W. L. McDOWELL.

DAMPER.

No. 173,321. Patented Feb. 8, 1876.

Fig. 1.

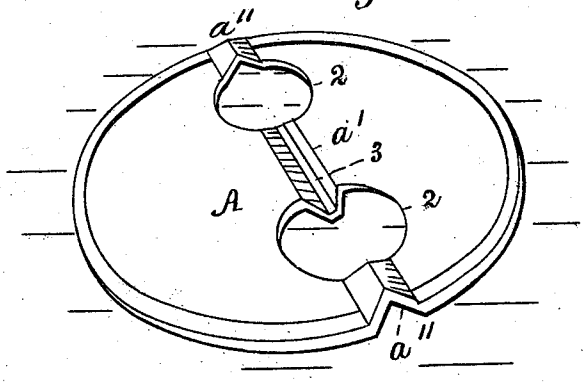


Fig. 2

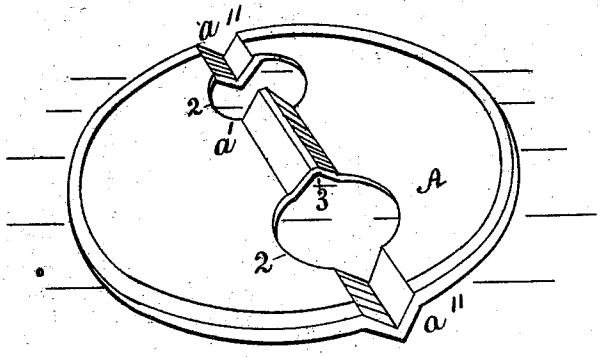


Fig. 3.

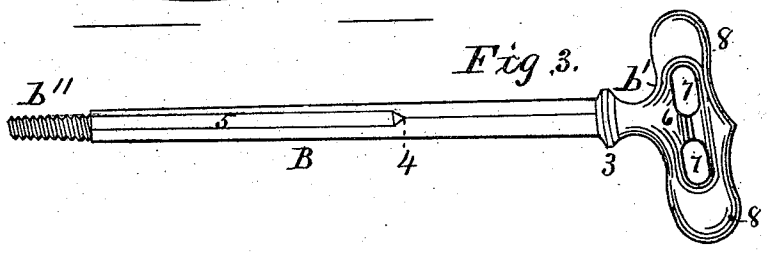
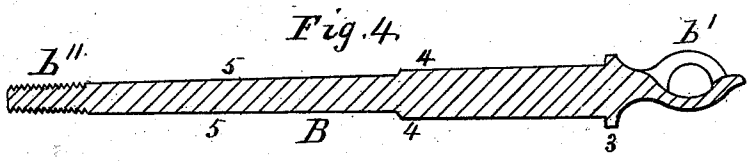


Fig. 4.



Witnesses:

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WILLIAM L. McDOWELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. **173,321**, dated February 8, 1876; application filed January 22, 1876.

To all whom it may concern:

Be it known that I, WILLIAM L. McDOWELL, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Stove-Pipe Dampers, which improvement is fully set forth and described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the upper side of the damper-plate; Fig. 2, a like view of the under side of the same plate. Fig. 3 is a plan view of the upper side of the shank, detached and enlarged; and Fig. 4 a vertical longitudinal section of Fig. 3.

