(No Model.) 2 Sheets—Sheet 1.

R. KARGES.

PEA SHELLING MACHINE.

No. 382,988. Patented May 15, 1888.

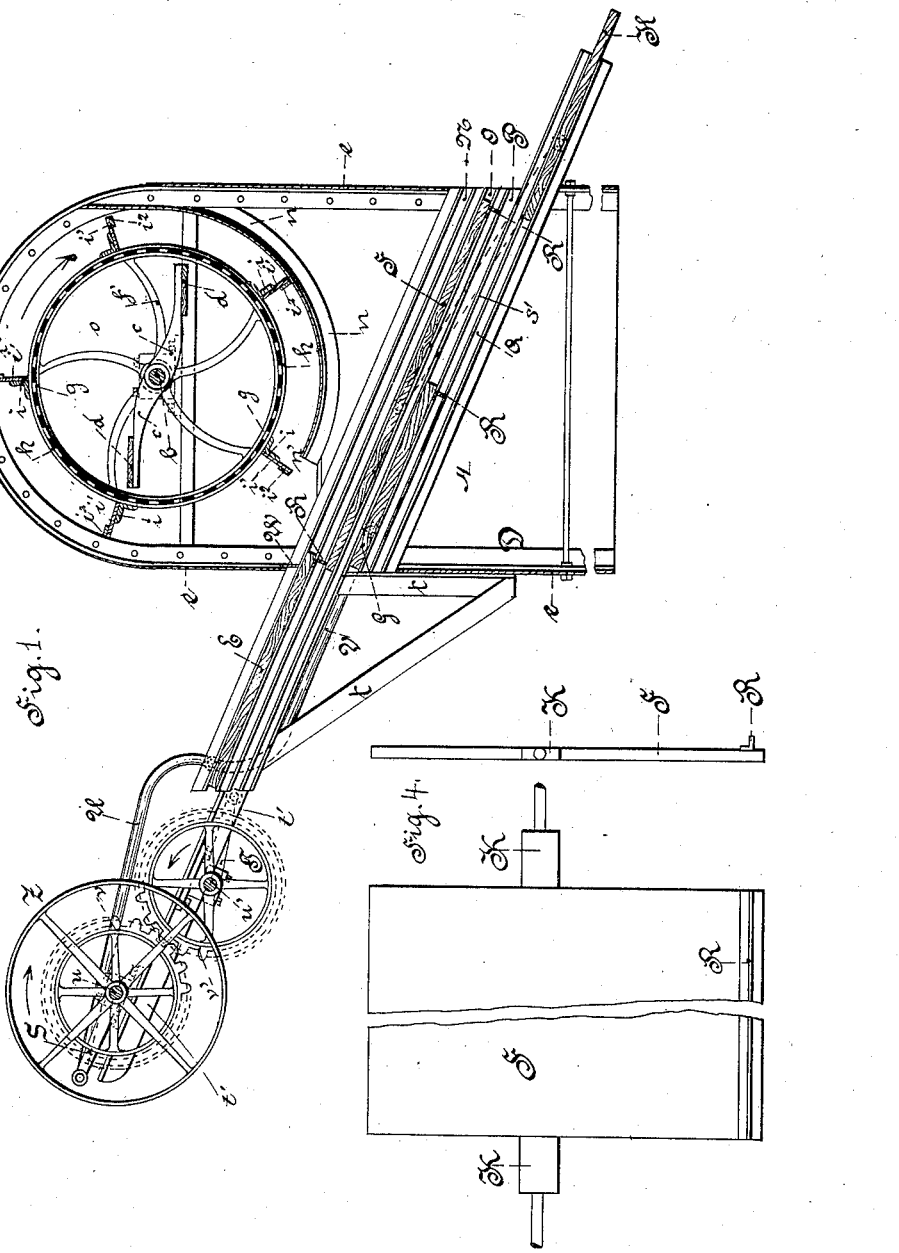


Fig. 1.

