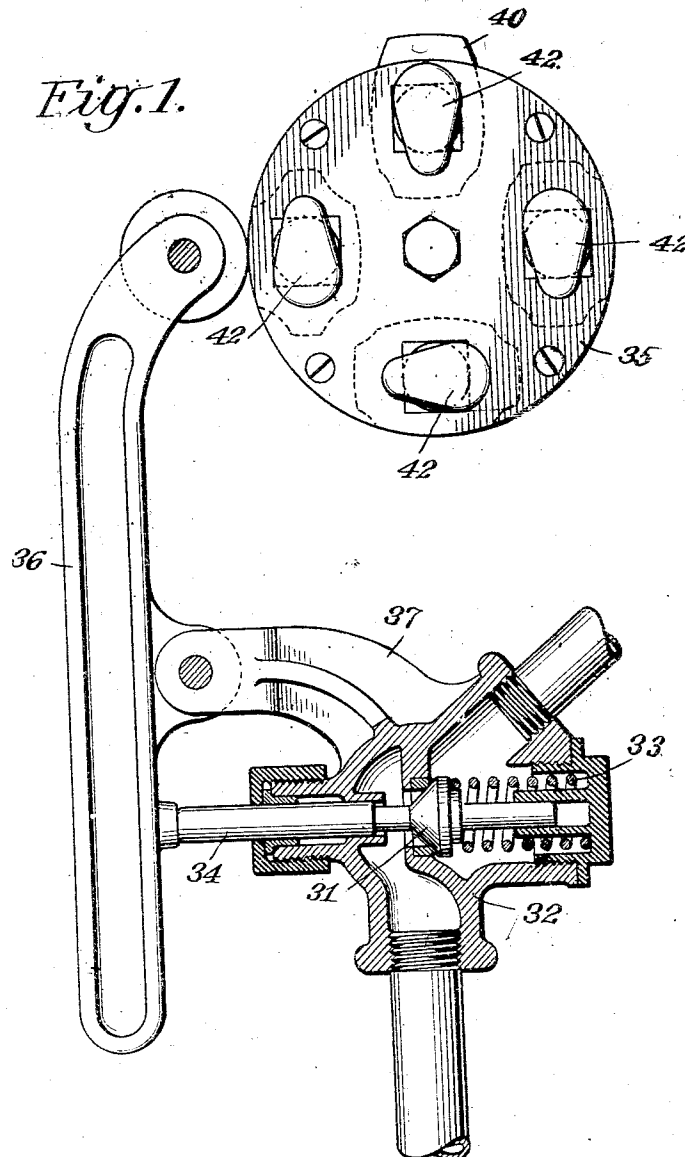


C. F. STREET.  
CONTROLLER CAM DEVICE.  
APPLICATION FILED OCT. 6, 1913.

1,145,337.

Patented July 6, 1915.  
2 SHEETS—SHEET 1.

*Fig. 1.*



WITNESSES:

*H. Crockeron*

*A. S. Fowler*

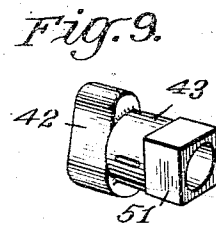
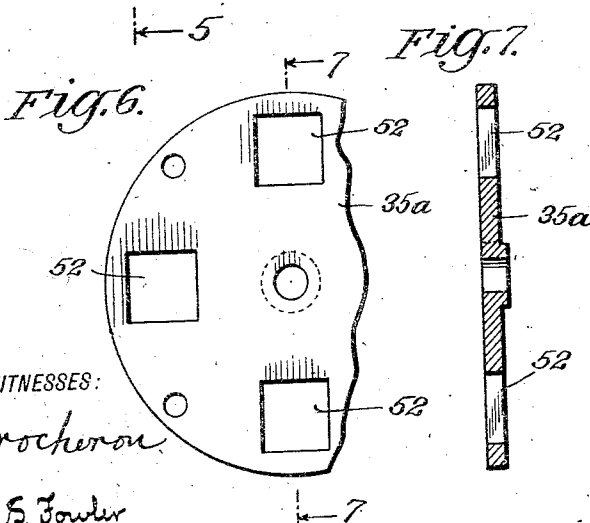
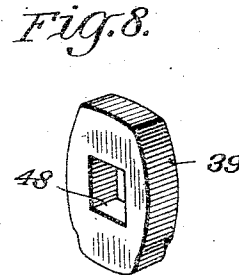
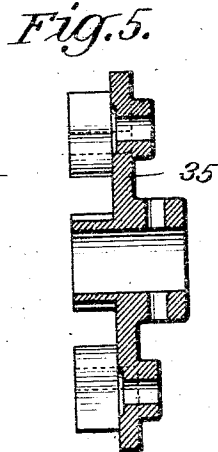
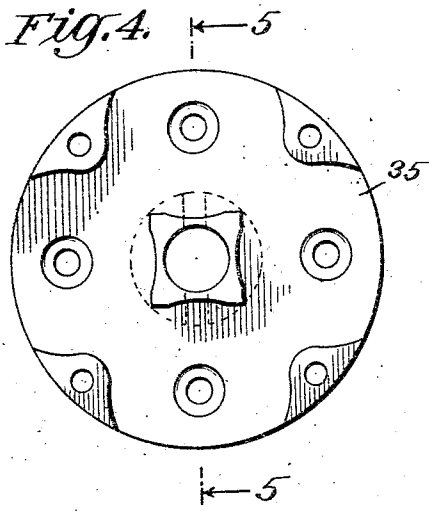
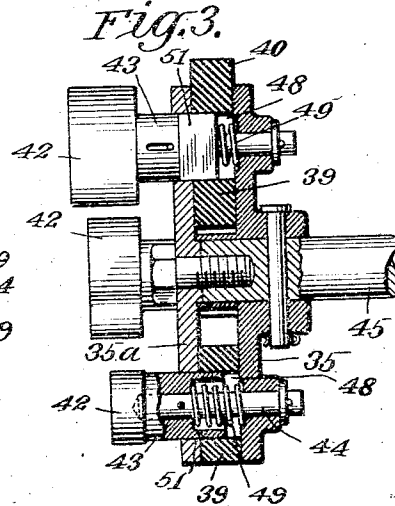
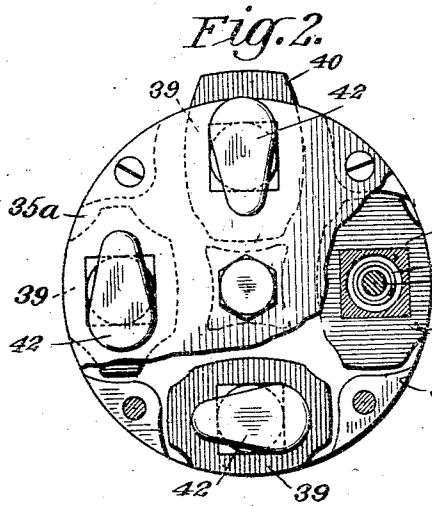
INVENTOR

