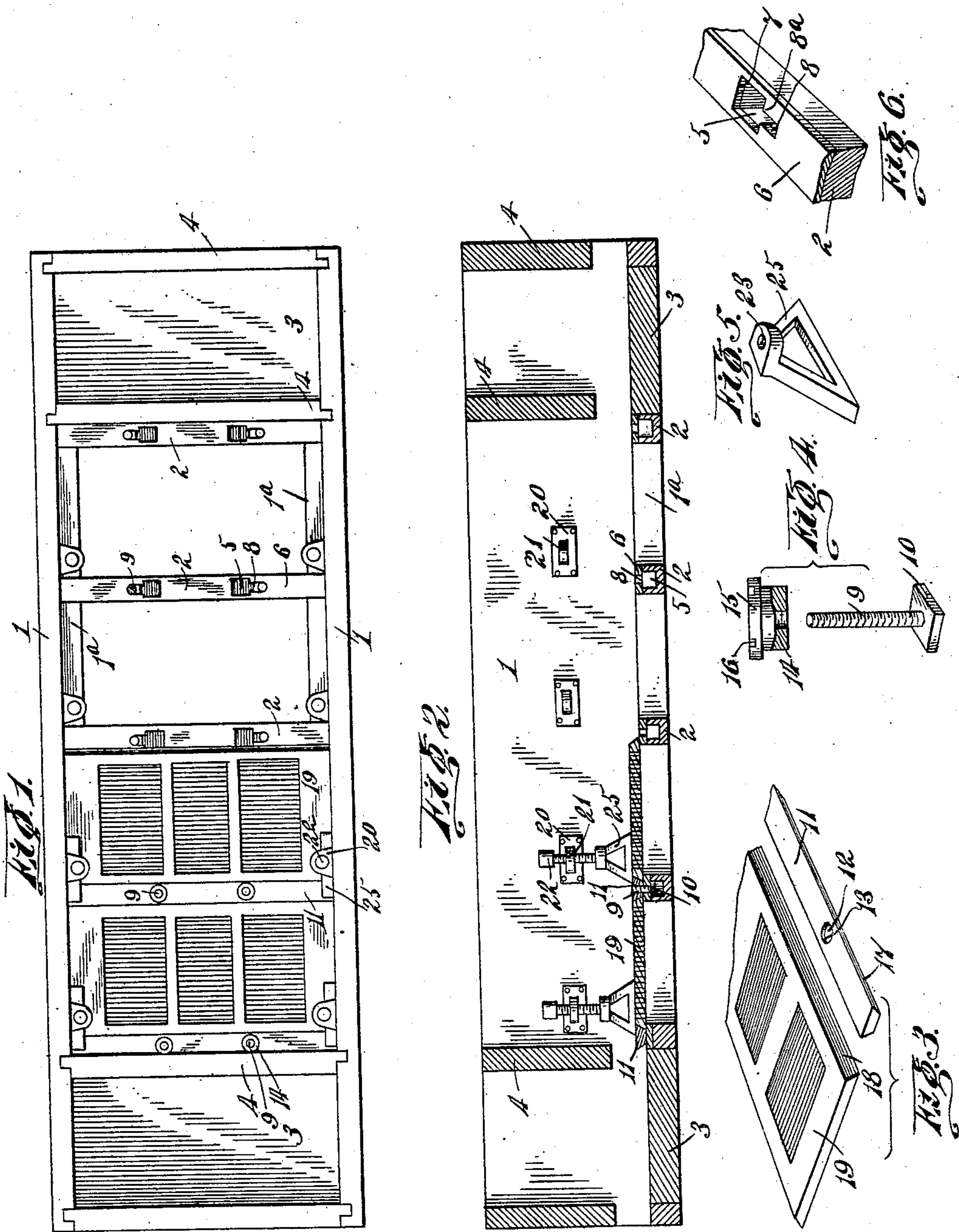


No. 859,228.

PATENTED JULY 9, 1907.

C. JENTZ.  
PULP SCREEN PLATE FASTENING.  
APPLICATION FILED AUG. 1, 1906.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CARL JENTZ, OF GRAND MERE, QUEBEC, CANADA.

## PULP-SCREEN-PLATE FASTENING.

No. 859,228.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed August 1, 1906. Serial No. 328,647.

*To all whom it may concern:*

Be it known that I, CARL JENTZ, a citizen of the United States of America, residing at Grand Mere, county of Champlain, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Pulp-Screen-Plate Fastenings; and I do hereby declare that the following is 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 pulp screen plate fastenings; the object of my invention is to provide a fastening for existing forms of pulp screen plates, which will permit the removal of any plate in the frame without disturbing the other screen plates; a further object is to provide a fastening which may be readily removed, and the removal of which in no way wears the screen plate, as in the use of screws, the heads of which break off under the pressure against the plates, and the bodies of which have to be drilled out; a further object is to provide a removable fastening for the ends of each screen plate; and, my invention consists in the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

In the accompanying drawings, forming part of this application, I have illustrated one form of embodiment of my invention, in which drawings similar reference characters designate corresponding parts, and in which:

Figure 1 is a plan view of a pulp screen, two of the screen plates and their fastening strips being removed; Fig. 2 is a longitudinal vertical section on line 2—2 of Fig. 1; Fig. 3 is a perspective of a screen plate and its fastening strip, shown in their relative operative positions, but separated; Fig. 4 is an elevation, partly in section, showing a fastening bolt and nut in their relative operative positions; Fig. 5 is a perspective of a stirrup adapted to secure the ends of the screen plates; Fig. 6 is a perspective of a fragmentary portion of one of the cross braces and the strip thereon, illustrating the recess and opening for the reception of a securing bolt.

