C. F. TOWNSAN.

VALVE ADJUSTER.

APPLICATION FILED OCT. 30, 1911.

Patented Jan. 27, 1914.

1,085,512.

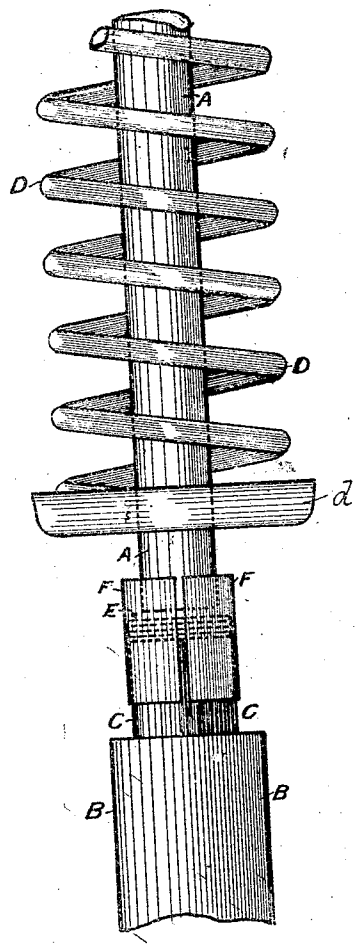


FIG. 5.

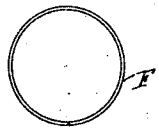


FIG. 1.

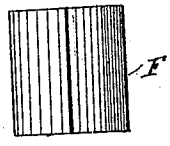


FIG. 2.

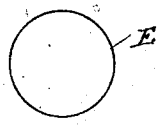


FIG. 3.



FIG. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES F. TOWNSAN, OF MITCHELL, SOUTH DAKOTA.

VALVE-ADJUSTER.

1,085,512. Specification of Letters Patent. Patented Jan. 27, 1914.

Application filed October 30, 1911. Serial No. 657,684.

To all whom it may concern:

Be it known that I, CHARLES F. TOWNSAN, a citizen of the United States, residing at Mitchell, in the county of Davison and State of South Dakota, have invented certain new and useful Improvements in Valve-Adjusters, of which the following is a specification.

This invention relates to devices for adjusting the lift of puppet valves used on internal combustion engines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a plan view, and Fig. 2 is a side view, of a spring band used in carrying out this invention. Fig. 3 is a plan view, and Fig. 4 is an end view, of an adjusting disk. Fig. 5 is a side view of portions of a push rod, and a valve stem and co-acting parts, provided with an adjuster according to this invention.

The push rod C, used to raise the valve, is slidable vertically in a stationary guide B, and the valve stem A is arranged in line with the push rod. The valve has a spring D which bears on a collar *d* secured on the valve stem, and which normally holds the valve to its seat in the usual way. The valve stem is a little smaller in diameter than the push rod.

A cylindrical spring band F is provided, and is forced partway over the upper end portion of the push rod, so that it is secured upon the push rod by its own resiliency, and forms an open-topped chamber above it having a vertical slot in one side. This slot is formed between the edges of the spring band which are separated as shown, when it is forced onto the push rod. In the chamber thus formed are placed one or more spacing or adjusting disks E. The valve stem A is arranged above the adjusting disks, in the upper part of the chamber, and is freely slidable in the chamber.

The lift of the valve is varied by inserting more or fewer disks in the chamber, and the disks can be removed and inserted at the open top of the chamber without removing the spring band from the push rod, when the valve and its stem are lifted out. The disks are removed by inserting any suitable instrument in the longitudinal opening or slot between the edges of the spring band.

What I claim is:

The combination, with a slidable push rod, and a valve stem of smaller diameter than the push rod; of a spring band encircling the end portion of the push rod and held in engagement therewith by its own resiliency and forming an open-topped chamber, for the valve stem, having a slot in one side; and an adjusting disk interposed between the push rod and the valve stem, said disk being removable from the chamber without disengaging the spring band from the push rod.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES F. TOWNSAN.

Witnesses:

T. J. SPANGLER,

IDA MCKILLIP.