

(No Model.)

W. R. SMITH.
FRICTION CLUTCH.

No. 487,545.

Patented Dec. 6, 1892.

Fig. 1.

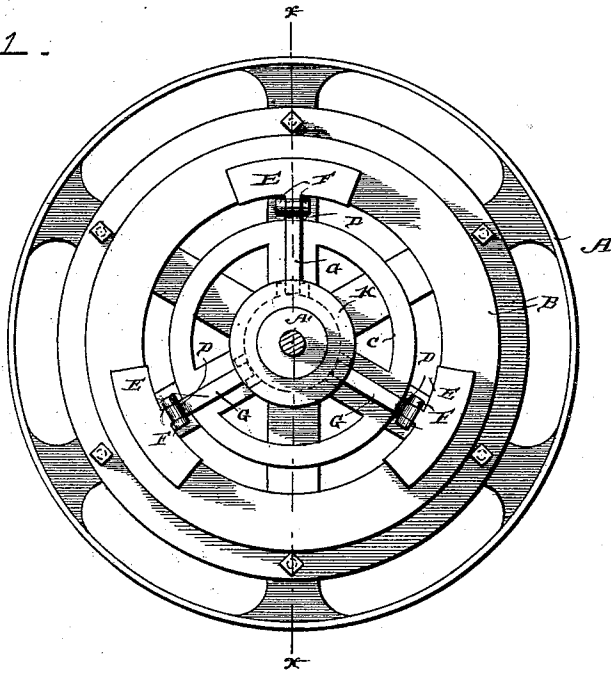


Fig. 2.

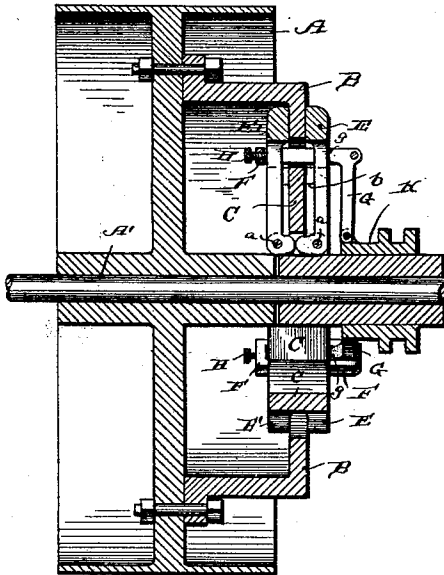


Fig. 3.

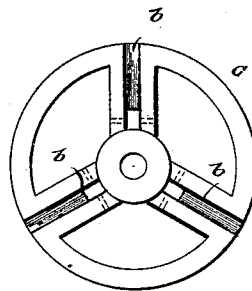
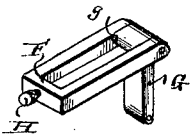


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILSON R. SMITH, OF BELOIT, WISCONSIN.

FRICTION-CLUTCH.

SPECIFICATION forming part of Letters Patent No. 487,545, dated December 6, 1892.

Application filed June 9, 1892. Serial No. 436,132. (No model.)

To all whom it may concern:

Be it known that I, WILSON R. SMITH, a citizen of the United States, and a resident of Beloit, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Friction-Clutches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a face view. Fig. 2 is a vertical section on line *x x*. Fig. 3 is a detail view of the driver. Fig. 4 is a detached perspective view of the clevis and its lever.

This invention has relation to certain new and useful improvements in friction-clutches; and it consists in the novel construction and combination of parts, all as herein specified.

The object of this invention is to provide a clutch having an improved construction and arrangement of oscillating jaws or grips which will take up any wobble or untrue movement of the driving-pulley, and thereby prevent undue strain upon the driver-shaft or upon the pulley itself.

In the accompanying drawings, the letter A designates a loose pulley on a shaft A', B the grip-rim thereof, and C the driver fast to said shaft.

D D are the clutches or grips shown as being three in number and arranged each upon proper operation to close upon the grip-rim B of the pulley A. Said clutches or grips comprise each a pair of jaws E E', pivoted at their inner ends in sockets in the hub of the driver by means of pins *a a*. The spider and rim of the driver is recessed or formed with seats *b*, in which the jaws rest, whereby the driver will take any strain there is upon the jaws. Said inner ends bear against each other, so that all strain is taken off the pins *a a*, said pins simply holding them in place.

F is a clevis or link extending each side of the jaws and held to the jaw E' by a set-screw H. Said clevis at its other end is loosely connected to an eccentric lever G, the other end of which is connected to a sliding sleeve K on the sleeve of the driver or upon the shaft. When said sleeve is given an end-wise movement toward the pulley by means of a shifting-lever, (not shown,) the levers G of all the clutches will be moved in such manner that the eccentric heel portions *g* will take a bearing against the jaw E, while the clevis will draw upon the jaw E', bringing the jaws closely together and closing upon the grip-rim. Said eccentric levers when forced to their proper place to close the jaws bring the eccentric portions *g* to their centers, whereby they are locked until forced back, which releases the jaws, which are thrown apart by centrifugal action. Said jaws, being capable, therefore, of an oscillating movement on their pins independent of the driver, will take up all wear and undue motion of the pulley and relieve the strain on the parts.

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

In a friction-clutch, the combination, with the pulley having the grip-rim thereon, of the clutches or grips comprising each a pair of oscillatory jaws E E', pivoted at their inner ends in sockets in the hub of the driver, said driver and its rim having seats for said jaws, the clevis or link embracing said jaws near their upper ends and held to the jaw E' by a set-screw, said link or clevis at its other end being loosely connected to a lever G, having an eccentric portion *g*, and a sliding sleeve, to which the inner ends of said levers are connected, substantially as specified.

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

WILSON R. SMITH.

Witnesses:

FREDERICK J. FAIRCHILD,
GEO. L. CARR.