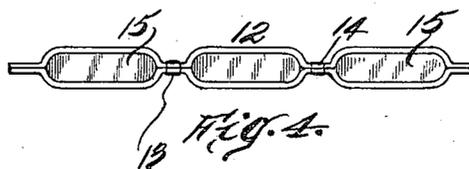
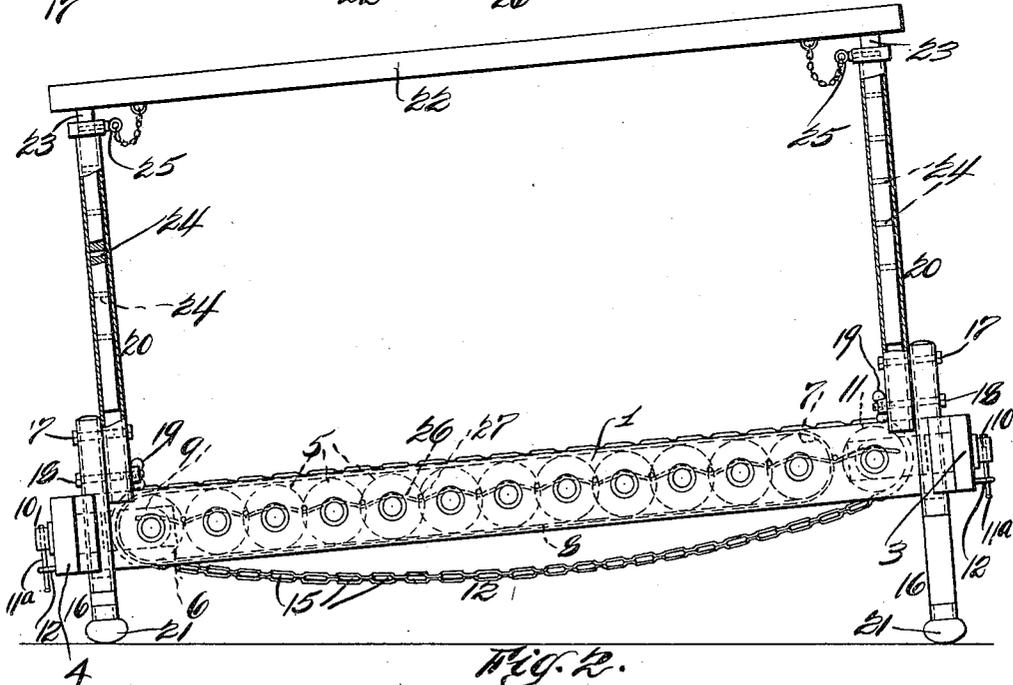
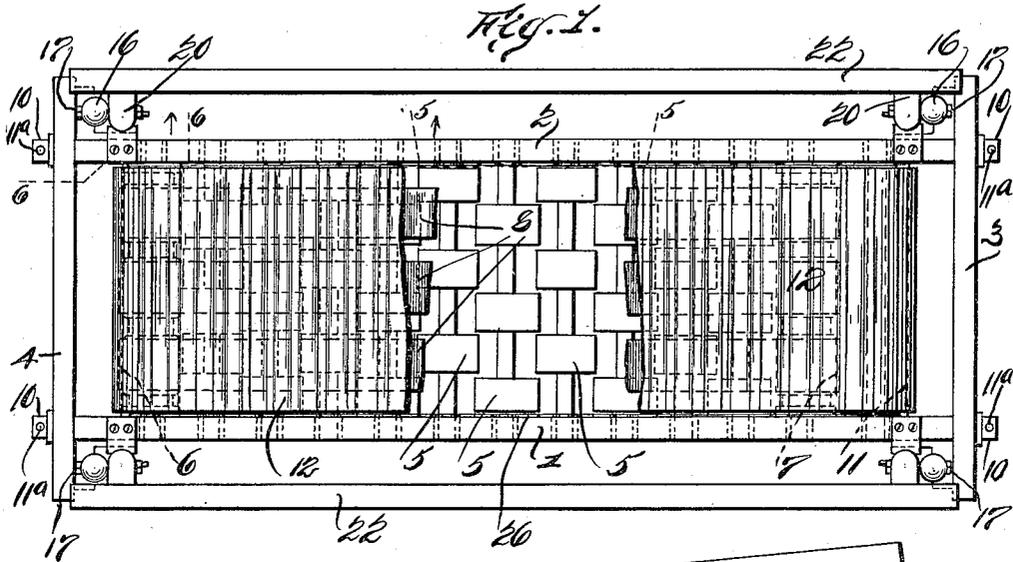


C. L. HAGEN.  
 TRAINING MACHINE.  
 APPLICATION FILED OCT. 20, 1911.

1,064,968.

