(No Model.) 2 Sheets—Sheet 1.

H. C. W. BUCHTERKIRCHEN.

CAR LOADER.

No. 486,079. Patented Nov. 15, 1892.

Fig. 1.

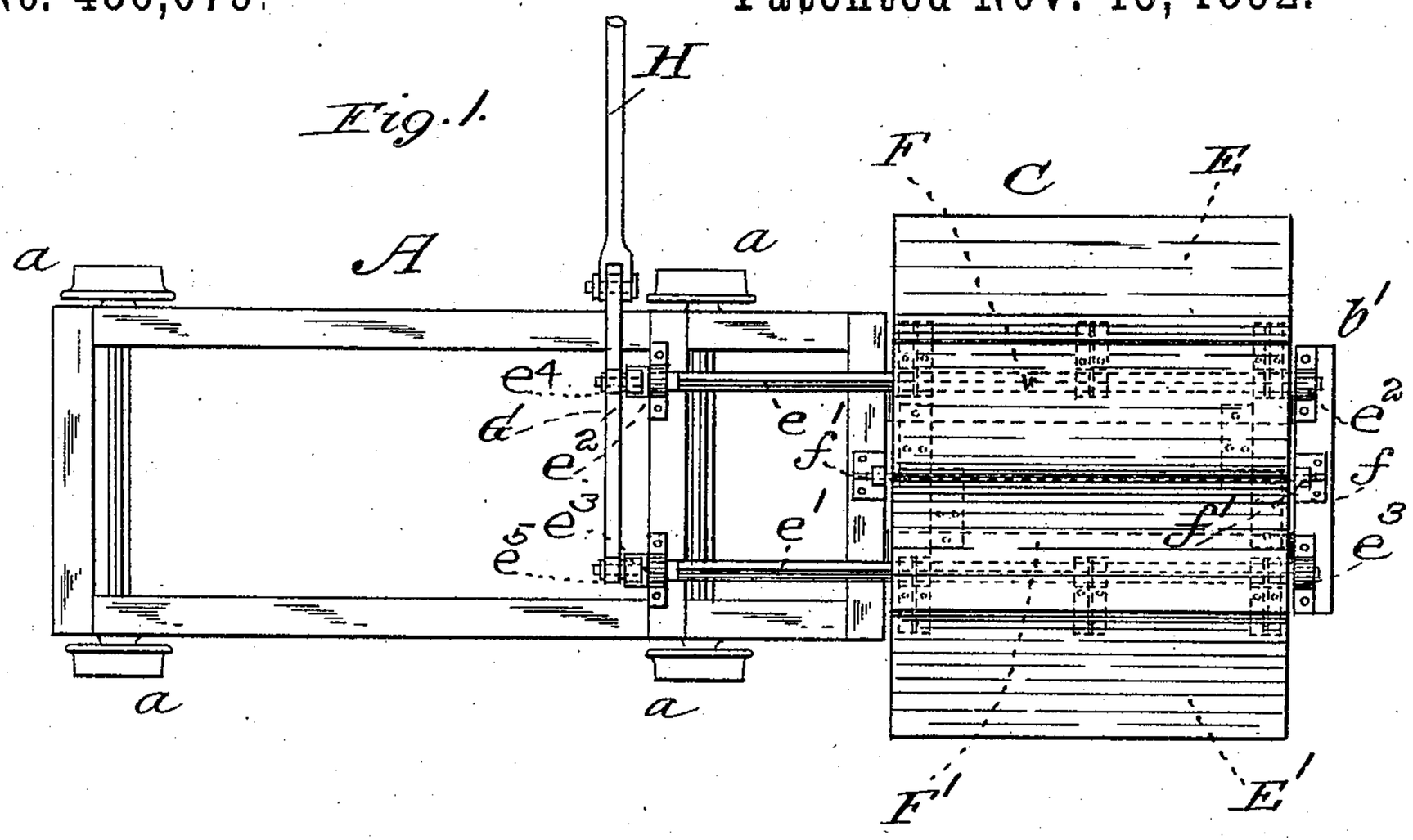
