TRAINERS JOURNAL

SECTION

The NATIONAL ATHLETIC TRAINERS ASSOCIATION

JUNE, 1943 No. 10

Trainers at the United States Navy Pre-Flight School, Chapel Hill, North Carolina. Left to right, Eugene Logan, Ph. M. 3/c; Lieutenant Roland Logan, head trainer; Allen Cooke, Ph. M. 3/c (standing); Lieutenant Howard Haak. Lieutenant Haak has recently been detached to become head trainer at the Del Monte Navy Pre-Flight School.

Official Publication
Of the National Athletic
Trainers Association

THE TRAINERS JOURNAL SECTION

Official Publication National Athletic Trainers Association

June, 1943 No. 6

The Officers for 1943-44

AS many other organizations are doing this year, the officers of the National Athletic Trainers Association are being "frozen" for 1943-1944. Many of our trainers are in the various services and cannot devote much time to the work of the Association and to the Trainers Journal. Dr. Wilbur Bohm, our president for the past year, has been serving both as president of the Association and as editor of the Trainers Journal. He has done an excellent piece of work and will continue to serve us next year. Should some of the men now serving as officers find it impossible to continue, changes may be necessary during the year. We want to keep the Association going, for we believe that the training and conditioning of the American boy is more necessary now than ever before.

WILLIAM FREY,
Secretary N. A. T. A.
Athletic Trainer,
Iowa City Pre-Flight School

The Year in Retrospect

THIS issue of our Trainers' Journal marks the close of another successful year for the publication and the National Athletic Trainer's Association as well. I feel that we have accomplished a great deal during the year. Our Trainer's Journal has offered many fine articles. The contributors of this material deserve a vote of thanks, especially at this time, since so many who are in the service or on the home front, are shouldering additional responsibilities. We are especially grateful to Lieutenant Charles Burton, Jr., Officer in Charge of Public Relations and Aide to the Commandant at the United States Navy Pre-Flight School, Athens, Georgia, for the series of six articles by Hank Crisp, Bill Dayton, Fritz Lutz, Eddie Wojecki, Phil Hudson and Mickey O'Brien. Others, among them S. E. Bilik, Major M. C. Oliver General Hospital, Augusta, Georgia, and Lieutenant Roland Logan, trainer and dietitian at the Navy Pre-Flight School, Chapel Hill, North Carolina, have taken time from their strenuous duties to contribute splendid articles. Lieutenant Howard Haak, now head trainer at the Navy Pre-Flight School, Del Monte, former trainer of the Rochester International League Baseball Club, enlightened us with an authoritative article on baseball injuries. Bill Fallon and Bob Officer, who are doing splendid work in conditioning our future fliers at St. Mary's Pre-Flight School, also gave time to supply some photos that were used to good advantage in our Trainer's Journal. The excellent work done by Roland Bevan of the United States Military Academy, L. J. Dimmett of Texas A and M and of Frank Wiechec of Temple University deserves special mention.

We men who are serving in the schools are conditioning the boys for service, just as our colleagues working in direct contact with out future fliers and other service men are doing. Many of the boys now in our athletic and physical education programs will soon see service. Our job is an important one. We want you to tell your stories in our Trainer's Journal and support your Association in every way.

In conclusion, I want to take advantage of this opportunity to let each and every contributor, and the Athletic Journal Publishing Company, know that I keenly appreciate their 100 per cent co-operation, during the past year.

WILBUR BOHM,
Assistant Professor of Physical Education
State College of Washington
Pullman, Washington
1942-3 President of the National Athletic Trainers Association.

Trainers in the Service

AT various times during the year, we have printed the names of athletic trainers in the service. If some names have been omitted, they should be sent to the editor in time for publication in the September issue. Additional names not previously printed are as follows.

ROBERT SHELTON, Lieutenant, j.g., Navy. Trainer and Swimming Coach, University of Colorado.

S. E. SCHOLZE, 1st Lieutenant Army Trainer, University of Florida.

BERYL TAYLOR, Captain Army Trainer, Iowa State College.

JACK CRAMER, 2nd Lieutenant Army Air Force Trainer, Kansas State College.

N. P. CARTER, Ensign Navy Trainer, Kent State University.

WILLIAM H. CROWDUS, Chief Specialist Navy Trainer, Western Kentucky State Teachers College.

