G. H. DEKKER.

SEPARATOR.

APPLICATION FILED SEPT. 12, 1908.

915,832. Patented Mar. 23, 1909.

Fig. 2.

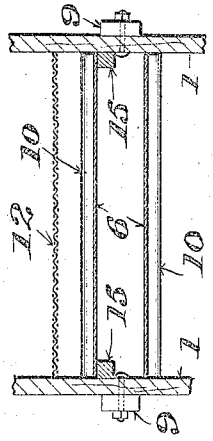
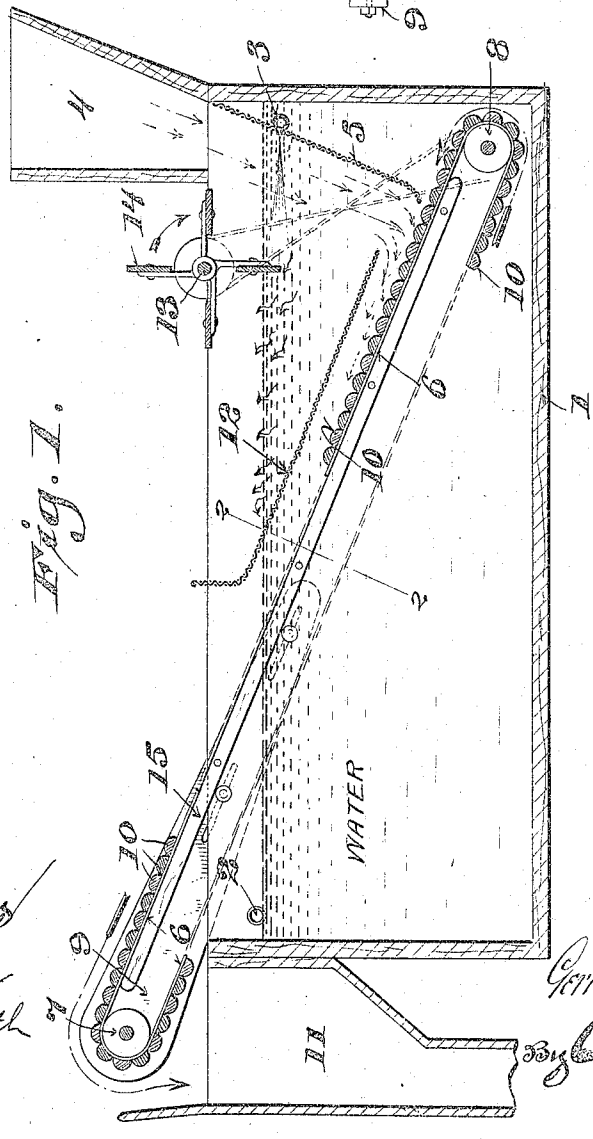


Fig. 1.



Witnesses
George Felber
R. Strunguth

Inventor:
Gerrit H. Dekker.
By Wickham & Young
Attorneys

UNITED STATES PATENT OFFICE.

GERRET H. DEKKER, OF OOSTBURG, WISCONSIN.

SEPARATOR.

No. 915,832. Specification of Letters Patent. Patented March 23, 1909.

Application filed September 12, 1908. Serial No. 452,787.

To all whom it may concern:

Be it known that I, GERRET H. DEKKER, a citizen of the United States, and resident of Oostburg, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Separators; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a simple, economical and effective separator for cleaning and scouring pulse, berries or the like.

The machine is particularly designed for cleaning hulled peas preparatory to canning, the peas being passed through the machine for the purpose of separating thistles or other foreign substances therefrom, together with imperfect or split peas, and at the same time said peas are thoroughly scoured by being precipitated into a water bath.

The invention therefore consists in various details of construction and combination of parts as hereinafter fully described with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a longitudinal sectional view of a separator embodying the features of my invention, and Fig. 2, a detail cross-section, as indicated by line 2—2 of Fig. 1.

Referring by numerals to the drawings, 1 indicates a tank adapted to be partially filled with water, the height of the same being controlled by an overflow 2 located at the rear end of said tank. Water is supplied to the tank by means of a feed-pipe 3 extending across the same and provided with a series of discharge apertures. The feed-pipe is adjacent the front end of the tank, its discharge apertures being directed toward the rear of said tank and thus when water is admitted a current is maintained toward the overflow, it being preferable, as shown to place the feed-pipe at such an elevation with relation to the overflow, that said feed-pipe will be slightly submerged. A feed-hopper 4 is secured to the front end of the tank, there being a vertically disposed inclined wire screen 5 secured to the tank directly under the feed-hopper constituting a deflector. This screen terminates adjacent to the upper stretch of a horizontally disposed inclined endless conveyer 6, which conveyer is mounted upon an idle roller and a driven roller 7 and 8 respectively, the driven roller 8 being located at the front end and adjacent the bottom of the tank. The idle roller is revolubly mounted in adjustable bars 9 constituting a belt tightener, the bars being secured to the tank and having extended ends which overhang the rear end of the tank, in which ends said idle roller is hung.

