

Nautilus System Training Equipment Is Now Available

Several types of the totally new and revolutionary Nautilus exercise machines are now being manufactured in Florida; delivery is still on a "first come, first served" basis — but we now have three production points and shipment can usually be made within two or three weeks of the receipt of an order.

PULLOVER TYPE TORSO MACHINE — Designed to work all of the major muscular structures of the upper torso, this machine provides direct, rotary movement, full range, automatically variable, balanced resistance over a range of movement exceeding 240 degrees.

Extensive research programs conducted in major Florida public schools during the last two years have given us undeniable proof that this is by far the single most productive exercise in the history of physical training. This machine was designed to provide, direct, full-range resistance for the largest muscular structure in the torso, the latissimus group — but it also provides a high degree of very effective exercise for the pectorals, the abdominals and the trapezoids, as well as several smaller muscular structures of the torso.

Three brief weekly workouts — involving the use of this machine for a weekly training time of only thirty-six (36) minutes — will produce more results in this area of the body than any amount of training by conventional methods, regardless of the number of other exercises used, and no matter how much training time is devoted to such other exercises.

Because of the extremely effective nature of this exercise, the machine is subject to "overuse" — for that reason, detailed training instructions are included with all machines, and these instructions should not be ignored by anyone, regardless of his previous training experience.

The exercises made possible by these machines have almost nothing in common with any previously existing type of exercise — the machines DO NOT represent an improvement in training equipment; instead, they are a totally new concept, a complete departure — and thus any really meaningful comparison to other types of equipment is impossible. Used properly in accordance with instructions, these machines will produce at least a 1,000% improvement in training progress — and many of our research subjects have improved their training progress in excess of 3,000% — but if such equipment is "overused," if long, frequent workouts involving many sets are attempted, then the recovery ability of the body will be exceeded and losses will be produced instead of gains.

For that reason, when training with this equipment, short, infrequent workouts are not only a possibility, but are a definite requirement.

This particular machine is designed to go through the average 32 inch door — it occupies a "working area" of 3 feet by 5 feet (about the area required for a padded chair) — and it is almost exactly 5 feet high; shipping weight is approximately 400 pounds. Construction is all steel except for the seat, back rest, elbow pads, bushings, cable, hand grips, and the lead filling of the counterweights. The production models of this machine being offered for sale are the final result after twenty-six previous prototypes; the machine is almost indestructible, functions perfectly and comfortably, and the very few moving parts that are subject to wear are designed in such a manner that they will last for years in hard use — and can then be replaced in a matter of seconds at practically no expense. The finish of the machine is durable and attractive and it will be an attractive addition to any commercial or private gym.

Price .. \$590.00 f.o.b. DeLand Florida; delivery time — shipment within two or three weeks of receipt of order.

Three other types of Nautilus machines that are designed to be used in connection with the above described Pull-over-type Torso Machine are listed below. These machines are not a requirement for the average trainee — but for the production of the best possible rate of progress and the ultimate in strength and muscular size, they represent a very valuable addition to any training program.

Behind-neck type Torso Machine \$560.00
 Rowing-type Torso Machine \$560.00
 Single-station, dual-exercise Chinning Machine .. \$315.00

And, for large commercial gyms, where space is at a premium, the above four machines can be purchased in a combined unit .. \$1,925.00, with delivery time of six to eight weeks.

Also available . . .

NAUTILUS SYSTEM COMBINATION CURLING AND TRICEPS MACHINE — a two-station, two-exercise machine for the production of great strength and muscular size in the upper arms. Size — 3 feet by 7 feet by approximately 5 feet in height; "working area" required: 4 feet by 7 feet. This machine will NOT go through a door narrower than 36 inches. Shipping weight approximately 500 pounds. \$715.00
 Delivery within two to three weeks.

NAUTILUS SYSTEM TEN EXERCISE ARM MACHINE incorporating ten very result-producing exercises for the upper arms and forearms; most of the stations in this machine do NOT provide the rotary movement, direct exercise that is one of the most important features of most of the Nautilus machines — but all of the stations do provide variable resistance balanced to the strength curves of properly developed muscular arms, and thus this machine is a major improvement over any other type of training equipment except the Nautilus machines that do provide direct, rotary movement, omni-directional resistance \$850.00
 Delivery within six to eight weeks.

NAUTILUS SYSTEM CURLING MACHINE — the finest curling machine in existence, by far. Providing full-range (158.4 degrees), direct, omni-directional, automatically variable, balanced, rotary resistance for the bending muscles of the upper arm. This is basically the same machine incorporated into the above described combination Curling and Triceps Machine \$455.00
 Delivery, three to four weeks.

NAUTILUS SYSTEM BICEPS AND FOREARM MACHINE \$165.00
 Delivery within two to three weeks. A three-exercise machine for the development of both the contractile and supinational functions of the biceps of the upper arms and the pronational function of the forearms. For the production of best-possible results, this machine should be used in connection with the above described Curling Machine — but it will be an extremely valuable addition to any training program even if used only in connection with normal barbell or pulley exercises for the arms.

NAUTILUS SYSTEM LEG AND LOWER BACK MACHINE (The "Final Breakthrough"); the machine that eliminates the requirement for squats — totally removes the compression force from the spine that is experienced in all forms of squatting — removes any danger to the knees that may have existed in squatting — and provides all of the extremely productive features of the Nautilus exercise principles, full-range, compound rotary resistance, omni-directional resistance, balanced resistance, automatically variable resistance, all with perfect safety and in comfort. This is a large, complex machine — and is being offered on a limited basis, with delivery within ten to twelve weeks. Priced at \$1,200.00 — price subject to change without notice; because of the difficulty of construction of this particular machine, it is probable that the selling price will be increased in the near future by as much as 50% — but orders accepted at the above listed price will be delivered at that price, regardless of any later price changes.

Another of the above listed machines is now being offered at a price that is actually below our present cost of manufacture — and all of the machines are being presently offered at prices very close to actual construction costs; however, with hoped-for reductions in costs provided by larger-scale manufacturing, we now feel that we can hold the line on all prices with the exception of the Leg and Lower-back Machine.

As of the moment, forty-four (44) different types of Nautilus machines are in various stages of production and testing; when we are totally satisfied with these new machines — only after extensive research programs have been conducted with them — they will also be offered for sale.

Established public schools and/or universities that are interested in conducting research programs in connection with their athletic activities — using any of the freely offered, and some of the still experimental Nautilus equipment — should contact Arthur Jones or coach Bill Bradford of the DeLand, Florida public high school. While we are not prepared to subsidize such research programs not under our direct supervision, we'll provide extensive research data for cross-checking purposes and will extend priority on the delivery of any required equipment. Any resulting data will, of course, be the unrestricted property of the school conducting such research

— but we will provide publication in an unedited form if such is desired, the only restriction being that of reasonable length.

Seriously interested trainees desiring to train on the new Nautilus equipment under the direction of the coaches that have been working with our research programs should consider joining special adult educational programs being conducted by the DeLand, Florida public high school under the personal direction of coach Bill Bradford.

The only cost involved is a nominal \$5.00 per year fee payable to the school for enrollment and insurance purposes. Normal training hours are from 6:00 p.m. to 9:00 p.m. on weekdays, but in special cases other hours can sometimes be arranged — at the moment, some of our trainees are training every day of the week and at all hours of the day and night.

Regarding the above offered adult educational programs, I wish to add only the following: these programs are conducted as formal classes but for research purposes; facilities are not available for self-directed training, and trainees refusing to cooperate properly will be dropped from any program they are taking part in. Almost any

amount of personal attention will be freely extended to sincere trainees, but we will expect full cooperation and a reasonable attitude and conduct in return.

Required travel expenses and/or living expenses are, of course, at the expense of the individual trainee. Some employment is available in the area for trainees needing to work in order to support themselves, but high wage scales are not generally available.

For more information, or for placing orders, write Arthur Jones Productions, P.O. Box 1783, DeLand, Florida 32720 — or phone area code 904 228-2884. For information on the above described training programs, write coach Bill Bradford, in care of the DeLand, Florida public high school.

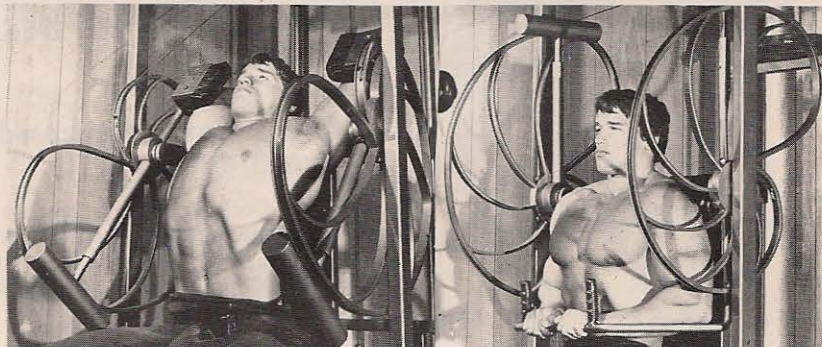
For information on the use of the new Nautilus training principles in connection with training programs using conventional equipment, order Bulletin No. 1 by Arthur Jones — a straight to the point, clearly written outline of the Nautilus principles and a number of suggestions for incorporating these same principles into your present training with barbells and conventional pulley devices. \$4.00 — from Arthur Jones Productions, P.O. Box 1783
DeLand, Florida 32720

Nautilus System Training . . . And How It Works

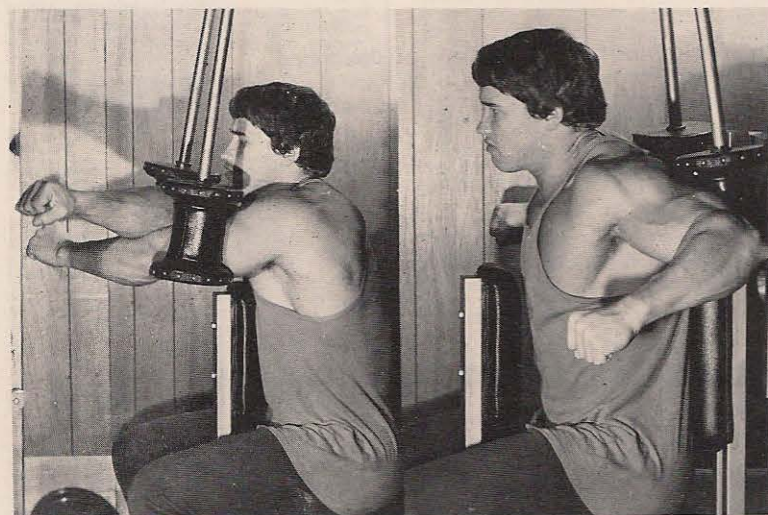
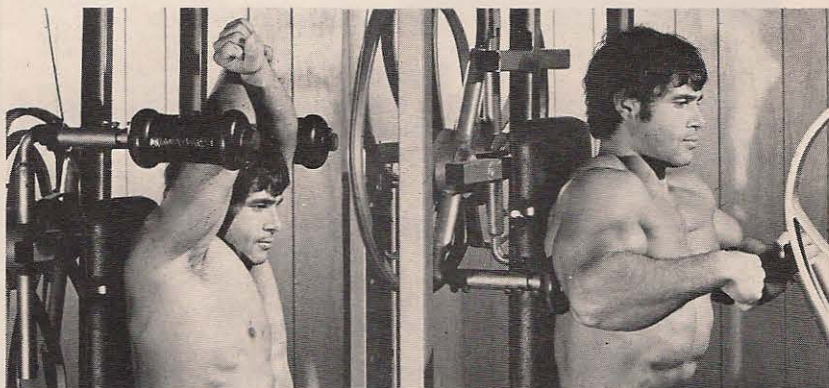
Arnold Schwarzenegger and Franco Colombu recently spent two weeks in DeLand, Florida. While there they trained with some of the equipment which is installed at the new gym of the DeLand Public High School where it is used in a special adult education program. In these photos we show Arnold with the older model

of the Pullover Type Torso Machine, then Colombu with the Behind the Neck Type Torso Machine, and in the next photos Arnold is using the Rowing Type Torso Machine. These can all be had as one machine or as individual units and there is also a chinning machine not shown.

In the photos at right Arnold has his arms forced well back on the Pullover Type Torso Machine and pressure is exerted on his elbows only by the pads. Resistance is lightest in this position but increases evenly and gradually as the elbows are brought forward and downward as shown in second photo where resistance is greatest and the strength of muscles is greatest. This gives over 200 degrees of rotary movement.



At right we see Franco Colombu as he is using the Behind Neck Type Torso machine and follows through in a different direction from the position shown at left, with arms high overhead gradually downward against increasing resistance to the lower position, making nearly a 180 degree movement, with even, smooth, increasing resistance all the way. This is done without involving the muscles of the arms at all.



At the left Arnold is shown in the starting position of the Rowing Type Torso machine, then in the finish position with elbows well back, having completed the movement for major back muscles without involving the weaker, limiting muscles of the arms in any way. Thus when you have finished this exercise you have exhausted the back muscles involved without limiting the value by involving the weaker arm muscles.

In addition to the Chinning Machine not shown, there is a fifth station not shown, similar to regular chins, but with some important differences.

NAUTILUS TRAINING EQUIPMENT . . .

In addition to the Nautilus Pullover-type Torso machine and the Combination Curling and Triceps machine described elsewhere in this same issue, the following types of Nautilus equipment are also available:

NAUTILUS CURLING MACHINE. The same basic curling machine included as one of the two stations on the Combination Curling and Triceps machine. **\$455 f.o.b. DeLand, Florida**

NAUTILUS TRICEPS MACHINE. The same basic machine included in the combination machine described elsewhere. This machine provides full-range resistance for the triceps without the discomfort or danger normally encountered in triceps exercises—comfort and safety are provided by the fact that the triceps are worked with the hands in a normal, “palms facing together” position; the danger caused by twisting the forearms into either a fully pronated or supinated position while working the triceps is removed—the elbow tendons are worked in a normal “untwisted” position.

Chris Dickerson remarked that it was the only triceps exercise that he had ever used which did not cause him pain in the elbows.

In almost all conventional triceps exercises there is little or no resistance in the strongest, fully-contracted position of the triceps; with this machine, resistance is provided in every position—and maximum resistance is provided in the fully-contracted position, exactly where it is needed. You cannot “lock-out” and hold the top position in this movement without effort—if you wish to hold the contracted position you will be forced to do so by muscular action.

For the first time in the history of exercise, a machine is available that provides full-range resistance for the largest muscles of the upper arms—and very little of such “total” exercise is required for the production of best results; two, at the most three, sets of such exercise should be performed in each workout, three times weekly.

All of the remarkably productive features of the other types of Nautilus training equipment are provided in this machine—rotary movement, direct omni-directional resistance, balanced resistance, full-range resistance, and automatically variable resistance; with this machine available, no other type of exercise for the triceps is required—or even desirable.

Available for shipment within three weeks of receipt of orders. **\$385 f.o.b. DeLand Florida**

In addition to the Pullover-type Torso machine described elsewhere, three other torso stations are available—either separately or in combination with the Pullover-type machine. For the average trainee, these stations are not a requirement; but for the production of best-possible results in the upper torso, they should be included in any well-equipped gym.

Orders for these machines have been received from Bill Pearl, Red Lerille, Joe Gold, Arnold Schwarzenegger, and others well-known in the gym field.

Behind-neck Type Torso machine \$560
f.o.b. DeLand, Florida

Rowing-type Torso machine \$560 f.o.b. DeLand, Fla.

Single-station, dual-exercise Chinning machine \$315
f.o.b. DeLand, Florida

Four-station, five exercise Torso machine — including the elsewhere described Pullover-type Torso machine, and all three of the other Torso machines listed above **\$1,925 f.o.b. DeLand, Florida**

The above machines are available within four to six weeks of receipt of orders. The required “working space” for all four stations is approximately 3 feet by 15 feet. Shipping weight approximately one ton (2,000 pounds).

Quite a number of other machines are also available on a “first come, first served” basis—but until such time as our present backlog of orders is filled, we are not taking orders for several previously offered machines, the Thigh and Lower-back machine, the Biceps and Forearm machine, and several other machines listed in previous advertisements.

Special consideration will be given to orders from established public schools and/or other public institutions interested in using this new equipment in connection with their athletic training programs—and a large store of research information is available for cross-checking purposes. We are especially interested in obtaining research data produced by working with blind subjects, since this new equipment provides unique opportunities for such an application.