*Clement F. Street.*  
BY  
*Edward Wright.*  
ATTORNEY

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WITNESSES:  
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# UNITED STATES PATENT OFFICE.

CLEMENT F. STREET, OF NEW YORK, N. Y., ASSIGNOR TO LOCOMOTIVE STOKER COMPANY, OF WILMERDING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## CONTROLLER-CAM DEVICE.

1,145,337.

Specification of Letters Patent.

Patented July 6, 1915.

Application filed October 8, 1913. Serial No. 794,016.

To all whom it may concern:

Be it known that I, CLEMENT F. STREET, a citizen of the United States, residing at the borough of Manhattan, in the city, county, and State of New York, have invented a certain new and useful Improvement in Controller-Cam Devices, of which improvement the following is a specification.

This invention relates to means for supplying fluid pressure intermittently or periodically for any suitable purpose where it is desired to utilize the fluid under pressure in a series of blasts of greater or less frequency and duration, and has for its object to provide an improved cam device for controlling the successive admissions of fluid pressure, or for other purposes.

While my improvement is adapted for a variety of uses, it is particularly designed to be employed in connection with a mechanical stoker for forcing the fuel into the fire-box, as shown and described in my prior pending application Ser. No. 565,579, filed June 7, 1910. In this prior construction, the admission of fluid under pressure to the fuel distributor nozzles is controlled by a valve operated by a pivoted lever one end of which carries a roller bearing upon the periphery of a cam disk upon which the cam members are pivoted and adapted to be turned to different positions to extend the different cam surfaces beyond the periphery of the disk to engage the roller and actuate the valve.

According to my present improvement, the cam members are rotatably mounted on the cam body or disk, and are provided with handles and spring actuated locking mechanism so arranged as to normally and positively lock each cam member against accidental movement from any position to which it may be adjusted, but adapted to be released by a certain movement of the handle and then turned to any other of its positions, as desired.

In the accompanying drawings: Figure 1 is a front elevation of my improved controller cam device with the actuating lever and valve, the valve being shown in section; Fig. 2, a front elevation of the cam, with a portion of the cover plate broken away, showing some of the cam members in elevation, and one of the handle stems in sec-

tion; Fig. 3, a central transverse section of the cam device; Fig. 4, a face view of the body portion of the cam disk, with the cover and cam members removed; Fig. 5, a vertical transverse section of the same, taken on the line 5-5 of Fig. 4; Fig. 6, a front elevation of the cover plate, a portion being broken away; Fig. 7, a vertical transverse section of the same, taken on the line 7-7 of Fig. 6; Fig. 8, a perspective view of one of the cam members; and, Fig. 9, a perspective view of one of the handle members.

As set forth in my prior application, the valve for controlling the supply or flow of the fluid under pressure comprises a casing, 32, containing a valve proper, 31, with stem, 34, and a spring, 33, normally holding the valve closed on its seat, the casing having a bracket arm, 37, to which is pivoted the lever 36, adapted to operate the valve stem and at the other end carrying a roller which bears against the cam disk.

