

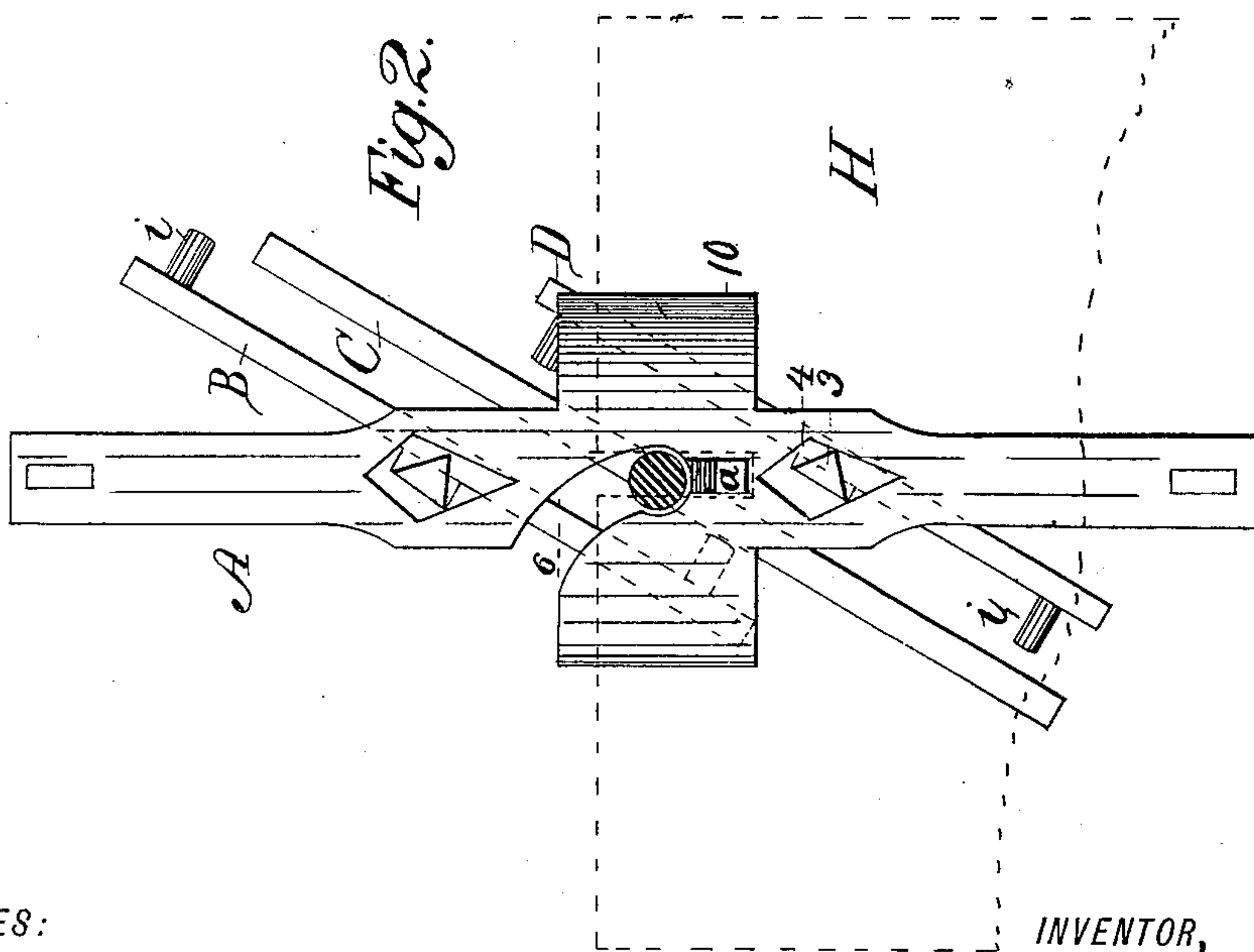
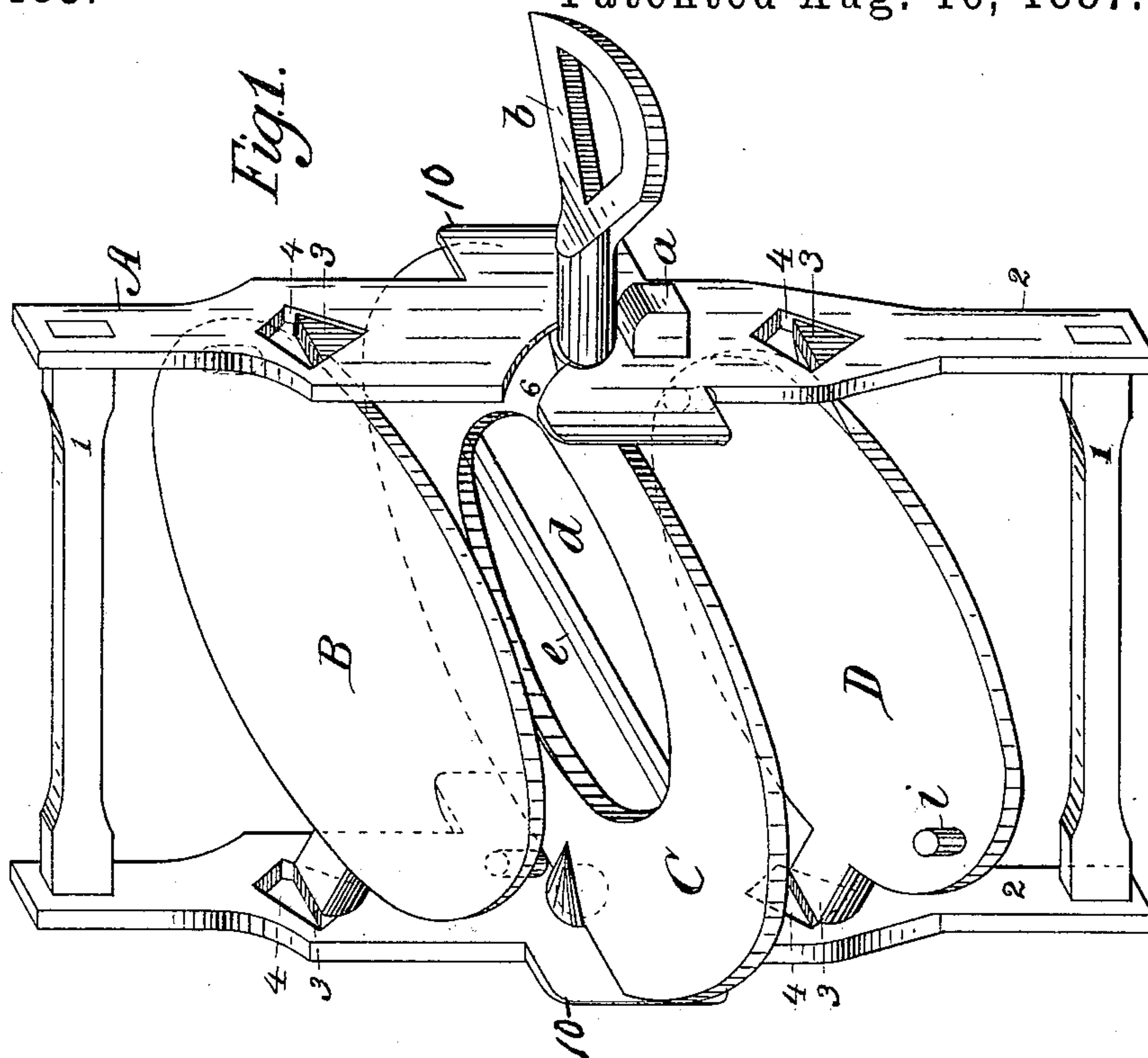
(No Model.)

