

No. 656,471.

Patented Aug. 21, 1900.

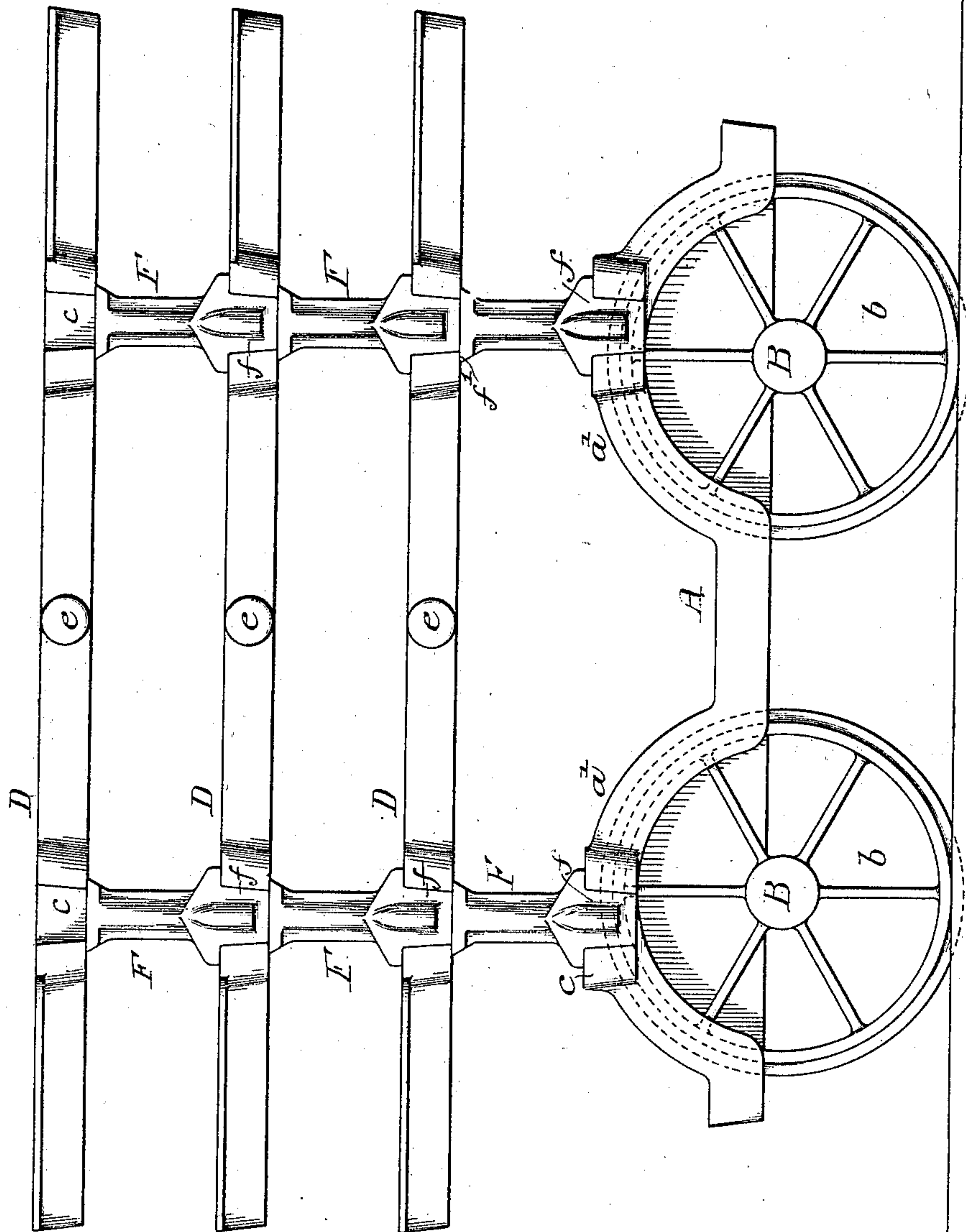
T. I. RANKIN.  
CORE DRYING CAR.