J. W. NAGLE, Lieutenant Army Trainer, Lafayette College.

LLOYD BOYCE, O.T.C. Army Assistant Trainer, University of Minnesota.

DALLAS JONES, Private Marines Trainer, Mississippi College.

HOWARD WAITE, Lieutenant Navy Trainer, University of Pittsburg.

HENRY SCHMIDT, Civilian Trainer, Del Monte Pre-Flight School Trainer, University of Santa Clara

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for JUNE, 1943

The Sore Arm, Its Prevention and Treatment

By Roland Logan, Lieutenant U.S.N.R.
Trainer, Dietitian, and Assistant Football Coach,
United States Navy Pre-Flight School, Chapel Hill, North Carolina
Formerly Athletic Trainer, United States Military Academy

DURING this time of the year great care should be given to the throwing arm in baseball. First, a word about throwing. Try to develop a free over-hand throw, one that is without jerk or pull on any part of the arm or body. The throw should be rhythmical, loose, literally effortless. Should you become tired in some part of your body in early practice, there are, in all probability, two reasons. Either that part of the body needs special exercise and work, or your peculiar throwing motion is not free in its entirety and needs to be relieved of the jerk that causes the undue pain. A long and loose follow-through will often put an added zip in your throw. Follow through until your hand nearly reaches the ground, that is, if you are an over-hand thrower. Lefty Grove often followed through so far that he bruised his left elbow on his left knee. Wes Ferrell, famous control pitcher, would in some cases actually drop his hand clear to the dirt in his follow-through. Infielders and outfielders do not need quite as much follow-through to get their desired control and speed.

During early spring, when it is cold, an embryo pitcher may find his back and arm tightening, and he starts to lose the zip in his ball. In all probability, his arm lacked proper warm-up procedure, or the weather was too cold. As you start your warm-up, just work for form and control. Do not bear down or put undue strain on your arm at first. Throw for perhaps ten or fifteen minutes, then start to add more power and get more body into the throw. After about eighteen or twenty minutes, throw your curves and practice the so-called Change-up.

An infielder and outfielder may follow the same procedure in general; that is, throw easily and work for form and control. Throwing may be practiced from all positions and distances, so that the player may familiarize himself with the various play situations. As a player gradually warms up, he may start putting more body and zip into the ball. Numerous sore arms, shoulders, and backs are caused by not following the above procedure in practice and in games. Good pitchers often injure themselves through lack of proper conditioning procedure, rather than overwork. My opinion is that most Big League pitchers do not work enough, and do not take proper care of their arms, back, and shoulders.

Dizzy and Daffy Dean, Lee Grissom, Vandermeer, Feller, Schoolboy Rowe, John Marcum, and Mungo are a few of the stars that fell victims to injuries and, incidentally, cost the club owners hundreds of thousands of dollars. It is interesting to note that approximately all of these men were speed-ball pitchers.

Proper care off the field is a big factor. Air-cooled Pullmans, and electric fans chill the muscles and minor adhesions set in, in many cases. The arm should be kept warm at all times.

Now for specific care of the sore arm, back, and shoulders. Since it is almost impossible for a pitcher to massage and manipulate his own arm for treatments, I will explain the procedure briefly, and in layman terms.

Should the shoulder have a twinge, or sharp pain, allow the athlete to lie on the rubbing table on his side with the injured part up. Pull up the legs to allow for relaxation and proper position. The manipulator holds the shoulder joint with his own left hand, as he grasps the wrist with the right hand (this manipulation, incidentally, is for a right-hander, and for a left-hander, just reverse the procedure). Next move the wrist in the actual arc or motion that the pitcher uses in a regular throw. The arm is stretched easily at first, and not to the fullest extension of the muscles. Gradually repeat the arc or actual throwing motion by pulling forward at the end of the throw. Now stretch by pulling fairly hard; make sure, however, that the athlete is relaxed and not pulling against your exerted stretch. The above manipulation is not only beneficial in the alleviation of sore and tender areas of the shoulder, but also is an almost absolute necessity the day before a man pitches. This specific treatment was given to Lefty Grove and Wes Ferrell after their disastrous seasons of 1934, and was continued every day before the day they pitched during my three years stay at Boston, as trainer of the Red Sox.

