No. 804,048. PATENTED NOV. 7, 1905.

E. ROENIUS.

CHUTE.

APPLICATION FILED JAN. 18, 1905.

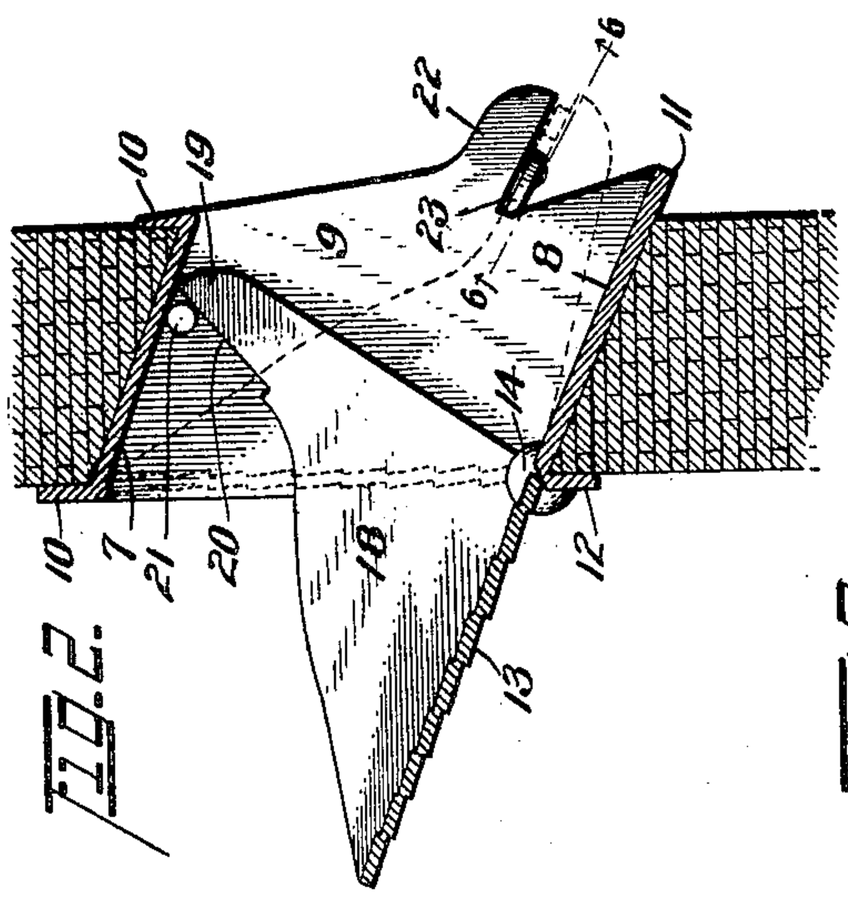

FIG. 2.