(Application filed Jan. 8, 1900.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses:-

*Samuel D. Turner*

*Louis M. Whitelhead*

Inventor:-

*Thomas I. Rankin*

by his Attorneys:-

*Howan & Howan*

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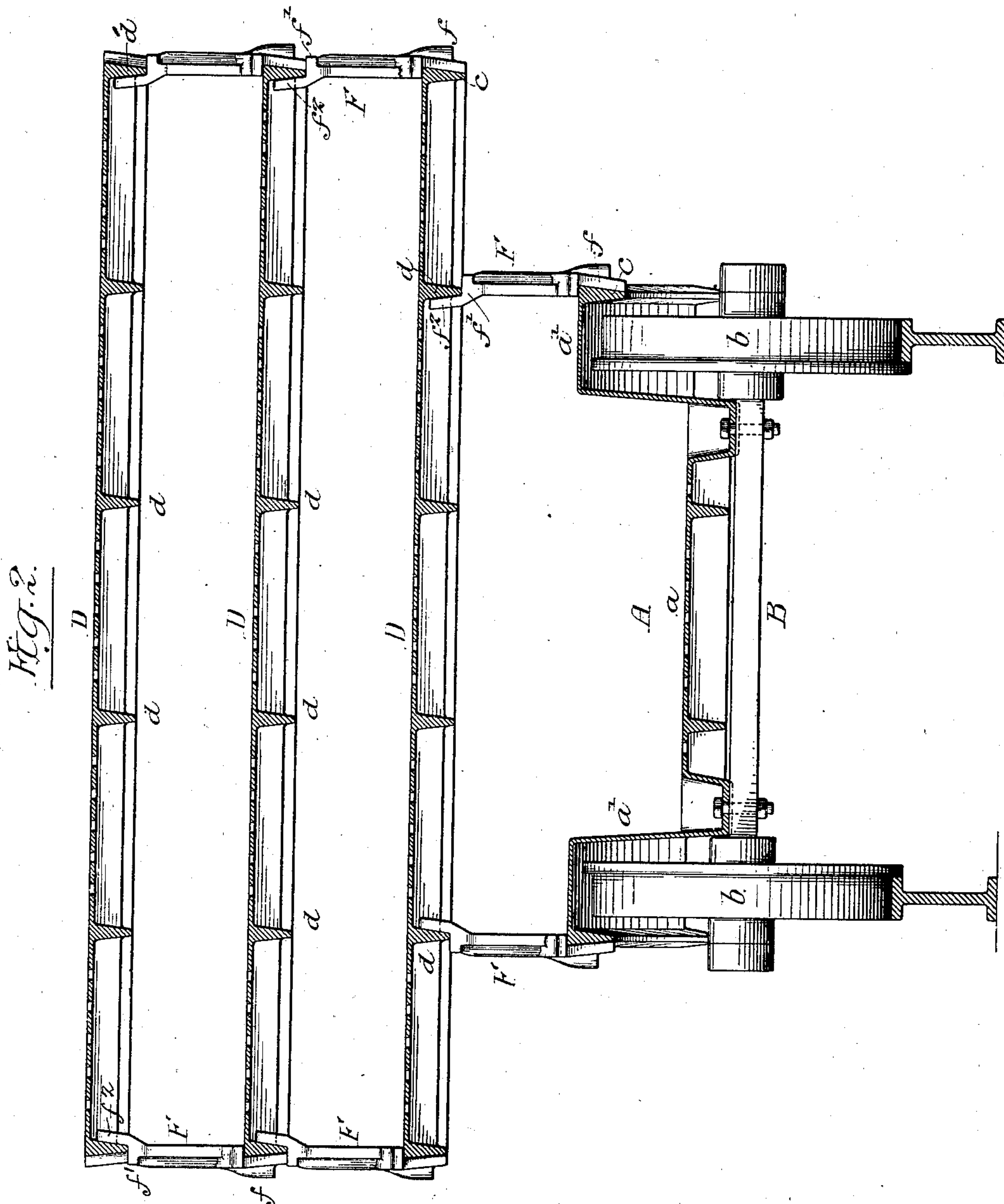
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**3 Sheets—Sheet 2.**



