

H. M. STRADLING.
COAL CHUTE.
APPLICATION FILED FEB. 19, 1908.

926,032.

Patented June 22, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

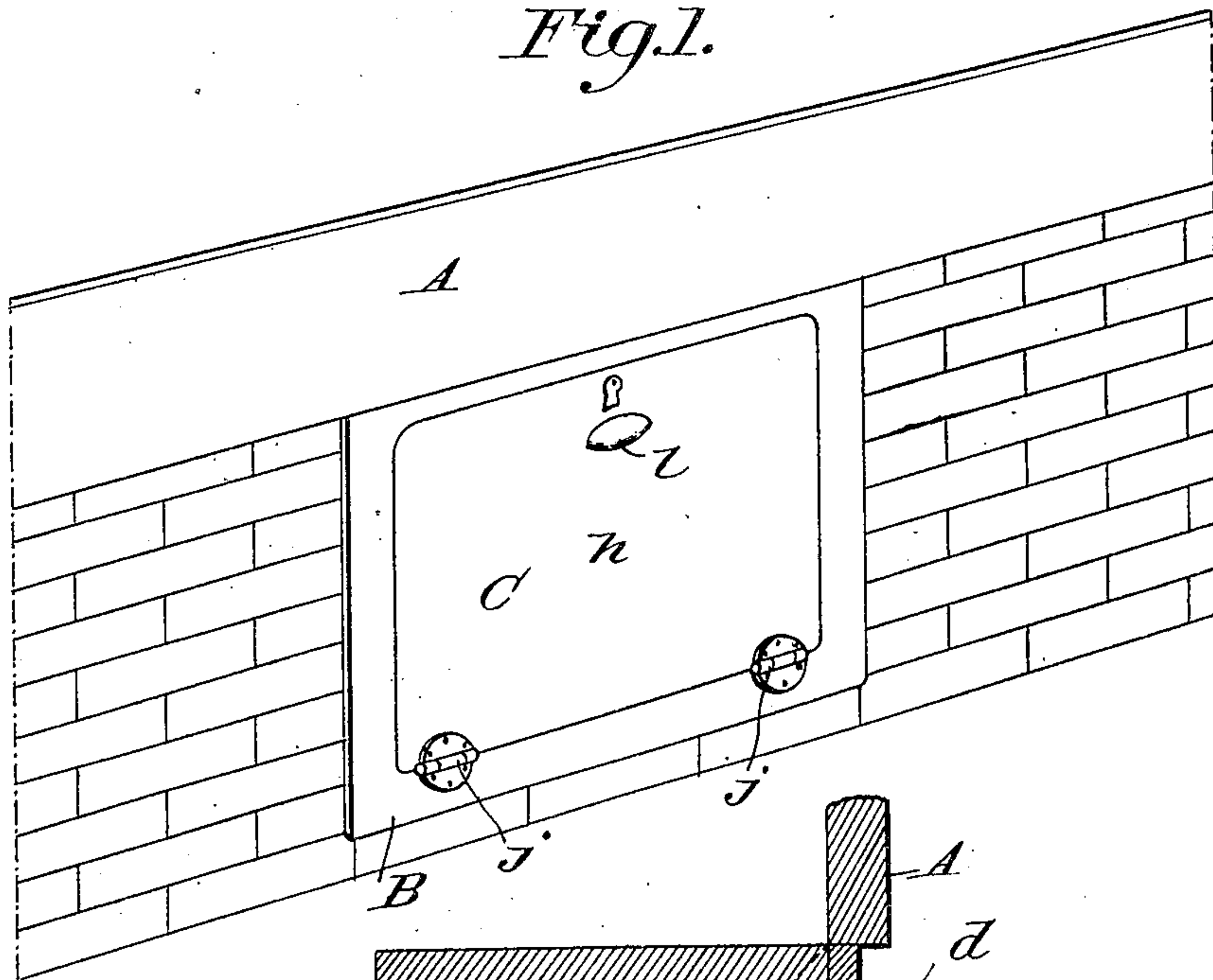
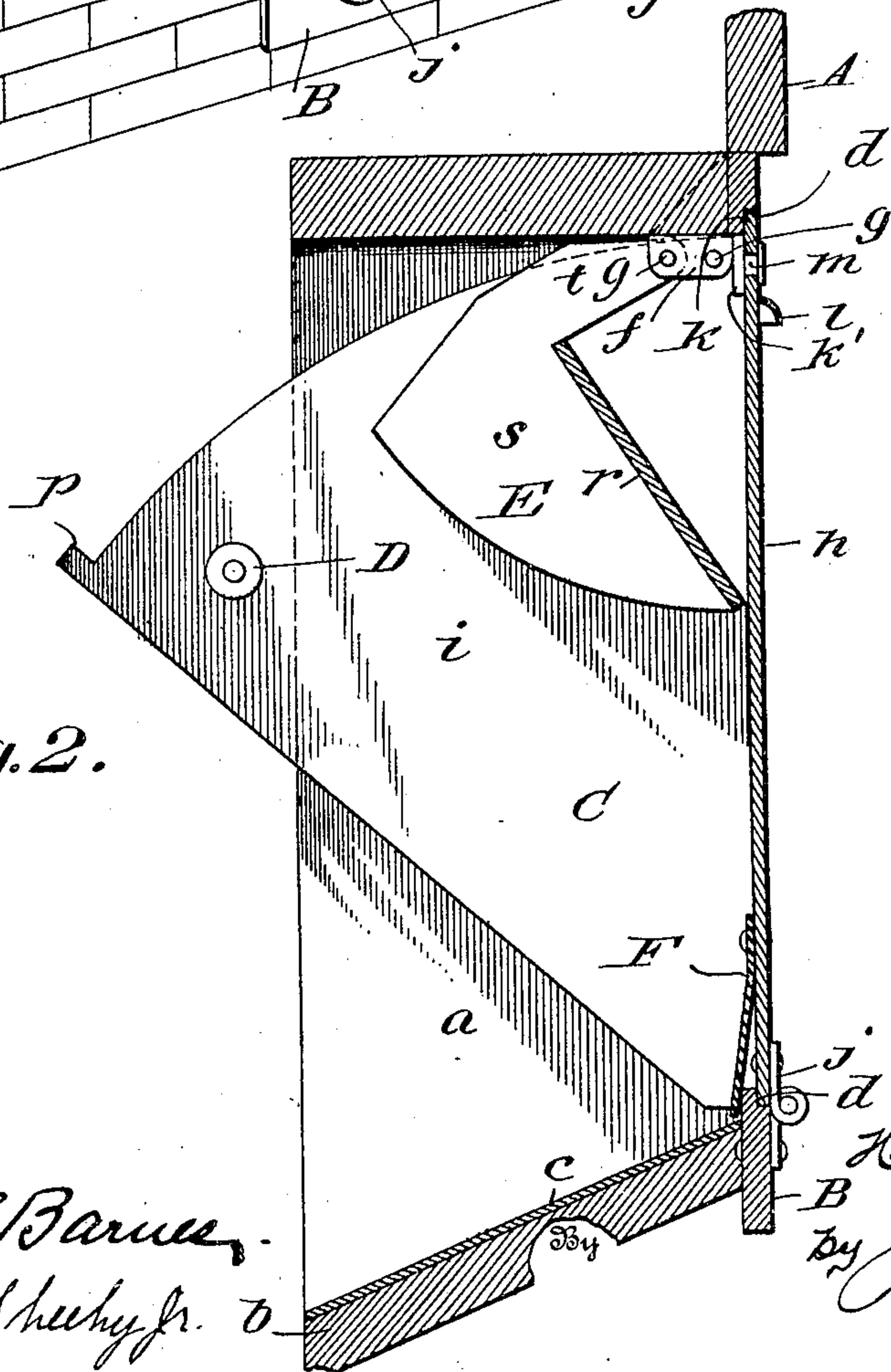


