

O. Gallagher,

Permutation Lock.

No. 108343.

Patented Oct. 13, 1870.

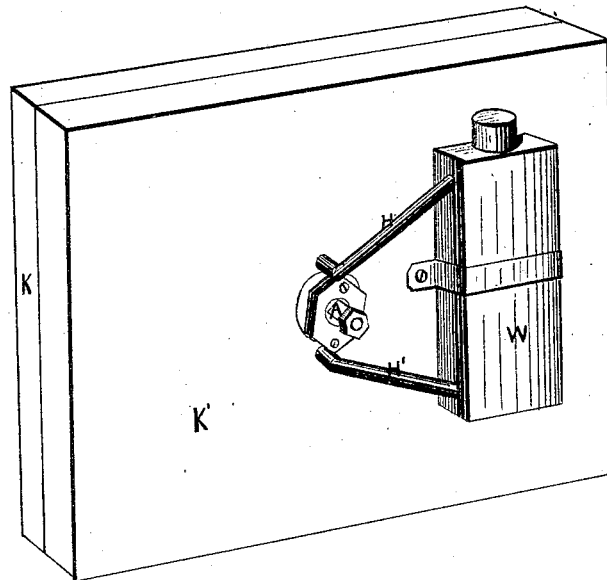


Fig. 1

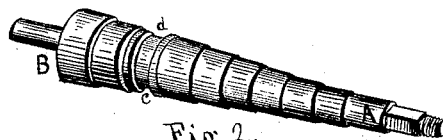


Fig. 2.

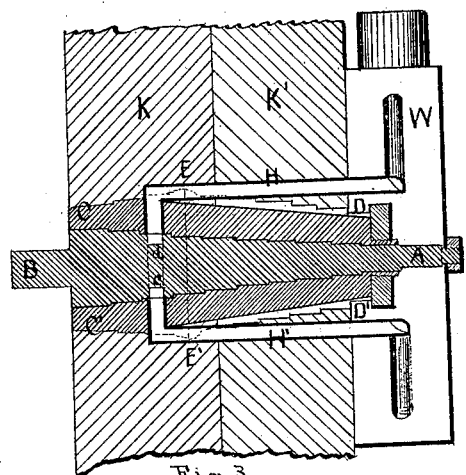


Fig. 3

Witnesses

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OWEN GALLAGHER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 108,343, dated October 18, 1870; antedated October 15, 1870.

IMPROVEMENT IN SOCKETS FOR LOCK-SPINDLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, OWEN GALLAGHER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Spindles for Locks, &c., of which the following is a complete specification.

Nature and Object of the Invention.

The nature of my invention consists—

First, in combining, with the spindle of the lock, one or more water-ways, through which a stream of water flows from and to some suitable receptacle.

Second, in making the hub in the form of a double truncated cone, being largest in the middle.

The object of my invention being—

First, to render the spindle proof against the process of softening by heat, and

Second, to prevent the hub from being either driven in or drawn out.

Description of Drawings.

Figure 1 is a perspective view from the inside of a safe door, showing the inner end of the spindle and the water-tank, and a part of the water-ways.

Figure 2 is a perspective view of the spindle.

Figure 3 is a section through the whole.

General Description.

A B figs. 2 and 3 represent the spindle, made in any desired size and form, of hardened steel.

This spindle is provided with an annular groove, *c d*, as shown.

When the spindle is in the hub C D C' D', as shown in fig. 3, the annular groove *c d* forms a water-way around the spindle, and is connected, by means of the pipes H and H', to the water-tank W, the pipes H and H' being closed at their point of contact with the

spindle by fusible plugs, the whole being so arranged that upon the application of heat to the spindle or hub, the fusible plugs will be melted, and thus establish a free communication between the grooves *c d* and the water-tank, so that it will be impossible to heat the spindle B or hub C C' sufficiently to draw the temper so long as there is any water left in the tank W, which would be an indefinite time; for, as fast as steam would be formed by heat from the spindle, it would pass upward through the pipe H into the upper part of the tank W, and there being condensed, would again form water.

The upper part of the tank may be provided with any suitable device for allowing the escape of steam in case more is formed than can be readily condensed.

The hub C' D' is made in the form of two cones, with the larger bases in contact at the dotted line E E', fig. 3, so that when it is placed between the two plates or series of plates, K K', it can neither be driven in nor pushed out.

If desirable, this double cone-shaped plug may consist of a series of short cylinders, increasing in diameter from either end toward the center of the hub, as represented in fig. 3.

Claims.

I claim—

1. The spindle A B, when provided with one or more water-ways, *c d*, arranged to serve, in connection with a water-receptacle, for the purpose set forth.

2. The combination of the double cone-shaped hub C D C' D', with the plates or series of plates K K', and the spindle A B, substantially as described, and for the purpose set forth.

Witnesses:

OWEN GALLAGHER.

FRANK G. PARKER,

JAS. S. CONANT.