

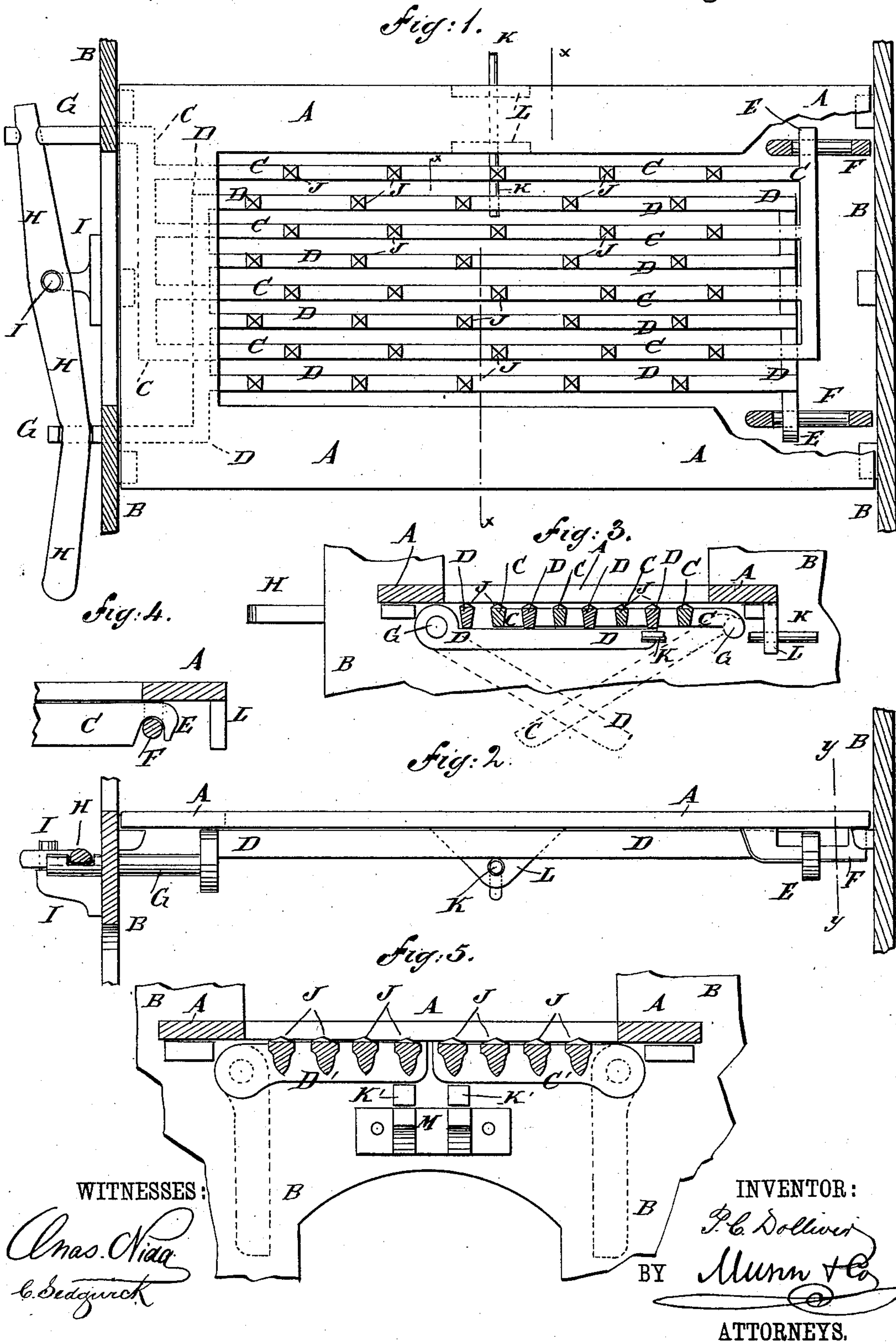
(No Model.)

P. C. DOLLIVER.

GRATE FOR STOVES AND FURNACES.

No. 367,376.

Patented Aug. 2, 1887.



UNITED STATES PATENT OFFICE.

PILLSBURY C. DOLLIVER, OF AUGUSTA, MAINE.

GRATE FOR STOVES AND FURNACES.

SPECIFICATION forming part of Letters Patent No. 367,376, dated August 2, 1887.

Application filed April 6, 1886. Serial No. 197,961. (No model.)

