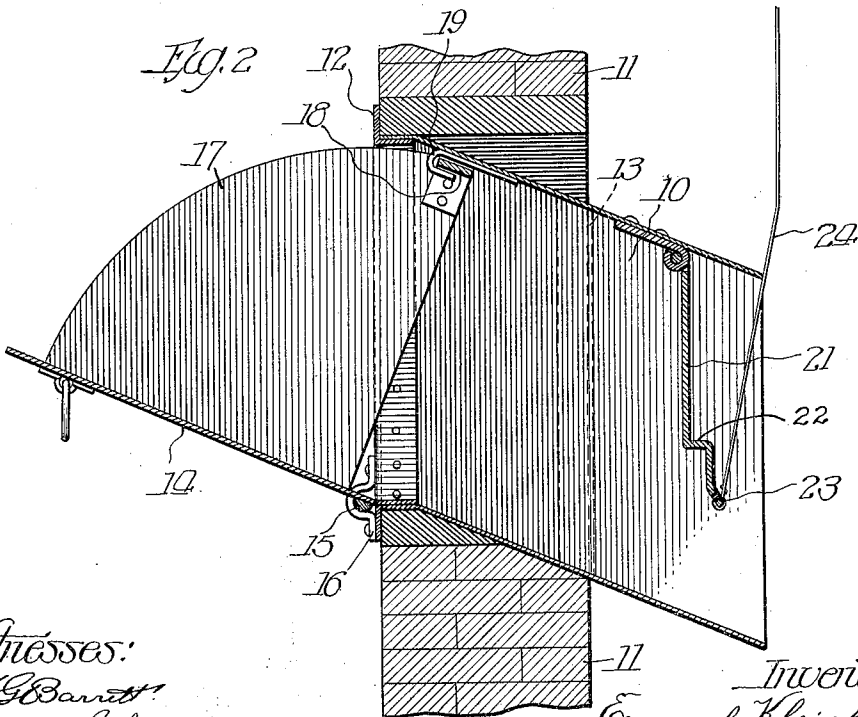
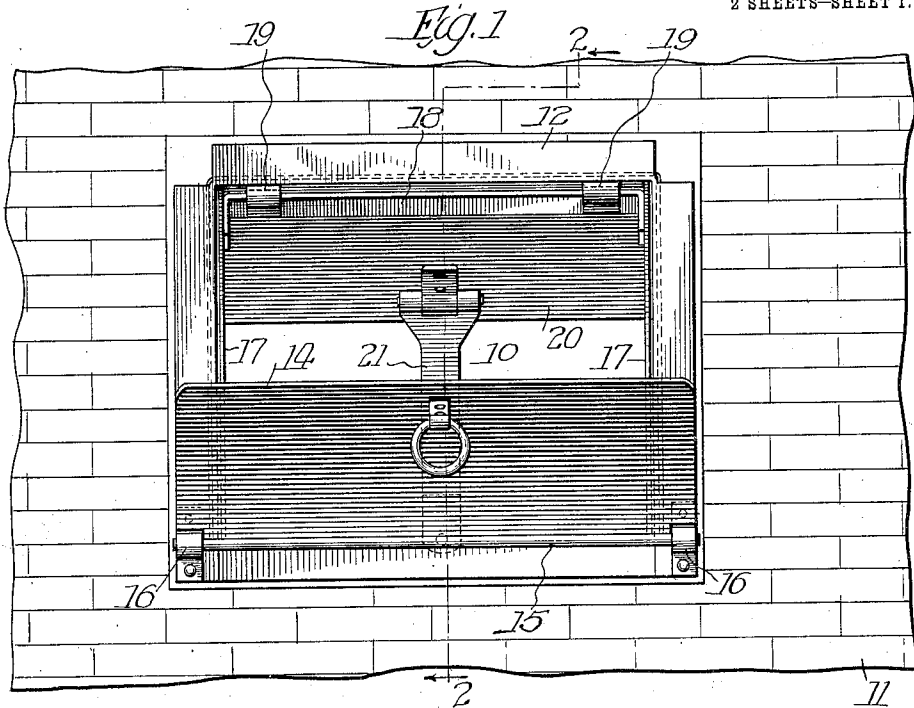


E. KLEINKNECHT.
FUEL CHUTE AND LOCKING DEVICE THEREFOR.
APPLICATION FILED MAY 2, 1912.

1,047,244.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.



