No. 740,557. PATENTED OCT. 6, 1903.

W. E. HAMILTON.

SHOVEL NOSE.

APPLICATION FILED JAN. 26, 1903.

NO MODEL.

Fig. 1

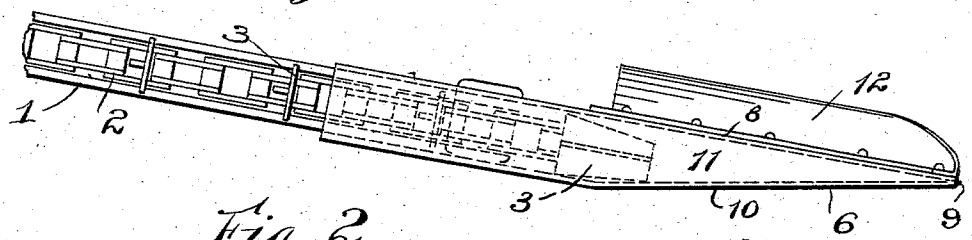


Fig. 2

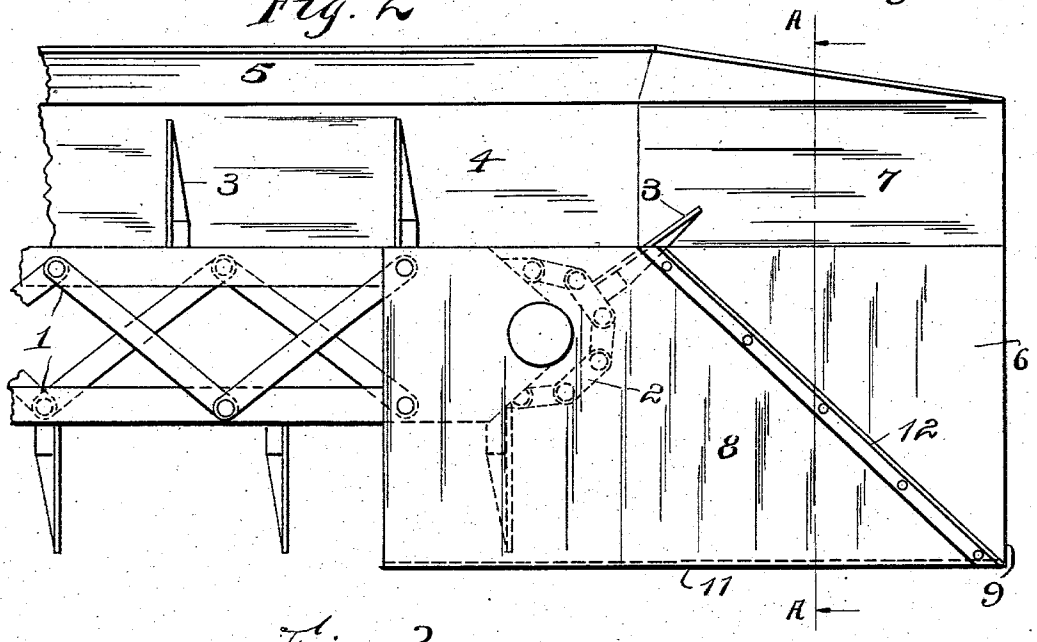
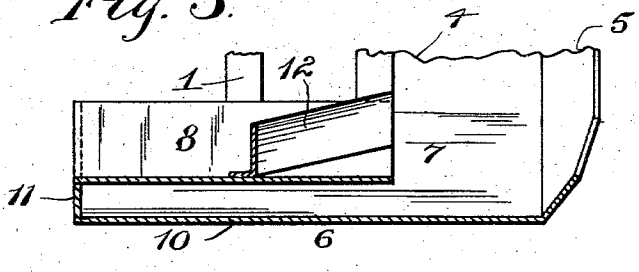


Fig. 3.



Witnesses:

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No. 740,557. Patented October 6, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM E. HAMILTON, OF ZANESVILLE, OHIO.

SHOVEL-NOSE.

SPECIFICATION forming part of Letters Patent No. 740,557, dated October 6, 1903.

Application filed January 26, 1903. Serial No. 140,482. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HAMILTON, a citizen of the United States, residing at Zanesville, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Shovel-Noses, of which the following is a specification.

This invention relates to shovel-noses or forward gathering devices for gathering and loading or conveying machines, and has for its principal objects to provide a device of this nature that may be used in connection with a chain-and-flight conveyer, especially when the flights lie in the same plane with the chain and the sprockets around which it passes, to provide a shovel-nose that may be forced into or under the material and in so doing will gather the same into the conveyer-trough.

It consists in the various novel features and details of construction which will be described and claimed hereinafter.