Patented June 17, 1913.

2 SHEETS—SHEET 1.



Witnesses:  
 C. A. Jarvis  
 Mabel Dittenhofer

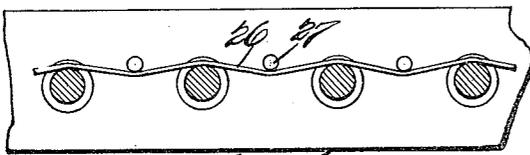
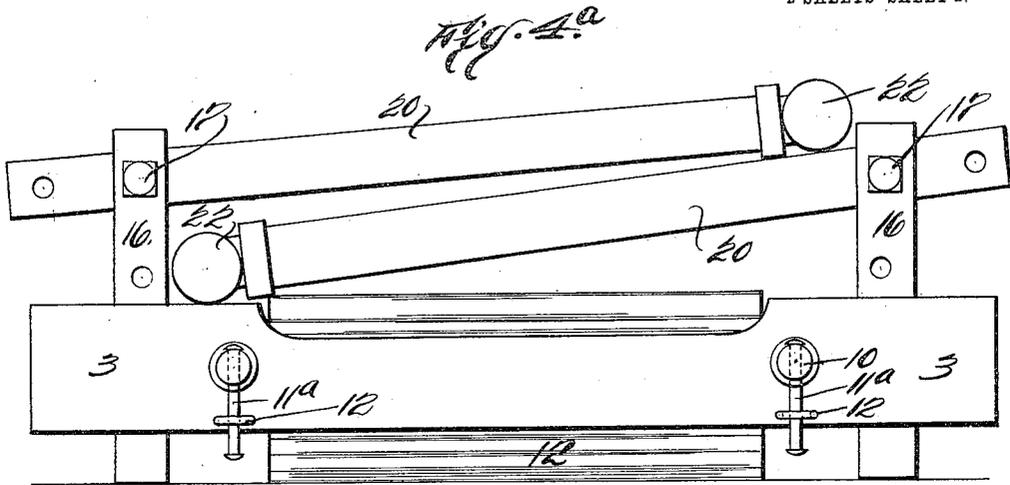
Inventor:  
 Claude L. Hagen  
 by Arthur Wright  
 attorney.

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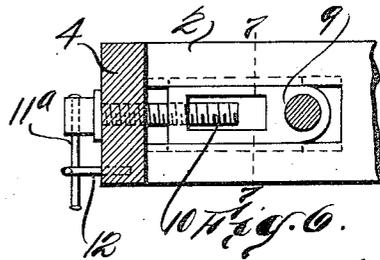
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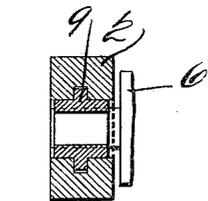
2 SHEETS-SHEET 2.



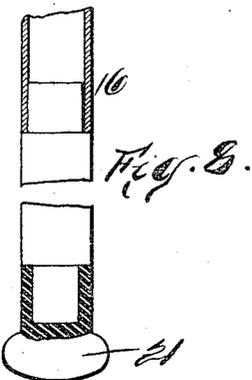
*Fig. 5.*



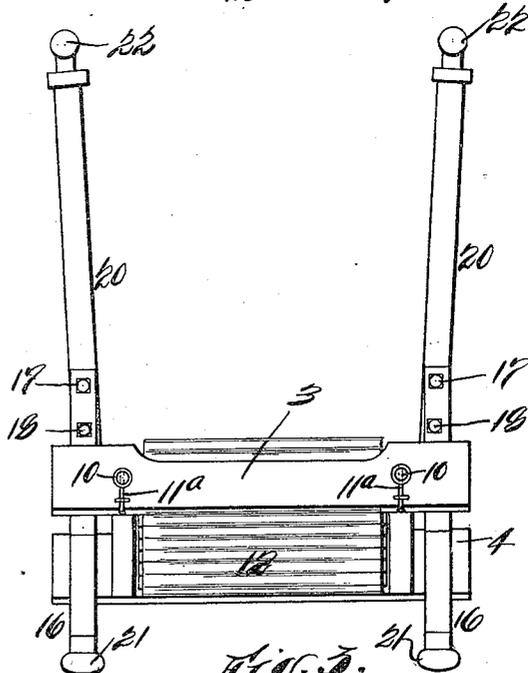
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Fig. 9.*

Witnesses  
 S. A. Jarvis  
 Mabel Dittenhofer

Inventor:  
 Claude Hagen  
 by Swann Wright, attorney

# UNITED STATES PATENT OFFICE.

CLAUDE LAURAINÉ HAGEN, OF NEW YORK, N. Y.

