

(No Model.)

T. CRANEY.

DEVICE FOR COLLECTING SALT FROM GRAINERS.

No. 305,153.

Patented Sept. 16, 1884.

Fig. 1.

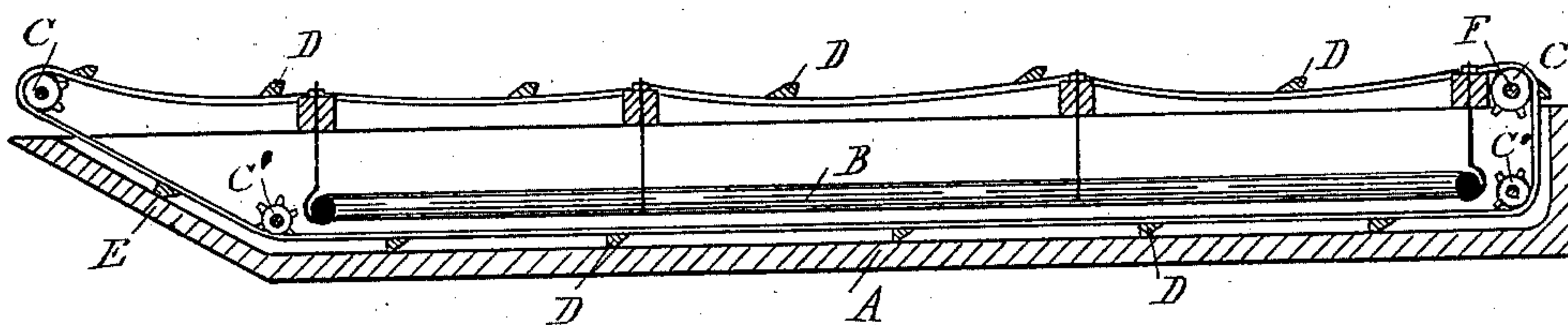
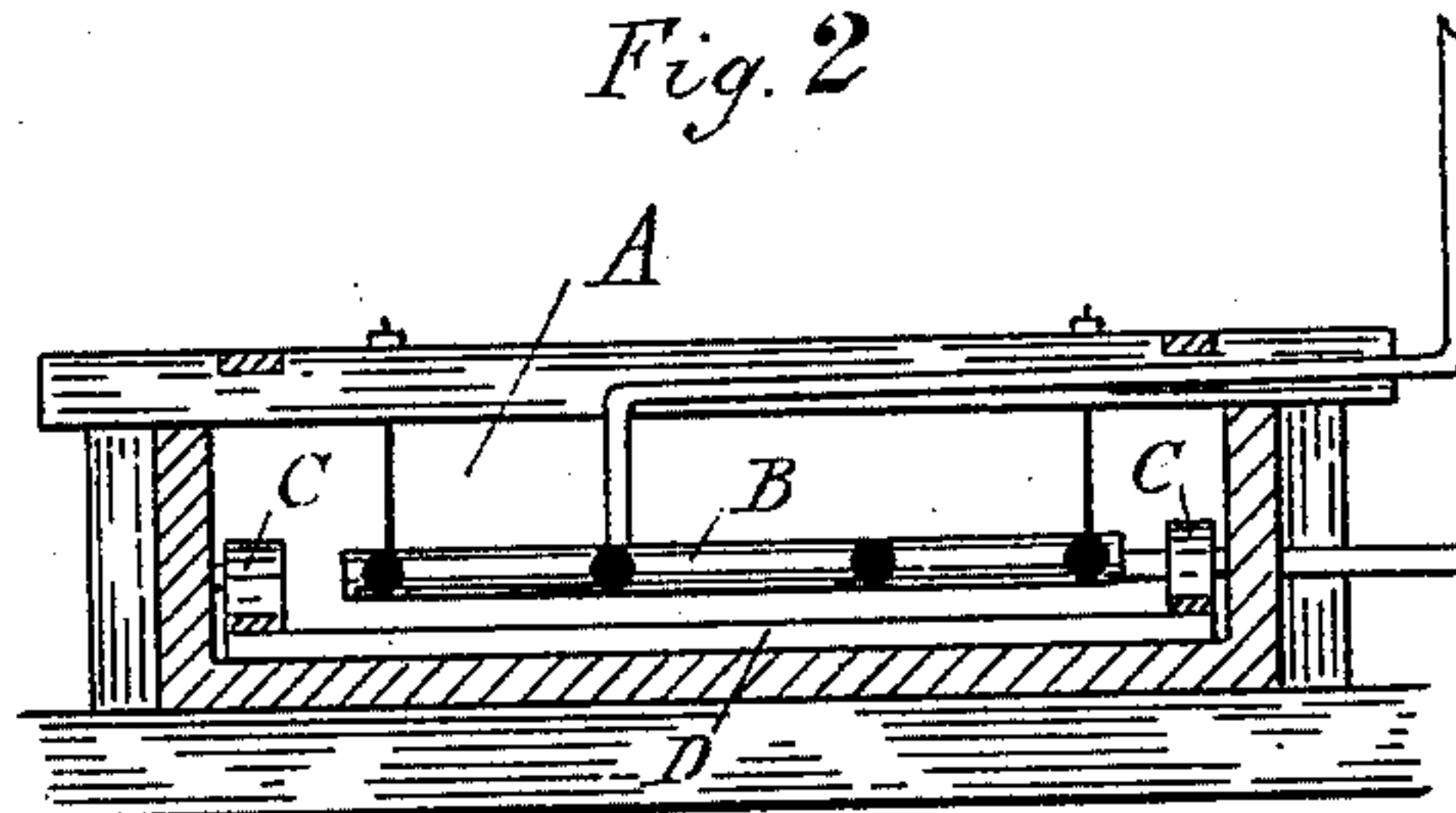


