













# TUMBLING FOR AMATEURS.

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## EXTRACTS FROM LETTERS OF PROMINENT PHYSICAL DIRECTORS.

NEW HAVEN, CONN.

W. G. ANDERSON, Associate Director Yale University Gymnasium: "I believe in 'tumbling' as an exercise. It makes a man quick, agile, and very sure-footed. It is a form of sport that is popular and perfectly legitimate when properly taught. We have no good book on the subject, but need one. If such a work is to be presented to those interested in this subject, it ought to be written by a man who has had much experience in actual tumbling, who is familiar with the mechanism of the body, and who is educated. Dr. James T. Gwathmey, of Vanderbilt University, Nashville, Tenn., is just the person to compile a book on this form of gymnastics. He is a clever performer, a teacher of wide experience, and an educated physician. I have looked over the MS. of the Doctor's new book, and I indorse it."

MCGILL UNIVERSITY, MONTREAL, CANADA.

R. TAIT MCKENZIE, M.D.: "I am glad to find some one ready and able to draw the veil from a branch of gymnastics which the professional acrobat has so long kept shrouded in mystery. *The reducing of the various feats of tumbling to a progressive sequence, and the analyzing of the various combinations, is indeed a difficult task; but your kinetoscopic method of illustration will make clear what would otherwise require pages of description.* Your work can not but assist any one of ordinary ability in mastering the rudiments of the art; but it will also appeal to the much wider field of all who admire acrobatics, and will give them

some idea of the difficulties mastered by the professional, whose work they will more fully appreciate. I wish your book every success."

ITHACA, N. Y.

E. HITCHCOCK, JR., M.D., Director of Department of Hygiene and Physical Training, Cornell University: "It has always seemed to me that this graphic method of instructing is the most useful, and I know that this subject in your hands will help enormously in instructing in a decidedly difficult branch of gymnastic work."

AMHERST, MASS.

E. HITCHCOCK, M.D., Amherst College, Pratt Gymnasium: "In physical education, as in many other branches of mental and bodily training, there are some advanced branches which are adapted to the few and not the many. Acrobatic work is one of these. But it should be controlled, cultivated, and made good use of, like the other work, which may be undertaken by anybody. It is a pleasure to know that a manual on this subject is to be prepared and furnished for our use by one so capable to issue the book as is Dr. Gwathmey, of Vanderbilt University. We shall wait impatiently to get hold of it."

AMHERST, MASS.

R. F. NELLIGAN, Instructor, Amherst College: "For sound men and boys tumbling is one of the best and most exhilarating of exercises, when practised under favorable conditions. Of course tumbling on a brick sidewalk differs from tumbling on

a hair-stuffed mattress, with the aid of the safety appliances while learning. It has been said that one can not learn after reaching maturity. This is not so, as many first-class tumblers did not commence until after reaching twenty-five. At the age of thirty-two I was induced to take up tumbling under Dr. Gwathmey, and, with the aid of his safety appliances, succeeded in learning to do fairly well over fifty different movements and combinations."

KANSAS CITY, MO.

CARL BETZ, Supervisor Music and Physical Training, Public Schools: "Your book, 'Tumbling for Amateurs,' which you have announced, will undoubtedly be hailed with delight by thousands of young American men who seek and find recreation in this particular kind of exercise. The photographs that will illuminate the pages of your book will be of intrinsic value to amateurs, who usually have no expert teacher to explain to them minutely each step of the exercise. If the element of danger in tumbling is greater than is consistent with the needs of physical education, as some claim it is, then your book, giving such minute instructions, and photographs of the body passing through the different stages of each exercise, cannot fail to reduce that danger to a degree which every interesting gymnastic exercise must contain. I therefore cheerfully recommend your interesting and timely little book to all who may wish to learn and practice the delightful pastime of *tumbling*."

ST LOUIS, MO.

WILLIAM A. STECHER, Secretary Technical Committee, Nord Amerikanischer Turnerbund: "I think that your undertaking is a very commendable one; for I believe that the greater the

control a person has over his body—and tumbling undoubtedly increases this—the better off he is. I wish you all success."

MILWAUKEE, WIS.

FRANK PFISTER, M.D., Editor *Mind and Body*: "Received your favor of the 7th inst., and congratulate you upon the idea of publishing a manual on tumbling, for nothing commendable exists in that line."

SPRINGFIELD, MASS.

LUTHER GULICK, M.D. ("History of Physical Training"), International Y. M. C. A. Training-School: "Your letter of the 7th is at hand, with the excellent cuts that were inclosed. You ought not to charge less than one dollar for the book. I do not know but what you could get more. I shall be very glad to purchase a copy of the book as soon as it is published. Please let me know."

CHICAGO, ILL.

G. W. EHLE, Physical Director of the Y. M. C. A. of Chicago, Central Department: "There is a necessity for a good book on tumbling, as there is none now in print to my knowledge; and I believe that such a book would meet with a very hearty reception by physical directors and by others who are interested."

BOSTON, MASS.

ROBERT J. ROBERTS: "I approve your idea of getting out such a book as you speak of. I would keep out the dangerous exercises; or, if you put them in, hedge them in so that amateurs will not use them. *There is no kind of physical work that will so harmoniously develop every part of the body as ground tumbling.*"

## *Tumbling for Amateurs.*

**T**EACHERS, especially in public gymnasia, where the attendance is voluntary, will welcome anything that will make the exercises more attractive and do away, as far as possible, with the idea of "work."