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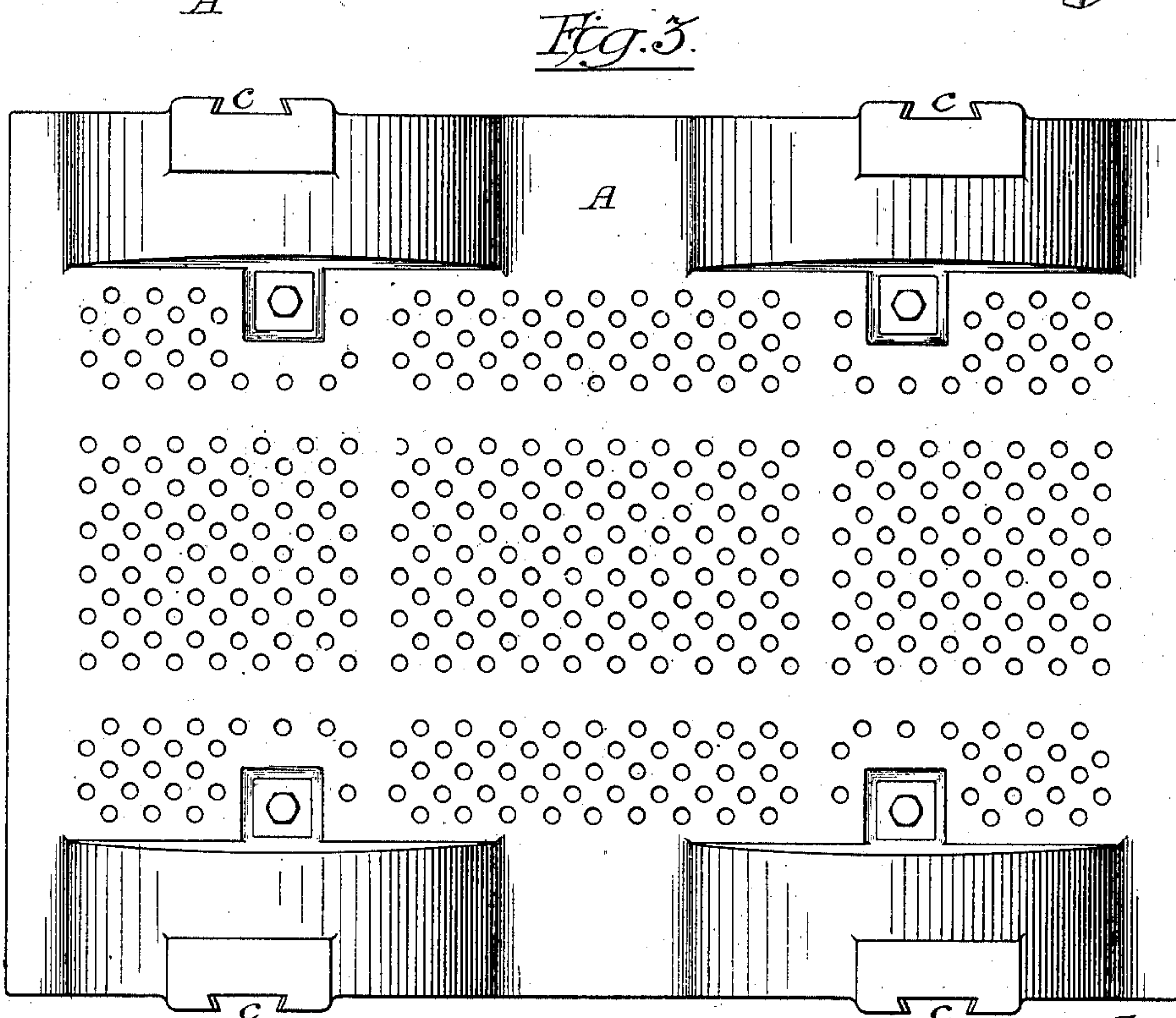
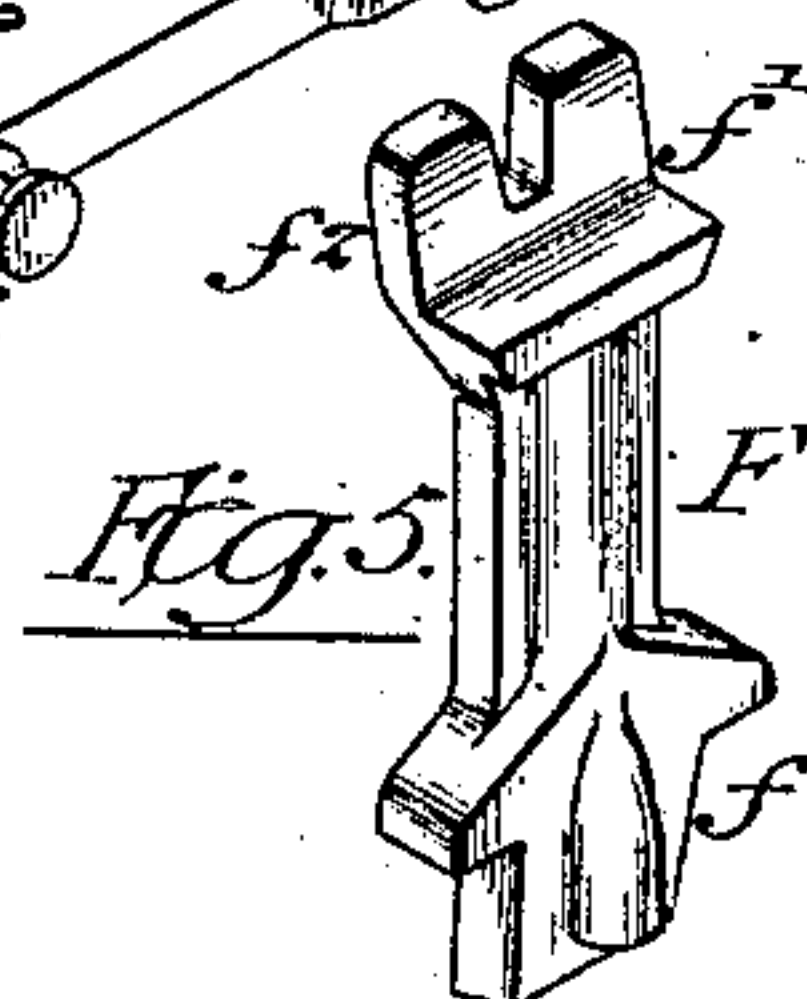
