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PATENTED JUNE 4, 1907.

H. A. STARR.
DAMPER MECHANISM.
APPLICATION FILED AUG. 1, 1906.

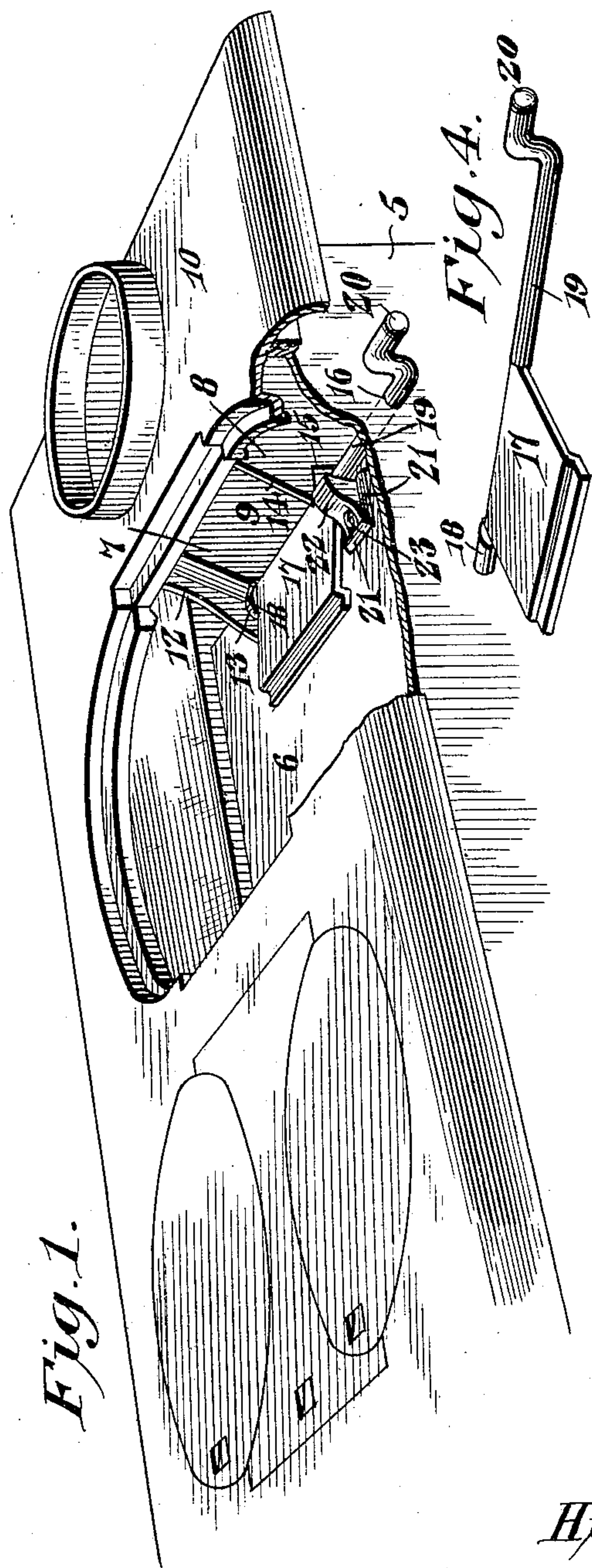


Fig. 3.

