

A. N. ALBEE.
 CARTON SEALING MACHINE.
 APPLICATION FILED DEC. 13, 1910.

1,037,845.

Patented Sept. 10, 1912.

5 SHEETS—SHEET 1.

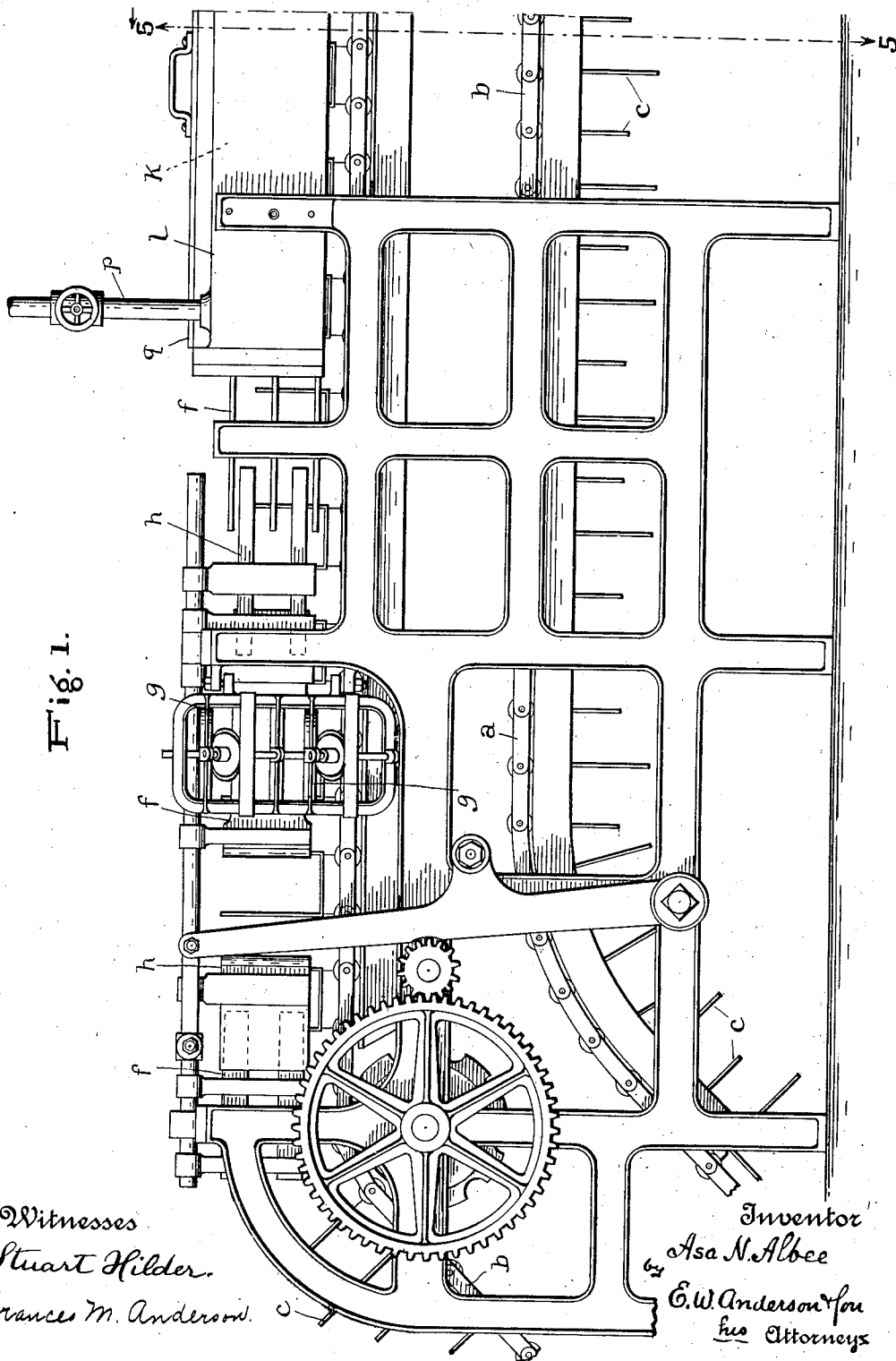


Fig. 1.

