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“Strength is Health”: George Barker Windship and the First American Weight Training Boom



*Dr. George Barker Windship, The “American Samson” as he appeared in *The Phrenological Almanac*.*

Bryan Hall filled up quickly that chilly February night in 1861 as Chicago’s sporting crowd gathered to see the strongman contest.¹ Dr. George Barker Windship, the health reformer known throughout the United States as the “American Samson” and the “Roxbury Hercules” was scheduled to lecture that evening, and he had agreed to pit his strength against all comers in a public contest following his lecture.² Windship normally gave an exhibition of his strength at the end of the lectures he’d been delivering for the past two years, but this night was different. Following the lecture, any man could come on stage, try the weights, and vie for the two hundred dollars in prize money put up by the local promoter. A buzz of speculation filled the hall. How many men would try? Was it true that Windship weighed less than 150 pounds? Wasn’t it dangerous for him to lift such big weights?

As the crowd settled into their seats, Windship strode on stage and began the evening’s entertainment with his standard lecture about the rules of health and the special benefits of systematic weight training. It was a lecture Windship had given dozens of times in New England, and his active mind shifted quickly through his mental filing cards as he gracefully explained his beliefs about diet, bathing, ventilation and the proper methods of training.³ Dressed in a black business suit, the five foot seven inch Windship looked every bit

the blue-blooded, Harvard-trained physician he actually was.⁴ His black hair was combed back to accentuate his piercing eyes, high forehead and sharp features; his shoulders, though broad, gave no hint of unusual strength or power.⁵ Some in the crowd had attended lectures by other health reformers, and were surprised by what Windship told them that evening. Here was not another expert arguing for light exercise, vegetarianism and moderation. Windship’s message was diametrically different. The body should be made as strong as possible, he contended, with no weak points. It should be balanced and symmetrical with the muscles full and round and strong, like those of the “Farnesian” Hercules.⁶ The Chicagoans listened closely as he explained that heavy weights and short workouts were the secret to health and longevity. Training should be systematic, he argued with the intensity of the exercise gradually increasing over time. He maintained that workout sessions should never last more than an hour and that proper rest must be obtained before the next day’s training. As for nutrition, meat and a mixed diet helped build his strength, he explained, while his experiment with vegetarianism resulted in a diminution of his vitality. Drawing to a close, he fielded questions for a few minutes before retiring backstage. There, while mentally preparing himself, he quickly changed into his lifting costume, which revealed the large muscles in his arms and shoulders and the heavy straps throughout his legs and back.⁷ He was understandably nervous about the contest. More than the two hundred dollars in prize money was at stake. Windship’s reputation as the strongest man in the world was also on the line. What he and the Chicago audience didn’t realize, however, was that the evening held far greater significance. The contest held that February evening in 1861 was the first true weightlifting competition ever held in the United States. George Barker Windship and his challenger were about to become America’s first competitive weightlifters.

Weight Training Before Windship

Although Windship was an innovator in many ways, his advocacy of resistance exercise was not as much of an anomaly in the mid-Nineteenth Century as we might immediately assume. In fact, the road to his appearance on the stage of Bryan Hall had been paved by a number of exercise experts who advocated resistance exercise. In Europe, in the late 1780s, for instance, schoolmaster Johann Jacob Du Toit had his young students at the influential, experimental school called the Philanthropinum hold sand-bags out to the sides of their bodies while he walked among them and counted the time as their arms fell.⁸ In 1802, one of the most famous of the early Ger-



In this detail from the title page of the 1672 edition of *De Arte Gymnastica*, note the dumbbell and what appear to be circular barbell plates. The rectangular implement next to the small dumbbell is a lead plate with which Mercurialis demonstrated twisting exercises for the torso.

man exercise textbooks, C. G. Salzmänn's *Gymnastics for Youth*, was translated into English and published in Philadelphia. Though the book was aimed at school children, it discussed the necessity of strength training for both boys and girls and recommended using a leverage device similar to the modern Weaver-stick to strengthen the arms, hands and shoulders.⁹

As for dumbbell training, it had been known for several centuries before Windship appeared in Chicago. Following the publication in 1672 of a new edition of Mercurialis' enormously influential exercise text, *De Arte Gymnastica*, references to dumbbell training appeared in the writing of several prominent eighteenth-century men.¹⁰ Essayist Joseph Addison, for example, wrote in the *British Spectator*, "When, I was some years younger than I am at present, I used to employ myself in a more laborious diversion, which I learned from a Latin treatise of exercises, that is written with great erudition; it is there called fighting with a man's own shadow; and consists in the brandishing [of] two short sticks, grasped in each hand, and loaded with plugs of lead at either end. This opens the chest, exercises the limbs and gives a man all the pleasure of boxing, without the blows."¹¹ In the United States, Benjamin Franklin trained at certain periods of his life on a regular basis with dumbbells and believed the hand weights to be an efficient way to get a vigorous workout in a relatively short period of time. In a letter written in 1772, Franklin recommended dumbbell training because it contained "a great quantity of exercise in a handful of minutes," and, on another occasion, he attributed his continued health and vigor when past eighty years of age to the fact that "I live temperately, drink no wine, and use daily the exercise of the dumbbell. . ."¹²

References to training with dumbbells, Indian Clubs and other forms of resistance apparati escalated in the early Nineteenth Century. Widespread concern that city-dwellers were becoming sedentary and soft grew in the antebellum period. Gymnastics and resistance exercise were touted repeatedly as urban man's best defense against this moral and physical decline.¹³ Sir John Sinclair discussed dumbbell training and described an exercise similar to the modern squat in Volume One of his monumental work, *Code of Health and Longevity*, published in 1807.¹⁴ In 1828, Charles Beck told the readers of his English translation of F. L. Jahn's *Gymnastics* that he

had added a chapter on dumbbell exercises because the implements were so well known in America.¹⁵ An anonymous book aimed at women entitled *A Course of Calisthenics for Young Ladies in Schools and Families With Some Remarks on Physical Education*, published in Hartford, Connecticut, in 1831, recommended using weights of four to five pounds made from iron or tin and filled with sand.¹⁶ *Walker's Manly Exercises*, the gentleman's guide to health and exercise first published in the early 1830s contained a lengthy chapter on Indian Club training.¹⁷

Though these, and the literally dozens of other references to resistance training, undoubtedly helped Windship's cause, they were not his chief inspiration. What fired Windship's imagination, and paved the way for the wide acceptance of his method of heavy weightlifting, was the sudden explosion of interest in human strength which occurred in the middle decades of the Nineteenth Century. This groundswell of interest in the limits of human performance was fed by several sources.¹⁸ Historically, it was fostered by the publication of J. T. Desaguliers' analysis of the acts of such pioneering strongmen as England's William Joy and Thomas Topham, and Germany's Johann Karl Von Eckenberg.¹⁹ Desaguliers was fascinated by these men's attempts to lift great weights for very short distances. In his book, entitled *A Course of Experimental Philosophy*, Desaguliers described the mechanical and physiological advantages inherent in certain of the heavy partial movements these strongmen favored. Desaguliers further revealed that he had personally experimented with various methods of heavy lifting, and that he subsequently gave an exhibition of strength feats to the British Royal Society, a scientific body.²⁰

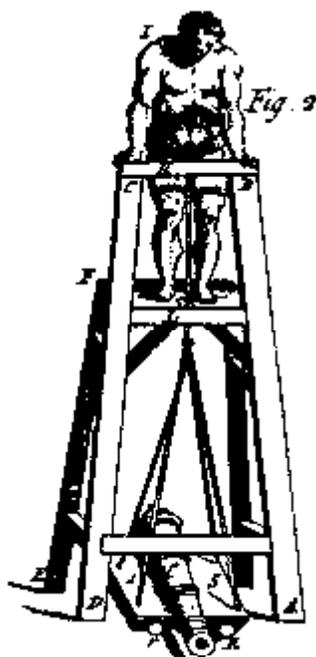
Desaguliers was especially interested in trying to find ways to scientifically compare the strength of men. He developed several strength testing machines, one of which mimicked the hip and harness lifting done by Topham and Von Eckenberg. Using a steelyard scale to measure the amount of their pull, Desaguliers' subjects put a harness around their hips, climbed onto a raised platform and hooked the harness to a chain attached to the arm of the scale. As they pulled upward, the strength of their pull could be measured by adjusting the weights on the steelyard. Desaguliers understood, of course, that a harness lift such as this could only test the strength of a man's hips, back, and thighs. Consequently, he also developed machines to