This manipulation is particularly beneficial in that it tends to relax the entire athlete, removes minor adhesions, stretches the main injury, and, in general, increases the circulation of the blood. The theory behind this manipulation is that, if the athlete will stretch the muscles to the limit of their flexibility or elasticity prior to the game or practice, and keep warm and properly covered in the meantime, the possibility of strain, tear or pulled muscles is cut to a minimum.

Should the elbow be injured, use the above specific manipulation, except that the manipulator should clasp the elbow in his left hand and rotate slowly in both directions.

In many cases chipped elbows, which are caused by hyper-extension, cannot withstand this manipulation. In this case, the surgeon should investigate and remove the chips. Often rest and short-wave heat treatments will help absorb these small chips if they are detached. If the arm becomes extremely sensitive, the family physician, team doctor or a bone specialist should be consulted without delay. Hubbell, Schumacher, Ostermueller, and Wes Ferrell were pitchers who had to undergo operations for a bone and ligament condition as mentioned above.

Now for the injury to the shoulder. Allow the athlete to lie face down on a rubbing table. Place a hard pillow under the outer point of the shoulder. The next move on the part of the manipulator is to roll the shoulder with a kneading movement, which is in reality a pressure roll, using the fat or lower part of both palms in the movement. Heat should be applied (preferably short wave, hot packs or infrared), preceding this treatment. Bursitis, or inflammation of a small sack lying between two major ligaments in the sub-

deltoid area, is a common injury to ball players. It cannot be reached by massage, but may be aided through manipulation and deep therapy, preferably short-wave treatments.

Proper rest is the best treatment after all. Old Mother Nature can be aided, but not forced. It is simple to over-treat, particularly in subdeltoid bursitis. One treatment a day with the short wave and manipulation will suffice. Do not try to throw if the pain is sharp and interferes with the throwing motion.

Dizzy Dean was hit on the big toe of his right foot by a line drive in the All-Star Game at Washington years ago and tried to come back too early. He figured he had just sprained the toe. X-ray pictures, two weeks too late, disclosed a fracture. In his haste, Dean tried to throw without the powerful drive off his right toe and foot. This new throwing form put undue strain on his shoulder muscles. The result—subdeltoid bursitis, and almost curtains for the great Dean.

The lessons to be learned from this article are: first, take a picture of the injury if the pain is severe; second, get proper treatment; third, throw naturally; and lastly, keep in mind that if you do not take proper care of your arm, you may be pitching hay instead of baseball, and the salaries differ considerably.

Suggestions for Treatment of Knee Injuries

By M. J. "Mickey" O'Brien
Civilian Trainer, U. S. Navy Pre-Flight School, Athens, Georgia

PROPER treatment of knee injuries is always a matter of special concern to the trainer because of the hazard of permanent damage through faulty diagnosis or inexpert reparative measures.

In our handling of the Navy's fledgling aviators, the six-man staff of trainers here at Athens Pre-Flight are thoroughly agreed on that subject. Where any doubt exists, the case is promptly referred to an orthopedic surgeon.

X-ray, of course, is the only reliable means of determining the full extent of a knee injury and should, therefore, not be neglected. Preliminary diagnosis, however, will serve as a valuable guide. Exact details of how the injury was received are helpful. Was it from a direct blow to the outside of the leg, or from a sudden twist while off balance? If the former, the injury is probably a torn or strained internal lateral ligament. If the latter, it may be either an internal or external lateral ligament which is affected. Severe ligament injuries are usually accompanied by a distinct cracking sound in the joint at the instant they occur. Locking of the joint invariably indicates cartilage injury or displacement. Reduction of such displacement is a job for an orthopedic expert.

Further diagnosis may be more accurately made after twenty-four to forty-eight hours have elapsed, during which time the injury has had a chance to run its course. The knee should then be examined further for lack of extension or flexion. If this condition exists, look first for a muscular spasm of the thigh from over-stretching. If none is present, a cartilage injury is probably indicated. The knee should also be examined for undue mobility in the lateral plane in either direction. If pressure applied, as shown in Illustration 1, causes the knee to assume a knock-knee turn, the internal lateral ligaments have obviously been damaged. Similarly, if a reverse application of the pressure causes the joint to yield in the outward direction, the external laterals are the ligaments affected. Extreme mobility in either case would indicate a severe ligament tear.