Fig. 4.

Witnesses.

Wallace Becerra.

Harry S. Rohrer.

Inventor

Robert Karges.

by Schuyler Duryee

Atty.

(No Model.) 2 Sheets—Sheet 2.

R. KARGES.

PEA SHELLING MACHINE.

No. 382,988. Patented May 15, 1888.

Fig. 2.

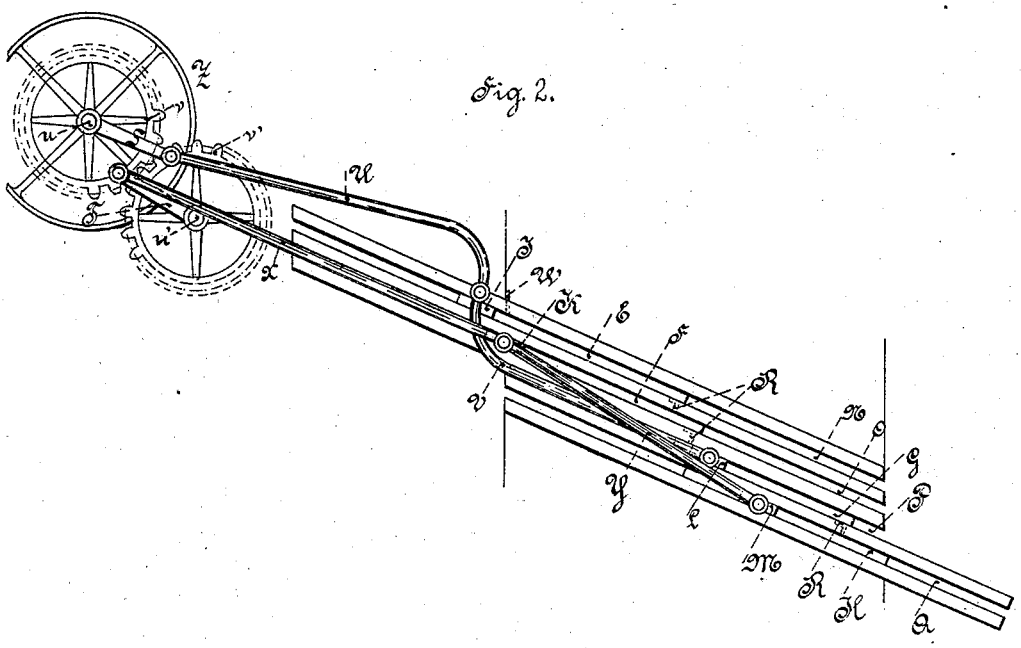
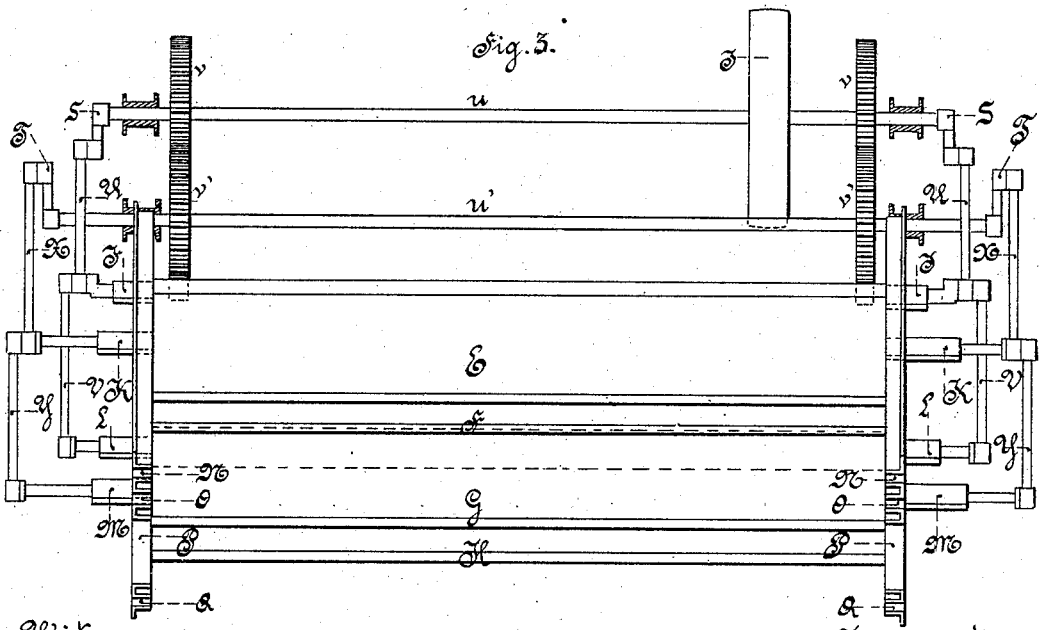