This rare eighteenth-century illustration shows the method by which William Joy, "The English Samson," supposedly lifted 2240 pounds.

measure arm strength and gripping power.²¹

Windship's interest in heavy weightlifting was no doubt also piqued by the growing number of professional strongmen who were his contemporaries. In the early Nineteenth Century, as touring circuses criss-crossed Europe and America, and as variety theaters opened in the newly industrialized cities of both continents, public displays of strength became common. Furthermore, just as television and films are today, the circus in antebellum America was an important, and influential, transmitter of ideals and images about the body and human potential. In small towns, the circus was often the only popular entertainment seen in an entire year. In large cities, the coming of the circus was an important cultural event, and several shows a day were held to accommodate the crowds. In 1847, for instance, over seventeen thousand people attended a circus in Pittsburgh, Pennsylvania, in one day.²² Some of these early strength professionals, such as J. A. J. Bihin, known as the Belgian Giant, and Giovanni Belzoni, the so-called Patagonian Giant, were famous on both sides of the Atlantic.²³ Belzoni, in fact, was even described by one of the most prominent physiologists of the 1830s and 1840s as an example of an "ideal" male because of his harmonious muscular development, his amazing strength and his agility.²⁴ Though there was more professional strongman activity in Europe than there was in America at least one professional strongman attached to the Rockwell and Stone Circus toured throughout the Eastern United States in the late 1840s and



This illustration from Desaguliers' book—A Course of Experimental Philosophy—depicts the method by which Karl Von Eckenberg could reportedly lift two thousand pound cannon in the mid-Eighteenth Century.

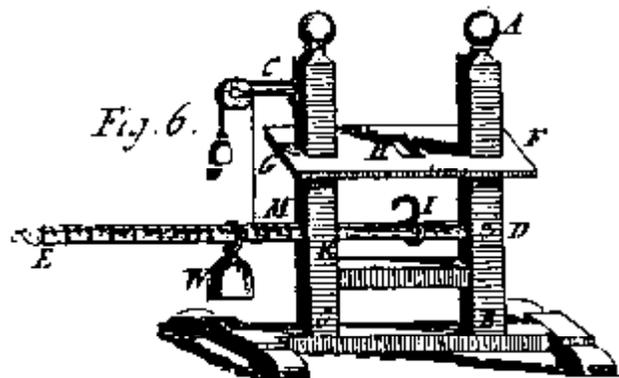
early 1850s. On one occasion in New York, this French strongman withstood the pull of four horses, a feat which amazed the audience and newspaper reporters, and would later be copied by strongman Louis Cyr.²⁵

In the mid-Nineteenth Century, interest in specifically training to increase one's strength became a big business.²⁶ Hippolyte Triat's elegant and spacious Parisian gymnasium where French aristocrats trained with heavy dumbbells and what were probably the first true barbells contributed significantly to the newfound enthusiasm for greater muscular size and the incremental measurement of strength.²⁷ In America private gymnasiums for men opened. In many large urban centers prior to the Civil War and dumbbell training played an important role in the physical transformation of the gyms' customers. Following the great influx of German immigrants to the United States in 1848, the lifting of heavy dumbbells and heavy Indian Clubs became increasingly common, and records began to be established in certain lifts.²⁸ James Montgomery, for instance, operated a gymnasium in New York City in the 1850s and regularly trained using a one hundred pound dumbbell.²⁹ "Professor" Harrison was considered the club-swinging champion of England in this same era, and was frequently mentioned in American

books and magazines for his muscular physique, as well as his finesse with a pair of forty-seven pound Indian Clubs.³⁰ Several new resistance exercise machines appeared on the market before 1860, the most notable of which was James Chiosso's Gymnastic Polymachinon, a forerunner of all the selectorized weight machines now available.³¹ Furthermore, strength testing machines, probably modeled on Desaguliers' original plans, appeared in many towns on street corners, in circus sideshows, and at local fairs. On these machines any man could test his "main strength"—the strength of his back, hips, legs and hands—by moving a large weight a very short distance and thus see how he stood in comparison to his neighbors. It was, in fact, a lifting machine of this type which inspired Windship to become a serious weightlifter in 1854.

George Barker Windship Discovers Weightlifting

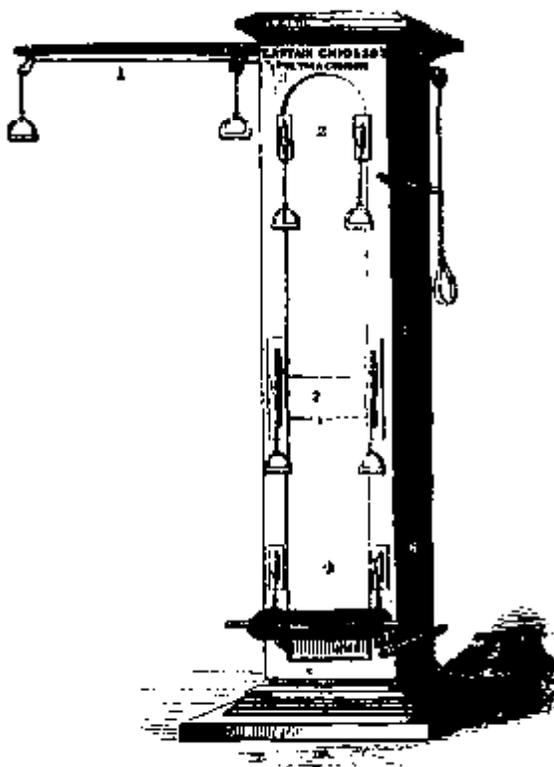
Windship entered Harvard University in 1850, as a sixteen year old freshman standing five feet tall and weighing only one hundred pounds. Though not quite a ninety-seven pound weakling, he was not far off the mark, until he resolved after tiring of the jeers and sneers of his classmates, to build himself up by doing gymnastic training. According to his own account, "Autobiographical Sketches of a Strength-Seeker," published in the *Atlantic Monthly* in 1862, he spent part of every evening training in the Harvard gym, working on the bars and rings, performing chins and dips, until, by graduation time, he was known as the strongest man at Harvard.³² In the sum-



This drawing of Desaguliers' leg and hip machine shows how sophisticated man's understanding of strength was by the mid-Eighteenth Century. The subject to be tested stood on the platform, wearing a hip harness. Attached to the harness was a chain which then ran through the hole labeled "H" and attached to the arm of the scale at "I." The strength of a man's pull could then be measured by moving the weights along the steelyard.

mer of 1854, on a trip to Rochester, New York, to find work as an actor, Windship discovered a crowd surrounding a lifting machine on the town's main street. Windship managed to lift 420 pounds, in what we would today describe as a partial deadlift, or hand-and-thigh lift, but he failed to impress the crowd, a fact which ate at his young male ego. Upon his return to Boston, he devised a lifting machine in his backyard by sinking a hogshead in the ground and placing inside it a barrel, filled with rocks and sand, to which he attached a rope and handle. Then, standing on a platform he constructed above the barrel, he mimicked the partial movements of the lifting machine he had tried in Rochester. Windship became fascinated with the great weights he could hoist in this partial movement. Though the weight moved no more than a few inches, he found the exercise both physically and emotionally satisfying as his strength grew in measured increments. Abandoning his gymnastic training, and his aspirations to be an actor, Windship became a dedicated weightlifter and resolved to study medicine so that he could understand as much as possible about the human body. He graduated from Harvard Medical School in 1857.³³

In his workouts with the crude hand-and-thigh apparatus, Windship gradually increased the weights he used over the next several years. On January 29, 1856, he lifted seven hundred pounds at Bailey's Gymnasium in Boston. By April of the next year he could move 840 pounds, and by the spring of 1860, he had increased his strength in this lift to 1208 pounds.³⁴ Having reached the limits of his grip strength, Windship began experimenting with other methods of lifting. At first, he used a padded rope passed over his shoulders and attached to the weights below. He next tried a leather harness which fit over his shoulders but found that there was too much "give" in the leather. Finally, he had a wooden yoke carved to fit his shoulders and to the ends of this yoke he attached two iron chains. "With this contrivance," Windship reported, "my lifting-power has advanced with mathematical certainty, slowly but surely, to two thousand and seven pounds, up to this third day of November, 1861."³⁵ ("Mathematical certainty" has its limits, of course, and Windship's best lift using the yoke was twenty-two hundred pounds.)