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

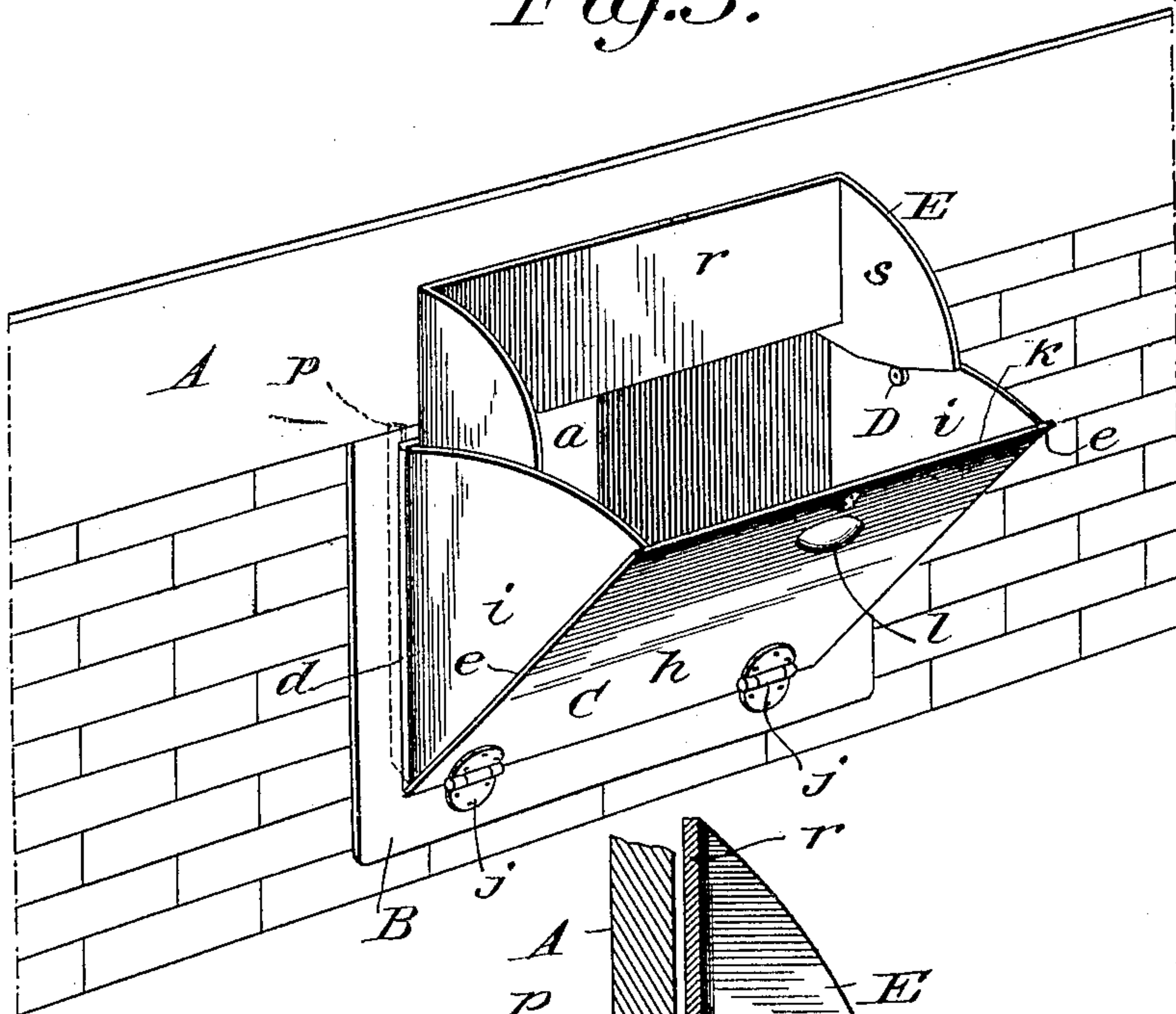
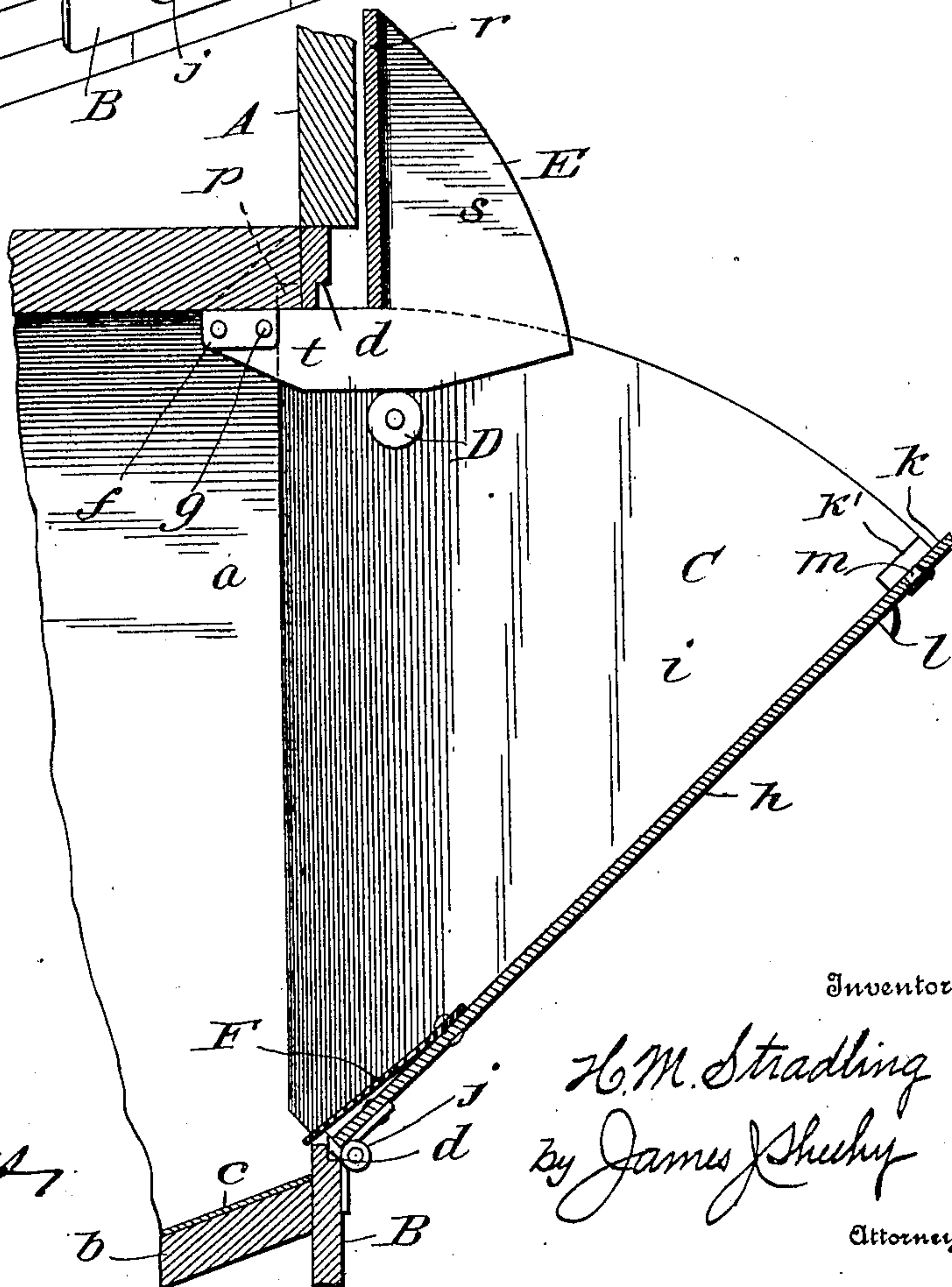


Fig. 4.