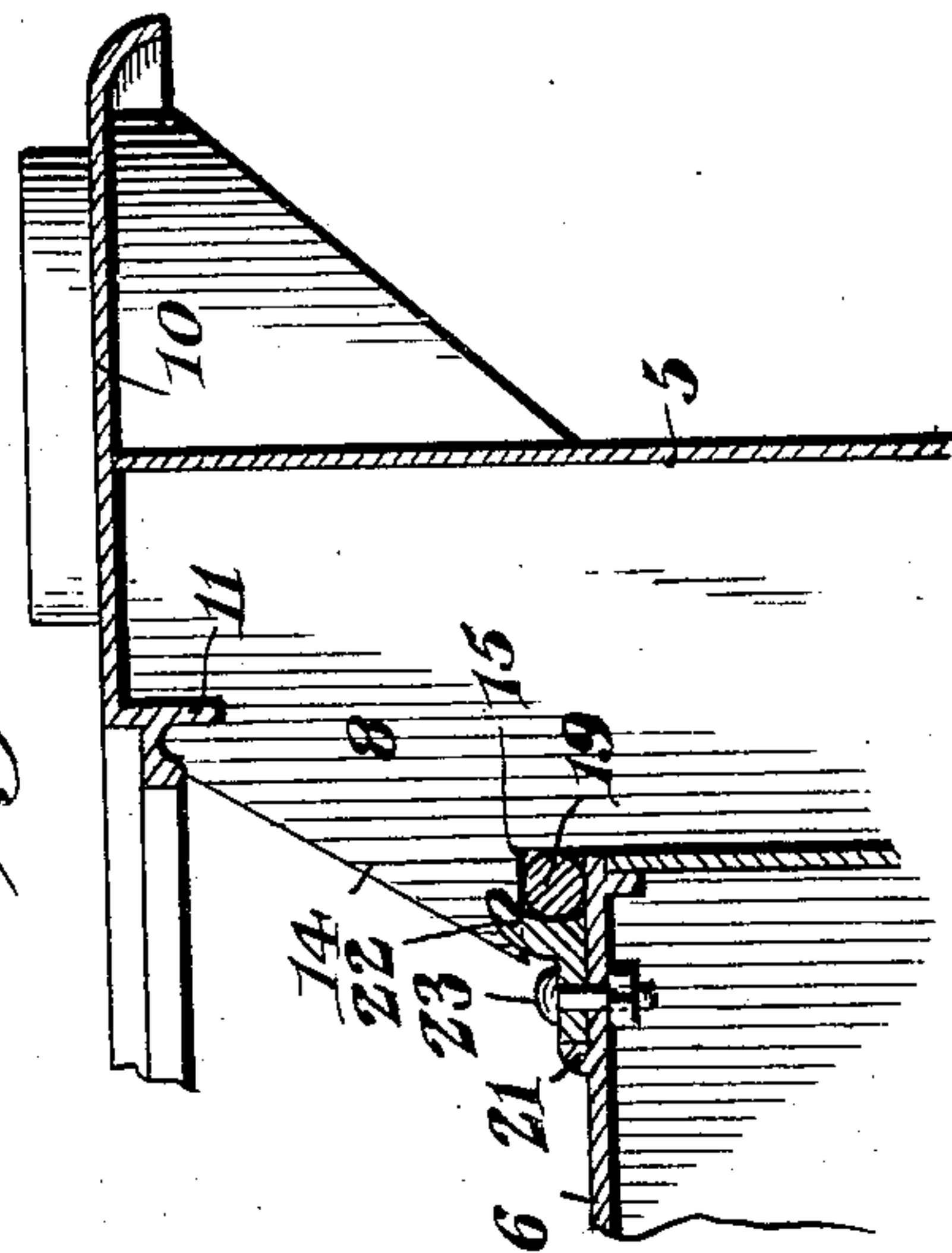
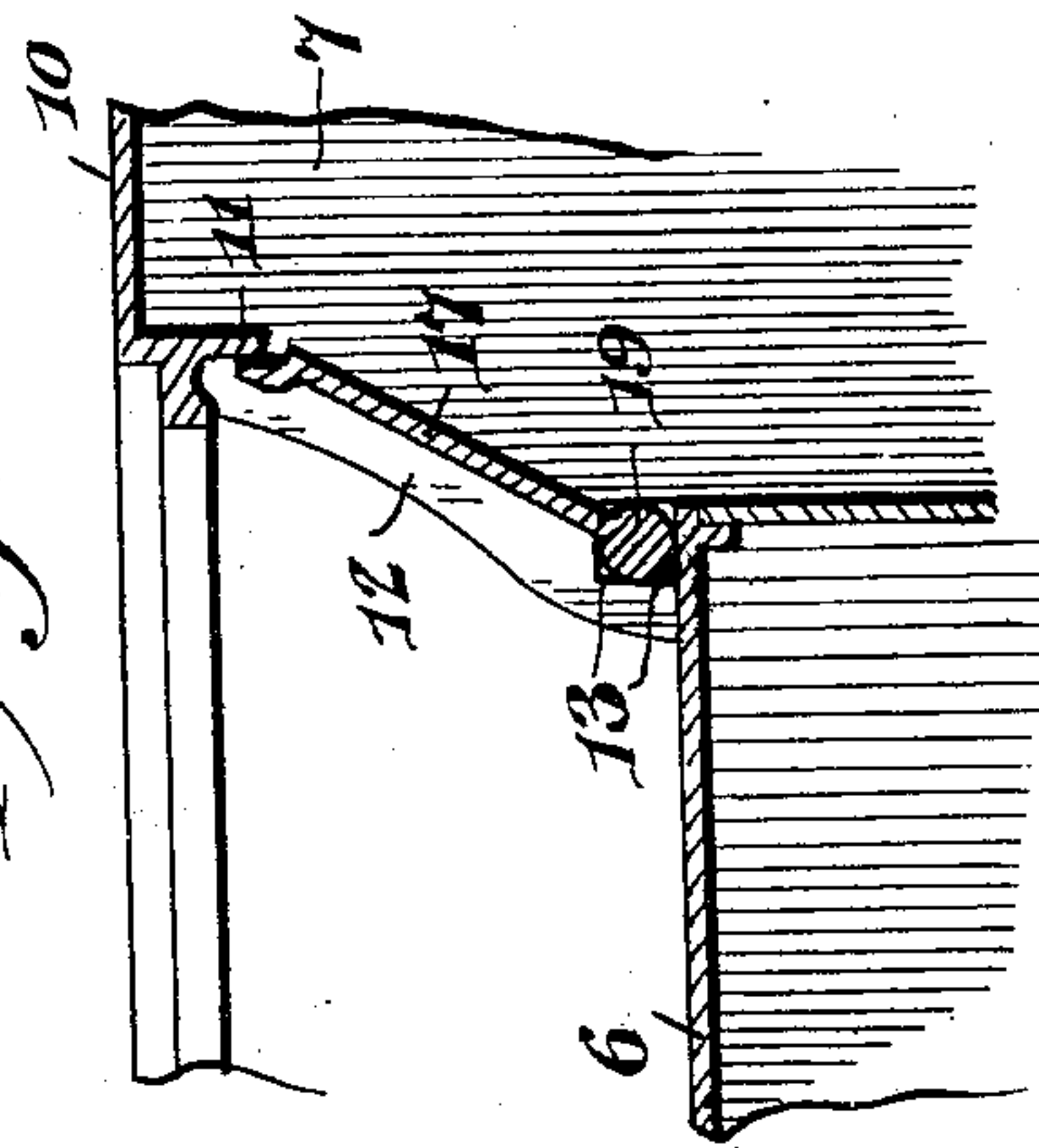