We are also still offering an opportunity to train in the finest equipped gymnasium in the world—in the DeLand, Florida Public High School gymnasium, in connection with special adult educational programs in weight training conducted by Coach Bill Bradford. Barbells, almost all types of conventional training devices, a Universal machine, and a large number of new types of Nautilus training machines are available in a modern air-conditioned gym. The cost is \$6 per year, payable to the Public High School Adult Educational Program, DeLand, Florida. For additional information, write Coach Bill Bradford in care of the school.

This program offers a unique opportunity to sincerely interested trainees; a chance to train with the best equipment in the world—in company with some of the best-built and strongest men in history.

For a copy of Nautilus Bulletin No. 1, send \$4 to **ARTHUR JONES PRODUCTIONS, P.O. Box 1783**
DeLand, Florida 32720

This is a straight-to-the-point outline of the principles contained in the new methods of training; primarily designed to be of assistance to trainees who do NOT have the availability of any of the new equipment, this bulletin offers a number of valuable tips for incorporating the use of similar principles into training programs based on conventional equipment.

For the purpose of placing orders or making inquiries regarding the new equipment, write:

ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720 — or phone 904-228-2884

NAUTILUS PULLOVER-TYPE TORSO MACHINE

the most productive piece of equipment in the history of exercise.

Human muscular structures perform work by moving body parts, and body parts move in a rotary fashion; this machine provides rotary resistance over a range of more than 240 degrees of movement.

Muscular structures are weakest in their extended positions and strongest in their contracted positions; Nautilus equipment provides automatically varying resistance which makes it possible to work any major muscle against a load that is never too light and never too heavy in any position—the Pullover-type machine provides such ideal resistance for the largest muscular structure in the upper body, the latissimus.

For the production of best possible results, muscles must be worked over their entire ranges of movement; this machine provides direct, omni-directional resistance over a range of movement which actually exceeds the requirements of most individuals—and meets the requirements of any individual.

Regardless of the direction of movement of the involved body part, the resistance is always 180 degrees out of phase with such movement—thus resistance is provided in such a way that any movement is always directly opposed. There are no “sticking points” of too heavy resistance—and no points of little or no resistance; the muscles are properly worked throughout their entire range of movement.

For the involvement of an entire muscular structure in any form of exercise, the resistance must be provided with maximum possible resistance in its position of full contraction; in most conventional exercises literally no resistance is provided in the fully contracted position—at the point where greatest resistance is required, none is provided.

The Pullover-type Torso machine provides maximum possible resistance in the position of full contraction—and proper resistance in every position.

Three brief weekly workouts on this machine—involving a total weekly training time of approximately thirty minutes—will produce more muscular development and strength increases in this area of the body within a few weeks than can be produced by conventional training methods in a period of several years, regardless of the amount of time that is devoted to such other types of training.

While this machine is primarily designed to develop the latissimus muscles, it also provides a very high order of extremely productive exercise for the pectorals, the abdominals, the trapezoids, and other muscular structures of the torso.

The original prototype of this machine was first constructed in 1948—since then, twenty-six other models have been built and carefully tested; during the last two years, large scale research programs have been conducted in major public schools in order to determine the most effective methods for utilizing this extremely productive machine.

The model of this machine now being offered to the public has been tested and proven far beyond any shadow of a slightest doubt—and as of this moment, it remains by far the most productive device in the history of exercise.

Designed to pass through an average width 32 inch door, the machine is approximately 3 feet wide, 5 feet high and 400 pounds in weight; it occupies a “working space” of 3 by 5 feet, about the same space required for a large padded chair.

Basic construction is “all steel”—using the heaviest normally available steel tubing. All welds are hand ground, radiused and filled. The overall finish is fully on a par with that of a fine automobile—and major portions of the machine are finished in high quality chrome. Seats and pads are built around a solid framework of heavy timber, with thick padding and long-lasting, attractive covering material.

The very few moving parts that are subject to wear are so sturdily built that they should be trouble free for several years of hard usage and can then be replaced in moments at very little expense.

Bushings are high quality oil-impregnated porous bronze, and enough spare bushings are provided free with each machine to insure against any possibility of “down time” from bushing failure; every bushing in the machine can be replaced in a matter of less than five minutes, with the use of only two standard-sized wrenches.

With anything even approaching normal care, the machine should literally last a lifetime in hard service.

Upon seeing one of these machines for the first time, Red Lerille, Mr. America of 1960 and the owner of one of the finest health studios in the world, remarked, “. . . it's beautiful; I'll be proud to have one in my gym.”

Available for shipment within approximately three weeks after receipt of orders, these machines are priced at \$590 f.o.b. DeLand, Florida

Full instructions for use are provided free with each machine shipped—and because of the extremely effective nature of the “total” exercise provided by these machines, these instructions should be carefully followed. With these machines, brief and infrequent workouts are not only a possibility, they are a definite requirement.

We now have orders for this type of machine from Red Lerille, Bill Pearl, Joe Gold, Arnold Schwarzenegger and a number of other well-known body-builders—within a few months it will be possible to see and try these machines in almost any well-equipped gym.

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720 — or phone 904-228-2884**



The photo above is a closeup of the Pullover Type Torso Machine

NAUTILUS COMBINATION CURLING & TRICEPS MACHINE

by far the most productive piece of equipment available for developing great muscular size and strength in the upper arms.

This two-station, two-exercise machine provides full-range, direct, omni-directional, balanced, automatically-variable resistance for both the curling and triceps curling functions of the upper arms.

Franco Colomбу pumped his upper arms a total of one and five sixteenths inches in approximately twenty minutes by performing a total of ten sets on this machine; five sets of curls and five sets of triceps curls.

One of our trainees in DeLand has produced the largest-appearing muscular arms in the world by training on one of these machines for a period of less than four months; upon seeing this man's arms, Arnold Schwarzenegger remarked, ". . . his arms are larger than mine."

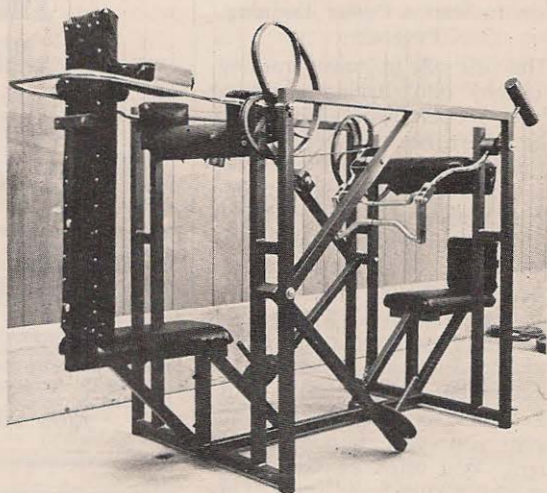
As it turned out, Arnold was wrong—his arms were actually a bit larger, by a fraction of an inch—but then, Arnold is six inches taller than this man.

This machine will NOT build such arms on just anybody; but it will build a greater degree of both size and strength than it is possible to do with any other method of training—and it will do so in a small fraction of the time that is normally required for developing maximum-sized muscular arms.

In almost all cases, no more than two sets of each of the two exercises should be performed in any one workout—three times weekly; long workouts involving large numbers of sets would actually reduce muscular size and strength—because of the "total" nature of the exercise provided by this machine, very little in the way of training is required, or even desirable.

The two stations of this machine are housed in the same structure, but both stations can be used at the same time—by two trainees; neither station interferes with the operation of the other—and most of our training subjects train in pairs, alternating sets. While one man is using the curling station, the other is using the triceps station—and then they swap stations. In this manner, a complete workout for the upper arms can be completed by two subjects in a matter of less than fifteen minutes—and for best results in most cases, should be completed even more rapidly, in approximately nine minutes, a total weekly training time for the upper arms of twenty-seven minutes.

Overall size of the machine is 3 feet by 7 feet by approximately 5 feet in height, with a weight of about 500 pounds. This machine will NOT pass through a normal width 32 inch door—but modifications can be made to the basic structure at extra cost which will make this possible.



This photo of the Nautilus Triceps-Biceps machine presents a view of a rather complicated machine but one which will give results in arm development never dreamed possible before its invention. It is beautifully finished in lustrous automobile finish and chrome. The upholstery is of the finest quality, thus you have a quality lifetime machine as well as the most effective arm machine available.

Basic construction of the Combination Curling and Triceps machine is very similar to that of the Pullover type Torso machine described in another advertisement; the supporting framework is all steel, welded, and with the finish of a fine automobile. Movement arms of the curling and triceps-curling works are all chromed.

This machine has two seats, two seat backs, a curling pad, a triceps curling pad, two elbow restraining pads in the triceps station, and two triceps-curling hand pads—a total of ten padded areas.

The curling works is designed in such a manner that it is automatically adjusted to the length of arms of any user; and it provides both normal "palms-up" curling and angled grip curling—without adjustment. The triceps-curling station will fit anybody—automatically, without adjustment.

In short, it's a "get in it and go" machine—no calculations, no adjustments, no limitations.

Full instructions for best utilization are provided free with each machine.

Available for shipment within two to three weeks of receipt of orders, \$715. f.o.b. DeLand, Florida.

It is the opinion of the inventor that the Pullover-type Torso machine is more valuable for the production of overall results; but it has been the almost unanimous opinion of the people who have used the Combination Curling and Triceps machine that it will rapidly become the most popular piece of large training equipment in existence—simply because of the great degree of interest in developing the upper arms to the maximum size and strength.

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720 — or phone 904-228-2884**

NAUTILUS SYSTEM TORSO MACHINES -

THE MOST PRODUCTIVE MACHINE IN THE

The largest muscular structure in the upper body, the extremely complex latissimus group of muscles, can now be exercised directly; in the past, using conventional exercises, this was literally impossible — and as a result, the development of maximum-possible degrees of strength and muscular size was a long, slow process.

Using conventional exercises for the torso muscles, a point of failure is reached when the much weaker muscles of the arms become exhausted — and this occurs long before a significant degree of growth stimulation has been induced in the torso muscles. As a result, attempts to develop the torso muscles were constantly limited by the proportionate weakness of the upper arms; the arms are simply not strong enough to provide a workload required for producing best possible results in the torso.

Secondly, attempts to overcome this shortcoming by doing more sets or more exercises — or both — simply resulted in overworking the arms, while still not providing a heavy enough workload for the torso; more work is not the requirement — for best possible results, much heavier work is needed, and with conventional equipment this is impossible.

Muscles do not lift weights; instead, they move related body parts — and the body parts lift weights. And while muscles work in a fairly straight line (reciprocal) fashion, body parts rotate; and since conventional exercise devices provide only straight line resistance, it is literally impossible to work any major muscular structure over its entire possible range of movement.

Nautilus machines provide rotary resistance — assuring full-range, constant resistance; the Pullover-type Torso Machine provides rotary resistance over a range of movement exceeding 240 degrees — a range of movement that meets the requirements of any subject, and exceeds the requirements of most subjects. The largest muscles in the torso are worked directly and heavily — over their entire range of movement; flexibility is greatly increased, enormous degrees of rib-box expansion are provided, and large areas of the muscular structures involved that have never before been provided with any exercise are now worked to the maximum possible degree.

Muscles are weakest in their extended positions and strongest in their contracted positions; for full involvement of an entire muscular structure in any form of exercise, automatically variable forms of resistance must be provided. And while some effective variation of resistance is encountered in conventional exercises because of changing moment-arm factors, such variation is totally random and incorrect; as a result, you encounter so-called "sticking points," where the resistance is far too heavy, and areas of little or no resistance. And in the position of full contraction — the **ONLY POSITION IN THE EXERCISE WHERE IT IS EVEN POSSIBLE TO INVOLVE THE ENTIRE MUSCLE** — there is literally no resistance. Just where you need resistance the most — and where you need the most resistance — you have absolutely no resistance.

Nautilus machines provide automatically variable resistance balanced to a properly developed strength curve; the Pullover-type Torso Machine provides

maximum possible resistance in every possible position — and in some positions that are impossible for most people. There are no "sticking points," no areas of little or no resistance, and you cannot "lock out" in the position of full contraction — the involved muscles are worked heavily and properly in every position; you have resistance where you need it; where it will provide the greatest possible degree of muscle growth stimulation.

Conventional forms of exercise are necessarily limited to uni-directional (one-directional) resistance; and since the direction of movement of involved body parts is constantly changing, it becomes impossible to provide direct resistance in conventional exercises in anything more than an infinitely small range of movement. In conventional forms of curling, direct resistance is limited to less than one degree of movement — out of a total range of movement of approximately 160 degrees. In effect, you are working the muscle properly in "one" position — and incorrectly in 159 positions. In conventional forms of squatting, there is literally **NO** direct resistance.

Yet the curl and the squat are among the six best conventional exercises, and will eventually produce great degrees of both muscular size and strength. But far better results can be produced in a small fraction of the previously required training time by working the muscles in every position — against perfectly direct resistance.

Nautilus machines provide perfectly direct resistance; because of the omni-directional form of resistance incorporated in Nautilus machines, the "direction of resistance" is always exactly opposite to the "direction of movement." If the hands are moving up, the resistance is down — if the hands are moving east, the resistance is towards the west. If the direction of movement of the involved body parts changes by so much as a tiny fraction of one degree, then the direction of resistance automatically changes in exact proportion — instantly, simultaneously, with literally zero "time delay."

The Pullover-type Torso machine provides such perfectly direct resistance in every position; and as a result the muscles are always being involved in the exercise to the maximum possible degree in every position.

Such **TOTAL** exercise is extremely productive, since it involves close to 100% of the total number of individual muscle fibers contained in the muscles being exercised — as opposed to something on the order of 18% of the fibers (or less) in conventional exercises; and as a result, brief and infrequent use of the Pullover-type Torso Machine is not only a possibility — but is a distinct requirement. Frequent workouts involving many sets will exhaust the muscles beyond their ability to recover between workouts.

We have repeatedly demonstrated the ability of this machine to put a well-conditioned subject on the floor in a state of outright shock in a matter of a very few moments; and while there is nothing dangerous about the use of the machine if it is used with anything approaching common sense, it absolutely should not be viewed as simply another training device and used

PULLOVER-TYPE TORSO MACHINES

HISTORY OF SYSTEMATIC EXERCISE

accordingly. Used properly in accordance with instructions, this machine will produce more in the way of strength and muscular size in the areas of the body involved in a matter of weeks than can be produced by conventional exercises in any length of time. Used properly in connection with a properly outlined training program, this machine should produce maximum possible degrees of development in the areas most heavily involved in less than a year of three-times-weekly workouts.

The actual degree of results produced will, of course, depend upon several factors — the individual potential of the subject, his degree of maturity, overall health and metabolism, and other factors; but in all cases, actual results will far exceed anything even possible with conventional training equipment.

The Pullover-type Torso Machine occupies a "working space" of approximately 3 feet by 5 feet, about the area occupied by a large padded chair — thus space requirements are not normally a factor; it will pass through a normal 32 inch door — is shipped almost fully assembled, and can be unpacked and used in a matter of a few minutes. No mechanical knowledge or special tools are required; simply insert one bolt, tighten it — and use the machine.

Construction is of the heaviest normally-available steel tubing (square) and the overall finish is similar to that of an expensive automobile. All welds are hand-ground, radiused, filled, and sanded — the overall appearance of quality is on a par with any exercise machines sold at any price, and far superior to most exercise machines. Major portions exposed to contact with moisture (sweat) are finished in high quality chrome.

Overall construction is so rugged that the machines should last in hard service almost literally "forever" — they are truly a lifetime machine. The only parts subject to wear — cables and bushings — can be quickly, easily, and inexpensively replaced, in a matter of a very few minutes, using simple tools. Seats, seat backs, elbow pads — the padded areas of this machine — are professionally made, using the best obtainable materials; built around heavy timber supports, the padded parts are at least five times as strong as required — and while the covering material will eventually wear in hard service, it should last for years, and can be easily replaced by almost any upholstery shop.

More than 200 individual parts go into the construction of each of these machines, and each part is made with extreme attention to quality-control; in short, the machines are as good as we can make them. In use, they require little or nothing in the way of care, and while the design and features of this type of machine are very complex, the use of the machine is very simple.

Within the very near future, this type of machine will become the most commonly used type of exercise machine in existence — and it is certainly the most productive exercise machine obtainable at any price.

Because of cost factors beyond our control, we have been forced to raise the price of this machine approxi-

mately 15%; careful cost studies clearly indicated that we have actually been selling these machines at a price below our cost of production. Orders received at previously existing prices will be filled at those prices — but new orders will not be accepted at the old prices. The present price for the **Pullover-Type Torso Machine is \$680** f.o.b. DeLand, Florida, for pickup in DeLand. For machines that are not picked up uncrated, there must be an additional charge of \$25 for machines to be shipped by air, and \$35 for machines to be shipped by truck. Shipping weight by air approximately 350 pounds — by truck, 400 pounds.