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UNITED STATES PATENT OFFICE.

HOWARD M. STRADLING, OF INDIANAPOLIS, INDIANA.

COAL-CHUTE.

No. 926,032.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed February 19, 1908. Serial No. 416,639.

To all whom it may concern:

Be it known that I, HOWARD M. STRADLING, citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Coal-Chutes, of which the following is a specification.

My invention pertains to coal chutes; and it has for one of its objects to provide a coal chute for use in connection with a cellar window opening of a building, the said chute being arranged in one position to close the window opening and being equipped with means for protecting the face above the window opening against soiling and scarring, which means is arranged when the chute is opened to automatically assume a position above the window opening and in front of the building face, and when the chute is closed is adapted to be closed within the same so as to be entirely hidden from view.

Another object of the invention is the provision in combination with a coal chute and the frame to which the chute is hinged, of efficient means for preventing coal from finding its way between the frame and the chute and interfering with the proper closing of the latter.

Other objects and advantageous features of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a perspective view illustrating a portion of a building equipped with my improvements and showing the chute as closed. Fig. 2 is a vertical section of the same on an enlarged scale. Fig. 3 is a view similar to Fig. 1, but showing the chute and the shield in their working positions. Fig. 4 is an enlarged vertical section of the same.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which: A is a portion of a building having a window opening *a* surrounded by a frame, preferably though not necessa-

rily of wood, the bottom bar *b* of which is inclined downwardly and inwardly and is covered by a metallic plate *c* having for its office to prevent coal from wearing the said bar *b*.

B is a frame, preferably of metal, arranged in front of and fixedly attached to the frame surrounding the opening *a*. The said frame B has its inner edge rabbeted, as indicated by *d*, and is provided on the rear side of its upper cross-bar with depending lugs *f* which reach under the top bar of the frame surrounding the window opening and are provided with one or more, preferably two, apertures *g* for a purpose hereinafter set forth.

C is the chute of my improvements which comprises a front wall *h* and side walls *i*; the said side walls being preferably sector shaped, as illustrated. The front wall *h* of the chute is hinged to the base bar of the frame B, as indicated by *j*, and said front wall is extended slightly above and beyond the side walls, as indicated by *k* and *e*, so as to enable it to seat in the rabbet *d* in the frame B after the manner shown in Fig. 2. On the inner side of the front wall *h* a conventional or other suitable lock *h'* is provided, which lock embodies a bolt (not shown) designed to enter the said frame bar, and is controlled by a key (also not shown), and on the outer side of the wall *h* a handle *l* is arranged, through the medium of which the chute may be expeditiously and easily opened. The key complementary to the lock *h'* may be introduced from the outside of the building through the illustrated key-hole *m* or else the lock may be arranged for the introduction of the key from the inside of the building, without involving departure from the scope of my invention as defined in the claims appended. It will be seen by reference to Fig. 2 that when the chute is closed the wall *h* thereof rests flush with the frame B and presents a neat appearance, and by reference to Figs. 2 and 3, it will be understood that when the chute is opened, stops *p* on the side walls *i* bring up against

the inner side of the top bar of the frame B and thereby limit the outward movement of the chute. In this connection it will be noted that the frame surrounding the window opening *a* is recessed as shown by dotted lines to permit of movement of the stop *p* adjacent to the said top bar of the frame B. On the inner sides of the side walls *i* of the chute gudgeons D are provided for an important purpose hereinafter set forth.

