

(No Model.)

2 Sheets—Sheet 1

H. J. DICKERSON.  
PULP SCREEN.

No. 585,656.

Patented July 6, 1897.

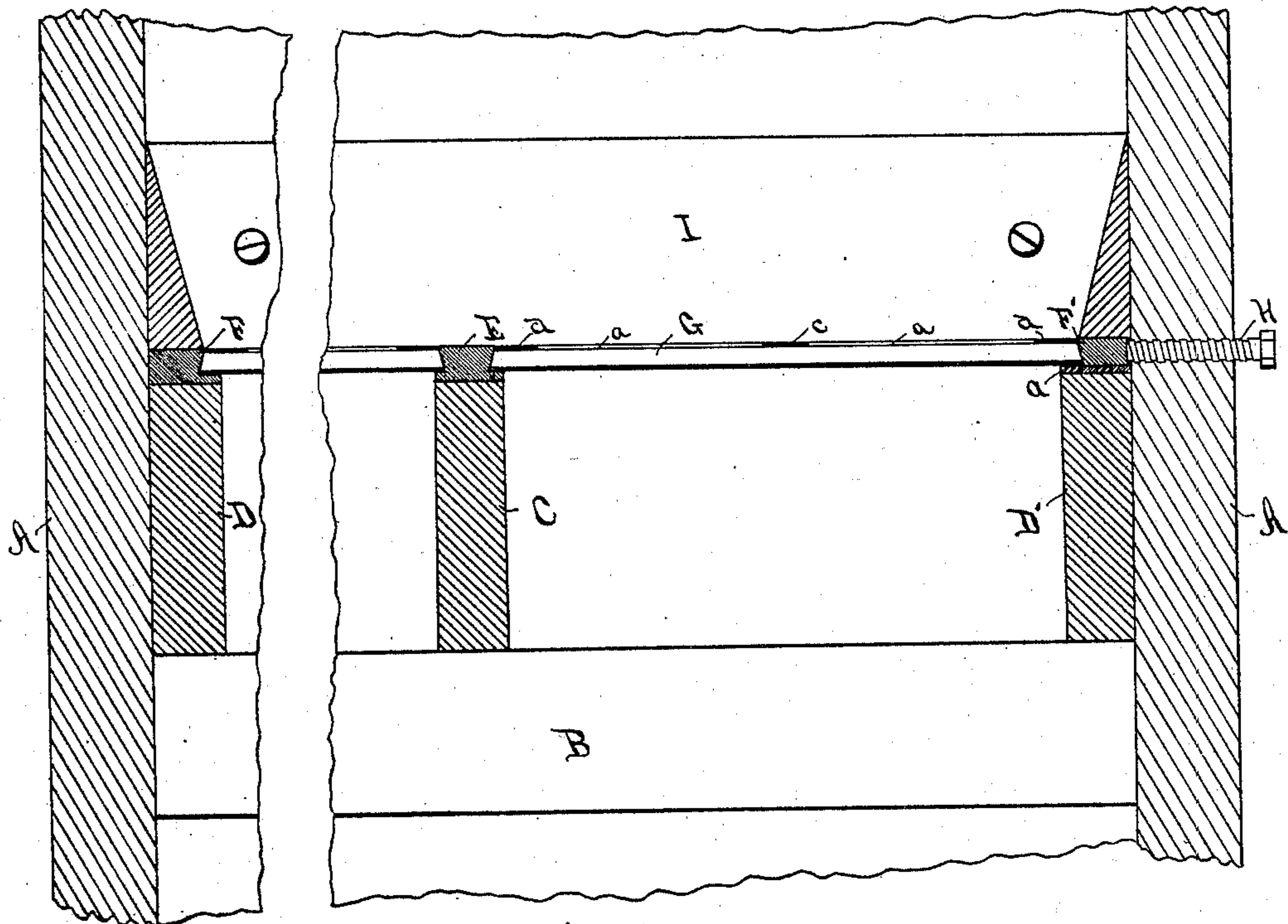


Fig. I.