In addition to the Pullover-type Machine listed above, we are also now making deliveries of three other types of Torso Machines; the Rowing-type Torso Machine — the Behind Neck-type Torso Machine — and a single-station, dual exercise Torso and Arm Machine. These machines were designed to be used in connection with the Pullover-type Machine and while they are not a requirement for the production of the average trainee, they are a distinct requirement for the production of the greatest possible degree of overall results within the shortest possible period of time; in short, they are designed for the subject desiring to build the ultimate degree of development — for top body-builders, large gyms, large school athletic programs, rehabilitation facilities, research programs, etc.

These machines are built to the same standard of quality incorporated in the previously described Pullover-type machine; they are designed with exactly similar functional principles and provide the best possible type of exercise for the areas of the body involved.

Rowing-type Torso Machine — \$560
f.o.b. DeLand, Florida

Behind-neck Type Torso Machine — \$560
f.o.b. DeLand, Florida

✕ Torso and Arm Machine (single-station, dual-exercise)
\$420 — f.o.b. DeLand, Florida

The last above listed machine (Torso and Arm Machine) does NOT provide all the features of the other machines; in this machine, the arms are involved in the torso-muscle exercises — thus the resistance is neither direct nor omni-directional. But automatically variable resistance is provided, and this machine is extremely productive if used properly in connection with the use of the other torso machines — and far more productive than conventional exercises for the same areas of the body even if used alone. It is NOT an arm machine — it is designed to work the upper torso muscles — but it does involve and work the arms to a rather high degree. Crating charges for shipment by air or truck are the same for these machines as they are for the Pullover machine — no crating charge made for machines picked up uncrated.

ARTHUR JONES PRODUCTIONS, P.O. Box 1783

DeLand, Florida 32720

Phone area code 904 228 2884

NAUTILUS SYSTEM FRANCHISES

We are now offering "protected dealership" franchises in a number of widely scattered areas; such franchises have already been negotiated with Boyer Coe and Red Lerille in Lafayette, Louisiana — Bill Pearl in Pasadena, California — and the House of Shi-Boi in Clearwater, Florida; interested individuals can see and try several types of the new Nautilus machines at any of those locations.

Similar franchises are available in northern California, the far north-west, the New York area, the Chicago area, and in literally hundreds of other areas. General requirements are as follow:

A minimum cash investment of at least \$13,000 — which includes the cost of nine types of Nautilus machines providing a total of twelve different exercises; a maximum cash investment of not more than \$37,000 which includes the purchase of a much larger number of Nautilus machines of a wide variety. The primary difference in size of investment required being determined by the area of the franchise.

Franchised dealers will be assured a protected sales area, and will benefit from forthcoming advertisements in either, or both, the Readers Digest and/or U.S. News and World Report, and other major, national advertising arrangements.

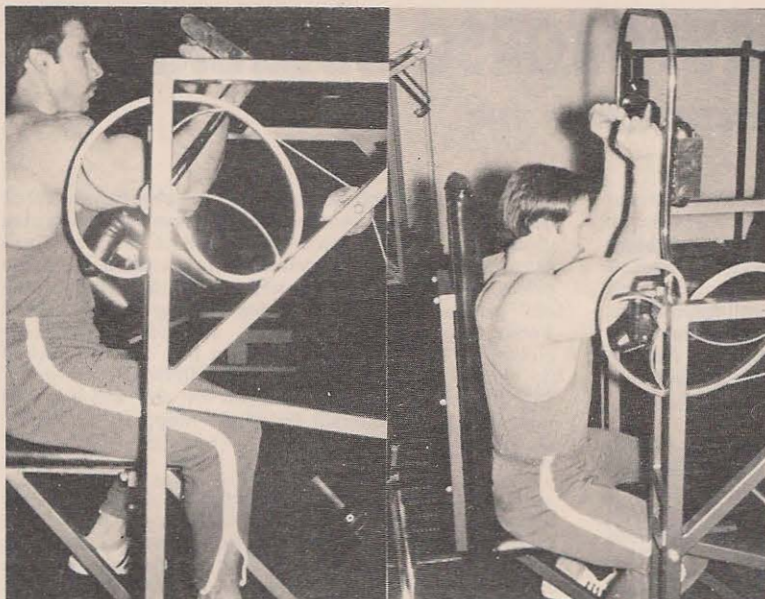
Production facilities are being greatly increased to meet an enormous demand for these revolutionary new

machines, and within a short time, a major industrial manufacturer will be producing some of the machines on a large scale — additional arrangements for other, similar, production facilities are now underway and will probably be completed long before this notice is printed.

It will be necessary for a senior representative from any firm desiring a franchise to visit DeLand, Florida, at their own expense, for a period of at least a week for a training program in the proper use of the new machines — and this requirement will not be waived under any circumstances, regardless of the previous experience of the persons involved.

First, application for additional information must be made on a company letterhead, giving an exact day and hour when senior members of the interested firm will be available to accept a collect long-distance telephone call for the purpose of giving preliminary information. Information regarding these franchises will not be given over the phone in reply to questions put by people who have deviated from the above outlined procedure — nor will any information be sent in reply to letters from any source until after such a telephone conversation has been completed satisfactorily.

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720**



Boyer Coe using biceps machine, on the left, and triceps machine, on the right, at Red Lerille's Gym.

NAUTILUS SYSTEM ARM MACHINES

NAUTILUS COMBINATION CURLING AND TRICEPS MACHINE

The most productive machinery in the history of exercise for building maximum possible degrees of both muscular size and strength in the upper arms. Used properly in accordance with instructions, this machine will quickly produce great degrees of improvement in both muscular size and strength — as a result of three brief weekly workouts involving a total weekly training time of less than one hour; it is no longer necessary — or desirable — to spend several hours training the muscles of the arms.

This is a two-station, two-exercise machine — with completely separate stations that can be used simultaneously by two trainees; while one subject is using the triceps station, another subject can be using the curling station.

All of the remarkably productive features of the other major types of Nautilus machines are incorporated in both stations of this machine — rotary movement, full-range, omni-directional, balanced, automatically variable, direct exercise, TOTAL exercise — and because of these features, very little in the way of training is required for the production of best-possible results.

These exercises will NOT build huge arms on just anybody — but they will go a great deal further in that direction than any other type of exercise, and a lot faster; and they absolutely will build as much in the way of size and strength as is possible in any particular case in line with individual potential limitations — some trainees that have previously found it impossible to add even a tiny fraction of an inch to their upper arm size, after unsuccessful attempts in that direction for several years using conventional exercises, have added as much as a full half-inch to their arms in a matter of a very few days — after first starting to use these exercises.

The use of these exercises involves a far higher percentage of the total number of fibers contained in the muscular structures of the upper arms than it is even possible to involve with any sort of conventional exercise; such near TOTAL exercise must literally be experienced to be appreciated — and the degree of muscular “pump” produced by even a few minutes’ work on these machines far surpasses anything possible in any other type of exercise. And while it should be clearly understood that muscular “pump” is a result, rather than a causative factor, it is nevertheless true that such degrees of pumping clearly indicate that far more fibers are being worked, and worked much harder.

This combination machine occupies a “working space” of approximately 3½ ft. x 7 ft; construction is of highest possible quality both in regard to appearance and strength. Finish is similar to that of a fine automobile — with high quality chrome in critical areas exposed to moisture (sweat).

Since the publication of previous advertisements, we have found it desirable to add a hand-grip triceps-curling bar to the curling station of this machine; this addition has resulted in raising the price of the machine by \$15 — to a total price of \$750 f.o.b. DeLand, Florida, if picked up uncrated. If the machine must be shipped, then we must add \$25 for crating charges if shipment is to be by air, and \$35 for shipment by truck. Actual freight charges, in either case, are, of course, at the expense of the customer.

Delivery of this machine can be made within three weeks after orders are received, in most cases.

**NAUTILUS
CURLING MACHINE — \$455**
f.o.b. DeLand, Florida, crating
charges as above.

The finest curling machine available at any price, by far; this is the same basic curling machine included in the two-exercise machine described above.

**NAUTILUS
TRICEPS MACHINE — \$400**
f.o.b. DeLand, Florida, crating
charges as above.

This machine provides full-range “total” exercise for the largest muscles in the upper arms, the triceps; because of the design of this machine, the danger to elbow tendons sometimes encountered in triceps exercises is greatly reduced, if not totally eliminated — and the pain usually caused by triceps exercises is not produced. The arms are worked with the hands and forearms in a “normal”, untwisted position, with the palms of the hands facing each other — which positioning removes a large part of the strain on the elbow tendons, the troublesome and dangerous factor involved in conventional exercises for the triceps.

Very little of such “total” exercise is required; if nine weekly sets requiring a weekly training time of less than half an hour are performed in connection with a properly outlined overall training routine, then maximum-possible results will be produced very quickly.

This is the same basic machine included in the combination machine described above.

Delivery of either the curling or triceps machines (as separate units) can normally be made within three to four weeks after orders are received.

As of the moment, we are not accepting orders for other types of arm machines previously offered; until such time as our present backlog of orders is filled, we are concentrating all of our production facilities on the machines listed here and in other advertisements in this issue of Iron Man.

ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Florida
32720 — Ph. (ac) 904 228-2884

NAUTILUS SYSTEM LEG AND LOWER BACK MACHINES

In response to literally hundreds of requests — requests made in the face of our plain statement that these machines were available only upon a very limited “first come, first served” basis, and later plain statements that the machines were no longer available under any circumstances at the present — we have decided to establish a firm “waiting list” of interested customers for this type of machine.

Orders will be posted in their exact order of receipt by us, and later deliveries will be made in accordance with that order; the first received order will be delivered first, etc.

Orders must be accompanied by check or money order in the amount of \$600, as a firm deposit against future delivery at an estimated price of \$1,200 — but with no guarantee regarding actual price; if it later proves impossible to deliver the machines at a price of \$1,200, then customers will have the option of an immediate refund of their advance deposits, plus normal interest for the amount of time the deposit may have been held.

All such deposits will be placed in a special trust account in a major Florida bank, and will be removed from that account only upon delivery of machines involved or for the purpose of making refunds; any interest thus produced will be credited to the balance due on machines delivered, or added to the amount refunded.

The balance due will be payable immediately prior to delivery of individual machines.

And while it might appear that “the more orders received, the slower delivery will be” — in fact, the exact opposite appears to be the case in this situation; because a high enough volume of orders will make it possible for us to interest a major manufacturer of equipment — and thus a high number of orders would probably be delivered earlier than a much lower number of orders.

But it should be obvious that the lower on the list a name appears, the slower delivery will be — and vice versa. And in view of the amount of interest shown in this machine up to this moment of writing, I feel safe in estimating that at least a thousand orders will be received within a reasonably short period of time.

Thus it is now possible to both assure “soonest possible” delivery of this extremely productive and truly revolutionary training machine and to make such machines widely available much sooner than they might otherwise be.

Placement on the list of orders can be obtained immediately by telephone — if the required deposit is then immediately forthcoming by airmail.

For the benefit of any persons considering this a rather unusual arrangement, I will add that it was the only possible arrangement we could think of under the circumstances, and was prompted by a literally overwhelming demand for this type of machine, hundreds of telephone calls, and many, many letters and personal visits.

Since our production facilities are already working at capacity to turn out enough machines of the other types to meet a constantly increasing stream of incoming orders, it is simply impossible for us to produce the large, complex Leg and Lower-back machines in reasonable numbers — and certainly not in proportion to demand; thus we must turn this production over to a large manufacturing company — but in order to interest such a company, we must have a large number of firm orders.

If the level of response to this offer is satisfactory, then delivery of the first thousand machines can probably be completed within a period of six months — and probably at the hoped-for price of \$1,200.

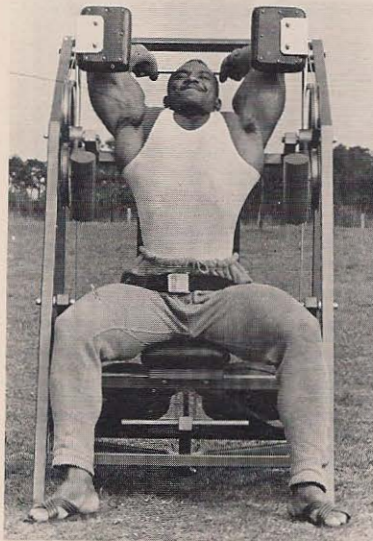
ARTHUR JONES PRODUCTIONS, P.O. Box 1783

DeLand, Florida 32720

Phone area code 904 228 2884

PULLOVER-TYPE TORSO MACHINES

The Most Productive Machine in The History of Systematic Exercise



The most advanced, the most productive, and the most popular type of readily available Nautilus System machines; the Pullover-type Torso Machines provide all of the revolutionary features incorporated in any of the other types of Nautilus machines — and these principles are applied to the largest muscular mass in the torso. While the application of these same principles will produce an equal “degree” of results with any muscular structure, the actual “amount” of results will obviously be limited by the maximum potential size of the particular muscular structure being worked; and since the Pullover-type machines involve the largest muscular structures in the torso, overall results will obviously be greater.

Secondly, as a result of “indirect effect,” growth of any muscular structure in the body will cause at least some degree of growth in almost every other muscle in the body; and results from this effect are primarily determined by the relative size of the muscles that are being worked — heavily working a large muscle will cause more indirect effect than would be produced by an equal amount of work applied to a smaller muscle.

In addition to full-range, direct resistance for the latissimus muscles, these machines provide a high order of very productive exercise for all of the largest muscular structures in the upper torso — the pectorals, the trapezoids, and even the abdominals; most subjects will find that properly using the Pullover-type machine totally eliminates the previous requirement for abdominal work — **NONE OF OUR TRAINEES ARE DOING ANY ABDOMINAL WORK OF ANY KIND** apart from six to nine weekly sets on the Pullover-type machines, no situps, no

leg-raises, no specialized abdominal work at all.

The arms, the deltoids, and the neck are not worked by the Pullover type machines — but in all cases, indirect effect produced by the large-scale growth of the torso muscles will cause muscular growth even in areas that are not being worked; starting with an underweight but healthy mature individual, it is easily possible to add from two to three inches to the size of the upper arms within a period of a few weeks — from the use of the Pullover-type machine combined with one other exercise, full squats, and without any exercise at all for the arms.

Thirdly, the size of the upper arms is at least to some degree dependent upon the size of the latissimus muscles; the latissimus muscles connect the upper arms to the torso, and the actual point of attachment is directly beneath the mass of the triceps muscles — overall growth of the latissimus muscles will thus also “directly” add to the size of the upper arms.

Most subjects — upon using the Pullover-type machine for the first time — mention resulting muscular soreness in the triceps; but in fact, such soreness is not soreness of the triceps — instead, it is soreness of the latissimus muscles, at the point where these muscles are attached to the upper arms, directly underneath the triceps.

While it is perfectly true that the secondary function of the triceps muscles is movement of the upper arms towards the rear, and that the movement involved in the Pullover-type machines is almost exactly similar during the last part of the movement — it should also be noted that the secondary function of the triceps can NOT be involved to any meaningful degree unless the primary function is completed; in effect, the arms must be fully straightened before the secondary function of the triceps is capable of significant power production — and since the arms remain bent throughout the exercise movements performed on the Pullover-type machine, it is thus impossible to involve the arm muscles in this exercise.

None of the above should be misread to imply that the Pullover-type machines are “arm machines” — they are NOT arm machines; but proper use of this type of machine certainly will produce large-scale increases in the size of the muscular structures of the upper arms, both directly and as a result of indirect effect.

For the fastest-possible production of the greatest-possible degree of overall results, the Pullover-type machine should be used in cycle with other types of Nautilus Torso

Machines — but even if used only in connection with normally-available conventional training equipment, the Pullover-type machine will produce results that are literally impossible from the use of conventional equipment alone.

Providing full-range, double direct, rotary form, omni-directional, automatically variable, balanced, “total” resistance for such a large muscular mass, exercise performed on this type of machine involves such a large number of individual muscle fibers that two sets performed during each of three weekly workouts are all that is required for the production of best-possible results in most cases; and similar results can NOT be produced by conventional methods, regardless of the number of exercises performed or the amount of time devoted to such training.

But it should be clearly understood that attempting to use such an effective machine as if it was a barbell will NOT produce good results: if numerous sets are performed during frequent workouts, then losses will be produced instead of gains — regardless of your condition, there is a definite limit to your recovery ability. If too much work is performed, then it will be impossible to fully recover between workouts. With this machine, brief and infrequent workouts are not only a possibility but a distinct requirement for the production of good results.