Chiosso built his first, crude weightlifting machine in 1829. Over the next several decades he continued to refine his machine, enclosing the weights and pulleys in a column, and building interior compartments so that the weights could move up and down smoothly. With this model, marketed in 1855, Chiosso demonstrated curling movements, squats, and a wide variety of resistance exercises. One of his early machines used two eight foot columns, attached to the floor like our modern cross-chest cable machines.

Windship added heavy dumbbell training to his regular routine of heavy partial lifting in June of 1858. He began with a pair of fifty pound dumbbells, which he could not press overhead at first. By the end of 1861, however, he could simultaneously press a pair of one hundred pound dumbbells, a considerable feat for a man who never weighed over 150 pounds.³⁶ At roughly the same time, Windship began training with what he described as a "dumbbell" of 141 pounds. This dumbbell, which was actually a barbell, consisted of a bar and two round, sixty-eight pound spheres. By unscrewing the handle, Windship could add lead shot to the spheres, bringing the total weight of the bar to around 180 pounds. In April 1860 he gave a public demonstration of his ability to jerk this barbell overhead.³⁷

Evidence that Windship was as strong as he claimed to be can be found in the remarks of famous physical educator Dudley Allen Sargent. Sargent watched him train in the early 1860s at the Park Street Church Building where Windship had put together a crude gymnasium next to his medical office. Sargent reported that Windship was "exceedingly strong" and that he applied the heavy weight principle to all of his exercises. He further claimed that Windship moved heavy weights from a number of different angles on several machines of his own invention. Besides the heavy platform apparatus Windship used for his partial movements, he also developed an early type of chest-weight machine in which he could brace his back against a wall "and see how much he could pull this way, and that way." Sargent reported that Windship used heavy dumbbells for overhead lifting, and that he demonstrated his ability to chin himself with one arm while holding on with only his little finger.³⁸ Another indication of the validity of the stories surrounding Windship's training methods can be found in an 1863 newspaper article which reported that Windship trained with dumbbells as heavy as 180 pounds, that he had a large Indian club weighing 137 pounds and that his gym contained several novel lifting machines.³⁹

The First American Weightlifting Contest

Windship was thus well prepared for the contest at Bryan Hall. Walking back onto the stage,

he was greeted by only one competitor, a Mr. Thompson of the local Metropolitan Athletic Club. Thompson was noticeably larger than Windship, but the Chicagoan was no match for the doctor in the first event of the contest, the partial deadlift. The weights used were kegs of nails, each one hundred pounds in weight, and they were held together by a sling of ropes and then suspended from a high platform. Starting with nine kegs, each man grasped the attached handle and strained to pull the weight clear of the floor. Both succeeded on the first round and so another barrel was added to the sling, bringing the total weight to eleven hundred pounds. (The apparatus holding the barrels weighed approximately one hundred pounds.) Windship went first and lifted the weight "with apparent ease." Thompson, to his surprise and consternation, could not budge the weight. Though he tried several more times, he finally had to concede: the first round was Windship's.

Windship then got out his yoke and chains and requested that 1500 pounds be loaded. Prior to this contest, Windship's personal best in the lift was 1934 pounds, a lift he made in a public exhibition in Charlestown, Massachusetts, when he lifted a platform full of people as the grand finale to one of his lectures.⁴⁰ For him, the 1500 pounds was supposed to be simply a warm-up, and it did look light as he straightened his knees and asked for more barrels to be added. Thompson, meanwhile, had stood aside, letting the famous strongman take the first lift alone. As Windship began attaching himself to the chains of the sling for his second attempt, however, he discovered that the hook which connected his harness to the sling had broken on his first attempt. He had no replacement. Understandably depressed Windship watched with dismay as Thompson brought out not a yoke apparatus, but a leather harness made to fit around the hips. As Thompson warmed up with his hip harness, Windship quickly grasped that it gave the challenger a considerable mechanical advantage. By bearing the strain on the large bones and heavy muscles of the hips, rather than on the smaller and more bony shoulders, the body could withstand more pressure, and greater weights could be lifted, especially since the load did not have to be suspended down the spine in a hip lift. As Windship watched from the sidelines, Thompson finally ended his exhibition with a lift of

2106 pounds, breaking Windship's record by nearly two hundred pounds.⁴¹ Though Windship tried to use Thompson's harness, it was simply too big for him and he had to concede round two, and the contest, to the Chicagoan.

Though the contest did little to help his image, the evening wasn't a total loss for Windship. At the risk of sounding like a poor loser, he explained the mechanical advantage inherent in Thompson's technique to the journalists who interviewed him in the days after the match, and announced that with a similar hip harness he believed that he could lift twenty-five hundred pounds. Returning to

his hometown of Roxbury after this Midwestern lecture tour, he found a leathersmith and ordered a hip harness. Using this new piece of equipment, he made good on his boast and eventually raised twenty-six hundred pounds.⁴²

"Strength is Health":

The Strongman Reformer

Windship began lecturing on the subject of weightlifting on 30 May 1859 though his first try at the lectern was a total disaster. On the evening he was scheduled to speak, Windship had an acute case of stage fright and fainted about ten minutes into his speech. Though he soon regained consciousness and tried to continue, his light-headedness returned and he left the stage abruptly, fearing he would faint again. Hugely embarrassed, Windship rescheduled his lecture and, on 9 June 1859, he conquered his fright delivered a stunning lecture to another packed house, and received rave reviews from the local newspapers. In the exhibition which concluded the show, he lifted 929 pounds on his lifting machine, shouldered a barrel of flour weighing 229 pounds, and did a chin-up with only the little

finger of one hand. According to Windship, "Invitations and liberal offers poured in upon me from all directions; and during the ensuing seasons I lectured in Baltimore, Philadelphia, Cincinnati, Albany, and many of the principal cities throughout the Northern States and Canada."⁴³ Surviving newspaper reports of these engagements are uniformly warm in their praise of Windship's lecture style and impressive physique. The *Philadelphia Inquirer* reported after one of his shows on "the volume of muscle which swelled and trembled in his full arm."⁴⁴

Windship's lectures, and his own on-going interest in this

This Thursday Ev'ng,
JUNE 23d, 1859,
 — AT —
CITY HALL!
CAMBRIDGE,
Dr. WINDSHIP,
 WILL
LECTURE
ON PHYSICAL CULTURE,
 And Illustrate by FEATS OF STRENGTH; one of which will be
 the
LIFTING WITH HIS HANDS 929 LBS.,
The Greatest Weight on Record.

TICKETS 25 CENTS.

Doors open at 7½ o'clock. Lecture to commence at 8.

An early handbill for what was probably Windship's second public lecture.