According to the preferred construction shown in the drawings, the cam disk comprises a body portion, 35, and a cover plate, 35<sup>a</sup>, mounted on a shaft, 45, and having one or more cam members, 39, pivotally mounted on said body portion and adapted to be rotated by means of handles, 42, so that the cam surfaces, 40, at the ends of said cam members, 39, may be either extended beyond or drawn within the periphery of the cam disk to suit any desired adjustment.

In order to normally and positively lock the cam members in any position, and thus prevent any accidental turning movement of the same, I provide a spring actuated locking mechanism which may be released by a preliminary movement of the cam handle before turning the same and the cam member to another position. According to the construction shown, the cam members are each provided with a square, or other non-circular opening, 48, each arranged in line with a corresponding opening, 52, in the cover plate, 35<sup>a</sup>, and the stem of each handle, 42, is provided with a square or corresponding non-circular end portion, 51, slidably mounted in said openings in the cover plate, and cam member, and having a limited transverse movement therein in a direction substantially perpendicular to the face of the cam. The stem is also guided upon a pin, 44, supported in the body por-

tion, and carrying a spring, 49, which acts between the body and said handle to normally hold the square end portion, 51, of the stem in engagement with the opening in the cover plate, and thereby positively lock the handle and cam member against rotation. The intermediate portion of the stem, 43, is made smaller or of circular cross section, and may be rotated within the non-circular opening, 52, of the cover plate, so that when the handle and stem are moved transversely in the openings by being pushed inward against the spring, 49, the square end portion, 51, of the stem passes wholly within the opening, 48, in the cam member, and the handle and cam member may then be turned to any other position to adjust or withdraw the cam as desired. In this way, any accidental rotation of the cam members is positively prevented as it is necessary to release the spring actuated locking mechanism by the preliminary or transverse movement of the handle before the same can be turned for adjusting the cam member to a different position.

Any desired number of cam members may be mounted on the cam disk, four being shown in the drawings, and each cam member may be provided with a plurality of cam surfaces, preferably two at opposite ends, as shown. With this arrangement, it is simply necessary to turn a cam member but one quarter of a revolution to adjust the same to either extend or withdraw one of the cam surfaces.

It will now be seen that I have provided a simple and efficient cam device in which the cam members are normally positively locked against rotation, but may be readily released by a preliminary movement of the handles and then adjusted to any desired position.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a controller cam device, the combination of a disk, a cam member movably mounted on said disk and adapted to project beyond the perimeter thereof in one position, and to be withdrawn when in another position, positively engageable interlocking parts for normally preventing movement of the cam, and a handle having a preliminary inward movement for disengaging said locking parts and then moving the cam.

2. In a controller cam device, the combination of a disk, a cam member rotatably mounted thereon and adapted to project beyond the perimeter when turned to one position and to be withdrawn when turned to another position, positively engageable interlocking parts for holding said cam in its respective positions, and a handle having a preliminary inward movement for releasing the interlocking parts and then turning the cam.

3. In a controller cam device, the combination of a disk, a cam member rotatably mounted thereon and adapted to project beyond the perimeter when turned to one position and to be withdrawn when turned to another position, interlocking parts for normally preventing rotation of the cam, a spring for holding said parts in the locked relation, and a handle having a preliminary movement perpendicular to the disk for compressing the spring to release the lock and then turn the cam.

4. In a controller cam device, in combination, a disk, a rotatable cam member carried by the disk, a spindle slidably and rotatably mounted in the disk and non-rotatively engaging the cam member, a portion of the spindle being non-circular and a portion of the disk aperture within which the spindle is located being of complementary form, and a spring normally holding the non-circular portion of the spindle in such corresponding part of the disk aperture.

5. A controller cam device comprising a rotatable body portion, a cam member rotatably mounted on said body and adapted to project beyond the periphery of the same when turned to one position and to be withdrawn when turned to another position, a handle having a non-circular stem portion slidably mounted in a corresponding opening in said cam, and means normally locking said stem against rotation but adapted to be released by the sliding movement of the handle relative to said cam member.

6. A controller cam device comprising a body portion and cover plate, a rotatable cam member mounted on said body and adapted to project beyond the periphery of the same when turned to one position and to be withdrawn when turned to another position, a handle having a non-circular stem portion mounted to slide in corresponding openings in the cover plate and cam member, and a spring normally holding said stem portion in engagement with the cover plate.

7. A controller cam device comprising a body portion and cover plate, a rotatable cam member mounted on said body and adapted to project beyond the periphery of the same when turned to one position and to be withdrawn when turned to another position, a handle for turning said cam member and having a non-circular stem portion normally engaging a corresponding opening in said cover plate, and another stem portion adapted to rotate in said opening in the cover plate, and a spring bearing on said stem.

8. A controller cam device comprising a body portion and cover plate, a rotatable cam member mounted on said body and adapted to project beyond the periphery of the same when turned to one position and to

be withdrawn when turned to another position, a handle having a circular stem portion and a square stem portion extending through a square opening in the cover plate, and a spring normally holding the square stem portion in engagement with the cover plate for locking the cam.

In testimony whereof I have hereunto set my hand.

CLEMENT F. STREET.

Witnesses:

LAURA E. SMITH,  
W. GLASGOW CLARK.