Except in cases of fracture or of displaced cartilages which have not been satisfactorily reduced, most knee injuries may be treated along the same lines as a severe sprain. To arrest swelling, it is important that cold applications or ice packs be employed for thirty to forty minutes as soon after the injury as possible. The leg should be elevated during this time.

With the patient in a comfortable position, a firm compression bandage is applied over a thick layer of cotton as shown in Illustrations 2 through 8. Use of elastic pressure is a valuable aid in the absorption of the effusion which is usually present. The patient is then put to bed with his leg elevated. No weight should be allowed to bear on the injury.

This bandage should be removed daily for massage and heat treatments to increase circulation, improve muscular tone and absorb effusion. With the knee elevated and covered with a towel, infra-red heat, at a distance of two feet for about twenty minutes, is advisable in the early stages. When swelling has been sufficiently reduced, the whirlpool bath will prove highly beneficial.

Gentle passive movement may be started by the trainer from the very first provided swelling and tenderness have subsided. The trainer increases the range of motion daily. The movements should not be allowed to throw any strain upon the newly-formed reparative tissue. Therefore, lateral and rotary movements must be avoided. The exercises, which are intended only to prevent early adhesions, should not be carried beyond the tolerance of the patient. Such exercises, properly graduated from passive to resistive, will give the patient the strength and mobility necessary to begin walking again on his own. In very severe cases it may be fourteen days before the patient is able to bear his own weight with the aid of a supportive bandage. In most instances the time will be considerably shorter.

The supportive strapping shown in Illustrations 9, 10, and 11 is, except for the steel brace, probably the best that has been devised to fortify the external lateral ligaments. If the internal laterals are involved instead, the same type of strapping would be employed, except that it would be applied to the inside of the leg.

Dependence on adhesive tape must, of course, be tempered with common sense. So long as the leg is not subjected to undue strain the strapping shown here will be adequate. On the other hand, it would be folly to send a man into vigorous competition expecting adhesive to withstand severe shocks. For competitive wear I am never fully at ease unless the athlete is wearing a steel brace, specially fitted to his leg. The type shown in Illustration 11 is one I have used extensively in the past with excellent results.

WHEN "Mickey" O'Brien joined the civilian trainer staff of the Navy Pre-Flight School, Athens, Georgia, last October, he brought with him a background of sixteen years' experience as a conditioner of athletes. Head trainer at the University of Tennessee since 1938, "Mickey" conditioned the "Vols" for the Orange Bowl in '38, the Rose Bowl in '39, and the Sugar Bowl in '40. Last fall, before the Navy claimed him, he trained the highly successful East squad of Army All-Stars coached by his old Tennessee colleague, Bob Neyland. "Mickey" started as a trainer in 1927 at Chattanooga University, spent his summers successively as conditioner of the Birmingham, Atlanta, Reading, and Albany baseball clubs.

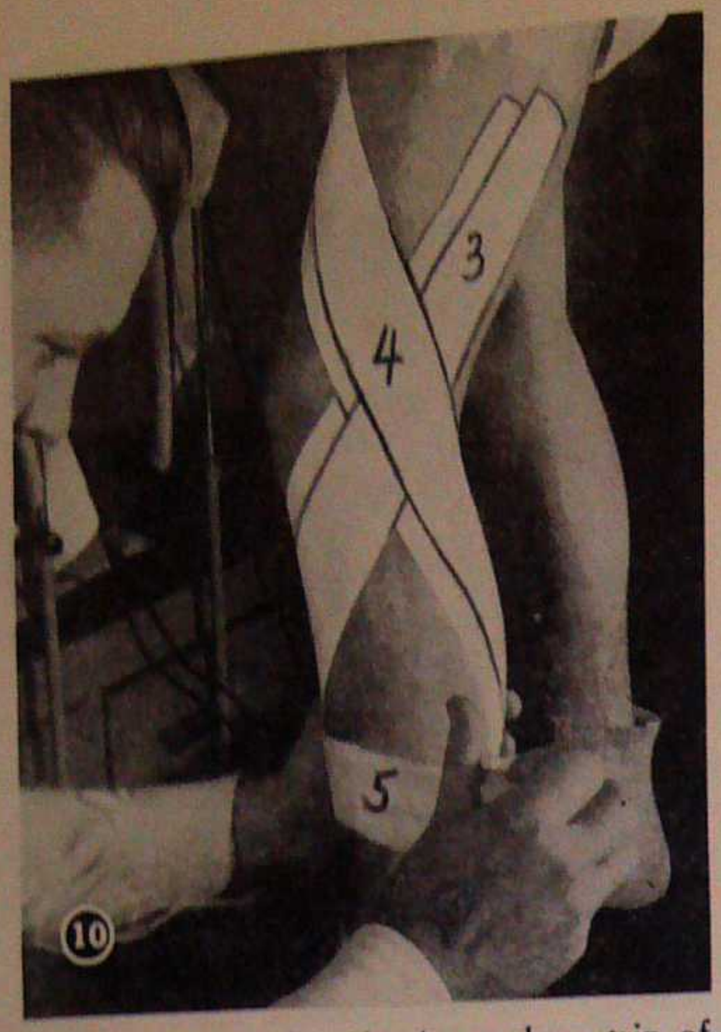
Illustration 2: first wrapped arou and back. A liber the cotton may e at both ends to p Illustration 3: four-inch) elastic

