

(No Model.)

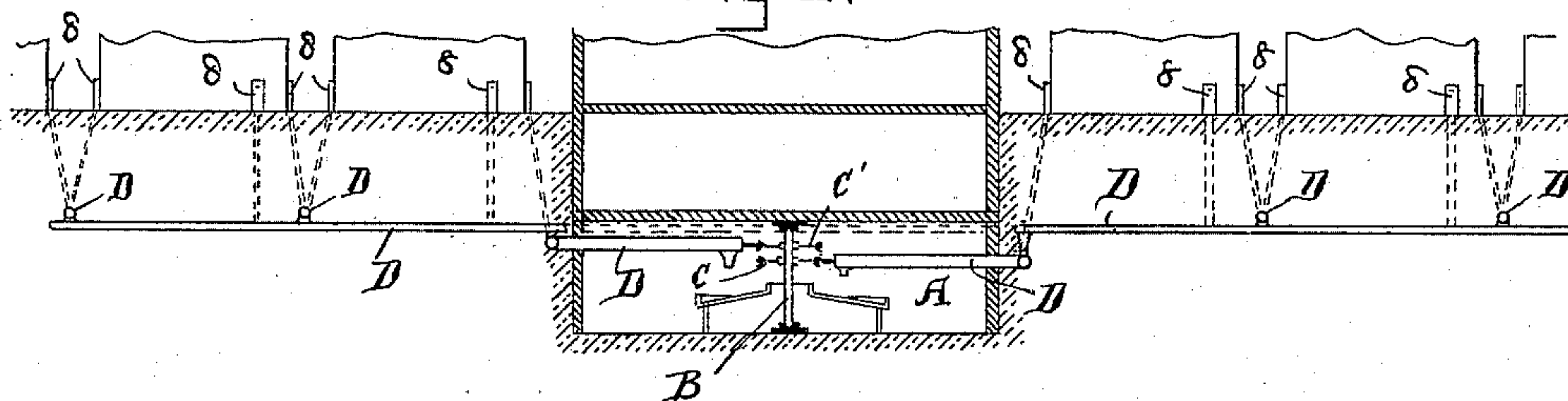
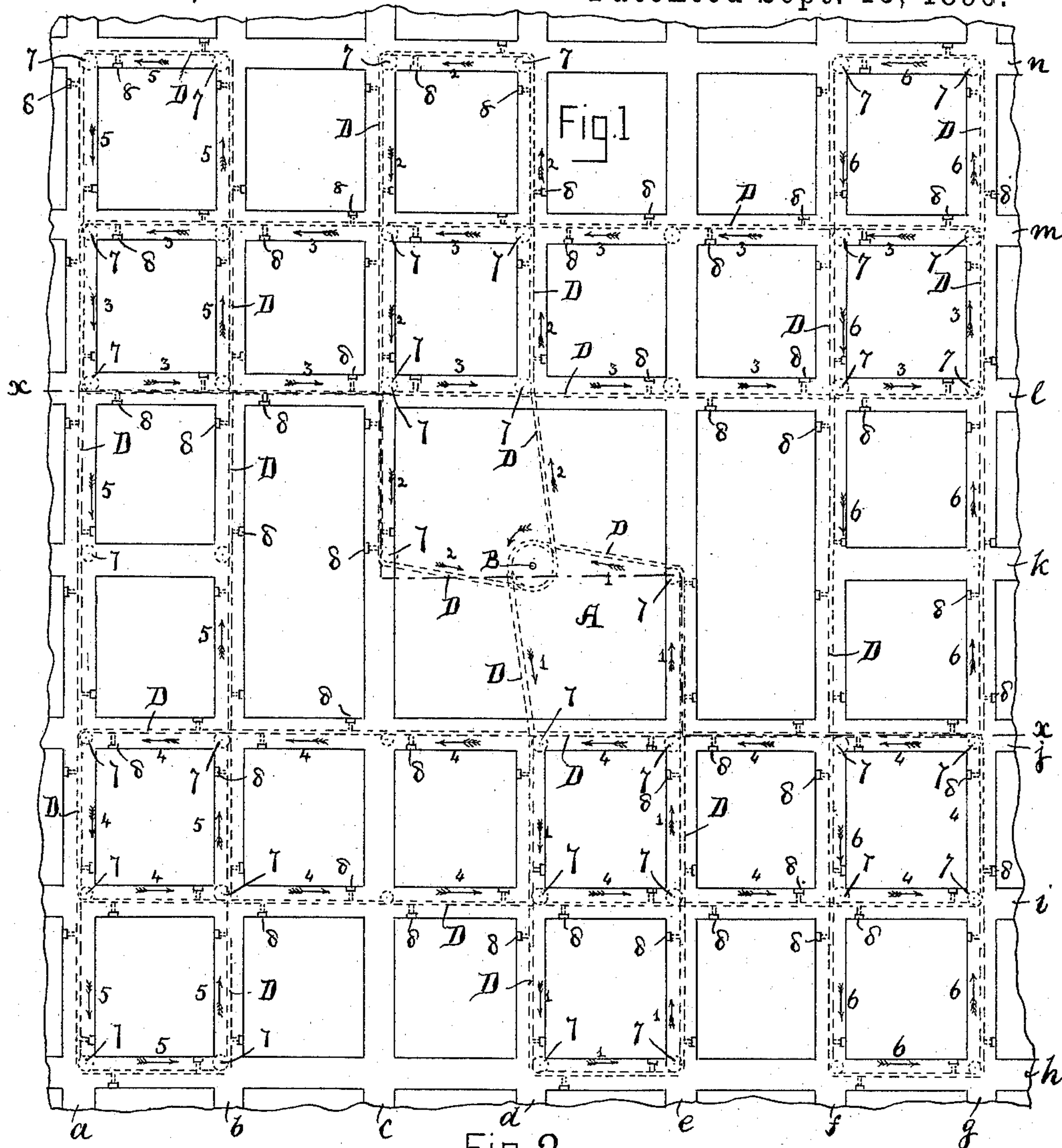
2 Sheets—Sheet 1.