—COURTESY MASSACHUSETTS HISTORICAL SOCIETY

new type of heavy training, went beyond his interest in muscular growth. Windship believed, and preached, that heavy lifting was an efficacious form of medical therapy. "I discovered that with every day's development of my strength," he wrote in 1861, "there was an increase of my ability to resist and overcome all fleshly ailments, pains and infirmities,—a discovery which subsequent experience has so amply confirmed, that, if I were called on to condense the proposition which sums it up into a formula, it would be in these words: *Strength is Health.*"⁴⁵ If weightlifting could cure his nervousness, headache, dyspepsia and weak circulation, Windship argued, it could cure other people's ailments too. As he explained his theory in an article for *The Massachusetts Teacher* in 1860, "lifting, if properly practiced, was the surest and quickest method of producing harmonious development; while it was also the most strengthening of all exercises, and consequently the most healthful."⁴⁶

For the remainder of his short life, Windship's mind, and his medical practice, seem to have centered around his advocacy of heavy weightlifting. Though his travels as a lecturer were curtailed during the Civil War, he continued to experiment with lifting in his medical practice. In 1863, he moved his practice from Roxbury to the Park Street Church Building in Boston. There he combined his medical and athletic interests and built a successful practice using exercise as a form of therapy. An 1863 newspaper article described this early facility in detail: "His office.. .is daily thronged with the curious as well as those who are desirous of learning the art of how to be strong. In one corner of the room stands his famous lifting machine. This consists of a solid frame-work of wood, about seven feet in height, with a platform about halfway up upon which the doctor stands to go through his daily exercise. A shoulder bar and two heavy chains form the connection between himself and the weights, which by the way are suspended directly under the platform and consist of iron disks of a circular form, resting one upon the other and held together. . .Surrounding these disks are long, slim bars of iron, running transversely, and made to be detached or joined to the main body. They are arranged in this manner so as to graduate the weight. . .They are each of twenty-five pounds weight. . . Among the objects of interest in his apartment are an iron club of one hundred and thirty-seven pounds, a dumbbell of one hundred and eighty, a lifting apparatus for patients, &c., &c."⁴⁷

Windship opened a combination gymnasium and medical office in a larger and more advantageously situated building on

Washington Street in late 1866.⁴⁸ This facility, which may have been America's first sports medicine facility, was equipped with a "separate apartment for ladies," but no evidence has been found to suggest precisely what women did at Windship's gym or how many women were members.⁴⁹

The Health Lift

Windship's lectures and exhibitions, his impressive physique, and the considerable publicity he received, created many converts to the principle of heavy exercise. Not surprisingly, a few of those who watched and read about Windship tried to capitalize on the new popularity of heavy lifting. Though Windship continued to preach that the entire body needed to be trained with resistance exercise, most of the entrepreneurs who followed on his coat-tails fixed their efforts on the heavy partial lift which became known, generically, as the Health Lift.

The health reformer and phrenologist, Orson S. Fowler, who heartily endorsed the new interest in heavy training, offered his readers the cheapest method for partaking of the new fad. Fowler suggested taking about thirty feet of cod line, or other cotton cord which slightly stretched, and then "twist and double, then twist and double again, tie the ends, and attach two sections of a broom-handle, or any round stick adapted to lift by. . . adjusting its length to your height." Once these handles are attached, Fowler instructed, the person should stand on the bottom handle and pull upward as hard as they could on the top handle, holding the pull for several seconds. Fowler promised that just five minutes, during which several of these primarily isometric contractions could be performed, "will yield more and better exercise than an hour in any other form,"⁵⁰

Other exercise advocates offered far more expensive alternatives, however. Lifting machines aimed at home and institutional use were rushed onto the market in the 1860s, and found instant popularity. In major cities, a number of Health Lift studios or gyms opened, catering to busy office workers who were promised a total workout in only minutes per day. Dudley Allen Sargent later report-

Disease and Weakness Supplanted by Health and Strength!
Mann's Reactionary Lifter.
 The adjustment of this Apparatus for lifting is so simple that a child can readily understand and manage it, and so easy as to require neither time nor effort. Its range of weight is from 50 pounds to 1200 pounds.

THE HEALTH-LIFT.
 A THOROUGH GYMNASTIC SYSTEM IN TEN MINUTES ONCE A DAY.

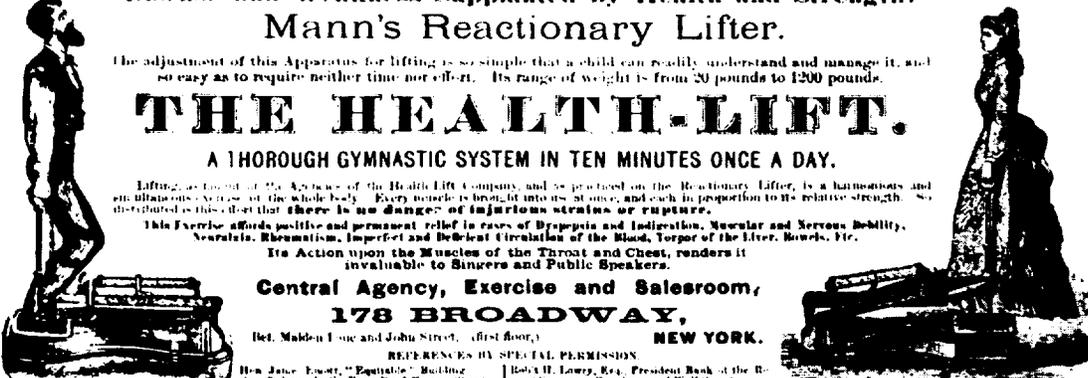
Lifting apparatus of the Apparatus of the Health Lift Company, and is produced on the Reactionary Lifter, is a harmonious and simultaneous exercise of the whole body. Every muscle is brought into use, and each in proportion to its relative strength. So distributed is this, that there is no danger of injurious strains or rupture.

This Exercise affords positive and permanent relief in cases of Dyspepsia and Indigestion, Neuritis and Nervous Debility, Neuralgia, Rheumatism, Imperfect and Deficient Circulation of the Blood, Torpor of the Liver, Bowels, &c.

Its Action upon the Muscles of the Throat and Chest, renders it invaluable to Singers and Public Speakers.

**Central Agency, Exercise and Salesroom,
 178 BROADWAY,
 NEW YORK.**
 (bet. Maiden Lane and John Street, first floor.)

REFERENCES BY SPECIAL PERMISSION:
 Hon. James Everett, "Equitable" Building, 111 N. E. Cor. Wall Street.
 Hon. John Curtis, Esq., No. 9 Nassau Street.
 Hon. Luther K. Marsh, No. 170 Broadway.
 Hon. H. Loring, Esq., President Bank of the Republic, corner Broadway and Wall Street.
 J. B. Ames, Esq., President Clinton Insurance Co.



Mann's Health Lift Machine, in an advertisement from the 1860s. Note the placement of the handles which made it unnecessary for women to change their clothes before training.

ed of this era, “lifting machines sprang up in parlors and offices and schools everywhere.”⁵¹

Mann’s Reactionary Lifter, for instance, was a cast iron lifting machine sold through the offices of the Health-Lift Company of New York city. This company’s main exercise salon and salesroom was located at 178 Broadway. Mann’s advertising promised that disease and weakness in men and women would be replaced by vigorous strength through just ten minutes a day of “harmonious and simultaneous exercise of the whole body” on one of his lifting machines. Relatively small, the Mann Reactionary Lifter still adjusted from twenty to twelve hundred pounds. Two handles attached to the weighted lever arm so that by standing on the machine’s base, with a handle in each

hand and the knees slightly bent, the lifter would simply straighten the legs to move the weighted arm a few inches. Prominently displayed in the advertising for this machine was a fashionably dressed young woman complete with bustle and corset.⁵² “Side-lifting” machines, such as Mann’s, were partly designed with women in mind. The idea was that the two side handles made it unnecessary for women to change their clothes for a workout. Besides Mann’s New York studio, side-lifting salons also opened in Cincinnati and Chicago. Though men and women patronized these establishments, competitors frequently criticized these gyms for allowing women to engage in the “dangerous” practice of training without loosening their corsets.⁵³

Another approach to the Health Lift was developed by Dr. Barnett, one of the early pioneers of the home equipment industry. Barnett advertised a health lifting machine using rubber “wands” on each side of a platform. Like Orson Fowler’s isometric exercises, people using Barnett’s machine pulled on the rubber cables until they were fatigued, then rested and tried again. No weights were lifted at all.⁵⁴ Other instructors were also active during this period. J. Fletcher Paul advocated “center-lifting” and ran a Health Lift gymnasium in Boston. Paul claimed that a man could double his strength in just three months by training at his health studio.⁵⁵

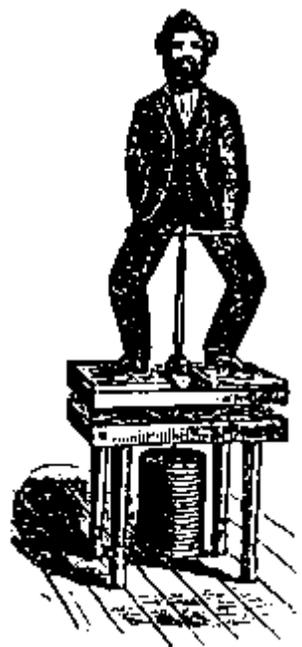


FIG. 2.
POSITION—WEIGHT AT REST.

