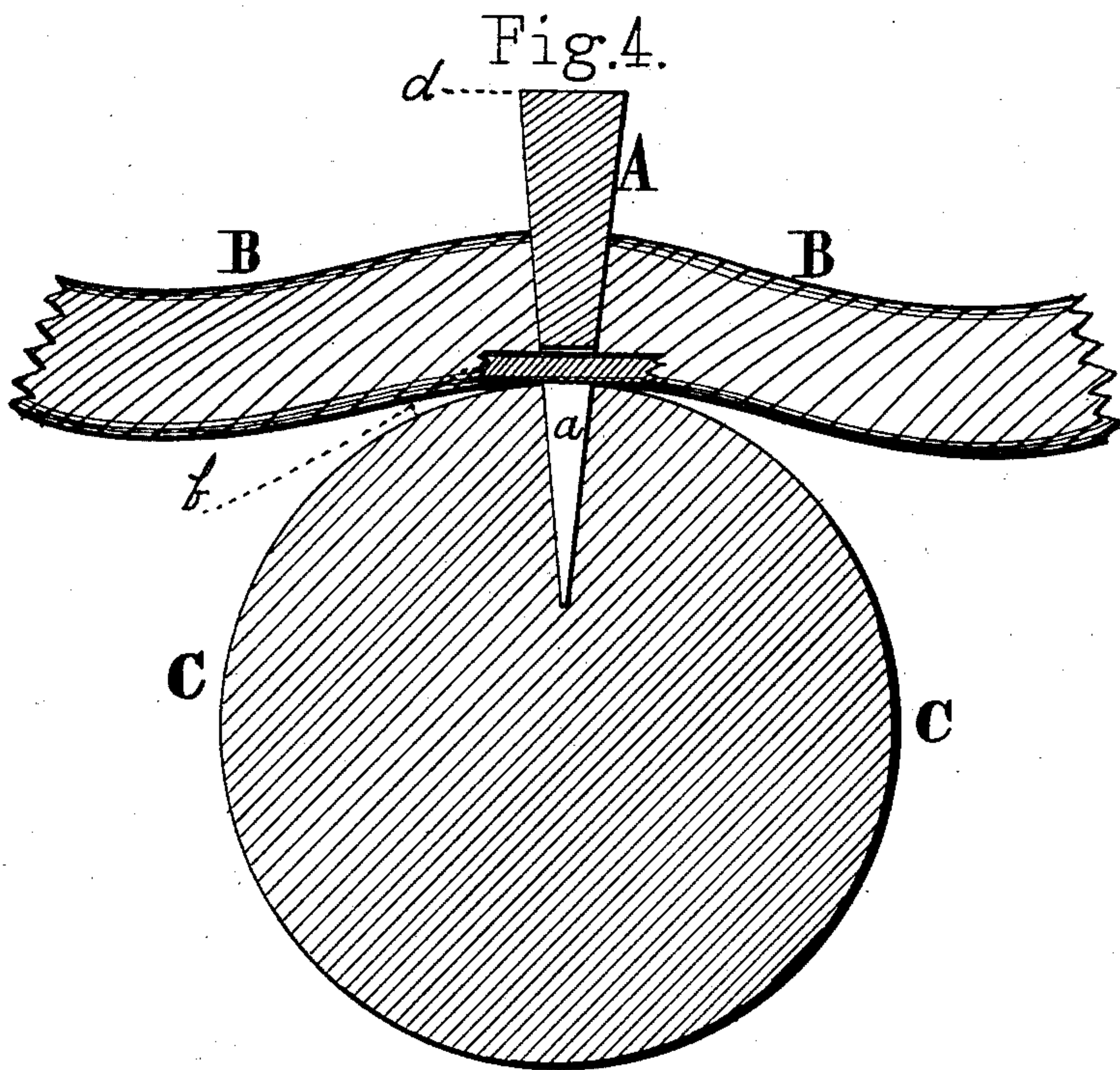
