

(No Model.)

F. A. RICE.  
FOLDING HOE FOR REMOVING ASHES.

No. 492,875.

Patented Mar. 7, 1893.

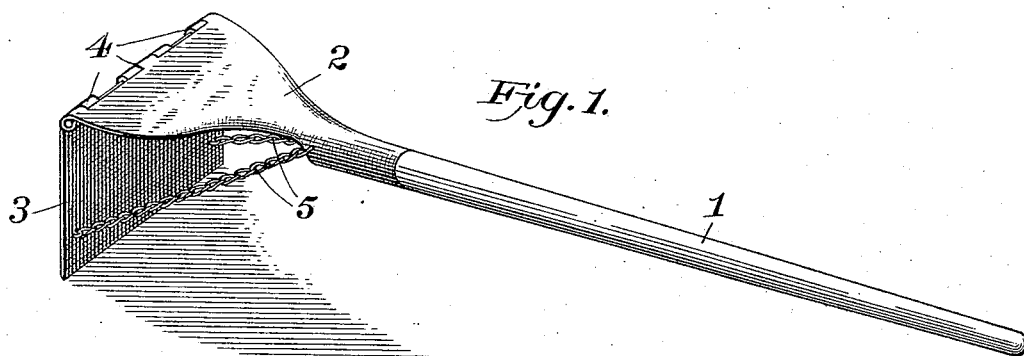


Fig. 1.

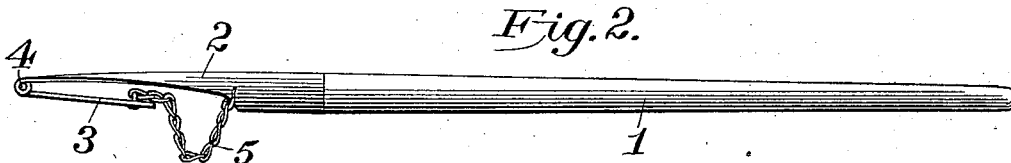


Fig. 2.

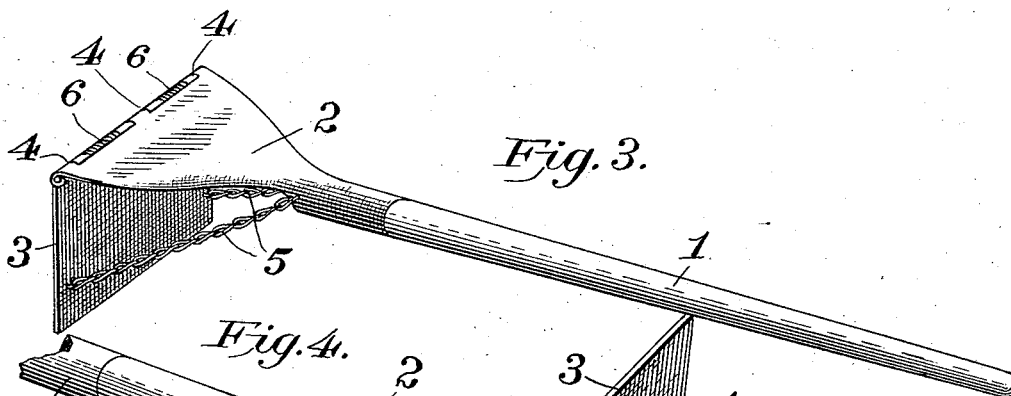


Fig. 3.

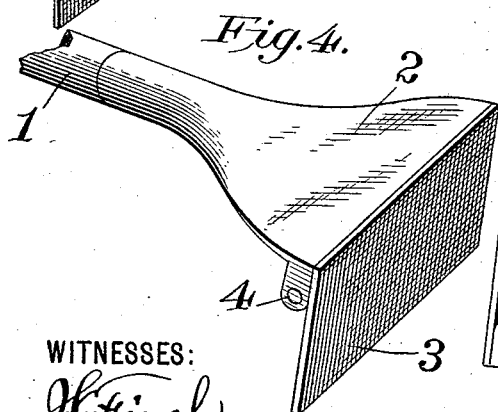


Fig. 4.