Fig. 3.



Witnesses.

Wallace Greene.

Harry E. Robbins.

Inventor.

Robert Karges.

by Shuffler Duncan.

Attys.

UNITED STATES PATENT OFFICE.

ROBERT KARGES, OF BRUNSWICK, PRUSSIA, GERMANY, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HERMANN FROLING, OF SAME PLACE.

PEA-SHELLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,988, dated May 15, 1888.

Application filed February 25, 1886. Serial No. 193,119. (No model.) Patented in Austria-Hungary January 11, 1886, No. 2,826 and No. 22,114; in Belgium January 13, 1886, No. 71,608; in England January 14, 1886, No. 601; in France January 18, 1886, No. 173,599, and in Italy February 12, 1886, XX, 1,676, CCCLXXXIX, 19,498.

To all whom it may concern:

Be it known that I, ROBERT KARGES, of Brunswick, in the Dukedom of Brunswick, German Empire, have invented new and useful Improvements in Pea-Shelling Machines, (for which I have obtained patents in Great Britain, No. 601, dated January 14, 1886; Austria-Hungary, No. 2,826 and No. 22,114, dated January 11, 1886; France, No. 173,599, dated January 18, 1886; Belgium, No. 71,608, dated January 13, 1886, and Italy, No. 1,676, Vol. 20, and No. 19,498, Vol. 389, dated February 12, 1886,) of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a machine which is adapted to separate the peas and shells (after the pods are broken) and deliver the same at different points in suitable receiving-vessels.

In the accompanying drawings, which fully illustrate my invention, Figure 1 is a vertical transverse sectional view of a pea-shelling machine with my improvement attached. Fig. 2 is a detail elevation showing the slides in a different position from that illustrated in Fig. 1. Fig. 3 is a detail elevation illustrating the slides and the mechanism to operate the same. Fig. 4 is a detail top plan and side elevation of one of the slides.

My invention relates particularly to attachments for pea-shelling machines having a cylindrical revoluble screen in which longitudinal beaters are spirally arranged, and which are also provided with radial longitudinal sweeps, as shown in Fig. 1.

N O P Q represent a series of inclined guideways, which are arranged transversely in the ends of the casing or frame and one above another, as shown. The upper ends of the ways N O project beyond one side of the casing, and the lower end of the way Q projects beyond the opposite side thereof.

t represents a pair of brackets, which are secured to one side of the casing and have the upper sides inclined at an angle corresponding to the inclination of the guideways, and provided with outward-extending inclined arms *t'*. In suitable bearings, which are secured near the outer ends of the arms *t'*, on the upper sides thereof, is journaled a longitudinal shaft, *u*, which is provided near its ends with spur-wheels *v*, that are keyed thereto. Also keyed to said shaft is a band-pulley, Z, and rigidly secured to the extreme ends of the shaft are crank-arms S. *u'* represents a similar longitudinal shaft that is journaled in bearings on the under side of arms *t'*. Keyed to shaft *u'* are spur-wheels *v'*, which engage with the wheels *v*, and at the ends of said shaft are crank-arms T.

