No. 881,745. PATENTED MAR. 10, 1908.

F. B. TICE.

SUPPLEMENTAL HOPPER FOR GRINDING MILLS.

APPLICATION FILED MAY 23, 1907.

FIG. 1

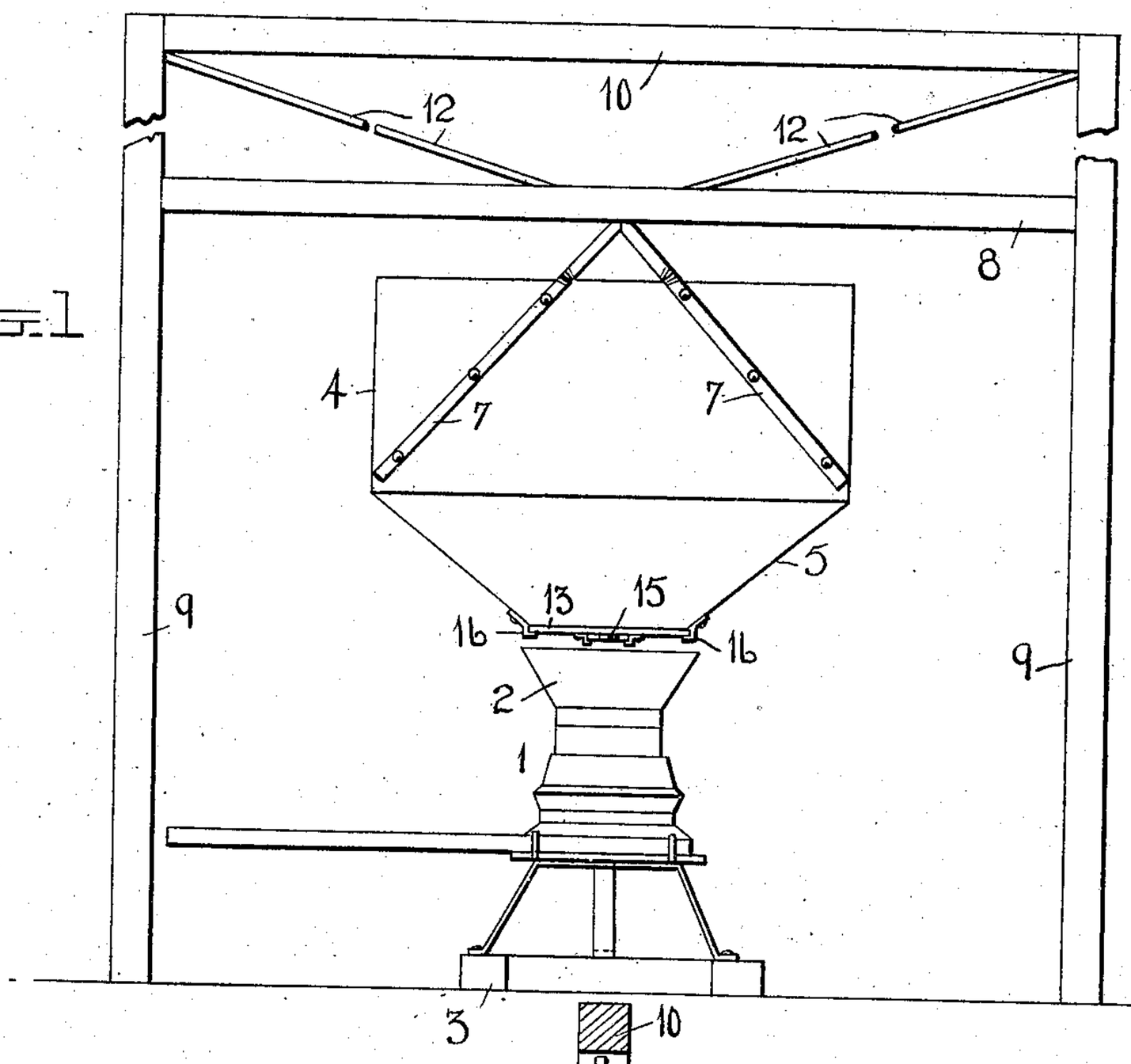


FIG. 2

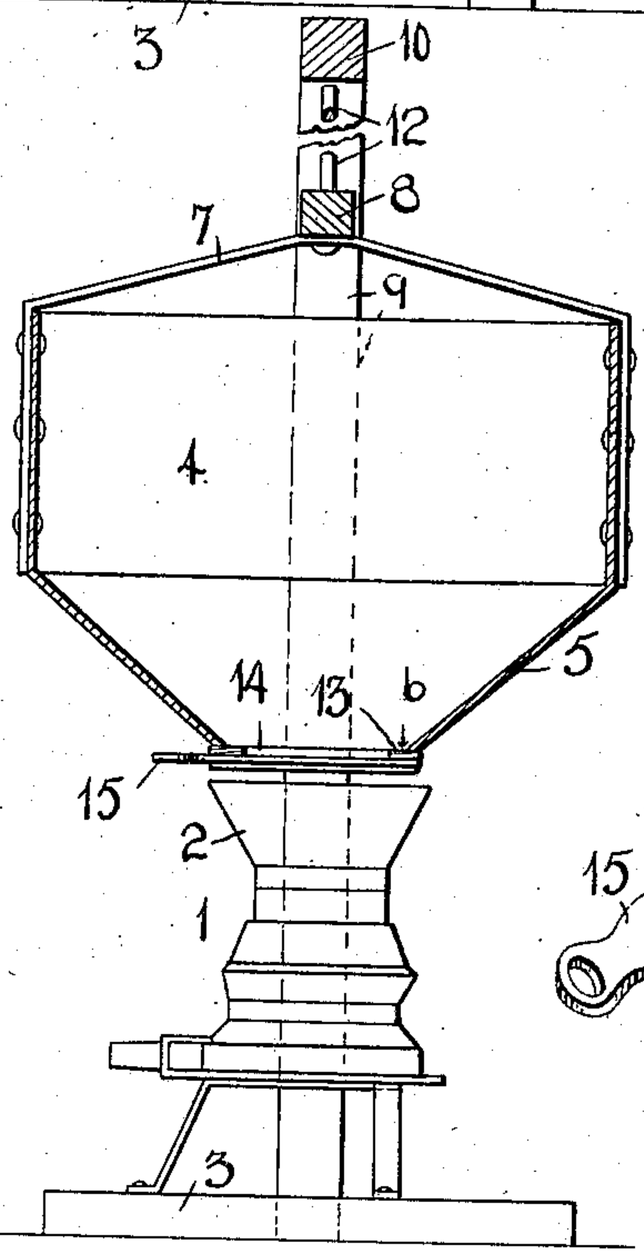
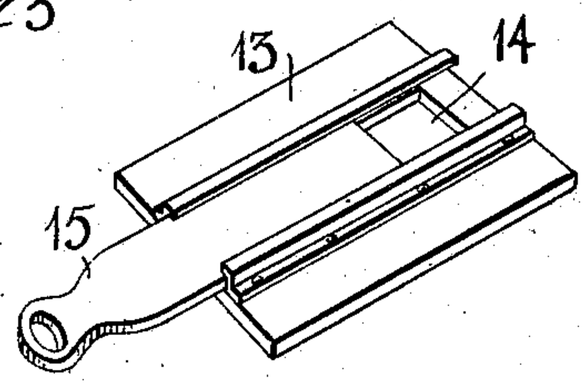


FIG. 3



Witnesses
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UNITED STATES PATENT OFFICE.

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SUPPLEMENTAL HOPPER FOR GRINDING-MILLS.

No. 881,745. Specification of Letters Patent. Patented March 10, 1908.

Application filed May 23, 1907. Serial No. 375,338.