E is the shield of my improvements, which by preference comprises a main wall *r*, side or end walls *s* and arms *t* disposed as shown relative to the walls *r* and *s*. The edges of the arms *t* remote from the main wall *r* are preferably shaped as shown for the engagement of the gudgeons D, and said arms are pivotally connected to the lugs *f* as illustrated, so as to enable the shield E to swing vertically in the manner hereinafter pointed out. At this point I deem it well to state that two apertures *g* are provided in each lug *f* so that the shield E can be correctly positioned relative to the thickness of the portion of the building immediately above the top bar of the frame B.

In the practical operation of my improvement it will be manifest that during the first part of the movement of the chute toward the position shown in Figs. 3 and 4, the shield E will swing forward by reason of gravity until it hangs directly below the points where it is pivotally connected to the lugs *f*, and in consequence of this the gudgeons D assume positions behind the edges of the shield so that as the chute is opened to the full extent the gudgeons operate to raise the shield to the position shown in Figs. 3 and 4, in which position the shield will remain without any tendency whatever to cause casual closing of the chute. It will also be manifest that when the chute is manually closed the gudgeons D will pass out of engagement with the shield E whereupon the shield will gravitate to a position opposite the front wall *h* of the chute and will then be moved by said front wall to the position shown in Fig. 2.

By virtue of the provision of my improvements, the cellar window is securely closed when the chute is in the position shown in Figs. 1 and 2, and when it is desired to supply coal through the said window all that is necessary to be done is to unlock and open the chute. The opening of the chute causes the shield E to automatically assume the position shown in Figs. 3 and 4 in which position the shield will obviously preclude soiling or scarring of the face of the wall above the window opening. It will also be appreciated that my improvements are advantageous since when coal is carried in sacks to the window the coal heaver may stand up and pour the coal into the chute, which obviously occupies but little

time, and when the chute is so located that a wagon can be positioned adjacent to the chute, coal can be expeditiously and easily shoveled directly from the wagon to the chute.

With a view of effectually preventing coal from gaining access to the space between the front wall *h* of the chute C and the lower bar of the frame B and interfering with the proper closing of the chute, I provide the guard-plate F. This guard-plate F is attached to the inner side of the chute wall *h*, and is preferably possessed of springiness or resiliency so as to enable it to accommodate itself to the lower bar of the frame B incidental to the opening and the closing of the chute.

The frame B and the working parts of my improvements are preferably formed of metal suitable to the purpose, and it will be gathered from the foregoing that notwithstanding the practical advantages peculiar to the said improvements the same are simple and inexpensive in construction and are well adapted to withstand the rough usage to which such devices are ordinarily subjected.

The construction herein illustrated and described constitutes the best practical embodiment of my invention of which I am cognizant, but it is obvious that in the future practice of the invention such changes may be made in the form, construction, and relative arrangement of the parts as fairly fall within the scope of my invention as defined in the claims appended.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. In means for the purpose described, the combination of a frame having an opening, a chute connected with the frame and arranged to be opened and closed and when closed to bar the said opening, and a shield mounted to be moved to and from a position in front of the frame and above the opening therein and also mounted to be opened and closed by the opening and closing of the chute.

2. In means for the purpose described, the combination of a frame, having an opening a chute connected with the frame and arranged to be opened and closed, and a shield also connected with the frame and arranged to be moved to and from a position in front of the frame and above the opening therein by the opening and closing of the chute.

3. In means for the purpose described, the combination of a shield, and a chute for controlling an opening; one of the said elements being arranged to be opened and closed by the opening and closing of the other, and the shield being arranged when opened to assume a position above the opening controlled by the chute.

4. In means for the purpose described, the combination of a frame having an opening and a chute for controlling said opening and a shield, connected with the frame; the
 5 said chute and shield being relatively arranged to assure opening and closing of one by the opening and closing of the other, and the shield being arranged when opened to assume a position in front of the frame and
 10 above the opening therein.

5. In means for the purpose described, the combination of a frame having an opening, a chute for controlling said opening, and a shield, connected with the frame; the said
 15 chute and shield being relatively arranged to assure opening and closing of the latter by the opening and closing of the former, and the shield being also arranged to be covered and hidden from view by the chute
 20 on closing of the latter and to assume a position in front of the frame and above the opening therein on opening of the chute.