Fig. 2.



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HILLYARD AUGUSTUS STARR, OF EAST CHATTANOOGA, TENNESSEE.

DAMPER MECHANISM.

No. 856,107.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed August 1, 1906. Serial No. 328,768.

To all whom it may concern:

Be it known that I, HILLYARD AUGUSTUS STARR, a citizen of the United States, residing at East Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Damper Mechanism, of which the following is a specification.

The present invention relates to dampers for stoves, and one of the principal objects is to provide simple and novel damper mechanism, which can be readily placed in position in the stove after such stove has been completely assembled, the structure moreover being such that there is little liability of the movable parts binding or warping from exposure to heat.

A still further and important object is to provide damper mechanism, which is so simple that an unskilled person or one unacquainted with the manufacture of stoves, can, without difficulty, remove a broken damper and replace it with a new one without the necessity of dismantling the stove.

An embodiment of the invention that is at present considered the preferable one, is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a portion of a stove with the damper mechanism applied thereto, parts being broken away in order to more fully illustrate said mechanism. Fig. 2 is a vertical sectional view through the same. Fig. 3 is also a sectional view therethrough. Fig. 4 is a detail perspective view of the damper, and the integral parts associated therewith.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

The stove itself may be of any suitable construction, the parts associated with the damper including an outer plate 5, an oven top 6, an inner flue plate 7, and an intermediate flue plate 8, the flue plates forming between them the usual outlet 9. The top of the stove 10 is provided with a depending flange 11, disposed across the upper portions of the outlet flue 9, though this flange is not a necessity to the operativeness of the structure.

The innermost flue plate 7 has an ear 12, that extends over the rear end of the top 6, and is provided with an inclosed bearing 13. The intermediate flue plate 8 has an extension 14 that also extends over the rear end of the oven top 6, and has a bearing 15, the front

side of which is open. The outer plate 5 is also provided with a journal bearing 16 alined with the bearings 13 and 15.

A swinging damper 17 is provided in the lower rear corner with a pintle 18 that detachably engages in the bearing 13 of the inner plate, and is disengaged therefrom upon the longitudinal movement of the damper 17 outwardly. A rock shaft 19 is connected to the lower front corner, of the damper 17, being preferably formed integral therewith, and having at its front end a suitable offset handle portion 20. The rock shaft 19 is journaled in the open sided bearing 15 of the intermediate plate, and in the bearing 16 of the front plate. The oven top 6 is provided with angularly disposed upstanding ribs 21 arranged adjacent to the open side of the bearing 15, and forming a seat, in which is detachably engaged a keeper or retaining device 22 that extends across the open side of the bearing 15 and is arranged to be engaged by the outer end of the damper 17 so as to prevent its longitudinal movement. The keeper or retaining device 22 is held in place by any suitable means, as for instance, a bolt 23 passing therethrough and through the oven top 6, said bolt constituting means for preventing the rotation of said retaining device.

