

(No Model.)  
C. A. FLETCHER & W. H. WILDER.

WICK ADJUSTER.

Patented May 26, 1885.



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# UNITED STATES PATENT OFFICE.

CHARLES A. FLETCHER AND WILLIAM H. WILDER, OF GARDNER, MASS.,  
ASSIGNORS TO THE AMERICAN OIL STOVE COMPANY, OF SAME PLACE.

## WICK-ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 318,714, dated May 26, 1885.

Application filed December 22, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES A. FLETCHER and WILLIAM H. WILDER, both of Gardner, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Wick Raisers or Adjusters, of which the following is a full, clear, and exact description.

This invention is more particularly designed as a wick raiser or adjuster for oil-stoves in which flat wicks of considerable width are used; and it relates to that description of wick-raisers in which duplicate toothed rotating wick raisers or spindles, arranged for operation on opposite sides of the wick and geared together to operate in unison, are used, and more particularly to that construction of such wick-raisers in which the wick-raising surfaces are grooved longitudinally and otherwise to form the teeth which bite or hold on the wick. In such wick-raisers the duplicate toothed wick-raising spindles or devices have been so constructed, pitched, and geared that they press upon the wick at directly opposite points, and where the same extend across the whole width of the wick bear upon both sides of the wick at opposite points throughout its width, thus firmly grasping or pressing the wick in between them. This rigid hold of the wick restricts the flow of oil up the wick, and consequently interferes with the proper burning of the stove or lamp.

Our invention consists in a novel construction and arrangement of the duplicate wick-raisers, whereby this defect is avoided and other advantages are obtained, substantially as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 represents a partly broken plan in part of the oil-reservoir of an oil stove or lamp with wick-tube attached and having our invention applied. Fig. 2 is a vertical section of the same on the line *x x* in Fig. 1.

A indicates the oil-reservoir, and B the wick-tube, up and down through which the flat wick C is adjusted by means of duplicate toothed

spindles D D', arranged to act upon opposite sides of the wick in the wick-tube or elsewhere, and shown as extending wholly across the wick. These spindles are geared together to rotate in unison, as by gears *c c*. They may be made either of cast or milled metal, and the one, D, of them has its shank *d* made in one piece with its toothed portion and extended through and outside of the reservoir, for operation by an attached button, *e*. The body or wick-raising portion of each spindle D D' is formed with a series of longitudinal grooves, *f*, in it and cross-grooves *g*, intersecting the longitudinal ones, thereby bearing or producing teeth *h*. Thus grooved the spindles are so geared together that the teeth *h* of either spindle alternate with the longitudinal grooves *f* of the other spindle; or, in other words, the teeth of each spindle alternate with the concave spaces between the teeth in the other spindle, and the cross-grooves *g* are also preferably so pitched that said grooves in the one spindle are intermediate of those in the other spindle. By this arrangement of the teeth of the two geared spindles, especially of the teeth in either one spindle alternately with the longitudinal grooves in the other, a positive action of the teeth at short distance apart on both or opposite sides of the wick is obtained without pressing or squeezing the wick at opposite points in between the spindles, thus allowing of a full or free flow of oil up the wick, and insuring an even and continuous action throughout the full width of the wick. This is directly the reverse of grasping the wick upon opposite sides across its whole width at opposite points, which necessarily checks the free flow of the oil, whereas by our improvement we so engage the wick that at no time during its passage between the spindles will it be compressed, and that at all times the flow of oil will be equal, and to the full capacity of the wick, each pair of teeth on the one spindle bearing on one side of the wick for or as against one intermediate tooth on the other spindle, and said bearing-points alternately from one side of the wick to the other as the raising spindles are turned, the flexibility of the wick being largely depended upon for the necessary pressure upon the bearing-surfaces,



and whereby a positive motion without obstructing the flow of the oil through the wick is obtained. Furthermore, by our arrangement of the wick-raising teeth, as described, 5 a wavy or tortuous motion is given to the wick in its passage between the spindles, whereby we are enabled to force the wick through a longer and closer wick-tube, and any slight obstruction will be more readily 10 passed or removed than is practicable with a direct or straight passage of the wick between the raising devices.

We are aware that cylinders for raising lamp-wicks have been provided with serrated 15 ribs extending entirely around the same, forming grooves between said ribs, and we therefore do not claim such invention.

Having thus described our invention, we claim as new and desire to secure by Letters 20 Patent—

1. The longitudinally-grooved wick-raising spindles geared for operation in unison, as described, so that each longitudinal rib on either spindle will register with a longitudinal groove 25 in the other spindle, substantially as described.

2. The longitudinally and transversely grooved wick-raising toothed spindles geared for operation in unison, as described, so that each longitudinal row of teeth on either spindle will register with a longitudinal groove in 30 the other spindle, substantially as described.

3. In duplicate wick-raising spindles arranged for operation on reverse sides of the wick, and geared together for action in unison, and in which the wick-raising teeth are formed 35 by longitudinal and transverse grooves in said spindles, the geared spindles *D D'*, having their longitudinal grooves *f* and transverse grooves *g* forming teeth *h*, arranged to alternate with one another both longitudinally and 40 transversely throughout the two spindles, substantially as shown and described.

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Witnesses:

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