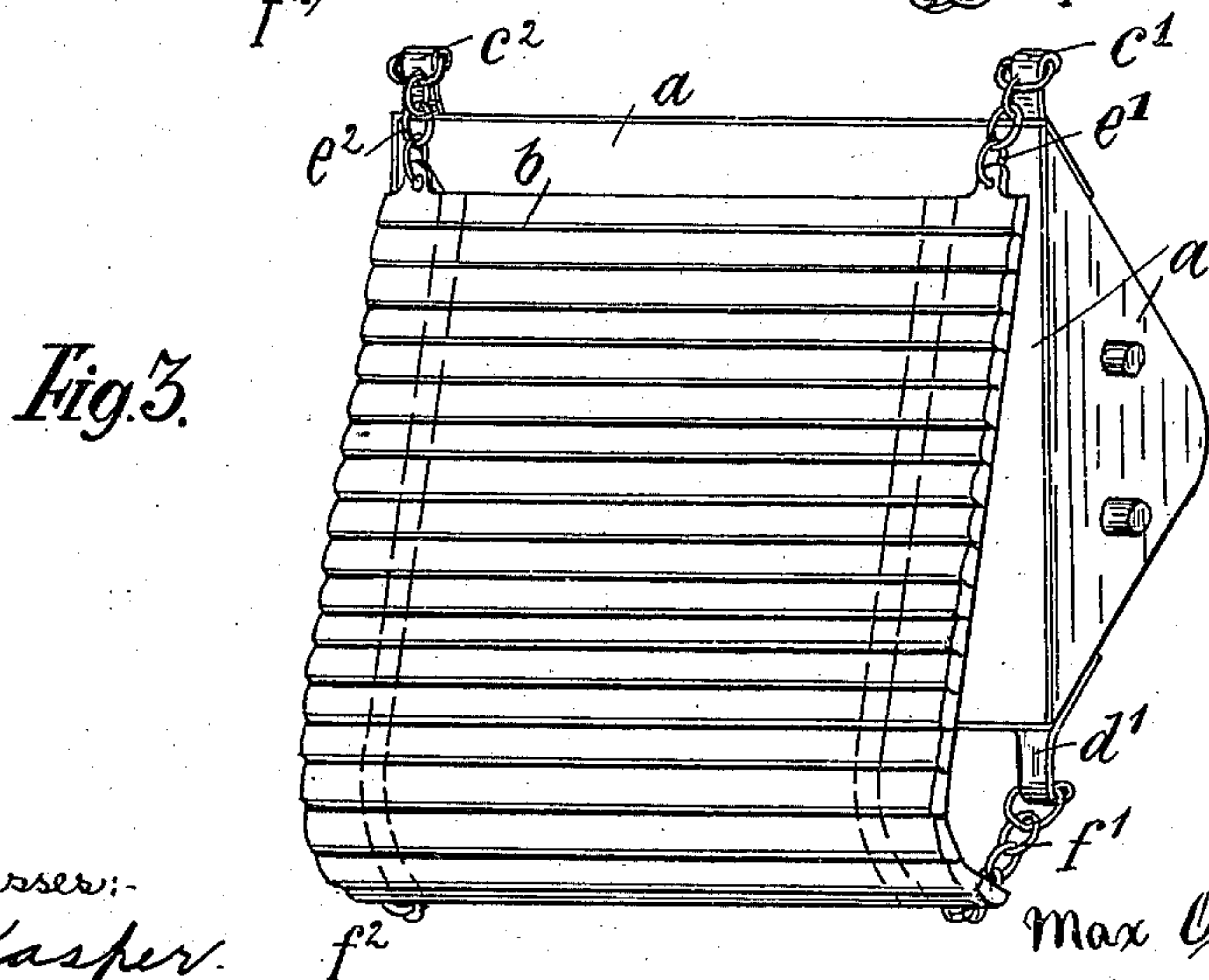
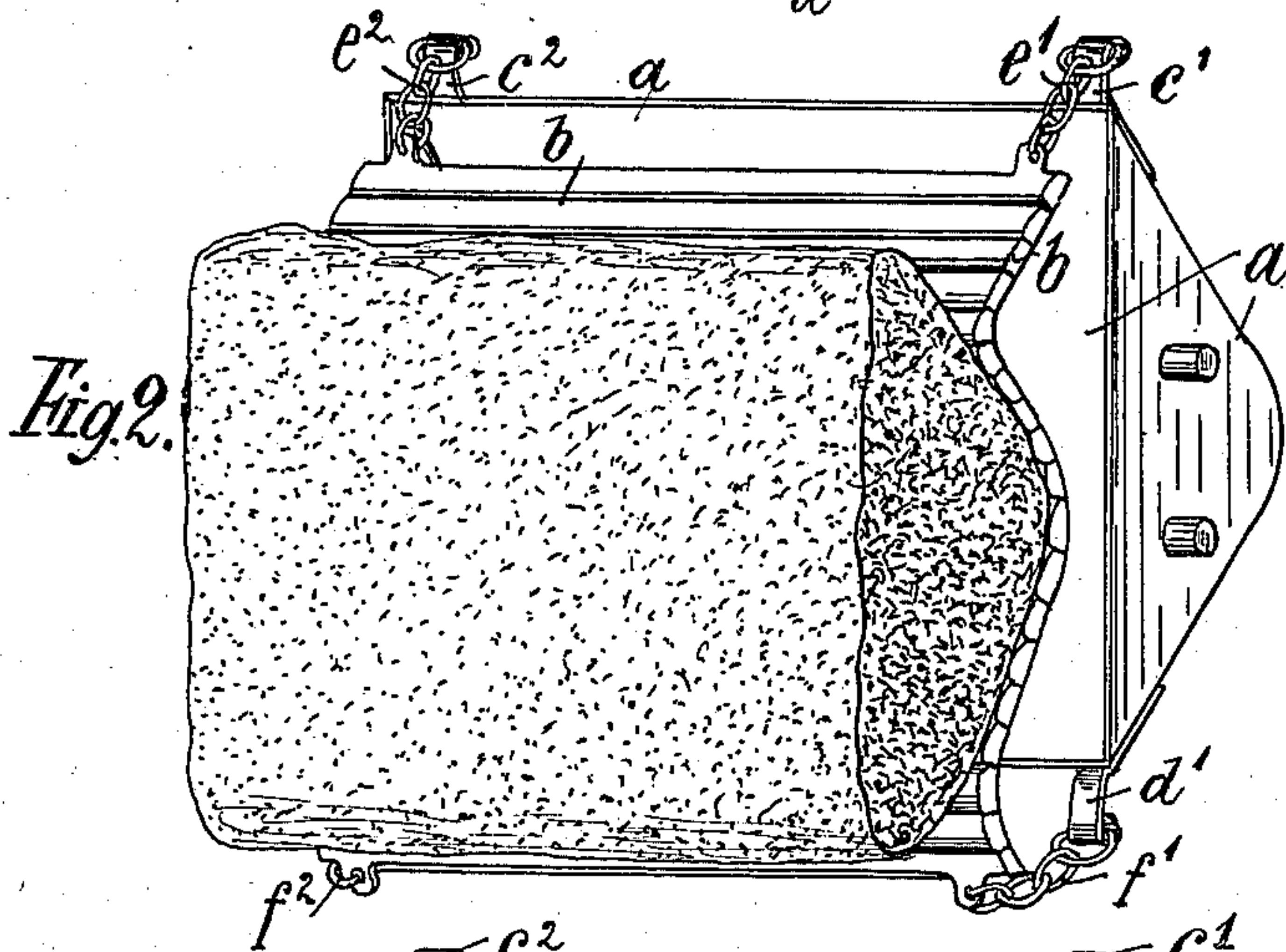