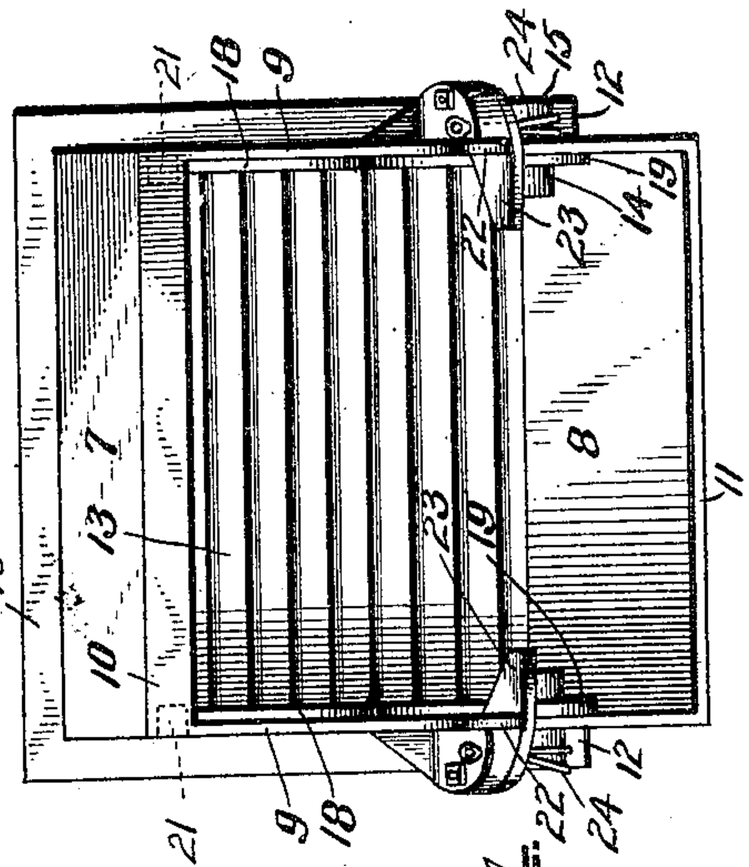

FIG. 3.

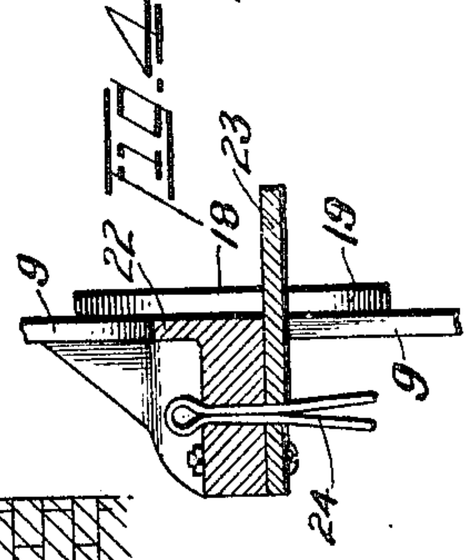

FIG. 4.

