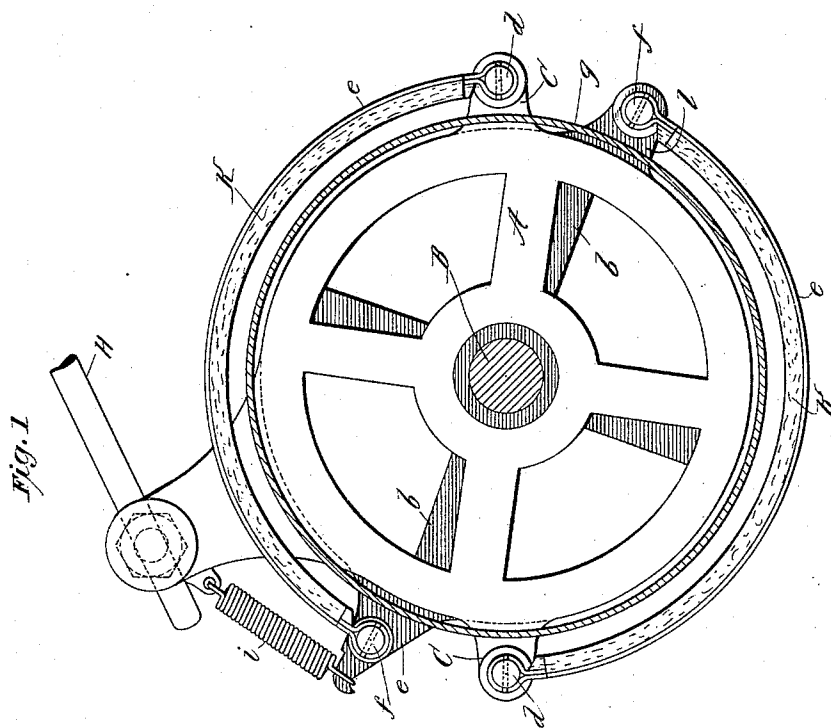
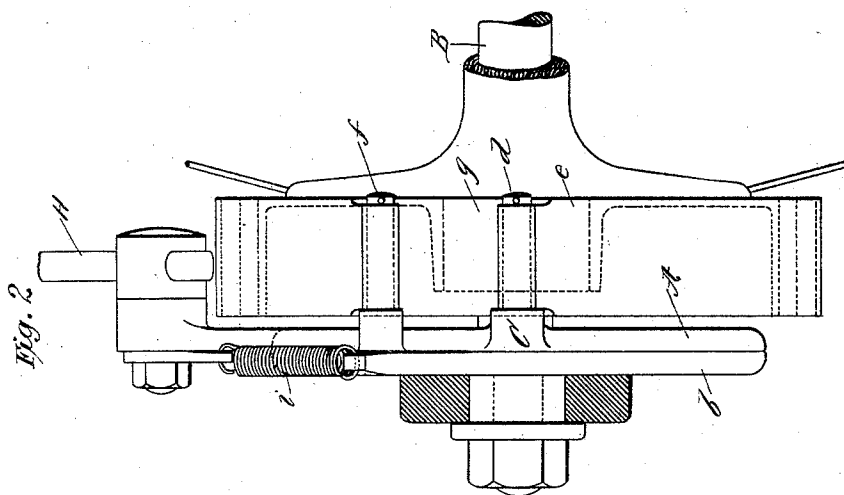


(No Model.)

R. M. WOODHEAD & P. ANGOIS.
BRAKE FOR CYCLES.

No. 474,051.

Patented May 3, 1892.



Witnesses:

John Buckler,
Ernest Hopkinson

Inventors:

Richard M. Woodhead and
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Attorneys.

UNITED STATES PATENT OFFICE.

RICHARD MORRISS WOODHEAD AND PAUL ANGOIS, OF NOTTINGHAM,
ENGLAND.

BRAKE FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 474,051, dated May 3, 1892.

Application filed October 16, 1891. Serial No. 408,964. (No model.) Patented in England December 3, 1890, No. 19,682.

To all whom it may concern:

Be it known that we, RICHARD MORRISS WOODHEAD, a subject of the Queen of Great Britain, and PAUL ANGOIS, a citizen of the Republic of France, residing at Nottingham, in the county of Nottingham, England, have invented certain new and useful Improvements in Brakes for Cycles and other Vehicles, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

This invention was patented in Great Britain December 3, 1890, No. 19,682.

The object of our invention is to construct a band-brake for cycles so arranged that no impediment to propulsion can be caused by contact between the drum and friction-band when the brake is not in use.

Our device also facilitates the application of the maximum friction to the brake-drum without producing unequal pressure or strain upon the wheel-bearings, thereby preventing excessive wear, liability to fracture, or deflection of the parts from their true position.

In carrying out our invention we divide the brake-band into sections, preferably using only two. Each of these sections is fixed at one end and arranged to stand over and clear of the frictional surface of the drum. The other ends of the sections are all suitably attached to the same lever or disk, which pivots on the same axis as the drum. The gear used for applying the brake is connected to this lever. When not in use, the ends are suspended clear of the drum. When it is required to apply the brake, the loose ends of the bands are pulled by the action of suitable gear away from the fixed ends, thus straightening and forcing them into contact with the drum.

In order that our invention may be clearly understood, reference is hereinafter made to the accompanying drawings, in which similar letters of reference indicate corresponding parts.

Figure 1 illustrates in elevation a brake

mechanism made in conformity with our invention and as we apply it to the driving-wheel hub of a Safety bicycle. Fig. 2 is a view in elevation of the said mechanism and the parts of a cycle shaft and wheel to which the same is or may be applied.

Both figures illustrate the device with its parts in the positions which they assume when the brake is not applied.

A is a lever—in this case in the form of a skeleton wheel or disk—mounted upon the axle B of the wheel-hub and free to turn thereon.

Lugs or extensions C C are fixed or formed on the disk and extend out beyond the periphery of the brake-drum *g*. From these lugs project studs *d d* over the periphery of the drum *g*, and to each is secured an end of one of the two sections of the friction clips or bands *e e*, composed of any proper material, such as sheet-metal straps, with a frictional surface K of leather, wood, or the like. The other end of each of these band-sections is secured in a similar manner to a fixed plate or disk *b* or its equivalent by means of studs *ff*, projecting from lugs *ll*, or the said ends may be secured to fixed supports on the frame in any other proper manner.

The brake is applied by pulling forward the rod H, which is connected in any convenient manner with the usual band-gear, and thereby turning the disk about its center, which results in the studs *d d* and the ends of the brake-bands connected therewith being drawn farther away from the ends fixed to studs *ff* and by the circular motion imparted, thereby forcing the bands *e e* into contact with the revolving drum *g*. On releasing the strain upon the rod H the spring *i* serves to return the bands to their position clear of the drum when the brake is not in use.

It is obvious that the brake-band may, if desired, be divided into more than two sections, or that the drum may be fixed on any convenient revolving part of the cycle, and

that the form and arrangement of the parts may be modified to suit the different types of cycles to which brake-bands are applied.

Having now described our invention, what
5 we claim is—

A band-brake for cycles, consisting in the combination, with a friction-drum, of a strap or band embracing the same and divided into two or more sections, a fixed or stationary
10 disk, to which one end of each section is connected, a movable or loose disk or lever, to

which the other ends are connected, and gearing by which the said disk or lever is turned upon its center, thereby forcing the bands upon the drum, all as herein set forth.

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