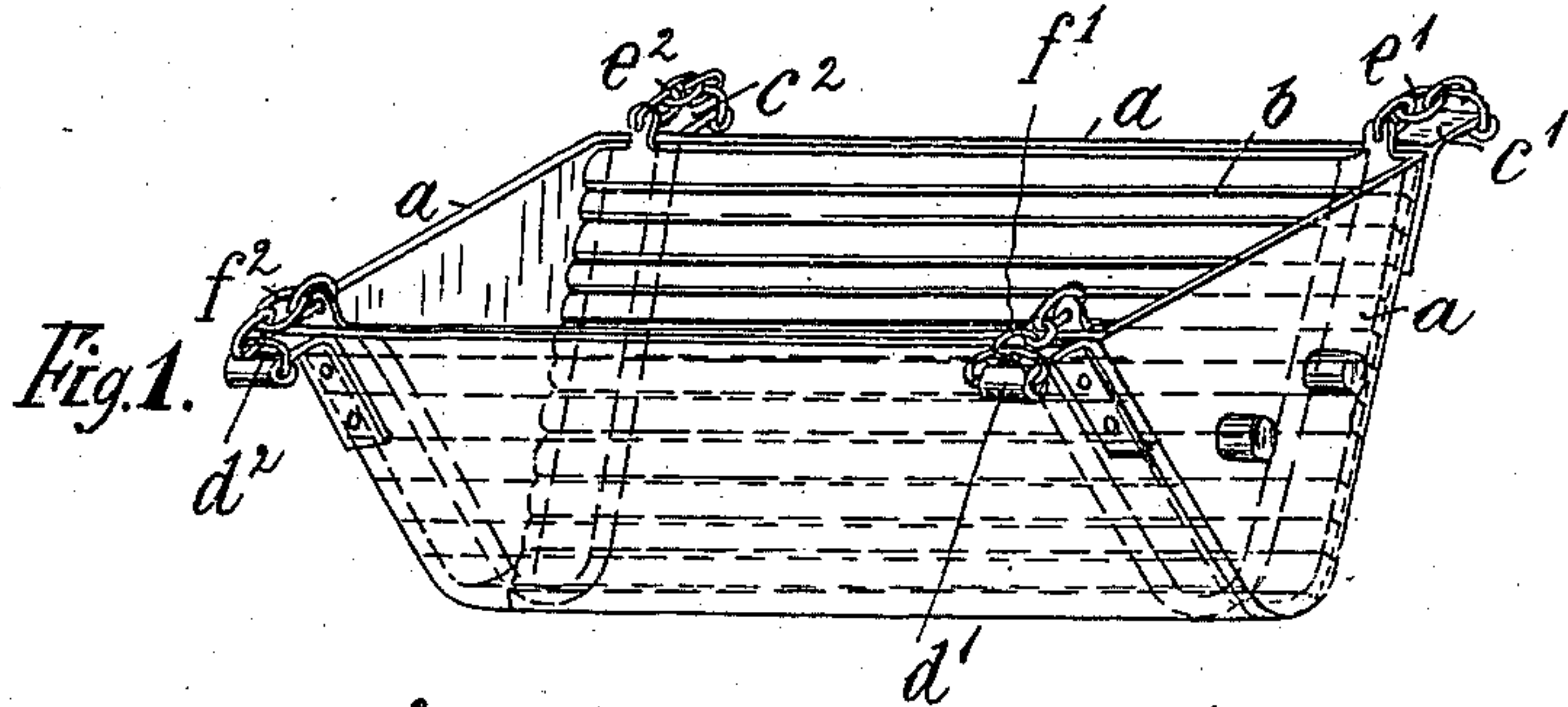