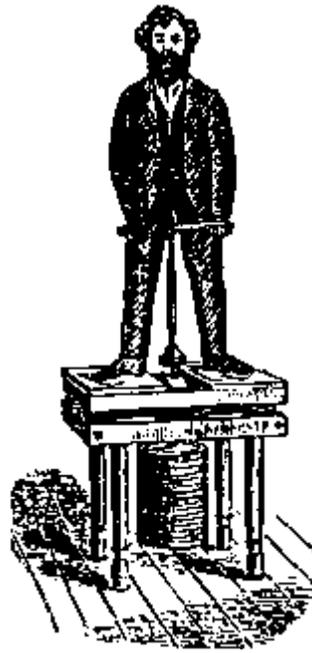


FIG. 3.
POSITION—WEIGHT RAISED.

THE WOODEN MACHINE.

Butler called this technique “center-lifting,” and argued, incorrectly, that it was safer for the spinal column than other versions of the Health Lift Butler sold wooden machines such as this one for \$250. Note the elliptical springs separating the two layers of the platform.

David P. Butler

Windship’s major rival in the field of heavy training was David P. Butler, who, unlike windship, had a true entrepreneurial bent. A fellow Bostonian, Butler claimed to be “broken down in health and given up by physicians to die,” when he decided to search for a cure to his “moribund debility.”⁵⁶ For Butler, that cure was heavy lifting, and he apparently began experimenting with the system in 1857. Butler opened a gymnasium in Boston at 19 Temple Place in 1867, although it is likely he had an earlier studio elsewhere in the city. He patented his first lifting machine on 6 June 1865, another on 19 June 1866, and he claimed two more patents in 1869.⁵⁷ By 1870, Butler manufactured several expensive models of Health Lift machines, and had franchised his system,

offering health lift converts a chance to open gyms using his equipment and system of exercise.⁵⁸ His Standard Iron Machine, with six hundred pounds of weight, sold for \$300. If a gym owner purchased three, at the same time, the price dropped to \$250 per machine. A simpler, wooden version of the Butler machine sold for \$250 or, \$225 for three. Second-hand versions of the wooden machine still cost \$200. A spring machine, preferred for home use, because it required no additional iron weights, was still a considerable investment at \$100.

Butler published a detailed account of his methods and training philosophy in *Butler’s System of Physical Training. The Lifting Cure: Original Scientific Application of the Laws of Motion or Mechanical Action to Physical Culture and the Cure of Disease*.⁵⁹ Butler believed that his system had beneficial effects on both the body and the brain and that it created harmonious development both internally and externally.⁶⁰ Lewis Janes, Butler’s New York partner who wrote frequently about the Health Lift, went well beyond Butler’s modest claims and avowed that men under five feet six inches would discover they were growing taller from the lifting program while excessively tall people would be shortened.⁶¹

Like Windship, Butler centered his system on heavy, partial movements, arguing that “Perfect lifting, is perfect exercise.”⁶²

Where the two men differed, however, was in Butler's insistence that his lifting machines have springs underneath the platform so that as the weight was being pulled upward, the floor gave way slightly. He believed that these springs softened the force, allowed the strain to be gradually absorbed by the body, and stimulated the internal organs. It brought "the whole body: into action," Butler wrote, and not just the muscles themselves.⁶³ Although he argued that lifting on his machines was the most beneficial exercise known to man, Butler's training manual suggests that a full workout at his studio consisted of four distinct types of exercise. Men and women began their exercise sessions with pulley work. On the back edge of a small wooden platform, Butler installed a number of upright posts with attached pulleys. In the center of the platform, he secured another post against which the person would press his back and hips while performing exercises. Then, reaching behind himself, the lifter grasped the wooden handles attached to the ropes over the pulleys and, beginning with relatively light weights, pushed his arms horizontally forward, while simultaneously executing a partial squatting motion. Four attempts, with successively heavier weights, were to be made each day on this machine as a warm-up exercise. The maximum weight used should be slightly increased each day.

The second exercise in the series was the Health Lift itself. At Butler's studios, the machine consisted of a substantial table, through the center of which passed an upright rod, upon which the weights rested. This rod could be adjusted for height and was set so that the knees were just slightly bent. The lifter grasped the handle with one hand in front of the body and the other behind the body as in a "Jefferson lift." Butler believed, incorrectly, that the spine thus remained absolutely upright and protected from strain.⁶⁴ Again, beginning with a light weight, Butler recommended four attempts, with rests of up to five minutes between exertions. Butler recommended that those exercising should gradually increase the total weight lifted by five or ten pounds a day. When it seemed as if they had reached their physiological limit, they should reduce the weight by fifty to one hundred pounds and begin the ascent again. As a variation, Butler suggested that a shorter rod could

be used, making for a longer pull. He also recognized that truly heavy weights should not be approached during every workout. He advised taking some workouts that were below one's absolute limits, and trying the heaviest weights only every couple of weeks.⁶⁵ It is worth noting that at no place in his exercise manual does he suggest that there should be any limits on the amount of weight lifted in this method by women.

Following the completion of the four health lifts, the Butler pupil engaged in heavy dumbbell exercises. Butler warned that dumbbell work should be approached carefully, as it could be dangerous. The only dumbbell exercise for which he gave instructions was the one-hand overhead "jerk," the most common dumbbell exercise of this era. Perhaps the speed of the lift concerned him. In his instructions, he suggests lifting the bell slowly to the shoulder, and lowering it slowly back to the floor by a squatting motion. However, he contends that the overhead phase of the lift should be performed with a "thorough motion of the whole body, moving upon the hips and ankles," a statement which suggests a sudden, explosive movement.⁶⁶ In any case, four attempts were to be made with each arm with gradual weight increases over time.

The final exercises of the session were a series of light dumbbell movements. Women's dumbbells, Butler notes, should weigh between two and six pounds—which was considerably heavier than most other exercise advocates of this era recommended for women—while men and boys should use weights from six to fourteen pounds. With these dumbbells, Butler had his pupils do squats while simultaneously pressing the weights overhead, a series of limb extensions, and several circular motions reminiscent of Indian Club work.⁶⁷ This light dumbbell work Butler considered "of least importance," and warned that in many cases it was injurious instead of beneficial. He makes the interesting argument that invalids, women, and children rarely needed such light exercises unless they were phlegmatic or stout.⁶⁸

By 1871, the Butler Health-Lift Company had five different branches in New York City, four of them on Broadway.⁶⁹ Lewis G. Janes headed up the New York arm of the company from its main offices on the second floor of the Park Bank

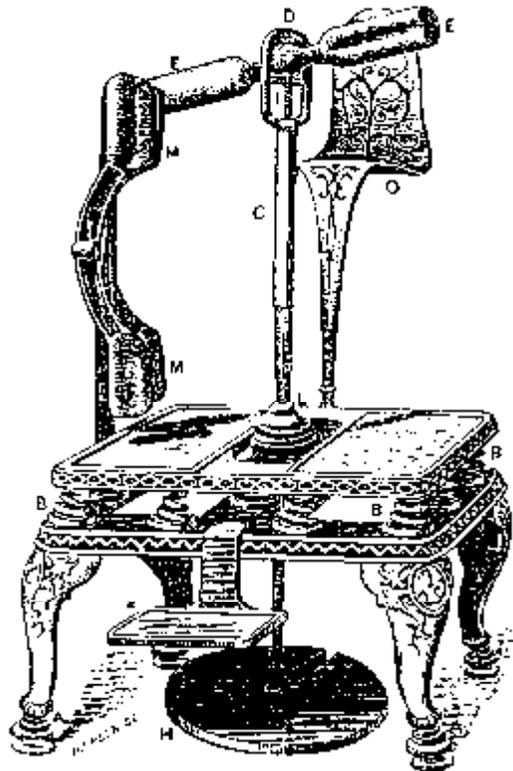


FIG. 1.

THE STANDARD IRON MACHINE.

Butler's most expensive machine was this cast iron contraption with springs located between the layers of the platform and at the end of the four legs. Its platform measured 26" by 32" and it stood 26" from the floor. The machine, alone, weighed seven hundred pounds. Fifty pound iron weights were added to the rod underneath the platform. The seat on the back of the platform was used to rest between attempts.