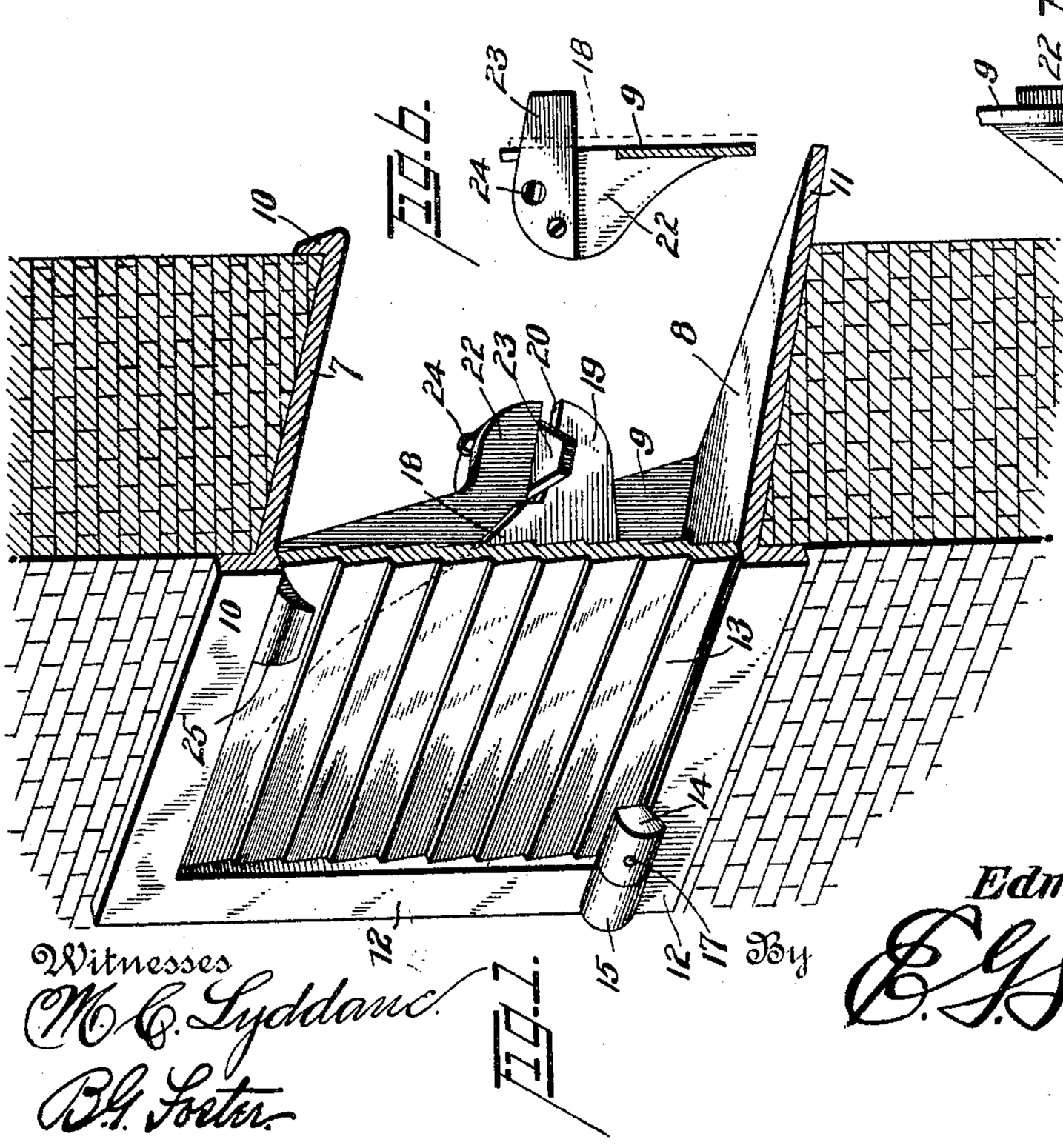

FIG. 6.

FIG. 1.

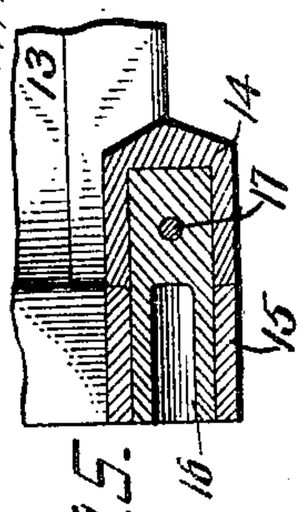

FIG. 5.

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EDMUND ROENIUS, OF GRAND RAPIDS, WISCONSIN.

CHUTE.

No. 804,048. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed January 18, 1905. Serial No. 241,694.

To all whom it may concern:

Be it known that I, EDMUND ROENIUS, a citizen of the United States, residing at Grand Rapids, in the county of Wood and State of Wisconsin, have invented a new and useful Chute, of which the following is a specification.

The present invention relates more particularly to improvements in that class of chutes that are placed in basement-walls and the like to permit the passage of coal, wood, and other substances therethrough, though said invention is useful for many other analogous purposes, as will be apparent.

Among the objects of the present invention the following may be mentioned as important: the provision of a simple structure of a novel nature that may be readily set in a wall by an ordinary mechanic, a structure that constitutes an efficient chute without obstructions for the lodgment of material when opened, and the provision of efficient means for closing the chute and securely locking the same when closed, so that the closure for said chute cannot be forced from the outside.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a sectional view in perspective, showing the chute in place in a wall and closed. Fig. 2 is also a sectional view showing the chute opened. Fig. 3 is a rear elevation of said chute. Fig. 4 is a detail sectional view through one of the locking devices and the mounting therefor. Fig. 5 is a detail sectional view through one of the hinge-joints; and Fig. 6 is a bottom plan view of one of said locking devices, the same being a detail section on the line 6 6 of Fig. 2.