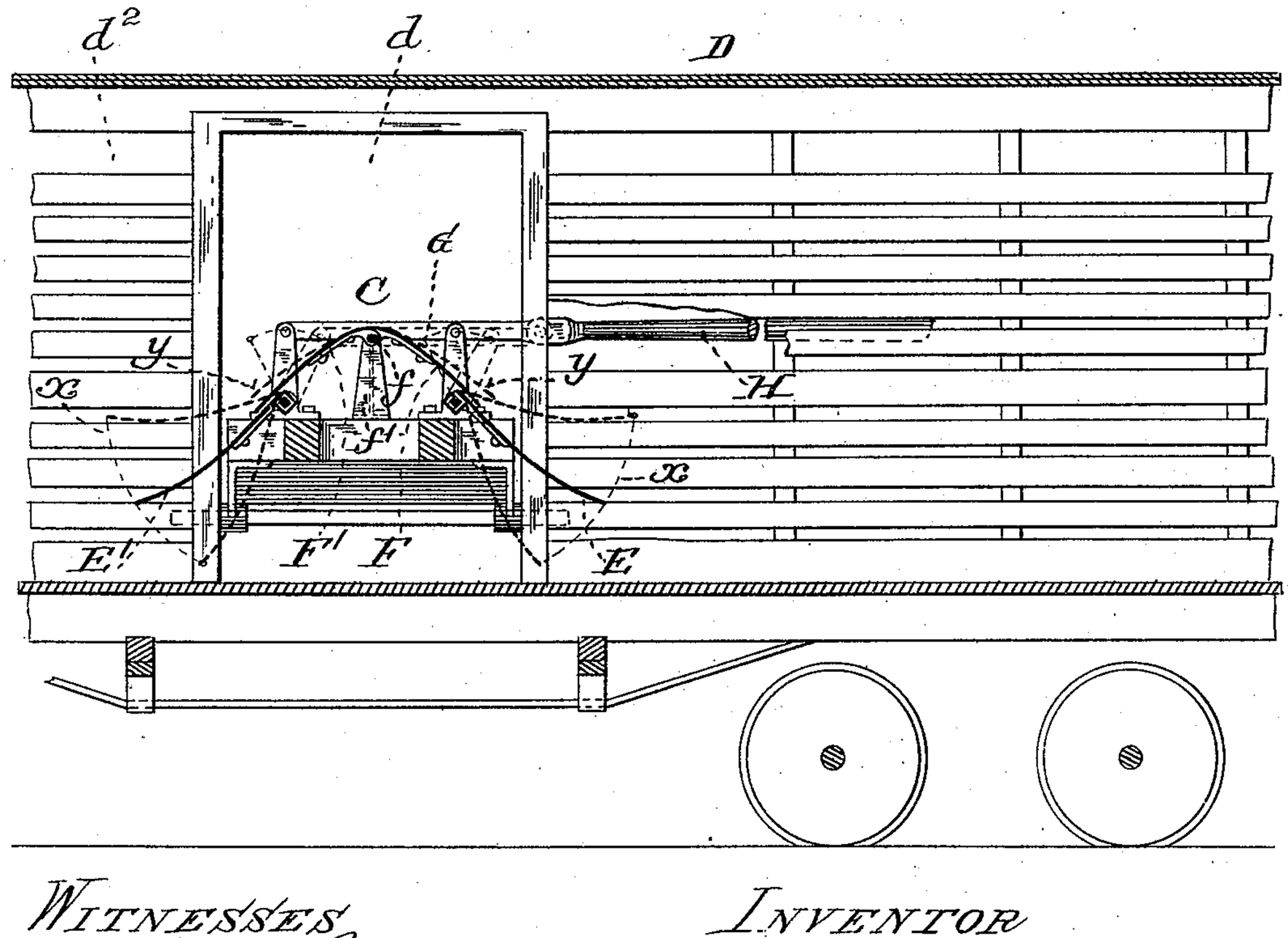


Fig. 2.



WITNESSES
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(No Model.) 2 Sheets—Sheet 2.