6. In means for the purpose described, the combination of a frame, having an opening
 25 a swinging chute connected with the lower portion of the frame, and a swinging shield connected with the upper portion of the frame and arranged to be opened and closed by the opening and closing of the chute and
 30 also arranged when opened to assume a position in front of the frame and above the opening therein.

7. In means for the purpose described, the combination of an open frame, a chute con-
 35 nected with the frame and arranged to be opened and closed and also arranged when closed to close the opening in the frame, and a shield also connected with the frame and arranged to be moved to and from a position
 40 above the opening in the frame and in front of said frame and also arranged to be opened and closed by the opening and closing of the chute.

8. In means for the purpose described,
 45 the combination of an open frame, a chute hinged to the lower bar of the frame and arranged when closed to close the opening in the frame, and a shield hinged to the upper portion of the frame and arranged to
 50 swing through the opening in the frame to and from a position in front of the frame and above the opening and also arranged to be opened and closed by the opening and closing of the chute.

55 9. In means for the purpose described, the combination of an open frame, a chute hinged to the lower bar of the frame and provided with means for limiting its outward movement, a shield hinged to the
 60 upper portion of the frame, and arranged to be swung to and from a position in front of the frame and above the opening therein and means on the chute for opening the shield on the opening movement of the
 65 chute.

10. In means for the purpose described, the combination of an open frame, a chute having a front wall hinged to the lower bar of the frame and also having side walls on which are means for limiting the outward
 70 movement of the chute, a shield having a main wall and end or side walls and also having arms connected in a hinged manner with the upper portion of the frame, and a
 75 gudgeon arranged on the chute in position to open the shield on opening movement of the chute; said shield being arranged to gravitate to a position in front of the front wall of the chute subsequent to the move-
 80 ment of the gudgeon out of engagement with the shield and to be moved further to its idle position by the said front wall of the chute.

11. In means for the purpose described, the combination of an open frame, a swing-
 85 ing chute connected with the lower bar thereof, a swinging shield connected with the upper portion of the frame, and means on the chute arranged on the opening move-
 90 ment of the chute to engage and open the shield and also arranged to pass out of engagement with the shield on closing move-
 95 ment of the chute and to permit the said shield to gravitate to a position opposite the chute to assure movement of the shield by the completion of the closing movement of the chute.

12. In means for the purpose described, the combination with a frame having an opening the wall of which is rabbeted, a
 100 chute hinged to said frame and adapted when closed to rest in the rabbet thereof, and a resilient plate connected to the chute and extending over and movable on the
 105 inner corner of one wall of the opening in the frame.

13. In means for the purpose described, the combination of a building wall having an opening, a chute connected with said wall and arranged to be opened and closed and
 110 when closed to bar the said opening, and a shield mounted to be moved to and from a position in front of the wall and above the opening therein and also mounted to be opened and closed by the opening and clos-
 115 ing of the chute.

14. In means for the purpose described, the combination of a building wall having an opening, a chute connected in a hinged
 120 manner with the portion of the wall below said opening and arranged to be opened and closed and when closed to bar the said opening, and a shield connected in a hinged manner with the upper portions of the wall
 125 at opposite sides of the opening and arranged to be swung to and from a position in front of the wall and above the opening therein and also arranged to be opened and closed by the opening and closing of the chute.

15. In means for the purpose described, 130

the combination of a frame having an opening, a chute connected in a hinged manner with the portion of the frame below said opening and arranged to be opened and
5 closed and when closed to bar the opening, and a shield connected in a hinged manner with the portion of the frame above the opening therein and arranged to be swung to and from a position in front of the frame
10 and above the opening therein and also ar-

ranged to be opened and closed by the opening and closing of the chute.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HOWARD M. STRADLING.

Witnesses:

IRVIN CONWAY,

WILBUR M. GRAHAM.