Additionally, **IN ALL CASES**, careful “break-in” training should be followed for a period of at least a week; if a trainee without previous experience with this machine attempts to use it heavily during a first workout, it may literally produce a condition of outright shock. Beginning trainees in DeLand are trained five days in a row at the start of their training with these machines and perform only one set during each of the first four workouts and two sets during the fifth “break-in” workout; and up to this point in time, no single individual has been able to perform a first “heavy” workout on this type of machine without literally becoming sick. However, if a proper break-in program is followed, then most subjects can use the machines properly during their second week of training.

PULLOVER-TYPE TORSO MACHINES, picked up in DeLand, Florida (uncrated), \$680. If machines must be shipped, an additional charge for crating must be made — \$35., if shipment is by truck; \$25 if shipment is by air. In all cases, freight charges are collect.

ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Florida
32720. Ph. AC 904 228-2884 day
or night.

NAUTILUS TRAINING PRINCIPLES

Bulletin Number 1

by Arthur Jones

The latest word on advanced weight training principles, written by the inventor of the revolutionary new Nautilus exercise machines; 113 pages, approximately 60,000 words, 44 chapters — a straight-to-the-point outline of the new training principles designed for trainees that do not have the use of any of the new types of machines.

This is NOT a long, detailed brochure on the new types of equipment; instead it is intended for trainees using conventional types of equipment, barbells and conventional pulley equipment. Dozens of extremely valuable training tips are covered in a simple to understand and clearly explained manner — tips that will be of very great value to all weight trainees.

Most of this information is new — but all of it is well supported by undeniable research evidence; some of the information is not new — but seems to have been forgotten or misunderstood by present-day weight trainees. And quite a bit of this information will undoubtedly lead to a probably never-ending, wide-scale controversy — since it clearly refutes many long-accepted but false beliefs presently held to be self-evident truth by almost all current weight trainees.

Chapter titles as follow . . .

- | | |
|--|---|
| 1 — An introduction and a brief background | 23 — Professional medical attitudes on training |
| 2 — Basic physics of conventional exercise methods | 24 — The significance of muscular "pumping" |
| 3 — The functions of muscular structures | 25 — The significance of muscular soreness |
| 4 — Indirect effect | 26 — The "Instinctive Training" theory |
| 5 — Frequency and extent of exercise | 27 — "Break-in" training |
| 6 — Intensity of effort | 28 — Time as a factor |
| 7 — Cam action | 29 — Age as a factor |
| 8 — Full squats — pro and con | 30 — Developing speed and flexibility |
| 9 — Compound exercises versus specialization | 31 — Muscular proportions |
| 10 — Irregularity of exercise | 32 — Layoffs from training |
| 11 — Inducing growth stimulation | 33 — "Sticking points" in training |
| 12 — Secondary growth factors | 34 — Confidence |
| 13 — The limits of muscular size | 35 — The significance of measurements |
| 14 — Reciprocity failure | 36 — Charting progress |
| 15 — Strength and endurance | 37 — The pre-exhaustion principle |
| 16 — Speed as a factor | 38 — The harder it seems — the easier it is |
| 17 — Accurately measuring power production | 39 — Conclusions |
| 18 — "Warming-up" properly | 40 — The Nautilus principles |
| 19 — Superstitions and myths | 41 — The next step |
| 20 — Growth drugs | 42 — DeLand High School training programs |
| 21 — Ranges of movement — flexibility | 43 — Training with conventional equipment |
| 22 — Average expectations from training | 44 — Recent Developments |

\$4. by mail, prepaid — bulletins mailed on same day orders are received.
ARTHUR JONES PRODUCTIONS, P.O. Box 1783, DeLand, Florida
32720 — Phone area code 904 228-2884

This book will NOT guarantee good training results to anybody, but it certainly will point the way to logical, well-proven training programs that can be the difference between literally striking results and outright failure.

NAUTILUS SYSTEM ARM MACHINES

Giving Sensational Results

Before his visit here, I told a recent trainee on the telephone that I thought we could add a full half-inch to his "cold" upper-arm size within two weeks — in spite of the fact that he had made no progress in that direction for a period of two full years of hard training.

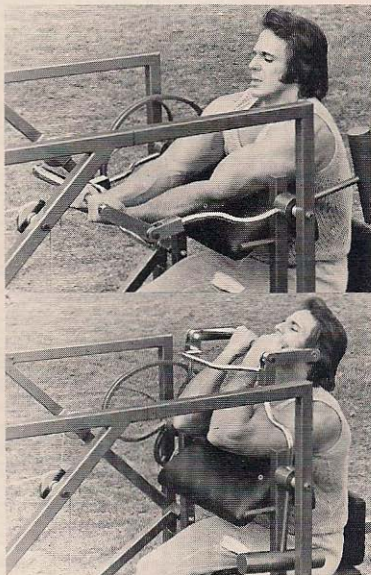
And what actually happened?

Well, during his first workout — within an elapsed time of exactly seven minutes and twenty seconds — he pumped his upper arms one and one-eighth inches; during his second break-in workout, twenty-four hours later, he pumped his upper arms a full one and one-half inches in less than eight minutes; and forty-eight hours after he arrived in DeLand, his "cold" upper arm measurement had increased by a solid half inch — so it didn't take us two weeks, in fact it took only two days. Within a period of ten days, he added well over three-quarters of an inch to his starting "cold" measurement — 13/16 inch to be exact. And it should be carefully noted that all of this was new growth — he was not replacing size that had previously existed; he was in the best condition of his life when he arrived here — and in far better condition when he left ten days later.

During the course of the last six months, at least fifty different subjects have produced literally striking results from very brief training with the new machines here in DeLand — and we have received dozens of reports of very similar results that people are producing with the machines elsewhere.

The machine that is producing these results is the Nautilus Combination Curling and Triceps Machine — available for shipment within three weeks of the receipt of orders, **\$750. F.O.B. DeLand Florida** if picked up uncrated. \$35 crating charge for shipment by truck; \$25. for shipment by air — freight collect in either case.

**ARTHUR JONES PRODUCTIONS — P.O. Box 1783, DeLand, Florida
32720 — Phone area code 904 228-2884**



Caputo using arm machine

More about NAUTILUS SYSTEM TORSO

How Long Does It Take?

Using a set of dumbbells, a barbell, and four types of Nautilus Torso Machines, three weekly workouts — of exactly sixteen minutes each — will produce a degree of results in the torso and shoulders that must be experienced to be believed. Forty-eight minutes of weekly training devoted to these areas of the body will produce the maximum possible rate of growth in any subject — and in most cases, growth will be so rapid that only a few months of such training will produce maximum possible degrees of muscular size and strength in line with individual potential.

Some people have asked, "... but how long can you maintain such a rapid rate of growth?"

And all I can say is "... at that pace, just how long do you have to maintain such a rate-of-growth?" If maximum possible goals can be reached in a matter of a few months — and they can — then why spend years in attempts to produce a lower order of results?

On the average, a man does not reach his individual peak of potential until the age of thirty-two; there are exceptions, of course — but in most cases, a man will not attain maximum possible strength and/or muscular size prior to the age of about thirty-two, regardless of how he trains. Prior to that age of maximum potential, the momentary potential will be lower — and it will gradually increase, year by year, until it reaches a peak at or about the age of thirty-two in most cases; thus, in most cases, individual potential will be at a certain point at age eighteen, and at a somewhat higher point at age twenty, and at an even higher point at age twenty-two, and so on.

This being true — and it is true — then it should be obvious that a man that had reached his momentary peak of potential at age eighteen, would thereafter be limited to a rate-of-progress determined by increases in his potential; that is to say, if, at the age of eighteen, you were already as big and as strong as possible, then any additional progress would be strictly limited by later increases in individual potential — and such additional progress would be rather slow.

However, in fact, it is almost literally impossible for anybody to reach a muscular-size or strength level that even closely approaches his momentary potential while using conventional types of training equipment; thus, in almost all cases, there is an unused reserve of potential size and strength — and in most

cases, the differences between existing levels of muscular size and potential levels of muscular size are very significant.

One recent visitor's experience will serve as a good example of the above point. After about ten years of steady training, and after having reached a development that placed him very near the top in national physique competition, this subject reached a point where any additional progress seemed impossible; during the two years immediately prior to his visit to DeLand, his progress was almost literally zero — in his own plainly stated opinion, he had gone as far as he considered possible for himself as an individual, he had, he thought, reached his maximum potential muscular size.

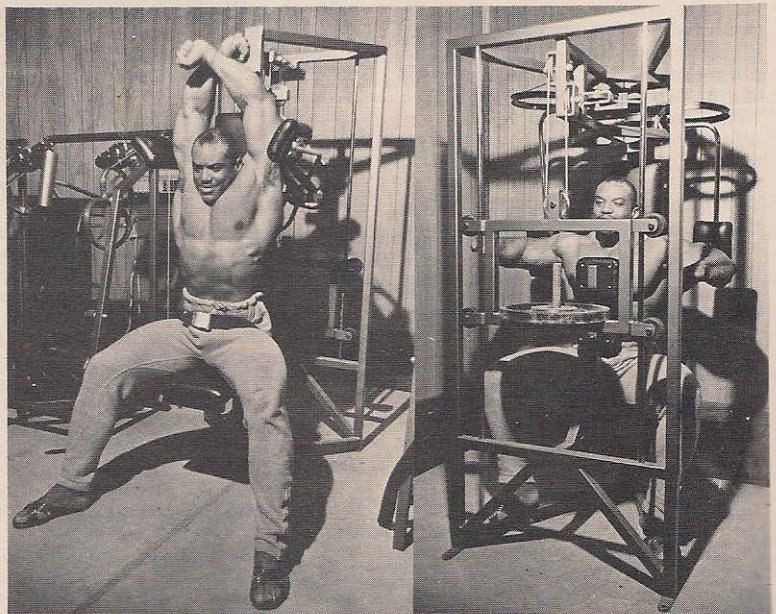
But then — during a period of only ten days in DeLand — he gained more than $\frac{3}{4}$ of an inch in his "cold" upper arm size, added another $\frac{3}{4}$ of an inch to his calves, increased his overall degree of muscularity, greatly improved his starting strength levels, and gained nearly seven pounds of overall bodyweight.

Perhaps this subject had reached his individual potential from the use of conventional equipment — but it should be obvious that his "actual potential" had not been reached. And while it is obviously impossible to maintain such a rapid rate-of-growth for a long period of time, it is just as obvious that — at that pace — it isn't necessary to maintain such a rate-of-progress for very long. When this subject does reach the real limits of his actual potential — whatever they may prove to be in his case — then additional progress beyond that point will be strictly limited by later increases in his potential; but I personally expect him to continue to progress far beyond his present levels of both muscular size and strength before reaching another sticking point.

Such results CAN NOT be produced by conventional types of training equipment — but such results WILL NOT be produced even by Nautilus equipment if it is improperly used; the above subject trained very briefly, but very hard — and after his initial period of break-in training, he trained only three times weekly, devoting less than one hour and twenty minutes to each of three weekly workouts for the entire body, a total weekly training time of less than four hours. Longer — or more frequent workouts — will NOT produce better results; on the contrary, for best-possible results, the equipment must be used very briefly and infrequently.

In addition to an arm machine (described elsewhere), the above mentioned subject used only three types of Nautilus machines; during the time he was in DeLand, we were in the process of replacing a number of

Oliva using two types of Torso Machines



MACHINES

older machines in the school gym and all of the newer models of machines were not available for his use. The torso-type machines used were the Pullover-type Machine, the Behind-neck type Machine, and the Rowing-type Machine — and since the Torso and Arm Machine that would normally have been used was not available at that time, a Universal Machine pulldown station was used instead.

Two cycles of four exercises were performed for the upper torso — each cycle required exactly four minutes, a total of only eight minutes of training for the upper torso muscles. Two other cycles of three exercises were performed for the shoulders — each cycle requiring about three minutes. Thus a total of only about fourteen minutes was devoted to training the upper torso and the shoulders — a weekly total of about forty-two minutes.

If a subject is in hard muscular condition at the start — as this man was — then very similar results can be produced with literally anybody, if they will train properly; in the case of an overweight subject, then similar progress will be produced in most cases, but will not be so obvious — since losses of fatty tissue may equal or exceed the addition of muscular mass, and measurable progress may not be apparent. If an inch of fat is removed from the arms during the same period that an inch of muscle is added, then no change may be produced in measurements — but an obvious increase in existing muscularity and strength will be produced.

Four types of Nautilus machines are required for properly working the upper torso and shoulders; these are, the Pullover-type Machine, the Behind-neck type Machine, the Torso and Arm Machine, and the Rowing-type Machine; used properly, those four machines will build more in both muscular size and strength in a matter of a very few months than it is possible to produce in any period of time with conventional equipment.

Purchased as a group of four machines, the total price is **\$2,200**, picked up in DeLand, Florida, uncrated. If the machines must be shipped, then a crating charge of \$35. must be added to the cost of each of the four machines if shipment is by truck, and \$25. for each machine if shipment is by air.

Purchased as individual units, prices are as follows:

Pullover-type Torso Machine (uncrated)	\$680.00
f.o.b. DeLand, Florida	
Behind-neck type Torso Machine (as above)	\$560.00
Rowing-type Torso Machine, as above	\$560.00
Torso and Arm Machine, as above	\$420.00

Delivery can now be made within three weeks of the receipt of orders in most cases. All — or most — of the above types of Nautilus machines can be seen at the following locations: in DeLand, Florida — at Red Lerille's Gym in Lafayette, Louisiana — Swoboda's Greenwich Gym, 234 W 12th St., New York, N.Y. — The House of Shi-Boi in Clearwater, Florida — Enterprise Sport Systems, 5225 Riverview Road, N.W., Atlanta, Georgia — Andy Gropp's Gym, Trenton, New Jersey — Sam Loprinzi's Gym, Portland, Oregon — Trojan Athletic Club, Seattle, Washington — Gold's Gym, Venice, California — R. & J. Health Club, Brooklyn, N. Y. — House of Hercules, Glendale, Arizona — Ed Sash's Body Shoppe, Ferndale, Michigan — and at several other locations. Within another few months, Nautilus Machines will be in use in almost all major gyms — and we already have orders from literally hundreds of gyms, schools, hospitals, research foundations, and individuals.

ARTHUR JONES PRODUCTIONS, P.O. Box 1783

DeLand, Florida 32720

Phone area code 904 228-2884 day or night

Nautilus System Equipment For Improving Conventional Training

Pulldown Bars for conventional lat-machines; providing both proper grip and hand-spacing. Fully chromed with plastic grips, ready to attach to lat-machine cable, **\$27.50** — without chrome, solid cold-rolled steel with plastic grips, ready to attach, unfinished (unpainted metal parts), **\$20.00**.

Nautilus "double-cam" Spiral Pulleys for use with conventional lat-machines; providing variable resistance — hubs machined from heavy, solid, cold-rolled steel, pulley perimeters constructed of heavy steel channel stock with strong, double-welded supporting spokes. Heavy-duty porous bronze, oil-impregnated, self-lubricating bushings and specially made hardened steel, shoulder-bolt type axles for perfectly smooth function and trouble-free years of service in hard use. Will improve the results produced by conventional lat machines "enormously." Finished in attractive, "Nautilus Blue," automotive enamel — metal parts (except bushings and axles) and welds are hand ground, filled, radiused, sanded, ♦ched, primed and double finished. **\$85**.

Nautilus "contracted position" Curling Bars, fully chromed **\$65**.

Nautilus "contracted position" Curling Benches, **\$95**.

All prices F.O.B. DeLand, Florida, freight collect, packing charges included in above prices.

All of the above pieces of equipment were developed for people using conventional types of training equipment. While these training aids will NOT duplicate the results produced by Nautilus Machines, they will greatly increase the degree of results produced by conventional training. Built to the "World's Highest" standard, the Nautilus standard of quality, using only the best materials and fine workmanship.

ARTHUR JONES PRODUCTIONS, P.O. Box 1783, DeLand, Fla. 32720
phone area code 904 228-2884.

Full installation instructions & training instructions included with all items.

difficulty with an intermediate pound-

Announcing . . .

NEW NAUTILUS SYSTEM LEG MACHINES

Available now on a "first come, first served," limited production basis, previously unannounced types of Nautilus System Machines for the development of the major muscular structures of the legs and buttocks are being manufactured in DeLand, Florida. Orders will be filled strictly in the order in which they are received — and at present the machines can be seen only in DeLand, although all franchised Nautilus distributors will have these machines on display within 60 days after publication of this first announcement.