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

In the embodiment illustrated a body member is employed comprising a top wall 7, a bottom wall 8, and side walls 9. The top wall 7 is provided with upstanding flanges 10, arranged to embrace the wall in which the chute is placed, while the bottom 8 is considerably longer than the top wall 7 and inclines continuously downward from its outer edge, thereby forming a lip 11, that projects inwardly beyond the wall in which the body is placed, as clearly shown in Figs. 1 and 2. The bottom and side walls are provided at their outer ends with outstanding flanges 12, forming, in effect, a frame that covers the outer face of the building-wall contiguous to said body member.

A closure for the body member is provided in the form of an outer ribbed wall 13, hinged at its lower end to the lower outer portion of the body member. As shown in Figs. 1 and 5, the lower corners of the wall 13 are provided with socketed lugs 14, while the adjacent portions of the body member are provided with sleeves 15, that aline with said lugs. Pintles 16 are passed through the sleeves 15 and are seated in the sockets of the lugs 14, being secured in place by suitable rivets or other fasteners 17. These connections constitute hinge-joints between the body and closure members. The ribbed wall 13 is adapted to fit snugly within the walls of the body member, and, as shown in Fig. 1, its outer face at the margins is located within the outer faces of the flanges 10 12. There is thus no joint between the parts which will permit the introduction of an instrument for the purpose of successfully forcing the closure 13 outwardly when said closure is within the said walls.

The ribbed wall 13 is provided at its opposite side edges with inwardly-extending wings 18, that operate adjacent to the side walls 9 and terminate in reduced abutment elements or lugs 19, having substantially flat outer shoulders 20. Located in the path of movement of said shoulders are stop elements or lugs 21, carried by the side walls 9 and arranged to limit the outward swinging movement of the closure member, so that the wall 13 thereof is alined with the bottom 8, as shown in Fig. 2. When the wall 13 is in closed position, the abutment elements 19 project beyond the inner ends of the side walls 9 and below inwardly-extending lugs 22, carried by said inner ends. Pivotally supported on these lugs 22 are locking elements or devices in the form of dogs 23, secured to the lower sides of said lugs 22 and arranged to swing between the same and the abutment elements 19. They are adapted to be locked in operative positions by means of spring-keys 24, passed through openings in the lugs 19 and 22, which openings aline when the locking devices are swung between said lugs. A suitable handle 25, formed upon the upper portion of the outer face of the wall 13, affords convenient means for swinging the same to open position.

It will be clear that when the closure is fitted within the body member and fastened the same is positively locked on the inside and cannot be forced from the outside. When

said closure is unlocked and swung to open position, it will be seen that a comparatively long chute with a continuous inclined bottom is afforded, having a mouth which projects a considerable distance outwardly beyond the building-wall, so as to afford convenient receiving means for the material to be passed through said chute, and that in like manner a lip is provided beyond the inner face of the wall that directs such material beyond the wall. While the structure is perhaps particularly useful as a fuel-chute, it will be apparent that it may be readily employed for vegetables and many analogous purposes.

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.

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

1. In a chute of the class described, the combination with a body member having a substantially vertical front face, said body member furthermore having side walls a top and a bottom, said bottom being longer than the top and inclining downwardly throughout its length from its outer edge, forming an inwardly-extending lip at its inner end, the side walls having their lower portions extending inwardly at the opposite edges of the said lip of a movable closure associated with the body member, and means for locking the closure against movement.

2. In a chute of the class described, the combination with a body member having a substantially vertical outer end, a top provided with spaced upstanding wall-embracing flanges at its outer and inner edges, a bottom longer than the top and inclining downwardly throughout its length from its outer edge, said bottom forming an inwardly-extending lip at its inner end and side walls, the lower portions of which incline inwardly and downwardly to the inner end of said lip, of an outwardly-swinging closure hinged to the lower outer portion of the body member, and means for limiting the outward-swinging movement of the closure to hold the same in substantial alinement with the bottom.