H. W. LIBBEY.

APPARATUS FOR COLLECTING MAIL OR OTHER MATTER.

No. 567,718.

Patented Sept. 15, 1896.



Witnesses.
Winifred E. Keen
Fanny A. Dillard.

Inventor.
Hosea W. Libbey
by Edwin Blanta
Attorney.

(No Model.)

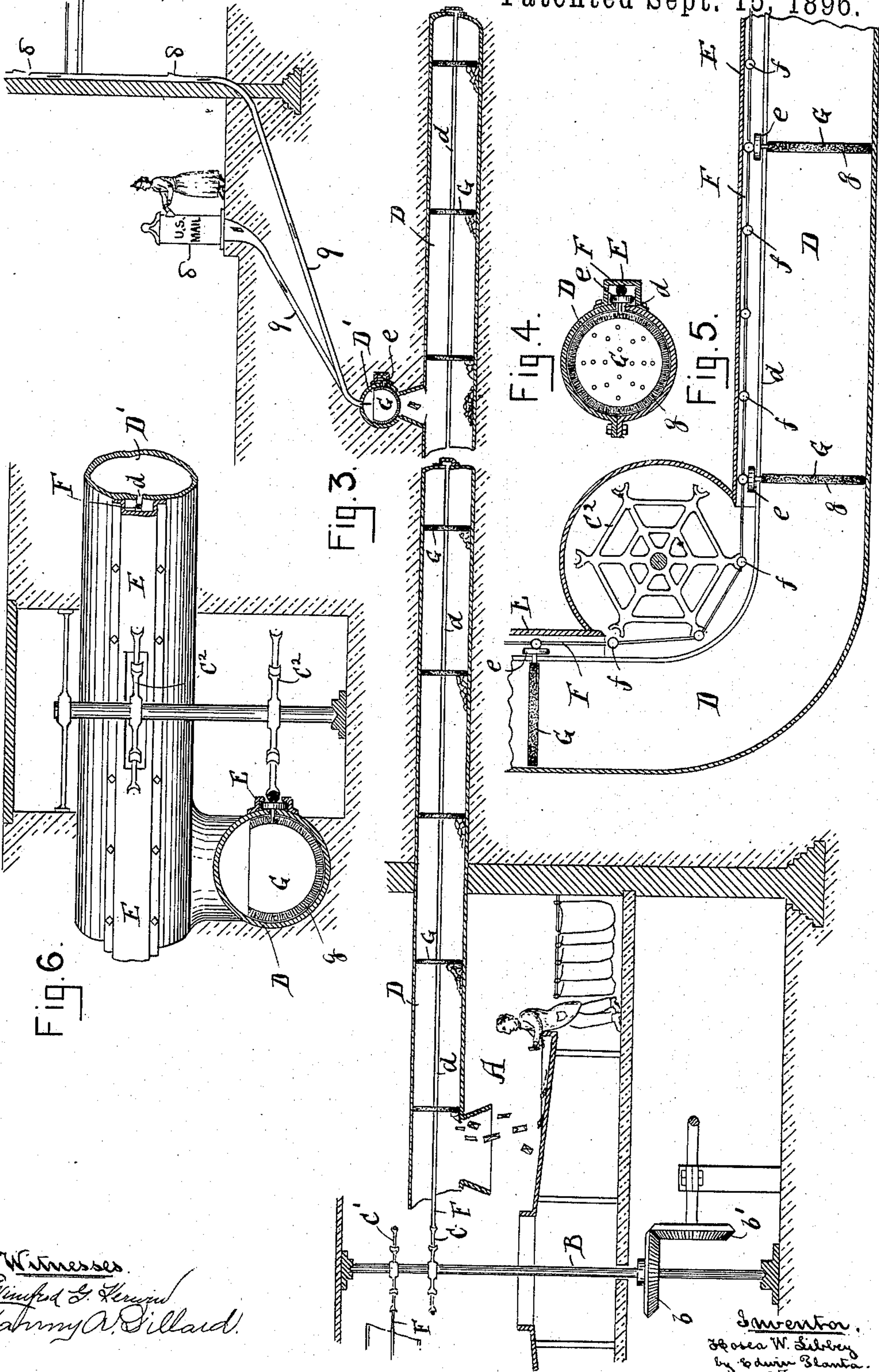
2 Sheets—Sheet 2.