NAUTILUS SYSTEM LEG-PRESS MACHINES — \$780 F.O.B. DeLand, Florida, picked up (uncrated). \$55 crating fee if shipment is made by truck and \$40 if shipment is by air.

NAUTILUS SYSTEM SQUAT MACHINES — \$860. F.O.B. DeLand Florida, crating charges as above if shipped.

NAUTILUS SYSTEM THIGH-EXTENSION MACHINES — \$560. F.O.B. DeLand, Florida. Crating charges as above.

NAUTILUS SYSTEM "GLUTE-CURL" MACHINES — \$660. F.O.B. DeLand, Florida. Crating charges as above.

NAUTILUS SYSTEM THIGH-CURL — \$560. F.O.B. DeLand, Florida. Crating charges as above.

Using three of the above machines — a Nautilus System Leg-press Machine, Thigh-extension Machine, and Squat Machine — three weekly workouts involving a total WEEKLY TRAINING TIME OF NINE MINUTES will produce a degree of strength and muscular size in the major muscle structures of the thighs that cannot be duplicated by any amount of weekly training with conventional equipment. Without the need for "spotters" — and in comfort and with far less danger than is involved in conventional leg training.

The previously-announced "Leg and Lower Back" Machines are still not available on regular order basis (see other advertisement in this issue).

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783, DeLand, Fla. 32720
phone area code 904 228-2884.**

NAUTILUS SYSTEM TORSO MACHINES

Using three types of readily-available Nautilus Torso Machines, two cycles of four exercises performed in a total period of less than eight minutes will produce the maximum-possible degree of growth stimulation in the muscular structures involved — in the latissimus, the pectorals, the trapezoids, the abdominals, and in other, smaller muscles. Less than twenty-four minutes of WEEKLY training on these machines will quickly produce results that are literally impossible using any amount of any other type of training equipment.

Three weekly workouts of less than eight minutes each are all that is required — or even desirable: careful tests have shown that three such cycles in each of three weekly workouts almost always results in a condition of "overtraining" — gains will still be produced in most cases, but not as rapidly as the results produced by only two cycles. And in some cases, three or more cycles will bring progress to a halt — or even produce losses.

The machines required for producing such results are the Pullover-type Torso Machine, the Behind-neck type Torso Machine and the Torso/Arm Machine. In a properly-performed cycle, a set of 12 to 20 repetitions is performed in the Pullover-type machine, to the point of failure — immediately followed by a set of 10 to 15 repetitions in the Behind-neck type machine, again to the point of failure — immediately followed by one set of each of two different exercises in the Torso/Arm machine, first a set of "behind-neck pulldowns" and secondly a set of "chinning-grip pulldowns" to the chest, with both sets being carried to the point of failure.

The first set, on the pullover-type machine, works all of the major muscles of the torso over a range-of-movement of as much as 255 degrees (or as much as the flexibility of the individual subject will permit), against constant, full-range, double-direct, automatically-variable, omni-directional, balanced resistance — and it does so without involving the muscles or strength of the arms, thus the "weak link" of the involvement of arm-strength which is one of the limiting factors of conventional forms of

exercises intended for these same torso muscles is totally removed; you are working the torso muscles — which you are trying to do — instead of over-working the arms in largely-wasted efforts to exercise the torso muscles.

The second set of the cycle, on the behind-neck type machine, works the same muscular structures from another angle — over a range-of-movement of approximately 160 degrees; and again you are getting the benefit of all of the revolutionary features of the Nautilus System machines. Even though the previously-used pullover-type machine was used to the point that any amount of additional movement was literally impossible (and it should be used in that fashion), and even though the set on the behind-neck type machine is started immediately after the set on the pullover machine is finished — it is still possible to work the same muscular structures quite hard; because, in the second machine, you are working the same muscles in a different direction, involving fibers and using strength that could not be used in the first set on the pullover machine.

By the end of the second set, your major torso muscles will be exhausted to a point where additional movement against significant resistance is impossible — so, at that point, you immediately move to the third machine, the Torso/Arm machine; the Torso/Arm machine does involve the strength and the muscles of the arms — and in that respect it is different from the first two machines which do not involve or work the arm muscles. But at that point in the cycle, it is desirable to involve the arms — because it is then necessary to use the strength of the arms to force the torso muscles to work far beyond a point where they would normally fail and refuse to function.

In the first exercise performed on the Torso/Arm machine, "behind-neck pulldowns" are performed using a proper grip, a narrow, parallel grip, and variable resistance is provided by the special Nautilus "double cam" type of spiral pulleys — when a point of failure is reached in this first exercise on the Torso/Arm machine, the grip is quickly switched to a "regular chinning" grip, and a second set is immediately performed pulling the bar down in front of the chest.

When no additional amount of movement can be produced, then you have completed one "cycle" — total time about three and a half minutes or less; at which point your latissimus muscles, your pectorals, your trapezoids, your abdominals, your upper-arms, your forearms, and several smaller muscular structures will have been worked in a manner that is utterly impossible to duplicate in any other way in any amount of time.

Most people require only one such cycle in each of three weekly workouts; advanced bodybuilders usually produce best results from two cycles in each of three weekly workouts — and NOBODY should EVER use more than three cycles in any one workout and in such cases then it would be a very good idea to perform only one or two weekly workouts.

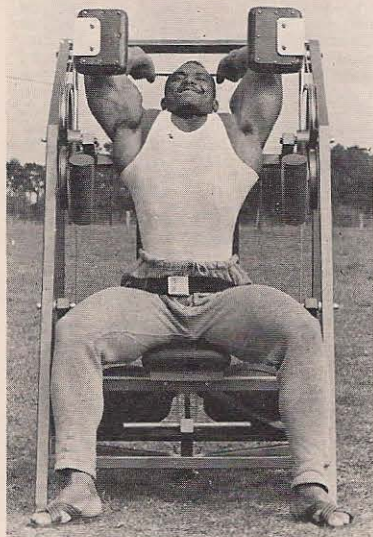
The above description of a "proper" workout is intended to outline the method of use required for maximum-possible results; but even if the machines are used without such "intensity of effort," very good results will still be produced — but nothing on the order of the results that could have been produced by proper use of the machines.

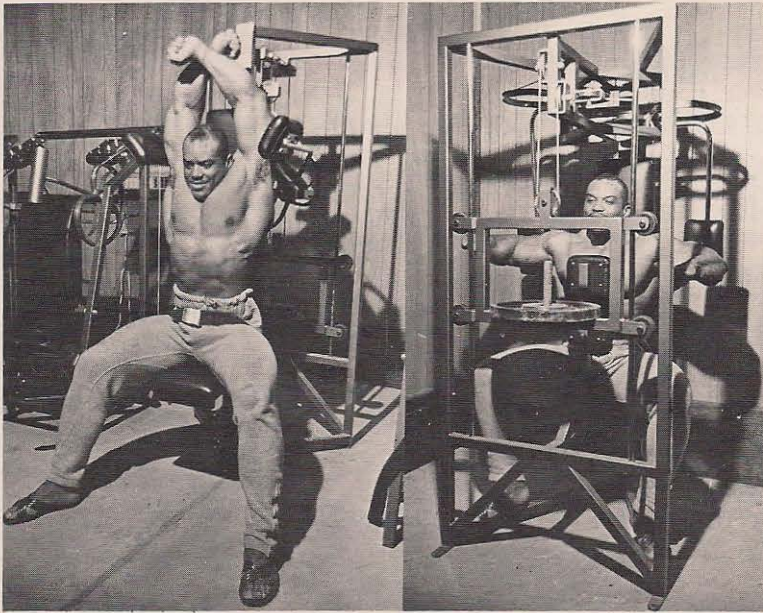
However, NOBODY — regardless of previous training experience or starting "condition" — should attempt to use the machines in the manner described without at least a week of careful "break-in" training; a first hard workout on these machines will produce a state of outright shock in almost anybody — and up to this point, nobody has been able to perform such a hard first workout without literally becoming sick. But after a week or ten days of careful "break-in" training, then almost anybody can use the machines properly — without becoming sick; and for the maximum in possible results, the machines must be used as outlined above. Doing more sets will NOT make up for doing the exercises with less intensity — doing the four exercises over a longer period of time (with even very short rest periods between sets) will NOT produce the same degree of results — and changing the order of exercises would greatly reduce the production of results.

We are interested in one thing — building the maximum possible degree of muscular size and strength in the shortest possible elapsed time; in effect, we want to build as much size and strength as we can within a period of one year — or one month. If longer workouts would produce more results over a period of a year, we would use them — but they won't; if more frequent workouts would produce better results over a period of a year, we would use them — but they won't; if more sets or more exercises or more of anything in the way of exercise would produce better results over a period of a year, then we would use any such helpful methods or systems of training — BUT THEY WON'T.

We did not set out in search of a way to reduce overall weekly training time — but it has undeniably been proven that very brief training is actually a requirement for producing best possible results; but such a situation is certainly a very welcome "side benefit" — even if a totally unexpected one.

Secondly, we were not looking for ways to improve cardiovascular efficiency — but the required fast-pace-of-training and the necessary intensity-of-effort unavoidably produce simply enormous increases in "condition" or "wind," as well as overall cardiovascular efficiency. So, again, a very valuable "side benefit" is produced — even if, as happened in this case, totally by accident. But while it may be true — and is true — that these welcome "side benefits"





Oliva using two types of torso machines.

of great improvements in cardiovascular efficiency and enormous savings in required training time were accidental by-products unavoidably produced by the type of training that is required for producing maximum results in the way of muscular size and strength, it should be clearly understood that these results are the only thing "accidental" about these machines; the pullover-type machine uses one "shape" of cam (or spiral pulley), the behind-neck type machine uses an almost entirely different shape of cam, and the Torso-Arm machine uses a special "double cam" — such drastically different shapes being absolute requirements for producing good results.

In short, the machines **MUST BE** a combination of many things — they must be practical applications of clearly understood physical principles; and if you think that "exact shape," for example, is of little or no importance — then just shave as little as 1% off one side of one of the tires on your car, and then see what happens when you try to drive it. Or notice — the next time you fly — what an actually tiny deflection of a control surface is required to roll an airplane onto its back. Or try misdirecting a heavy bullet aimed at an elephant's brain by a little as a quarter of an inch — as a friend of mine did a few minutes before we gathered him up out of several nearby trees.

Nautilus machines are "right" — as exactly right as the combined efforts of a giant computer and the brains of the people who discovered and applied the involved principles can make them; insofar as function is concerned, they are literally beyond improvement — any slightest change would reduce their degree of efficiency, and much in the way of a change would destroy all or most of their value. As a tool for building muscular size and strength, they are beyond compare — but like any tool, they should be used properly.

PULLOVER-TYPE TORSO MACHINES — \$680. F.O.B. DeLand, Florida (uncrated)

BEHIND-NECK TYPE TORSO MACHINES — \$560 (uncrated)

TORSO/ARM MACHINES — \$420 (uncrated)

ROWING-TYPE TORSO MACHINES — (not described above, designed for the shoulders) — \$560 (uncrated)

If shipment is made by truck \$35 must be added for crating for each machine, or \$25 if shipment is by air.

Orders for the above machines will be accepted at listed prices through the month of July, 1971 — but on August 1st, 1971, prices on all types of Nautilus equipment will be raised significantly; new prices will be published first in the next issue of Iron Man — but the new prices will go into effect on August 1st with or without prior publication. And afterwards, we will NOT accept any orders at present prices under any circumstances. Such price increases are an unavoidable requirement because of the high cost of both the materials and labor that are used in the manufacture of these machines: Nautilus Machines are certainly by far the most productive exercise machines in history — but they are also the best built, strongest, most durable, and most attractive exercise machines in the world. We are primarily interested in "function" — but we are also concerned with appearance, reliability, strength, and safety, in overall "quality."

As of the moment, delivery of any of the above listed machines can be made within two or three weeks of the receipt of orders — and in many cases, delivery can be made within a week. Nautilus Machines are now in use with the Kansas City Chiefs professional football team, are being used by Colorado State University, Troy State University (Alabama), Auburn University, East Washington State College, Louisiana State University, and many other schools.

Nautilus Machines can be seen and used at Ed Sash's Body Shoppe in Ferndale, Michigan, at the DeLand Public High School Gym in DeLand, Florida (by special arrangement with coach Bill Bradford or Arthur Jones), at Red Lerille's Gym in Lafayette, Louisiana, at Alvin Roy's Gym in Baton Rouge, Louisiana, at the House of Hercules in Phoenix, Arizona, at the House of Shi-Boi in Clearwater, Florida, at Hector Morales' Gym in Tampa, Florida, at the R. and J. Health Club in Brooklyn, New York, at Swaboda's Greenwich Village Health Club in New York City, at the Sheridan Square Health Club in New York City, at Andy Gropp's Gym in Trenton, New Jersey, at Dan Lurie's Gym in New York, at Enterprise Sports Systems in Atlanta, Georgia, at the Duncan Y.M.C.A. in Chicago, at Sam Loprinzi's Health Club in Portland, Oregon, at the Knott Street Community Center Gym in Portland, Oregon, at the Trojan Athletic Club in Seattle, Washington, at Michael's Health Club in Lincoln, Nebraska, at Gold's Gym in Venice, California, and in a number of other gyms and health clubs. Hundreds of Nautilus machines are already in use in universities, high schools, research foundations, police departments and rehabilitation facilities — as well as in many other types of establishments — including private home gyms, which have been responsible for more than 50% of all sales up to this point.

ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Fla. 32720
Phone (area code 904) 228-2884

PULLOVER-TYPE TORSO MACHINES -- THE MOST

Prior to the introduction of Nautilus Exercise Machines, the manufacturers of conventional exercise machines devoted most of their attention to attempts to imitate barbell exercises. Little or no thought was given to the requirements of the muscles that were being worked; instead, the builders of such machines were merely trying to improve the convenience of barbells. In some cases, they did produce machines that were more convenient and more attractive than barbells — but in almost all cases, they did so only at the price of actually reducing the value of the exercises provided by such machines: almost all conventional exercise machines are **LESS PRODUCTIVE** than a barbell.

Nautilus machines were designed with another purpose in mind, they were intended to **IMPROVE THE FUNCTION OF EXERCISES** — and they do, to such a degree that it is literally impossible to draw any meaningful comparison between the results produced by Nautilus machines and the results that are possible from the use of any other type of training equipment.

Exercise machines of any kind (even Nautilus machines) have certain disadvantages — and unless the improvement in function more than compensates for the unavoidable disadvantages, then better results will always be produced by the use of barbells. The greatest single disadvantage to the use of exercise machines of any kind is a direct result of the fact that such machines provide “guided resistance” — the weight is confined to a definite track-of-movement; and while such guided resistance certainly does improve the safety factor, and the convenience — it just as certainly reduces the effectiveness of the exercises.

Such guided resistance makes the exercises “easier” — but if you are concerned with results, then easier exercise is the very last thing you should be looking for; barbell exercises are more productive than free-hand exercises for a very simple reason — barbell exercises are **HARDER** than free-hand exercises.

And do not make the mistake of assuming that you can overcome this shortcoming by performing “more” exercise — even one-hundred sets of a poor exercise will not give you the results that can be produced by one properly-performed set of a good exercise. Good results from exercise are **NOT** a result of the “amount of exercise” — instead, a very undesirable result is produced in direct ratio to the amount of exercise. The more exercise performed, the greater the degree of damage to the momentarily-existing recovery ability — and the harder it becomes for the body to respond to any growth stimulation that may have been produced by the exercise; if the system is exposed to too much exercise, then growth becomes literally impossible.

An “ideal” situation would obviously require maximum possible growth stimulation with no exhaustion of the recovery ability; in such a case growth would be so rapid that it would probably be frightening — but since that is an impossible situation, we should concern ourselves with “possible situations.” Almost all beginning weight-trainees respond very rapidly to exercise, for a very simple reason; their systems have not been exhausted by too much exercise and they are capable of very fast response to growth stimulation produced by almost any type of exercise — and secondly, since “any exercise” is a new and **HARD** experience for their muscles, a high degree of growth stimulation is produced.

But after their first few weeks of training, almost all new trainees make the same mistake — they increase the “amount” of exercise, which makes it difficult for their systems to recover from their workouts, and they do little or nothing in the way of making the exercises “harder,” and when they become easily capable of performing their exercises, then little or nothing in the

way of additional growth stimulation is produced. And their progress stops — or slows to a snail’s pace; it then usually takes them several years to produce the same degree of results that could have been produced in an equal number of months.