Tumbling should form a part of every system taught in our public gymnasia, and to those who have not heretofore studied the subject we submit the following propositions:

1. Tumbling will develop, harmoniously, the whole body *without the aid of any apparatus whatever, or any other set of exercises*. A careful study of the physiques of *professional tumblers* will verify this statement.

2. The exercises can be easily graded, so that there will be absolutely no danger in going from primary to advanced tumbling. In *individual tumbling*, the body being always close to the ground, the chances of a

break or a sprain are reduced to a minimum; and in comparison with other forms of exercise, such as boxing, wrestling, or apparatus work, the percentage of accidents will be found to compare most favorably.

3. Friends can enter into the keenest competition, urging each other to the highest possible development and perfection, and never experience the inconveniences of black eyes and bruises—the usual resultants of combative exercises.

4. At least 50 per cent of those entering the gymnasium can participate in some form of tumbling, either individual or combination; the greatest progress for adults being attained in the latter, where two or more men exercise together.

5. No expensive appliances or apparatus is necessary in introducing or teaching tumbling, the mats absolutely essential in any gymnasium being all-sufficient for ordinary class work. But if tumbling is to be made

a *feature*, then a large mat, 15 feet long by 6 feet wide and 2 feet high and stuffed with straw or hay, will be found a very attractive addition, as it can be used to great advantage with any gymnastic apparatus.

6. For boys, tumbling is the most *natural* exercise in the world, as they are easily interested and held in this form of exercise when a dumb-bell drill would run them away. Besides the development, they get co-ordination and control to a remarkable extent, which will be invaluable to them in any exercise that they may engage in later on.

7. A tumbler easily adapts himself to all gymnastic apparatus, and will usually be found to be more graceful than an exclusive apparatus worker. If teachers who have never used tumbling would introduce it, it would do away, in a great measure, with that *stiffness* which is so distasteful to many; and, if as *systematically taught* as their apparatus work, would change the *product* of their gymnasiums from the top-heavy type to a symmetrical whole.

8. It is the one *universal exercise* used by the whole human family from the earliest times to the dawn of the twentieth century, and will continue in use as long as the world lasts. The millions of babies tumbling

in the world to-day, learning their first physical exercise—to walk—reminds us that we have all taken a few lessons, at least, in this most useful art.

9. Tumbling is of more importance than all other exercises, as, *volens nolens*, we all take a tumble occasionally; and if we know *how* to tumble—so as to land on our feet or keep from falling—it will give us a confidence that we would not otherwise have. There seems to be a very prevalent idea that if a man has never learned how to tumble before he is twenty one he had just as well not start. On the contrary, if a person has never taken gymnastic exercises, he can make greater advancement in tumbling than in almost any other form of exercise, if his physique permits of tumbling at all. After acquiring a few of the exercises, tumbling can be practiced with pleasure and satisfaction on any lawn, sand-bar, or sawdust pile, and in this way will prove of more practical utility than almost any form of gymnastics.

A word of caution might not be out of place: In teaching adults (where a large mat, such as already described, is not used) the small mats cannot be piled too high to prevent jars and *shocking surprises*. If pupils suffer from dizziness, excuse them from these ex-

ercises. In combination tumbling the belt, or lunger, must always be put on for a first trial, however simple the exercise may appear.

A word in regard to the engravings: Some of them have a rather ridiculous effect, from the fact that the participants appear to have entirely changed their costumes *before* the completion of the exercise. This is due to the fact that many dozens of the plates were destroyed—nearly two-thirds of them being instantaneous—and that they were taken at different times and places and with different individuals. From an artistic standpoint, this is to be regretted. If they clearly

illustrate the exercises, the author will feel compensated for his trouble.

In the following pages I have depended almost entirely upon the illustrations, and have intentionally made the text as short and concise as possible—following the plan of Messrs. Hitchcock and Nelligan's most excellent work, "Wrestling." I am also indebted to Dr. William Anderson, of Yale University, for many valuable suggestions.

I intend to revise the book a year from date, and criticisms, pro and con, will be highly appreciated.

JAMES T. GWATHMEY.

Vanderbilt University, April, 1897.



## Primary Tumbling.



1. **The Forward Roll Over.** *Double up close,* and finish standing erect on toes. Figs. 1, 2, 3.



2. **The Forward Roll Over,** grasping toes throughout roll. Fig. 4.

3. **The Forward Roll Over,** grasping toes, legs crossed. Fig. 5.



4. **The Forward Roll Over,** arms between legs, hands on outside of ankles. Fig. 6.







5. **The Forward Roll Over**, arms between legs, hands clasped. Fig. 7.

6. **The Forward Roll Over**, arms at side horizontal throughout exercise. Do not touch mat with hands. Commence standing on right foot, swing the left to front to get momentum, and then under and back as you roll over to erect position on right foot again. Figs. 8, 9, 10, 11.



7. **The Forward Roll Over**. Same as Fig. 7, starting on left foot.

8. **The Forward Roll Over**. To lying

9. **The Forward Roll Over**, with half-downward.

10. **The Forward Roll Over**, feet spread,

11. **The Forward Roll Over**, position.



No. 6, start-

flat on back.

turn to face

arms in different positions.

**Roll Over**, arms folded, come to standing



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12. **The Backward Roll Over**. Repeat *all* of the foregoing *backwards*.

