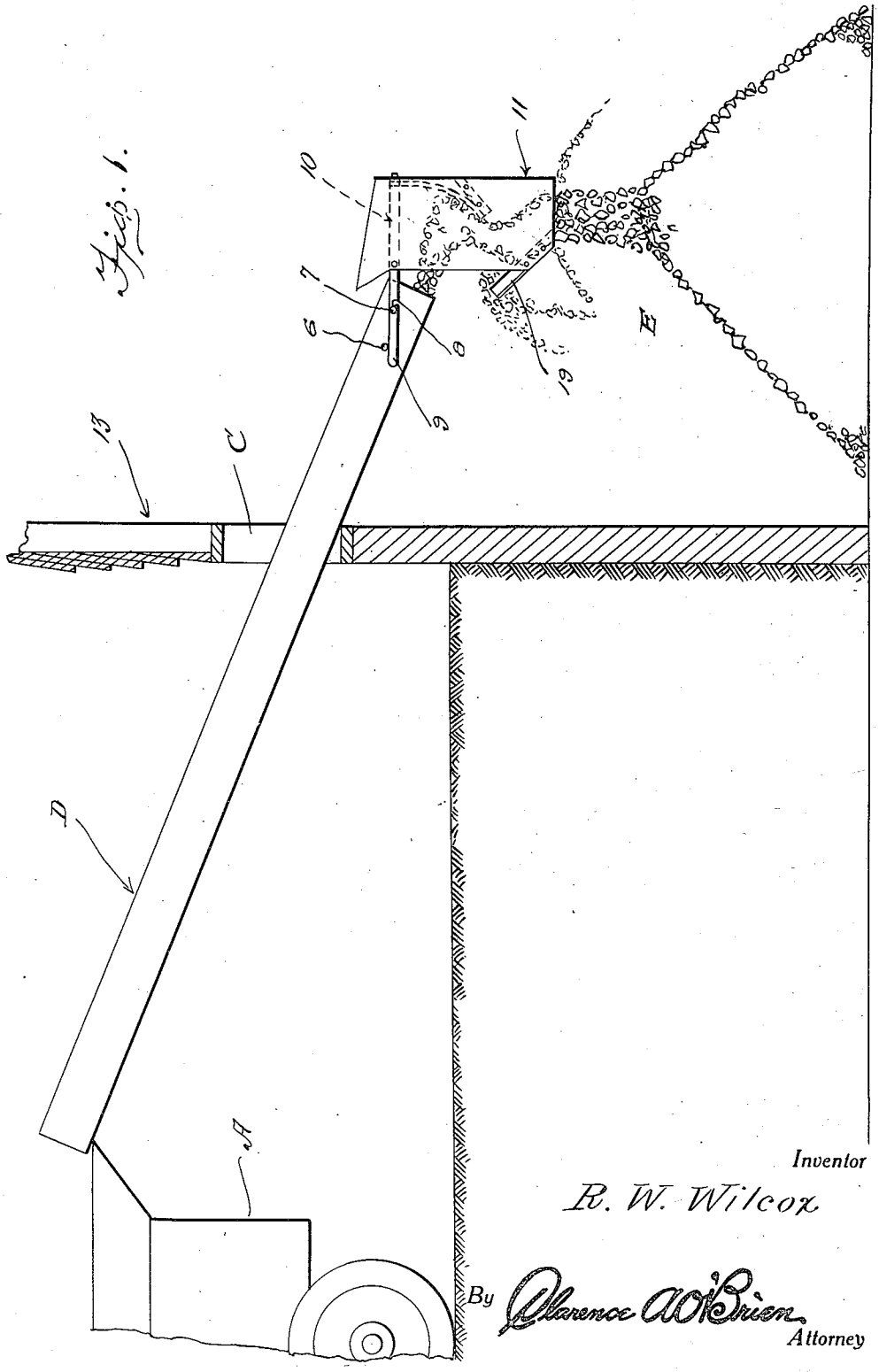
Aug. 11, 1936. R. W. WILCOX 2,050,774

GUARD ATTACHMENT FOR COAL CHUTES

Filed May 6, 1935 2 Sheets-Sheet 1



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Fig. 4.