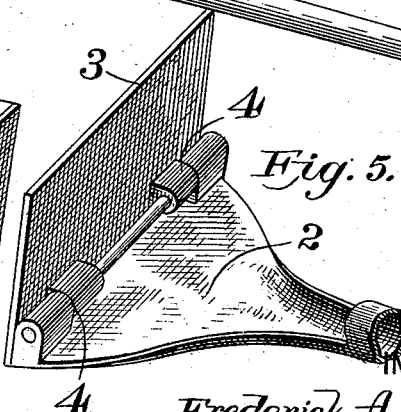


Fig. 5.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK A. RICE, OF BRIDGEPORT, CONNECTICUT.

## FOLDING HOE FOR REMOVING ASHES.

SPECIFICATION forming part of Letters Patent No. 492,875, dated March 7, 1893.

Application filed May 5, 1892. Serial No. 431,904. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK A. RICE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Folding Hoes for Removing Ashes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in the construction of hoes for use in the removal of ashes from beneath the grate-bars in furnaces, and has for its object to provide a device of this description which may be readily forced through a mass of ashes and which shall greatly facilitate the removal of the latter.

In the accompanying drawings,—Figure 1 is a perspective of my improved hoe. Fig. 2, a side elevation thereof, the blade of the hoe being shown in folded position. Fig. 3, a view similar to Fig. 1, but showing a spring which tends to keep the hoe-blade in normal position, and Figs. 4 and 5, are broken top and bottom perspectives, respectively, showing a modified form of my improvement.

Similar numbers of reference denote like parts in the several figures of the drawings.

1 is the handle and 2 the body of the hoe secured in the usual way to said handle.

3 is the blade of the hoe hinged at 4 to the body 2 in such manner as to be capable of folding inwardly.

5 are chains secured to said blade and to the body 2 in order to afford keepers to preserve the vertical position of the blade when in use.

The operation of my improvement is as follows: The hoe is thrust through the mass of ashes in the ash-pit, the blade being folded inward (as shown in Fig. 2) by this operation, so that every little resistance to the passage of the hoe is met with. When the hoe is at the rear of the ashes, which latter are generally piled up pyramidally, the blade will drop by gravity into a vertical position (as shown at Fig. 1) and on the withdrawal of the hoe a large mass of ashes will be removed.

In order that any slight resistance to the opening of the blade may be overcome, a spring 6 may be utilized in the usual manner to afford a spring hinge connection between the body and blade of the hoe, said spring acting to throw the blade open and yielding resiliently when the hoe is thrust through the mass of ashes.

The chains may be done away with and other means may be employed in their stead to limit the outward movement of the blade.

In the construction shown at Figs. 4 and 5, the upper edge of blade abuts against the body 2 when such blade is in normal position.

In order to still further facilitate the opening of the blade, the latter may be weighted along its lower edge.

I do not therefore wish to be limited to any particular means either for facilitating the opening of the blade or for affording a check to prevent the latter from swinging outwardly beyond a vertical plane, the gist of my invention resting in the broad idea of so constructing the hoe that the blade will automatically fold inwardly when thrust into the mass of ashes, and in providing means for preserving the normal vertical position of the blade while the hoe is being withdrawn to remove the ashes.

I claim—

1. As a new article of manufacture, a hoe comprising a body portion, a blade hinged thereto and adapted to fold inwardly, and means for limiting the outward swing of said blade to a vertical position, substantially as set forth.

2. The combination with the body of a hoe, of the blade hinged thereto and secured as against any outward swing beyond a plane at right angles to said body, said blade being capable of folding inwardly, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK A. RICE.

Witnesses:

F. W. SMITH, Jr.,  
J. S. FINCH.