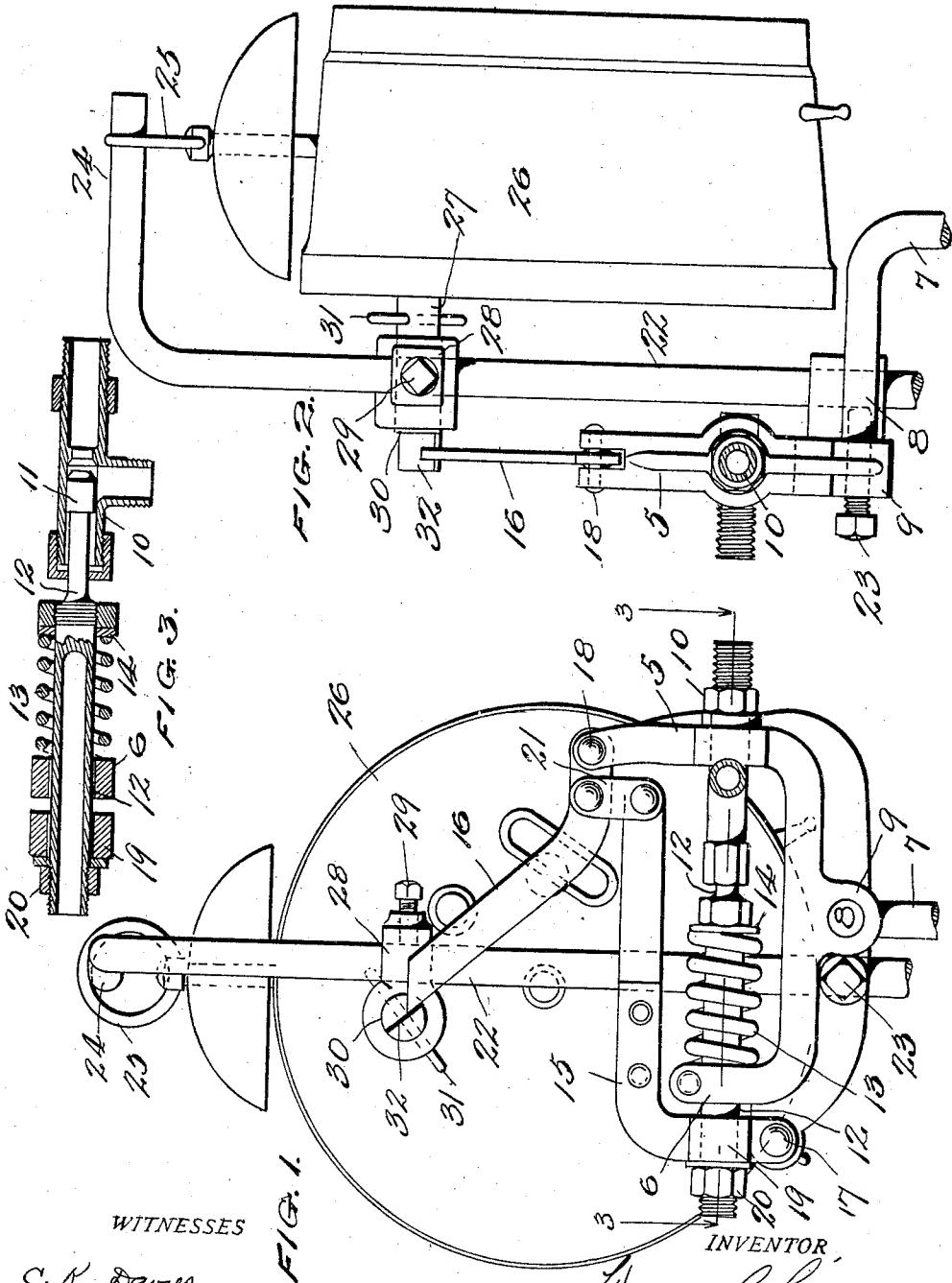


W. C. COLEMAN.
AUTOMATIC CUT-OFF.

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976,724.

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WITNESSES

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AUTOMATIC CUT-OFF.

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To all whom it may concern:

Be it known that I, WILLIAM C. COLEMAN, a citizen of the United States residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Automatic Cut-Offs, of which the following is a specification.

The present invention relates to means for automatically controlling the flow of liquids or other fluids, and more particularly those which operate under a comparatively high pressure.

The principal object is to provide a novel, simple and compact structure that may be employed in connection with any ordinary alarm clock, and comprises a controlling valve with novel and powerful mechanism governed by the alarm clock for controlling the operation of the valve.