B. C. OBLINGER.

STOVE PIPE DAMPER.

No. 368,485.

Patented Aug. 16, 1887.



WITNESSES:

Orish'd. W. Wake
H. W. Hodgdon

INVENTOR,

B. C. Oblinger
BY *J. C. Hodgdon*
ATTORNEY.

UNITED STATES PATENT OFFICE.

BARRETT C. OBLINGER, OF INDEPENDENCE, MISSOURI.

STOVE-PIPE DAMPER.

SPECIFICATION forming part of Letters Patent No. 368,485, dated August 16, 1887.

Application filed November 29, 1886. Serial No. 220,132. (No model.)

To all whom it may concern:

Be it known that I, BARRETT C. OBLINGER, of Independence, Jackson county, Missouri, have invented certain new and useful Improvements in Stove-Pipe Dampers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My present invention relates to an improvement in dampers, and more particularly to that class of stove-pipe dampers in which deflecting-plates are used for the purpose of allowing a free passage for the products of combustion while at the same time retarding the passage of the heat; and my invention consists in certain novel features of construction and combinations of parts, as will be more fully described hereinafter, and pointed out in the claims.

In the drawings, which illustrate the manner of carrying out my invention, Figure 1 is a perspective view of the damper with the plates in a closed position, and Fig. 2 is a sectional elevation of the same, looking toward the right-hand side of Fig. 1, and showing the plates in an open position.

In the construction of my damper I provide a rectangular frame, A, which consists of opposite side bars or plates, 2, and cross-bars 1, and which supports the several plates independently of each other, as shown.

The main operating-plate C is loosely journaled in the sides of the frame A, and is provided with an operating-handle, *b*, projecting from one side thereof through one of the side bars, 2, and out through the stove-pipe a suitable distance.

The deflecting-plates B and D are loosely journaled in the frame A, on opposite sides of the plate C, and each at a distance therefrom not to exceed one-half of the distance between the points on the plate C which are intended to come in contact with the plates B and D, respectively.

It should be observed that the several plates are not in any way secured together, and that they are free to be rotated to a limited extent independently of each other, though, of course, as the upper and lower plates are not provided with a handle, they cannot be turned from the outside of the pipe, and must be op-

erated by the main plate, which is provided with a handle, as before stated.

