H. JUHLKE.

GRAIN CLEANING SIEVE.

APPLICATION FILED JULY 16, 1919.

1,334,761. Patented Mar. 23, 1920.

Fig. 1

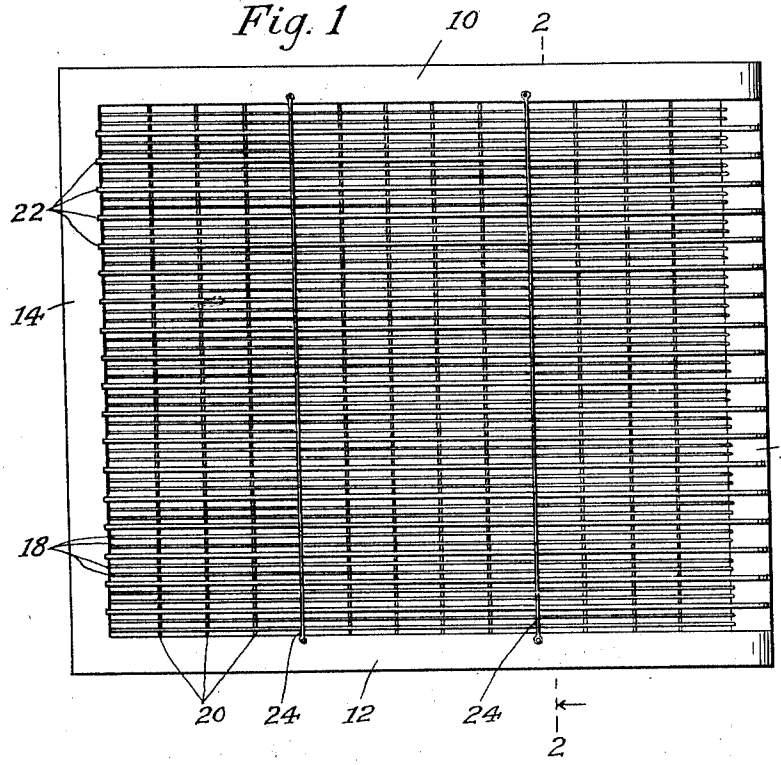
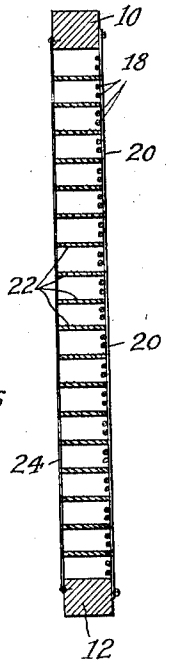


Fig. 2



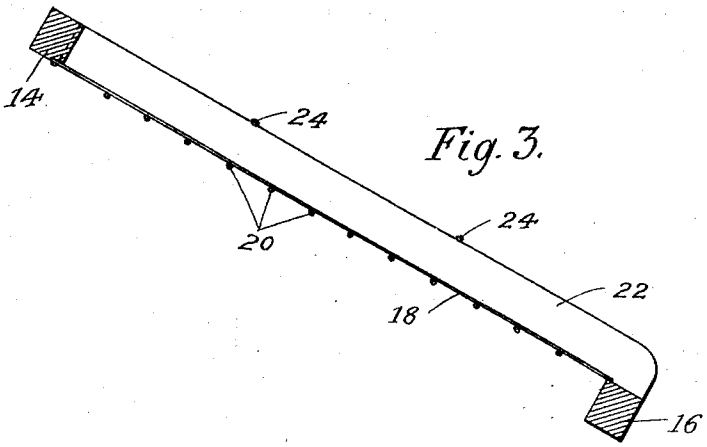


Fig. 3.

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UNITED STATES PATENT OFFICE.

HARRY JUHLKE, OF ARVILLA, NORTH DAKOTA.

GRAIN-CLEANING SIEVE.

1,334,761. Specification of Letters Patent. Patented Mar. 23, 1920.