So instead of trying to make an airplane out of an ox-cart — instead of trying to improve a barbell’s convenience or safety or appearance (while actually reducing its effectiveness) — we have devoted our attention in an entirely different direction, in a logical direction; Nautilus machines are designed to provide the **HARDEST POSSIBLE EXERCISE**, since that is the requirement for producing growth stimulation — and they are fully capable of producing maximum-possible growth stimulation from an actually very small “amount” of exercise, as they must if best results are desired.

But during the course of our research, we discovered some very surprising — and very important — things; for example — the first reasonably productive model of the Pullover-type Torso Machine was a “two exercise” machine, we performed two different exercises on the same machine, “high” pullovers and “low” pullovers, the high pullovers worked the latissimus muscles (and other involved muscular structures) in the extended position, and the low pullovers worked the muscles in the contracted (flexed) position. Upon first using this early-model machine, we quickly discovered that no amount of exercise in the “high” (extended) position did anything meaningful in the way of working the “low” (contracted) position of the muscles — we could do as many as ten sets in the high position and still be fresh and strong in the low position; but if we worked the low position first, then it was impossible to afterwards do much in the high position. In effect, working the low (contracted) position was working **ALL OF THE MUSCLE** — but working the high (extended) position was providing exercise for only part of the muscular structures involved, and the weakest part, at that.

That early-model machine provided a range-of-movement (actually the total of two separate ranges of movement) of only about 120 degrees; and we quickly discovered that this was not enough — when resistance was applied in the extended position, the possible range of movement was quickly increased, flexibility was enormously increased in the direction of extension. And when strength was provided in the fully contracted position by working against resistance in that area of the movement, we soon learned that even greater movement was also possible in the direction of full contraction. So greater degrees of movement were provided in both directions. In a later model of the machine, range of movement was increased to 160 degrees — but even that was not enough; eventually we were using machines with a range of movement of 255 degrees, actually more than twice the range required at first.

By that stage of the development, we were providing the full range of movement in one exercise — only one movement was required to work the involved muscles from a position of full extension to one of full contraction, against constant, direct resistance. In the meantime, in addition to increasing the possible range of movement, we had added such features as double-direct resistance, omni-directional resistance, and rotary-form movement; one exercise on such a machine could then work the muscles in every possible position, against constant, unvarying resistance — there were no “sticking points” in the exercise, and no points of little or no resistance like the areas in barbell exercises where you can “lock out” under the weight and hold it with no effort on the part of the muscles.

The resistance was absolutely “constant” — it was ex-

PRODUCTIVE MACHINES IN THE HISTORY OF EXERCISE

actly the same in every position, which was certainly an improvement over exercises provided by barbells or conventional exercise machines — but it still wasn't "right," it still left a great deal to be desired. Because once we had perfectly "constant" resistance, absolutely "direct" resistance, actually "full-range" resistance — then it was instantly obvious that muscles are much stronger in some positions than they are in other positions; if the weight was light enough to permit you to start the movement with, then it was far too light in the contracted position — and if it was heavy enough to properly work the muscles in their strongest, contracted positions, then it was far too heavy in the extended position.

Obviously, then, the resistance actually had to change during the movement — in the extended position, the resistance had to be light (although, even a light weight will "feel" heavy in that position), and as the movement progressed in the direction of contraction, the resistance had to increase.

Some people — even some long-experienced bodybuilders — have difficulty understanding this all-important requirement for constantly-varying resistance; and for that very reason I still keep a very old model of Pull-over-type machine — a machine that provides all of the features of the later model machines EXCEPT VARIABLE RESISTANCE. In this machine, the resistance is exactly the same in all positions — but it certainly doesn't "feel" the same; one very quick demonstration in this machine will do more in the way of forcing a clear understanding of this factor than any amount of description — we put the subject in the machine with only about 100 pounds of weights, and he starts in the mid-range of possible movement, and in that position the weight feels so light that he is almost unaware that there is any weight at all. But then we tell him to let the weights pull his elbows back in the direction of full extension — and as he moves in that direction, the weight seems to grow rapidly heavier (while, in fact the weight remains perfectly constant in all positions); then as the subject moves close to a position of full extension, he finds that the weight is so heavy that it would be impossible for him to reverse the direction of movement — and at that point we stop the movement and remove the weight from his elbows, since even such a light weight would otherwise rip his muscles out by their roots if we permitted him to move into a fully-extended position.

Thus an amount of weight that is far too light even in the midrange of possible movement feels dangerously heavy — and would be dangerously heavy — in the extended position; and in the fully contracted position, the same amount of weight would be so light that the subject literally would not be able to feel it.

When a man first experiences this for himself — as literally hundreds of people have now done in the DeLand Public High School gym — then he really understands the requirement for variable resistance, resistance that changes during the actual exercise movements.

So, when we first became aware of this requirement, we added the feature of automatically-variable resistance to the machines — and then we became aware of another requirement, "balanced resistance," a form of variable resistance that was exactly "right" in every position; and eventually that requirement was met as well — although it proved to be by far the most difficult requirement of all, because nobody then had any slightest idea just how strong a muscle was supposed to be in various possible positions, and because it was impossible to determine this information by measuring the existing "strength curves" of people who had been

training with conventional equipment, because such people would obviously be a product of the type of training that they had used, and since no form of conventional training provided "proper" training it was obvious that the strength curves of bodybuilders who had been training with conventional equipment would be "wrong," they would be strongest in the areas that should be weakest in a man with balanced development, actually "full development," and they would have very little or no strength in the potentially strongest areas, the fully-contracted positions, since the contracted positions are provided with no resistance by conventional training devices.

The only practical method of providing either (or both) automatically variable resistance or balanced resistance is by the use of special cams which we call "spiral pulleys" — the special pulleys which gave the Nautilus machines their name, since such pulleys look very much like a Nautilus seashell insofar as shape is concerned; if the perimeter of these pulleys is designed properly, then it is possible to produce a form of exercise that is almost literally 100% effective — as compared to the "efficiency ratio" of about 3% for most barbell exercises, and a ratio of about 2% for most conventional exercise machines that try to duplicate barbell exercises.

When a machine with properly balanced resistance is first used by a man who has been using conventional equipment, the resistance will feel too light in the extended position and too heavy in the contracted position; but after a few weeks of proper use, the machine will start to feel perfectly "smooth" to a new trainee — and eventually it will seem to the trainee that the resistance is exactly the same in every position. And in the meantime, the trainee's strength will have increased enormously in every position — but particularly in the fully contracted position, which is the only position where it is possible to involve ALL of a muscular structure in any exercise, and the position that receives NO benefit from most conventional exercises since such exercises provide no resistance in the contracted position.

Similar principles applied to any type of exercise for any muscular structure will produce exactly the same "degree of results" — but the actual "amount of results" produced will depend upon the potential size of the muscles being worked; and since the upper torso muscles — the latissimus, the pectorals, and the trapezoids — are the largest muscles in the body, it naturally follows that the Pullover-type machine, which is designed to work those muscular structures, will produce more in the way of actual "amount" of results than any other type of machine using similar applications of the same principles (except, of course, machines applying these principles to the legs).

Even these machines suffer the disadvantage of "guided resistance" — but in Nautilus machines this disadvantage is more than compensated for; the advantages so far outweigh this one small disadvantage that there is literally no reasonable basis for comparing the exercises provided by Nautilus machines to any other type of exercise.

NAUTILUS SYSTEM PULLOVER-TYPE TORSO MACHINES — for shipment within one week of the receipt of order, \$680 picked up in DeLand, Florida (uncrated); if shipment is made by truck \$35 must be added for crating — for shipment by air, add \$25 for crating. Freight collect in all cases.

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720**

Phone area code 904 228-2884

NAUTILUS SYSTEM ARM MACHINES

One and a half inches of "pump" in less than eight minutes — an increase of a solid half-inch in the "cold" measurements of the upper arms as a result of the first two days of training on these machines, after ten years of total training, and after two years of steady training with absolutely nothing in the way of results — arms so sore that full movement is impossible for more than a week, as a result of one brief workout — areas of "deep" muscular soreness in places that have never been even slightly sore before — strength increases of as much as 25% to 50% within a period of less than two weeks of brief, infrequent workouts; these and similar types of results are being produced by trainees in many areas of the country.

Using a Nautilus System Combination Curling and Triceps Machine, a barbell, a set of parallel bars, and a "pulldown" machine of almost any kind — a complete workout for the arms can be, AND SHOULD BE, completed in less than eight minutes; a total weekly training time of less than twenty-four minutes — for the biceps, the triceps, and the forearms — is all that is required, or even desirable. Some people simply won't be able to make themselves believe that such brief training can produce much if anything in the way of results for the arms; but in the meantime, the people who are using these machines properly — and that means very briefly and very hard — are producing results that even they can hardly believe.

In the upcoming Mr. Universe contest in London, we will have two trainees from DeLand representing outstanding examples of the kind of results that the proper use of Nautilus equipment can produce — Casey Viator and Sergio Oliva, men who both originally built their arms to literally huge size with conventional training equipment, and then added additional size, shape, definition and strength to a degree that literally almost defies belief, such additional size being added in the only way it can be added, with the use of Nautilus Arm Machines.

The machines that have already produced the largest, strongest muscular arms in the world are AVAILABLE NOW — and while they certainly will not produce equal degrees of final results with just any subject, they just as certainly WILL PRODUCE MAXIMUM POSSIBLE RESULTS as dictated by the limits of individual potential, in minimum possible elapsed time, and as a result of very brief training.

COMBINATION CURLING AND TRICEPS MACHINES — \$825 F.O.B. DeLand, Florida, picked up (uncrated). If shipped by truck add \$35 for crating, or \$25 if shipment is by air. Freight collect in either case. Shipment within a week of the receipt of orders in most cases, and within two weeks in all cases.

SINGLE STATION TRICEPS MACHINES — \$460 F.O.B. DeLand, Florida, picked up (uncrated). Crating charges as above.

SINGLE STATION CURLING MACHINES — \$485 F.O.B. DeLand, Florida, picked up (uncrated). Crating charges as above.

Constructed of the heaviest-walled normally available steel tubing, the basic structure of these machines is almost literally indestructible in heavy use; all welds are hand ground, radiused, filled and sanded — the finish is a five step, quality automotive finish fully on a par with a fine automobile, beautiful, durable, easy to maintain. Without single exception up to this point, the people who have purchased Nautilus machines have stated that they are by far the most attractive exercise machines they have ever seen.

The "hubs" of the Nautilus spiral pulleys are machined from solid, four-inch diameter, cold-rolled steel that weighs over 42 pounds to the foot — after machining, the hubs for Nautilus Arm Machines weigh approximately 13 pounds each, and there are four such hubs in the Combination Curling and Triceps Machines. The movement-arm bars are solid cold-rolled steel finished in high-quality chrome — and the entire "movement works" of each station is counter-balanced with solid cold-rolled steel counterweights to insure perfect function of the balanced, automatically-variable resistance. Bushings are porous-bronze, oil-impregnated, and self-lubricating — the axels are special made, hardened steel, shoulder-bolt-type axels that assure perfect fitting of all moving parts and absolutely smooth function.

Upholstered parts of the machines (there are ten padded and upholstered areas in the Combination Curling and Triceps Machine) are built around heavy timber supports with soft but thick and strong padding of foam rubber and high quality vinyl covering fitted professionally.

Depending upon the amount of use, the steel cables will have to be replaced every few months — or every few years; but the cables can be replaced in a matter of less than five minutes by anybody, without the need for special tools of any kind. Again depending upon the amount of use, some of the upholstered areas may eventually have to be recovered — but this can be easily and inexpensively done by any upholstery shop. The bushings may eventually wear out — after several years of constant use in a commercial gym; but if so, they can be replaced by anybody in a matter of minutes — and extra bushings are shipped free with each machine. Apart from such normal replacement of minor parts, the machines should last in hard service almost literally forever with anything approaching reasonable care.

ARTHUR JONES PRODUCTIONS, P.O. Box 1783 DeLand, Fla. 32720 — Phone area code 904 228-2884

Announcing . . .

NEW TYPES OF NAUTILUS TRAINING EQUIPMENT

This is the first announcement and the first offer of several types of totally new Nautilus exercise equipment; one very simple piece of equipment — and two very complex new Nautilus machines.

In an effort to supply the demand for a lower-priced type of Nautilus training equipment, we have developed and are now offering the Nautilus System Variable-resistance, multiple-exercise Arm and Torso Machine **\$385.00** (crated), F.O.B. DeLand, Florida, freight collect, but no extra charge for crating.

In order to keep the price as low as possible, this machine is NOT self-supporting — it must be attached firmly to the ceiling (or wall) and to the floor; but full instructions for such attachment and all of the required fixtures are provided as part of the machine.

This type of machine does NOT provide omnidirectional resistance nor direct resistance, but it does provide automatically variable resistance — and it is designed in such a manner that resistance is provided in the areas where it will produce the best results that are possible without full-range, direct, omnidirectional resistance. By conservative estimate, the exercises provided by this machine are at least three times as effective as any conventional exercises for the same body parts.

Exercises are provided for the upper back and chest, the biceps and the triceps; full training instructions are included.

In addition to the above type of new Nautilus Machine, we are now offering the first of a totally new line of Nautilus Machines — the first two of the UD ("Ultimate Development") Series of Nautilus Machines. These are large, extremely complex machines designed to provide "compound" resistance for two or more separate muscular functions.

UD 3, Nautilus System Semi-compound Triceps Machine, \$630., F.O.B. DeLand Florida (uncrated) \$35, for crating if shipped by truck, \$25. for crating if shipped by air.

UD 4, Nautilus System Compound Triceps Machine, \$880., F.O.B. DeLand, Florida (uncrated), \$45. for crating if shipped by truck, \$35. for crating if shipped by air.

Since a full description of these machines and their functions would require at least several pages for even a brief coverage, I will simply say that these machines will do things for the triceps muscles that are utterly impossible in any other way. Delivery on a "first-come first-served," limited-production basis at the present.

**ARTHUR JONES PRODUCTIONS, P.O. Box 1783
DeLand, Florida 32720**

Phone area code 904 228-2884 day or night

NAUTILUS SYSTEM ARM MACHINES

During his first week of training in DeLand, Florida (in preparation for the upcoming Mr. Universe contest in London), Sergio Oliva added a solid $\frac{3}{8}$ of an inch to the "cold" measurement of his upper arm — and he already had the largest muscular arms in the world when he came here.

Also training in DeLand (in preparation for the IFBB Mr. America contest to be held in Los Angeles), Pete Caputo added more than $\frac{5}{8}$ of an inch to his "cold" arm measurement in less than two weeks of very brief training.

John Meyers of Toledo, Ohio, (while on a short vacation in DeLand) increased his "cold" upper arm measurement by a full $\frac{1}{2}$ inch in less than three days — and one of his students, who came here with him, added $\frac{3}{4}$ of an inch to his arm size during the same three days.

Bob Ellerby of San Antonio, Texas (a high school football coach — and a man with a 19 inch arm when he came here), added a solid $\frac{1}{2}$ inch to his upper arm in less than a week.

None of these men are beginners — yet all of them made fast gains; and they gained as a result of very brief training — less than twenty-four minutes of weekly training for the arms, three weekly arm workouts of less than eight minutes each.

All of these men used — and are still using — the same training routine, the exact routine listed below .

- 1 set of 10 repetitions, standing curls with a barbell
- 1 set of 12 repetitions Nautilus Triceps Machine
- 1 set of 12 repetitions Nautilus Curling Machine
- 1 set of 15 repetitions palms-up wrist curls with a barbell
- 1 set of 15 repetitions palms-down wrist curls with barbell
- 1 set of 12 repetitions Nautilus Triceps Machine
- 1 set of 10 Parallel dips (immediately after above)
- 1 set of 12 repetitions Nautilus Curling Machine
- 1 set of 10 repetitions Front pulldowns on Nautilus Torso-Arm Machine — Pulldowns to immediately follow the Triceps Machine work.

Then another set of wristcurls each way — one set "palms-down" and one set "palms-up."

Properly performed, the above arm workout requires approximately seven minutes and twenty seconds of elapsed training time; and best results will always be produced if the entire workout is completed in less than eight minutes. Training at a slower pace will reduce results — and performing more sets will also reduce results in almost all cases; many of our trainees are producing very good results from arm workouts of approximately half the length of the above outlined training program.

The machine that is producing these results is the Nautilus System Combination Curling and Triceps Machine. Picked up in DeLand, Florida, (unrated) \$825.00. A large, complex "two-station" and "two-exercise" machine for building the major muscular structures of the arms. The two "stations" — one for the triceps, and one for curling — are completely independent of each other, and both stations can be in use at the same time. One station provides full-range resistance for curling, and the other station provides full-range resistance for the primary function of the triceps (extension of the arms).