The endless conveyer is preferably composed of a canvas belt having crosswise lags 10 secured to the outer face thereof, these lags serving to carry the perfect and cleansed peas which are precipitated thereon upward through the water and into a delivery hopper 11 at the rear of the tank.

An apertured cover comprising a screen 12 is secured to the tank and extends parallel with the inclined endless belt from a point about midway of the length of the tank. The lower end of the screen 12 terminates adjacent the deflector screen 5, whereby a throat is formed between the screens through which the peas, due to specific gravity, pass to the conveyer. The upper end of the screen cover terminates with a vertical extension which projects above the water-line of the tank, serving as a wall against which accumulated thistles or other chaff are deflected. Directly forward of the hopper and mounted in suitable bearings carried by the tank is a shaft 13, which shaft carries a paddle-wheel 14 that is driven by a pulley in cross-belt connection with the driven roller 8. The blades of this paddle-wheel are arranged to contact with the water, and owing to their direction of rotation assist the discharge pipe in creating a current of water toward the rear of the tank whereby light particles of floating foreign matter are deflected back upon the screen cover, which cover acts as a trap for the same, the action of the paddle-wheel also serving to keep the water clear of screenings directly under the hopper 4. In order to prevent peas from falling between the belt-edges and walls of the tank and also sagging of the upper stretch of belt, I have provided strips 15, which strips are secured to said tank directly under the upper stretch of the canvas body of the conveyer, whereby the latter is supported in its passage rearward to the delivery hopper.

It will be seen from the foregoing description that unscreened peas discharged into the feed-hopper 4, will pass through the water and guided by the screens, be delivered upon the upper stretch of the conveyer. Light foreign matter, such as thistles, etc., is caught by the water, and owing to its spe-

cific gravity, be floated rearward above the screen-cover upon which they will finally be delivered and trapped due to the current created by the paddle-wheel and water feed-pipe. Thus all screenings will be separated from the sound peas, split peas being similarly separated due to their specific gravity, while the sound cleansed peas will be delivered by the belt to the hopper 11. When the screenings have accumulated upon the screen-cover in sufficient quantities, the operator removes the same, thus maintaining a clear passage between the paddle-wheel and screen 5 whereby the material fed is effectively cleansed.

I claim:

1. A separator comprising a tank, an inclined endless driven conveyer extending into the tank below the level of a body of water therein, a deflector above the conveyer adjacent to the lower end of same, a vented cover above said conveyer approximately parallel thereto forward of the deflector, and means for creating a current of the water in said tank through the vented cover toward said conveyer.

2. A separator comprising a tank, an inclined endless driven conveyer extending into the tank below the level of a body of water therein, a deflector above the conveyer adjacent to the lower end of same, a vented cover above said conveyer approximately parallel thereto forward of the deflector, and an apertured water-feed pipe located adjacent to said deflector, the direction of the pipe apertures being toward the vented cover.

3. A separator comprising a tank, an inclined endless driven conveyer extending into the tank below the level of a body of water therein, a deflector screen above the conveyer adjacent to the lower end of same, a screen cover above said conveyer approximately parallel thereto forward of the deflector screen, a hopper above the deflector screen, an apertured water feed-pipe adjacent to the deflector screen, the direction of the pipe apertures being toward the screen cover, and a driven paddle-wheel adjacent to the water feed-pipe.

4. A separator comprising a tank, an inclined endless driven conveyer extending into the tank below the level of a body of water therein, a deflector above the conveyer adjacent to the lower end of same, a vented cover above said conveyer approximately parallel thereto forward of the deflector, and a driven paddle-wheel located adjacent to the deflector, the paddle-wheel being adapted to create a current of water toward the vented cover.

In testimony that I claim the foregoing I have hereunto set my hand at Sheboygan in the county of Sheboygan and State of Wisconsin in the presence of two witnesses.

GERRET H. DEKKER.

Witnesses:

SIMON GILLEN,

MATILDA LORENZ.