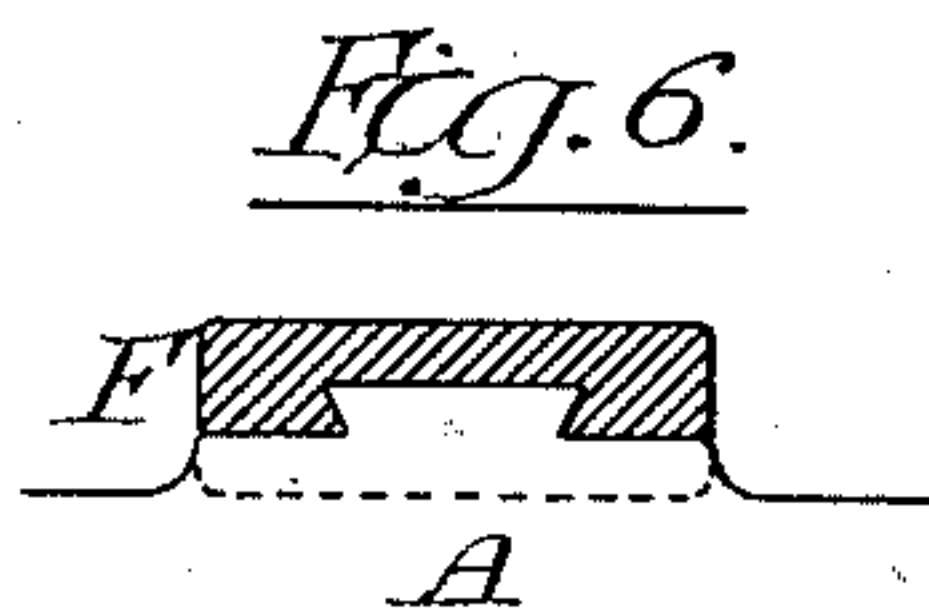
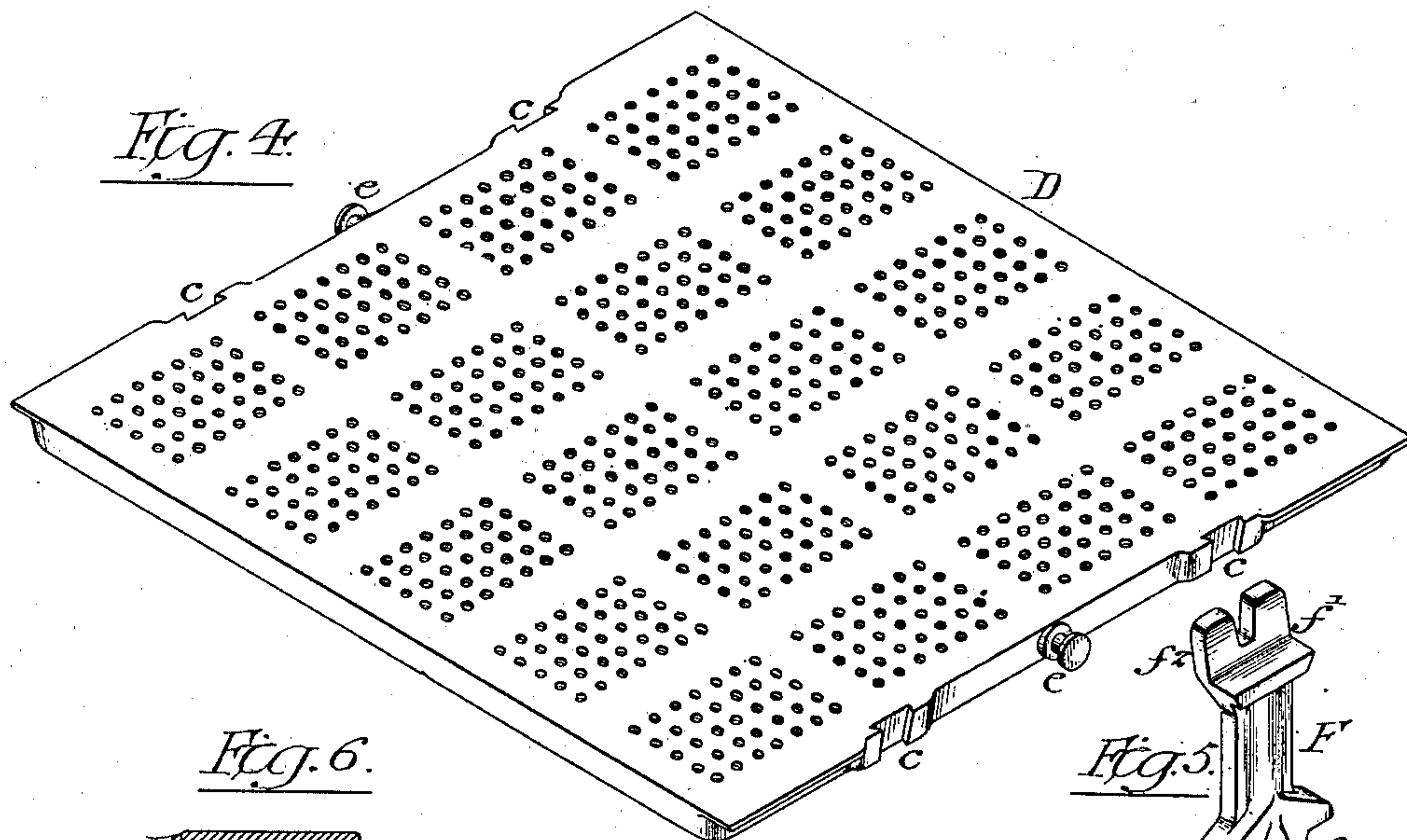
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3 Sheets—Sheet 3.