Both stations provide rotary form, direct, omnidirectional, constant, automatically variable, balanced resistance; there are no "sticking points" and no points of little or no resistance such as those encountered in conventional exercises for the arms.

Regardless of how many sets — or how many exercises — you perform for the arms with conventional equipment, you are working only an actually small PART of the muscles of the arms. With this machine, you will be working almost ALL of the muscles of the arms. Using conventional exercises, a man with muscular arms will usually "pump" his arms approximately $\frac{1}{2}$ inch during a long workout — but a very brief workout on this machine will usually pump a muscular arm a full inch. Several advanced bodybuilders have pumped their arms an inch and a half on this machine — and a few have pumped their arms a full two inches.

And while it should be clearly understood that "pumping" is a result — rather than a causative factor — it is nevertheless true that such an extreme degree of pumping clearly indicates that a far greater percentile of the total muscular mass of the arms is being involved in the exercises.

Carefully conducted tests using a large number of previously untrained subjects clearly indicated that conventional exercises for the arms produce muscular soreness in only certain areas — primarily in the "ends" of the involved muscles; but the same amount of exercise performed on Nautilus Machines produced extreme degrees of muscular soreness throughout the muscles. Another clear indication that a higher percentile of the muscles was involved in the exercises.

Again it should be clearly understood that nobody knows "why" muscles become sore as a result of exercise; but it is obvious that a lack of exercise is not the cause — and it is just as obvious that muscular soreness will not result in an area that is not being worked. Thus it is at least clear that a greater degree of soreness — or more widespread soreness — indicates a greater degree of involvement of the muscles being worked.

The basic structure (the "frame") of the Nautilus Combination Curling and Triceps Machine is constructed of heavy-walled, square, steel tubing; all welds are hand ground, filled, radiused and sanded — in effect, the welds are invisible, one piece of steel seems to flow smoothly into the next piece. The finish is a five step process fully on a par with the finish of a fine automobile. The result is a beautiful machine that is so strong that it is almost literally indestructible — and it is certainly a "lifetime" machine, one that will perform perfectly in hard use for many years. All Nautilus machines sold on or after August 1, 1971, carry an unconditional guarantee on all metal parts for TEN YEARS.

The hubs of the special Nautilus "Spiral Pulleys" (the "heart" of Nautilus Machines) are carefully machined from four-inch diameter, solid, cold-rolled steel. Before machining, the hub of each spiral pulley used in the arm machine weighs 13 pounds; these hubs are so strong that it would be difficult (perhaps impossible) to damage them with a sledge hammer. Eleven separate machining operations are required for the manufacture of each hub for the spiral pulleys used in the arm machines.

The "movement arms" of the curling station and triceps station are constructed of heavy, solid, cold-rolled steel — highly polished and finished in three-step, high quality chrome. The counter weights for the balanced movement arms are made from solid, cold-rolled steel — the counter weight for the triceps station weighs more than thirty pounds, as it must in order to exactly balance the great weight of steel used in the triceps movement-arm.

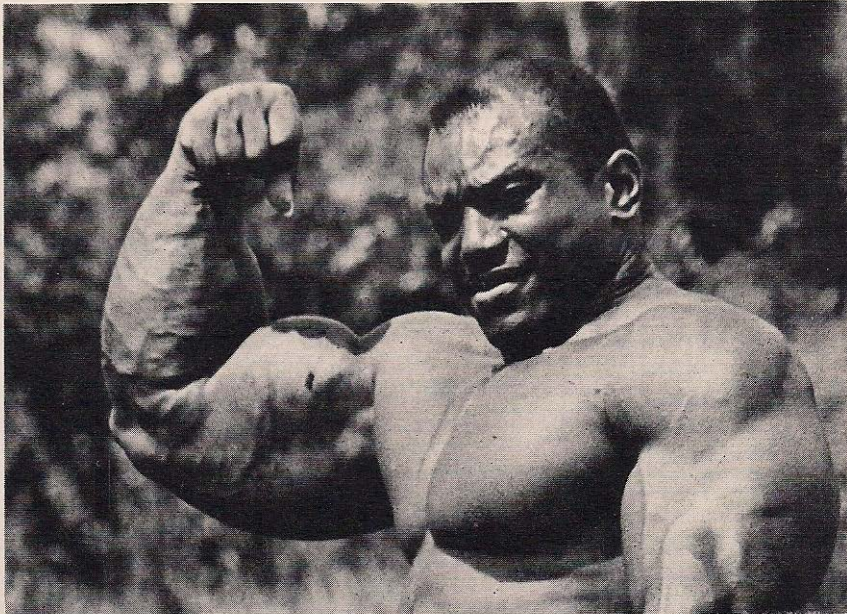
The axles are special-made, over-sized, hardened steel, shoulder bolt types — rotating on porous bronze, self-lubricating, oil-impregnated bushings — an axle-bushing combination that assures precise alignment and smooth, friction-free function of all rotating parts. The axles are guaranteed for ten years (and should last much longer in hard use); the bushings should **also** last for many years — but can be replaced in a matter of minutes with simple tools, and extra bushings are shipped with each Nautilus machine at no charge to the customer.

The upholstered areas of the Combination Curling and Triceps Machine (there are ten padded areas in each machine) are built around heavy timber supporting structures that are screwed together and attached to the frame of the machine with strong steel bolts. The pads are soft but strong and thick — and the covering material is beautiful, long-lasting vinyl, professionally upholstered. In hard service, the covering material will eventually wear — but it can be replaced by any upholstery shop.

In short, the Nautilus Combination Curling and Triceps Machines — like all Nautilus Machines — are as close to being perfect as we are capable of making them; and while we make no claims that they are literally perfect, they certainly are the strongest, best built and most attractive exercise machines in existence — and insofar as “function” is concerned, the ability to produce results, they are simply beyond comparison to any other type of exercise equipment. Nautilus Machines are NOT an improvement in exercise equipment — instead, they are a totally new approach to the concept of progressive exercise.

In addition to the two-station arm machines described above, single station machines are also available; the “function” of these machines is identical to that of the combination machines, and construction is along similar lines — the only real differences being those of size and cost (the combination machines, which provide both biceps and triceps exercises in one machine, are somewhat lower in price than two individual machines).

All prices F.O.B. DeLand, Florida — picked up uncrated; if shipment is made by truck, add \$35. for each machine except the Compound Triceps Machine and \$45 for the compound machine. Florida state tax of 4 per cent must be added to in-state sales. Shipment within two to three weeks of the receipt of orders in most cases, and in one week in some cases.



The Mighty Arm of Sergio Oliva

NAUTILUS TRICEPS MACHINES — picked up in DeLand (uncrated)	\$460.00
NAUTILUS CURLING MACHINES (as above)	\$485.00
NAUTILUS SEMI-COMPOUND TRICEPS MACHINES (as above)	\$725.00
NAUTILUS COMPOUND TRICEPS MACHINES (as above)	\$950.00

The last two machines (Semi-compound and Compound Triceps Machines) are large, extremely complex, double-function machines intended for utilization by people desiring “the ultimate development” — but they are NOT a requirement for the average trainee.

NOTE — The above listed Nautilus Arm Machines will NOT pass through a normal width, 32-inch door; however, for an extra charge of \$22.50, any of these machines can be “sleeved” in a manner that will make it possible to move them through a door 28 inches wide. If door width is a factor, please make this clear when ordering any of the above machines. All of the machines except the semi-compound and compound machines will pass through a door 37 inches wide without being sleeved, and the compound machines will go through a 46 inch door.

ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Florida 32720
Phone (area code 904) 228-2884

NAUTILUS SYSTEM ANNOUNCES . . . DELUXE TRAINING EQUIPMENT -- for Health Studios, Schools, YMCAs, Hospitals & Rehabilitation Facilities

You can easily pay more for other types of training equipment — but you can NOT duplicate the results produced by NAUTILUS equipment in any other manner, regardless of cost. In response to an enormous demand for deluxe, SELECTORIZED models of the Nautilus exercise machines, we are now offering the following pieces of equipment at the prices listed . . .

TORSO MACHINES Picked up, uncrated Crating
Pullover-type Torso Machines \$915.00 . . . \$35.00
Behind-neck Type Torso Machines \$740.00 . . . 35.00
Torso-Arm Machines \$640.00 . . . 35.00

While all of the above Torso Machines are extremely effective even if used individually (or in conjunction with conventional equipment), the three machines should be used together, "in cycle," for best possible results. These three machines, used properly, will produce results in the major muscular structures of the upper torso that are utterly impossible to duplicate in any other manner — and will do so with an actually very small "amount" of training; the average trainee will produce the fastest rate of gains from only three weekly cycles on these machines — a total WEEKLY training time of less than TWELVE MINUTES. Advanced bodybuilders will usually respond best to six weekly cycles — two cycles each of three workouts; a total weekly training time of less than twenty-four minutes.

All Nautilus machines are designed and manufactured to the "World's Highest Standard" of quality — the NAUTILUS standard; basic structures are NOT bolted together — instead, they are entirely welded into one perfectly rigid, accurately aligned, almost indestructible unit. Built of the heaviest-walled normally available square steel tubing — with all seams welded; the welds are hand ground, filled, radiused, and sanded — and the finish is a five step process fully on a par with the finish of a fine automobile.

The hubs of the special Nautilus "Spiral Pulleys" are machined from four-inch diameter, solid, cold-rolled steel; the axles are special made, oversized, hardened steel, shoulder belt types that assure smooth operation and trouble-free years of use in hard service; the bushings are porous bronze, oil impregnated, self-lubricating and silent — providing "no drag, no squeak" function of the rotating parts.

The perimeters of the Spiral Pulleys are constructed of heavy steel channel supported by quadruple welded, curved steel spokes; with all welds hand ground, filled, radiused and sanded — and with the same five-step finishing process outlined above. Smaller (redirectional) pulleys are machined from solid, cold-rolled steel — NOT CAST IN SOFT ALUMINUM — and rotate on special, hardened steel axles with self-lubricating bronze bushings. The "movement arms" are made from heavy, solid, cold-rolled steel — and are finished in three-stage, high quality chrome. The pad brackets are solidly "double welded" cold-rolled steel — with all welds ground and polished, finished in high quality chrome.

The selectorized weight "guide rods" are heavy, solid steel — and the weights themselves are shock mounted and "jam-free" in operation.

In short, the metal parts — ALL OF THE METAL PARTS — are constructed of the best material that is

available; and ALL of the above listed parts are UNCONDITIONALLY GUARANTEED against failure for a period of TEN YEARS. Excepting only purposeful damage — and normal wear and tear on the finish. Additionally — if later developments make it possible for us to improve the functions of existing machines, then all of the required parts and full instructions for installing such parts will be furnished at no cost to the owners of all similar machines.

The seats and pads of Nautilus Machines are constructed around heavy timber — using soft but strong foam padding and a special, "extra tough" but strong and attractive vinyl covering, professionally upholstered; in heavy use, the covering material eventually will wear — but it can be replaced by almost any upholstery shop.

While we make no claims that Nautilus Machines are literally "perfect" — they certainly are the most attractive, the strongest, and the most durable exercise machines in existence; if we were aware of a manner in which we could improve the construction of Nautilus Machines, we would do so.

Identical results can be produced by users of other, low priced, non-selectorized models of the Nautilus Machines listed elsewhere in this same issue of IronMan; but for customers desiring the convenience of selectorized weight stacks, we suggest the models listed above and below.

NAUTILUS "DOUBLE CHEST" MACHINES \$1,170.00 . . . \$45.00

The "two station" and "two exercise" machines that provide FULL development of the large muscular structures of the chest — in a minimum of weekly training time; SIXMINUTES of WEEKLY training time will produce maximum possible rates of growth in most cases — and not more than TWELVE MINUTES of WEEKLY training are required in any cases.

NAUTILUS "DOUBLE SHOULDER" MACHINES \$1,080.00 . . . \$45.00

The "two station" and "two exercise" Machines that provide the fastest possible rate of growth for the muscles of the shoulders — as a result of very brief training; FOUR MINUTES of WEEKLY training will produce the best rate of growth in most subjects — and advanced bodybuilders should train this section of the body not more than EIGHT MINUTES weekly.

ROWING-TYPE TORSO MACHINES \$740.00 . . . \$35.00

For the Shoulders and Back

The single station, single exercise machine for the development of the upper back and shoulders; to be used individually or in conjunction with the above-listed "Double Shoulder" machine; THREE MINUTES of weekly training for most subjects — SIX MINUTES weekly for advanced bodybuilders.

VERTICAL TYPE SHOULDER MACHINES \$740.00 . . . \$35.00

The "single station" duplication of the primary station of the above-listed "Double Shoulder" machine; NOT required if the "double" machine is available for use — but extremely productive even if used individually or in conjunction with conventional training equipment.

**45-DEGREETYPE SHOULDER
MACHINES**

\$740.00...\$35.00

This machine is designed for Health Studios catering to advanced trainees — and is NOT required by most subjects.

**NAUTILUS SYSTEM
ARM MACHINES...**

**COMBINATION CURLING & TRICEPS
MACHINES**

\$1,050.00...\$35.00

The selectorized version of the most popular arm machine in the history of exercise; a "two station" and "two exercise" machine for the development of the major muscular structures of the arms. Will produce the best results for most trainees if used only **TWELVE MINUTES WEEKLY** — and should NOT be used by anybody more than **EIGHTEEN**

MINUTES WEEKLY. Many leading bodybuilders have added from a solid half-inch to as much as a full inch to the "cold" measurements of their upper arms within a week of proper use of this "double" machine — after having failed to make any progress with conventional equipment during several years of regular training.

NAUTILUS CURLING MACHINES \$610.00...\$35.00

The "single station" curling machine portion of the above listed combination arm machine.

NAUTILUS TRICEPS MACHINES \$585.00...\$35.00

The "single station" triceps machine portion of the above listed combination arm machine.

NAUTILUS SEMI-COMPOUND

TRICEPS MACHINES \$850.00...\$35.00

NAUTILUS COMPOUND TRICEPS

MACHINES \$1,075.00...\$45.00

The above two machines are "double function" triceps machines designed for the use of advanced bodybuilders ONLY; they are NOT required by the average trainee.

**NAUTILUS SYSTEM
LEG MACHINES...**

NAUTILUS LEG-PRESS MACHINES

\$780.00...\$55.00

NAUTILUS THIGH-EXTENSION MACHINES

\$590.00...\$55.00

NAUTILUS SQUAT MACHINES \$860.00...\$55.00

For the production of best possible results in the major muscular structures of the legs, the above three machines should be used together, "in cycle" — and if so, then only **NINE MINUTES** of **WEEKLY** training time is required by ANYBODY; one cycle of one set on each of the three machines — during each of three weekly workouts — is all ANYBODY requires. Additional training will constitute **OVER-TRAINING** — for ANYBODY.

These machines CAN BE used SAFELY by ANYBODY — even by women and children; but they MUST BE used BRIEFLY by EVERYBODY — regardless of previous training experience.

Ten of the above-listed machines (three of them being "double station" machines), incorporating a total of fourteen exercises, can be purchased for a total of **\$8,565**. If picked up uncrated in DeLand, Florida; and with those ten machines, most trainees can produce maximum possible results from less than two hours and twenty minutes of **WEEKLY** training (three weekly workouts of less than **FORTY-FIVE MINUTES** each) — and ANYBODY can produce maximum gains in muscular size and strength from less than four hours of weekly training (three weekly workouts of less than one hour and twenty minutes each **INCLUDING REST PERIODS BETWEEN EXERCISES**).

Finally — for specialized applications, primarily for the use of women, we offer the following Nautilus Machines . . .

NAUTILUS THIGH-CURL MACHINES

\$590.00...\$55.00

**NAUTILUS "GLUTE-CURL" (Buttocks)
MACHINES \$680.00...\$55.00**

These two machines are designed for restoring muscle tone to the rear of the thighs and in the buttocks area — and while actual "spot reduction" is a total myth (a physiological impossibility), since heavy deposits of localized fatty tissue are merely an indication of an over-all fatty condition resulting from a caloric imbalance (which can be corrected ONLY by a regulation of the overall expenditure of energy in relation to the intake of food), these machines will nevertheless give the IMPRESSION of producing "spot reduction" by restoring proper tone to the muscles in that section of the body.

All of the NAUTILUS machines can be used by women as well as by men — and very good results can be produced by women from even briefer programs of training than those recommended for men. The Pullover type Machines, the Chest Machines, and the Leg Machines are especially productive when used in very brief training programs for women.