3. In a chute of the class described, the combination with a body member having a downwardly-inclined bottom, a top and side walls, of a closure member, hinges connecting the lower end of the closure member and the bottom to permit the outward-swinging movement of the closure member to a position in substantial alinement with the bottom at its outer edge, said hinges also permitting the inward-swinging movement of the closure member to a position between the top, bottom, and walls of the body with its outer margins inset within the outer edges of said walls, top and bottom, and means for limiting the said swinging movement of the closure member.

4. In a chute of the class described, the combination with a body member, of a closure member movably associated therewith, a locking element and a stop element carried by one member, and an abutment element carried by the other member and coacting with both said locking and stop elements.

5. In a chute of the class described, the combination with a body member, of a closure member hinged thereto, a locking element and a stop element carried by the body member, and an abutment element carried by the closure member, said abutment element operating between and coacting both with said locking and said stop elements.

6. In a chute of the class described, the combination with a body member, of a closure member hinged thereto, a locking element located at the inner portion of the body member, a stop element carried by an intermediate portion of the body member, and an abutment element carried by the closure member and engaging the stop element on its outward movement, said abutment element also coacting with the locking element upon its inward movement.

7. In a chute of the class described, the combination with a body member, of a closure member movably associated therewith and having an abutment-shoulder, a stop carried by the body member and located in the path of movement of the shoulder, and a locking device movable into the path of movement of said shoulder.

8. In a chute of the class described, the combination with a body member, of a closure member movably associated therewith and having an abutment-shoulder, a stop carried by the body member and located in the path of movement of the shoulder, a locking device pivoted upon the body member and movable into the path of movement of the shoulder, and means for securing the locking device against movement.

9. In a chute of the class described, the combination with a body member having a shoulder, of a closure member hinged to the body member and having a shoulder arranged to assume a position contiguous to the shoulder of the body member, and a locking device movable to a position between the shoulders to secure the closure member.

10. In a chute of the class described, the combination with a body member comprising walls, of a closure member hinged to the outer portion of the body member and having inwardly-extending side wings terminating in abutment elements, stops carried by certain walls of the body member and located in the

path of movement of the abutment elements, inwardly-extending lugs carried by the body member, said abutment elements being arranged to swing below the same, locking devices pivoted upon the lugs and arranged to engage over the abutment elements, and means for securing the devices against swinging movement.

11. In a chute of the class described, the combination with a body member having a shoulder, of a closure member hinged to the body member and having a shoulder arranged to assume a position contiguous to the shoulder of the body member, a locking device pivoted upon the shoulder of the body member and movable to a position over the shoulder of the closure member, and a key arranged to engage the shoulder of the body member and the locking device to hold the latter against its pivotal movement.

12. In a chute of the class described, the combination with a body member having walls, spaced sleeves carried by one of the walls, a closure for the body member having socketed lugs that aline with the sleeves, pintles passing through the sleeves and engaging in the lugs, and means for securing said pintles in the lugs.

13. In a chute of the class described, the combination with a body member comprising surrounding walls and outstanding flanges, of a closure member comprising a wall arranged to fit within the body-walls and inside the outer faces of the flanges, and hinges connecting the lower margin of the closure-wall and the lower body-wall, said hinges comprising socketed lugs carried by one of the walls, sleeves carried by the flanges, and pintles engaging in the sleeves and sockets of the lugs, said hinges permitting the inset relation of the closure-wall with respect to the flanges.

14. In a chute of the class described, the combination with a body member having an inwardly-extending shoulder, of an outwardly-swinging closure member hinged to the body member and having an inwardly-extending shoulder that assumes a position below the shoulder of the body member when the closure member is in operative or closed position upon the body member, and a dog pivoted upon the shoulder of the body member and having a swinging movement to a position between the shoulders to lock the closure against its outward-swinging movement.

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

EDMUND ROENIUS.

Witnesses:
JOHN A. GAYNOR,
OTTO R. ROENIUS.