This invention relates to oiling devices, and its general object is to provide an oiling device that is primarily designed for lubricating the stems of valves of internal combustion engines.

A further object of the invention is to provide an oiling device for the stems of valves of internal combustion engines, that is adapted to be disposed in communication with the oil pressure line of an engine and includes manually operated means for controlling the flow of lubricant to the stems.

Another object of the invention is to provide an oiling device for the stems of valves of an internal combustion engine that supplies the lubricant between the stems and their guides, with the result the stems will be properly lubricated so as to perform their intended function in an efficient manner.

A still further object of the invention is to provide an oiling device for the stems of valves of an internal combustion engine, that is extremely simple in construction, inexpensive to manufacture and install, and efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing our invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 illustrates our device applied to one type of internal combustion engine.

Figure 2 is a fragmentary horizontal sectional view taken through a portion of the device and the engine respectively with parts as shown in top plan.

Figure 3 is a vertical sectional view taken through one valve assembly of the engine and illustrates the oiling means for the stem of the valve.

Figure 4 is a similar view taken at right angles to Figure 3.

Figure 5 is a detail perspective view showing one of the cup shaped reservoirs.

Figure 6 is a similar view of a stem guide and the wicks therefor.

Figure 7 is a vertical sectional view taken through the valve for controlling the lubricant to the stems.

While we have illustrated our oiling device applied to an internal combustion engine of the type as shown, we want it understood that it can be applied to any type of internal combustion engine that includes valves as shown, without departing from the spirit of the invention.

The stems of the valves of the internal combustion engine as shown are indicated by the letter A and the valve springs which have their lower ends received by retainers of the usual construction by B.

Slidably receiving the stems and mounted in any well known manner in the block are stem guides 1 that have their lower ends tapered and disposed adjacent the lower ends are longitudinally disposed slots 2 that extend through the guides and are arranged in diametrically opposed relation with respect to each other.

Each of the slots have their upper and lower walls disposed in converging relation with respect to each other and are adapted to receive wicks 3 that are substantially wedge-shape as shown in Figure 6 for the purpose of fitting the slots 2 as will be apparent. The wicks 3 are of a size to engage the stems of the valves as shown in Figure 3 and may be formed from felt or other well known absorbing material.

A substantially cup-shaped reservoir 4 is provided for each guide and surrounds the latter as clearly shown in Figures 3 and 4.

Arranged in the cup-shaped reservoirs 4 are disks 6 of absorbent material that surround the guides and the reservoirs are disposed on the guides in a manner whereby the disks of absorbent material engage the wicks 3 whereby capillary action will cause the lubricant to pass from the disks 6 to the wicks 3 as will be apparent.

Each of the reservoirs are provided with an inclined bore 7 extending through the walls thereof for communication with the inner side of the reservoirs as best shown in Figure 3, and these inclined bores have their outer ends arranged in communication with straight bores which have threaded or otherwise secured therein one of the ends of branch 110.
pipe lines 8 which have their outer ends formed or secured with a pipe line 9 for communication therewith in any well known manner, and this pipe line 9 supplies the lubricant to the reservoirs through the medium of the bores and the branch pipe lines 8 as will be apparent.

The pipe line 9 has one of its ends closed by a plug or the like, while its opposite end is arranged in communication with a needle valve that includes an elbow body 10 having a seat therein to accommodate the tapered end of the stem 11 which is provided with a serrated head 12 whereby the stem can be adjusted with respect to its seat as will be apparent. Disposed in communication with the needle valve is the oil pressure pipe line 13 of the lubricating system of the engine.

From the above description and disclosure of the drawings, it will be obvious that we have provided an oiling device for the stems of the valves of internal combustion engines, that is manually controlled through the instrumentality of the needle valve as shown in Figures 1 and 7, with the result the pressure of lubricant to the valve can be regulated as desired, and by employing the cup-shaped reservoirs having projections thereon, these reservoirs not only act as such but also act as abutments for the upper ends of the coil springs. By employing the wicks and disks of absorbing material in the manner set forth, with the means of supplying lubricant to the disks, our device will perform its intended function in an efficient manner for a prolonged period of time and with minimum attention.

It is thought from the foregoing description that the advantages and novel features of our invention will be readily apparent.

We desire it to be understood that we may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

In an oiling device, the combination with a valve of an internal combustion engine and its spring, of a guide for the stem of said valve and being formed with slots extending therethrough, a wick in each slot and being engageable with said stem, a substantially cup-shaped reservoir surrounding the guide, a disk of absorbing material in the reservoir and being disposed about the wicks, a projection depending from the reservoir to receive the upper convolution of the valve spring to retain the disk in operative association with the wicks, a pipe line in communication with the pressure oil line of the engine, a branch line in communication with the pipe line and with the disk holding portion of the reservoir through the medium of an inclined bore formed in said reservoir, and a needle valve in the pipe line.

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