The detachment again had a 100% success rate on the semi-annual fitness test.



LCol Jean Turcotte (r) wearing the appropriate regalia is shown handing over the traditional emblem of office to the new president of the Valcartier Fish and Game Club, LCol G. Boulanger.

15 Dental Unit News

VISIT OF MND TO CFB MONTREAL

Although hampered by the worst snow storm of the season, the Honourable Barney Dawson visited CFB Montreal Jan 31 - 1 Feb 77. Officers and Senior NCOs had an opportunity to meet him at receptions in their respective messes. He seemed to enjoy these encounters despite the "ear bending" that obviously took place.

ORAL SURGERY CONSULTANT

Since LCol Turcotte's retirement from the Armed Forces in Nov 76, he has acted as a civilian consultant in his specialty at CFH Valcartier.

In the photo, LCol Turcotte is shown with suitable headdress (that of the "coureurs de bois") handing over the emblem of authority to his successor as he relinquishes his position as president of the Fish and Game Club at Valcartier.

SPORTS

15 Dental Unit held its annual Curling Bonspiel at CFB St Hubert

on 28 Jan 77 with eight rinks participating.

One "outsider", LCol Fred Begin from the Dental Division, returned to his old stamping ground to skip a rink from CFB St Jean. Others must have been "psyched out" by his previous record because his rink once again won top honours. Whether he'll ever be invited to attend again is anybody's guess.

It was almost an "all St Jean" day, with the runner-up winners being a rink skipped by Sgt Larry Frechette. A rink skipped by Capt René Levesque took the consolation prize for the St Hubert detachment.

This practise round didn't do much for our status at the CFDS Bonspiel in February when the 15 Dental Unit rink had the dubious honour of winning the wrong end of the horse!

ICE FISHING ANYONE?

MCpl Bob Levesque from CMR is now into the real estate business. He purchased an ice fishing shack on Lake Champlain; however with the spring thaw, word has it that the property value is declining rapidly.

TRAVEL '77

Several of our personnel have had winter holidays, but the most exotic was undoubtedly that of

Major Claude Arpin. He and Mrs Arpin flew to Hawaii with a group of dentists from Montreal on 2-10 Feb 77.

FAREWELL TO CAPT HIGGINS (continued)

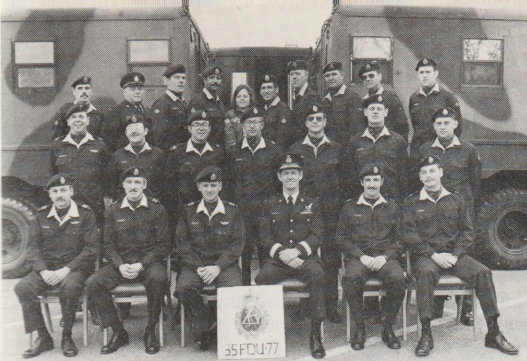
Our last submission reported the departure of our Unit AO, Capt Anne Higgins, on posting to MARCOM HQ Halifax.

It has since been learned that she has taken her release from the Forces and has accepted a position as Assistant Administrator to CIDA (Canadian International Development Agency) in Nairobi, Kenya. Let's hope she doesn't stray across the border into Idi Amin territory!

35 Field Dental Unit News

DGDS INSPECTION

Bgen W.R. Thompson inspected the clinics of 35 FDU on 28 Mar - 01 Apr 77. The visit included briefings on Canadian Forces Europe, a parade involving all dental personnel and equipment, as well as a sampling of both German and French cuisine.



BGen Thompson is pictured with members of 35 Field Dental Unit during his visit last March.

TRAINING

35 FDU hosted the European Conference of Military Periodontists at Lahr on 18 Mar 77. Forty-five dental officers attended the one-day seminar during which the guest speaker was LCol Dan Loughlin. The event was billed as the first annual Lee Reynolds Memorial Lecture and a suitably engraved plaque was presented.

LCol Brogan, Maj Higgins, Maj Lemieux, Capt Amundrud, Capt Stone, and Dr. Mills attended a two-day seminar on General Dentistry at Frankfurt on 10-11 Mar 77.

EQUIPMENT

Six Weber Criterion units have been received for the Baden and Lahr clinics. Seven similar units are on the way for the Dependents' Clinic. Seven new 5 KW trailer-mounted generators have been received to go with the seven 2½ ton shop vans that have been put into operational readiness state.

