No. 615,441. Patented Dec. 6, 1898.

R. F. EMMERICH & F. VONDERLEHR.

DOUBLE CAM.

(No Model.) (Application filed Sept. 29, 1898.)

Fig. 1.

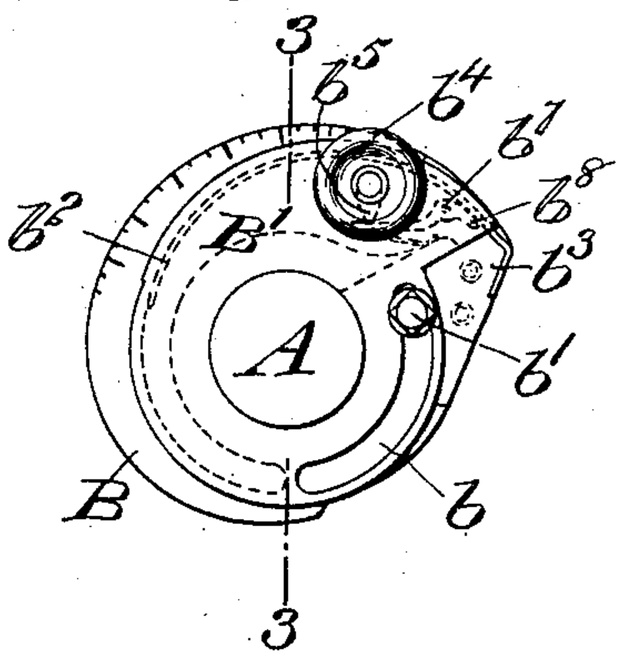


Fig. 2.

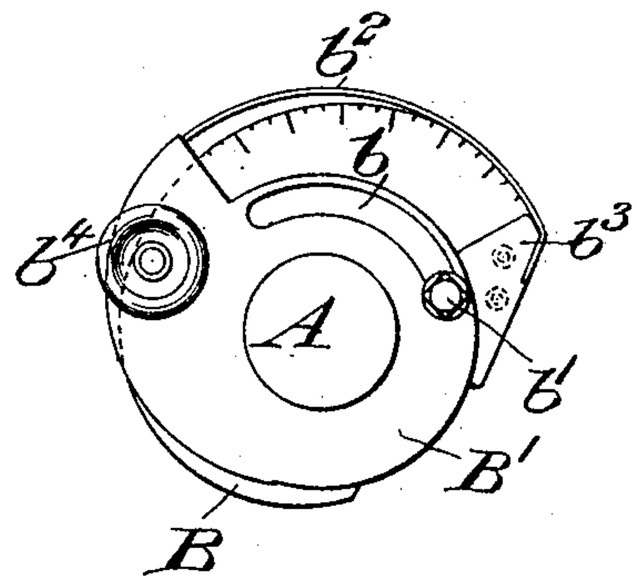


Fig. 3.

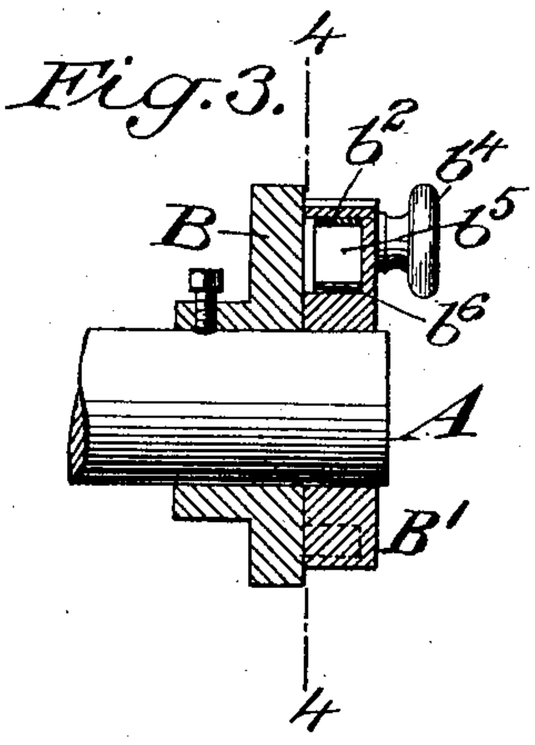
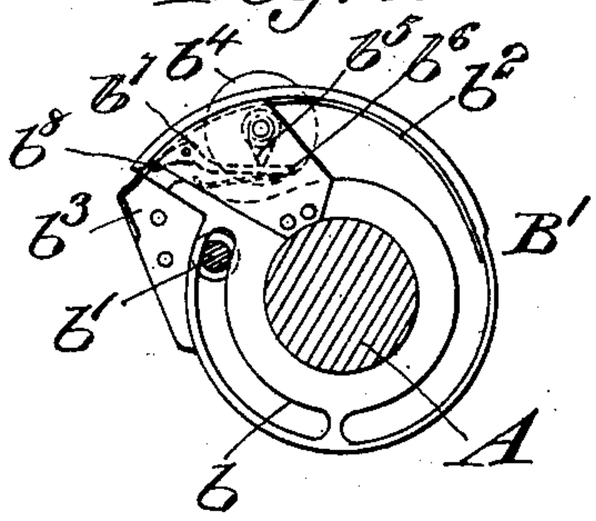


Fig. 4.



