No. 705,365. Patented July 22, 1902.

C. LAW.

CHUTE.

(Application filed Nov. 27, 1901.)

(No Model.)

Fig. 1

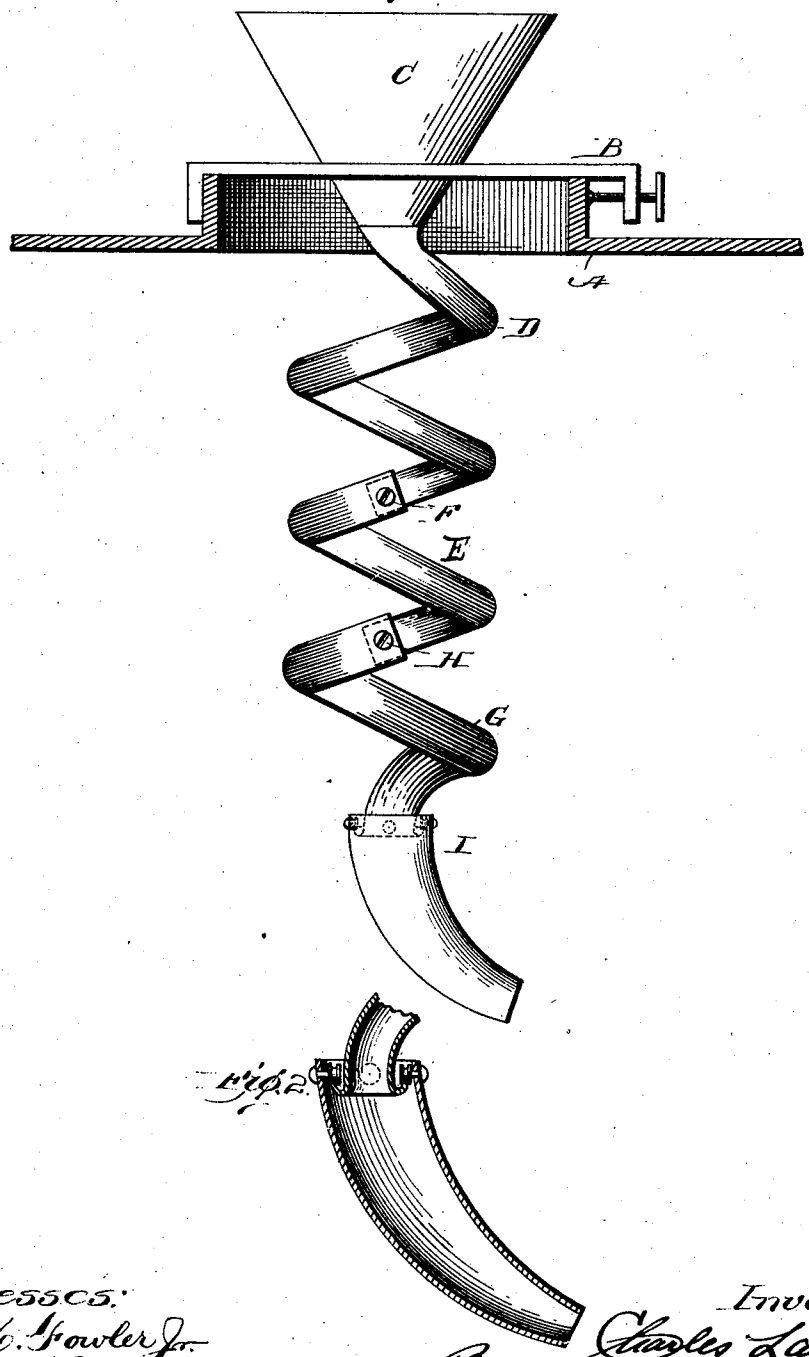


Fig. 2

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES LAW, OF PITTSTON, PENNSYLVANIA.

CHUTE.

SPECIFICATION forming part of Letters Patent No. 705,365, dated July 22, 1902.

Application filed November 27, 1901. Serial No. 83,897. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LAW, a citizen of the United States of America, residing at Pittston, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Chutes, of which the following is a specification.

This invention relates to chutes for conveying coal, grain, or other products in loading vessels.

The object of this invention is to provide a chute which will convey coal, grain, and other products without injury thereto by breaking, shattering, &c., and to so construct the same that it may be readily adjusted to deliver or discharge the product placed therein to either side or end of the vessel.

Another object of this invention is to provide a spiral chute consisting of a series of telescoping spiral sections, adjustable one upon the other, the upper section being secured in a breech adapted to fit over the hatchway of a ship and the lower section supporting a revolving section, by means of which the coal, grain, &c., may be discharged in any desired direction.

With these and such other objects in view as may hereinafter appear my invention consists in the particular construction and arrangement of the various parts, all of which will be described in the specification, illustrated in the accompanying drawings, and specifically pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of the chute complete. Fig. 2 is a detail view of the revolving section.

Referring by letters to the drawings, A represents the hatchway of a vessel, over which is detachably secured the breech B, supporting a hopper C, to which is connected a cylindrical spiral section D, having mounted thereupon a similar telescoping section E, provided with set-screws F for locking the sections together. Mounted upon the section E is a similar telescoping section G, which is also provided with set-screws H for locking the two sections together. It is further provided with a short half-spiral section or spout I, which is mounted in bearings J upon its free end in such a manner that it may be easily revolved, so as to discharge the coal, grain, &c., in any desired direction.

If desired, the spiral sections may be dispensed with and a continuous spiral tube employed in lieu thereof. However, I deem it best to construct the chute of telescoping cylindrical spiral sections in the manner described, thus providing a chute that is purely adjustable in its length, one that can be quickly adapted for loading either deep or shallow vessels, a chute that will occupy but little space when not in use, owing to the fact that one part telescopes the other, and one that will efficiently perform all of its intended functions.

It is well known to nearly all practical coal merchants that coal contains sulfur and other vapors, fumes, &c., which attack metals such as iron, copper, and the like. Accordingly I propose to construct my improved chute with manganese bronze or enameled iron, upon which there would be no effect.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a chute, a series of telescoping spiral sections, substantially as shown and described.

2. In a chute, a hopper, a series of telescoping cylindrical spiral sections and a revolving spout, substantially as shown and described.

3. In a chute, a hopper connected to a series of telescoping cylindrical spiral sections and a revolving spout upon the free end of the last section, substantially as shown and described.

4. In a chute, a breech supporting a hopper, the said hopper communicating with a series of cylindrical telescoping spiral sections, set-screws for locking the said sections together, and a revolving spout mounted upon the end of the chute, substantially as shown and for the purpose set forth.

CHARLES LAW.

Witnesses:
WM. C. SMITH,
A. M. TINKER.