An embodiment of the invention that is at present considered preferable is disclosed in the accompanying drawings, wherein:—

Figure 1 is a view in elevation of the mechanism showing the same with the clock thereon. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional view on the lines 3—3 of Fig. 1.

Similar reference numerals designate corresponding parts in all figures of the drawings.

In the embodiment disclosed, a substantially U-shaped supporting frame is employed, comprising a horizontal reinforced bar and upright arms 5 and 6. The frame is preferably carried on a standard 7 having an offset end 8 engaged in an ear 9 formed on the horizontal bar. The upstanding arm 5 of the frame has secured therein a suitable valve casing 10, within which is located any suitable type of valve 11, said valve having a stem 12 that is slidable in the arm 6 of the frame, and projects beyond said arm. A powerful coiled spring 13 surrounds the stem, one end of this spring bearing against the arm 6, the other having a bearing against a suitable abutment 14 mounted on the stem 12. This spring serves to urge the valve to closed position, as will be obvious.

Oppositely extending levers 15 and 16 are journaled respectively at their outer ends on the arms 6 and 5, as shown at 17 and 18. The lever 15 has a tubular bearing portion 19 that surrounds the projecting end of the stem 12, and bears against an abutment nut

20 carried thereby. The inner or free end of said lever 15 has a link connection 21 with the lever 16, contiguous to its fulcrum.

Slidably mounted in the supporting frame, is a clock-holding standard 22 that is normally held against movement in the frame by a suitable set screw 23. The upper end of the standard 22 is offset, as illustrated at 24, so that the usual ring 25 of an alarm clock 26 can be placed thereon, and consequently said clock suspended in advance of the mechanism above described. It may be stated that the clock may be of any well known type, and includes as an essential part of its make up, the winding stem 27 of the alarm mechanism. A bracket 28 is slidable upon the standard 22, and is adapted to be fixed thereto by a set screw 29. This bracket carries a rotatable gudgeon 30, which is adapted to be connected in any suitable manner to the winding stem, as by a pin 31 passing through both. The rear end of the gudgeon has a flat shoulder 32 against which the free end of the lever 16 is arranged to bear when the parts are in the position, as shown in Fig. 1.

Briefly described, the operation of the mechanism is as follows. The clock is first wound and placed in position, and the lever 16 elevated and engaged with the shoulder 32. This elevation of said lever will effect the corresponding movement of the lever 15, and the tubular portion 19, bearing against the nut 20 will move the valve 11 to open position against the action of the spring 13. The parts will remain in the relation shown until the alarm is released by the time movement, whereupon the gudgeon 30 will rotate, thus carrying the shoulder 32 from beneath the lever 16, and releasing said lever. This will permit the spring 13 to act and move the valve to closed position.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In mechanism of the character dis-

closed, the combination with a valve, of automatic means for closing the same, and time controlled means for maintaining the valve open, said latter means including a pair of
 5 levers, one of which is connected contiguous to its fulcrum to the valve and has its free end connected to the other lever contiguous to the latter fulcrum.

2. In mechanism of the character disclosed,
 10 the combination with a valve, of automatic means for closing the same, time controlled means for maintaining the valve open, said latter means including a pair of oppositely
 15 extending levers fulcrumed at their outer ends, one of said levers being connected contiguous to its fulcrum to the valve, the other being connected contiguous to the fulcrum to the free end of the first mentioned lever,
 20 and means for normally maintaining said levers in a predetermined position.

3. In mechanism of the character disclosed, the combination with a substantially
 25 U-shaped frame, of a valve casing mounted in one arm of the frame, a valve located in the casing and having a stem slidable in the other arm of the frame, a spring interposed
 30 between the arms and engaging the stem for urging the valve to closed position, oppositely extending levers fulcrumed on the arms of the frame and having a link connec-

tion between them, one of the levers engaging the valve stem, an alarm clock supporting standard mounted on the frame, and time controlled means that engages one of
 35 the levers for holding it in a predetermined position, said means being journaled on the standard.

4. In mechanism of the character disclosed, the combination with a substantially
 40 U-shaped frame, of a valve casing mounted thereon, a valve in the casing having a reciprocatory stem slidable in the frame, a spring bearing against the stem for urging the valve to closed position, a supporting
 45 standard for the frame, oppositely extending levers fulcrumed at their outer ends on the frame, one of the levers being engaged with the stem and having a link connection with the other lever, a clock supporting standard
 50 slidably mounted on the frame, means for holding the standard in fixed position, a bracket adjustably mounted on the standard, and a time controlled lever holding gudgeon
 journaled in the bracket.

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

WILLIAM C. COLEMAN.

Witnesses:

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