(No Model.)

C. P. GOODSPEED.

WICK ADJUSTING MECHANISM.

No. 409,639. Patented Aug. 20, 1889.

Fig. 1.

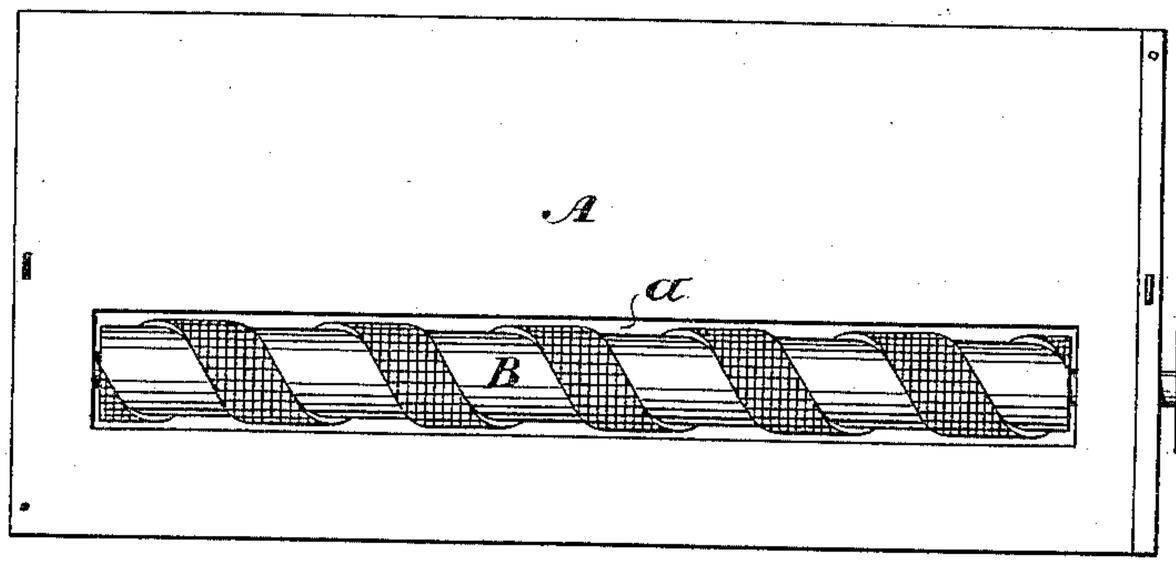


Fig. 3.

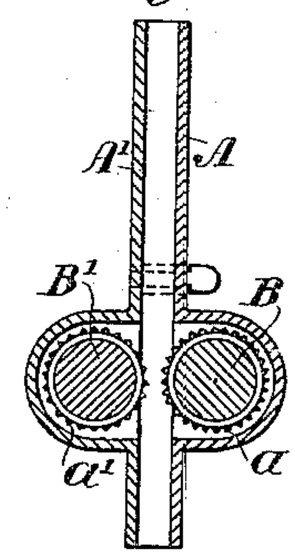


Fig. 2.

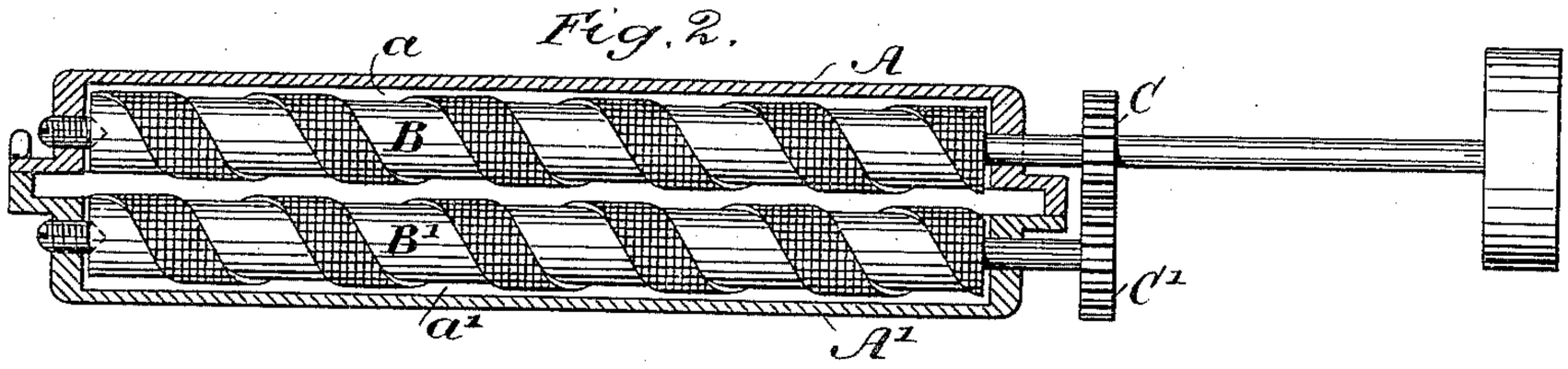
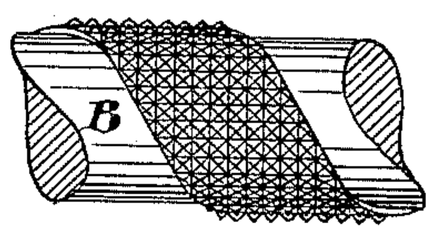


Fig. 4.



