(No Model.)

E. C. GAGE.

Grain and Cockle Separator.

No. 234,958. Patented Nov. 30, 1880.

Fig. 1.

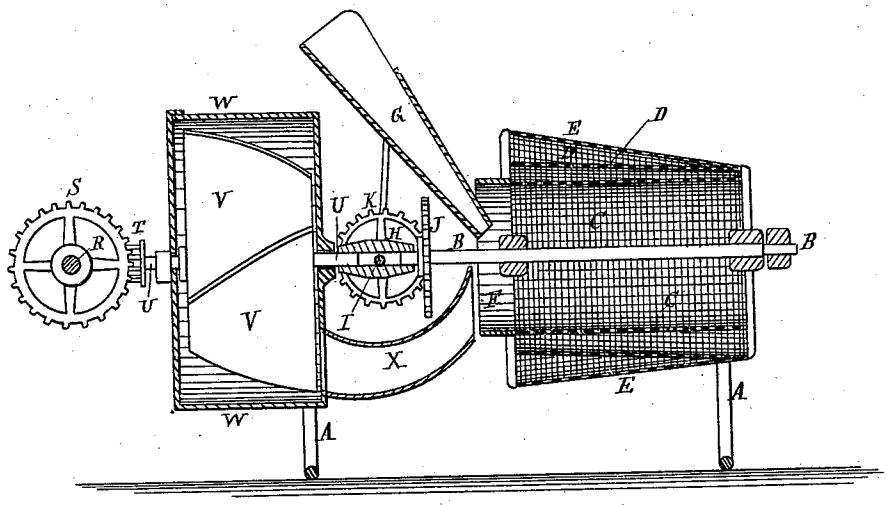
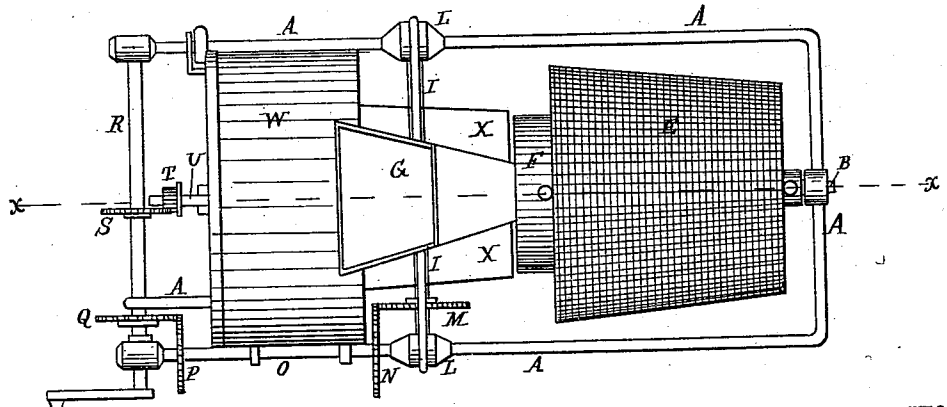


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELI CHAPMAN GAGE, OF WHITEHALL, WISCONSIN, ASSIGNOR TO HIMSELF AND DANIEL BANNERMAN, OF MENOMINEE, MICHIGAN.

GRAIN AND COCKLE SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 234,958, dated November 30, 1880.

Application filed June 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, E. CHAPMAN GAGE, of Whitehall, in the county of Trempealeau and State of Wisconsin, have invented a new and useful Improvement in Grain and Cockle Separators, of which the following is a specification.

Figure 1 is a sectional side elevation of the improvement, taken through the line *x x*, Fig. 2. Fig. 2 is a plan view.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish separators for removing cockle from grain, so constructed as to take out the cockle rapidly and thoroughly, and which shall be simple in construction and convenient in use.

A represents the frame of the machine. In bearings attached to the rear cross-bar of the frame A revolves a shaft, B, to which are attached three or more concentric screens, C D E.

The inner screen, C, may be made of woven wire or perforated sheet metal.

D is the intermediate screen, one or more of which may be used, and which may be made of woven wire or perforated sheet metal, as may be desired.

The outer screen, E, is made of woven wire of such a fineness of mesh that the cockle can pass through it, but the wheat cannot.

The inner screens, C D, have meshes of such a size that both wheat and cockle will pass through them.

The screens C D E are all made flaring, or wider at one end than at the other. The inner screens, C D, are placed with their larger ends outward or rearward. The outer screen, E, is placed with its larger end inward or forward.

To the inner or forward end of the inner screen, C, is attached a band or collar, F, to receive the grain from the hopper G and guide it into the inner screen, C.

The inner end of the shaft B revolves in a bearing, H, through which passes, in which revolves, and which is supported by the cross-shaft I.

To the inner part of the shaft B is attached a bevel-gear wheel, J, the teeth of which mesh into the teeth of a bevel-gear wheel, K, attached to the shaft I.

The ends of the shaft I revolve in bearings L, attached to the side bars of the frame A, and to the said shaft, near one end, is attached a bevel-gear wheel, M, the teeth of which mesh into the teeth of a bevel-gear wheel, N, attached to the shaft O.

The shaft O revolves in bearings attached to the frame A, and to it, near its forward end, is attached a bevel-gear wheel, P, the teeth of which mesh into the teeth of the bevel-gear wheel Q, attached to the cross-shaft R.

The shaft R revolves in bearings attached to the frame A, and to its middle part is attached a gear-wheel, S, the teeth of which mesh into the teeth of the small gear-wheel T, attached to the forward or outer end of the shaft U.

The rear or inner end of the shaft U revolves in the bearing H, and to the said shaft are attached fans V, which are inclosed by a case, W, and are so formed as to force a blast of air through the discharge-spout X.

The discharge-spout X is so formed as to discharge the air-blast against the grain as it passes from the hopper G to the screens C D E.

With this construction the chaff, straw, oats, and other light impurities will be driven off through the open outer end of the screen C, while the grain and cockle pass together through the screens C D and fall upon the lower part of the outer screen, E.

The cockle passes through the screen E to the cockle-box or other receiver, and the grain escapes at the lower inner end of the said screen E.

With this construction the grain and cockle will be separated very rapidly, the revolution of the screens C D E keeping them all the time free.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

In a grain and cockle separator, the combination, with the screen-shaft B and the fan-shaft U, of the four pairs of gear-wheels J K, M N, P Q, and S T, and the three shafts I O R, whereby the screen-shaft and the fan-shaft can be placed in line with each other, as set forth.

ELI CHAPMAN GAGE.

Witnesses:

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