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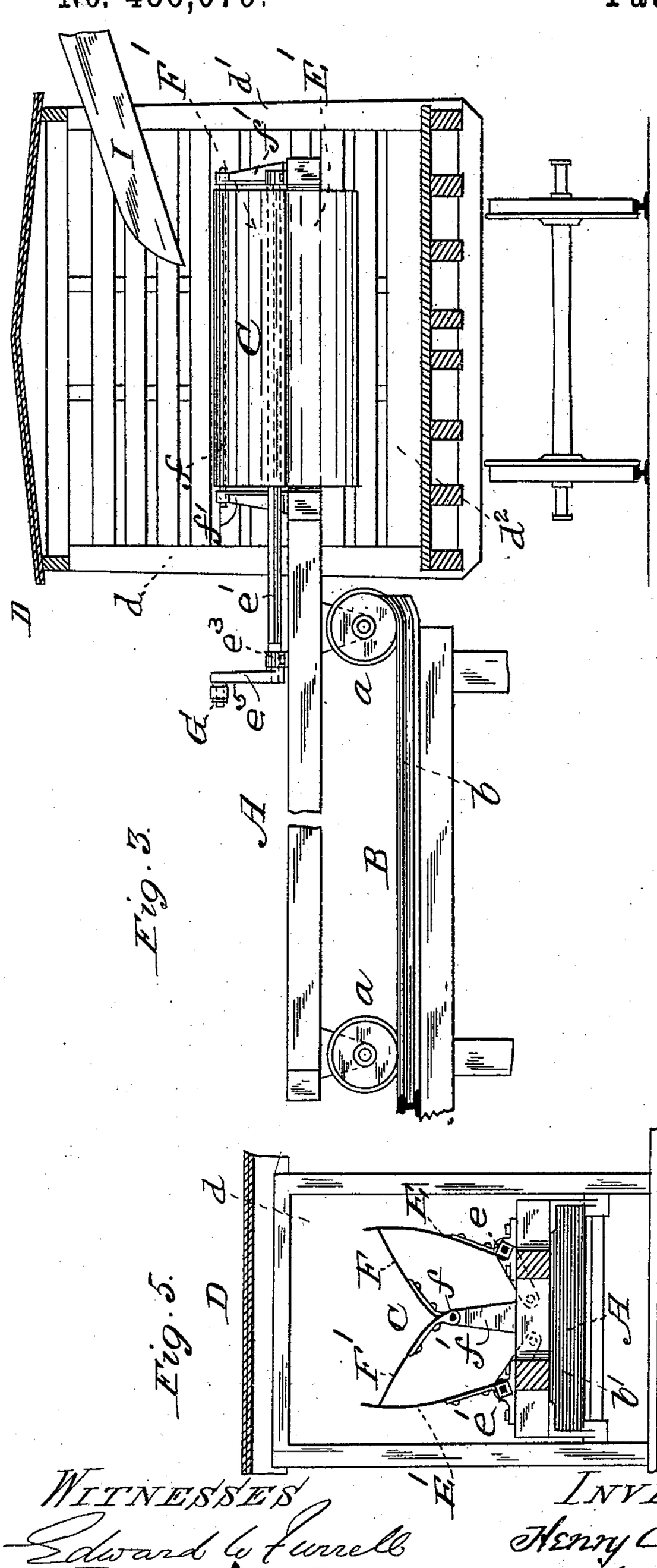

Fig. 3.

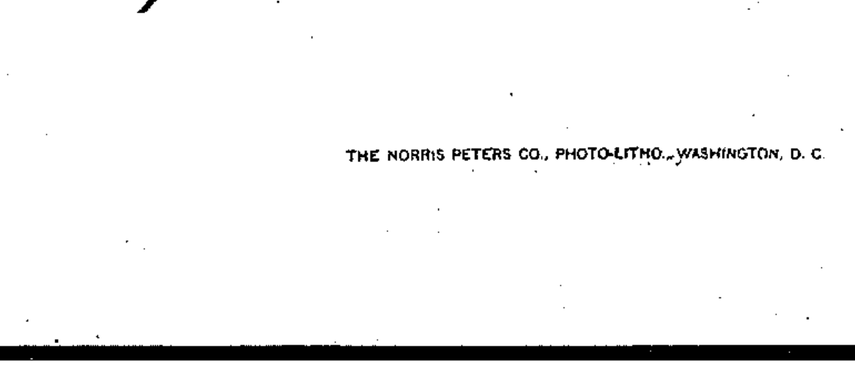

Fig. 5.