Delivery — two to three weeks after the receipt of orders in most cases, and within one week in some cases; terms, F.O.B. DeLand, Florida at listed prices — crating charges as listed above must be added if shipment is made. Florida residents add 4 per cent state tax.

**ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Florida 32720
Phone (area code 904) 228-2884**

NAUTILUS SYSTEM Equipment For The Torso

Five years from now, "everybody" will be training with Nautilus equipment — and thousands of people are NOW.

During the period of a month between the Junior Mister America contest (which he won) and the 1971 Mister America contest (which he won in the most spectacular style in history), Casey Viator trained only SIX times, a total training time of less than EIGHT HOURS. To Casey, that was unquestionably the most important month of training in his career up to that point; if more workouts could have produced better results, he would certainly have trained more often — if longer workouts could have increased his muscular size or degree of definition, he would certainly have trained longer — but we were fully aware that best possible gains would be produced by an actually very small "amount" of training, and the results speak for themselves.

At least two other competitors in the same contest trained in a very similar fashion — using Nautilus equipment — and both of them placed very high; but it would be interesting to know the average total training time during that last month for the other thirty-odd contestants. I would guess that most of them trained six days a week and probably for at least three hours during each workout — and if so, then the average total training time was well in excess of SEVENTY HOURS during that period of a month: nearly ten times as much as Casey trained.

At the moment, Sergio Oliva is in DeLand, Florida — training for the NABBA Professional Mister Universe contest to be held in London on September 18, 1971. During the first week in DeLand, Sergio trained every day for five days in a row — but very briefly: his total training time for the week was less than five hours — and a rather large part of that time was devoted to required rest periods.

Starting tomorrow, Sergio will begin training on a regular three-times-weekly basis — Monday, Wednesday and Friday — and each workout will require approximately one hour and twenty minutes; a total weekly training time of a bit less than four hours. During the nine weeks that we have prior to the Mr. Universe contest, Sergio will train a total of less than thirty-five hours; and from all reports, it appears that his principal competitors in California will be training as much in each week of that time as Sergio will during the entire nine weeks.

During the first week of "break-in" training in DeLand, Sergio gained in bodyweight, increased the "cold" measurement of his upper arms by a solid $\frac{3}{8}$ of an inch (and he already had the LARGEST muscular arms in the world when he arrived here), and increased his definition to a marked degree.

A year ago, at the Teen-Age Mister America contest in York, a former Mr. America winner told me that adding ANY more size or bodyweight would ruin Casey Viator's physique, would make him fat; yet — less than a year later, and nearly twenty pounds heavier — Casey won the Mr. America title and all of the subdivisions (best arms, best legs, best chest, best back, and most muscular) except best abdominals. And he easily could have won best abdominals as well — since his abdominals are among the best in the world.

So now we will see what adding muscular bodyweight will do for Sergio; while his competitors are "cutting down," trying to increase their definition at the expense of size — Sergio will be steadily gaining, INCREASING his size, and INCREASING his definition at the same time.

Sergio may not win in London — after all, anything can happen: but if muscular size means anything, and if definition means anything, and if

almost unbelievable proportions mean anything — then he will win, because he will certainly be the largest, the most muscular, and the most unbelievable bodybuilder in history. He may literally be "too much" — too far ahead of his time; but win or lose, the judges and the audience in London will never forget him.

During the next nine weeks of his training, we may make slight changes in his training program — and if so, such changes (and the reasons for any such changes) will be published in the next issue of Iron Man; but as of the moment, Sergio's exact program for the upper torso is outlined below . . .

- 1 — One set of 15 repetitions — Nautilus Pullover-type Torso Machine
 - 2 — One set of 12 repetitions — Nautilus Behind-neck type Torso Machine
 - 3 — One set of 12 repetitions — Nautilus Torso-Arm Machine, behind neck
 - 4 — One set of 10 repetitions — Nautilus Torso-Arm Machine, to chest
- The above four exercises — performed "in cycle" on three types of Nautilus machines — require a total of a bit less than four minutes; Sergio will perform TWO such cycles in each of three weekly workouts — with no rest at all between sets during each cycle, and with only one minute of rest between cycles. Thus his total training time for that section of the body will be approximately EIGHT MINUTES per workout — or TWENTY-FOUR MINUTES per week.

But Casey Viator and Sergio Oliva are outstanding examples — perhaps the two most outstanding men in the history of physical training — so what about the average bodybuilder?

Well, the average bodybuilder will NEVER look like Casey or Sergio — the average man simply doesn't have the potential for that much muscular size. But the training program that Casey used while he was producing his fastest gains — the exact program outlined above for Sergio — will produce the fastest possible gains for ANYBODY, no matter what their potential may be: when changes are required, then — in EVERY SINGLE CASE UP TO THIS MOMENT — these changes involve a REDUCTION in training time. The program outlined for Sergio is designed for a man with outstanding potential and far better than average recovery ability — and for a man that is trying to produce maximum possible muscular size and strength in a minimum of time.

In practice, we have found that many of our trainees do best on a program limited to only one such "torso cycle" in each of three weekly workouts — and some trainees require only one cycle in each of two weekly workouts, a total of only EIGHT MINUTES of weekly training for that section of the body.

NAUTILUS SYSTEM PULLOVER-TYPE TORSO MACHINES	\$745.00
NAUTILUS SYSTEM BEHIND-NECK TYPE TORSO MACHINES	615.00
NAUTILUS SYSTEM TORSO-ARM MACHINES	485.00

Above prices F.O.B. DeLand, Florida — picked up in DeLand uncrated; if machines must be shipped, add \$35. for crating each machine. Florida state tax of 4 per cent must be added to in-state orders. Shipment within two to three weeks in all cases — and within one week in many cases. Freight charges collect in all cases.

ARTHUR JONES PRODUCTIONS
P. O. Box 1783, DeLand, Florida 32720
Phone (area code 904) 228-2884



Sergio Oliva as he looks today

very important point in mind:

Nautilus System PULLOVER-TYPE TORSO MACHINE

THE MOST PRODUCTIVE MACHINE IN THE HISTORY OF PROGRESSIVE EXERCISE FULL-RANGE EXERCISE, a movement that works the muscles from a position of full extension to one of full contraction.

ROTARY-FORM EXERCISE, a machine that provides rotary resistance against the rotary movement of body parts moved by the involved muscles.

DOUBLE-DIRECT RESISTANCE, a form of resistance that is always directly opposed to the direction-of-movement of the involved body parts; and a type of resistance that is directly applied to the "prime" body part, the body part that is actually moved by the working muscles.

CONSTANT RESISTANCE, that works the muscles in every position.

OMNI-DIRECTIONAL RESISTANCE, that is always 180 degrees "out of phase" with the momentary (and constantly changing) direction-of-movement of the prime body part.

AUTOMATICALLY VARIABLE RESISTANCE, that constantly changes as the exercise movement progresses — as it must in order to meet the changing requirements produced by movement.

BALANCED RESISTANCE, that is exactly "right" in every position — as it must be in order to provide the right amount of work throughout the entire range of the exercise movement.

The above outlined descriptive phrases are not advertising "catch phrases" — instead, they are valid terms that must be used to describe the functions of the new and totally revolutionary Nautilus System Exercise Machines. No conventional form of exercise provides all of the above features — and most conventional exercises provide none of them — NAUTILUS MACHINES PROVIDE ALL OF THESE FEATURES.

Barbell exercises are "better" than free-hand exercises for a very simple reason — because they are HARDER. Nautilus exercises are better than barbell exercises for a very similar reason — or, actually, for several reasons; barbell exercises work the muscles only in certain positions, Nautilus exercises work the muscles in ALL positions — barbell resistance is necessarily limited to the amount of weight you can handle in your weakest position. Nautilus exercises provide maximum possible resistance in ALL positions — barbell resistance is usually filtered through an unavoidable chain of related and weaker muscles. Nautilus resistance is directly applied to the muscles you are trying to work. In short, Nautilus exercises are NOT "easier" — instead, they are HARDER, as much harder as we can make them, as they must be in order to produce best possible results.

The same principles — rotary form, double direct, constant, omnidirectional, automatically variable, balanced resistance — will produce very similar "degrees" of results in any possible application; in effect, best possible results from exercise for any muscular structure in the body can be (and will be) produced by the use of exercises that incorporate these principles. But the actual "amount" of results will obviously depend upon the potential size of the muscles being worked, thus "more" results will be produced by applying these principles to a large muscular structure.

Secondly, since it is at least possible to work some of the muscular structures of the body in a reasonably productive manner while using conventional equipment — and since it is NOT possible to work some other muscles in a very productive manner with conventional equipment — it should be obvious that conventional exercises will unavoidably result in an unbalanced development; some muscles will respond fairly rapidly, while other muscles will gain in size and strength very slowly.

From the above — and from personal experience — it should be

obvious that the application of the Nautilus principles of exercise will produce more dramatic results in some areas than they will in others; in practice it will be found that the most rapid gains will occur in the largest muscular structures of the body — and in those areas that are "hard to reach" with conventional equipment.

The largest muscular structures in the torso are found in the upper back — and it is literally impossible to reach these muscles "directly" while using conventional exercises. But the Nautilus Pullover-type Torso Machine DOES reach these muscles directly — as well as providing a very result producing form of exercise for all of the muscles of the upper torso.

Literally thousands of people have written or called to ask just which of the Nautilus Machines is the "best" — the most productive; and if you are concerned with overall muscular size or strength in the upper body, then there can be only one answer, the Pullover-type Torso Machine.

For the absolute maximum production of results, the Pullover-type machine should be used in connection with two other Nautilus machines, the Behind-neck Type Torso Machine and the Torso-Arm Machine; but even if used alone, or in connection with conventional exercises, the Pullover-type Torso Machine is extremely productive — literally in a class of its own, beyond comparison to any other exercise machine in existence.

When we first started conducting research into the best system of training to use with these extremely productive machines, one of our most outstanding subjects was supposed to perform nine weekly sets on a pullover-type machine — but in fact he seldom did more than five or six weekly sets; his results were so good that they almost defied belief, and at the time we were convinced that he would have produced even better results if he had trained as much as he was supposed to — but since then, we have learned that his results would probably have been better than they actually were if he had trained even less than he did. At the moment, none of our trainees are doing more than seven weekly sets on a pullover-type machine, most of our trainees are doing from four to six weekly sets, and many of our trainees are doing only two or three weekly sets; "more" sets will NOT produce better results — when in doubt, the first thing we do is REDUCE the number of weekly sets, and this almost always increases the production of results.

It might also be of interest to mention that none of our trainees are doing any abdominal work of any kind apart from the use of the pullover-type machines; Casey Viator did absolutely NO abdominal work during the year that he trained in DeLand prior to this year's Mr. America contest — Pete Caputo is now training in DeLand and has gained 14 pounds during the last three weeks, and has done so while markedly improving his abdominals, and he is performing no abdominal work of any kind.

Many of our customers have first ordered a pullover-type machine and have then ordered other Nautilus machines — and, as a "first" machine, or an "only" machine, the Nautilus Pullover-type Torso Machine is certainly the obvious choice. None of the Nautilus machines will perform miracles, but they will produce maximum possible results in the way of muscular size and strength increases in line with the limitations imposed by individual potential.

NAUTILUS PULLOVER-TYPE TORSO MACHINES \$745.00
F.O.B. DeLand (uncrated)

Add \$35.00 for crating if machine must be shipped, freight collect in all cases. Florida residents add 4 per cent state tax. Shipment within two to three weeks of receipt of orders.

Phone area code 904 228-2884
ARTHUR JONES PRODUCTIONS
P. O. Box 1783, DeLand, Florida 32720

Announcing . . . NAUTILUS BULLETIN NUMBER 2

By ARTHUR JONES
THE INVENTOR OF THE REVOLUTIONARY NEW
NAUTILUS Training Equipment and the developer of the
NAUTILUS TRAINING SYSTEM

Thousands of copies of Nautilus Bulletin Number 1 have already been sold all over the world — and hundreds of letters have been received from enthusiastic readers; “. . . the most comprehensive book in the history of exercise.” — “. . . the most complete coverage of the field of physical training I have ever read.” — fascinating, it renewed my enthusiasm tremendously,” — “. . . the truth, at last; a real pleasure to read,” — “. . . my sincere thanks for a job well done.” — “. . . a friend of mine loaned me your book, and I sat up half the night reading it; I must have a copy of my own,” — “. . . brilliant,” — “. . . a masterpiece.”

On the recommended reading list for physiology students and for anyone interested in physical training at Colorado State University; recommended by Alvin Roy — the strength coach for the Kansas City Chiefs Professional Football Team, and “the one man most directly responsible for the use of weight training by athletes.”

Nautilus Bulletin No. 1 is NOT a long brochure designed to promote the new types of training equipment — instead, it is intended for trainees using any type of equipment. It is a clearly written, straight-to-the-point outline of the principles required for the production of good results from any type of progressive weight training, for any purpose; 113 pages, approximately 60,000 words (the length of an average novel), and 44 chapters.

AND NOW . . . NAUTILUS BULLETIN NO. 2

The following excerpts are from the introduction, by the author . . .
“. . . my writing has been on a far more personal level than any of my previous articles or books on this subject; but I strongly feel that any serious attempt to remove all signs of bias would greatly reduce the value of the bulletin.

Chapters as follow . . .

- | | |
|---|--------------------------------------|
| 1—Basic considerations | 11—The psychology of bodybuilders |
| 2—Commercial bias | 12—The “Mr. Nautilus” contest |
| 3—Personal involvement | 13—The real value of weight training |
| 4—The name of the game | 14—The drug scene in bodybuilding |
| 5—Diet | 15—Weight training for women |
| 6—A few simple facts | 16—Muscular potential and heredity |
| 7—Self-evident truth | 17—Muscular function |
| 8—Strength and muscular endurance factors | 18—Barbells vs. exercise machines |
| 9—Barbells, pro and con | 19—Direct exercise |
| 10—Time factors in exercise | 20—Four steps |
| | 21—The recovery factor |

“In Nautilus Bulletin No. 1, several chapters were removed at the last moment before printing — chapters that I felt were perhaps too controversial; but I have promised myself that such will not occur again — this time I will include portions that may well be offensive to some people, but which I consider necessary for a full statement, a true statement.

“Some readers will undoubtedly consider this unscientific — others may feel that I devote too much attention to nondirectly-related points; but I feel that nothing can be clearly understood unless it is viewed in its own environment — and the fact that the presently existing environment in the field of weight training is very bad certainly does not reduce the requirement for an overall look at the field. Which unavoidably entails mention of a rather large number of matters that are not directly connected, but are nevertheless important.

“A careful reading of this bulletin — together with a review of Bulletin No. 1 — will, I feel, bring the average reader well up to date on the subject; the entire bulletin is being written on a “first draft” basis — which unavoidably means that there will be some repetition — but which also tends to guarantee total honesty of expression, without which no writing is of any value to anybody apart from the writer himself, and then only when his concern is limited to commercial interest . . .”

More than 90,000 words (fifty percent longer than Bulletin No. 1), and 41 chapters; Bulletin No. 2 — in response to hundreds of requests — takes the reader through the entire field of weight training, step-by-step, in clear words, in plain English. The information contained in Bulletin No. 2 can be used by anybody interested in weight training — not only in theory but in practical application, in ways that will improve the results being produced by anybody. While this information certainly will NOT guarantee good results from weight training to just anybody — it just as certainly will provide much valuable information that can be used to advantage by anybody in this field.

- | | |
|---|---------------------------------|
| 22—Individuality | 32—The moment-arm factor |
| 23—It won't happen here | 33—Fuel-Air factors |
| 24—A natural mistake | 34—A simple example |
| 25—The first step towards understanding | 35—Advanced training |
| 26—The second step | 36—The ultimate physique |
| 27—The third step | 37—Proper form |
| 28—The fourth step | 38—What to expect |
| 29—The fifth step | 39—A realistic goal |
| 30—The sixth step | 40—The present state of the art |
| 31—The seventh step | 41—The next step |

PLEASE NOTE — While your book WILL be mailed the day your order is received, please allow two to three weeks for delivery — since book rate mail is VERY slow. For fast delivery by AIRMAIL, postage prepaid, \$6 in the United States, Canada and Mexico \$7.00 — to Europe and South America — \$8.00 to Africa or Asia.

ARTHUR JONES PRODUCTIONS
P.O. Box 1783, DeLand, Florida 32720
Phone (area code 904) 228-2884

NAUTILUS BULLETIN NO. 2, by Arthur Jones — ready for mailing NOW: books mailed the same day orders are received — \$5.00 postage prepaid.