J. D. MOORE.

COMBINATION SHOE.

APPLICATION FILED APR. 19, 1911.

999,835. Patented Aug. 8, 1911.

Fig. 1.

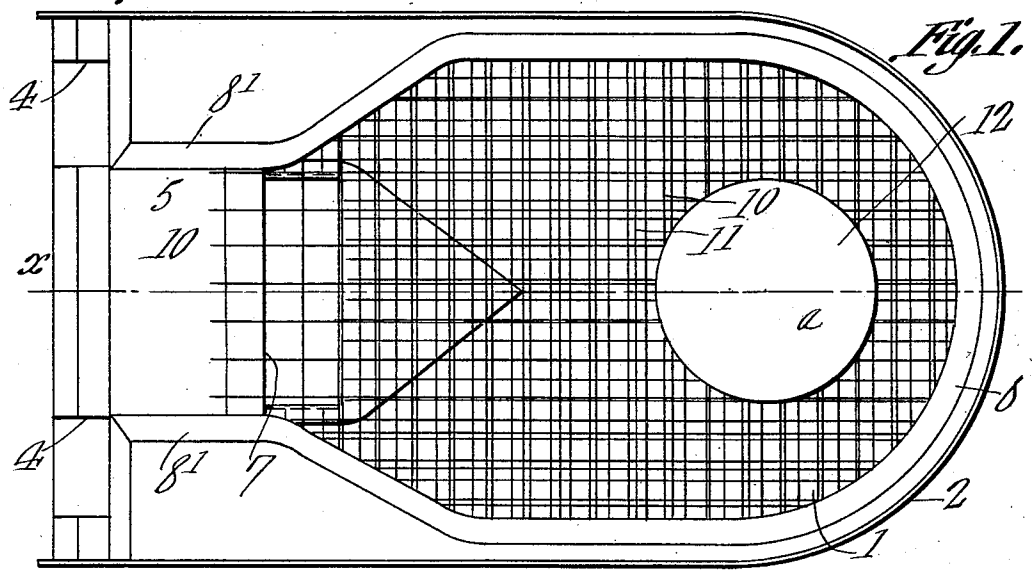

Fig. 2.

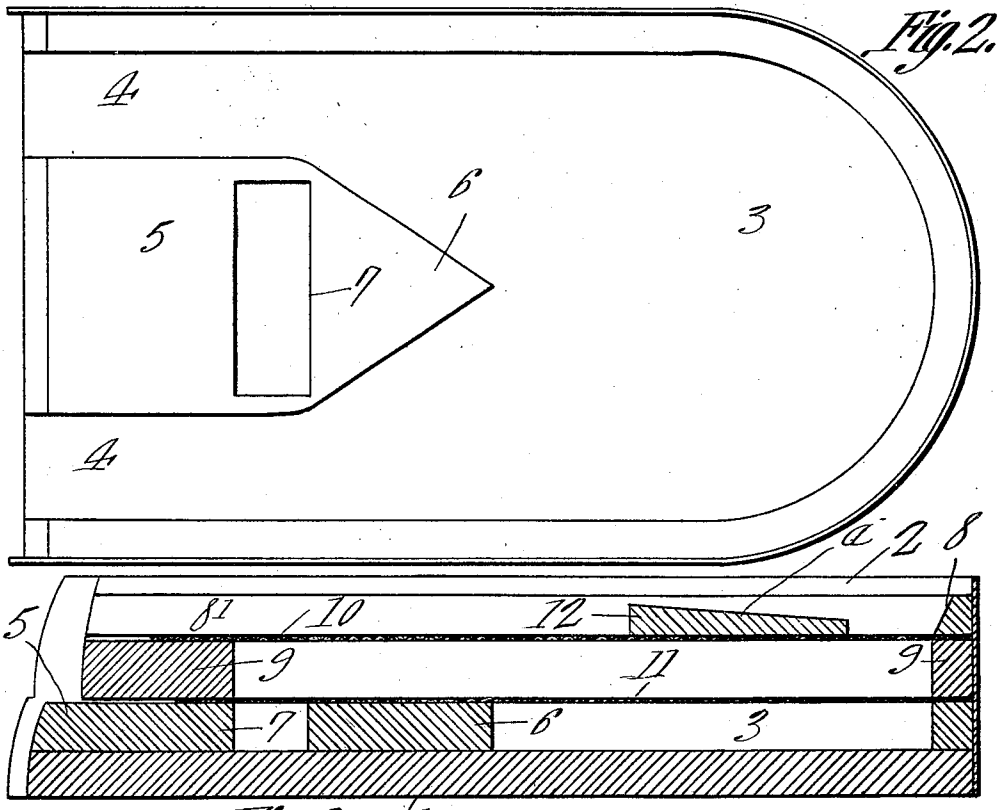

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES DUDLEY MOORE, OF NORTH WILKESBORO, NORTH CAROLINA.

COMBINATION-SHOE.

999,835. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed April 19, 1911. Serial No. 622,111.

To all whom it may concern:

Be it known that I, JAMES D. MOORE, a citizen of the United States, residing at North Wilkesboro, in the county of Wilkes and State of North Carolina, have invented a new and useful Combination-Shoe, of which the following is a specification.

This invention relates to an improvement in combination shoes, the said combination shoe and screen device being used in connection with bur wheat and corn mills, and its primary object is to provide a device of this character which is an improvement upon Patent No. 978,188, granted December 13, 1910.