To all whom it may concern:

Be it known that I, FRANK B. TICE, a citizen of the United States, residing at Polo, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Supplemental Hoppers for Grinding-Mills; and I do 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.

This invention relates to supplemental hoppers for grinding mills.

The object of the invention is to provide a hopper of this character adapted to be supported over the mill, whereby a wagon load or large quantity of grain may be held in position to be discharged into the hopper of the mill and thereby greatly facilitate the operation of the same by dispensing with the necessity of frequent filling of the mill hopper, the latter being kept supplied from the supplemental hopper.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side view of a sweep mill showing the application of the invention; Fig. 2 is a similar view taken at right angles, showing the device in section; and Fig. 3 is a detail view of a sliding valve plate for the discharge opening in the hopper.

Referring more particularly to the drawings, 1 denotes the mill which may be of any construction, but which is here shown as a sweep mill having a hopper, 2, and which is suitably mounted upon a supporting base, 3.

Supported above the hopper 2 of the mill is a large supplemental hopper 4, the sides at the lower end of which incline or converge inwardly as at 5 to a centrally disposed discharge opening 6. To two of the opposite sides of the hopper 4 are secured upwardly projecting inclined bars 7, which are joined at their upper ends and form supporting bails for the hopper. The upper ends of the supporting bails of the hopper are connected to a cross-bar 8, the opposite ends of which are secured to vertically disposed standards or upright posts 9, the lower ends of which are set into the ground on each side of and at a suitable distance from the mill. The upper ends of the standards 9 are connected by an upper cross bar 10 and from said upper ends of the standards 9 extend downwardly inclined truss brace rods 12, the lower ends of which are connected to the cross-bar 8 at the point where the same is engaged by the bail bars 7. The bars 8 and 10 and the standards 9 form a supporting frame by means of which the hopper 4 is suspended in position over the mill. The standards 9 are located a sufficient distance from the mill to permit of the passage of the draft animals hitched to the mill sweep.

In the lower discharge end 6 of the hopper is slidably mounted a valve plate 13 in which is formed a discharge opening 14 adapted to be opened or closed by means of a sliding plate 15 whereby the size of said opening may be varied. At the lower end of the inclined bottom 5 of the hopper at each side of the discharge opening 6 is arranged guide-ways 16, in which the valve plate 13 is adapted to be supported. The valve plate 13 is used to close the opening 6 in the hopper when the latter contains small grain, said grain being fed to the hopper of the mill through the feed opening 14 in said valve plate. The feed of the grain through the opening 14 is regulated by means of the sliding valve plate 15, as will be understood. When the hopper 4 is to be used for holding ear corn, the valve plate 13 is removed, thus leaving the entire discharge opening 6 clear for the discharge of the corn from the hopper.

The hopper 4 is intended to be constructed of such size as to contain a load or a large quantity of grain, and by arranging the same as herein shown and described, a wagon load of grain may be driven sufficiently close to the hopper to permit of the grain being shoveled directly from the wagon into the hopper, thereby dispensing with the necessity of carrying the grain in small quantities to the hopper of the mill, which frequently interferes with the work of the team operating the mill and often necessitating the stoppage of the grinding operation while the hopper is being filled.

From the foregoing description, taken in connection with the accompanying drawing, the construction and operation of the invention may be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of

this invention as defined in the appended claims.

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

In a sweep mill the combination of a feed hopper supporting structure comprising oppositely disposed uprights spaced from the respective sides of said mill a sufficient distance to provide for the operating team to pass between said mill and said uprights, vertically spaced cross bars connecting said uprights above said mill, truss brace rods connected at one end to the upper ends of said uprights and at their opposite ends to the lower cross bar, a feed hopper, a pair of bars secured on opposite sides of said hopper and arranged in inverted V-shape with the apices thereof projecting above the top of said hopper and secured to the lower cross bar at the point where said bar is engaged by said brace rods.

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

FRANK B. TICE.

Witnesses:
ELMER R. ANTRIM,
JOHN YEAKEL.