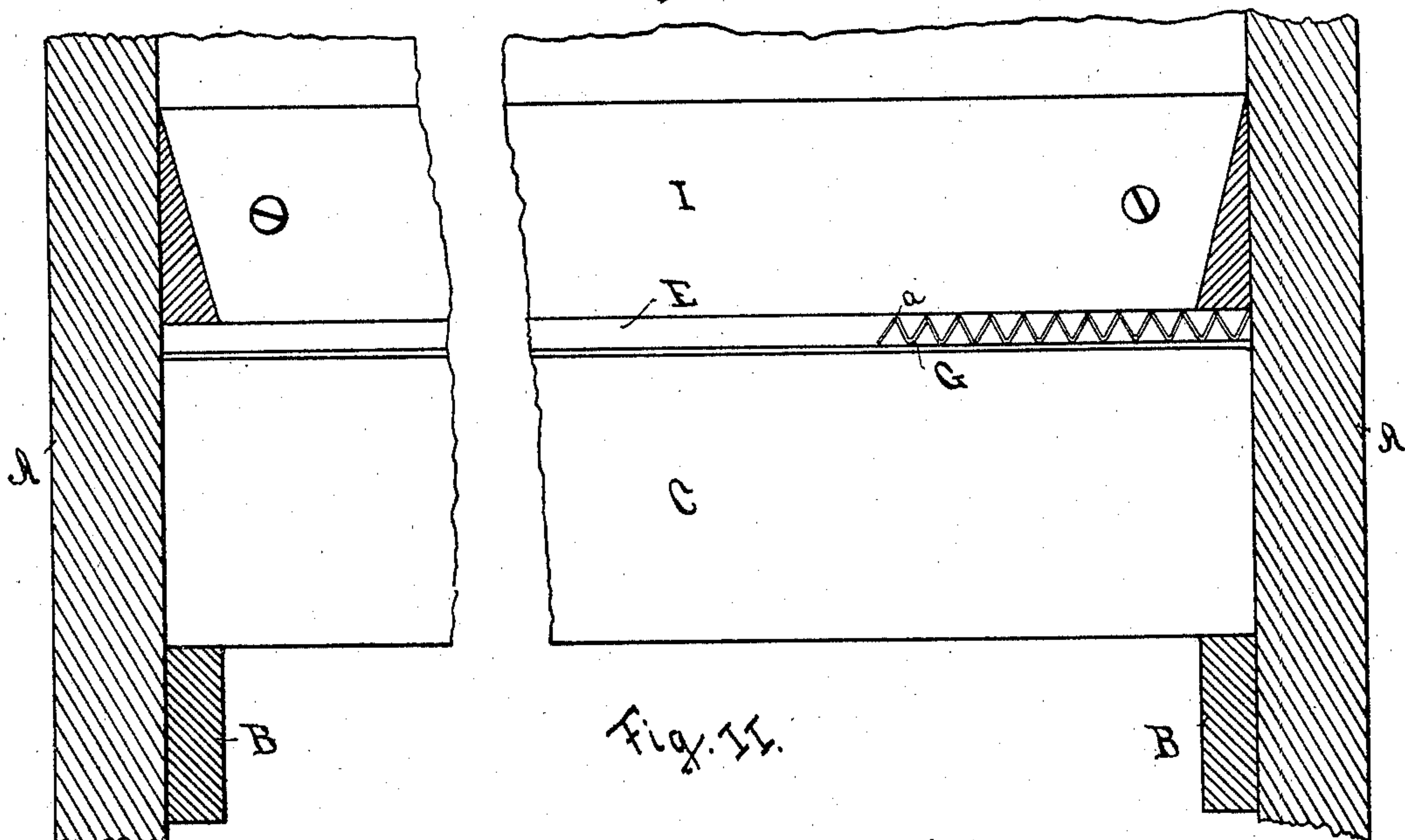


Fig. II.

Witnesses:

Edmund R. Bosley  
Att. Macomber

Henry J. Dickerson Inventor,  
By his Attorney,  
William Macomber

(No Model.)

