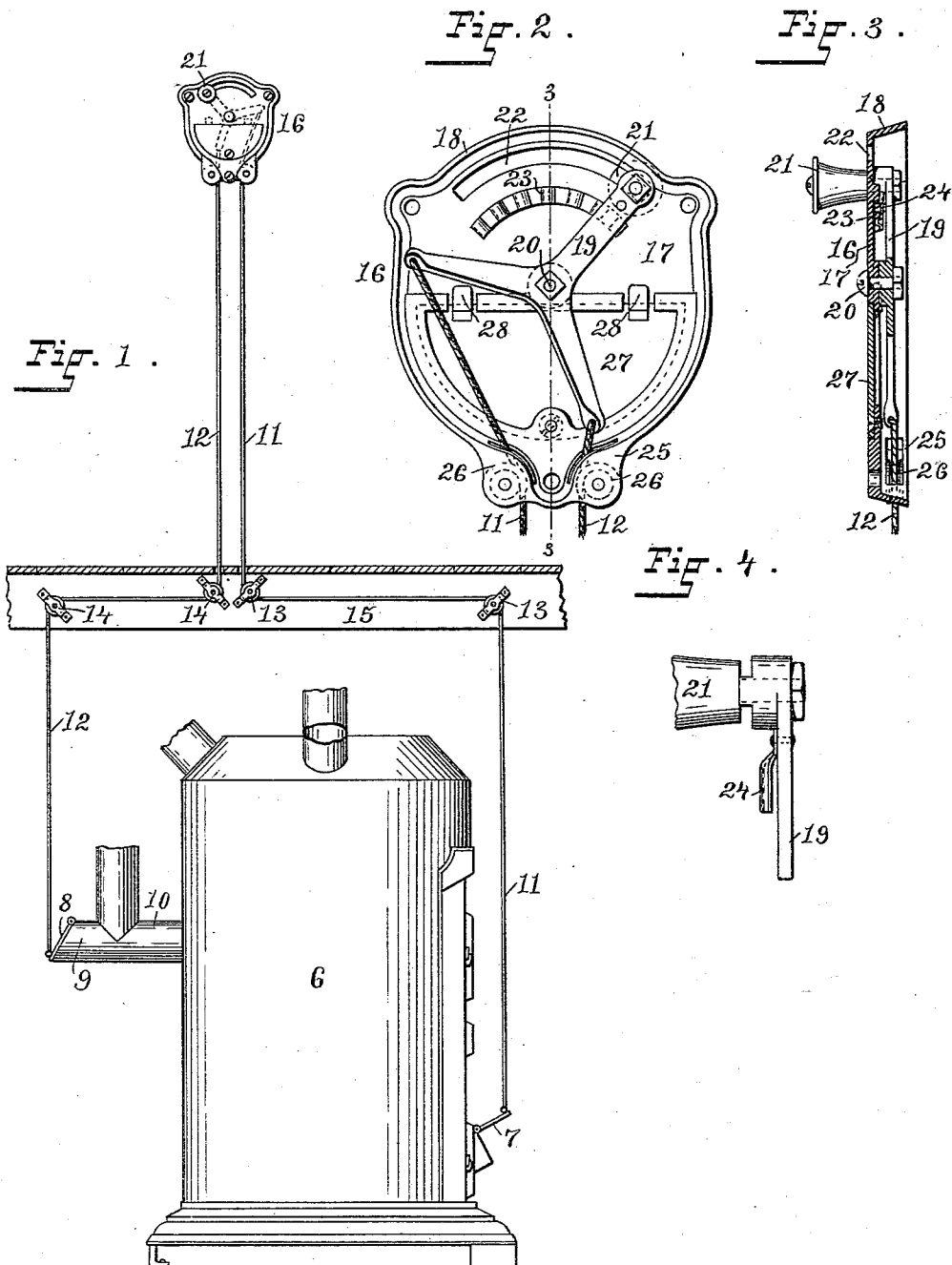


(No Model.)

W. C. HIGGINS.
FURNACE DAMPER REGULATOR.

No. 379,395.

Patented Mar. 13, 1888.



WITNESSES:

Chas. H. Luther Jr.
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UNITED STATES PATENT OFFICE.

WERTER C. HIGGINS, OF NORWICH, CONNECTICUT.

FURNACE-DAMPER REGULATOR.

SPECIFICATION forming part of Letters Patent No. 379,395, dated March 13, 1888.

Application filed June 8, 1887. Serial No. 240,587. (No model.)

To all whom it may concern:

Be it known that I, WERTER C. HIGGINS, of Norwich, in the county of New London and State of Connecticut, have invented certain
5 new and useful Improvements in Furnace-Damper Regulators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention relates to mechanism for regulating the positions of the dampers of a furnace in order to regulate the draft of the furnace.

