

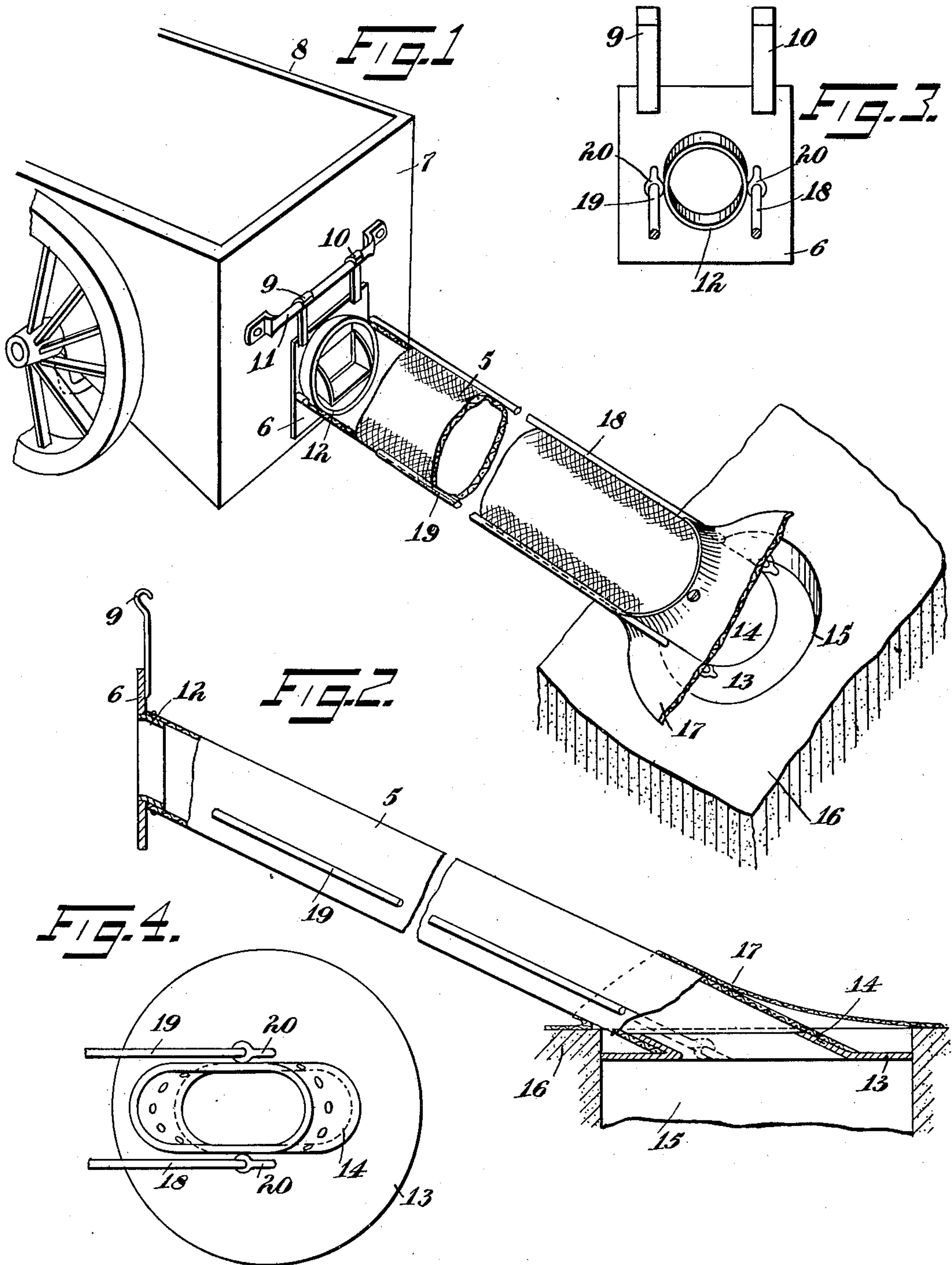
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COAL CHUTE.

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UNITED STATES PATENT OFFICE.

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COAL-CHUTE.

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To all whom it may concern:

Be it known that I, MAGGIE B. LAING, a citizen of the United States, residing in the borough of Bronx, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Coal-Chutes, of which the following is a specification.

The object of this invention is to provide a device for conveying coal or similar material, from a vehicle to an opening in the pavement or other place, which device will form a closed conveyer for the material to effectually exclude the escape of dust or fine particles therefrom; and which device will also have the property of deadening or preventing the noise and racket usually attendant upon the passage of coal down a chute or the like.

A further object of the invention is to provide such a device that will be economical of construction and repair, which will be of light weight comparatively to be readily carried on the vehicle with the load to the place it is to be dumped, and which device will permit its easy and quick connection with the vehicle and also with the opening into which the coal is to be dumped.

