E. HEROLD.

BRAKE.

APPLICATION FILED NOV. 30, 1908.

940,461. Patented Nov. 16, 1909.

Fig. 1.

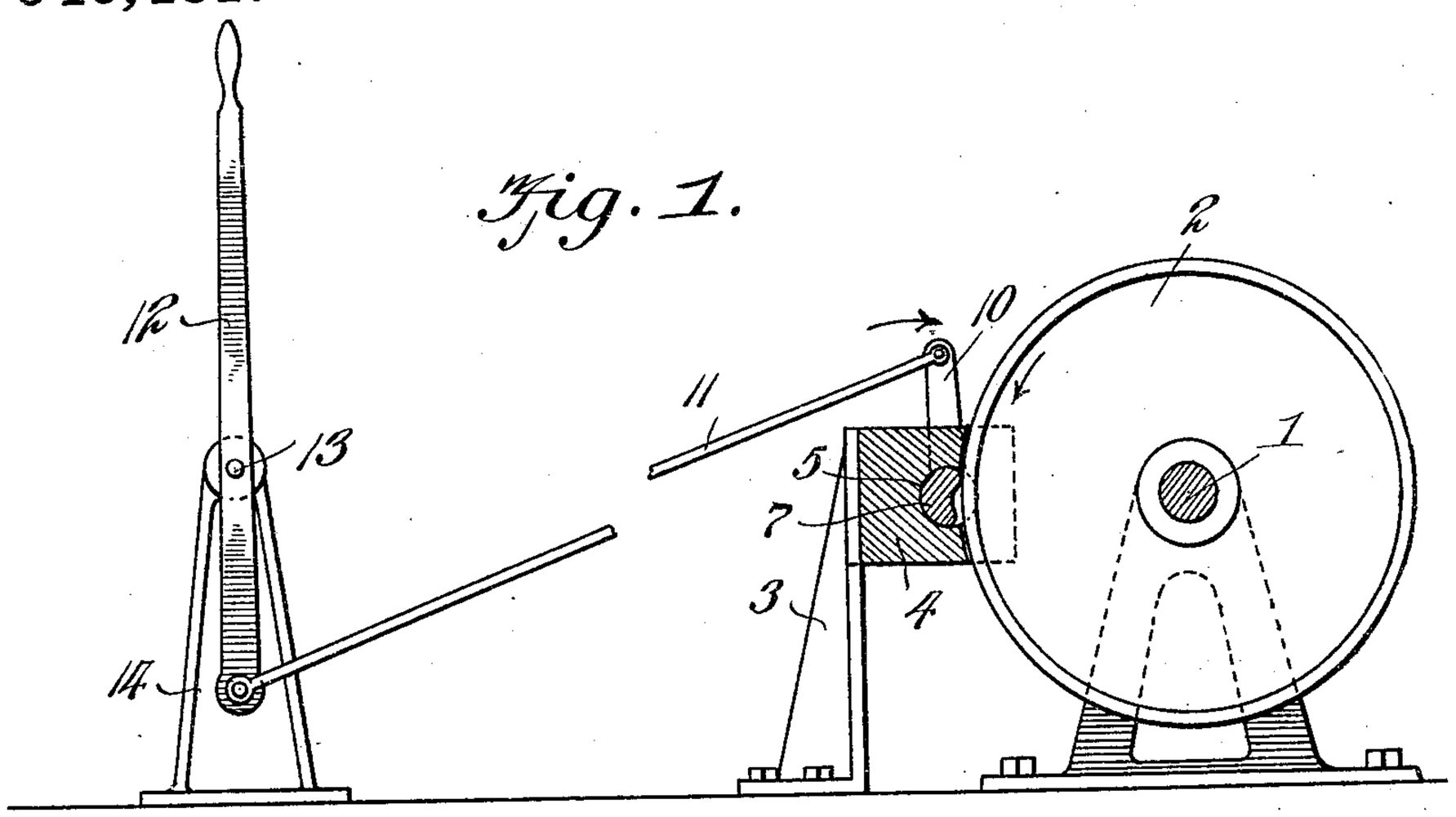
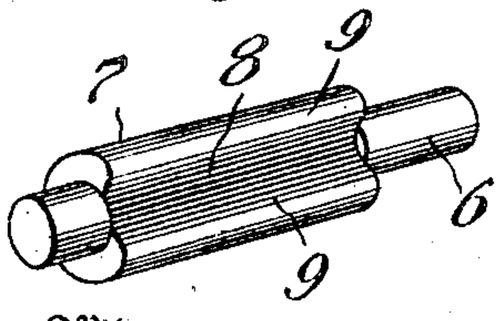


Fig. 2.

Fig. 3



Witnesses

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BRAKE.

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To all whom it may concern:

Be it known that I, EDMUND HEROLD, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Brakes, of which the following is a specification.