2 Sheets—Sheet 2.

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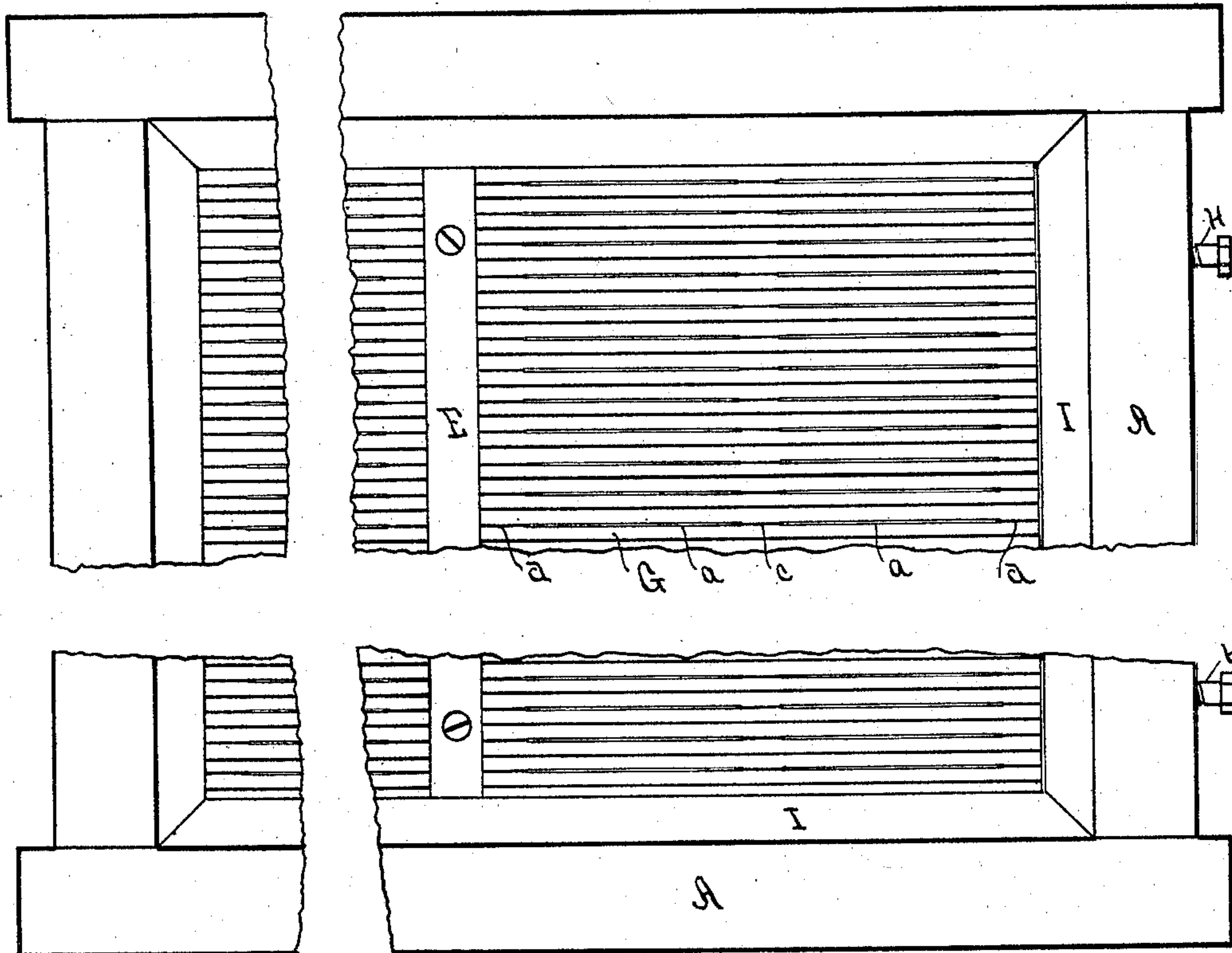


Fig. III.