Building at 120 Broadway. Women could partake of Butler's version of the Health Lift at all the locations, but special accommodations were made for women at 830 Broadway, where Caroline E. Young oversaw their training sessions; and at 158 Remsen Street, in Brooklyn, where Caroline Branson taught. "Low-Rate" Health Lift rooms also operated at 348 Broadway, in the New York Life Insurance Building and on the second floor of the Equitable Insurance Building at 214 Broadway. Additionally, John W. Leavitt operated a Health Lift studio at 113 Broadway in the heart of Wall Street.⁷⁰ Leavitt and Janes began as partners and introduced the system to New York City in 1868 after studying with Butler in Boston. Leavitt then left the firm and opened his own franchise in which he continued to utilize Butler's machines.⁷¹ In Boston, women could take lessons at Butler's original studio on West Street and at physician Elizabeth Branson's gymnasium at 784 Washington Street. Men had access to the Butler machines at his main studio and at the "low rate rooms" at 53 Temple Place. Butler Health Lift studios also operated in San Francisco, under the direction of Dr. Swain, and in Providence, Rhode Island.⁷²

The Death of the Health Lift

Windship also sold equipment, but there his entrepreneurial spirit seems to have ended. In 1865 he patented, and offered for sale, a plate-loading graduated dumbbell which could quickly be adjusted in weight from eight to one hundred and one pounds. That same year, he received patent approval for a lifting device called the "Exercising Machine," which could be used for both yoke- and handle-lifting.⁷³ In the early 1870s Windship patented a hydraulic lifting machine which used air, captured in a piston-like arrangement, for resistance.⁷⁴ His final patent was for an invention called the "Apparatus for Physical Culture" which contained a lifting platform, cables for chest work, a rowing machine and a chinning bar.⁷⁵ Like Chiosso's Polymachinon, this piece of apparatus attempted to contain an entire gym in one machine. Unfortunately, no records exist to indicate how many of these machines were sold. Beyond these entrepreneurial efforts, however, Windship did not venture. He did not franchise his name, as Butler did, nor, apparently, did he publish a training manual or printed course.

THE PRACTICAL GRADUATING DUMB-BELL.

Patented February 14th, 1865.

OBTAINED BY ORDERING OF

G. B. WINDSHIP, M. D., 351 Washington St., Boston.

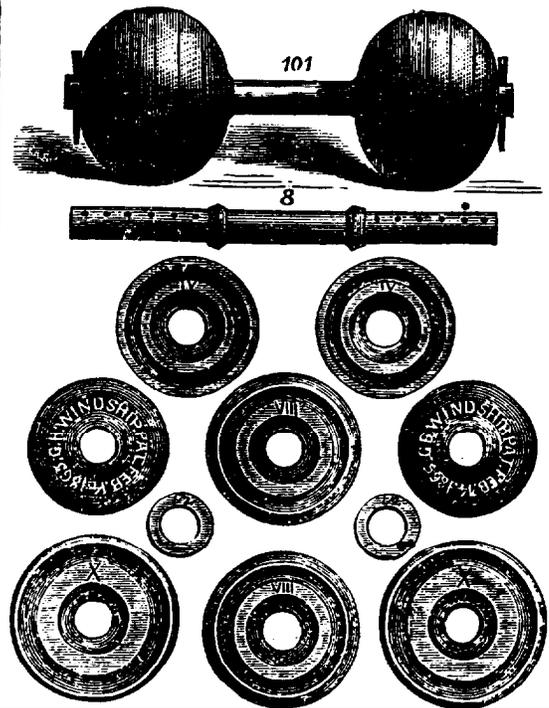
Price \$16.00.

AGENTS WANTED.

RIGHTS FOR SALE.

This instrument, although designed by Dr. WINDSHIP as a special means of developing the chest, shoulders and arms, may be relied on as a very effective and convenient means of developing almost every region of the body. It is confidently recommended as something which decidedly meets the wants of thousands of persons who do not get the exercise they need in their ordinary routine of business, and yet have not time to regularly attend a gymnasium, who desire a more satisfactory device than a club with which to practice, and yet do not wish to incur much expense for apparatus.

The instrument weighs 101 pounds, reduces to 8 pounds, and is adjustable in a moment to any half-pound graduation of a regular series between these extremes; it admits accordingly of 187 variations in weight, and may be regarded as a substitute for an equal number of dumb-bells of a



Windship's plate loading dumbbell adjusted from eight to one hundred and one pounds in half pound increments It consisted of an eight pound, cast iron shaft; four four pound plates; four eight pound plates; four ten-pound plates; ten half-pound plates; and two steel pins. It sold for sixteen dollars.

It is impossible, of course, to know how many men and women practiced the type of heavy lifting advocated by Windship and Butler. That it was a popular system can be ascertained by the large number of Health Lift studios that opened, especially in New York City, by the favorable references to Windship's and Butler's systems in newspapers and magazines of that era and by the fact that Lewis Janes' book on the Health Lift, released in 1869, went through six editions by 1871.⁷⁶ When Windship died unexpectedly at his home on 12 September 1876 the Health Lift, and weight training in general, was struck a severe blow. Only forty-two years of age, Windship apparently suffered a massive stroke and died instantaneously. Those opposed to his theories on heavy lifting were quick to blame his death on his training methods.⁷⁷ Weightlifters everywhere were suddenly concerned. If "strength is health," the journalists and physicians argued, then why was Windship dead at forty-two? Didn't his

death prove that lifting was dangerous? In the years after his death, weight training slid into a decline. Butler's studios gradually closed, his machines relegated to scrap metal. The men and women who sought health through lifting turned to new fads—especially cycling and baseball—as outlets for their healthful impulses.⁷⁸

But not everyone turned away from heavy weightlifting simply because Windship had died of a stroke. As competitive athletics grew in popularity in the late-Nineteenth Century, the benefits of systematic weight training continued to be touted for athletes. Two years after his death, a lengthy discussion of Windship's training methods turned up in Ed James, *How to Acquire Health, Strength and Muscle*, one of the earliest books aimed at improving competitive athletic performance.⁷⁹ In that same book is a section entitled "Remarkable Feats of Muscular Strength," in which James lists a number of weightlifting records in hand- and harness-lifting made after Windship's death, as well as records in overhead lifts with dumbbells.⁸⁰ In 1888, health reform physician John Harvey Kellogg recommended the Health Lift to his readers, telling them, "We have carefully tested this form of exercise, and believe it to be an exceedingly valuable measure for those whose employments are sedentary and whose time for exercise is limited."⁸¹ Likewise, historian Joan Paul has documented that Robert J. Roberts, one of the most influential figures in the early development of the YMCA, was a Windship protégé who began lifting at the doctor's gym in 1866. According to Paul, Robert's love for heavy lifting carried over to his work in the physical training program of the YMCA.⁸²

On 23 June 1859 Harvard alumnus John Langdon Sibley wrote in his private diary: "Heard George Barker Windship, a graduate in 1855, deliver a lecture in Cambridgeport on physical culture. He lifted 929 pounds and is thought though rather small to be the strongest man living."⁸³ Though Windship was, admittedly, small in physical stature, his efforts on behalf of resistance exercise make him a titan in the pantheon of weight training pioneers.

Notes:

¹"Physical Culture: Roxbury vs. Chicago," n.p. unidentified newspaper clipping, Commonplace Book of George Barker Windship. May-Windship Family Papers, Massachusetts Historical Society, Boston, MA. [A "commonplace book" would today be called a scrapbook.]

²In 1861, Roxbury was a small town just outside Boston, Massachusetts.

³"Roxbury vs. Chicago," n.p. Commonplace Book.

⁴George Barker Windship was the son, grandson and great-grandson of Harvard-educated physicians. George graduated from Harvard Medical school on 7 July 1857. *Records of the College Faculty*, Vol. 15: 1855-1860. Harvard College Archives, Cambridge, Massachusetts.

⁵An interesting physical and temperamental description of Windship occurs in: "Dr. George B. Windship," *The Phrenological Almanac* (New York: Fowler & Wells, 1859): 12-14.