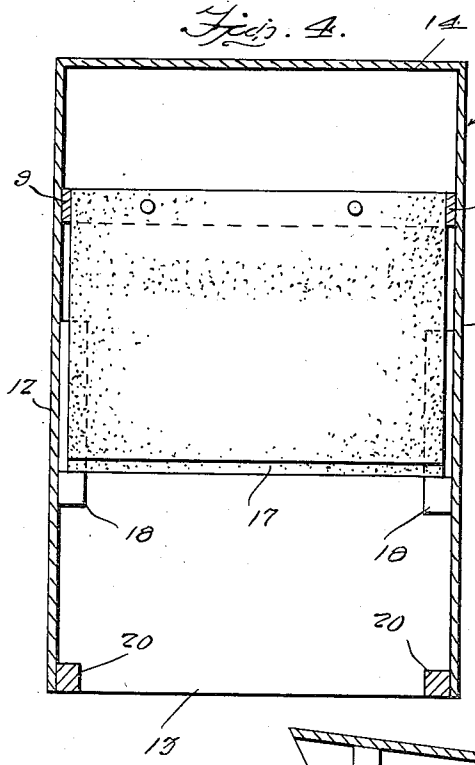
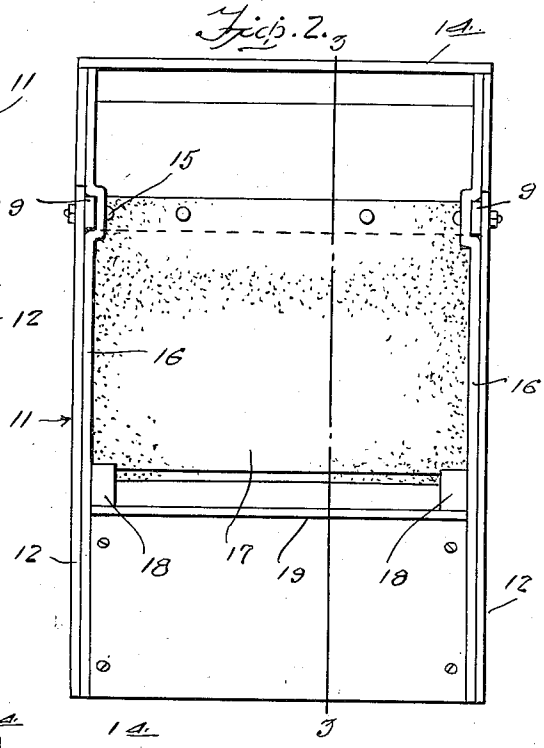


Fig. 2.



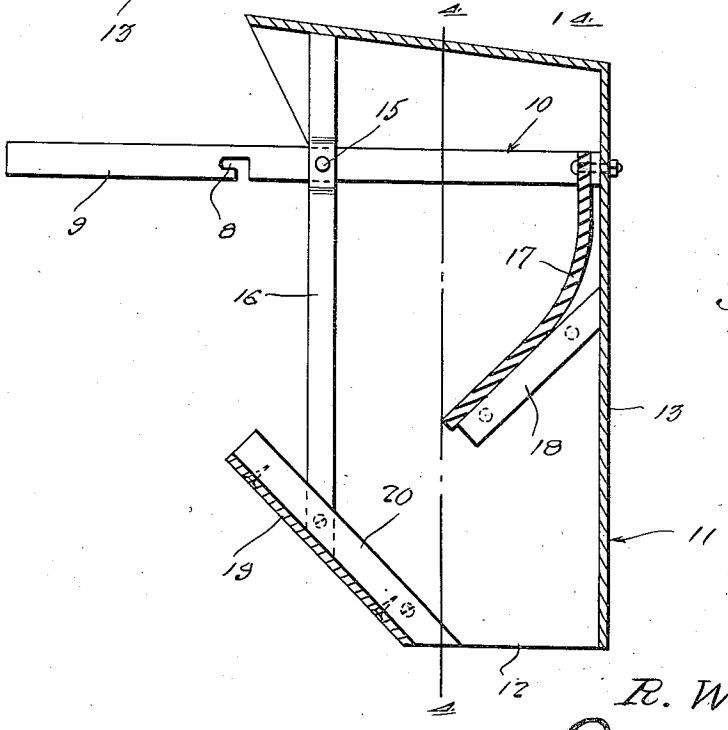


Fig. 3.