Witnesses:-
George Barry Jr.
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by attorneys
Sommerman

UNITED STATES PATENT OFFICE.

RUDOLPH F. EMMERICH AND FREDERICK VONDERLEHR, OF NEW YORK, N. Y.

DOUBLE CAM.

SPECIFICATION forming part of Letters Patent No. 615,441, dated December 6, 1898.

Application filed September 29, 1898. Serial No. 692,168. (No model.)

To all whom it may concern:

Be it known that we, RUDOLPH F. EMMERICH and FREDERICK VONDERLEHR, citizens of the United States, and residents of New York, in the county and State of New York, have invented a new and useful Improvement in Double Cams, of which the following is a specification.

Our invention relates to an improvement in double cams, the object being to provide a structure in which the circumferential extent of the outer portion of the cam may be increased or decreased within predetermined limits at pleasure and rigidly clamped in such adjustments.

A practical embodiment of our invention is represented in the accompanying drawings, in which—

Figure 1 is an outside view of the double or divided cam, the members being adjusted so as to present the shortest extent of track at the outermost circumference of the cam. Fig. 2 is a similar view with the members adjusted in position to give the greatest length of track at the outermost circumference of the cam. Fig. 3 is a vertical central section in the plane of the line 3 3 of Fig. 1, and Fig. 4 is a section in the plane of the line 4 4 of Fig. 3 looking toward the movable member of the cam.

The double or divided cam may be mounted upon the end of a shaft A, the member B being stationary with respect to the said shaft and the member B′ being capable of a rotary adjustment thereon.

The cam member B increases in diameter for about three-fourths of its periphery and the movable cam member B′ increases in diameter about one-third of its periphery, the outermost and innermost points of the peripheral tracks upon said cam members being practically the same distance from the center of the shaft A. Thus the cam member B is provided with a gradual outwardly-extended track and the cam member B′ with a rapid outwardly-extended track.

The movable cam member B′ is provided with an elongated concentric groove b, within which is located a clamping-bolt b', extending from the member B. By this means the two members may be clamped in any desired rotary adjustment relatively to each other.

To bridge the space between the outermost portions of the two cam members, we provide a band-spring b^2, which is secured at one end to a block b^3, located at the outermost point on the member B, the free end of the spring being caused to pass through the abrupt portion of the cam member B′ into the interior of the said member just beneath its periphery. An operating-handle b^4 is provided with a cam b^5, arranged to engage the long arm b^6 of a lever b^7, so that when the knob is turned to cause the cam to depress the said arm the short arm b^8 of the said lever will be caused to grip the spring b^2 and hold it rigidly in position.

The outer face of the cam member B may be provided with a suitable scale, if so desired, along which the abrupt portion of the periphery of the cam member B′ is caused to pass, so that the two members may be quickly and accurately adjusted with respect to each other and in accordance with the amount of track-surface which is desired at the outermost circumference of the cam.

This cam may be used in connection with machines of various kinds where it is desired to increase or diminish the length of time which the cam operates upon the mechanism controlled thereby.

What we claim is—

1. A double cam comprising a stationary cam member and a rotary cam member arranged to coact therewith, the one being provided with a gradual outwardly-extended track and the other with a rapid outwardly-extended track and a connecting band or spring permanently secured to the outermost portion of one of the cam members and arranged to be temporarily secured to the outermost portion of the other cam member for bridging the space between said outermost portions, substantially as set forth.

2. A double cam comprising a stationary member and a movable member, the one being provided with a gradual outwardly-extended track and the other with a rapid outwardly-extended track, means for clamping the two members in any desired adjustment

and a band or spring secured at one end to the outermost portion of the stationary member and having its free end telescoping within the movable member at its outermost portion and means for temporarily locking the spring in position when the members have been adjusted relatively to each other, substantially as set forth.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 22d day of September, 1898.

RUDOLPH F. EMMERICH.
FREDERICK VONDERLEHR.

Witnesses:
FREDK. HAYNES,
EDWARD VIESER.