⁶Windship discusses his fascination with the Farnese Hercules in: "Autobiographical Sketches of a Strength-Seeker," *Atlantic Monthly* 9(January 1862): 108.

⁷This description of Windship's lecture is based on a composite of reports of his public appearances included in a promotional pamphlet, circulated by Windship, entitled: "To Lecture Committees," included in the

Commonplace Book of George Barker Windship, May-Windship Family Papers, Massachusetts Historical Society, Boston, Massachusetts.

See also: "Roxbury versus Chicago," and "Autobiographical Sketches" for other details of his public exhibitions.

⁸Fred Eugene Leonard, "The Beginnings of Modern Physical Training," *Mind and Body* 11(October 1904): 187. The Philanthropinum was one of the first schools to require physical education of its students. It became a model for many other eighteenth-century schools and was visited by dozens of liberal-minded educators. Du Toit was the physical education teacher at the Philanthropinum between 1788 and 1793.

⁹C. G. Salzmann, *Gymnastics for Youth: Or, A Practical Guide to Healthful and Amusing Exercises for the Use of Schools. An Essay Toward the Necessary Improvement of Education, Chiefly as it Relates to the Body* (Philadelphia: William Duane, 1802), 315-319.

¹⁰In *De Arte Gymnastica*, Mercurialis reviewed the ancient Greek writings on exercise and health and then added his own suggestions for physical training. The first edition of *De Arte Gymnastica* appeared in 1569. It stayed in print for more than a century, with subsequent editions released in 1573, 1587, 1600, 1614, and 1672. Historians agree that for the next several centuries, *De Arte Gymnastica* was the inspiration for nearly all exercise texts. The title page of the Springfield College Library edition examined by this author reads: Hieronymi Mercurialis, Foroliviensis, *De Arte Gymnastica Libri Sex: In quibus exercitacionum omnium vetustarum genera, loca, mosi, facultates, & quidquid denique ad corporis humani exercitaciones pertinet diligenter explicatur.* Editio novissima, aucta, emendata, & figuris authenticis, Chrisophori Coriolani exornata, Amstelodami, Sumptibus, ANDREÆ FRISII (1672).

¹¹L. H. Joseph, "Medical Gymnastics in the Sixteenth and Seventeenth Centuries," *Ciba Symposia* 10(March-April 1949): 1041-42.

¹²Joseph Addison, *The Spectator* No. 115. Quoted in: *Sure Methods of Improving Health and Prolonging Life or, a Treatise on the Art of Living Long and Comfortably* (London: by "A Physician", 1827), 238-239.

¹³Franklin to his son, 19 August 1772. Quoted in: Albert Henry Smyth, *The Writings of Benjamin Franklin* (New York: 1905), 411-412.

Franklin to Le Veillard, 22 April 1786. Quoted in: Carl Van Doren, *Benjamin Franklin* (New York: The Viking Press, 1938). 743. Both letters are quoted at length in: Terry Todd, "The History of Resistance Exercise and Its Role in United States Education," (Ph.D. Diss., The University of Texas at Austin, 1966), 39-40.

¹⁴See Jan Todd, "The Classical Ideal and Its Impact on the Search for Suitable Exercise: 1774-1830," *Iron Game History* 2(November 1992): 6-16, for a discussion of some of these early nineteenth-century exercise texts.

¹⁵Sir John Sinclair, *The Code of Health and Longevity; Or, A Concise View of the Principles Calculated for The Preservation of Health, and The Attainment of Long Life. Being an Attempt to Prove the Practicability of Condensing, Within a Narrow Compass, The Most Material Information Hitherto Accumulated Regarding The Most Useful Arts and Sciences, Or Any Particular Branch Thereof.* Vol. 1, 2d ed., (Edinburgh: printed for Arch. Constable & Co., 1807), 503-504.

¹⁶Charles A. Beck, *A Treating [sic] on Gymnastics Taken Chiefly From the German of F. L. Jahn* (Northampton: Simeon Butler, 1828), 3.

¹⁷ *A Course of Calisthenics for Young Ladies in Schools and Families with Some Remarks on Physical Education* (Hartford: F. J. Huntington, 1831), 36-38.

¹⁸ [Donald Walker] *Walker's Manly Exercises: Containing Rowing, Sailing, Riding, Driving, Racing Hunting, Shooting, and other Manly Sports. The Whole Carefully Revised or Written, by "Craven"* 11th ed. (London: George Bell & Sons, 1888). The first edition of this work appeared in 1832.

¹⁹ Space does not permit a discussion of the other social, technological and ethnic forces which helped shape the athletic revival of the mid-Nineteenth Century. See Steven A. Riess, *City Games: The Evolution of American Urban Society and the Rise of Sports* (Urbana University of Illinois Press, 1989).

²⁰ J. T. Desaguliers, *A Course of Experimental Philosophy* (London: 1762). Joy, also referred to as William Joyce, is discussed on page 265, Topham on pages 289-291, and Von Eckenberg on pages 265-273.

David P. Willoughby's, *The Super Athletes* (New York: A. S. Barnes, 1970) also contains information on these men. See pages 38 and 40-46.

²¹ Desaguliers, *Course*, 265.

²² *Ibid.* The lengthy descriptions accompanying these illustrations can be found on pages 291 and 292.

²³ [Horace Mann], "Circus," *The Common School Journal* 9(October 1847): 18.

²⁴ For information on Belzoni, see David Webster, "Giovanni Belzoni: Strongman Archaeologist" *Iron Game History* 1(April 1990). J. A. J. Bihin is described in: Orson Fowler, *Hereditary Descent* (New York: Fowler & Wells, 1848), 37. According to Fowler, Bihin weighed 300 pounds, stood 7'6", measured fifty inches around the chest, twenty-eight inches around the thigh and twenty-two inches around the calf. Fowler claims Bihin could lift eight hundred pounds, though he does not say how the giant performed this lift Fowler also claims Bihin "could straighten himself when stooping under two tons."

²⁵ Andrew Combe, M.D., *The Principles of Physiology, Applied to the Preservation of Health, and to the Improvement of Physical and Mental Education* (New York: Fowler & Wells, 1838). 104. Combe was not the only physiologist to hold up strongmen as exemplars of manhood. See: John Lee Comstock, M.D., *Outlines of Physiology: Also the Application of these Principles to Muscular Exercise* (New York: Harper & Brothem, 1836), 228-263.

²⁶ Orson Fowler, *Physiology: Animal and Mental: Applied to the Preservation and Restoration of Health of Body and Power of Mind*, 6th ed. (New York Fowler & Wells, 1851), 228.

²⁷ For insight into the growing popularity of heavy weightlifting see: Ed. James, *How to Acquire Health Strength and Muscle, Including Treatment for Free Livers and Sedentary People, About Air, Clothing, Food and Stimulants; Also Best Mode of Exercise for all Ages, Cures and Preventives for Various Diseases, Proportions of a Perfect Human Figure; Sketches of Dr. G. B. Windship's and R. A. Pennell's Methods, Remarkable Feats of Strength, Measurements of Noted Athletes, The Muscular System, Tables of Nutrition and Digestion*, 12th ed. (New York: Ed James, 1878).

²⁸ Information on Triat and his gymnasium may be found in: Edmund Desbonnet, *Les Rois de la Force: Histoire de tous les Hommes Forts depuis les temps anciens jusqu'à nos jours* (Paris: Librairie Berger-Lev-

rault, 1911): 58-78.

²⁹ See James, *How to Acquire*, 60-63 for details of early weightlifting accomplishments. Most exercise texts from this era warn against using heavy implements, a fact which suggests that some individuals, besides the professional strongmen, practiced what we would today refer to as resistance exercise or true weight training. For instance, Dio Lewis, a popular exercise author of the 1860s, warned his readers to use only light dumbbells for his rhythmic drills but conceded that if people wished to use dumbbells as the Germans did, then heavy weights were needed. Dio Lewis, *The New Gymnastics for Men, Women and Children* (Boston: Ticknor and Fields, 1862), 123.

³⁰ Montgomery was part owner of Ottignon and Montgomery's Gym, located at 159 and 161 Crosby Streets in New York City. According to their ad in the *Water Cure Journal* the gymnasium offered classes for men and boys in gymnastics and boxing, and they sold dumbbells and Indian Clubs. See: "Bodily Exercise the Best Medicine," *Water Cure Journal and Herald of Reforms* 25(August 1857): 46.

