C. F. STREET.

CONTROLLER CAM DEVICE.

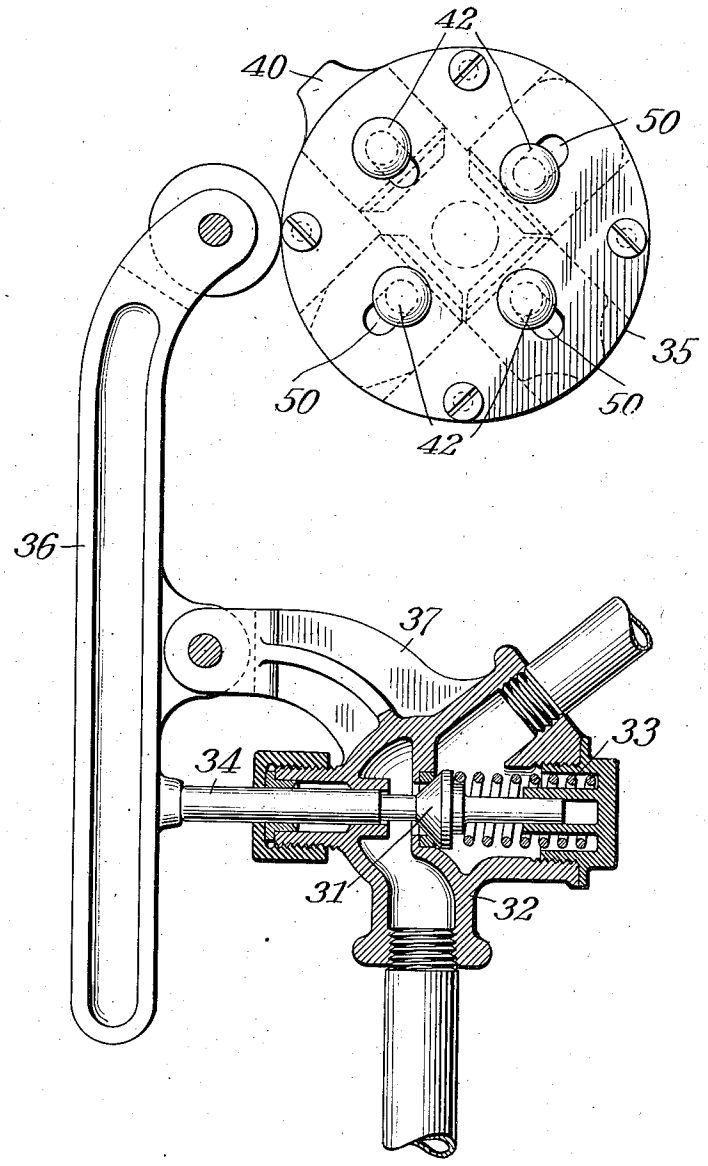
APPLICATION FILED OCT. 8, 1913.

1,141,504.

Patented June 1, 1915.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2

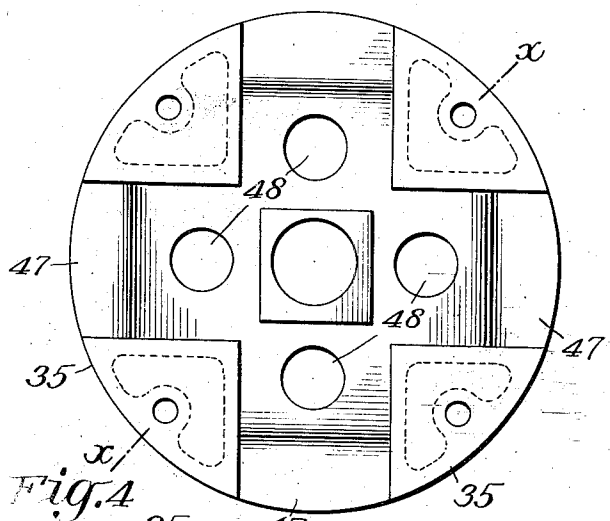


Fig. 3.

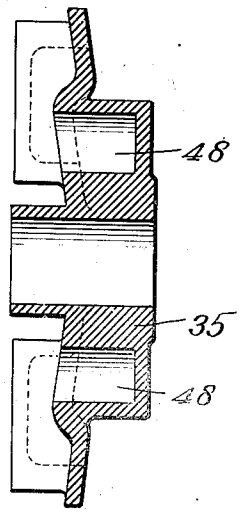


Fig. 4

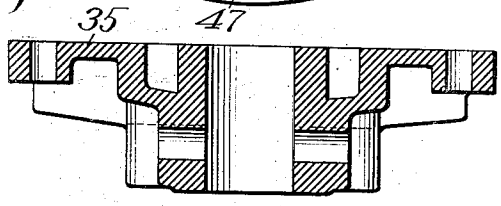


Fig. 5.