This invention relates to brakes, and more particularly to those adapted for use in connection with engines or automobiles or the like, and has for an object to provide simple means which may be conveniently and quickly actuated to engage a movable element.

A further object of this invention is to provide an eccentrically mounted element adapted to be normally held out of engagement with the element with which it is to be engaged, thus obviating wear upon the said eccentrically mounted element.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claim may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a side elevation partly in section of a driven shaft and fly wheel showing the application of the present brake thereto. Fig. 2 is a similar view with parts in section showing a slightly modified form of my invention. Fig. 3 is a perspective view of the brake shaft and its eccentrically mounted cam element.

Referring now more particularly to the drawing and with particular reference to Fig. 1, there is shown a driven shaft 1 upon which is secured in any suitable manner a fly-wheel or similar movable element 2. At a point spaced from the said wheel or element is shown a bracket 3 provided at one end with a casing 4 which, in the present instance, is arranged concentrically with the shaft 1. The casing 4 is provided with a passage 5 disposed at right angles to the bracket 3 and in parallel relation with respect to the shaft 1 and the said passage is adapted to receive a rotatable brake shaft 6 which is provided intermediate of its ends with an eccentrically mounted cam element 7. The cam element is constructed in such manner that a concavity 8 is disposed longitudinally of the shaft 6, and at each side of the concavity the said element is provided with substantially rib shaped contact portions 9. Broadly speaking the said element 7 in this form of my invention is of crescent form as will be clearly seen upon reference to Figs. 1 and 3. The shaft 6 carries a lever 10 to which is connected one end of a rod 11. The rod 11 has its other end connected to the lower end of an actuating lever 12 which, as shown, is pivoted at 13 to a standard or bracket 14.

Upon reference to the drawing it will be seen that the element 7 is in such position in Fig. 1 that the ribs 9 at the sides of the concavity 8 are disposed slightly in spaced relation with respect to the peripheral edge of the wheel or element 2, thus allowing free movement of the said wheel or element. The element, as shown in the said figure is adapted for use upon a machine wherein is provided means for rotating the wheel 2 in opposite directions. Assuming the wheel to be traveling in the direction of the arrow shown in Fig. 1, it will be seen that upon moving the lever 10 in the direction of the arrow it will rotate the shaft 6 to the extent that the upper rib 9 will frictionally engage the peripheral edge of the wheel 2 whereby the latter may be effectively and quickly brought to an immediate standstill.

Upon reference to Fig. 2 of the drawing, it will be seen that I provide a casing 15 having upper and lower spaced passages 16 and 17, the passage 16 having rotatably mounted therein a shaft 18 upon which is formed a substantially elliptical cam or element 19. The shaft 18 is provided with an arm or lever 20 which is connected to an operating rod 21 which latter may be controlled by a lever as shown in Fig. 1 of the drawing or any other suitable means. The passage 17 has rotatably mounted therein a shaft 22 having an elliptical element 23 identical in construction to the element 19. The shaft 22 is provided with an arm or lever 24 to which is connected an operating rod 25. In this form of my invention the element 19 is adapted to be applied to the peripheral edge of the wheel or element 2 when it is traveling in the direction of the arrow *a*, and when the said wheel is traveling in the direction of the arrow *b*, the element 23 is applied to the peripheral edge thereof. It will be seen that after the operating rods 11, 21 and 25 in the two forms of my invention described have been actuated to engage their

elements with their respective wheels 2 the rotation of the said wheel will tend to rotate the elements which greatly increases the efficiency of the brake as will be readily appreciated.

It will be seen that a brake constructed on the lines herein set forth and described is extremely simple, efficient, strong, durable and can be applied to machines of various forms and the said brake may be also applied to vehicles of the self-propelled type to be used as a brake for engines of different forms.

The casings 4 and 15 herein mentioned are of such form that they are each provided with a vertical recess or passage directly in front of the cam means to be engaged with the revoluble elements so that such elements when in their operative positions will have portions disposed between the walls of the recesses or passages. In this construction it is obvious that the casings can be correctly adjusted in order to bring their operative parts in their correct position.

I claim:—

The combination with an element adapted to be moved or revolved in two directions, of a casing having a vertical passage between the walls of which a portion of the said element is disposed, cam means revolubly mounted in said casing provided with a plurality of element contacting points adapted to be engaged with the element to hold the same against movement, a bracket for supporting said casing, an actuating lever adapted to be manually manipulated and disposed in juxtaposition to the casing, and connections between the lever and the cam means so that when the former is operated the element contacting portions of the cam means can be engaged with the said element or disengaged therefrom.

In testimony whereof I affix my signature in presence of two witnesses.

EDMUND HEROLD.

Witnesses:

HUBERT DALY,

B. W. KING.