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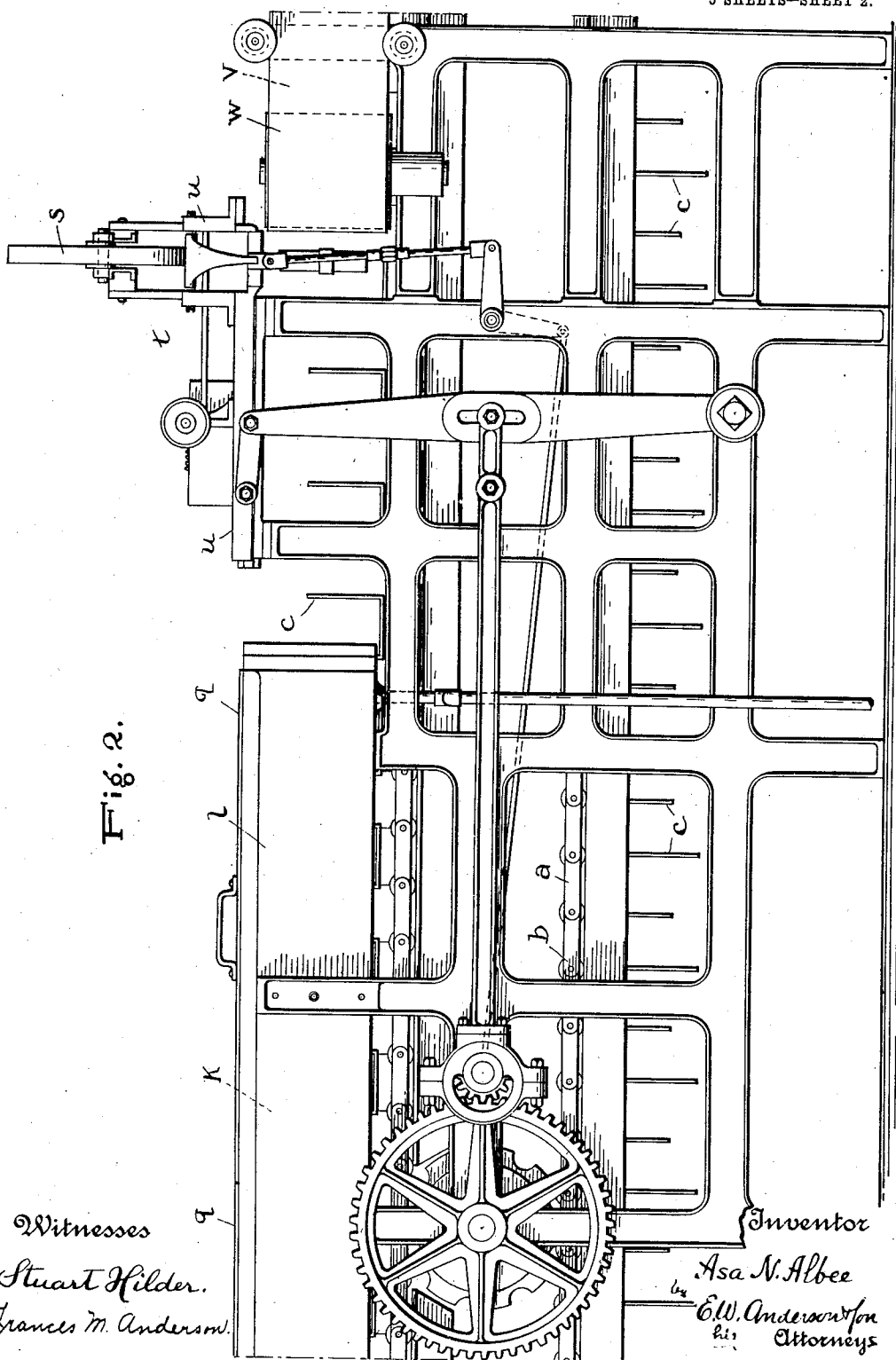


Fig. 2.

