

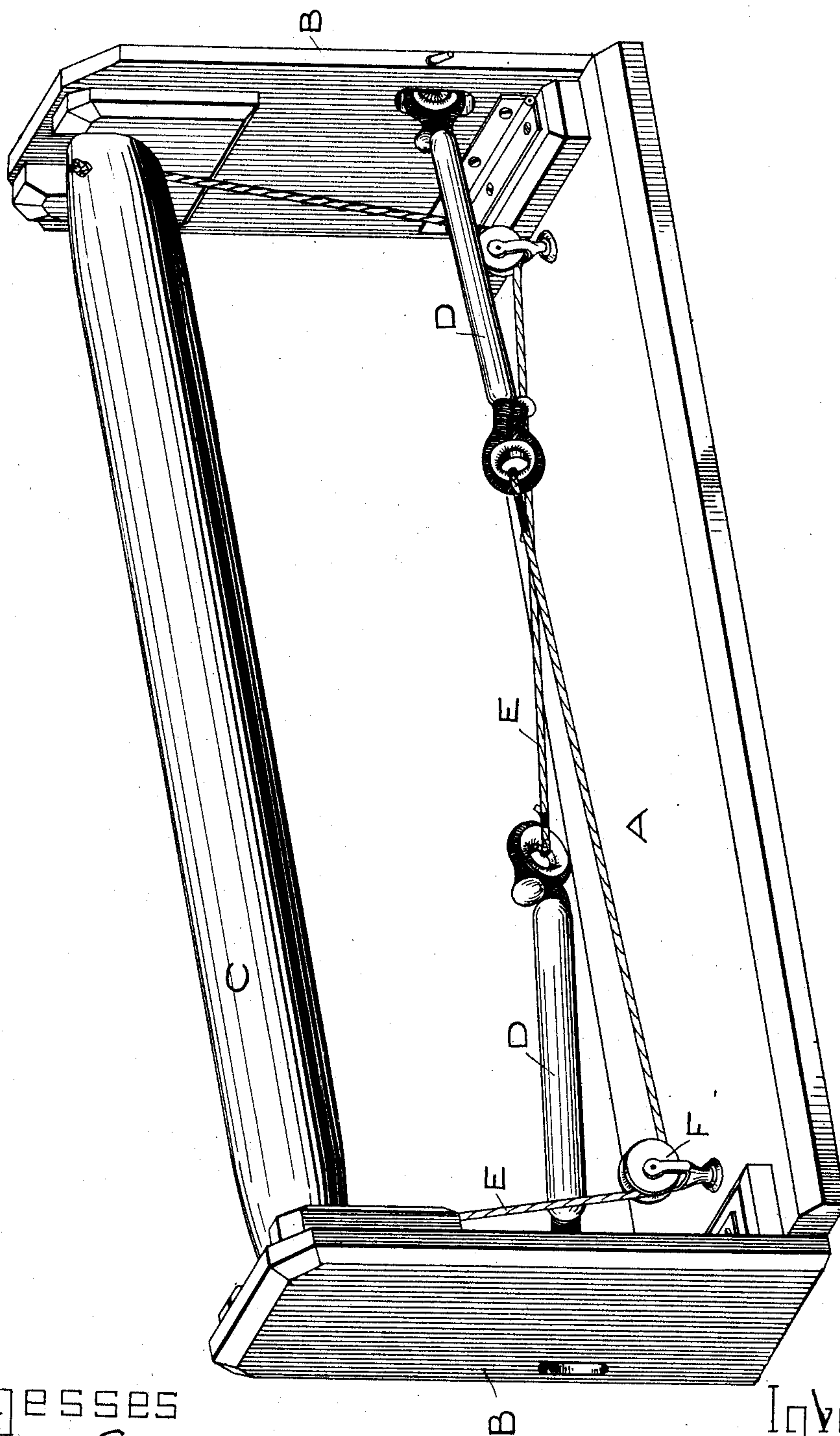
No. 621,429.

Patented Mar. 21, 1899.

W. L. RUSHTON.  
EXERCISING APPARATUS.

(Application filed Dec. 19, 1898.)

(No Model.)



Witnesses

Charles Severance  
Reed Clift

Inventor

William Lewis Rushton  
by his attorney  
Mason Smith Lawrence



# UNITED STATES PATENT OFFICE.

WILLIAM LOWES RUSHTON, OF LIVERPOOL, ENGLAND.

## EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 621,429, dated March 21, 1899.

Application filed December 19, 1898. Serial No. 699,742. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LOWES RUSHTON, a subject of the Queen of Great Britain, residing at Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in Exercising Apparatus, of which the following is a specification.

This invention has for its object to provide an apparatus for developing the strength and pliability in various muscles and ligaments in the fingers, hand, and wrist, especially those which are brought into use in performing on the pianoforte and many other instruments, and in operating type-writing machines and other key-actuated mechanisms, which apparatus shall be portable and occupy but a small compass.

The invention will be understood from the following description, reference being had to the accompanying drawing, which shows a general view of my apparatus.

Referring to the drawing, I provide a frame having a base A and two uprights B, hinged to the base, so that they may fall flat thereon or stand at right angles thereto. Mounted in these uprights there is a rotary bar C, removable therefrom. D are elastic springs or other resilient connection, which connect the bar C to the frame. These elastic springs D are coupled to the frame, as at d, and to the rotary bar C through the cords E, passing over guide-pulleys F. One or more of these springs can be used at a time, according to the amount of exertion desired, and thus the rotary bar C may be acted upon with more or less force, according to the strain which it is desired to bring upon the muscles of the fingers and wrist of the operator.

To exercise the fingers, hand, and wrist, the bar is grasped in the right and left hand alternately and rotated so as to wind the cords E onto the bar, and this may be done either with the hands in pronation and the cords winding on the off side of the bar, with the hands in supination and the cords winding on the off side of the bar, with the hands in supination and the cords winding on the near side of the bar, or with the hands in pronation and the cords winding on the near side of the bar. These exercises may be varied by winding and unwinding with one hand in

pronation and the other in supination or otherwise. One or two revolutions of the bar at a time will be sufficient. It will be seen that by using this invention the winding and unwinding of the cords on the bar cause, by means of the springs, a gradual increase and decrease in exertion, and that the strain on each finger varies according to their strength, and that the various muscles of the hand and wrist and the ligaments connected therewith are thereby thoroughly exercised with obvious advantage.

The apparatus is comparatively light and portable, so that it can be carried about from place to place. To collapse the apparatus, all that is necessary is to uncouple the elastics D from the frame, remove the bar, and fold the uprights on the base. It can then be packed into a small compass. Instead of using cords the elastic spring might be arranged to wind direct onto the rotary bar.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In exercising apparatus, the combination with a frame, of a rotary bar adapted to be grasped by the right and left hand alternately and rotated, cords fastened to this rotary bar, and thence passed over guide-pulleys to resilient connections secured to the frame, whereby by turning the bar in one direction or the other, with the hands in supination or pronation a gradual increase or decrease in exertion is obtained with a thorough exercise of the muscles and ligaments of the hands, fingers and wrist, substantially as described.

2. In exercising apparatus, the combination of a frame having a base and two uprights hinged to the base so as to fold thereon when required, a rotary bar mounted between these uprights, and springs so arranged as to connect the bar to the frame, substantially as described.

In witness whereof I have hereunto signed my name, this 16th day of November, 1898, in the presence of two subscribing witnesses.

WILLIAM LOWES RUSHTON.

Witnesses:

G. C. DYMOND,  
W. H. BEESTON.