Illustration 2: A sheet of cotton wool is first wrapped around the injured knee, front and back. A liberal quantity is used so that the cotton may extend beyond the bandage at both ends to prevent constriction.

Illustration 3: A roll of three-inch (or four-inch) elastic bandage is then applied. Wrapping begins below the knee with two complete turns and is then spiraled upward from the rear (as seen in 4) and wrapped twice more around the leg above the knee.

Illustration 5: As seen in this rear view, the elastic bandage is brought below the knee again from the rear to circle the leg once more below the knee. The wrapping throughout should be applied with the maximum pressure below the knee cap, and the minimum pressure above.

Illustration 6: Rear view of the completed bandage, showing criss-crossing of the elastic behind the knee.



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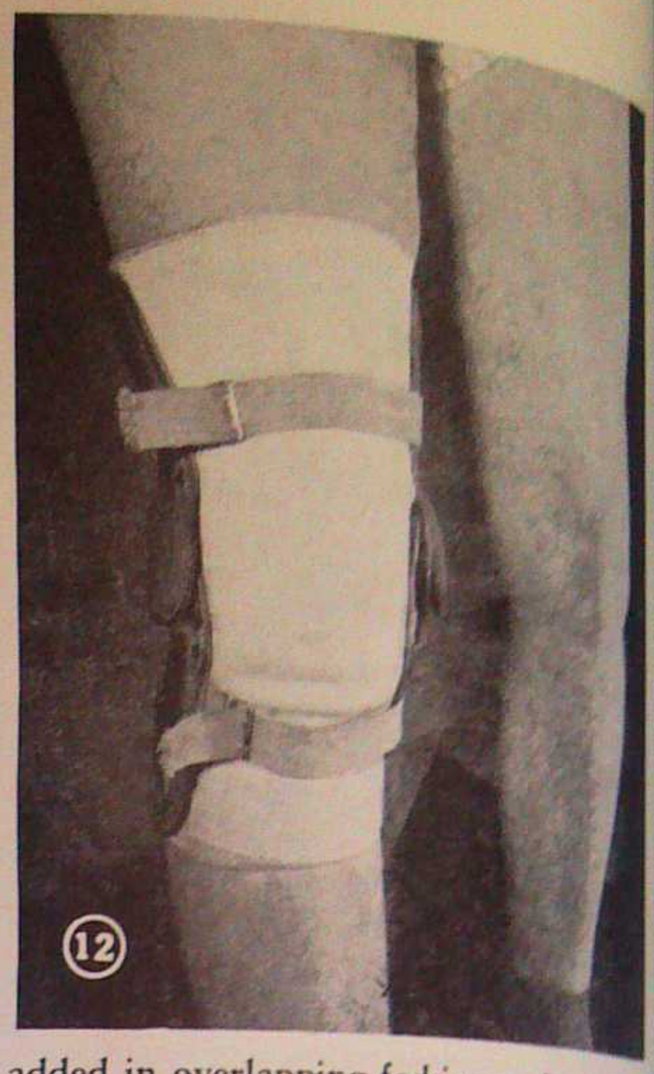
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Illustration 7 (or 8): An anchor strip of adhesive tape above the knee completes the wrapping. The area below the knee cap, as indicated, is the spot at which most of the elastic pressure is concentrated if the bandage has been properly applied.