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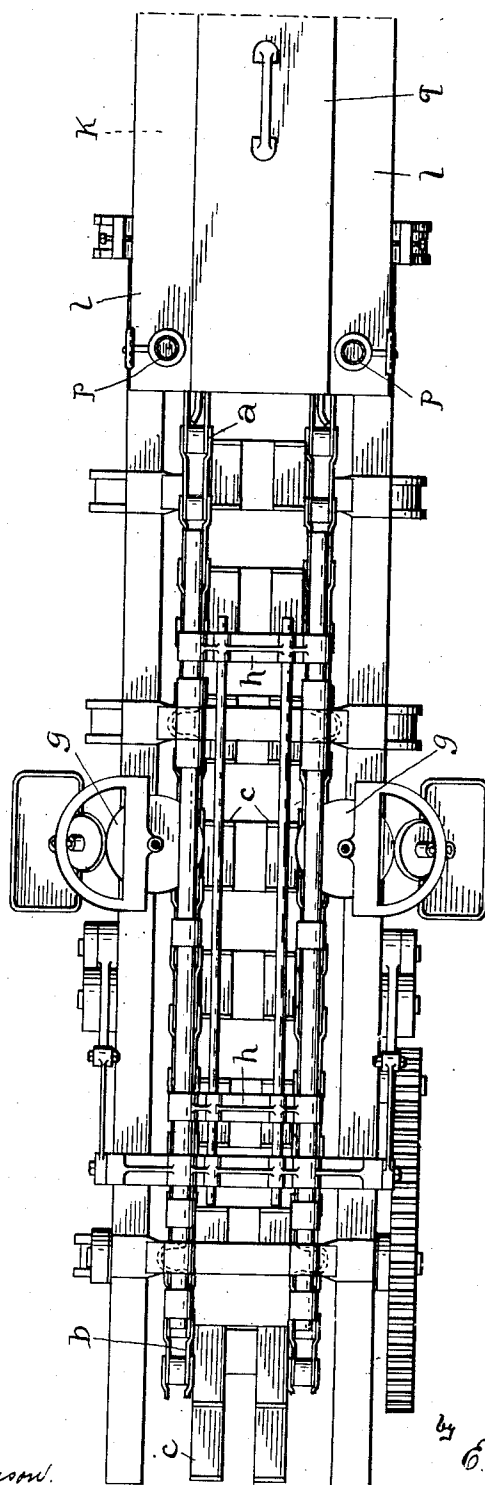
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5 SHEETS—SHEET 3.

Fig. 3.



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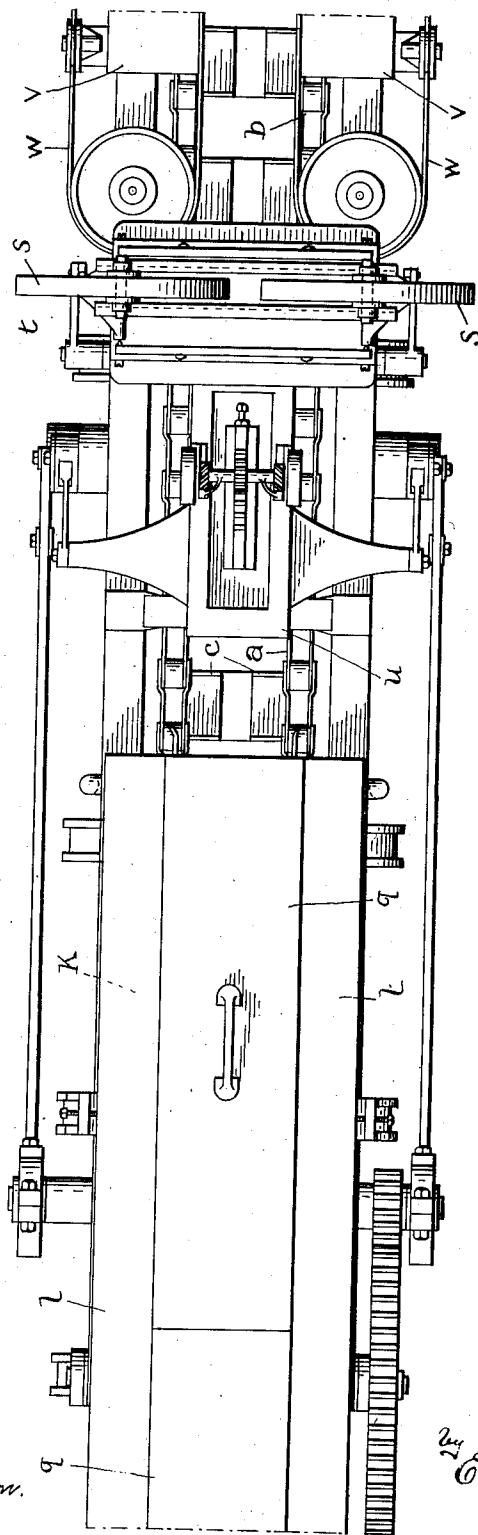
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Fig. 4.