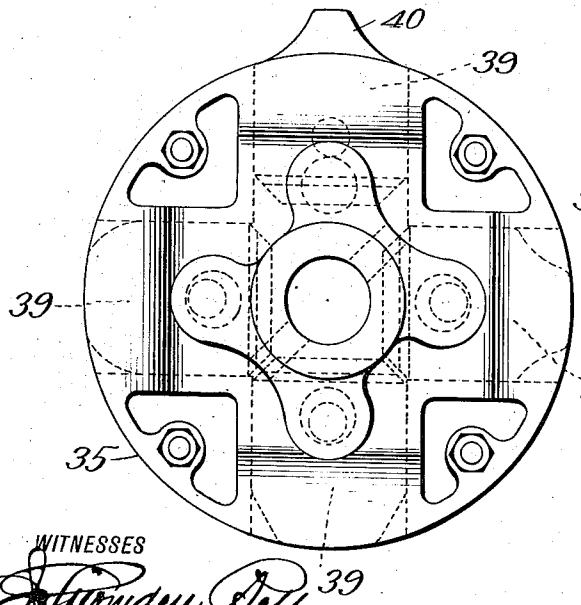
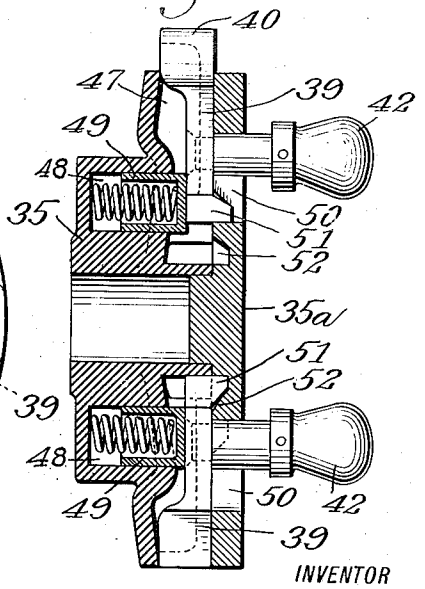


Fig. 6.



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

CONTROLLER-CAM DEVICE.

1,141,504. Specification of Letters Patent. Patented June 1, 1915.

Original application filed August 16, 1911, Serial No. 644,476. Divided and this application filed October 8, 1913. Serial No. 794,015.

To all whom it may concern:

Be it known that I, CLEMENT F. STREET, a citizen of the United States, residing in 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 distributer 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 one of the features of my present improvement, the cam members are slidably mounted to be reciprocated on the disk and are provided with a positive spring actuated latch mechanism which prevents any accidental or undesired displacement of the cam members, and also renders the adjustment of the same positive and certain.

In the accompanying drawings: Figure 1 is a front elevation of my improved controller cam device, the valve being shown in section; Fig. 2, a face view of the body portion of the cam disk with the cover and cam members removed; Fig. 3, a vertical transverse section of the same; Fig. 4, a transverse section taken on the diagonal line *x x* of Fig. 2; Fig. 5, a rear elevation of the cam disk; and, Fig. 6, a vertical transverse section of the same showing one of the cam members extended.

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 my present construction, the cam disk is preferably formed in two parts, the body portion, 35, and cover, 35ª. A plurality of cam members, 39, are slidably mounted on the cam disk, and are adapted to be reciprocated by means of handles, 42, so that the cam surfaces, 40, at the outer ends of said cam members, may be either extended to engage the lever or withdrawn within the periphery of the cam disk, according to what adjustment is desired.

The cam disk is adapted to be mounted on a shaft and be continuously rotated at any desired speed. According to the preferred construction, the body portion of the cam disk is provided with recessed seats or guide ways, 47, in which the cam members, 39, are mounted to slide when manually adjusted by means of handles, 42, which extend through slots, 50, in the cover, 35ª, of the cam disk. The cam members, 39, are also provided at their inner ends with latch projections, 51, adapted to engage notches, 52, when in the retracted position, and be held therein by the spring plungers, 49, located in the recesses, 48, and bearing against the under side of the cam members. When the cam members are adjusted to the extended position, the projections, 51, engage the ends of the notches or slots, 50. The latch projections engaging in the slots or notches positively prevent any accidental or undesired displacement of the cam members by pressure applied to the cam surfaces but the cams may be readily adjusted from one position to the other by the handles which may be pushed inward sufficiently to compress the spring and clear the slots or notches whenever it is desired to adjust the cams.

Any desired number of cam members may be employed and the width and contour of

the respective cam surfaces may be varied as desired to produce longer or shorter blasts or admission periods.

With all of the cams withdrawn to their inner positions, it is apparent that there will be no admissions of fluid pressure as the lever roller merely engages the periphery of the revolving cam disk, without opening the valve, but by adjusting one or more or all of the cam members to the extended position, the valve will be intermittently opened and closed and the frequency and duration of such admissions or blasts may be varied as desired to suit any conditions.

This application is a division of my original application Serial No. 644,476, filed August 16, 1911.

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 mounted to slide radially thereon, and manually operated means for reciprocating said cam member to extend the same beyond or withdraw the same within the periphery of the disk.

2. In a controller cam device, the combination of a disk having radial guide ways, a cam member mounted to slide in said guide ways, and a handle fastened to said cam member for manually reciprocating the same.

3. In a controller cam device, the combination of a disk having guide ways, a cam member mounted to slide in said guide ways, a handle fastened to said cam member for manually reciprocating the same, and a spring latch device for holding the cam member in its extended position.

4. A controller cam device, comprising a cam disk, a plurality of cam members mounted to slide radially thereon, means for manually reciprocating said cam members, and a spring latch device for holding the same in their respective positions.

5. A controller cam device, comprising a cam disk, a plurality of cam members mounted to slide radially thereon, and having projections for engaging notches in said disk, springs bearing upon said cams for normally locking the same in position, and handles for manually reciprocating said cams.

6. A controller cam device comprising a circular cam disk having radial guide-ways, cam members mounted to slide in said guide ways, and having latch means engaging said disk, springs bearing upon the cam members for holding same latched in position, and handles for reciprocating said cam members to withdraw or extend the same beyond the circumference of said disk.

7. A controller cam device comprising a cam disk having guide ways and notched recesses, cam members mounted to slide in said guide ways and having projections for engaging the notched recesses, springs bearing upon the cam members for holding same latched in position, and handles for reciprocating said cam members to withdraw or extend the same beyond the edge of said disk.

In testimony whereof I have hereunto set my hand.

CLEMENT F. STREET.

Witnesses:
W. GLASGOW CLARK,
LAURA E. SMITH.