13. **A Dive** is a jump for height or distance, alighting on hands. Bend arms, duck head, and forward roll over. *Never strike middle of back first*. Commence with the forward roll over (Figs. 1, 2, 3), and gradually increase the height or distance until you can finally go your full limit without jolting or bumping yourself in the least. The rise is usually from both feet.

14. **Dive (1) for distance, (2) for height.**





15. **Combine the Forward Roll Over and Dive for** (1) **Distance,** (2) **for Height.**
16. **Fall Forward without Bending at Hips,** with knees stiff; catch on hands.
17. **Fall Backward,** stiff (stage fall).
18. **Fall Forward,** with chest out, and back arched. Turn head to right or left. Continue rolling, and push over to feet.
19. **Combine Front and Back Roll Over,** making continuous movement by crossing legs *as you finish the front roll.*
20. **Combine Back and Front Roll Over.**
21. **Combine Front, Back, and Front Roll Over** in quick succession.
22. **Combine Back, Front, and Back Roll Over** in quick succession.
23. **Roll Over Backward,** straightening body as you go over to lying-down position on stomach.
24. Lie on back, arms at side horizontal. Bring right hand close to side, turn head to right, and at *same* time bend at waist, bringing feet over head, then snap over quickly on to stomach, *facing* in opposite direction.
25. Hold left toe with right hand and jump right leg through.
26. Hold right toe with left hand and jump left leg through.
27. Hold stick in hands, jump through and back in order to learn to *double up close* for back or forward somersault. Fig. 12.
28. **Head Stand.** Place the hands in line on the mat, and the head between and about 10 inches in advance, forming an equilateral triangle; throw feet over head, with knees together and toes pointed upward; hold 30 seconds, then forward roll over.

29. **Hand Stand.** Beginners can best learn this by placing the hands on floor  $1\frac{1}{2}$  feet from wall and throwing the feet up against the wall. In practising hand stands on the floor, come down easy to feet the same way you threw into position, or pick up right or left hand as you overbalance and come to feet, or bend arms and roll over. Fig. 13.

30. **Head Stand.** Push up into hand stand without losing balance.

31. **Forward Roll Over into Head Stand.**

32. **Backward Roll Over into Head Stand.**

N. B.—Do *not* compete in holding head stands for time. Caution boys especially against this foolish practice.

33. **“Bucking Broncho.”** Throw almost into hand stand, bend knees and push up hard with hands, throwing head and shoulders up and back, *snap* feet to floor and come to standing position; jump to hands again and repeat.

34. **The Forward Roll Over into Hand Stand.**

35. **The Backward Roll Over into Hand Stand.**

36. Body stiff, face downward, resting on hands and feet, without raising either hand, jump between hands to lying-down position on back.

37. **Roll Down.** From hand stand incline head and shoulders forward, bend arms until chest touches, keep back arched, roll to lying-down position on mat, then to knees, and jump to feet immediately.

38. **Head Stand and Roll Down.**





39. Lie on back, raise feet up in air, place the hands just above the hips, with elbows, upper arms and shoulders touching mat, bend and straighten knees with a snap, thus progressing backward on shoulders.

40. **Head Spring.** Place head (touching upper part of forehead, not the back of head) between and in advance of hands on mat. As you snap feet over shove hard from hands and head. Alight in standing position, with knees bent. Fig. 14.

N. B.—Always place head on mat easily, thus obviating jars.

- 41. Same as No. 40, only alight—
- 42. Same as No. 40, without
- 43. Repeat No. 40, alight on
- 44. Repeat No. 40, alight on left
- 45. **Twisting Head Spring.** body to right or left, and land fa-



ing knees stiff and back arched.  
hands.  
right foot, and hold balance.

46. **The Balance Head Spring.** From head stand bend cute head spring without touching feet to floor.

- 47. Same as No. 46, but with neck spring.
- 48. **Neck Spring** (snap up). Place back of head and mat between hands. Same movement as head spring.

49. **Neck Spring.** Hands on front of thighs, shove hard with hands and head as you snap feet over. Fig. 16.

50. **Neck Spring** with arms folded. Fig. 17.



foot, and hold balance.

Same as No. 40, only twist the  
cing starting position.  
at waist, with knees stiff, exe-

neck on  
Fig. 15.





51. **Hand Spring.** Jump from either foot on to hands. Keep the arms perfectly stiff, and as the feet are thrown quickly over (chest and stomach well out and head back) shove hard from hands and alight on feet with bent knees. Figs. 18, 20.

52. **Leaping Hand Spring.** Jump from both feet on to hands. Movement same as in No. 51. Touch hands lightly as you go over. Figs. 19, 20.

53. Same as No. 51, only alight on balls of feet, with knees stiff, back arched, and perfectly erect position.



54. **The Cart-wheel.** Either right or left side leading, keep the head back, chest and stomach well out, hands and feet as well separated as possible. If right side leads, place right hand on floor following with left, then left foot followed by right. Continue movement by keeping in a straight line.

55. **Round Off.** Start as in cart-wheel, but hand spring movement, turn, snap the feet down quickly, and alight facing starting-point.