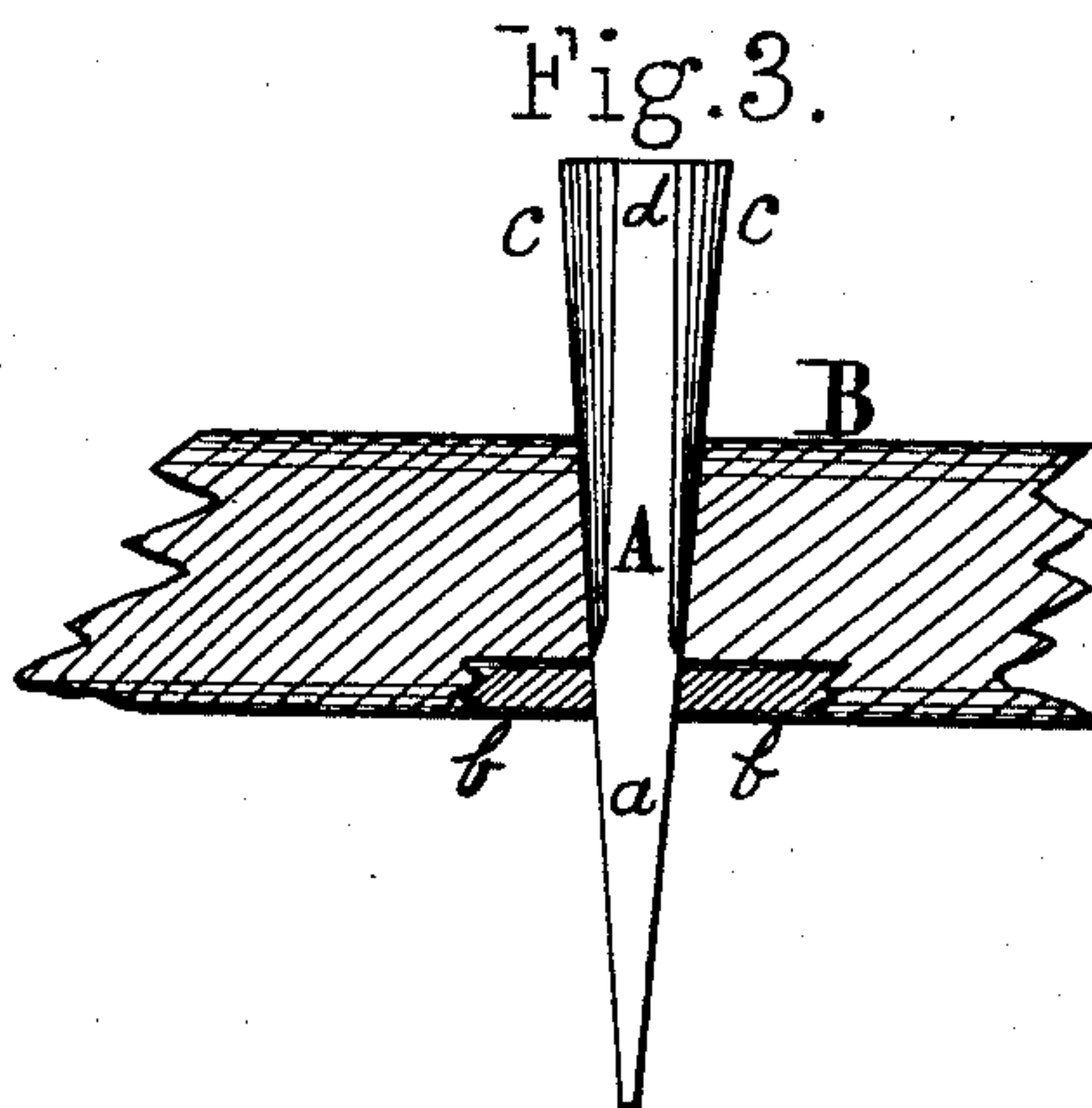
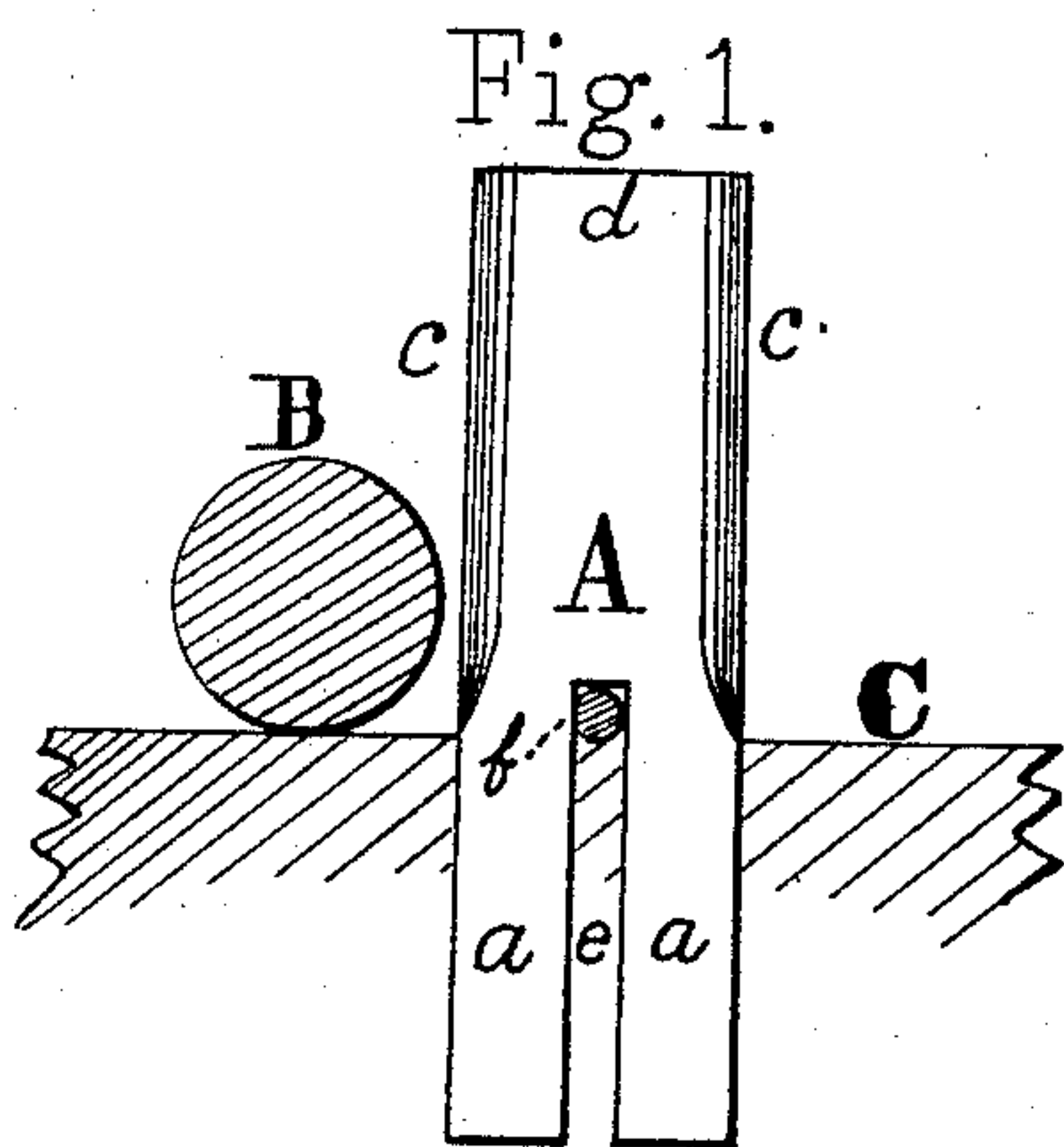
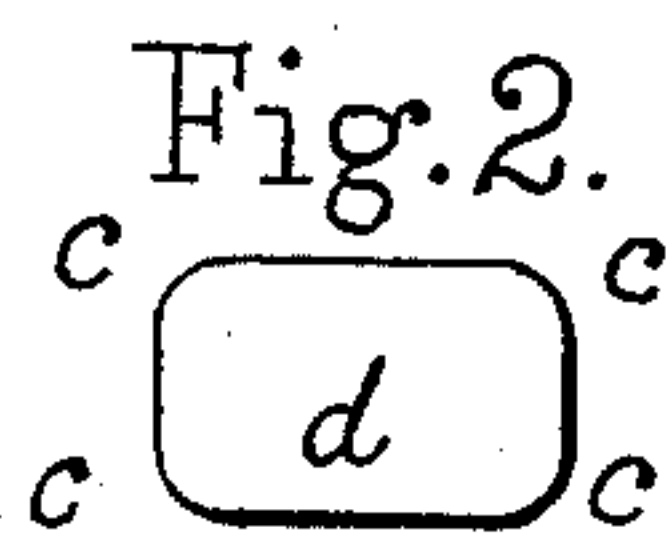


