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PATENTED SEPT. 3, 1907.

F. SELLERS.
DYNAMOMETER.

APPLICATION FILED FEB. 26, 1907.

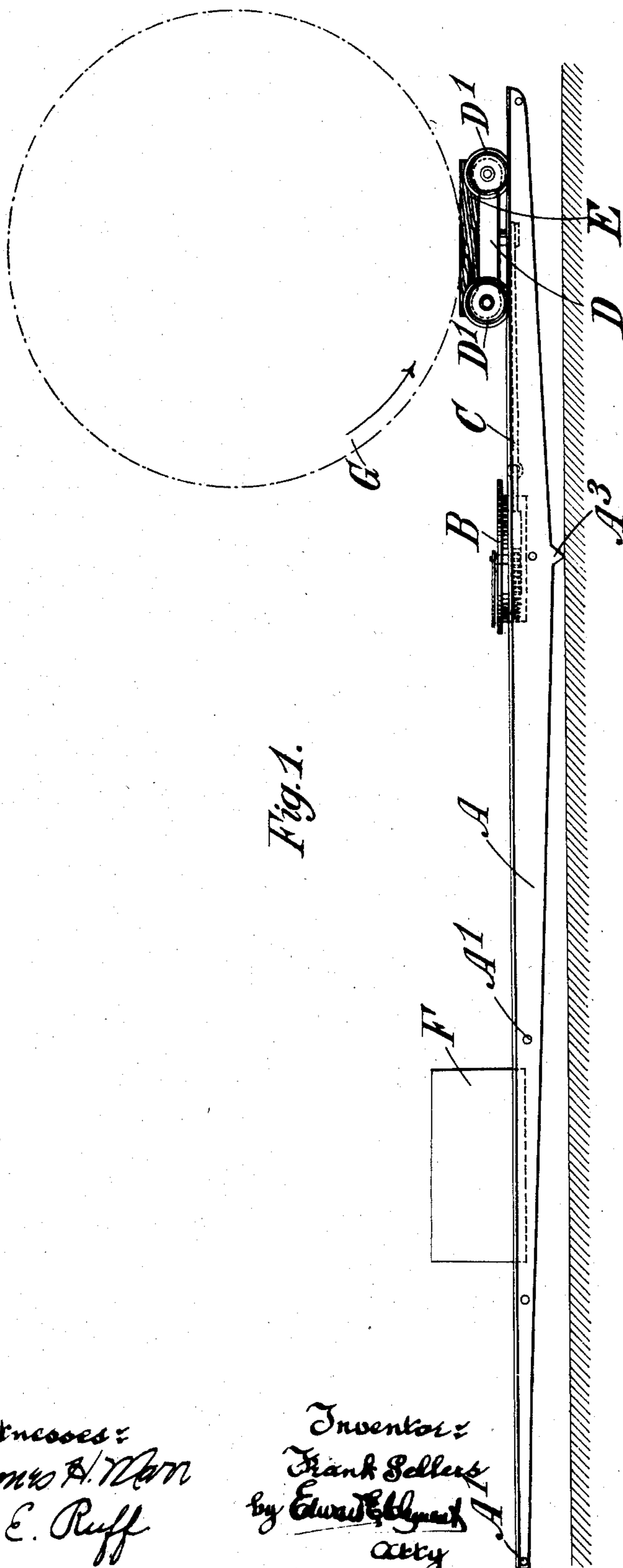


Fig. 1.

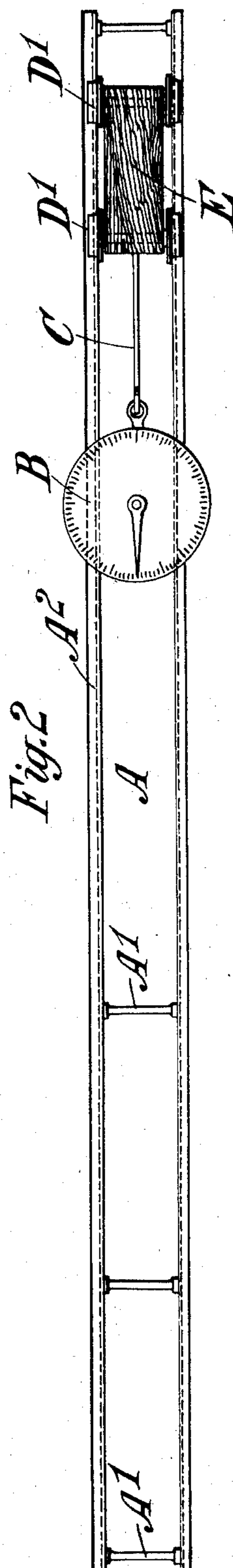


Fig. 2.

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UNITED STATES PATENT OFFICE.

FRANK SELLERS, OF LONDON, ENGLAND.

DYNAMOMETER.

No. 864,927.

Specification of Letters Patent.

Patented Sept. 3, 1907.

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To all whom it may concern:

Be it known that I, FRANK SELLERS, a subject of the King of England, and residing at London, in England, have invented certain new and useful Improvements in Dynamometers, of which the following is a specification.

This invention relates to dynamometers and has for its object to construct an apparatus of the absorption type which is in many respects handier than those at present in use and can be made in a portable form.