56. Roll over backward to back of neck,

57. Jump, turn in air, alight facing start-

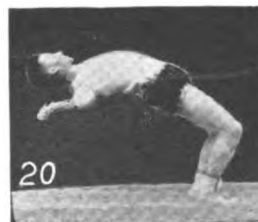
58. Combine hand stand (Fig. 13) and

59. A row of hand stands and snap ups in

60. Combine two, three, or four head

61. Combine two, three, or four neck

62. **Alternate Head and Neck Springs**



and snap up.

ing-point, and back roll over.

snap up (Fig. 15).

quick succession.

springs in quick succession.

springs in quick succession.

in quick succession.

63. **Hand Walk.** Throw up into hand stand, and as you overbalance take a step forward with either right or left hand, and continue.

64. **Hand Walk Forward.**

65. **Hand Walk Backward.**

66. **Hand Walk in Circle.**

67. Hand walk forward, turn, and come back to starting-point.

68. Hand walk forward, touching chest at each step.

69. Hand walk, forward roll into hand stand, and repeat.

70. Two head springs into hand stand, roll down (37), pull through (36), and snap up (48).

71. Dive, back roll into hand stand, to neck, and snap up.

The combination of the foregoing movements are infinite, and the inventive teacher can repeat the same exercises in a different order or combination, making new movements out of the old ones, and thus keeping up the interest and enthusiasm from day to day. Select ten or twelve movements from the preceding list, and give as a drill for *one* lesson. Change the order, and repeat for next lesson; but give an entirely different drill for third lesson. As the pupils advance let them put in their own combinations at the end of each lesson.



## Advanced Tumbling.

NOTE.—Advanced tumbling should *never* be attempted alone the *first* time. A belt, with an assistant on either side, is the usual method of practising these exercises. Do not hurry. Practise one movement day after day *until you are proficient*, remembering that a *difficult movement once mastered is as simple as any other*, and that after learning you can execute them with ease and impunity. It is folly, not bravery, to attempt movements by yourself that you are not *sure* of; and *you* are the one to decide this, not others.

1. **Back Somersault.** From standing position, hands by the side, spring straight up (do not bend forward as you stoop for spring), throwing hands high above head; throw the head back, and, grasping the knees, pull them well in at the highest point of jump, at the same time kicking the feet forward; let out, and come down straight.  
Fig. 21.

2. From a hand stand snap to feet and a back somersault.
3. Round off and a back somersault.
4. Two, three, or four back somersaults in a swing.
5. Forward run and back somersault.
6. Cart-wheel, round off, and back.

7. **Front Somersault.** Run forward, and as you run *increase your speed*; spring from either right or left foot a distance of from 8 to 12 feet, landing on the balls of both feet, hands by the side (Fig. 70), chest out, and head



erect (not forward); jump for height, lifting the body by a quick upward swing of the arms, and at the highest point of the jump throw head and hands down with a snap, grasp the legs a short distance below the knees and pull in close and hard, doubling up close, then straighten out quickly and alight on balls of feet in erect position. Fig. 22.



NOTE.-- Make the *jump for height* the *fastest* part of the run, and as you jump *increase your speed* so as to get the *greatest height attainable*, double into as *small a ball as possible*, and then let out and come down *perfectly straight*, and you have the ideal somersault.

8. **Standing Front Somersault.** Hands by the sides (Fig. 70), spring *straight upward*, lifting with arms and shoulders, and as you reach the limit of your height throw head and hands forward with a *snap*, grasping ankles and pulling in close; then let out again quickly.

9. **The Layout Front Somersault.** (Done principally from the spring-board, although a few exceptionally fine jumpers can do it from the mat.) As you rise for the somersault throw the hands well out in front, with arms perfectly stiff, head up, chest out; hold this position for a second, then make a quick, close double as in the ordinary somersault; let out and come down straight.

10. **One Foot Front.** Stand on one foot and execute regular somersault.

11. **Knee Front.** From kneeling position raise to feet, regular somersault.

12. **Head Spring and Front Somersault.**

13. **Hand Spring and Front Somersault.**

14. **Two Front Somersaults in Quick Succession.**

N. B.-- A *double* somersault should never be attempted by amateurs.

15. **Back Hand Spring, or "Flip"** (the most difficult of all tumbling exercises). From standing position raise the heels, bend the knees, let the hands go back past sides, keep the body, from waist up, straight, stoop until hands





can nearly touch the mat; from this position throw the hands swiftly forward and upward, at the same time raise on toes (but do not jump at all), arching the back well in, head and arms thrown as far back as possible; pull the body over by momentum of shoulders, body, and head. Figs. 23, 24, 25.

16. **Hand Stand, Snap to Feet, and Flip.**

17. **Hand Stand, Snap to Feet, Flip, and Back.**

18. **A Row of Flips; Two or More in Quick Succession.**

19. **Alternate Flips and Backs.**

20. **Round Off and Flip.**

21. **Round Off, Flip, and Back.**

22. **Twisting Flip.** As the hands hit, twist the body and alight facing in opposite direction from which you started.

23. **A Series of Twisting Flips.** The hands strike *about* the same place each time.

24. **Twisting Back.** Regular movement, only throw head hard to right or left and alight facing opposite direction from which you started. Fig. 74.

25. **Hand Stand, Snap to Feet, and Twisting Flip.**

26. **Round Off and Twisting Back.**

27. **Running Twisting Forward Somersault.** Regular movement, only throw head *hard* to right or left, and alight facing direction from which you started.

28. **Running Side Somersault.** Alight sideways and turn sideways.

Devise, invent, and make up your own combinations.

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## Combination Tumbling.