In the accompanying drawing representing an embodiment of my invention, Figure 1 shows the device partly in section and partly in elevation, with the lower end inserted in the coal hole. Fig. 2 is a view showing the device in use. Fig. 3 shows the vehicle attaching member; and Fig. 4 shows the attaching member for the coal hole.

Heretofore it has been customary to use a chute formed of rigid material, generally sheet metal, that is attached at the opening in the tail-board of the vehicle, with its end placed at the opening in the pavement. With the use of such a structure, whether of wood or iron, the running of the coal down into the hole from the wagon always produced a large and objectionable noise especially where the device was made of sheet metal. A further objection was the necessary spreading of dust and fine particles in the neighborhood. The results of such objections has been in large cities, that it is prohibited to dump coal in the business sections during office hours. This required the use of the wagons and men after office hours and necessarily increased the cost of the coal to the consumer.

The present invention is shown as com-

prising a tubular member 5 made of soft pliable material of great strength yet inexpensive, and canvas or sail cloth has been found satisfactory for such purpose. At the upper end of the tube is an annular member 6 that is placed against the tail board 7 of the wagon 8 and removably secured by any suitable means. The member 6 is shown as having hooks 9 and 10 that engage a bar 11 secured to the wagon. The annular member may have a ring flange 12 secured thereto whose axis is inclined to the plane of the ring plate 6. This ring flange forms a convenient means of attachment of the canvas tube 5 that is preferably circular or slightly oval in cross section.

At the lower end of the tube is another annular member 13 to which the lower end of the tube 5 is secured, preferably in such a manner that when the tube is stretched out the annular member 13 will lie in a plane perpendicular to the plane of the ring plate 6. Similar means may be provided for securing the tube 5 to the ring plate 13 as by a ring flange 14 also inclined to the ring plate, to which the tube is suitably secured as shown. The plate 13 is preferably circular in outline and of a diameter for its insertion in the coal hole 15 in the pavement 16. But where the coal hole is larger than this ring suitable means are provided to prevent the escape of dust around the edge of the ring plate, as my having a canvas apron 17 secured to the tube 5 at its lower portion, somewhat similar to the ring plate 13, but sufficiently larger therefrom in its area to extend a short distance beyond the coal hole of a maximum size, in all directions. This will effectually prevent any dust rising from the coal falling down into the hole and from the cellar or room below the pavement.

If desired the tube 5 may be provided with supporting means to prevent its sagging or bending from the weight of the coal passing therethrough. Two rigid supporting bars 18 and 19 are provided on opposite sides of the chute and secured thereto. This will cause the tube to retain its straight form and prevent sagging. These bars are secured at their ends to the flanges 12 and 14 respectively in any suitable manner preferably by eye portions 20, whereby the tube may vary its angle with its attaching plates at each end within certain limits yet be rigidly and properly supported.

It will thus be seen that a chute is provided that is readily attached and detached from the wagon, and will accommodate itself to different sizes or shapes of coal holes in the pavement or building, and can also accommodate itself to different angles with the wagon.

The device is comparatively light in weight and thus easily handled, and furthermore it will take up very little space as it is collapsible, and can be readily placed on top of or at one side of the wagon.

While the canvas or other material of the chute is not as durable as if made of metal or even wood such material is comparatively cheap and the worn tubing can be easily patched or quickly and cheaply replaced using the same end members and supporting rods. By this means the coal can be dumped into the hole in the pavement at any hour of the day, without causing unnecessary and disturbing noise, and without any dust or particles escaping therefrom.

Having thus described my invention, I claim:

1. The combination of a ring plate, attaching means on the plate, a tube of flexible material such as fabric having one end secured to the plate and extending at an angle therefrom, a second ring plate, the tube having its other end secured to said ring plate and inclined thereto whereby the said ring plates will lie in substantially perpendicular planes when the tube is extended, a rigid supporting rod on each side of the tube secured thereto and having its ends hinged to the said ring plates respectively, and an annular apron member of

flexible material such as fabric secured to the tube near its lower end to cover the marginal portions of the opening engaged by the lower ring plate.

2. The combination of a ring plate having an annular flange at its opening whose axis is inclined to the ring plate, attaching means on the ring plate, a second ring plate having an inclined annular flange at its opening, a tube of flexible material such as fabric having its ends secured to said ring flanges respectively whereby the ring plates will lie in planes substantially perpendicular when the tube is extended, and supporting rods one on each side of the tube secured thereto with the ends hinged to the plate members respectively.

3. The combination of a ring plate having an annular flange at its opening whose axis is inclined to the ring plate, attaching means on the ring plate, a second ring plate having an inclined annular flange at its opening, a tube of flexible material such as fabric having its ends secured to said ring flanges respectively whereby the ring plates will lie in planes substantially perpendicular when the tube is extended, supporting rods one on each side of the tube secured thereto with the ends hinged to the plate members respectively, and an annular member of flexible material such as fabric secured to the tube near its lower end to cover the marginal portions of the opening engaged by the lower ring plate.

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