EXERCISES

Wintex '77 proved to be interesting and demanding, especially with 17 days on a 24 hr duty basis. This was complicated by a National Tac Eval and a Starfighter Ex in Baden. Detachments were in the field in January, February, and March with 1R22^{er} and the RCDs.

SPORTS

While hockey is still number one in the Canadian community, skiing and "volksmarsching" have attracted a good number of Unit personnel.

Dental Detachment Cyprus

What a great feeling it was after leaving Uplands Airport on 9 January 77 to land in Akrotiri, Cyprus, to a warm balmy breeze, beautiful sunshine, and 70°F temperatures.

The dental clinic staff consisting of Capt Bays (Dent O), Sgt Lambert (Lab Tech), and Cpl Vasek (DA), has been operating quite smoothly with our goal of making all of CANCONCYP dentally fit. The present contingent composed of 3RCR from Petawawa will be here until 7 Apr 77 when the spring rotation will bring the 12 RCB from Valcartier. Both Sgt Lambert and Cpl Vasek are looking forward to their repatriation to Canada in mid-April.

The staff has been quite busy both in the organization of and participation in activities at Blue Beret Camp. In February we entered a rink in the "World's First Dry Land Curling Bonspiel", also known as "Cyprus Pigspiel '77". Unfortunately, the clinic team was eliminated in the second round. We are looking forward to revenging our honour in the Blue Beret Camp bath-tub race later on in March.

Sky diving is one of Cpl Vasek's great loves and recently he conducted a basic course at British Sovereign Base Akrotiri, which saw five students make their first jumps, with several already into freefall. Cpl Vasek has also shown himself to be a champion-class dart player, having won top honours in the Junior Ranks Club dart league. During the UN Secretary General's visit in February, he also donned his helmet and flak jacket and assisted as part of the Base Security Staff.

Sgt Lambert has been active in the mess, participating in the inter-mess soccer, dart, and go-kart leagues. On most afternoons he can be seen jogging around Blue Beret Camp in his attempt to complete the 365 mile "Tour of the Island." Last December 25th he spent a most unusual day standing OP duty in the UN outpost Maple One. What a way to spend Christmas!

Most of Capt Bays' spare time has been spent on the squash and tennis courts in a vain attempt to improve his game before returning to Petawawa. As president of the CANCONCYP Photo Club, he is active in both the instructional program as well as the actual dark-room work.

In retrospect, it can be said that our tour on the Island has been a very interesting and enjoyable one indeed. We would like to wish our replacements, Capt Grenier, Sgt Abfalter, and Cpl Paquin the best of luck in their up-coming six month tour of Cyprus.



One of the lighter moments for our dental team on the island of Cyprus.

GENERAL NEWS



WELCOME

Sgt J.H. Gracie, Cpl M.T. Lambe,
Cpl F. McDougall, Pte C. Longmire,
Pte J.L. Sushelinski,

FAREWELL

CWO H. Bilbey, MWO G. Bradley,
MWO A.L. Strub, WO J. Dion, Sgt
Sgt D. Murley, Sgt N. Peterson,
MCpl J.P. Oakley, MCpl R.J. Tallack,
Cpl J. Dale, Pte F.A. Alliston,
Pte M.C. Gilbert,

PROMOTIONS

Capt - J.R. Wynes
WO - J.G. Bernier - G. Hilderbrant
- J.J. Pouliot
Sgt R - Claveau
MCpl - J.R. Jobin, - R. Kossakowski -
L. Petkow-Auramow - P. Searle

TRAINING

PROFESSIONAL TRAINING

US NAVY DENTAL SCHOOL BETHESDA, MD

Fixed Partial Dentures (7-9 Feb 77)
Capt W.H. Fallon
Oral Pathology (10-14 Jan 77)
Maj P. Wooding

ARMED FORCES INSTITUTE OF PATHOLOGY WASHINGTON D.C.

Oral Pathology (28 Feb - 4 Mar 77)
Maj F.H. Harreman

US ARMY INSTITUTE OF DENTAL RESEARCH WASHINGTON D.C.