³¹ A description of Harrison and his measurements is reprinted in Russell Trall's *Illustrated Family Gymnasium* (New York: Samuel R. Wells, 1857): 57-58. It originally appeared in the *Illustrated London News*. See also: Siegmund Klein, "American Pioneers of Weightlifting," *Strength & Health* (November 1942): 15 and 40-41, for information on other early weight trainers.

³² Captain James Chiosso, *The Gymnastic Polymachinon: Instructions for Performing a Systematic Series of Exercises on the Gymnastic and Calisthenic Polymachinon* (London: Walton and Maberly, 1855).

³³ Windship, "Autobiographical Sketches," 102-103. For other information on Windship see Joan Paul, "The Health Reformers: George Barker Windship and Boston's Strength Seekers," *Journal of Sports History* 10(Winter 1983): 41-57. See also: Todd, "History of Resistance Exercise," 40-48.

³⁴ Details of Windship's strength training methods and his personal best lifts can be found in James, *How to Acquire*, 54-57.

³⁵ Windship, "Autobiographical Sketches," 108-109 and 114.

³⁶ *Ibid.*, 114.

³⁷ *Ibid.*, 108-109.

³⁸ *Ibid.*, 109. See also: James, *How to Acquire*, 56. By today's standards a jerk of 180 pounds is not a significant strength feat for a man of Windship's size. However, it must be remembered that the most difficult part of a clean and jerk was the cleaning of the thick-handled, non-revolving bar.

³⁹ Dudley Allen Sargent, "The Achievements of the Century in Gymnastics and Athletics, Together with Notes and Questions," Typescript of an address delivered at Springfield College. Sargent's comments about Windship appear on pages 2-3 of the interview notes attached to this speech. Springfield College Manuscript Collection, Springfield, Massachusetts. References to Windship's ability to chin himself using only one finger also appear in several newspaper articles quoted in: 'To Lecture Committees,' n.p.

⁴⁰ "Dr. Windship Raises Twenty-Six Hundred Pounds," *Evening Express* (21 November 1863). Clipping in Commonplace Book of G. B. Windship. See also Joan Paul, "Health Reformers," 50-52, for information on Windship's machines and patents.

⁴¹ Windship, "Autobiographical Sketches," 115.

- ⁴² See: "Roxbury vs Chicago," n.p., and Ed. James, *How to Acquire*, 56-57.
- ⁴³ "Windship Raises," n.p.
- ⁴⁴ Windship, "Autobiographical Sketches," 113.
- ⁴⁵ Quote included in "To Lecture Committees," n.p.
- ⁴⁶ *Ibid.*, 105.
- ⁴⁷ George Barker Windship, "Physical Culture," *The Massachusetts Teacher* 13(April 1860): 128.
- ⁴⁸ "Windship Raises," n.p.
- ⁴⁹ According to historian Joan Paul, the Washington Street building is still standing and is now listed on the National Register of Historic Buildings. It is presently used as a restaurant Windship's Boston patients included such distinguished men as the actor Edwin Forrest. "George Barker Windship," obituary notice, newspaper clipping in the Commonplace Book of G. B. Windship, Massachusetts Historical Society, Boston, Massachusetts.
- ⁵⁰ References to the "women's apartment" can be found in the Advertising Section, *Boston Directory* (Boston: Sampson & Davenport 1870).
- ⁵¹ Orson S. Fowler, *Human Science: or Phrenology; its Principles, Proofs, Faculties, Organs, Temperaments, Combinations, Conditions, Teachings, Philosophies, etc. etc. as Applied to Health, its Value, Laws, Functions, Organs, Means, Preservation Restoration, etc., Mental Philosophy, Human and Self Improvement, Civilization, Home, Country, Commerce, Rights, Duties, Ethics, etc., God, His Existence, Attributes, Laws, Worship, Natural Theology, etc., Immorality, its Evidences, Conditions, Relations to Time, Rewards, Punishments, Sin, Faith, Prayer, etc., Intellect, Memory, Juvenile and Self Education, Literature, Mental Discipline, the Senses, Sciences, Arts, Avocations, A Perfect Life, etc. etc.* (Philadelphia: National Publishing Company, n.d.), 579.
- ⁵² Dudley Allen Sargent, *An Autobiography* (Philadelphia: Lea and Febiger, 1927), 98.
- ⁵³ Harvey Green, *Fit for America: Health, Fitness, Sport and American Society* (New York: Pantheon Books, 1986) 199.
- ⁵⁴ See Lewis G. Janes, *Health-Exercise: The Rationale and Practice of the Lifting-Cure or Health Lift*, 6th rev. ed. (New York: Lewis G. Janes, 1871) 44.
- ⁵⁵ Barnett also sold a rowing machine and a "parlor gymnasium"-a rubberized cable with attached handles which we would today call an expander Barnett's small book on the Parlor Gymnasium showed both men and women using his device for stretching exercises, arm curls and presses and for chest expansion work. See: S. M. Barnett, *Barnett's Patent Parlor Gymnasium* (New York: J. Becker and Co., 1871).
- ⁵⁶ *Boston Directory*, Reel 8 (1875) 1363.
- ⁵⁷ David P. Butler, *Butler's System of Physical Training. The Lifting Cure: Original, Scientific Application of the Laws of Motion or Mechanical Action to Physical Culture and the Cure of Disease. with a Discussion of True and Fake Methods of Physical Training* (Boston: D. P. Butler, 1868): 81.
- ⁵⁸ John W. Leavitt, *Exercise a Medicine; or, Muscular Action as Related to Organic Life* (New York: J. W. Leavitt, 1870), 7.
- ⁵⁹ Janes, *Health-Exercise*, 37-38.
- ⁶⁰ Butler, *Butler's System*. Historian Fred Eugene Leonard reports that a book by Windship was scheduled for release by Ticknor and Fields in 1862. However, no copies of this book are known to exist. Fred Eugene

Leonard, *A Guide to the History of Physical Education* (Philadelphia: Lea and Febiger, 1923), 258.

- ⁶¹ Butler, *Butler's System*, 75-77.
- ⁶² Janes, *Health-Exercise*, 24.
- ⁶³ *Ibid.*, 88.
- ⁶⁴ *Ibid.*, 89.
- ⁶⁵ In actuality, such a position slightly twists the spine and makes it more susceptible to back injuries. A similar lift, using a barbell, is known as the Jefferson Lift.
- ⁶⁶ *Ibid.*, 95-96.
- ⁶⁷ *Ibid.*, 97.
- ⁶⁸ *Ibid.*, 99-100.
- ⁶⁹ *Ibid.*, 100.
- ⁷⁰ Leavitt, *Exercise a Medicine*, iii-vi.
- ⁷¹ *Ibid.*, iv. Leavitt claimed to have seventy-five prominent bankers, brokers, lawyers and merchants from the Wall Street area among his clients.
- ⁷² *Ibid.*, iii-iv; and 10.
- ⁷³ Janes, *Health-Exercise*, i.
- ⁷⁴ See Paul, "The Health Reformers," 51.
- ⁷⁵ *Ibid.*
- ⁷⁶ *Ibid.*
- ⁷⁷ "Physical Training," *Harper's Weekly* 4(22 September 1860): 594, and: Janes, *Health-Exercise*, i.
- ⁷⁸ In fact, for some years afterward, Windship's unexpected death was mentioned negatively in exercise books.
- ⁷⁹ Windship Biographical File, Harvard University Archives, Cambridge, Massachusetts.
- ⁸⁰ James, *How to Acquire*, 55-57
- ⁸¹ *Ibid.*, 60-62.
- ⁸² J. H. Kellogg, M. D., *Ladies Guide in Heath and Disease, Girlhood, Maidenhood, Wifehood, Motherhood* (Des Moines, Iowa: W. D. Condit & Co., 1888): 240.
- ⁸³ Paul, "Health Reformers," 55.
- ⁸⁴ John Langdon Sibley, *The Private Journal of John Langdon Sibley, Volume I: 1846-1845*. Typed quotation from this book, included in George Barker Windship Biography File, Harvard University Archives, Cambridge, Massachusetts.