Application filed July 16, 1919. Serial No. 311,327.

To all whom it may concern:

Be it known that I, HARRY JUHLKE, a citizen of the United States, residing at Arvilla, in the county of Grand Forks and State of North Dakota, have invented certain new and useful Improvements in Grain-Cleaning Sieves, of which the following is a specification.

My invention relates to grain cleaning sieves and an object is to provide a sieve which will take the wild oats and other foul seeds out of grain and will also help in grading the grain. The usual fanning mill or grain cleaning machine consists of three or four sieves, which are generally referred to as the gang. The grain in going through this gang is separated from the straw and chaff while more or less of the light grain and light wild oats are blown out by the blast of air from the fan. After passing through the gang the grain drops upon a lower sieve, and it is an object in particular of my invention to so construct this sieve that long narrow seeds or particles such as wild oats will be caused to travel lengthwise over the sieve so as to insure their passing through the meshes of the sieve and thus causing separation from the thicker kernels or grain berries such as wheat which are caused to pass off the lower end of the screen.

The full objects and advantages of my invention will appear in connection with the detailed description thereof and the novel features embodied in my inventive idea will be particularly pointed out in the claims.

Referring to the accompanying drawings, which illustrate the application of my invention in one form,—

Figure 1 is a top plan view. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal section through the screen showing its inclined position when in use.

Referring to the construction shown in the drawings the frame of the sieve consists of two side members 10 and 12, a rear member 14 and a front member 16, the latter being located below the plane of the other members as shown in Fig. 3. The sieve is made up of two sets of wires crossing each other at right angles. The lengthwise wires 18 are placed close together, there being about ten to twelve wires to the inch. The crosswise wires 20 are spaced much farther apart, the distance between them being usually from three-eighths to five-eighths of an inch. The spacing of the wires 18 is such that thick grain such as wheat will not pass through even when moving lengthwise, but narrow particles such as wild oats will readily drop through provided these particles are moving lengthwise. In order to insure these particles moving lengthwise of the screen the following construction is provided: Strips of sheet material 22 are placed directly above some of the wires 18, preferably over each third wire in succession, so they leave three open spaces crosswise of the sieve between any two of the strips. These strips are secured to the frame lengthwise of the screen, and it is obvious that each of these strips may take the place of the lengthwise wire which would be placed at that particular position. These strips may be braced with wires or rods 24 extending across the tops thereof.

The operation and advantages of my invention will be readily understood from the foregoing description. The strips 22 are placed close enough to each other so that the particles of wild oats will be turned lengthwise in case they are not already in such position, and since these particles have a thickness which is less than the distance between the longitudinal wires 18 they will readily pass through the meshes of the screen and be separated from the wheat or other grain.

I claim:

1. A grain cleaning sieve comprising a multiplicity of longitudinal wires spaced from each other in such manner as to permit oats to pass therebetween and to prevent the passage of thicker grain such as wheat, and a plurality of guiding members for causing the oats to move longitudinally along the screen, a plurality of said longitudinal wires being interposed between said guiding members.

2. A grain cleaning and grading sieve comprising a multiplicity of longitudinal wires spaced from each other a distance sufficient to permit oats and light kernels of grain to pass therebetween and to prevent the passage of plump kernels of grain, and a plurality of longitudinal strips for causing the oats to move longitudinally along the screen, a plurality of said longitudinal wires being interposed between said longitudinal strips.

3. A grain-cleaning sieve, comprising a multiplicity of longitudinal wires spaced from each other in such manner as to permit oats to pass therebetween and to prevent the passage of thicker grain such as wheat, a multiplicity of cross-wires, spaced from each other a greater distance than the spacing of said longitudinal wires, and a plurality of longitudinal strips extending upwardly from the plane of said wires for causing the oats to move longitudinally along the screen, a plurality of said longitudinal wires being interposed between said longitudinal strips.

In testimony whereof I hereunto affix my signature.

HARRY JUHLKE.