Oral Surgery (9-13 Jan 77)
Maj M.W. Freedman, Capt J.A. Casey
Periodontia (7-10 Mar 77)
Capt T.B. Cadden, Capt J.G. Grenier,
Capt T.R. Melbourne

DALHOUSIE UNIVERSITY HALIFAX N.S.

Orthodontics Course (25-26 Jan 77)
Capt W.J. Dawson

REGIONAL DENTAL ACTIVITY CENTRAL LABS SAN ANTONIO, TEXAS

Porcelain Fused to Gold (21 Mar - 18 Apr 77)
WO H.K. Gapman, WO T.H. Taylor

CFDSS CFB BORDEN

Senior Dental Officer's General Dentistry Course (19 Jan-2 Feb 77)

Col L.R. Pierce, Col D.H. Protheroe,
LCol M. Deyette, LCol R. Kettys,
LCol V.J. Lanctis, LCol H.S. Wood

Dental Officer's Perio Course (23 Feb-9 Mar 77)

Maj B.A. Gaudet, Maj D.J. Morrow,
Capt J.R. Keddy, Capt L.C. St Pierre, Capt
T.M. Strilesky, Capt L. Whitmore

Removable Partial Dentures (20 Oct-3 Nov 76)

Maj P. Levy, Maj R. Paturel

D Lab Tech Adjustment Training (15-19 Nov 76)

WO D. Hill, Sgt O. Mandrusiak

Dental Hygienist 725.01 Course (14 Feb-15 Jun 77)

MWO J. Lambert, WO A. Busse,
WO D. Mason

De Tech TQ 6A Course (5-27 Jan 77)

MCpl J. Cornett, MCpl H. Haberjam

Dental Clinical Assistant TQ3 Course (9 Jan - 22 Mar 77)

Cpl M. Blouin, Cpl J. Gignac, Cpl J.
Gosselin, Cpl J. Leclerc, Cpl J. Lemire,
Cpl D. McDaniel, Cpl P. Ruck

CANADIAN FORCES TRAINING

CANADIAN FORCES STAFF SCHOOL, TORONTO

Junior Staff Course (15 Nov 76 - 27 Jan 77)
Maj E. Sasse, Capt P. Peterson

CFB BORDEN

Junior Leaders Course (10 Jan-12 Feb 77)

Cpl R. Kossakowski, Cpl L. Payette,
Cpl W. Quine

General Safety Course (21-25 Feb 77)

Sgt J. Gratton

Drug Education Course (21 Feb-4 Mar 77)

WO L. Pion

Sit 1 Course (26 Jan-10 Feb 77)

Maj R. Orenczuk

CMR ST JEAN P.Q.

Advanced Management Course (10-28 Jan 77)

Maj H. Amos

CFB VALCARTIER

Junior Leaders Course (17 Jan - 25 Jul 77)

Cpl J. Neveu

CFB MONTREAL

Basic First Aid Course

Sgt J. St Pierre (31 Jan-1 Feb 77), WO J.
WO J. Hossdorf, (28 Feb-2 Mar 77)
Cpl J. Moir

CFB ESQUIMALT

Senior Leader's Course

Sgt G. Hilderbrant (10 Jan - 16 Feb 77)
Sgt J. Pouliot (4 Apr - 12 May 77)

TRAINING WITH INDUSTRY

YORK, PENNSYLVANIA

Dentsply Equipment Maintenance Course (7-11 Mar 77)

CWO E. Everett

CANTON, OHIO

Weber Installation and Maintenance (23-24 Mar 77)

Sgt G. Bowman

TORONTO, ONTARIO

**Ritter Equipment, Installation Maintenance
and Repair (4-5 Oct 76)**
Sgt B. Green

HONOURS & AWARDS

1st CLASP to CD

WO R. Lowery
Sgt C. Millard

CD

Sgt J. Craig

BIRTHS

Congratulations to: Capt and Mrs. S.
Allington, Capt and Mrs. C. Bullock,
Capt and Mrs. T. Strilesky, Mr. and Cpl H.
Goodwin on the birth of their sons and to:
Capt and Mrs. J. Genest, Capt and Mrs. R.
Leblanc, Mr. and Sgt P. Dallaire, Mr. and
Mrs. K. Forrest on the birth of their
daughters

MARRIED

Sgt B. Rector and Pte H. McCurdy