M. ORENSTEIN.
DUMPING CAR.
APPLICATION FILED APR. 5, 1910.

966,237.

Patented Aug. 2, 1910.



Witnesses:-

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UNITED STATES PATENT OFFICE.

MAX ORENSTEIN, OF BERLIN, GERMANY.

DUMPING-CAR.

966,237.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed April 5, 1910. Serial No. 553,648.

To all whom it may concern:

Be it known that I, MAX ORENSTEIN, citizen of Germany, residing at Berlin, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Dumping-Cars, of which the following is a specification.

My invention relates to improvements in dumping or tipping cars or wagons, whose bodies are fitted with sliding linings or trays, of the class described in my United States Letters Patent No. 901643, for the purpose of enabling certain discharge of the entire load, even in the case of materials possessing a high degree of adhesiveness.

According to my invention I construct the lining or tray in the form of a flexible, sliding wall or apron.

Reference will now be made to the accompanying drawings, which illustrate one embodiment of the invention.

Figure 1 is a perspective view of an empty tip-trough fitted with the flexible dumping-apron. Fig. 2 is a like view of the tipped trough while the contents thereof are being discharged. Fig. 3 is a like view of the trough in the tipped position after the load has been dumped.

The tipping trough or hopper *a* of the car is furnished with a flexible, sliding lining or apron *b*, composed of narrow laths or slats of wood or other suitable material. This apron is fastened by means of short chains e^1 , e^2 and f^1 , f^2 at its four corners to hooks c^1 , c^2 and d^1 , d^2 provided on the sides of the trough *a*. In the upright position of the trough (Fig. 1) the apron *b* lies with the whole of its lower surface against the interior walls of the trough. In order that the sticky material which is to be filled into the trough may adhere less firmly to the apron, the latter is preferably first wet with water. If the trough is now filled with sticky or clinging material and then tipped, the apron, with the whole of its contents, will slide down the lower, inclined wall of the trough, until the chains e^1 , e^2 and f^1 , f^2 are stretched taut. The outermost slats of the apron *b* being thus restrained by the

chains (Fig. 2) the load (which constitutes a compact, integral mass) will, as it were, tear itself from them as the tipping operation proceeds. In the same manner the remaining slats will in succession be detached from the load. Thus during the tipping procedure the apron *b* is, so to say, peeled off the load. It will be observed, therefore, that it is not necessary that the load should separate itself from the apron over a large area all at once; on the contrary, the separation between the surfaces of the load and the apron respectively proceeds strip-wise over a relatively great distance. When the entire load has been dumped, the apron hangs completely out of the trough, as shown in Fig. 3.

If longer chains are employed than those illustrated in the drawings, the material, with the apron clinging to it, will naturally have to travel over a greater distance before the chains are drawn taut. In this case, on the chains tightening, the jerk will be more violent, so that the detachment of the load from the outermost slats will be more sudden. On the other hand, quite short chains may be used. Or the ends of the apron may be jointed direct to the trough walls, in which event the individual slats of the apron will act as chain-links, and separating themselves from the surface of the load, will adjust themselves to the direction of the pull exerted upon them by the descending load.

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

In a dumping-car, in combination, a tipping body, and a flexible, sliding lining, consisting of an apron of slats, secured therein at its ends, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAX ORENSTEIN.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.