Witnesses:-

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Inventor:-

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# UNITED STATES PATENT OFFICE.

THOMAS I. RANKIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE  
ABRAM COX STOVE COMPANY, OF SAME PLACE.

## CORE-DRYING CAR.

SPECIFICATION forming part of Letters Patent No. 656,471, dated August 21, 1900.

Application filed January 8, 1900. Serial No. 721. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS I. RANKIN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain  
5 Improvements in Core-Cars, of which the following is a specification.

My invention relates to certain improvements in cars on which cores used in casting are mounted while undergoing the baking  
10 process.

The object of my invention is to so construct the cars that the plates on which the cores are mounted can be placed one above another on the car, dispensing with the usual  
15 platforms heretofore used.

By my invention I am enabled to considerably reduce the weight of the cars when loaded, so that they can be readily moved from one portion of the foundry to another  
20 and through the core-oven.

In the accompanying drawings, Figure 1 is a side view of my improved car for supporting the cores used in the process of casting. Fig. 2 is a cross-sectional view. Fig. 3 is a  
25 plan view. Fig. 4 is a perspective view of one of the core-plates. Fig. 5 is a perspective view of one of the distance-pieces used in separating the plates in loading the car, and Fig. 6 is a view of a modification.

30 The common method of constructing a car of this type is to use an ordinary car having a platform mounted on wheels and having a series of heavy tables provided with short legs. These tables are necessarily of sufficient  
35 strength so that they will not warp, and the core-plates, with the cores thereon, are placed on these tables and the tables in turn mounted one above another on the carriage. This makes a very cumbersome and heavy  
40 carriage which cannot be moved without considerable effort, and, furthermore, it is not rigid, so that great care has to be exercised in moving the car, as otherwise the core before being baked may be broken or disinte-  
45 grated. By my improvements I overcome these objections, and while I make a readily-detachable support for any number of cores the pile when complete is perfectly rigid and the car is light enough to be handled readily  
50 by a boy, and a number of them can be drawn or pushed through the core-oven.