Witnesses:
H. G. Barrett
Luther Johnson

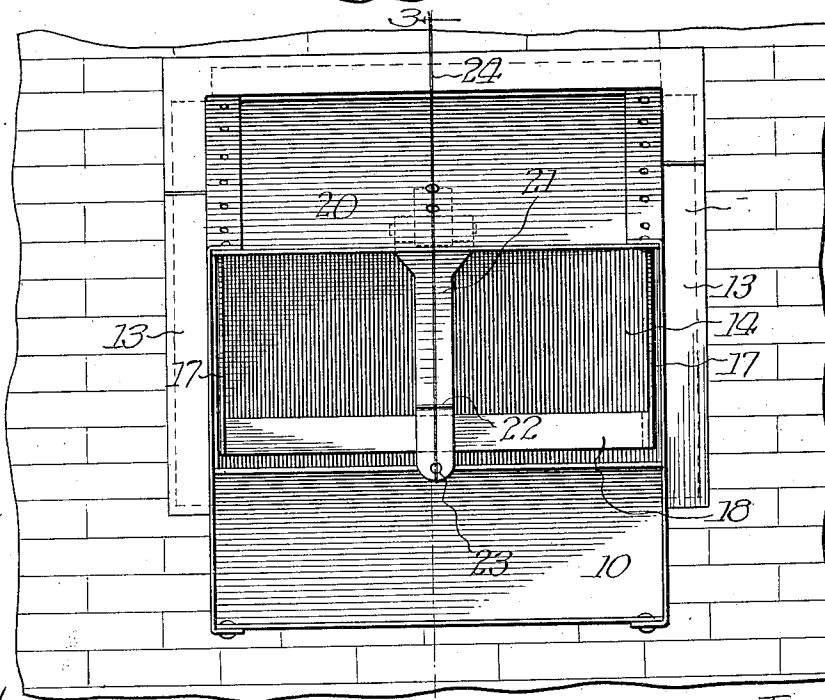
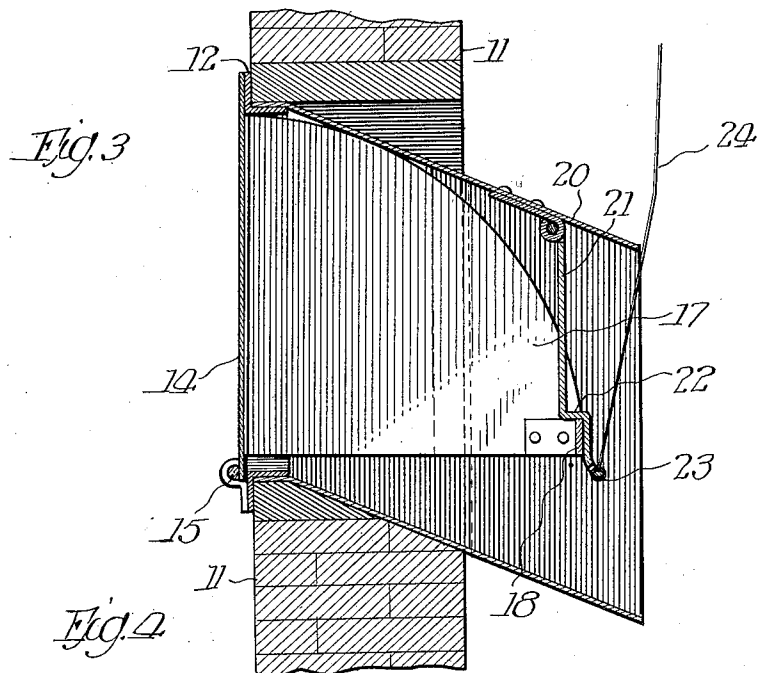
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UNITED STATES PATENT OFFICE.

EMANUEL KLEINKNECHT, OF SPOKANE, WASHINGTON, ASSIGNOR TO HOLLEY-MASON HARDWARE COMPANY, OF SPOKANE, WASHINGTON, A CORPORATION OF WASHINGTON.

FUEL-CHUTE AND LOCKING DEVICE THEREFOR.

1,047,244.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed May 2, 1912. Serial No. 694,677.

To all whom it may concern:

Be it known that I, EMANUEL KLEINKNECHT, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Fuel-Chutes and Locking Devices Therefor, of which the following is a specification.

My invention relates to locking devices, and refers particularly to locking devices used for fuel chutes, secret safe compartments, and the like.

The objects of my invention are to devise a fuel chute made entirely of heavy sheet metal without any cast-iron entering into its construction, and to provide a positive but very simple free swinging gravity-operated locking device for same which can be manually opened from a distance,—a fuel chute which will be strong and durable and not likely to be broken by heavy lumps of coal or large pieces of wood being thrown into the opening to chute from wagons, and devise the same so that the door when closed will fit tightly to keep out cold and moisture, and to locate the locking device so that it will be extremely difficult for same to be opened from the exterior, and place the locking device above the path of travel followed by fuel passing through the chute so as not to be clogged or injured thereby, and to make free swinging from top of chute so that large lumps of fuel passing through the chute will not injure it.