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GUARD ATTACHMENT FOR COAL CHUTES

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Application May 6, 1935, Serial No. 20,077

3 Claims. (Cl. 193—4)

This invention relates to a novel attachment for the discharge end of a conventional coal chute which attachment is in the nature of a shield or guard and is expressly constructed to serve as a temporary trap in such a way that the flow of coal entering it is retarded and shunted down by an arrangement of baffles or deflectors to facilitate uniformly piling coal in the cellar or elsewhere.

Ordinarily, when the coal is discharged from the truck on a downwardly inclined chute leading into the cellar, it rushes out through the discharge end of the chute with such velocity and force as to cause it to spread haphazardly over the cellar floor and to create an unnecessary stir and agitation of dust. As a matter of fact in cellars of small capacity the stream of coal frequently causes breakage of private property within the area or vicinity of the coal bin, thus causing untold damage and subjecting the dealer to offering to make reparations to the customer.

My primary purpose and aim is to provide a simple shield or enclosure in the nature of a depending housing into which the coal is directed, which housing is provided with an alternate arrangement of companion or complemental baffles properly inter-related to bring about the desired shunting and deflecting so as to not only retard the discharge action of the stream of coal but to expedite easily and uniformly forming it into a restricted mass to facilitate unloading and to overcome the aforementioned objectionable results.

The specific structure utilized for accomplishing what I aim to do will become more readily apparent from the following description and drawings.

In the accompanying drawings wherein like numerals are employed to designate like parts throughout the same;

Figure 1 is an elevational view showing the general assemblage, that is a portion of the coal truck, the building wall with the cellar window, the pile of coal in the cellar, and the attachment as it is hung or suspended from the discharge end of the chute.

Figure 2 is a face view of the guard or shield, which may be said to be a view of Figure 1 looking at it in a direction from left to right.

Figure 3 is a vertical sectional view taken on the plane of the line 3—3 of Figure 2.

Figure 4 is a view at right angles to Figure 3, the section being on the line 4—4 of said Figure 3.

Referring to the drawings by distinguishing reference characters, I call attention first to Figure 1 wherein it will be observed that the truck, that is the coal truck, is indicated by the letter A, the building wall is indicated by the letter B, the cellar window at C and the chute D. The coal which is being delivered from the chute and handled through the instrumentality of the distributing guard is indicated by the letter E. In order to accommodate the attachment, the walls of the chute are provided adjacent the discharge end with pins or studs 6 and 7. These are located in proper position and the studs 7 are preferably headed. These studs 7 are adapted to accommodate the bayonet slots 8 formed in the arms 9 of the U-shaped hanger or attaching bracket 10 for the coal trapping and shunting housing 11. Incidentally, the housing is in the form of a substantially rectangular, suitably shaped shell or casing which in effect resembles a hood. For sake of convenience, it may be said to include a pair of spaced side walls 12, a back wall 13 and an inclined hood forming top wall 14. It is open at the front to facilitate entrance of the stream of coal and is open at the bottom to expedite discharge of the restricted gravitating mass of retarded coal. The U-shaped hanger 10 is fastened on the interior of the housing or hood and bolted or otherwise secured to the walls 12 and 13 as shown. The arm portions are fastened in place by suitable bolts or the like 15 which also serve to secure in place reinforcing stay straps 16, these being vertically disposed and attached to the edge portions of the side walls on the open front thereof.