H. W. LIBBEY.

APPARATUS FOR COLLECTING MAIL OR OTHER MATTER.

No. 567,718.

Patented Sept. 15, 1896.



Witnesses.
Wm. L. Hargis
Samuel A. Gillard.

Inventor.
H. W. Libbey
by Edwin Blanton
Attorney

UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

APPARATUS FOR COLLECTING MAIL OR OTHER MATTER.

SPECIFICATION forming part of Letters Patent No. 567,718, dated September 15, 1896.

Application filed December 10, 1894. Serial No. 531,429. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Collecting Mail or other Matter, of which the following, taken in connection with accompanying drawings, is a specification.

10 The object of my invention is to produce an apparatus whereby mail or other matter may be collected from various parts of a city, town, or other place and carried to a central office.

15 The invention consists of a series of tubes in communication with street or house letter-boxes and a central office, said tubes being provided with sweepers to carry the letters or other articles deposited in the said street or house letter-boxes to a central office. Cross-
20 tubes communicate with the main tubes, so that letters deposited therein will be carried forward and deposited in the main tube, and thence carried to the central office, as hereinafter fully described, and pointed out in the
25 claims.

Referring to the accompanying drawings, Figure 1 represents a plan of a portion of a city or town having a central office and fitted with a mail-collecting system or apparatus embodying my invention. Fig. 2 is a vertical
30 section of the same, taken on line *xx* of Fig. 1. Fig. 3 is a vertical section of a general view, illustrating my mail-collecting system. Fig. 4 is a vertical section through one of the tubes.
35 Fig. 5 is a horizontal section through one of the tubes at a corner or bend. Fig. 6 is a vertical section through a corner, showing one tube above another and the method of operating the cable of one from the other.

40 A represents a central station, in the center of which is an upright shaft B, to which rotary motion is imparted through bevel-wheels *bb'*, or other suitable means, from any suitable motive power. On the upper end of the shaft
45 B are secured sprocket-wheels C C', one for each main cable, as hereinafter described.