Witnesses
Geo Wadman
Richard J. Cody.

Inventor
Charles P. Goodspeed,
by his attorneys,
Gifford & Brown

UNITED STATES PATENT OFFICE.

CHARLES P. GOODSPEED, OF BROOKLYN, ASSIGNOR OF TWO-FIFTHS TO ROWLAND A. ROBBINS, OF NEW YORK, AND JAMES S. BARROW, OF BROOKLYN, NEW YORK.

WICK-ADJUSTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 409,639, dated August 20, 1889.

Application filed March 1, 1886. Serial No. 193,686. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PERRY GOODSPEED, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Wick-Adjusting Mechanism for Burners, of which the following is a specification.

My improvement relates to the combination, with a wick-tube, of a pair of rollers arranged at opposite sides and having at intervals circumferential collars and intermediate spaces where they will not pinch or squeeze the wick, and consequently where provision will be afforded for the greatest freedom for the flow of oil through the wick. The portions of the rollers between the spaces constitute the collars. I provide the collars by grooving the rollers circumferentially. Preferably the collars, if they are spiral, will run in the same direction, so that when the rollers are put in place the projecting spirals of one will extend crosswise of the spirals of the other at the opposite portions of the rollers. A suitable hold of the wick will thus be provided for the rollers, and yet the wick will not be objectionably pinched or squeezed; moreover, the wick will not be crumpled up or moved laterally.

In my present improvement I provide the collars with teeth arranged in rows extending at right angles to the axes of the rollers.

In the accompanying drawings, Figure 1 is a transverse vertical section of a wick-tube embodying my improvement. Fig. 2 is a horizontal section of the same. Fig. 3 is a view of the inner surfaces of the two halves of the wick-tube with the rollers in place. Fig. 4 is a detail of a portion of one of the rollers, on an enlarged scale, showing the projection of teeth thereon.

Similar letters of reference designate corresponding parts in all the figures.

A A′ designate the two halves of a wick-tube made of sheet metal. These halves are joined by having their edges overlapped. In the lower portions are chambers or cavities *a a′*.

B B′ are rollers arranged in the cavities *a a′* of the wick-tube and journaled in the ends thereof. They may be made of metal. They have spiral collars extending in the same direction circumferentially about the rollers. Consequently the opposite portions of the spirals extend crosswise of one another. On one journal of the rollers are gear-wheels C C′, which intermesh. One of the rollers has a journal provided with a hand-piece. By turning this hand-piece both rollers may be rotated to adjust the wick.

It will be seen that the spiral collars are provided with rows of teeth extending at right angles to the axes of the rollers, or, in other words, in the direction of movement of the wick. By this means a firm grip upon the wick is afforded, while the wick is subjected to only a slight wringing action. It will also be seen that the teeth on the collars are short and blunt, so that they assist rather in securing a firm grip of the collars on the wick by indenting themselves therein than by puncturing the wick. In rollers such as I use, if the teeth were long and sharp they would be apt to catch in the wick at different points, thus causing the wick to be raised and lowered unevenly.

By employing rollers provided with spiral collars the point of grip upon the wick is constantly varied. This is advantageous, because thereby the wringing action to which a wick is more or less subjected when being raised by the action of rollers which present straight flat circumferential surfaces to the wick is lessened, and the point of grip being varied enables oil to ascend the wick at different places, and so thoroughly supply all parts of the wick with oil. It will be observed that the rollers rotate in reverse directions, and that the spiral collars upon the rollers extend in similar directions. By this arrangement the spiral collar upon one roller tends to move the wick laterally in one direction, while the spiral collar upon the other roller tends to move the wick in the opposite direction. The two collars, therefore, operating against each other, as it were, elevate or lower the wick evenly, and all lateral or sidewise movement is prevented. If the spiral collars upon the two rollers extended in reverse directions, the tendency would be to constantly move the wick toward one end or the other of the rollers.

The teeth are arranged in rows parallel to the axes of said rolls, and are separated by grooves extended transversely and longitudinally. A uniformity of lifting action is thus obtained across the whole width of wick, while the spiral arrangement constantly shifts the hold of the teeth on the wick and thus prevents distortion thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a wick-tube, of a pair of rollers arranged at opposite sides and provided with spiral collars extending circumferentially about them in the same direction, having rows of short blunt teeth extending at right angles to the axes of the rollers, substantially as specified.

2. The combination of the wick tube or casing, the equally-geared adjacent parallel rollers, and the ribs wound spirally around the rollers and formed with teeth on lines parallel to the axes of the rollers, substantially as specified.

CHARLES P. GOODSPEED.

Witnesses:
D. H. DRISCOLL,
C. C. PALMER.

Correction in Letters Patent No. 409,639.

It is hereby certified that in Letters Patent No. 409,639, granted August 20, 1889, upon the application of Charles P. Goodspeed, of Brooklyn, New York, for an improvement in "Wick-Adjusting Mechanism," the name of the last mentioned assignee is erroneously written and printed "James S. Barrow," whereas it should be *James S. Barron*, and the Letters Patent should be read with this correction therein to conform to the record of assignments in this office.

Signed, countersigned, and sealed this 10th day of September, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,

Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,

Commissioner of Patents.