Heretofore in fuel chutes the door which closes same is generally made of cast-iron, very liable to be broken by throwing from wagons heavy lumps of coal or large pieces of wood, and where a locking device is provided at all it is generally only attached to one side of the chute and to the lower side of same so as to be clogged or readily stopped by the accumulation of fine fuel dirt and easily opened from the exterior by burglars.

Stated in general terms, my locking device is used in connection with a mechanism which is provided with a hinged door and side wings connected with this door. Extending between the side wings is a bar which is engaged by a gravity-locking member when the door is closed, and which serves to limit the movement of the door when the latter is opened. The locking member is

operated by means of a cord, chain, or the like, which extends to any convenient place. These and other advantages of my invention will be more readily understood by reference to the accompanying drawings, in which:

Figure 1 is a front elevation of my locking device used in connection with a fuel chute, the chute being shown in its open position; Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical section showing the fuel chute in closed position, this section being taken on the line 3—3 of Fig. 4; and Fig. 4 is a rear elevation showing the fuel chute in closed position.

In the embodiment of my invention which is illustrated in the accompanying drawings the fuel chute is preferably constructed of heavy sheet steel, and consists of the rectangular body portion 10, which is suitably secured in an aperture of the wall 11. In order to secure the chute firmly in position the body portion 10 is preferably supplied with heavy sheet metal angle irons 12 riveted on its front face and angle irons 13 on its sides. On the front of the chute is the door 14, provided near its lower edge with the steel rod 15, the ends of which engage the hinges 16. Extending rearwardly from each side of the door 14 is a heavy sheet metal wing 17. Connecting the wing 17 is a steel bar 18, which engages the stops or detents 19 when the door is opened into the position shown in Figs. 1 and 2. Pivotally suspended from the upper side 20 of the body 10 of the fuel chute is the steel locking member 21 which has an angularly bent locking surface 22. Attached to the end 23 of the locking member is a cord or chain 24, which extends to any convenient position.

Having now described the construction of the various parts used in my invention, the operation of the same may now be readily understood: When the door 14 is raised into the position shown in Figs. 3 and 4, the locking surface 22 of the locking member 21 slips over the bar 18, thereby securely locking the door 14 in its closed position. When it is desired to open the door 14, the chain or cord 24 may be pulled from any convenient position, as, for example within a dwelling, whereby the locking member 21 is swung to the right from its position shown in Fig. 3, thereby disengaging the locking surface 22 from the bar 18. The door 14

may then be readily opened until the bar 18 engages the stops or detents 19. When the door is again closed the locking bar 21 will again have its locking surface 22 slip over the bar 18 by the action of gravity, and the door is again securely locked immediately on its closure.

I have described my locking device particularly in connection with fuel chutes, but it will be apparent that it might be applied to a large variety of uses. For example, a wall safe might readily be constructed with a door similar to the door 14 of the fuel chute, and such a door could be unlocked by operating a cord or chain passing to some concealed place. It will also be apparent that many changes could be made in the detailed construction of the parts which I have described without departing from the spirit or scope of my invention.

What I claim is:

1. In combination with a door having rearwardly extending wings, a bar connecting said wings, a gravity-locking member adapted to engage said bar when the door is closed, and means for disengaging said locking member, whereby the door may be opened, substantially as described.

2. In combination with a door having rearwardly extending wings, a bar connecting said wings, a gravity-locking member adapted to automatically engage said bar when the door is closed, means for disengaging said locking member from said bar, whereby the door may be opened, and

means for limiting the extent to which said door may be opened, substantially as described.

3. In combination with a door having rearwardly extending wings, a bar connecting said wings, a gravity-locking member adapted to automatically engage said bar when the door is closed, means for disengaging said locking member from said bar, whereby the door may be opened, and a stop adapted to be engaged by said bar when the door is opened, thereby limiting the movement of the latter, substantially as described.

4. In a fuel chute, the combination of a sheet metal casing, a door pivoted at its lower edge to said casing, wings extending rearwardly from the sides of said door, a bar connecting said wings, a gravity-locking member pivotally connected to the top of said casing, said locking member having a locking surface thereon for engaging said bar when the door is closed and thereby automatically locking the same, means for disengaging said locking member from said bar, and a stop attached to said casing, said stop adapted to be engaged by said bar when the door is opened, thereby limiting the movement of said door, substantially as described.

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Witnesses:

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