By this is meant a series of combinations by two or more men exercising together. In these exercises a belt must always be put on for the *first* trial (or assistants stand on either side), however simple the exercises may appear, and must be kept on until the exercise is thoroughly mastered, which would mean that you have each other's *time* and act in unison. Work with the same men all the time; beware of strangers, even if both of you understand the exercises. Do not be *afraid* to use caution and common sense. Only combinations that can be mastered by business men with limited time have been put in; the more dangerous ones, requiring much time, being intentionally omitted. In all of the following exercises No. 1 is the heaviest or "bottom" man; No. 2, "middle" man; and No. 3, "top" man (or lightest man).

### ELEPHANT WALK.

1. Stand facing each other. No. 2 puts hands on No. 1's

shoulders, springs up and throws legs around No. 1's waist, then leans backward and drops between No. 1's legs, who then bends forward and places hands on floor, keeping knees stiff; No. 2 places hands on No. 1's heels and straightens arms; No. 1 then walks off (also with a small boy on top), or untwists legs and both do a roll over. Fig. 26.



### WALK OFF.

2. No. 2 makes hand stand, feet well apart; No. 1 steps in, letting legs rest on hips, and grasps heels of No. 2, who straightens himself, arms folded; No. 1 then walks off with him. For first part of movement see Fig. 96.

### HAND STAND ROLL.

3. No. 1 stands erect; No. 2 makes hand stand close to No. 1's heels, his legs dropping over No. 1's shoulders, who grasps No. 2's ankles, bends forward, quickly pulling No. 2 over to a standing position; No. 1 now does a



hand stand and is thrown over by No. 2. *Repeat in quick succession.* For first part of movement see Fig. 99.

#### DOUBLE ROLL.

4. No. 1 lies on back, legs raised to vertical, with knees slightly bent, and grasps No. 2's ankles, who stands close to his head and also grasps No. 1's ankles; No. 2 dives forward, held back slightly by No. 1 to break his fall; continue roll. Fig. 27.

5. Repeat No. 4 backward.

#### HANDS BETWEEN LEGS AND PULL OVER.

6. Facing same direction, No. 2 leans forward and places his arms



between his own legs; his wrists are grasped by No. 1, who lifts (as No. 2 jumps) and throws him over to his feet. Figs. 28, 29.

#### BACK TO BACK AND OVER.

7. Stand back to back, arms extended vertically, grasp each other's hands, heads turned to opposite sides; No. 2 springs and No. 1 pulls No. 2 over shoulders to feet. No. 2 must never relax muscles on this exercise. Figs. 30, 31.

#### BALANCE ON HEAD AND THROW OVER.

8. Facing in same direction, No. 1 grasps





No. 2 on either side of belt, and No. 2 grasps No. 1's wrists and springs up, assisted by No. 1 lifting, and comes to balance position on No. 1's head; No. 2 then throws his head back, pulls legs up and snaps over to feet, assisted by a slight push from No. 1. Figs. 32, 33.

#### THROW OVER HEAD.



9. Same as No. 8, only in quicker time. No. 2 does not touch head of No. 1, who holds his arms perfectly stiff, and throws No. 2 over his head in *one* movement. Fig. 34.

10. Leap-frog, roll over, and continue.



#### STRADDLE VAULT OVER.

11. No. 1 places one hand under No. 2's crotch; No. 2 places both hands on No. 1's head and vaults over.

Figs. 35, 36.

#### STRADDLE OVER FROM FLOOR.

12 a. No. 2 lies down and No. 1 places foot close up and between No. 2's legs and grasps both hands of No. 2, who springs up and straddle vaults over, while No. 1 pulls, then pushes his hands to horizontal with  $\frac{1}{4}$  turn of body.

#### STRADDLE OVER AND HAND SPRING.

12 b. Position and first part of



movement same as No. 12 *a*, only No. 1 grasps No. 2's wrists; as No. 2 passes over No. 1's head, he doubles up close and does a hand spring from No. 1's hands.

### LOW ARM HAND STAND.

13. No. 1 lies on back, feet apart; No.



2 steps in and, bending forward, they place hands on each other's shoulders; No. 2 does hand stand, No. 1 holding him in position. Fig. 37.

### HIGH ARM HAND STAND.

14. Facing each other, hands on shoulders, No. 2 jumps up, crossing

feet behind back of No. 1, who leans over and immediately comes to erect position; No. 2 pushing up into high arm stand. Figs. 38, 39, 40.



### HIGH ARM HAND STAND.

15. Repeat No. 13. No. 2 is let down easily by No. 1, and rolls over, retaining hold on each other's shoulders, to lying down position on backs; No. 1 does a quick back roll,

and lands on feet between No. 2's spread legs, and immediately pulls No. 2 (who assists by jumping) to high hand to shoulder stand in air. Fig. 40.

16. From position of Fig. 39, No. 1 throws No. 2 hand spring over head.

### PULL UP FROM FLOOR.

17. Facing each other, and six feet apart, No. 2 dives half-way over, keeping palms of hands on





mat by side of head, legs vertical; No. 1 grasps ankles and gives him a quick pull up and throw away; No. 2 assisting by pushing with his hands and head, and coming to standing position facing No. 1. Figs. 41, 42.

18. Same as No. 17, only both face same direction; No. 2 does forward roll; No. 1 pulls No. 2 to feet.

#### BACK FROM FOREARMS.

19. No. 1 stands body straight,



cuts close, and does a high forward somersault, coming down straight. Figs. 45, 46.