The frame A is to be placed in the first joint of pipe above the stove, at the upper end of the joint, and is supported in position by lugs *a*, which project from the outer surface of the side bars, 2, and rest upon the edge of the pipe, and for the purpose of allowing the next joint above to lap over the lower one a sufficient distance (as usual) opposite notches for the reception of said lugs should be cut in the joint of pipe H, as clearly shown in Fig. 2; and if still a greater amount of lap is desired between the two joints of pipe notches corresponding in location to those made in the lower joint can be made in the upper one, as may be desired.

If the notches in the pipe should inadvertently be made so much larger than the lugs as to leave an opening through which smoke could escape, the lateral projections or wings 10 on the side bars will cover said opening, and thus prevent any escape of the products of combustion into the room in which the stove is located. Said wings are preferably cast integral with the side bars, as I propose to make said bars of cast metal—in fact, the entire damper should be constructed of cast-iron, as such material can be cheaply produced.

The main plate C is provided with a central opening, *d*, in the usual manner, and with suitable journals which engage bearings in the side bars, all as shown. As there is no way of placing main plate C in the frame after it has been cast entire with handle *b* upon it, except to cut a slot in one of the side bars, I therefore provide such a slot, 6, and it extends from one of the bearings in the side bar in a diagonal direction to one edge of same. With this construction the main plate C can be placed in the frame by locating the journal that is opposite the handle *b* in its bearing and afterward locating the other journal, that carries the said handle on its outer end, in the slot 6, as indicated in the drawings.

Suitable bearings for the upper and lower plates are formed in the side bars for the reception of the journals carried by said plates, and although these bearings may consist simply of a circular aperture, and although the journals on the plates may be round, so as to engage the circular bearings just mentioned,

yet I prefer to make the bearings for said plates triangular in cross-section, as shown, as I have found that such bearings will not permit the plates to be turned so easily as a round bearing would, and that more friction will be generated by them, and that said plates will therefore be more likely to retain the position in which they are placed than they otherwise would.

For the purpose of assisting the upper and lower plates in dropping into a closed position after they have been started by contact of the main plate, I locate the journals of said plates a short distance above the upper surface thereof, thereby locating their center of gravity somewhat below the plane in which the bearings are located. I would say, however, that the bearings for these plates may be formed in the usual manner, if desired, and that they will still operate with a good degree of economy.

Upwardly-projecting lugs *i* are oppositely located on the lower surface of the upper plate, B, and the upper surface of the lower plate, D, respectively, for the purpose of receiving the impact of the main plate C. Still such lugs may be dispensed with, if desired. A small bar, *e*, is located diametrically across the central opening, *d*, in the main plate C, which is engaged by the lugs *i* during the operation of the damper, and the function of said bar is to prevent the said lugs and the respective edges of the plates which carry them from entering into the central opening of the main plate, which they might forcibly engage were the bar not provided, and thereby lock the main plate and another one together in such a manner that they could not be rotated.

3 indicates the triangular journals of the upper and lower plates, and 4 the triangular or diamond-shaped bearings for the same in the side bars.

When the several plates composing the damper have, by reason of use, become covered with an accumulation of soot, they may be readily and thoroughly cleaned without removing from the pipe by partly rotating the main plate in one direction by means of handle *b*, and then quickly reversing the movement, thus causing the upper and lower surfaces of same alternately to forcibly strike the lugs *i* on the other plates and jar the soot from them and also from itself at the same time.

Having thus described my invention, what I claim is—

1. In a stove-pipe damper, a suitable frame, in combination with a main operating-plate having a central aperture and a suitable handle, and separate and independent deflecting-plates journaled upon opposite sides of said operating-plate, the latter having a diameter one-half of which is greater than the distance between the plates, substantially as described.

2. In a stove-pipe damper, a suitable frame adapted to be removably located in the pipe at the junction of two sections, said frame being provided with lugs adapted to rest in apertures in the pipe, in combination with plates independently journaled in said frame, substantially as described.

3. In a stove-pipe damper, a suitable frame provided with bearings in its side bars, in combination with plates separately and independently located in said frame and provided with journals adapted to turn in said bearings, substantially as described.

4. In a stove-pipe damper, a suitable frame, in combination with a series of separate and independent plates, one of said plates having a diameter one-half of which is greater than the distance between the plates, substantially as described.

5. In a stove-pipe damper, a supporting-frame adapted to removably fit in a stove-pipe, the side bars of said frame being provided with oppositely-located angular apertures, in combination with two or more plates loosely mounted in said frame, and provided with angular journals which have their bearings in said angular apertures, substantially as described.

6. The combination, in a stove pipe damper, of the frame A, upper plate, B, main plate C, having central aperture, *d*, bar *e*, extending across said aperture, and handle *b*, and lower plate, D, provided with upwardly-projecting lugs *i* on its upper surface, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BARRETT C. OBLINGER.

Witnesses:

THOS. B. MCAULEY,
F. E. PARKER.