My improvement relates to those stove-pipe dampers, in which the shank for supporting and operating the plate has to be inserted from the outer side of the pipe into position with the plate, while the latter is in the inside of the pipe, and, therefore, generally not visible, and attended with delay and difficulty in properly adjusting the plate and shank together in relation to the pipe, or so that the transverse handle of the shank will have its upper side in the same plane with the upper side of the plate, and thus plainly indicate the position of the latter by the position of the former; and the object of my invention is to remedy the said difficulty and delay by constructing the plate and shank in such a manner that the latter cannot be inserted into proper connection with the former in the pipe in any other manner than the proper one, as will be hereinafter explained. The upper side of the plate A (see Fig. 1) has, in a diametrical line, a sunken groove, a', between two large through-holes, 2 2, and between the outer edge of said plate A and each of the said through-holes 2 2 there is an elevation, a'' a'', the under side of each of which forms a rectangular groove in a diametrical line with the reversed groove a', so that by placing one's eye to one of the grooves at the edge of the plate A and looking through it and the opposite one, a rectangular passage will be perceived through the plate, in a diametrical line, with the exception that the middle groove a' has a small portion of its angle cut off by a narrow flat surface, 3, which extends from end to end of said groove. In Fig. 2 the under or opposite sides of the same plate and angular grooves are shown. At the upper side of the plate (see Fig. 1) the inner edge of each of the two raised grooves a'' a'' slopes upward toward the perimeter of the plate, or from the hole 2, and the two outer ends of the sunken groove a' slope downward toward the respective holes 2 2, the edges of the said holes being beveled or sloped in the same direction as shown in Fig. 1. The object in thus sloping or beveling the ends of the grooves and edges of the holes is to permit the sand within the said bevels to be lifted by the coping of the flask without breaking at the parting-line between the sand in the said coping and the drag of the flask, the latter portion of the flask at the same time retaining the pattern with that side upward which is shown in Fig. 1, until required to be lifted out of the sand, which can be done with facility, without breaking the sand or otherwise impairing the matrice. The shank B (see Figs. 3 and 4) is a straight bar of iron cast with a transverse handle, b', at its front end, and a screw-thread for the reception of a screw-nut at its rear end b''. The shank B, from its shoulder 3 to the screw b'', is square in its transverse section from 3 to 4, and from 4 to the screw b'' the upper and lower angles are cut away, as shown in the two figures 3 and 4, so as to cause this portion of said shank to correspond in its transverse section with the groove a' of the plate A. The narrow flat surfaces 5 5 produced on the shank from 4 to the screw b'' are each in the same horizontal plane of the handle b', and, consequently, in introducing the shank into the grooves of the plate, if the handle b' of the former be held in the same plane with that of the latter A, the said shank will readily pass through the plate and allow a screw-nut to be applied over its projecting end outside of the stove-pipe, (not shown,) and thus secure the damper, so that it can be adjusted to any position required as such; but if it be attempted to introduce the shank while holding its handle at any other position than in the same plane with that of the plate A, the full angle of either the right or left side of the shank will move along upon the flat portion 3 of the groove a', and, consequently, the screw end

of the shank will be raised and prevented from entering through the rear groove *a''* of the plate A, and thus demonstrate to the operator the wrong position of the said damper-plate without seeing the same, and at the same time suggesting to him the withdrawing and changing the position of said shank. The handle *b'*, of the shank B, is cast with a depression, 6, and round holes 7 7 under the two respective ends 8 8, through which holes any round piece of wood or a pocket lead-pencil may be introduced to turn the shank when hot, and this is preferable to a permanently-fixed wooden pin in a socket-handle, because the wood in such case either dries or burns loose, and soon becomes lost.

It will be understood, without any further description or explanation, that the introduction of my said shank B into the damper-plate, both constructed as described, will greatly facilitate the required adjustment of the latter in a stove-pipe, and also that the manner described of sloping or beveling the inner ends of the grooves *a'* and *a''*, and of the inner edges of the plate around the holes 2 2, will greatly facilitate the operations of molding and withdrawing the said plate from the usual flask.

I claim as my invention—

1. The combination, in a stove-pipe damper, substantially as described, of the flat portion 3 in the groove *a'* with the shank B, provided with the flat portions 5 5 at two of its opposite sides, for the purposes set forth and specified.

2. In combination with the outer end of the shank B, the handle *b'*, provided with the round holes 7 7, the depressed middle portion 6, and raised end portions 8 8, substantially as and for the purposes described.

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Witnesses:

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