To position the damper in the stove, it is only necessary to introduce it through the opening formed by the removal of the rear covers and bridge-piece. The handle end 20 of the shaft 19 is then passed through the bearing 16 of the outer plate, and the damper is swung inwardly until the pintle 18 is alined with the inner bearing 13. Said damper is then moved longitudinally to engage the pintle 18 in the bearing 13, after which the cleat 22 is placed in position, and fastened. This cleat therefore constitutes a closure for the open sided bearing 15, and also prevents the longitudinal movement of the damper 17 and the consequent disengagement of the pintle 18 from the bearing 13. As a result, the damper is effectively held in position, and by operating the handle 20, it may be swung to its upper or closed position against the flange 11, or can be swung rearwardly and downwardly upon the oven top. To remove the damper, the reverse of the above operation is all that is necessary. It will thus be apparent that an extremely simple structure is provided, which can be readily applied to a stove after the same has been assembled or

set up, and which can be removed with ease and expedition, even by an unskilled person if it becomes necessary or desirable to change the damper.

5 From the foregoing, it is thought that the construction; operation, and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

15 Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a structure of the character described, the combination with a stove having 20 a side plate, of an inner bearing mounted in the stove, a swinging damper having a portion engaged with the inner bearing and longitudinally movable outwardly out of engagement therewith, an actuating shaft connected to the damper and journaled in the 25 side plate, said actuating shaft being longitudinally movable therein on the disengagement of the damper from the bearing, and being longitudinally movable inwardly to disengage it from the side plate after the 30 disengagement of the damper from the bearing and removable means detachably engaging the damper for preventing such longitudinal movements.

35 2. In a structure of the character described, the combination with a stove having a side plate, an outlet flue, and an oven top, of an inner bearing mounted in the stove at one side of the flue, a swinging damper having an inner portion engaged with the inner 40 bearing and longitudinally movable out of engagement therewith, an actuating shaft connected to the damper and journaled in the side plate, said shaft being longitudinally movable outwardly in the plate on the detachment of the damper from the bearing, 45 and a device detachably mounted on the oven top and engaging the other end of the damper to that engaged by the bearing for preventing the outward longitudinal movement of the damper and its consequent detachment from said bearing.

50 3. In a structure of the character described, the combination with an inner, an outer, and an intermediate bearing, the last mentioned having an open side, of a damper having a pintle engaged in the inner bearing and detachable on the outward longitudinal movement of the damper, a rock shaft 60 connected to the damper and journaled in the intermediate and outer bearings, being lon-

gitudinally movable in the latter in both directions and a keeper device detachably mounted over the open side of the intermediate bearing and engaging the damper for preventing its outward longitudinal movement. 65

4. In a structure of the character described, the combination with a stove having an outer flue plate, an inner flue plate, and an intermediate flue plate located between the 70 outer and inner plates, said plates having alined bearings, the bearing of the intermediate plate having an open side, and the others being entirely inclosed, of a damper located between the flue plates and having a pintle 75 journaled in the bearing of the inner flue plate and removable therefrom on the longitudinal outward movement of the damper, a rock shaft journaled in the bearings of the intermediate and outer plates and removable 80 from the latter on the inward longitudinal movement of the damper, and a keeper device detachably secured over the open side of the bearing of the intermediate plate and arranged at the outer end of the damper. 85

5. In a structure of the character described, the combination with an oven top, of an outer flue plate, an inner flue plate located at the rear end of the oven top and overlapping the same, the overlapping portion 90 being provided with an inclosed bearing, an intermediate flue plate located between the inner flue plate and the outer plate and having an open sided bearing portion disposed over the inner end of the oven top, a 95 swinging damper operating between the plates and having a pintle at its inner end that detachably engages in the bearing of the inner flue plate and is detachable therefrom on the outward longitudinal movement of the 100 damper, a rock shaft carried by the outer end of the damper and journaled in the bearings of the intermediate flue plate and the outer plate, said shaft being detachable from the outer plate on the longitudinal inward movement of the damper after the disengagement 105 of the pintle from the inner flue plate, a retaining device detachably secured to the oven top and closing the open end of the bearing of the intermediate flue plate, said device 110 engaging the outer end of the damper to prevent its longitudinal movement, and means for preventing the rotation of the retaining device.

In testimony, that I claim the foregoing as 115 my own, I have hereto affixed my signature in the presence of two witnesses.

HILLYARD AUGUSTUS STARR.

Witnesses:

G. W. COREY,
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