On the interior of the hood is a curved deflector 17, this being attached at its top to the bight portion of the yoke 10 and secured at its bottom to supporting cleats 18. The arrangement is such that this deflector is somewhat in line to receive the flowing coal from the discharge end of the chute as indicated in Figure 1. It serves to absorb the shock and to deflect it down on the lower discharging chute or deflector plate 19. This inclines in an opposite direction and is secured properly in place by attaching cleats or the like 20. Incidentally the deflector 17 may be of material to cut down the noise, that is, it may have some cushioning properties. The coal forcibly strikes it and is then gradually shunted against the final delivery deflector or secondary chute 19.

Structurally visualized from one view point, it may be contended that the invention is broadly in the nature of a box or trap, being fastened to the discharge end to receive coal as a sort of a depository. In effect it is a guard and a shield

in that it has a tendency to cut down unnecessary agitation and stirring up of dust which would otherwise occur. Then too, it is in a sense a distributing hood in that it traps the coal, gradually stops its speedy flow and then by a succession of deflecting actions drops it down gradually and evenly onto the top of the ascending pile. It is not necessarily in the form of an attachment, though as a general rule it is to be made detachable. That is to say, the invention might well be made a part of the discharge end of the chute if so desired and such a development would obviously be within the confines of the invention hereinafter claimed. I refer to these diversified versions in order to enable the reader to appreciate the variable language of the claims calculated to comprehend such adaptations as these which would be clearly in line with the special adaptation which I have developed;

The invention is simple, economical, sturdy and otherwise aptly fitted to fulfill the purposes intended. It is sufficiently open on the front side to expedite the unloading and trapping of coal and has sufficient overflow facilities to prevent clogging. That is to say, the deflector 19 has one portion, that is, the lower half portion extending into the shell or casing, and the upper end portion at the left projecting beyond the open front but leaving sufficient distance of space between itself and the top 14 to take care of excessive charging of the housing with coal, especially large lumps. Possibly at times it may be necessary if clogging should take effect to be able to insert an instrument or the like into the open front to relieve congestion and facilitate free and fluent action. In addition to these features it is believed that novelty resides in the adoption and use of the non-metallic deflector 17 which is so arranged and curved as to constitute the initial stop and deflecting means so as to cut down noise and to enhance the practicable side of the invention.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having thus described the invention, what is claimed as new is:

1. In a structure of the class described in combination, a coal chute, a hood having deflectors therein and a pair of attaching arms, said arms extending laterally from said hood and being provided with bayonet slots inwardly from the free ends thereof, a pair of spaced longitudinally disposed pins on each side of said chute adjacent the discharge end thereof, the outermost pins being receivable in the bayonet slots, and the end of said arms being disposed below the other pins in abutting contact therewith for operatively securing said hood to said chute.

2. In a coal chute guard and attachment of the class described, a hood open along its front and at its bottom, a U-shaped hanger fixture having its bight portion and adjacent arm portions secured in said hood, the free ends of the arms projecting beyond the open front for connection with the chute, a pair of inclined spaced parallel cleats secured in said hood on the inner surfaces of the side walls, a flexible shock absorbing flap of a length commensurate to the width of the hood and secured at its upper end to the bight portion of said U-shaped hanger and having its lower end portion resting on said cleats, a pair of additional cleats secured to the side walls adjacent the bottom of the hood and having portions projecting outwardly beyond the open front, and a baffle plate mounted on said second named cleats, said second named cleats being inclined in the direction opposite to the first named cleats.

3. A guard attachment and coal piling unit of the class described comprising a hood open at its bottom and on its front, an inclined piling baffle plate secured to the lower end portion thereof having one end projecting upwardly and outwardly beyond the open front, a hanger fixture for detachably mounting the hood on the coal chute, a strip of rubber secured at its upper edge to the back wall of the chute, inclined cleats on the interior of the side walls of the hood, said cleats cooperating with the free end of said strip of rubber, whereby to curve it forwardly and downwardly in the manner and for the purposes described.

RALPH W. WILCOX.