According to this invention the dynamometer comprises a pivoted lever upon one arm of which is mounted a brake block and upon the other is carried an adjustable weight. The position of the brake block upon the lever may be varied and it is connected to a spring balance mounted on the lever above or about its fulcrum. The brake block is conveniently attached to a carriage which can slide or move on wheels or rollers along the lever. The adjustable weight may slide on the upper side of the lever or weights can be suspended therefrom. The lever may be mounted on trunnions carried on a fixed or portable base if necessary provided with wheels or the lever for its pivot may have on its underside a projecting knife edge which forms the fulcrum and is placed on any suitable hard surface.

In operation the lever is disposed so that the brake block can be brought against the periphery of a fly wheel connected to the motor whose efficiency is to be tested and the weight on the opposite arm is adjusted.

It will be seen that the device can be applied to a wheel in practically any position without having to arrange special connections for the brake band or other apparatus as is the case in mechanism such as at present employed.

In the accompanying drawings, Figure 1 is a side elevation of a dynamometer constructed in accordance with this invention. Fig. 2 is a plan of the same.

Like letters indicate like parts throughout the drawings.

As illustrated by way of example in the drawings the lever A is formed of two side members connected by bolts A'. The side members are each constituted by plates with flanged upper edges A² and each plate has a projection A³ on its underside acting as a knife edge fulcrum on which the lever can turn. Above this fulcrum is securely attached to the lever A a spring balance B and connected to this balance by a link or cord C is a trolley or slide D conveniently mounted on wheels D' which rest on the flanges of the members forming the lever A these flanges acting as rails.

Securely mounted on the trolley D in a detachable manner is a brake block E formed of wood or other suitable material.

The longer arm of the lever A carries a weight F of

suitable dimensions and shape and capable of being positioned on the lever in accordance with the load to be applied to the motor whose efficiency is undergoing a test.

It will be seen that the whole dynamometer is in a portable form and can be readily put in position for testing any source of power without having to fit up special apparatus. The lever is merely so placed that the brake block comes under the wheel which is indicated at G and the weight F is adjusted as required when the test can be made. The knife edges A³ may rest on the ground or if this is not of a sufficiently hard nature a metal or stone plate or other suitable base may be disposed beneath it.

To enable the lever to be made as light as possible for the sake of portability, the side members can be formed of aluminium with steel rails or strengthening pieces on which the carriages D can run and the weight F rest.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a dynamometer the combination of a lever, a pivot therefor, a spring balance mounted on the lever, a brake block connected to the spring balance but free to move along the lever, and means acting in conjunction with the lever for pressing the brake block against a wheel as set forth.

2. In a dynamometer the combination of a lever, a pivot therefor, a spring balance mounted on the lever, a carriage connected to the spring balance but free to move along the lever, a brake block mounted on the carriage, and means acting in conjunction with the lever for pressing the brake block against a wheel as set forth.

3. In a dynamometer the combination of a lever, a pivot therefor, a spring balance mounted on the lever, rails on the lever, a carriage connected to the spring balance but free to run along the lever on the rails, a brake block, and means acting in conjunction with the lever for pressing the brake block against a wheel as set forth.

4. In a dynamometer the combination of a lever having two arms, a pivot therefor, a spring balance mounted on the lever, a brake block connected to the spring balance but free to move along one arm of the lever, and a weight adjustable on the other arm thereof as set forth.

5. In a dynamometer the combination of a lever having two arms, a pivot therefor, a spring balance mounted on the lever, a carriage connected to the spring balance but free to move along one arm of the lever, a brake block mounted on the carriage, and a weight adjustable on the other arm of said lever as set forth.

6. In a dynamometer the combination of a lever having an arm, a pivot therefor, a spring balance mounted on the lever, rails on the lever, a carriage connected to the spring balance but free to run along the lever on the rails, a second arm to the lever, and a weight adjustable thereon as set forth.

7. In a dynamometer the combination of a lever, a knife edge on the underside thereof constituting a pivot, a spring balance mounted on the lever, a brake block connected to the spring balance but free to move along the lever, and means acting in conjunction with the lever for pressing the brake block against a wheel as set forth.

8. In a dynamometer the combination of a lever, a knife edge on the underside thereof constituting a pivot, a spring balance mounted on the lever, a carriage connected the spring balance but free to move along the lever, a
5 brake block mounted on the carriage, and means acting in conjunction with the lever for pressing the brake block against a wheel as set forth.

9. In a dynamometer the combination of a lever having two arms, a knife edge on the underside thereof constituting a pivot, a spring balance mounted on the lever, a brake
10 block connected to the spring balance but free to move along the lever, and a weight adjustable on the other arm of said lever.

10. In a dynamometer the combination of a lever having an arm, a knife edge on the underside of the lever constituting a pivot, a spring balance mounted on the lever,
15 a carriage connected to the spring balance but free to

move along the lever, a brake block mounted on the carriage, a second arm to the lever, and a weight adjustable thereon as set forth.

11. In a dynamometer the combination of a lever having two arms, a knife edge on the underside thereof constituting a pivot, spring balance mounted on the lever, rails on the lever, a carriage connected to the spring balance but free to run along the lever on the rails, and a
20 weight adjustable on the other arm of said lever as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK SELLERS.

Witnesses:

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PERCY G. GATTER.