A further object of the invention is the provision of a combination shoe provided with means for receiving the grain and other particles and for separating the good grain from the bad grain, the foreign substances also from the same and delivering the good grain to the burs while the other particles are carried away and separated from the good grain.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—Figure 1 is a top plan view of the completed article. Fig. 2 is a view in plan of the lower portion of the shoe. Fig. 3 is a longitudinal sectional view through the device, taken on line X—X of Fig. 1.

Referring to the drawings, the numeral 1 designates the body of the shoe which may be made of the contour shown, or otherwise, and is provided with a marginal metallic rim 2. The body, as usual, is constructed of wood and is provided at its intake end or that which will be disposed beneath the spout of the mill with a relatively large chamber 3, into which the finer products are discharged and pass out through the lateral channels 4 at the discharge end of the shoe to the burs. Mounted at the discharge end of the frame 1 and separating the channels 4 is the projection 5, having its angular or pointed end 6 toward and centrally of the chamber 3, and provided transversely across or through the projection, is a rectangular opening 7, forming a discharge for the escape of the perfect grain. Removably fitting within the body and conforming marginally to the contour of the rim 2, is a frame comprising two members 8 and 9, between which is secured a relatively coarse mesh screen 10, the member 9 having secured to its under side a relatively fine mesh screen 11, the latter having or being provided with an opening which corresponds and fits around the opening 7 of the projection 5.

The member 8 is provided with the inwardly projecting walls 8′, forming a chute with the member 9 as its bottom, to convey the coarse products, imperfect grain, cobs, etc., over the end of the shoe.

At that portion of the screen 10, that will come under the mouth of the mill, there is secured a circular block 12 to prevent the great wear upon the screen 10 at this point and to provide for the purpose of regulating the feed, and if desired, of cutting off said feed, which may be accomplished by lowering the spout of the mill, and yet still permit the shoe to vibrate and thus effect the separation of the coarser from the finer portions of the grain. The upper surface *a* of this block 12, is inclined toward the feed end of the shoe, thus providing a surface which will tend to reduce the glancing action of the grains as they strike therefrom after being delivered from the mill.

By making the two members 8 and 9, or what is known as the screen frame removable, a coarse screen may be used in place of a fine one and vice versa, according to the character of grinding that it is desired to perform, and by this means one mill will be adapted to grind flour as well as corn meal.

By this construction it will be seen that the coarser screen will carry off the larger matter such as cob ends and the like, while the finer screen will convey the grain to the conduit leading into the burs, and at the same time allow any small trash such as silks, inferior grain, grit and the like to pass through and off of the end of the screen, the same as that of the coarse sieve.

What is claimed is:—

1. The combination with a body provided at its intake end with a grain receiving

chamber and with two lateral discharges, a projection in the discharge end forming said lateral discharges, and provided with a grain discharge therein, of a double screen removably arranged in the body, and provided at its intake end with means for checking the discharge of the grain and deflecting the grain in radial directions upon the screen.

2. The combination with a body provided at its intake end with a grain receiving chamber, and with two lateral discharges, a projection in the discharge end forming said lateral discharges and provided with a grain discharge opening therein, of a double screen removably arranged in the body, and an imperforate means connected to and carried by the upper screen for checking the discharge of the grain to the shoe and deflecting the grain radially upon the screen.

3. The combination with a body provided at its intake end with a grain receiving chamber, a projection having a pointed end mounted in the discharge portion of said body and having its pointed end projecting toward the chamber, said projection providing two lateral discharges for the body, and being provided with a grain outlet within itself, a frame removably mounted in the body and disposed to rest upon said projection, screens carried by said body the lower one of which is provided with an opening which empties into the outlet of the projection.

4. The combination with a body provided at its intake end with a grain receiving chamber, of a frame carrying two screens removably mounted in the body above said chamber, and a circular imperforate block carried by the upper screen of said frame and adapted to check the discharge of grain from the mill and deflect said grain radially upon the screens.

5. The combination with a body provided at its intake end with a grain receiving chamber, of a frame removably mounted above said chamber and provided with interposed screens, the upper screen being of a larger mesh than the lower screen which rests over the chamber, an imperforate means carried by the upper screen for checking the flow of grain from the mill and deflecting the grain radially upon said screen, and a restricted discharge formed by the two screens.

6. The combination with a body provided at its intake end with a grain receiving chamber and with two lateral discharges, of a double screen removably arranged in the body above the chamber thereof and provided with means for checking the discharge of and deflecting the grain radially upon the screen, said means being an imperforate circular block having an inclined upper surface.

7. The combination with a body provided at its intake end with a grain receiving chamber, a projection mounted in the discharge end of said chamber and provided with a pointed end projecting toward the chamber, said projection being provided with a grain discharge slot transversely thereof, said projection further providing two lateral discharges for the grain receiving chamber, of a frame composed of two members removably mounted within the body and provided with one screen upon its lower face to rest over the grain receiving chamber and provided with an opening to surround the discharge opening of the projection, and another screen interposed between the members of said frame.

8. The combination with a body provided at its intake end with a grain receiving chamber, and a projection mounted upon said body and having a pointed end projecting toward the main portion of the chamber and providing two lateral discharges for said chamber, said projection being provided with a transverse grain discharge opening therein, a frame carrying two screens adapted to removably fit in the body above the chamber, and an imperforate circular block carried by and upon the upper screen and adapted to be disposed below the discharge to receive the grain from the mill and scatter said grain equally in all directions upon the screen.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES DUDLEY MOORE.

Witnesses:
R. L. CHURCH,
N. H. WAUGH.