Fig. 2.



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DEVICE FOR COLLECTING SALT FROM GRAINERS.

SPECIFICATION forming part of Letters Patent No. 305,153, dated September 16, 1884.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CRANEY, of Bay City, in the county of Bay and State of Michigan, have invented new and useful Improvements in Attachments to Salt-Grainers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improvement in devices for collecting salt from grainers; and the invention consists in the construction and arrangement of the parts, all as herein-
after described.

In the accompanying drawings, which form a part of this specification, Figure 1 is a longitudinal vertical section through a grainer having my device applied to it. Fig. 2 is a cross-section thereof.

A is a so-called "salt-grainer," of the usual construction, in which the brine is evaporated by means of heat supplied by a coil of steam-pipes, B. These pipes are suspended in the brine in any suitable way some distance above the bottom of the grainer.

C C are sprocket-wheels or idlers, over which pass two endless carriers—such as chains or belts—one on each side of the grainer. The lower stretch of each carrier is supported upon the bottom of the grainer, and the upper stretch is supported in any convenient manner above the grainer out of the brine.

D D are a series of scraper-bars secured to the endless carrier transverse to the grainer, and so that in the travel of the carriers they are enabled to scrape over the bottom of the grainer. The number of such scraper-bars may vary from one to several, according to the length of the grainer and speed desired.

E is an inclined plane forming one end of the grainer.

F is a shaft connecting two corresponding sprocket-wheels, and furnishing the means for applying the power to operate the device.

It will be noticed that the wheels C have their bearings near the bottom of the grainer, so that the scrapers, after passing over the

pipes and down at the end of the grainer, are compelled to pass beneath the pipes and between them and the bottom of the grainer.

In practice the carriers are made to travel continuously with a slow motion, carrying the scraper-bars the entire length over the bottom of the grainer and up the incline, when they deposit the salt collected from the bottom of the grainer, and are carried back to the other end of the grainer, where they enter the brine again and renew the operation.

I do not claim the use of scrapers or scraper-bars secured to and moved by endless carriers continuously traveling in one direction for collecting and removing the salt from the grainer, as I have described and claimed such an arrangement heretofore; but the modification herein described presents the practical advantage of being simple and easily applied to a great number of salt-grainers in present use, in which the steam-pipes are suspended in the brine from above, and where but little or no alterations need be made to apply my device.

What I claim as my invention is—

1. In a device for removing and collecting salt from grainers, the combination of a grainer having its heating-pipes suspended in the brine above its bottom, with a continuous scraper device consisting of two endless carriers and scraper-bars transversely secured to the same, and constructed to pass beneath said pipes and between them and the bottom of the grainer, and collect the salt from the bottom thereof, and carry it up an incline and deposit it at the end of the grainer opposite to that at which they entered, substantially as herein shown and described.

2. The combination, with a grainer having its heating-pipes suspended above its bottom, of a continuous scraper device constructed to pass first over the top of the pipes, then down at one end of and beneath said pipes and between them and the bottom of the grainer, and collect the salt from the bottom thereof, and carry it up an incline and deposit it at the end of the grainer opposite to that at which they entered, substantially as described and shown.

3. In a device for removing and collecting

5 salt from grainers, the combination, with a grainer having its heating-pipes suspended in the brine above its bottom, with the wheels C', having bearings near the bottom of the grainer, and the scraper-bars D, secured to an endless carrier and constructed to pass beneath said pipes and between them and the

bottom of the grainer, substantially as and for the purpose specified.

THOS. CRANEY.

Witnesses:

H. S. SPRAGUE,

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