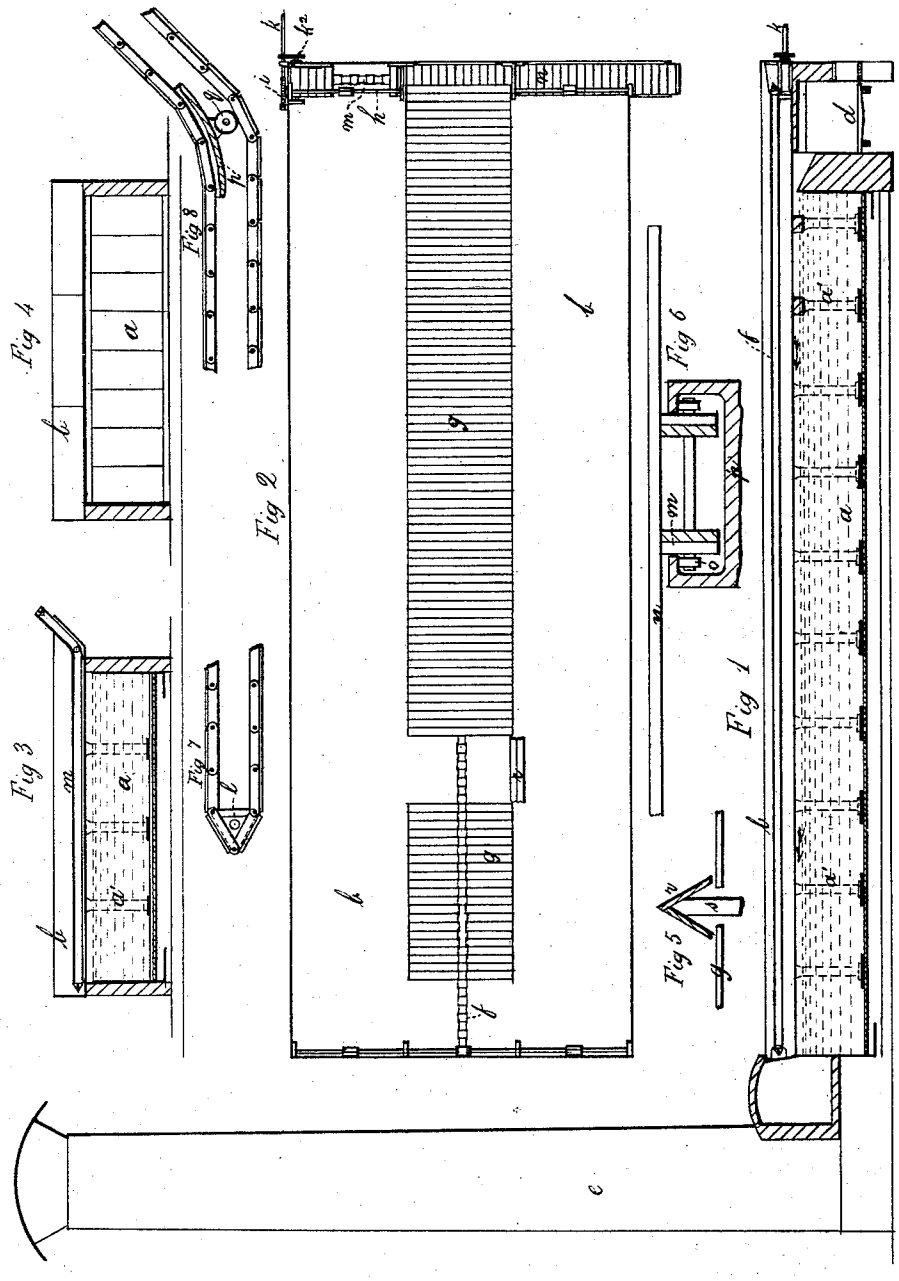
O. E. POHL.

Machinery in the Manufacture of Salt.

No. 155,971. Patented Oct. 13, 1874.



WITNESSES

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OTTO E. POHL, OF LIVERPOOL, ENGLAND.

IMPROVEMENT IN MACHINERY IN THE MANUFACTURE OF SALT.

Specification forming part of Letters Patent No. **155,971**, dated October 13, 1874; application filed June 24, 1874.