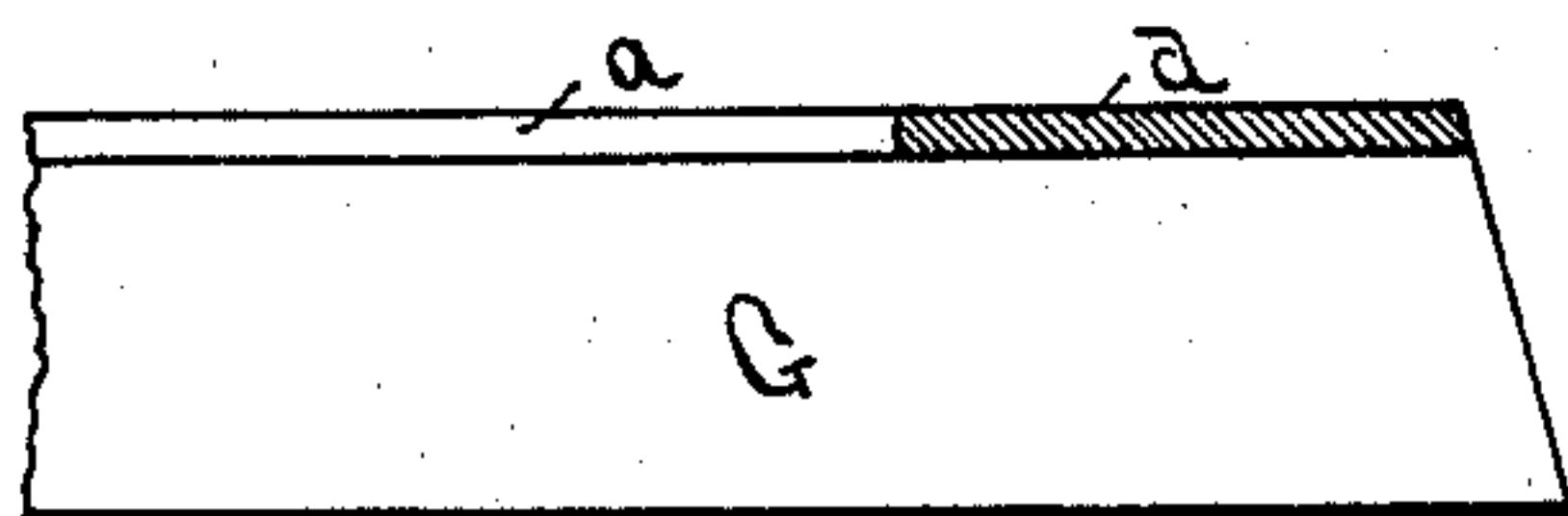


Fig. IV.

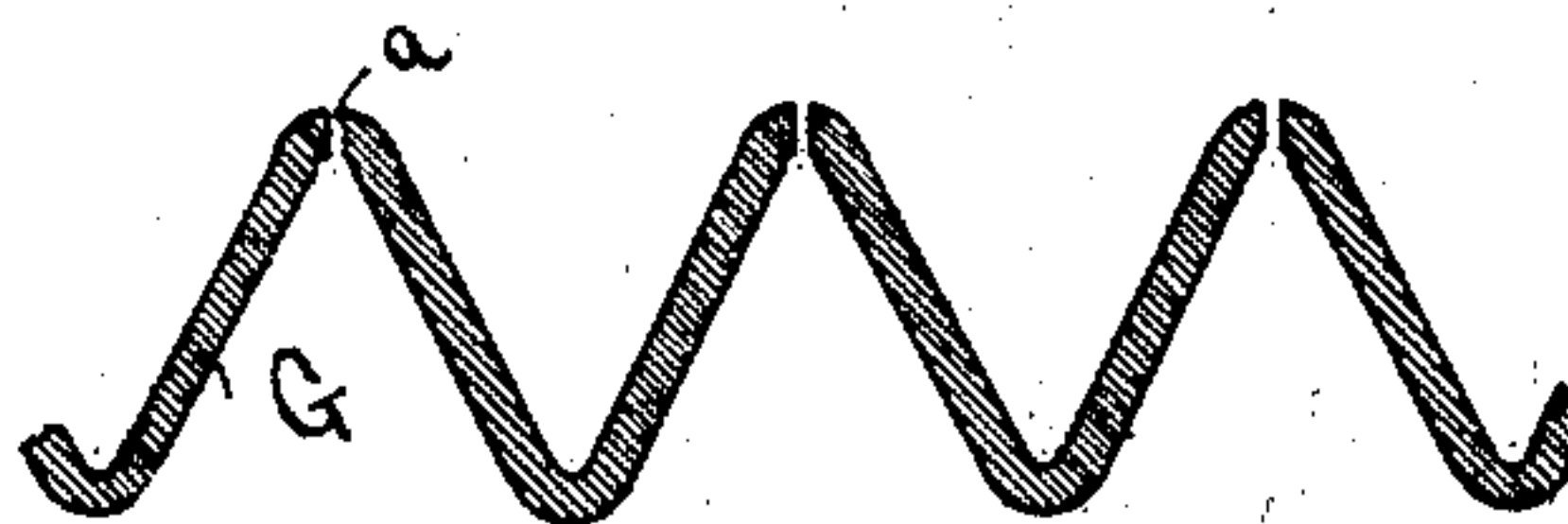


Fig. V.

Witnesses:

Edward R. Bosley.  
A. W. Macomber.

Henry J. Dickerson

Inventor.

By his Attorney

William Macomber



# UNITED STATES PATENT OFFICE.

HENRY J. DICKERSON, OF NIAGARA FALLS, NEW YORK.

## PULP-SCREEN.

SPECIFICATION forming part of Letters Patent No. 585,656, dated July 6, 1897.