#### MOUNT TO SHOULDERS.

21. No. 1 facing front, No. 2 to left of No. 1 and right face; No. 1 bends knees slightly, feet well apart, holds right hand over head, palm up,



feet spread, knees bent, and, interlacing fingers, holds forearms horizontal; No. 2 places hands on No. 1's shoulders, jumps to forearms, and back somersaults off. Figs. 43, 44.

#### ONE LEG FORWARD.

20. Facing same direction, one foot apart, No. 2 bends knee and places right or left ankle in No. 1's hands; No. 2 jumps directly up (assisted by No. 1),



and grasps No. 2's right hand, also No. 2's left with his left hand; No. 2 places left foot on No. 1's left thigh; as each pulls hard with right hand, No. 2 jumps and places his right foot on No. 1's right shoulder and left on left shoulder, lets go of No. 1's hands and stands erect, heels together on balls of feet, knees straight, and legs pressing hard on No. 1's head. Figs. 47, 48.

#### **MOUNT TO SHOULDER WITHOUT HANDS.**

22. Position same as in No. 21, only No. 1 folds arms; and No. 2, taking a short run, mounts to shoulders without using hands.

#### **LIFT TO SHOULDER.**

23. Facing in same direction, No. 1 grasps No. 2's hands and lifts to shoulders, No. 2 doubling up close in order to bring



as possible; No. 2 jumps to feet, and both do a forward roll over.

#### **BACK FROM SHOUL- DERS.**

26. Mount as in No. 23; as No. 2 jumps, No. 1 assists by lifting hard. Fig. 49.

his feet to No. 1's shoulders. For first part of movement see Fig. 57.

#### **TO DISMOUNT.**

24. No. 1 reaches up and grasps hands of No. 2, who jumps down between.

25. Both lean forward as far





#### FRONT FROM SHOULDERS.

27. Mount as in No. 23; as No. 2 jumps, No. 1 assists by lifting hard. Fig. 50.

#### CROTCH BACK.

28. Facing each other, No. 1 places hands under No. 2's crotch, and lifts hard; No. 2



doing a regular back somersault. Figs. 51, 52.

#### CROTCH FRONT.

29. Facing in same direction, No. 1 grasps No. 2 by seat and lifts hard; No. 2 doing a regular front somersault. Fig. 53.

#### PULL TO SHOULDERS.

30. Facing each other, No. 2 leans forward, putting his hands between his own spread legs; No. 1 leans over and grasps No. 2's wrists; a quick pull lands No. 2 on his shoulders *straddle seat*. He then places his hands under thighs of No. 2, who, in turn, does a back somersault off, assisted by a slight shove from No. 1. Fig. 54.

31. Same as No. 30, only No. 2 puts his feet on No. 1's shoulders. Back or forward somersault off.





### **PULL TO SHOULDERS AND HAND SPRING OVER.**

32. Position same as in Fig. 54. No. 1 grasps No. 2's wrists, pulls him up, and places his hands on his shoulders; No. 2 continues movement by hand spring over.

### **NECK LIFT.**

33. Facing same way, No. 1 puts head between legs of No. 2, who leans back quickly, and No. 1 straightens up and tosses him over his head; No. 2 doing back somersault movement. Figs. 55, 56.

### **TWISTING BACK OVER HEAD.**

34. Same as No. 33, only No. 2 throws head quickly to right or left, and alights with back to No. 1.

### **DOUBLE DIVE.**

35. Facing, and 6 feet apart, No. 1 dives forward, and as his head rests on mat—that is, half-way over—with feet well apart, No. 2 dives over, comes to feet quickly; each turns, and repeat movement.



### **TRIPLE DIVE.**

36. No. 1 in middle and facing No. 2, No. 3 back of No. 1 and facing in same direction; No. 1 dives forward and No. 2 dives over No. 1 (as in No. 35); No. 3 immediately dives over No. 2, and No. 1 has turned and now dives over No. 3; No. 2 again dives over No. 1, and repeat as before.



### **LIFT AWAY HAND SPRING.**

37. Facing in same direction, No. 1 grasps No. 2's hands and lifts him to standing position on shoulders; No. 2 jumps to mat between hands, and, without letting go, *immediately* jumps straight up, doubling up as he goes, stiffening arms and pressing hard against hands of No. 1, who pushes up, straightening arms; No. 2 continues on





through, and does a hand spring from No. 1's hands. Figs. 57, 58.

### THREE JUMPS AND LIFT AWAY HAND SPRING.

38. Position same as Fig. 57, only No. 1 rests right knee on mat; No. 2 jumps over No. 1's right arm, and *immediately* back to first position, in same manner

over left arm, then over head and back again; No. 1 now rises to feet immediately, No. 2 doing lift away hand spring as in No. 37.

39. Same as No. 37, only go straight from mat to hand spring without going to shoulders.

### ONE LEG BACK.

40. No. 2 places right leg in No. 1's hands, leg horizontal, knee stiff; as No. 2 jumps and presses down with right leg No.



1 lifts hard, throwing him a back somersault. Figs. 59, 60.

### LAY OUT BACK.

41. No. 1 interlaces fingers, palms up, and stoops well down, feet spread; No. 2 places hands on shoulders (also without placing hands on shoulders)

and right foot in his hands, jumps, straightening right leg, and does a hollow back somersault, No. 1 lifting up hard. Figs. 61, 62.