TRAINING-MACHINE.

1,064,968.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed October 20, 1911. Serial No. 655,827.

*To all whom it may concern:*

Be it known that I, CLAUDE LAURAINÉ HAGEN, a citizen of the United States, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in Training-Machines, of which the following is a clear, full, and exact description.

The object of my invention is to provide a new and improved training machine of the type described in my United States Letters Patent of August 9th 1904, Number 767,221.

Prime objects of the invention are to reduce the noise, make such machine adjustable for all sizes and heights of individuals, improve the toe grip or running tread of the device to make the same more comfortable to the user, and to improve in the construction, wear and durability of the moving parts, particularly the traveling belts.

The scope of my invention will be pointed out in the claims.

In carrying out the invention, I provide a rectangular frame, in the side pieces of which are mounted a series of rollers, such as shown in my aforesaid patent, over which rollers I prefer to mount distributing and wear take-up belts forming additional treads as well, and over such take-up belts I provide a tread or toe gripped belt of a peculiar construction, preferably formed with lateral slats joined by flexible hinged joints. I provide means for independently taking up the slack on the wear tread belts from the means used for taking up the slack in the toe gripped belt. In order to reduce the noise of the apparatus, I mount the rectangular frame on four posts, each terminating in a rubber or other elastic foot step. In order to secure a machine which will be adjustable, and have the narrowest possible tread when used for persons of various size, I provide inclined side posts having sliding therein or thereon supporting rods for side rails which as raised or lowered will also be brought more or less toward the center of the apparatus, whereby a short person with short arms will not have to reach as far out.

In order to make the device readily shippable, I provide such side posts with removable bolts to permit the same to be folded inwardly over the rectangular frame. In order to prevent noise, after considerable amount of wear on the machine, I provide

a resilient means for bearing on the rollers tending to hold the same down after wear.

In the accompanying drawings: Figure 1 is a top plan with parts broken away, showing my improved apparatus. Fig. 2 is a side elevation with parts of the adjusting tubes shown broken away. Fig. 3 is an end view of the apparatus looking from the forward end. Fig. 4 is a detailed side elevation enlarged of a portion of the toe gripped belt. Fig. 4<sup>a</sup> is an enlarged end view of the apparatus showing the same when collapsed for shipping. Fig. 5 is an enlarged fragmentary detail on the line 5—5 Fig. 1, showing the resilient take-up mechanism. Fig. 6 is a section on line 6—6 Fig. 1. Fig. 7 is a section on line 7—7 Fig. 6. Fig. 8 is a detail, partly in section, showing one of the leg or post members.

As shown in the drawings, my improved training device consists of side members 1, 2, joined at their ends by end members 3 and 4. In suitable bearings in the side members 1 and 2 I mount a series of rollers 5. The rollers consist of enlarged portions with intervening spaces. In the spaces of one portion the enlarged portion of an adjoining roller enters so as to provide a device such as described in my aforementioned United States Letters Patent.

In the frame I mount rollers 6 and 7, one at the extreme end and the other adjacent to a roller 11 to be hereinafter described, and I pass over such rollers 6 and 7 and above the rollers a series of belts, in this instance shown as three separated belts indicated by 8. They may be of fabric, rubber or reinforced fabric. The roller 7 near one end of the machine may be permanently mounted, but the roller 6 at the other end of the machine is mounted in a slide block 9 with which is engaged a screw 10 passing through the end member 4, and provided on the outside with a sliding locking pin 11<sup>a</sup>, which, as indicated in Fig. 6, normally engages a staple 12.

In order to take up the tension on the treadmill belts 8 the pin 11<sup>a</sup> is lifted from its staple, and the screw rotated to secure the take-up and then the pin is dropped back into position, so that the screw will be locked thereafter against vibration. A roller 11 is provided at the opposite end of the machine from the take-ups for the belts 8. The roller 11 is provided with similar take-up

mechanism to that described, and shown in Fig. 6.