APPLICATION OF SUPPORTIVE STRAPPING (for injury to external lateral ligaments). Illustrations 9, 10, 11.

(Note: Strapping of an injury to the internal lateral ligaments—which are generally more common—would be the same as shown in illustrations 9, 10 and 11, except that the taping would be applied to the inside of the leg instead of to the outside.)

Illustration 9: After the leg has been shaved and painted wtih a liquid adherent to give better skin traction, two strips of two-inch adhesive are criss-crossed as shown, extending from about eight inches above the knee to about eight inches below.

Illustration 10: Strips 3 and 4 are then added in overlapping fashion as shown. Additional longitudinal strips may be applied in like manner if more support is desired. Then anchor strip 5 is applied once around the leg, covering the lower ends of the longitudinal strips.

Illustration 11: The strapping is completed with the addition of a second anchor strip, 6, overlapping strip 5, and strips 7 and 8 on the upper leg to anchor the longitudinal taping at the top.

Improvements in Solar Therapy

By C. R. Hall

A STATEMENT, "Six times stronger than the sun at noonday in June on a mountainside 5,000 feet elevation," describes the intensity of a sun lamp recently developed.

Three minutes under such a light is equal to being exposed to a strong outdoor sunlight eighteen to twenty-five minutes. The action gives the production of Vitamin D by the chemical change in the egeustrol that lies under the skin. But it is not for the average layman; it would be dangerous in unskilled hands.

Heat therapy has long been recognized as an aid to sickness and relief of pain; hence development of the many heat appliances—short wave or the diathermy. All cases, however, do not respond favorably, which leads to the conclusion that recognition should be given to the importance of proper diagnosis in the engineering of the human body. Warmth being a factor in alleviating pain, surface heat cannot be expected to render the assistance that penetrating heat will give.

To comprehend solar therapy, it is necessary to understand the spectrum—the visible vibrations or light rays. These are measured in length of their vibrations, as discovered by Dr. Angstrom. Visible vibrations (which includes the spectrum) become visible at 1,000 and up to 120,000 Angstroms.

The most penetrating rays in the spectrum, according to American Medical Association and scientists, are between 6,500 and 14,000 Angstroms, and these carry the infra-red rays. There are seven colors in the spectrum and all travel on different vibrations. The filament that produces them begins at different places on the scale and ends on other places which may be visible or invisible. They may start below the spectrum and end in it or above it.

Various therapeutic lamps have been produced. There is an ultra-violet, whose rays are at the beginning of the spectrum, which lose their intensity beyond 4,000 Angstroms. It will produce a tan but has little penetrating power. Of doubtful value, it should be used only by skilled operators. The naked eye should not be exposed to it.

Another type, commonly called the infra-red and known as a heat lamp, produces its vibrations by both luminous and non-luminous type of burners. But so many of the not-so-penetrating vibrations are produced that one is not able to tolerate the common heat lamp long enough to absorb sufficient of the red rays to receive much good in treating pain. The non-penetrating rays are yellow, orange, blue, green and indigo.

Most of the infra-red lamps burn or blister at a given distance if the patient is not moved, and moving breaks up the vibrations. According to the A. M. A. none of these lamps penetrates over ten millimeters, and that hardly takes them out of the category of a hot water bottle or an electric pad.

A new method of applying the infra-red penetrating rays or vibrations has been put into lamps which filter back the intolerant, not-so-penetrating surface heating rays, and gives a tolerant, soothing soft penetrating heat that enters the fascia by conductivity. From the oncoming energy of the 375-watt bulb, an abundance of infra red is produced which continues the march of penetration by molecular vibrations.

A scientific test showed that these new lamps allowed no vibrations below the spectrum and none in the spectrum until 5,000 Angstroms were reached. This filters back any injurious ultra-violet or those rays that are below the spectrum entering near the x-rays. Tests show conclusively that these improved lamps produce 95 per cent infra-red from 5,000 to 27,500 Angstroms; will not burn or blister when used at a distance of thirty inches; put heat into human fascia by conductivity; show penetration of two inches in twenty minutes; and may be used wherever heat is needed.

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