E F G H represent sliding boards or plates which are arranged in the guideways N O P Q, respectively. The said slide F is twice as broad as either of the others, as shown in Fig. 2, and said slides are provided on opposite sides with projecting trunnions J K L M, respectively.

U represents a pair of pitmen that connect the cranks S to the trunnions J.

V represents a pair of connecting-rods, which have their upper ends connected to the trunnions J and their lower ends connected to trunnions L, said rods thereby serving to connect the slides E and G and cause the same to move simultaneously and in the same direction when the shaft *u* rotates.

X represents a pair of pitmen, which connect the cranks T and the trunnions K.

Y represents a pair of connecting-rods, which are attached to the trunnions K and trunnions M, and thereby serve to connect slides F and H and cause the same to move simultaneously and in the opposite direction to the slides E G when the shafts *u u'* rotate.

On the under side of each of the slides E F G, at the lower edge thereof, is secured a depending transverse strip, R, of india-rubber or other suitable material. Each of said strips is adapted to bear upon the upper side of the subjacent slide.

W represents a similar strip, which is secured to the upper side of the uppermost opening in the case through which the slides extend, and bears upon the upper slide, E.

The operation of my invention is as follows: The unshelled peas are fed to the cylindrical

screen by means of a hopper, and after passing through the ordinary process for splitting the pods and separating them from the peas the peas are brushed onto a series of inclined slides. The pulley Z is connected by a belt to a small pulley on a counter-shaft, (not shown,) which is driven by any suitable motor, and this causes crank-shafts *u* and *u'* to rotate in opposite directions and at a moderate rate of speed. The slides E G and F H reciprocate simultaneously in opposite directions, as before described. The inclination of said plates or slides causes the shelled and spherical peas to roll down the same and drop into a suitable vessel placed to receive them below the lower end of slide H, and the rough and flat particles of the pods will tend to remain on the said slides. The rubber scrapers R W serve to prevent these particles of pods from lodging on the slides and from obstructing the free delivery of the shelled peas, as will be readily understood. When the slides E G have traveled through about one-half their stroke, and before reaching the position shown in Fig. 2, the peas swept from the trough *n* by the sweeps of the cylindrical screen are delivered, together with particles of pods, onto the upper slide, E. The peas immediately start to roll down onto the lower slides, F G H; but the particles of pods remain on the upper slide. When the slides E and G move upward, the particles of pods on the upper slide, E, are swept from the same by the scraper W onto plate F, which is simultaneously moving downward, and said particles spread on said plate F, and on the reverse motion of the slide said particles are swept by the sweep R of slide E onto slide G, and on the next ensuing reverse motion of the slides, when the slide G is moving upward and the slide H is moving downward, the particles of pods are swept by the sweep R of slide F from the slide G into the opening which at this time appears between the receding opposing edges of slides G and H, and the said particles are thus finally discharged through said opening and kept separate from the shelled peas.

Having thus described my invention, I claim—

1. The combination of the guideways, the slides arranged therein one above another and in different vertical planes, said slides having the sweeps bearing against their opposing faces, and means, substantially as set forth, to reciprocate the alternate slides simultaneously in opposite directions, substantially as described.

2. The combination of the inclined guideways, the slides arranged thereon one above another and in different vertical planes, and means, substantially as specified, to reciprocate the alternate slides simultaneously in opposite directions, substantially as set forth.

3. The combination of the inclined guideways, the slides arranged thereon one above another and in different vertical planes, said slides being connected together alternately, the crank-shafts rotating in opposite directions, and the pitmen connecting said crank-shafts to the slides, and thereby reciprocating the alternate slides simultaneously in opposite directions, substantially as specified.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ROBERT KARGES.

Witnesses:

WILLIAMS C. FOX,

JOH. KRACKE.