To all whom it may concern:

Be it known that I, OTTO ERNEST POHL, of Liverpool, in the county of Lancaster, England, have invented Improvements in Machinery Employed in the Manufacture of Salt, of which the following is a specification:

The main object of my invention is to produce common salt (chloride of sodium) of ordinary merchant qualities at a cheaper rate than heretofore has been practicable. For that purpose, as well as for other minor purposes, as hereafter appears, I have devised the novel arrangements, constructions, and combinations of apparatus or appliances now to be described.

The said apparatus or appliances may be used together as a whole, or parts may be employed separately, in ordinary salt-works; first, as means for quickly removing to the drying-room or warehouse the salt collected at the end of the pan by the endless traveling collectors, under the above second head, I employ, in combination with such endless traveling collectors, traveling carriers, moving at or about a right angle thereto; second, as means for preventing salt from falling between the ends of the lengths of the boards forming the surface of the endless traveling collectors, when series of boards are used, I employ stationary angular sheds or pieces to deflect the salt onto the boards.

That my said improvements may be clearly understood, I have appended hereto a sheet of drawings, whereon the several parts of my invention are delineated.

Figure 1 is a longitudinal section; Fig. 2, a plan view, part only of endless chain and board collectors being shown; Fig. 3, a transverse section; Fig. 4, an end elevation; and Figs. 5, 6, 7, and 8, views of parts drawn to a larger scale—Fig. 5 being a transverse section of an angular shed; Fig. 6, a transverse section of a chain and collecting-board; Fig. 7, a side elevation of a portion of the chain and board and triangular carrying-piece; and Fig. 8, side elevation and section of transverse collecting-chain and guiding-piece.

In all these views like letters denote the same parts.

a is the lower evaporating-pan; *b*, top evaporating-pan, supported on columns *a'*. The arrows in the space between the brim in pan *a* and the bottom of pan *b* show the direction in which flames, heating-gases, or products of combustion travel from the fire-place *d* to the chimney *e*. There is nothing new in the fire-place or chimney which may be variously arranged. Gases from a Siemens producer may be employed. To prevent particles of carbonaceous matter from lodging in the lower pan, the admission of air should be well regulated, so as to insure effective combustion. The chimney-space should be sufficiently large to convey away the waste products and steam; *f*, chain of one endless traveling collector. In the modification shown, transverse wood boards *g* are secured to the chain, and it is proposed to use a series of three chains, each fitted with boards. I prefer that iron plates should be fitted to the chains, and that the boards should be in their turn secured to the said plates. Motion is given to the chains *f* and boards *g* by the transverse shaft *h*, whereon a wheel, *i*, is secured. This wheel gears with a worm, *j*, on the first motion-shaft *k*. A speed of one revolution per minute, or two feet in that time, answers well; *l*, pinion on *h* to carry endless chain. This pinion is made to fit links of the chain, and has pieces thereon to prevent slipping. Instead of the endless traveling collectors being made to travel continuously, an intermittent motion may be given to them; and instead of chains and boards, flexible bands, of woolen or other material, or their equivalents, may be used; and such bands may be the full width of the pan, as the boards might be, if desired; *m*, transverse chain; *n*, boards forming a carrier for conveying away the salt to the drying-room or warehouse. Motion is given to said carrier from a shaft, k^1, gearing through a wheel, k^2, with the driving-shaft *k*. *m n* moves underneath the end of the traveling collectors, and receives the salt dropped therefrom. To convey the salt upward into the desired place, pulleys *o* are placed on the bolts which connect the links of the chain, and these bear on the ends of the stationary piece *p*. The rollers, instead of being on the end of the chain-bolts, might be on the stationary piece. In like manner, pulleys *q* are employed to keep the part of the chain for the time being (the

lower part) at the proper distance. It will be evident that the carrier described may be made of an endless flexible material, and carried over rollers; *r*, stationary triangular deflecting sheds, carried by the pillars *s* resting on the bottom of the pan *b*.

Having now described the nature of my said invention, and particularized the same in such manner that others will be enabled to carry the same into effect, I claim—

1. The traveling carriers, in combination with the endless traveling collectors, for the purpose set forth.

2. The stationary angular sheds, in combination with series of endless traveling collectors, for the purpose set forth.

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Witnesses:

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