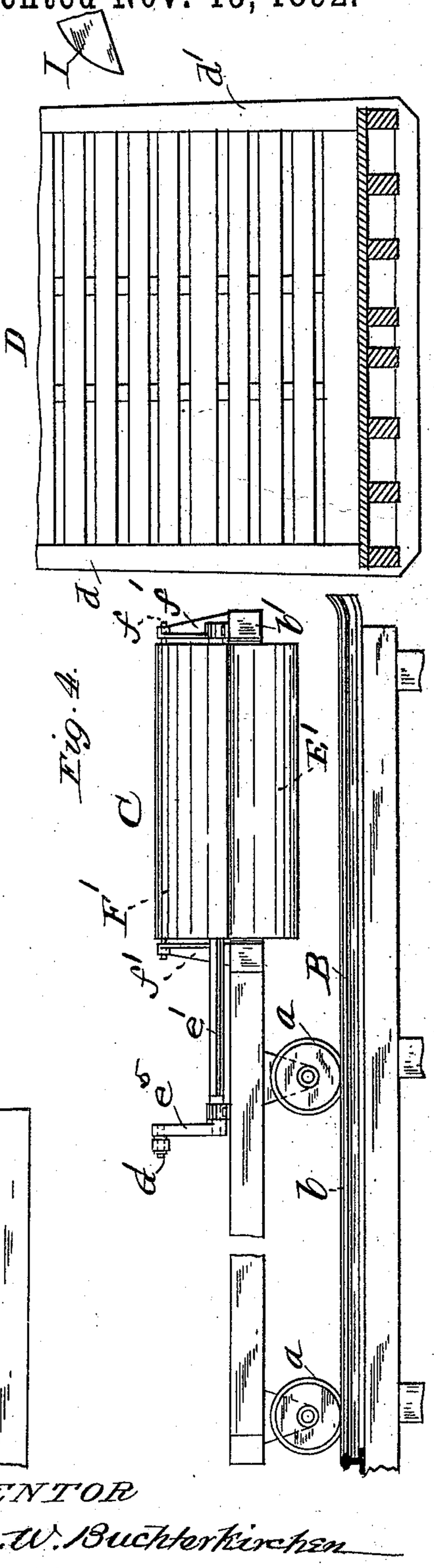

Fig. 4.

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UNITED STATES PATENT OFFICE.

HENRY C. W. BUCHTERKIRCHEN, OF STAUNTON, ILLINOIS.

CAR-LOADER.

SPECIFICATION forming part of Letters Patent No. 486,079, dated November 15, 1892.

Application filed July 11, 1892. Serial No. 439,576. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. W. BUCHTERKIRCHEN, of Staunton, Macoupin county, Illinois, have made a new and useful Improvement in Car-Loaders, of which the following is a full, clear, and exact description.

The improved construction under consideration, generally considered, consists of a device adapted to be removably introduced into a car or other chamber to be loaded with coal or other substance capable of being shoveled or similarly manipulated, and comprising, primarily, a part answering to a shovel-blade and held in position within the car or chamber for the substance to be delivered onto it and to be vibrated or moved to throw the substance off and into or toward that portion of the car or chamber to be loaded, and the improvement is more fully carried out when an incline is arranged above the shovel for the purpose of receiving the substance and deflecting it onto the shovel, and so that the incline by the action of the shovel or otherwise can be shaken to facilitate the delivery from the incline onto the shovel, and still more fully when the device is double-ended to enable the loading to be done in both ends of the car or chamber simultaneously, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, and exhibiting the most desirable mode of carrying out the improvement, and in which—

Figure 1 is a plan of the device; Fig. 2, a view showing a car in longitudinal section and containing the device ready for use; Fig. 3, a vertical cross-section of the car containing the device, which is shown in elevation; Fig. 4, a view similar to that of Fig. 3, but showing the device withdrawn from the car; and Fig. 5, a view analogous to that of Fig. 4, but showing the position of the shovels when folded.

