

W. L. McDOWELL.

Grate.

No. 36,662.

Patented Oct. 14, 1862.

Fig 1

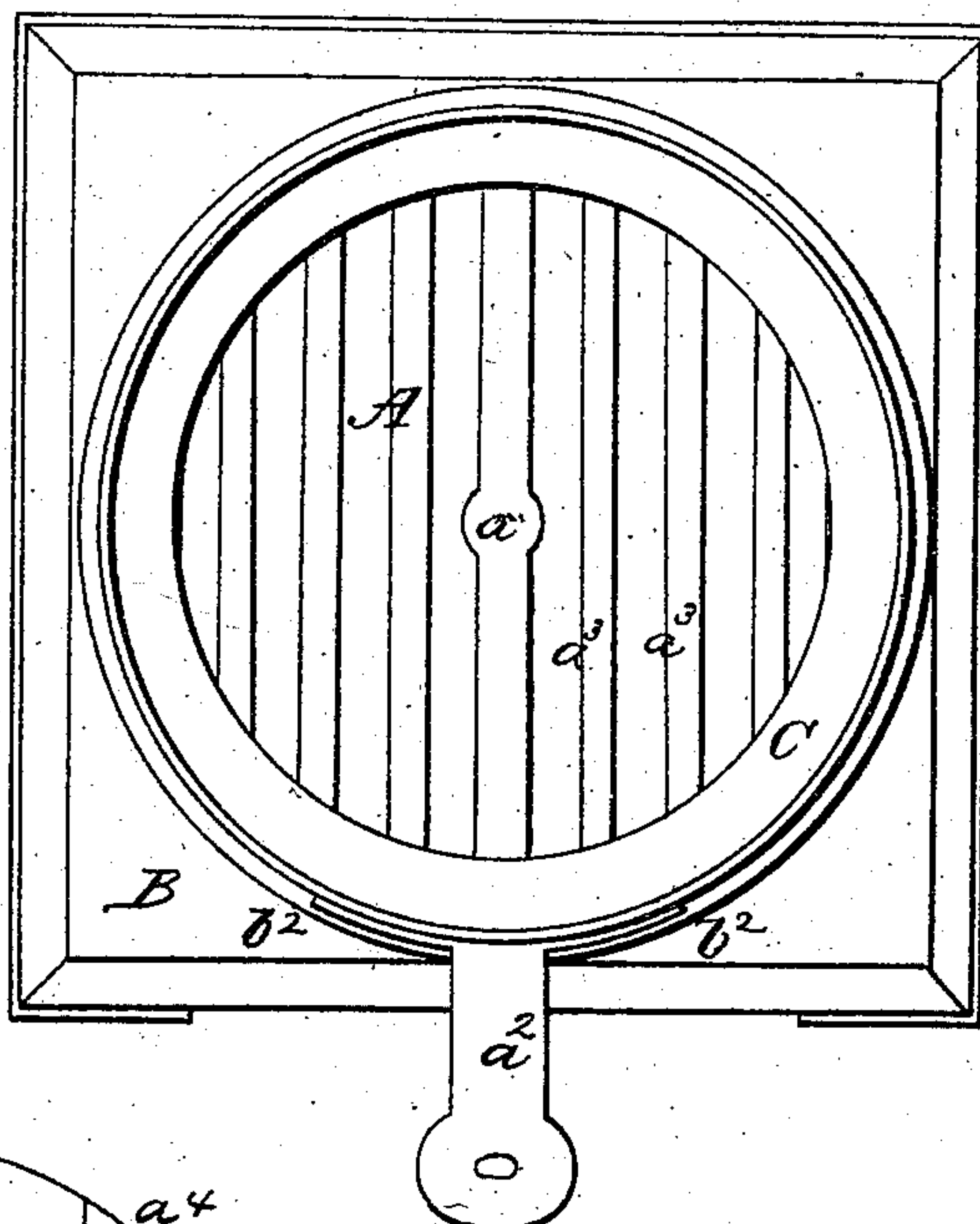


Fig. 2

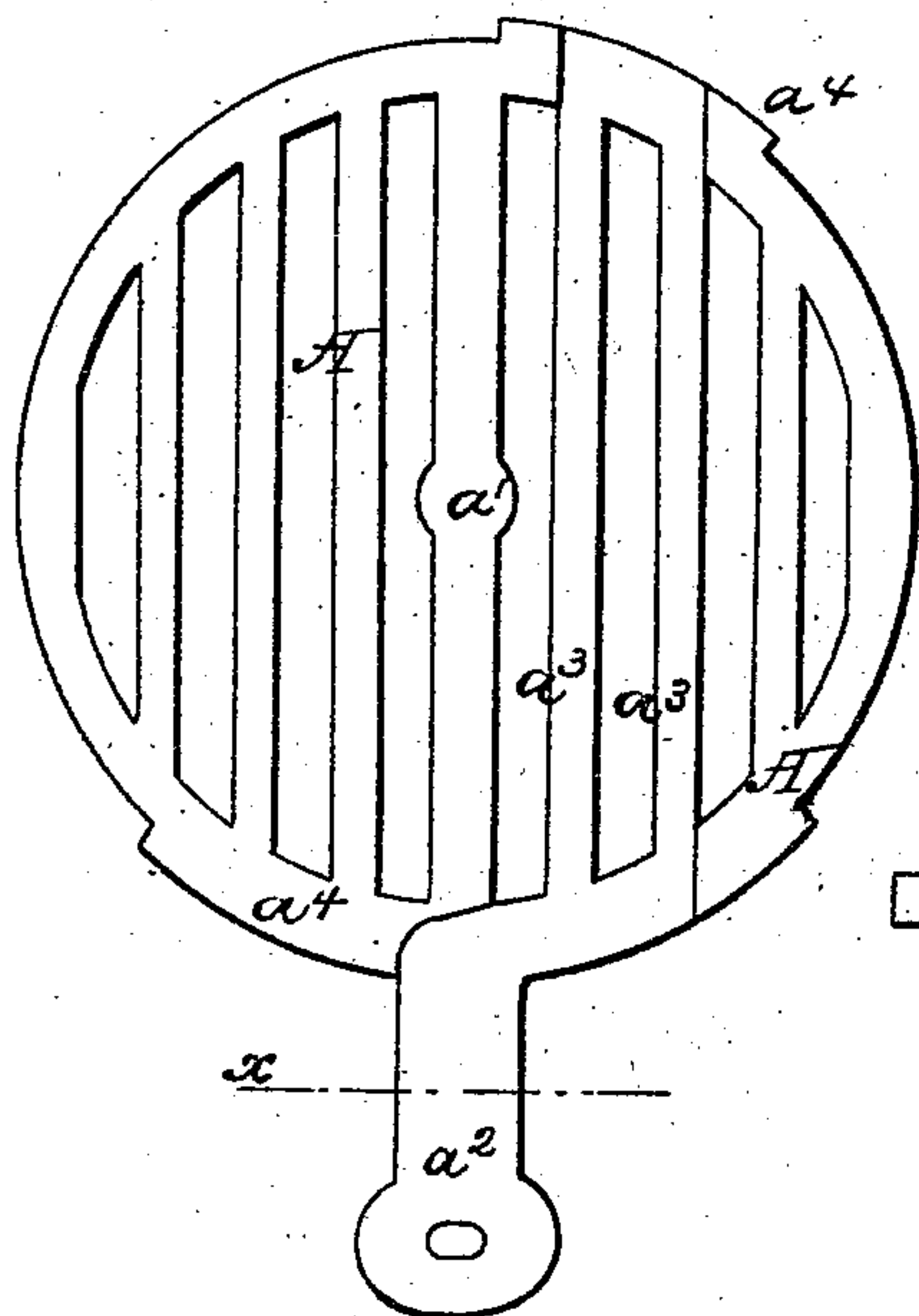


Fig. 3