Referring to the drawings, 1 designates the side walls, having longitudinal ledges 1<sup>a</sup>, 2 the lower braces, 3 the floor sections, and 4 the upper braces of a common form of pulp screen frame. The cross braces 2 are provided with recesses 5.

Disposed on the cross braces, and secured thereto in any suitable way, are strips 6, provided with rectangular openings 7, which openings have merging therein openings 8 of less area than the openings 5, so as to leave the projecting flanges 8<sup>a</sup>. Bolts 9, provided with rectangular heads 10 are inserted through the openings 7 into the recesses 5, and are slid into the reduced openings 8, so that the heads 10 engage under the flanges 8<sup>a</sup>, and maintain the bolt against upward movement.

Disposed on the strips 6 are fastening bars 11, pro-

vided with openings 12, having flanges 13 therein. The strips 11 are so disposed that the bolts 9 pass through the openings 12, and on the bolts are disposed nuts 14, having flanges 15 adapted to bear on the flanges 13 and thereby lock the strips 11 against upward movement. Nuts 14 are provided with slots 16, adapted to receive a suitable instrument, by means of which the nuts may be turned until they are brought flush with the surface of the strips 11. The strips 11 are provided with beveled edges 17, adapted to contact with the beveled edges 18 of the screen plates 19, which screen plates are of ordinary construction.

Secured to or formed upon the side walls 1 of the pulp screen frame, are brackets 20, having projecting ears 21, through which are projected the screw-threaded members 22, the lower ends of which are adapted to enter the openings 23, in the offset portion of the stirrups 25. The stirrups 25 are so arranged as to bear on the adjacent ends of the screen plates 19 and the strips 11, so that the ends of the screen plates are firmly held against upward movement.

When it is desired to remove any particular screen plate, the adjacent stirrup is released by releasing the screw-threaded member 22, and the nuts 14 are removed to permit the removal of the adjacent strip 11. The advantage of the bolt and nut construction over a screw fastening passing through the screen plates, is that the upward pressure against the screen plates frequently breaks off the head of the screw, necessitating the body of the screw being drilled out, thereby rendering unfit for use the cross brace.

I am aware that it is well known in the art to provide pulp screens with beveled edges, and to maintain the pulp screens against upward movement by means of bevel edged members adapted to engage the beveled edges of the screen plates. Therefore I do not claim this construction broadly.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination with a pulp screen frame, having cross braces, headed screw-threaded members having their heads removably embedded within the cross braces, nuts on the screw-threaded members, bevel edged locking strips disposed under the nuts, and bevel edged screen plates abutting against the locking strips.

2. In combination with a pulp screen frame, having cross braces, headed screw-threaded members having their heads removably disposed in recesses formed in the cross braces, nuts on the upper ends of the screw-threaded members, bevel edged locking strips disposed under the nuts and provided with flanged recesses to receive the nuts, bevel edged screen plates abutting against the locking strips, and means for locking the ends of the screen plates.

3. In combination with a pulp screen frame, having cross braces, headed screw-threaded members having their



- heads removably embedded in the cross braces, nuts on the upper ends of the screw-threaded members, bevel edged locking strips disposed under the nuts and having the nuts flush therewith, bevel edged screen plates abutting against the locking strips, removable stirrups disposed on the ends of the screen plates and the locking strips to permit the removal of single plates, and means for applying pressure to the stirrups.
4. In combination with a pulp screen frame, having cross braces, headed screw-threaded members removably secured to the cross braces, nuts on the screw-threaded members, bevel edged locking strips disposed under the nuts, bevel edged screen plates abutting against the locking strips, removable stirrups disposed on the ends of the screen plates and the locking strips, and screw-threaded members carried on the frame and adapted to bear on the stirrups.
5. In combination with a pulp screen frame, having cross braces, headed screw-threaded members removably secured to the cross braces, nuts on the screw-threaded members, bevel edged locking strips disposed under the nuts, bevel edged screen plates abutting against the locking strips, removable stirrups disposed on the ends of the screen plates and the locking strips, brackets carried by the frame and provided with projecting ears, and screw-threaded members disposed through the ears and adapted to bear on the stirrups.
6. In combination with a pulp screen frame, having cross braces provided with recesses therein, bolts having heads removably disposed in the recesses, strips secured to the cross bars and provided with registering openings

and reduced slots through which the bolts project, bevel edged locking strips having openings through which the bolts are disposed, nuts on the bolts, and bevel edged screen plates disposed with their edges beneath the edges of the bevel edged locking strips. 35

7. In combination with a pulp screen frame, having cross braces provided with recesses therein, bolts having heads removably disposed in the recesses, strips secured to the cross braces and adapted to maintain the bolts against upward movement, bevel edged locking strips having openings through which the bolts are disposed, which openings are provided with flanges, nuts disposed on the bolts and provided with flanges adapted to abut against the flanges of said openings, and bevel edged screen plates disposed with their edges beneath the bevel edged locking strips. 40 45

8. In combination with a pulp screen frame, cross braces provided with recesses therein, headed bolts removably disposed in the recesses, means for maintaining the bolts against upward movement, bevel edged locking strips, nuts on the bolts adapted to bear on the upper surface of the locking strips, bevel edged screen plates adapted to be held against movement by the locking strips, and means for locking the ends of the locking strips and the screen plates. 50 55

In witness whereof I have hereunto set my hand in the presence of two witnesses.

CARL JENTZ.

Witnesses:

M. R. DALEY,  
L. S. KENNEY.