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5 SHEETS—SHEET 5.

Fig. 5.

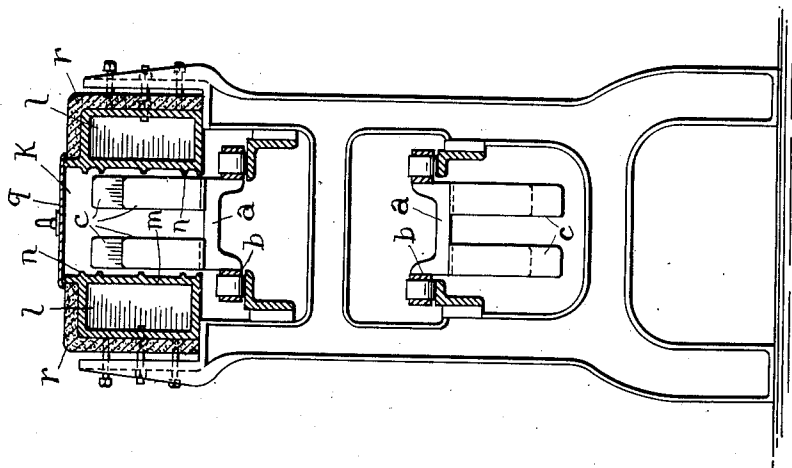
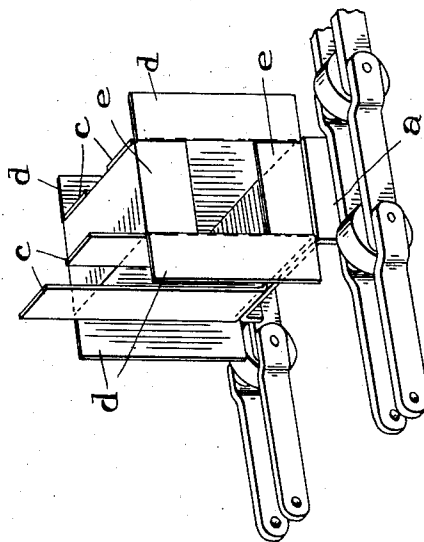


Fig. 6.



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UNITED STATES PATENT OFFICE.

ASA N. ALBEE, OF NIAGARA FALLS, NEW YORK, ASSIGNOR TO THE SHREDDED WHEAT COMPANY, OF NIAGARA FALLS, NEW YORK.

CARTON-SEALING MACHINE.

1,037,845.

Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed December 13, 1910. Serial No. 597,178.

To all whom it may concern:

Be it known that I, ASA N. ALBEE, a citizen of the United States, resident of Niagara Falls, in the county of Niagara and State of New York, have made a certain new and useful invention in Carton-Sealing Machines; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1, is a side view of the left hand portion of the machine. Fig. 2, is a side view of the right hand portion of the machine. Fig. 3, is a top view of mechanism shown in Fig. 1. Fig. 4, is a top view of mechanism shown in Fig. 2. Fig. 5, is a transverse vertical section on line 5-5, Fig. 1. Fig. 6, is a detail perspective view, showing a carton in a carrier link.

The invention relates to improvements upon mechanism for sealing cartons, for which Letters Patent No. 684,788, dated October 22, 1901, were granted by the United States; and the invention consists in the novel construction, and combination with such mechanism of devices designed to provide for sealing the filled cartons in a more satisfactory manner.

In the mechanism of the patent above referred to, not only are the flaps of the cartons gummed and closed, but also the sealing strips are gummed and applied to the cartons, before the heating chambers come into operation, so that the drying of the gummed flaps is considerably delayed. In applicant's improvements the flaps are gummed and closed in and immediately heated to dry them before the sealing strips are applied, as hereinafter described. In this mechanism, the cartons, which are of folded character, rectangular in shape, are placed in succession upon the links *a*, of the conveyer chain *b*, said links having upright flanges *c*, which serve to hold the cartons in position, so that their folding ends are laterally presented. These ends consist, according to the position of each carton in the link, of two upright flaps *d*, which are designed to meet or nearly meet at their adjacent edges, and two horizontal or transverse flaps *e*, which are designed to close toward each other at the top

and bottom of the carton. In the operation of the machine the latter flaps are carried between the parallel holding walls *f*, of the first portion of the machine, without change of position, while the upright or lateral flaps are spread apart, through slots or openings in said walls, through the action of the margins of said openings and slide devices *h*, for application of glue by means of a disk *g*, and are closed toward each other and upon the top and bottom flaps afterward, through the operation of similar openings in said walls and similar slide devices.