50 D D are tubes or pipes, having a slot or opening *d* on one side its entire length. Over this slot is secured a box or casing E, in which a cable F travels. On the cable are secured balls *f*, the distance between the same being equal to the distance between the spokes or

arms of the sprocket-wheel C, so that when the latter is rotated each arm will take hold of a ball and draw the cable along. At suitable intervals, say at every fourth ball, I secure a small wheel *e*, of a diameter equal to the height of the interior of the box E. By means of these wheels the cable is supported at suitable intervals, thereby preventing its sagging. The axles of each of these wheels *e* pass through the slot *d* in the tube D, and has secured thereto a disk G, of a diameter to just fit within said tube. These disks I prefer to make of thin steel, so as to make them as strong and light as possible, and I prefer to cover the perimeter with bristles or other suitable material *g*, so as to form a brush to carry the mail or other matter along the tube. These disks may be formed with a number of small holes, as shown in Fig. 4, so as to prevent air resistance as they are carried through the tube, but I prefer to have the upper portion of each disk cut off, as shown in Fig. 6. At each corner or bend of the tube the side of the box E is cut away so as to admit the arms of a sprocket-wheel C² to carry the cable round said corner or curve, as will be best seen in Fig. 5, and at each corner where two tubes meet, one passing over the other, the shaft carrying the sprocket-wheel C² is extended and fitted with another sprocket-wheel C² for operating the cable of the upper section or tube. (See Fig. 6.) Thus all the cables are operated from the main shaft B. This will be best seen by reference to Fig. 1, which represents a portion of a city or town having a central office A and streets lettered *a* to *n*. Now, supposing the main shaft B to be rotated in the direction of the arrow, then one of the main cables F will be drawn in the direction of the arrows 1 and the other main cable will be drawn in the direction of the arrows 2, each making a complete and independent circuit on each side of the office A. At each bend and street-corner they pass over sprocket-wheel 7. The shafts carrying said wheels at the corners of *e* and *i*, *e* and *j*, *f* and *i*, *f* and *j*, *d* and *l*, *d* and *m*, *e* and *l*, and *d* and *m* streets, where the first supplementary tubes cross the cables which travel in the direction of the arrows 3 and 4, are fitted with a second sprocket-wheel, as shown in Fig. 6, to operate said cables, which also

travel over sprocket-wheels at suitable intervals, and the shafts of the sprocket at the corners of *a* and *i*, *a* and *j*, *a* and *l*, *a* and *m*, *b* and *i*, *b* and *j*, *b* and *l*, and *b* and *m*, and also at the corners of *f* and *i*, *f* and *j*, *f* and *l*, *f* and *m*, *g* and *i*, *g* and *j*, *g* and *l*, and *g* and *m* streets, are also fitted with a second sprocket-wheel to operate the second supplementary tubes, the cables of which travel in the direction of the arrows 5 and 6. It will be thus seen that the main cables are driven from a central shaft and all the supplementary cables have motion imparted to them by means of said main cable.

15 In Fig. 1, 8 represents letter-boxes, which may be either outside or inside the buildings and communicate with their respective tubes. The operation will be best understood by reference to Fig. 3, in which is shown letter-boxes 8 both inside a building and on the street. Now, supposing a letter is dropped into either of said letter-boxes, it falls into one of the tubes 9 and is conducted (in this case) to a supplementary tube *D'* and is carried along by a disk or sweeper *G* until it falls through an opening in the bottom of said tube into the main tube *D*, where, by a sweeper, it is carried to the central office *A* and falls through an opening in bottom of said tube onto a sorting-table, where the attendant takes the letter and throws it into a mail-bag that is to be sent to the place where the letter is to be delivered. It will be readily seen that any number of supplementary tubes may be employed, and the matter deposited in one of said tubes will be carried forward until it reaches the main tube, by which it is delivered at the central office, and it will also be seen that all the cables of said

tubes will be operated from the central office through sprocket-wheels that communicate motion from the cable of one tube to that of a tube above same.

What I claim is—

1. In an apparatus for collecting mail or other matter, a tube having a slot on one side closed by a cap or cover, a cable, wheels mounted on axles secured to said cable and running within said cap or cover to prevent sagging of the cable, and disks or sweepers also secured to said axles and working in the tube to carry forward the mail-matter deposited therein substantially as set forth.

2. In an apparatus for collecting mail or other matter, a tube having a slot in one side with a cap therefor, a cable in said cap, balls secured to said cable, disks secured to axles on said balls, and a sprocket-wheel having arms adapted to engage said balls, said parts being combined, substantially as described.

3. In a mail-collecting device, a tube having a slot extending horizontally throughout its length, a cap on said slot, a cable in said cap, balls secured to said cable, wheels secured to said balls and adapted to travel inside of said cap, and cut-away movable disks secured to the axles of said balls and provided with brushes at their periphery, said parts being combined substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of October, A. D. 1892.

HOSEA W. LIBBEY.

Witnesses:

CHAS. STEERE,
EDWIN PLANTA.