The object of my invention is to provide
15 means for regulating the dampers from a point or points remote from the furnace, so that in a house having the furnace located in the cellar or lower floor the dampers of the furnace, and accordingly the draft, may be regulated and
20 controlled at will from the floors above the floor where the furnace is situated, and without having to go near the same.

To the above purpose my invention consists in the novel and peculiar arrangement
25 and construction of the several parts of the mechanism, all as hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 shows an ordinary furnace provided with a front and back damper
30 for controlling the draft. These dampers are each connected by means of cordings with the regulator, which is situated in the story or floor above the furnace. Fig. 2 represents an enlarged back view of the regulator with portions of the attached cordings. Fig. 3 represents a sectional view of the regulator, taken on line 3 3 in Fig. 2. Fig. 4 represents an enlarged view of a portion of the three-armed
40 rocker and attached handle.

In the said drawings like numbers of reference designate corresponding parts throughout.

Referring to the drawings, the number 6
45 designates an ordinary hot-air furnace, having the front damper, 7, located in the ash-pit door, and the back damper, 8, which consists in a hinged plate placed over the open end of the extension 9 of the smoke-pipe 10. The
50 offices of these respective dampers will be at

once understood by those familiar with furnaces. In order to place both these dampers under the control of a person at a remote point from the furnace, I connect the respective front and back dampers with the cordings 11 and
55 12, respectively, and these cordings are passed over the sets of pulleys 13 and 14, respectively, which are secured to the floor 15. Thence the cordings pass through the floor and lead to the regulator 16, which may be secured to any
60 convenient object in the story above.

The regulator 16 consists in a plate, 17, having the marginal flange 18, forming a concavity at the back of the plate. The cordings are controlled by the three-armed rocker 19, the
65 two lower arms of which are formed with eyes at their ends to receive and secure the ends of the cordings. The rocker 19 is pivoted at 20 to the plate 17, and the upper arm of the rocker is provided with a handle, 21, which
70 projects through the curved slot 22, formed in the plate 17. Below the slot 22 is arranged in an arc a set of stops, 23, which are engaged by the spring 24, secured upon the upper arm of the rocker. The rocker 19 may be moved on
75 its pivotal center in an evident manner, and the spring 24 will bear upon the series of stops 23, so as to hold the rocker at any point of its throw. At the lower end of the plate 17 is constructed a bracket or frame, 25, in which
80 are mounted the sheaves 26, over which pass the cordings 11 and 12, respectively. The lower half, 27, of the plate 17 is made removable, and is provided with the locking-lugs 28, so that the section 27 may be readily removed
85 and replaced in order to gain access to the rocker and cordage when the regulator is secured upon a flat surface.

From the foregoing description it will be at once evident that if the connections or cordings 11 and 12 be properly adjusted the movements of the rocker 19 of the regulator will serve to operate the respective dampers 7 and 8 in opposite ways—that is, when one damper
90 is opened the other will be closed.

By virtue of my improvements these dampers may be easily regulated from a point remote from the furnace, and in as an effective manner as if the manipulator were at the furnace. It is to be understood that the cordings
95 100

11 and 12 may be connected with more than one of the regulators 16, which may be located in the different floors of a house.

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

1. The combination, with the dampers of a furnace, of the regulator comprising the bed-plate 17 and the three-armed rocker 19, pivoted at 20 to the said plate and provided with
10 the spring 24, the set of stops 23, mounted on the said plate and engaged by the said spring, and the cordings 11 and 12, connecting the respective two arms of the rocker with the dampers, substantially as and for the purpose herein
15 described.

2. The combination, with the flanged bed-plate 17, formed with the curved slot 22 and provided with the set of stops 23, of the three-armed rocker 19, pivoted at 20 to the said plate
20 and provided with the spring 24, engaging the said set of stops, and having a handle, 21, projecting through the slot 22, substantially as and for the purpose herein described.

3. The combination, with the dampers of a
25 furnace, of the regulator consisting in the bed-plate 17, formed with the slot 22 and provided with the stops 23, and the frame 25, having the guide sheaves 26 mounted therein, the

three-armed rocker 19, pivoted at 20 on the said plate and provided with the spring 24 for
30 engaging the stops, the handle 21 on the rocker, projecting through the slot 22, and the cordings 11 and 12, passing over sheaves 26 and connected to the two respective arms of the rocker and to the dampers, substantially as and for the
35 purpose herein described.

4. The combination, with the dampers of a furnace, of the regulator consisting in the flanged bed-plate 17, formed with the slot 22 and provided with the stops 23, the remov-
40 able section 27, having lugs 28 and mounted on the plate 17, the bracket 25 on the plate, provided with the guide-sheaves 26, the three-armed rocker 19, pivoted at 20 to the said plate and provided with the spring 24, engaging the
45 said stops, and having the handle 21, taking through slot 22, the cordings 11 and 12, passing over the said sheaves 26 and connected intermediate the two respective arms of the said rocker, and the dampers, substantially as
50 and for the purpose herein described.

WERTER C. HIGGINS.

Witnesses:

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