In order to insure the adhesion of the flaps together and in proper relative position, there is provided an elongated chamber or passage *k*, through which the track of the carrier chain extends, said passage or chamber being laterally bounded by parallel elongated boxes *l*, connected to the holding walls *f*, and having upright inner walls *m*, forming extensions of said holding walls and along which extend narrow continuous horizontal ribs or beads *n*, which are designed to have sufficient bearing against the flap ends of the cartons, while materially diminishing friction as the cartons are carried through the passage. These beads are parallel and separated from each other sufficiently to avoid the places on which glue has been applied to the flaps by the glue disk.

The elongated boxes *l*, are closed, being designed to hold steam or hot water, which may be introduced by means of a supply pipe *p*, suitable outlets being also provided. These boxes form the side walls of the passage, which, in order to retain the heat in the passage, should have a covering or series of covers *q*, provided with handles as indicated, for their ready removal when inspection is required. The exteriors of the boxes should be covered with non-conduction material, as at *r*, to retain the heat as much as possible. The carton flaps being secured through the drying of the glue when they arrive at the end of the heated passage, the cartons pass to that portion *t*, of the machine whereby the sealing strips are applied to the ends of the cartons along the adjacent margins of the upright flaps, being fed downward from the ribbon reel *s*. This mechanism is fully explained in the specification of the Letters Patent herein referred to, and serves to feed the ribbon downward at each side of the carton, apply glue thereto, cut off the strips

to proper length, and press them against the upright carton flaps as the cartons are carried by, the portion *u*, of the mechanism having motion of reciprocation in order to move at the speed of the carrier chain in its operation with reference to the cartons. The sealing strips having been applied, the cartons are carried by the chain, along its track, between the parallel elongated drying chambers *v*, in engagement with the pressure belts *w*. These chambers may be charged with hot air or steam as may be preferred, and serve with the aid of the pressure belts *w*, which are usually of leather, to facilitate setting and drying the glue or paste employed in sealing the ribbon strips along the flaps of the carton. In this way it has been found possible to provide a better means for sealing up the ends of the carton, as the flaps, which being parts of the carton are of heavier material than the sealing strips, are first securely fastened in place by drying the adhesive substance thereon immediately upon its application and the closing of the carton.

Having thus described the invention, what I claim and desire to secure by Letters Patent is:

1. A machine for holding and sealing cartons, having an endless carton carrier, devices for opening and closing the flaps of the carton, means for applying adhesive substance to said flaps, devices for applying sealing strips to said flaps, parallel drying chambers and pressure belts for said strips, and parallel drier boxes between the means

for applying adhesive substance to the carton flaps and the devices for applying sealing strips to said flaps, whereby the flaps are dried after closure, and before the sealing strips are applied thereto.

2. A machine for holding and sealing cartons, having an endless carton carrier, lateral devices for opening and closing the flaps of the carton, means for applying adhesive substance to said flaps, devices for applying sealing strips to said flaps, lateral parallel drier boxes between the means for applying adhesive substance to the carton flaps and the devices for applying sealing strips to said flaps, and longitudinal bearing ribs on the inside of said drier boxes.

3. A machine for holding and sealing cartons, having an endless carton carrier, lateral devices for opening and closing the flaps of the carton, means for applying adhesive substance to said flaps, devices for applying sealing strips to said flaps, lateral parallel drier boxes between the means for applying adhesive substance to the carton flaps and the devices for applying sealing strips to said flaps, longitudinal bearing ribs on the inside of said drier boxes, and a removable cover closing the carton passage between said drier boxes.

In testimony whereof I affix my signature, in presence of two witnesses.

ASA N. ALBEE.

Witnesses:

JAMES TRAVERSE,
STELLA A. DUNNING.