Over and around one side of the roller 11 and over and around one side of the roller 6 I pass a toe gripped belt 12. The toe gripped belt is preferably formed of fabric, crash being an example, and is sewn together as indicated in Fig. 4 at 13 and 14, leaving chambered sections between the sewing, into which I pass slats of wood or other material 15.

To support the frame I provide posts 16, each secured at its upper end to a plate 17 attached to one of the side members 1 and 2. The post 16 projects above the side members, and each post is provided with two bolt holes, through which are passed bolts 17 and 18, bolt 18 being provided with a winged hand nut 19, so that it may be readily movable. The bolts 17 and 18 as well as being secured to the upper ends of the posts 16, also pass through tubular posts extending obliquely to the vertical. The tubular posts are indicated at 20. The bottom of each post 16 I supply with a resilient cushion 21 preferably of rubber. Side rails 22 are also provided, having at each of their ends solid rods 23 pierced by projections 24 at various distances, so that the side rails may be raised, and their solid rods 23 slid in the oblique tubular posts 20 to give a variation of height, and a variation at the same time of space between the side rails. A pin 25 may be used to hold the post 23 in its adjusted position, with regard to the hollow tubular post 20.

In view of the rollers and the wear resisting tread belts 8, there will be no tendency for the user to sink to any extent into the space holes between the rollers. There will be no tendency for the toe gripped belt to sink below a normal and substantially single plane. At the same time the user will get the benefit of all the rolls acting in unison, and all doing very little work at a given time, whereby great quietness and ease of operation may be secured. Any degree of extra stress on the belts desired may be secured by tightening up the belts 8. Both sets of belts in view of their adjustment at the opposite ends of the machine, may be adjusted independently. As the rolls wear their bearings in practice tending to cause a rattle and noise, I provide along the side members 1 and 2 a strong but small wire or flat spring 26 causing it to bear lightly on the top of each roll by means of pins 27 secured to the side frame, and bearing on the wire or flat spring at an intermediate position.

In carrying out this invention, details of construction may be varied from those shown, and yet the essence of the invention be retained; some parts might be employed without others, and new features

thereof might be combined with elements old in the art in diverse ways, although the herein described type is regarded as embodying substantial improvements over such modifications.

As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense. It is furthermore desired to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim as my invention:

1. The herein described training machine, comprising a frame, rollers therein, a treadmill belt passing over said rollers, a toe gripped belt superposed and inclosing the rollers and treadmill belt.

2. The herein described training machine, comprising a frame, rollers therein, a treadmill belt passing over said rollers, a toe gripped belt superposed and inclosing the rollers and treadmill belt, the treadmill belt passing around a roller intermediate of the ends of the apparatus, and take-up means for adjusting the tension on each belt independently of the other.

3. The herein described training machine, comprising a frame, rollers therein, a treadmill belt passing over said rollers, a toe gripped belt superposed and inclosing the rollers and treadmill belt, the treadmill belt passing around a roller intermediate of the ends of the apparatus, and take-up means for adjusting the tension on each belt independently of the other, and take-up mechanism consisting of guide blocks, a screw take-up means, a pin sliding in the head thereof, and a staple adapted to be interlocked by said pin.

4. The herein described training apparatus consisting of a frame, a treadmill apparatus, oblique posts extending upwardly and outwardly from said frame, adjustable side rails carried thereby adapted to be secured in adjustable positions on said oblique posts.

5. The herein described training apparatus consisting of a frame, a treadmill apparatus, and oblique posts extending upwardly and outwardly from said frame, adjustable posts and side rails carried thereby adapted to be secured in adjustable positions on said oblique posts, the bottom ends of said oblique posts having a removable bolt and a pivot bolt, whereby the oblique

posts may be turned inwardly one on the other.

6. The herein described training machine consisting of a frame, rolls therein, a toe gripped belt upon the rolls, consisting of at least two fabrics secured together at different distances, slats inserted between the fabric, between the points at which the fabric is secured together.

7. The herein described training apparatus consisting of a frame, rollers therein, a treadmill belt over said rollers, a resilient wire or flat spring take-up device secured to the frame and bearing upon the rollers.

8. The herein described training apparatus consisting of a frame, rollers therein, a treadmill belt over said rollers, a resilient wire or flat spring take-up device secured to the frame and bearing upon the rollers, said take-up device consisting of a resilient wire or flat spring bearing on the rollers with a pin bearing upon the wire or flat spring intermediate of the rollers.

Signed at New York city, New York.

CLAUDE LAURINE HAGEN.

Witnesses:

F. WARREN WRIGHT,  
FRED FRANCIS WEISS.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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