Application filed March 19, 1896. Serial No. 583,912. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY J. DICKERSON, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Pulp-Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in pulp-screens and pulp-screen plates and means for securing, removing, and replacing them.

Hitherto the plates employed in pulp-screens have commonly been secured in the usual frame to supports by a large number of screws to securely hold them in place. My invention removes the disadvantage of the difficulty, time, and expense involved in removing and replacing the plates by providing means whereby the plates may be forced into and held in place by pressure upon the line of corrugation of the plates.

Referring to the drawings herewith, consisting of two sheets, in which like letters refer to like parts, Figure I is a vertical longitudinal section of a pulp-screen embodying my improvement. Fig. II is a similar view at right angles to Fig. I. Fig. III is a top plan view. Figs. IV and V are enlarged detail views of a section of my screen-plate, Fig. IV being parallel to the corrugations and slots and Fig. V at right angles thereto.

As the vibratory motion commonly used to agitate the pulp is well understood, and as it forms no part of my invention, the same may be referred to, but not described, in this connection.

A is the frame or box, constructed in the usual manner, within which the screen is mounted.

B B are cleats or supports secured parallel to the sides of the frame or box. Supported by these cleats B B, but not secured to them, are supports C, extending transversely from side to side. D D' are similar supports which rest upon the cleats B B, but which are se-

cured to the end of the box or frame A. Secured to the upper surfaces of the supports C are dovetail plates E, made, preferably, of brass and secured to the supports C, the dovetail grooves being adapted to receive the beveled ends of the screen-plates, as hereinafter described. A similar plate F, but grooved only upon one side, is secured to the support D. The plate F', resting upon the support D', is made in one or two pieces, the base *a'* being shown in the drawings as a separate piece, but secured directly to the plate F', the whole being free to move transversely upon the support D'.

The plates G are made out of sheet metal, preferably brass, and are pressed by appropriate means into corrugated plates, as shown in Figs. II and V. The edges of these plates are beveled to the angle of the dovetails E, F, and F'. Upon one side—the upper side when in place—the corrugations are sawed in the usual manner, as shown at *a*, Figs. I, III, IV, and V; but these slots or openings *a* do not extend the full width of the plate, points of union and support being left at *c* and *d*.

In setting up the device the plates are set into place, the beveled sides engaging within the grooves of the dovetails E, F, and F'. Threaded through the end of the frame A, adjacent to the dovetail F', are set-screws H H, which tend to press against the outer sides of the dovetail F' and to force it against the side of the plate adjacent to it, which tends to force said plate laterally against the dovetail E, and so on until the last plate is forced to place against the dovetail F.

Secured to the frame and setting down upon the end dovetails F and F' and upon the ends of the several plates are cleats I, which hold all the parts down in place.

In operation the device differs from the ordinary plate only in the respect that the slight elasticity mentioned prevents clogging.

When it becomes necessary to renew any section of the plates, all that is necessary is to unscrew the set-screws H sufficiently to release the plate and insert a new one, and in some instances a portion of a single plate may become worn, in which case the worn



part may be cut off and a new piece inserted with a lap of one corrugation to make a close joint.

I do not limit myself to the particular form of dovetail shown, as it is apparent that either a circular or V-shaped groove may be employed.

Having thus described my invention, what I claim is—

10 1. A screen-plate consisting of several corrugated sheet-metal plates, having the corrugations sawed upon one side upon the line of the apexes of the corrugations with intervening points of division and support, movable  
15 supports connecting said plates, and means for securing all of said plates and supports simultaneously by pressure upon the line of corrugation, substantially as set forth.

20 2. A pulp-screen consisting of a frame provided with longitudinal cleats, transverse movable supports resting upon said cleats, dovetail plates secured to said movable supports, corrugated plates engaging with said dovetails, and set-screws threaded through  
25 said frame and forcing all of said movable

supports and plates to place upon the line of said corrugation simultaneously, for the purposes set forth.

3. In a pulp-screen, the combination of a series of screen-plates made of corrugated metal, having the corrugations sawed upon one side upon the line of the apexes of the corrugations with intervening points of division and support, with a frame, longitudinal cleats secured thereto, movable transverse supports resting upon said cleats, dovetail plates secured to said movable supports and engaging the beveled sides of said plates, and set-screws for forcing all of said plates and said movable supports carrying said dovetails into place and into contact simultaneously, as set forth.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

HENRY J. DICKERSON.

Witnesses:

GERTRUDE E. SMITH,  
GRACE J. FURLONG.