P. B. HEFFERNAN.

GRAIN SEPARATING SCREEN.

APPLICATION FILED JUNE 25, 1915.

1,186,775.

Patented June 13, 1916.

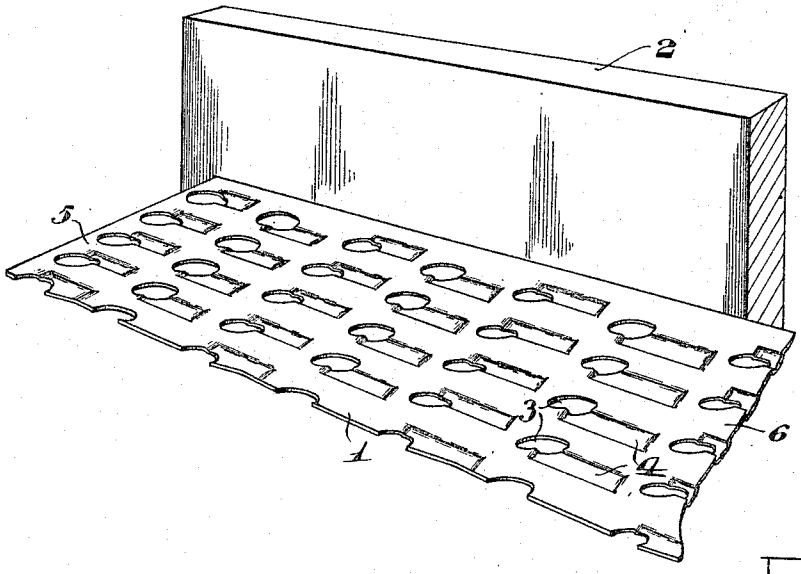


Fig. 1

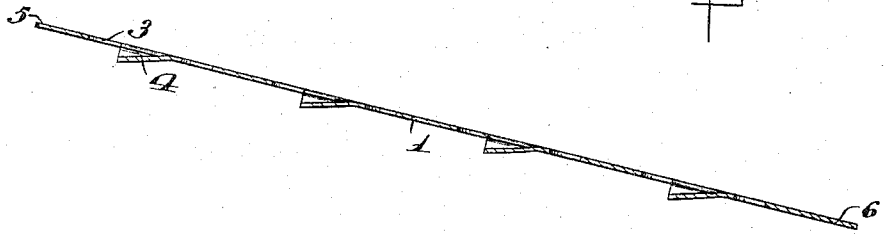


Fig. 2

Witnesses

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By

Inventor

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UNITED STATES PATENT OFFICE.

PATRICK B. HEFFERNAN, OF SIBBALD, ALBERTA, CANADA.

GRAIN-SEPARATING SCREEN.

1,186,775. Specification of Letters Patent. Patented June 13, 1916.

Application filed June 25, 1915. Serial No. 36,396.

To all whom it may concern:

Be it known that I, PATRICK B. HEFFERNAN, of Sibbald, in the Province of Alberta, Dominion of Canada, having invented certain new and useful Improvements in Grain-Separating Screens, do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in grain separating screens or the like, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel arrangement and construction of a screen having a plurality of orifices therein set in staggered manner, and an equal number of indentures or pockets communicating with said orifice.

The objects of the invention are to devise a grain separator of simple and durable construction which will effectively separate useful grains from those of a noxious variety, and would be of particular advantage when used with flax seed.

In the drawings:—Figure 1 is an enlarged perspective view of a portion of the screen. Fig. 2 is a longitudinal section of the same.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a screen supported within the frame 2, said screen preferably being made of sheet metal, and has punched therein a plurality of circular orifices, which are shown greatly exaggerated in the drawings to more clearly illustrate the same. In practice it has been found that the holes should vary in size from $\frac{3}{32}$ to $\frac{1}{8}$ advancing in sixty-fourths. Communicating with said orifices at the lower end thereof are a plurality of indentures or pockets 4, having one-half their width in the orifice and the other half to one side. The said pockets are inclined upwardly at the end remote from the orifice 3, and are stamped in such a manner that they will come in rows adjacent each other, and in a staggered manner.

In operation the screen will be set in a fanning mill of the ordinary type and vibrated in the customary manner. The grain is fed in the higher end 5, and due to the vibration will work its way downwardly to the end 6. In the separation of common flax seed from wild flax seed, for which the invention is particularly adapted, all common flax being oily and slippery, and the wild flax being somewhat shorter than the common flax, will drop into the pockets and partly cover the orifices, thus allowing the grains of common flax to pass over the same toward the discharge end of the screen.

It will be clear that the grain gravitating down the screen between adjacent rows of orifices will fall into that half of the pockets 4 which project laterally beyond the orifices 3, whereupon owing to the angular disposition of the pockets and the oscillatory motion of the screen the tame grain end-up will fall through the orifices. The wild grain which is rounder than the tame grain cannot pass through the orifices 3 and gravitates down to the foot of the screen where it is carried off in any suitable manner.

I do not wish to be confined to the construction illustrated in the above specification and accompanying drawings, but desire that the same be taken as illustrative, and not in a limiting sense.

What I claim is:

A grain separating screen having a plurality of orifices therethrough set in a staggered manner, a plurality of pockets at the front of the orifices, each pocket having one half of its width in its coöperating orifice and the other half on one side of the orifice, the said pockets being inclined downwardly toward the orifices, substantially as described.

Signed at Alsask, Sask., this 26th day of May, 1915.

PATRICK B. HEFFERNAN. [L. S.]

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."