Fig. 4

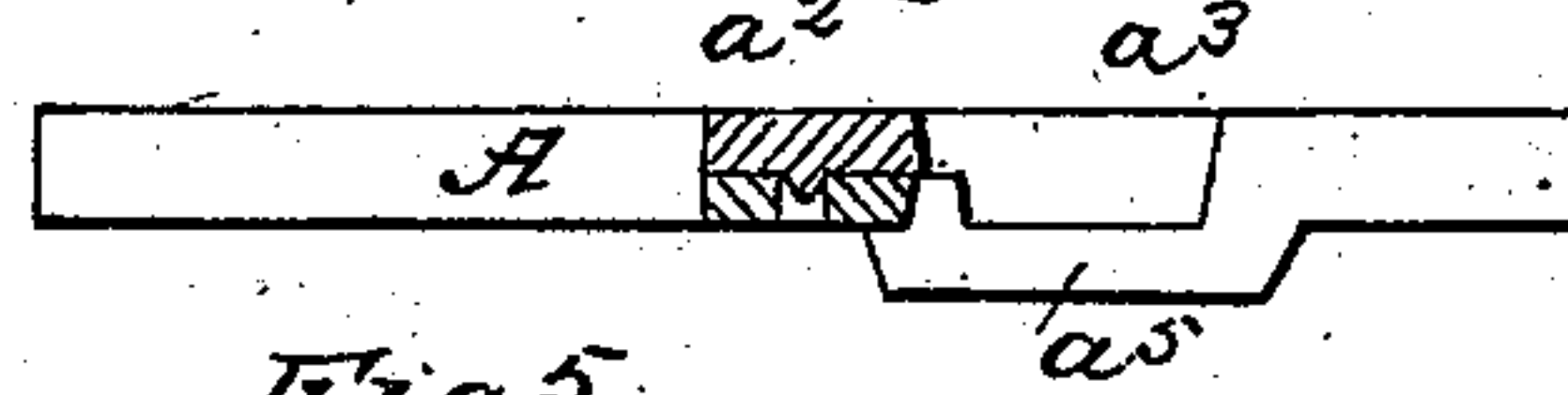
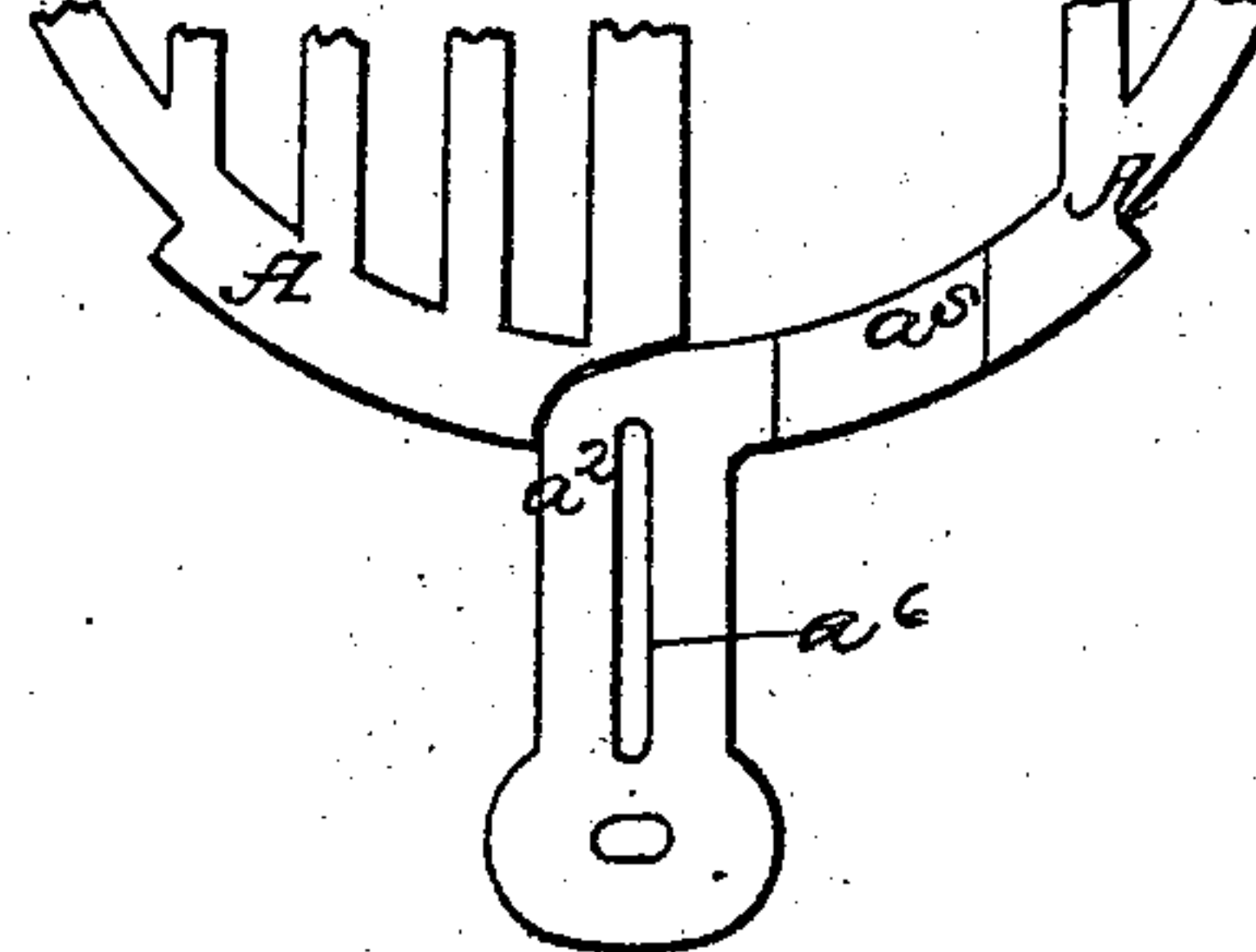