### LAY OUT BACK.

42. Same as No. 41, only No. 1 places hands *behind back* instead of in front.





#### **GAINER LAY OUT BACK.**

43. Same as No. 41, only No. 2 turns over No. 1's head, alighting on opposite side from which he started.

#### **RUNNING FORWARD OVER HEAD.**

44. Position of No. 1 same as in No. 41; No. 2 runs, placing hands on No. 1's shoulders, and right foot in hands, jumps, straightening right leg, and goes for regular front somersault, alighting with back to No. 1.

#### **HAND SPRING TO SHOULDERS.**

45. Facing each other, No. 1 bends knees slightly; No. 2 takes a run and places hands on No. 1's knees and does a hand spring up, assisted by No. 1 grasp-



ing him by hips. Now quick roll back back from shoulders. Fig. 63.

#### **HIGH ARM HAND SPRING.**

46. No. 1 spreads feet and braces himself, bending knees and getting low; No. 2 takes a good run, places hands on shoulders of No. 1, who grasps his thighs and pushes him over for a hand spring. Fig. 64.

#### **PULL UP AND BACK FROM HANDS.**

47. Facing each other, and 6 feet apart, No. 2 rolls over and

pushes his feet well up under him; No. 1 steps in, grasping





No. 2's hands, pulls him up, and then pushes him up and away; No. 2, doubling up close, pushing hard with hands, throws head back and goes for back somersault. Figs. 65, 66.

#### BACK FROM BACK.

48. Facing in same direction, No. 1 bends over, placing hands on knees; No. 2 jumps to back, between shoulders, and does a back off, No. 1 lifting up hard. Figs. 68, 69.

#### FORWARD FROM BACK.

49. Facing each other, and about 20 feet apart, No. 1



sault, as from spring-board, No. 1 throwing hard. Fig. 70.

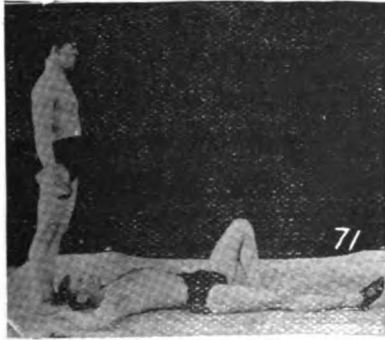
#### HIGH HAND-TO-HAND HAND STAND.

50. Lift to shoulders, as in No. 23. From position of Fig. 92, No. 2 throws into hand stand.

stoops over, placing hands on knees; No. 2 runs and jumps on No. 1's back, between shoulders, and immediately goes for front somersault.



## MOVEMENTS FROM POSITION ON FLOOR.



### BACK FROM HANDS.

51 *a.* No. 1 lying on back, hands close to head; No. 2 steps in No. 1's hands and does a back somersault, assisted by No. 1. Figs. 71, 72.

51 *b.* Same as No. 51, only No. 2 takes a few steps and jumps

in No. 1's hands, going for back immediately.

### BACK FROM HANDS.

52. No. 1 sits on floor, feet spread, and places hands in front, palms up; No. 2 steps in hands as before, and back out.

### FRONT FROM HANDS.

53. No. 2 places toes



in No. 1's hands, and does a regular front, assisted by No. 1. Fig. 73.

### TWISTING BACK FROM HANDS.

54. Same as No. 51, only No.

2 twists completely around by turning head to right or left as he goes over, and alights facing in opposite





jumps, and No. 1 pushes hard with feet and keeps his arms stiff, No. 2 pushing off with hands as he goes over. Figs. 75, 76.

#### **HAND SPRING FROM FEET.**

56. No. 2 grasps No. 1's ankles and

direction from which he started. Fig. 74.

#### **HAND SPRING OVER FEET.**

55. Clasp hands (do *not* interlace fingers), No. 1 placing feet on No. 2's body, No. 2



last part of movement. Figs. 77, 78.

#### **HAND SPRING FROM KNEES OVER HANDS.**

57. No. 2 runs and places hands on No. 1's knees and hand spring over, No. 1 shoving his shoulders, if necessary, as he goes over. Fig. 79.

places feet against his body, same as in No. 55; No. 2 shoves hard from ankles as he goes over, keeping arms stiff in last part of movement, No. 1 also holding his legs stiff in





### **HAND SPRING FROM HANDS OVER FEET.**

58. No. 2 steps in No. 1's hands and grasps the bottoms of feet of No. 1, who holds legs stiff while No. 2 does hand spring over. Figs. 80, 81.

### **BACK OVER FEET.**

59. Standing close to No. 1's shoulders, No. 2 sits on his



feet, leans back, and No. 1 pushes up hard; No. 2 doubles up for regular back. Figs. 82, 83.

### **TWISTING BACK OVER FEET.**

60. Same as No. 59, only No. 2 throws head quickly to right or left and alights with back to No. 1.





#### **SIDE OVER FEET.**

61. No. 2 stands by side of No. 1, and sits on feet. Rest of movement same as in No. 59. Figs. 84, 85.



#### **PITCH BACK FROM FEET.**

62. No. 2 sits on No. 1's feet and lays back; No. 1 kicks vigorously, No. 2 doing

regular back movement, and landing away from No. 1 on same side from which he started, not turning over No. 1 at all. Figs. 86, 87.