The same letters of reference denote the same parts.

A represents a slide, preferably in the form of a frame, mounted on rollers *a a* and adapted to be moved over any suitable support—such as the platform B—to enable the loader C, which is sustained by the slide, to be projected into and withdrawn from the car D or other chamber or place into which the coal or other material is to be loaded. The platform may have rails *b* to guide the frame wheels or rollers *a*. The rails also may serve as shoulders to better hold the apparatus against any strain acting to displace it laterally. The loader C in the present instance is mounted on the outer end *b'* of the frame. It is designed to be projected through one of the doorways *d d'* of the car to be brought centrally in the interior d^2 of the car and at a suitable elevation, substantially as shown, to receive the material to be loaded, and in turn to distribute it into the end portions of the car interior. The leading features of the loader in its most approved shape are the plates E E', which hereinafter will be termed the "shovels," and two inclines F F', whose function it is to deliver the material to the shovels respectively. The shovels are adapted to be vibrated or otherwise moved so as to throw or shift the material delivered to them a greater or lesser distance away—that is, in loading a car the material (say coal) is thrown into the end portions of the interior d^2. To this end the most desirable mode of supporting and moving the shovels is to incline them toward the car ends, respectively, and to attach them to rock-shafts *e e'*, respectively, which in turn are journaled in suitable bearings e^2 e^3 and provided with the arms e^4 e^5, respectively. The arms are connected by means of the link G, which in turn, by means of a suitable connecting-rod H, is connected with any means, such as a steam-engine, (not shown,) suited for imparting reciprocating motion to the arms e^4 e^5, and thereby to the shovels. The inclines F F' are in the form of leaves substantially arranged to jointly form a ridge to divide the material and direct its portions onto the shovels, respectively, and for this purpose they are attached to a suitable support, such as the rod *f*, which is sustained by the uprights *f' f'*, as shown, and the inclines are preferably hinged to the rod *f* to enable them to be agitated, to thereby facilitate the delivery of the material onto the shovels. For this last-named purpose the preferable practice is to allow the inclines at the lower end thereof to lap upon the shovels and relatively arrange the parts, so that the

shovels in their vibration shall more or less lift or effect the lifting of the lower ends of the inclines, respectively.

In operation the material is delivered—say by means of the chute I—onto the inclines, and thence onto the shovels. Meanwhile by the means described the shovels are being moved substantially as is indicated by the broken lines *x*, Fig. 2, which movement is communicated in the manner described to the inclines, as indicated by the broken lines *y*, Fig. 2. The motion of the shovels, however, is chiefly useful in causing the shovels to throw the material in the directions described, and thereby effect the loading of the car. After the operation of loading is through with the frame carrying the loader is withdrawn to one side of the car and the chute to the opposite side, as indicated in Fig. 4. The car is removed, another car brought opposite the loader, and the operation repeated. In withdrawing and entering the loader its shovels, if necessary, may be disconnected and folded to clear the sides of the car-doorway, as illustrated in Fig. 5—that is, the shovels may be disconnected from the link G and be turned either downward or upward, but preferably upward, lifting the inclines, and also occupy a space narrower than the doorway, substantially as shown.

I claim—

1. A loading apparatus having a vibrating shovel for receiving and delivering the material to be loaded, said apparatus being mounted on a slide, substantially as described.

2. A car-loader mounted on an adjustable slide, said loader having a shovel vibrating in a vertical plane to lift and throw the material being loaded, substantially as described.

3. A car-loader having two vibrating shovels, said shovels being mounted on a slide and arranged back to back and vibrating in a vertical plane and in opposite directions, respectively, substantially as described.

4. The combination, in a car-loader, of a vibrating shovel and a movable incline, said incline lapping upon said shovel, and said shovel and incline both being movable in a vertical plane, substantially as described.

Witness my hand this 7th day of July, 1892.

HENRY C. W. BUCHTERKIRCHEN.

Witnesses:

C. D. MOODY,

B. F. REX.