Fig. 5



witnesses
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IMPROVEMENT IN GRATES FOR STOVES.

Specification forming part of Letters Patent No. 36,662, dated October 14, 1862.

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 Vibrative Grates for Coal-Stoves and other Small Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the base of a common cylindrical stove having the improved grate applied thereto; Fig. 2, a like view of the grate detached; Fig. 3, a central transverse section of the middle bar of the said grate and of its supporting-bar; Fig. 4, a front edge view of the grate having its handle cut transversely through at the dotted line x of Fig. 2, and Fig. 5 a sectional plan view of the grate without its draw-bar.

Like letters indicate the same parts when in the different figures.

The nature of my invention consists, substantially as hereinafter described and specified, in combining a draw-bar with a horizontally-vibrative grate in such a manner that while each of the spaces between the bars of the grate will be free to allow an unobstructed course for the passage of the raking end of a hand-poker from the front to the rear side of the fire cylinder or chamber a free vibrative motion can at any time be given to the grate, whether the draw-bar be either in place or withdrawn therefrom, thus enabling the operator not only to rake the fire more perfectly by means of a poker, but to discharge the stones and cinders by vibrating the grate.

In the drawings, A is the grate; B, the base of an ordinary cylindrical coal-stove, and C the supporting-flange for the fire-cylinder of the same.

The center bar of the grate A is provided with a hollow boss, a' , which fits upon a stud or pivot in the middle of a supporting-bar, b' , fixed to the base B, so that the grate will be supported by and allowed to be turned or vibrated upon the said stud in the bar b' in the usual manner. The front edge of the grate has a handle, a^2 , which projects through a long horizontal slot, b^2 , in the front of the base in the usual manner. The handle a^2 is divided horizontally into two parts, the lower part forming a rigidly-fixed portion of the grate A, as shown in Figs. 4 and 5, while the upper

part fits accurately over the lower part and extends back from front to rear of the grate in the form of two connecting grate-bars, a^3 , the circular boundary or rim a^4 of the grate being depressed across its upper side, as at a^5 , Figs. 4 and 5, for the reception of the same, so that its handle and bars shall, when applied, come flush with the upper surface of the grate-rim. This upper or movable portion of the grate A constitutes the draw-bar.

The lower half of the handle a^2 has a straight longitudinal slot, a^6 , into which a stud, a^7 , on the under side of the upper half of the said handle a^2 fits, so as to serve, in connection with the sides of the draw-bar and the shoulders of the depressed parts a^5 of the grate-rim, to guide the bar properly in introducing it through the slot b^2 of the base B.

Operation: It will be seen that in this improved grate there is not any transverse obstructing bar whatever to interfere with or prevent a free backward and forward motion of the hooked end of a poker in raking the fire, and that the spaces between the grate-bars are each open entirely from front to rear of the fire cylinder or chamber; that a free and effective vibrative motion can be given by means of the handle a^2 to the grate, whether the draw-bar be either in place thereon or withdrawn, and that when the latter is withdrawn a sufficient opening will be produced thereby in the grate for discharging the stones and cinders by simply vibrating the grate by means of the remaining part of the handle—a combination of advantageous functions, which, it is believed, cannot be found in any other grate.

I wish it to be understood that I do not intend to confine myself to the particular manner described and set forth of combining the draw-bar with the grate; but,

Having fully described my invention and pointed out its utility, and also what I believe to be the best mode of carrying it out in practice, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a draw-bar with a vibrative grate, so that it shall form a moving part of the same and operate substantially as described, for the purposes specified.

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Witnesses:

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