To all-whom it may concern:

Be it known that I, PILLSBURY C. DOLLIVER, of Augusta, in the county of Kennebec and State of Maine, have invented a new and useful Improvement in Grates for Stoves and Furnaces, of which the following is a full, clear, and exact description.

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

Figure 1 is a plan view of my improved grate, parts being broken away. Fig. 2 is a front elevation of the same, the shaking-lever being shown in section. Fig. 3 is a sectional end elevation of the same, taken through the broken line *x x x*, Fig. 1. Fig. 4 is a sectional end elevation of a part of the same, taken through the line *y y*, Fig. 2. Fig. 5 is a sectional end elevation of a grate, showing a modification of construction.

The object of this invention is to provide grates for stoves and furnaces, constructed in such a manner that the ashes can be readily shaken from the coal without injury to the fire-brick, grate, or stoves, and that the said grates can be readily dumped.

The invention consists in the construction and combination of the various parts of the grate, as will be hereinafter fully described.

A represents the frame of the grate, which is designed to be supported by lugs formed upon the walls B of the fire-chamber, in the ordinary manner. The grate is made in two parts or sections, C D, each consisting of longitudinal bars connected at their ends by end bars. The two sections of the grate overlap each other, so that the longitudinal bars of the said sections will alternate, the end bars of the lower section being formed upon the lower edges of the ends of the longitudinal bars of the said section, so that the upper edges of the longitudinal bars of the two sections will be flush with each other, as shown in Fig. 3.

Upon the outer corners of one end of the sections C D are formed hooks E, which engage with keepers F, formed upon the lower sides of the side bars of the frame A. The keepers F are made so long that the grate-sections C D can have the necessary longi-

tudinal vibration. Upon the outer corners of the other ends of the sections C D are formed pivots G, which slide and rock in bearings in the wall B of the stove or furnace. The projecting ends of the pivots G are recessed upon the upper side to receive the lever H, which is pivoted to a bracket, I, formed upon or attached to the wall B, midway between the pivots G, so that the sections C D can be vibrated by operating the said lever H. By this construction the sections C D, when vibrated, will always move at the same time and in opposite directions, and will thus operate more effectively upon the coal to sift out the ashes than if said sections moved in the same direction. The vibration of the sections C D is made still more effective by pyramidal projections J, formed upon the upper edges of the longitudinal bars of the said sections, which agitate the coal, but are prevented from carrying the coal with them by having inclined sides.

The sections C D are supported in place, when raised into a horizontal position, by one or more bolts, K, which slide in keepers L, formed upon the frame A, so that they can be pushed inward beneath the lower edge of the outer longitudinal bar of the lower section, D, and which, when drawn outward, allow the sections C D to swing downward and dump the coal.

If desired, the sections C' D' can be made to meet at the central line of the frame A without overlapping, as illustrated in Fig. 5, in which case the supporting-bolts K' must be arranged to engage with the end bars of the grate-sections C' D', must be made long to serve as slides for the said sections to be vibrated upon, and should be supported by brackets M, formed upon or secured to the inner surface of the wall B of the stove or furnace.

With my improved grate the grate-sections are below the level of the frame A, so that fire-brick resting upon the said frame cannot be injured by the said sections C D, or by the coal moved by the vibration of the said sections.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent--

1. The combination, with the grate-frame having the keepers F, of the oppositely-pivoted grate sections, provided with pivots G at one end and hooks E, engaging the keepers F
5 at the opposite end, and a sliding support, as K, substantially as shown and described.

2. The combination, with the grate-frame, of the overlapping oppositely-pivoted grate-sections C D, the sliding bolt K for supporting
10 said sections in their normal positions, and the pivoted operating-lever H, engaging recesses in the pivots of the grate-sections, substantially as shown and described.

3. A grate consisting of two overlapping
15 pivoted sections, the longitudinal bars of which alternate, in combination with a sup-

port, as K', and an operating device, substantially as shown and described.

4. A grate consisting, essentially, of two oppositely-pivoted grate-sections, the longitudinal and cross bars of one section being in
20 the same plane and the longitudinal bars of the other section being above the plane of the cross-bars thereof, one of said sections having support from the other section, in combination
25 with the operating devices, substantially as shown and described.

PILLSBURY C. DOLLIVER.

Witnesses:

LEWIS SELBING,
O. O. STETSON.