In the drawings, Figure 1 is a view of a conveyer-sweep with my improved conveyer-chain and flights and a shovel-nose embodied in this invention. Fig. 2 is a plan view of the same, and Fig. 3 is a sectional view taken on the line A A of Fig. 2.

A conveyer sweep or arm 1 is provided with a chain 2, having laterally-extending flights 3. At one side of the sweep these flights coact with a trough or slideway 4 to elevate the material. This trough is provided with an outwardly and upwardly projecting flange 5, which acts to throw the material upon or in the path of the flights. At the forward end of the sweep 1 is a shovel-nose 6, comprising a wedge-shaped device having an opening 7 in the top plate thereof in alinement with the trough 4, making, substantially, a continuation of the same. The top plate 8 extends from the cutting or inserting edge 9 back and up over the end of the sweep and out to cover the descending flights. It may be extended back as far as desired, so that the sweep may be forced into the material a considerable distance without danger of the material falling onto the descending flights. The bottom 10 of the nose is substantially a widened projection of the bottom of the trough 4. An edge plate 11 closes the outer side of the shovel-nose and acts as a brace to make it more rigid. On the top plate 8 is a deflector 12, extending from the outer edge up and over to the opening 7, so that any material coming on the forward end of the covered part of the shovel-nose will be deflected into the trough as the nose is forced into the material.

In operation the sweep carrying the conveying devices, together with the shovel-nose, is placed with the nose in close proximity to the pile of material to be gathered, the conveyer started, and the nose urged into or under the material. The material falling into the open top and the trough will be carried away by the flights and the material falling onto the closed nose end will be deflected into the trough, as just explained.

Having described this invention, which I consider entitled to a broad interpretation of the novel features, I claim—

1. The combination with a conveyer, having laterally-movable flights of a shovel-nose adapted to be forced into the material to be gathered.

2. In combination, a conveyer provided with laterally-movable flights and a shovel-nose adapted to protect the descending flights.

3. In combination with a sweep provided with a trough and conveying apparatus comprising a chain with laterally-movable flights, a shovel-nose adapted to be thrust into the material to be gathered and direct the same into said trough.

4. A shovel-nose comprising a wedge-shaped body portion and a cover-plate extending laterally, substantially over one-half of said body portion.

5. A shovel-nose comprising a wedge-shaped body portion, a cover-plate extending from one side laterally over substantially one-half of said body portion, and a flared edge forming the opposite side.

6. A shovel-nose comprising a wedge-shaped body portion having an opening in top plate thereof and a deflector on said top plate directed toward said opening.

7. In combination with a conveying apparatus provided with a conveyer-trough, a shovel-nose comprising substantially a continuation of said trough with a lateral wedge-shaped compartment adapted to protect the flights in their approach to engage the mate-

rial and provided with an opening at the top thereof to allow the material to fall into the path of the rising flights.

8. In combination with a conveying apparatus provided with a trough, a shovel-nose adapted to be forced into the material to direct it into said trough, a wedge-shaped, closed portion to said shovel-nose through which the flights pass before passing onto the trough-bottom, and a deflector on said closed portion to deflect the material into the trough.

9. A sweep provided with a trough, a conveyer-chain with lateral flights, a shovel-nose covering the end of said sweep, an opening in the top of said shovel-nose in alinement with said trough, and a deflector-plate on the top of said shovel-nose extending from the outer engaging nose edge toward the opening in the top of said shovel-nose.

10. The combination in a conveying apparatus of a frame, a trough supported by said frame, wheels mounted to turn in a plane parallel with said trough, a conveyer-chain with lateral flights, and a shovel-nose secured to said frame adapted to be thrust under the material to be conveyed and direct the same into the path of said flights.

11. The combination of a sweep, wheels mounted on said sweep, a chain passing around said wheels in a plane parallel to said sweep, said chain being provided with laterally-projecting flights, a trough with which said flights coöperate, an extension of the trough having an open end in order that said flights may engage and carry up any material which is forced upon the open end of the said trough.

12. A shovel-nose in combination with and forming the end of a sweep or arm, a conveyer coöperating with said sweep or arm, said conveyer having its going and returning portions both in the same plane or a plane parallel with the sweep or arm, said shovel-nose comprising a shovel-shaped extension to said sweep or arm.

13. The combination in a conveying apparatus, of a frame, a chain, wheels for said chain journaled in said frame at right angles thereto, flights mounted on said chain, a lateral extension on said frame constituting a trough or slideway coöperating with said chain and flights, and a longitudinal extension of said frame constituting a shovel-nose adapted to slide upon the floor and under the material to be gathered and to direct the same into the path of the flights.

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Witnesses:
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