A is the car-body, having a perforated bed *a*, and secured to the body are axles B, on which are mounted the flanged traction-wheels *b*. I preferably provide roller-bear-  
55 ings for the wheels, as I find that it is desirable to have the wheels so that they will travel freely and without the use of a lubricant, and for this purpose the ordinary roller-bearing is preferable.

*a'* shows shields which extend over the wheels *b b* and not only protect the wheels, but also add strength to the frame A.

D D are the supporting-plates, on which the cores to be baked are directly mounted,  
65 the cores being mounted on these plates at the bench and are transported either by hand or by a suitable hoist to the cars. The plates are perforated, as shown, so as to allow the heat to gain access to all portions of the core,  
70 and they have ribs *d* on the under side to add strength to the structure.

In the car-frame A are tapered sockets *c* for the reception of the tapered foot-section *f* of the distance-piece F. The upper end of  
75 the distance-piece is offset, so as to form a rest *f'* for the first core-supporting plate D. As shown in Fig. 2, the portion *f*<sup>2</sup> of the distance-piece rests back of one of the ribs *d* of the core-plate, the rib resting directly upon  
80 the portion *f'*. The weight of the core-plate and its core tends to hold the distance-pieces firmly to their seats, and thus the first plate is held rigidly to the frame. In the present  
85 instance there are two sockets on each side of the car-frame A, and there are four distance-pieces to every plate. This may be multiplied, if necessary. Each plate D has its tapered socket *c* for the foot and a distance-piece F, so that the plates can be  
90 mounted one above another, with the distance-pieces between them, allowing room for the free passage of the products of combustion of the core-oven to pass around the cores on the plates.

95 It will be understood that the distance-pieces F may be of different lengths, depending altogether upon the height of the core being baked, and while I have shown the distance-pieces made in the form illustrated in  
100 Fig. 5, with a tapered foot adapted to a tapered socket and an offset at the upper end,



the parts may be reversed or modified without departing from the main feature of my invention, which is to make a rigid built-up core-supporting frame mounted on the carriage, so arranged as to dispense with the usual platforms.

In Fig. 6 I have shown a modified construction which may be applied to the distance-pieces. The figure is a sectional view of one of such distance-pieces F, showing it as made with a tapered recess, to which is adapted a tapered projection on the car or plate A.

The supporting-plates may be of different sizes, according to the size of the core to be baked. In some instances the plates may be only the width of the car, while again the plates may overhang the car, as shown in Fig. 2. I can also mount different-sized plates one above another on the same car, if desired. The plates D are preferably provided with lugs *e e*, which may be engaged by the hooks of a crane.

By the above description it will be seen that I am enabled to make a very light easy-running core-car which can be quickly built up and which will be perfectly rigid when built up, so that the cores before baking will not disintegrate by being jarred or roughly used. After the cores are baked the plates can be readily detached by simply lifting them away from the distance-pieces. These distance-pieces can be removed afterwards and piled in a suitable pile for further use.

I claim as my invention—

1. The combination of a core-car, a series of core-plates, dovetailed recesses in the frame

of the car and in the edges of the plates, and distance-pieces having one end constructed to fit said recesses, and the other end constructed to engage the ribs on the inner side of the plate immediately above it, thereby supporting said plates rigidly when they are arranged in a tier, substantially as described.

2. The combination of a carriage, axles thereon, wheels on the axles, tapered sockets in the carriage-frame, perforated cast core-plates, a tapered socket in each core-plate, detachable distance-pieces having tapered foot-sections adapted to the sockets, said distance-pieces being mounted between the plates so as to separate them and protect the cores, substantially as described.

3. The combination of a core-carriage, wheels thereon, distance-pieces projecting from the carriage, perforated core-plates on which the cores are directly mounted, ribs on the underside of the said plates, tapered sockets in the edges of the plates, distance-pieces having tapered foot-sections adapted to the sockets and offset at the upper end to engage the ribs on the under side of the core-plate, so that one core-plate can be mounted above another, the whole forming a rigid structure, substantially as described.

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

THOMAS I. RANKIN.

Witnesses:

WILL. A. BARR,  
JOS. H. KLEIN.