#### **BACK FROM FEET.**

63. No. 2 jumps on No. 1's feet, gets a perfect balance, and does a back off.





**MOUNT TO FEET AND  
BACK OFF.**

64. No. 1 lies on back, feet up, hands on outside of thighs; No. 2 places right foot on No.



1's left thigh, and presses inside of knee against No. 1's foot to steady himself. He then places left foot on No. 1's left foot and, *without touching hands*, comes to an erect position, then back somersault off. Figs. 88, 89.



**HAND SPRING FROM  
ELBOWS.**

65. Facing each other, No. 1 places hands on knees, bending over so that elbows project



above back; No. 2 runs, places hands on elbows, and hand spring over. Figs. 90, 91.



### **HAND SPRING FROM SHOULDERS.**

66. Mount to shoulders as in No. 23, then hand spring off. Figs. 92, 93.

### **PULL THROUGH TO FEET.**

67. Facing in same direction, No.

1 in front, No. 2 rolls to position on back, arms folded, and straightens knees so that his feet can be grasped by No. 1, who pulls him through quickly on to feet. Fig. 94.

## **MISCELLANEOUS.**

### **HAND SPRING OVER HEAD FROM HIPS.**

68. Facing each other, No. 1 places head between No. 2's legs and, grasping his knees, straightens up, throwing No. 2 over his head, who assists movement by placing his hands on No. 1's hips and pushing off hard, elbows stiff. Fig. 95.

### **JUMP TO SHOULDERS IN FOUR JUMPS.**

69. No. 1 does

a hand stand and roll down; No. 2 stands over him, feet on either side of thighs. No. 2 jumps on No. 1's back thighs and *immediately* jumps straight up, No. 1 coming to hands and knees, and No. 2 lands on No. 1's back just above hips; No. 2 again jumps straight up, and No. 1 comes to feet with hands on knees; No. 2 jumps up again, No. 1 comes to an erect position, and No. 2 lands on shoulders. Lean and roll over.



knees; No. 2 steps up immediately on his back and does two jumps to shoulders (lean and roll over, or back or forward somersault off).

#### **DOUBLE ROLL OVER BACK.**

71. Get into position as in No. 2; No. 1 presses hard on heels of No. 2, who comes up quickly and continues movement by rolling on over No. 1's back. Figs. 96, 97.

#### **HAND STAND AND DOUBLE OVER.**

72. No. 2 does a hand stand, and his ankles are grasped by No. 1, who stoops over quickly and assists No. 2 in turning the front somersault after leaving his shoulders, by pushing up hard on No. 2's ankles (called





a double—the body only  
turns once and a half)  
Figs. 98, 99, 100.

#### **TRIPLE ROLL.**

73. Same as No. 4, only  
three men grasp each  
each other's ankles and  
roll forward. Fig. 101.



#### BACK FROM THIGHS.

74. Facing each other, No. 1 squats, No. 2 placing hands on No. 1's shoulders; No. 2 jumps on his thighs, No. 1 catching him by calves; No. 2 does a back, assisted by No. 1 lifting and raising up. Fig. 102.

#### FRONT FROM THIGHS.

75. Facing in same direction, No. 1 stoops, and placing his head under No. 2's crotch lifts to shoulders, stoops and places No. 2's feet on his thighs (or No. 1 grasps No. 2's hands and lifts to thighs) and grasps his ankles; No. 2 straightens up and No. 1 pulls his



head out, and as No. 2 jumps for his forward No. 1 assists by raising up and lifting hard with hands. Fig. 103.

#### THE BASKET.

76. From this position either a back or front somersault can be easily thrown. No. 1 grasps his left wrist with right hand; No. 2, same; each then grasps the other's right wrist with left hand, thus forming basket. Fig. 104.





#### **KNEE THREE HIGH.**

77. No. 2 lifts No. 3 on shoulders, No. 1 then lifts No. 2 (and No. 3), No. 3 straightens up and leans forward, No. 2 pulls head out and holds No. 3 in position by ankles, No. 2 now raises up slightly and leans

forward and No. 1 pulls head out and, straightening up, completes the knee three high. No. 3 jumps down and rolls over, followed by No. 2 and No. 1 in quick succession. Figs. 105, 106, 107.





#### KNEE THREE HIGH AND FRONTS OFF.

78. Build three high as in No. 77. No. 3 does a front off, then No. 2, and No. 1 does a standing front. Fig. 108.



#### STILL MOUNT.

(For Three High.)

79. (The object is for No. 2 to mount to shoulders without moving No. 1 from his tracks. This should first be practiced a number of times on the floor, and then on top of the horse or buck. When prac-

ticing a three high the top mount should always have around his waist a belt suspended from the ceiling the first few trials.) Facing each other and clasping hands, No. 1 pulls No. 2 (who jumps) on his feet, hands above head; No. 2 places left hand on





top of No. 1's head, and clasps his right hand; No. 2 bends left leg and places his foot in No. 1's left hand; No. 1 pulls hard with right hand and lifts with left, No. 2 assisting himself by pressing hard on No. 1's head with left hand; No. 2 places right foot on No. 1's right shoulder and left foot on left



shoulder, and comes to an erect position. Figs. 109, 110, 111.

### THREE HIGH.

80. No. 2 mounts to No. 1's shoulders and grasps No. 3's hands (Fig. 112) and pulls him to top of No. 1's shoulders; No. 3 continues on up by still mount. Lean and fall. Fig. 113.



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