(No Model.)

J. TREAT.  
RAFTING PIN.

No. 328,260.

Patented Oct. 13, 1885.



Witnesses.  
H. D. Legman  
John B. B. Fiske

Inventor  
John Treat



# UNITED STATES PATENT OFFICE.

JOHN TREAT, OF ENFIELD, MAINE.

## RAFTING-PIN.

SPECIFICATION forming part of Letters Patent No. 328,260, dated October 13, 1885.

Application filed May 10, 1884. Serial No. 131,071. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN TREAT, a citizen of the United States, residing at Enfield, in the county of Penobscot and State of Maine, have invented a new and useful Improvement in Rafting-Pins; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a front view of my improved rafting-pin A. Fig. 2 is a top view showing the rounded corners *cc*. Fig. 3 is a side view showing a fragment of the small connecting-line *b* and also of the stay-line or warp B behind the pin. Fig. 4 is a cross-section of a log, C, with the pin A driven into the log and with the connecting-line *b* and the stay-line or warp B in their relative positions.

Same letters show corresponding parts in the different figures.

A is the pin; B, the large stay-line or warp; C, the log in cross-section. *b* is the small connecting-line. *cc* are the corners of the pin rounded. *d* is the vertically-projecting top of the pin. *e* is the slot in the pin.

The object of my invention is to provide an improved rafting-pin, which, while performing all the functions of the rafting-pins now in use, will prevent the wearing and destruction (by friction on the pins) of the long heavy stay-lines or warps used in rafting logs.

After logs have been cut in the forests they are floated down the small streams to the rivers and are stopped and collected in booms at convenient stations. As the whole cut on the lands upon any given stream is driven to the booms at the same time, it is evident that when they arrive at the booms the logs of all the persons who have conducted lumbering operations above will be thoroughly mixed together. The logs are then allowed to pass singly through the booms, and being distinguished by the private marks of their respective owners are separated accordingly, and the logs of each proprietor are secured together in rafts of convenient size, each raft containing from fifty to one hundred logs.

The logs composing each raft are secured together by small connecting-lines by means of

the various rafting-pins in use, which are preferably of wood, in wedge shape, slotted at the thin end for about half the length of the pin.

In making a raft the logs are laid evenly side by side. At each end of each log and at equal or nearly equal distances from the middle, an ax-cut is made in the direction of the length of the log. The connecting-line is then placed at right angles across the cut. The slotted pin is placed in position so that the connecting-line may be received in the slot, and the thin end of the wedge may enter the ax-cut, and the pin is then driven into the cut, whereby the connecting-line is made fast to the log. The large end of the wedge-shaped pin is of course left projecting above the surface of the log. This operation is repeated until as many logs are connected as may be conveniently moved or handled together and the raft is complete.

As many millions of logs are cut each season, and as two pins are commonly required for each log, the immense number of pins annually required and consumed can easily be imagined. For the purpose of securing these rafts to the shore or of uniting several of them or moving several of them together, large stay-lines or warps are placed across the surface of the rafts by the side of and in contact with the projecting ends of the pins, to which as well as to the connecting-lines they are secured by hitches at a sufficient number of points, the ends of the stay-lines or warps being secured as the occasion requires. These stay-lines or warps being frequently used to connect large numbers of rafts are necessarily of great length, and being often or commonly subjected to the great strain and resistance of the heavy rafts must be and are both large and strong. From their length and size they are very expensive and form a large item in the cost of rafting and handling logs.

My invention consists of an improved rafting-pin designed as an improvement upon those now in use, particularly that of Thos. B. Raymond, patented October 23, 1866, and numbered 59,072. In Raymond's pin, as in others which are sawed out, the lateral corners or edges of that part of the pin which projects above the log after the pin has been driven

into place are left angular and sharp as they come from the saw, with the result that the stay-lines or warps used for fastening and connecting the rafts and staying them to the shore are constantly worn and chafed by the friction of the sharp corners of the pins, and to the ordinary friction caused by the strain and resistance of the heavy rafts must be added that caused by the undulating motion imparted to the rafts by waves.

The object of my invention is to save the wear of the stay-lines or warps caused by the chafing and friction, as before described. I accomplish this object by rounding the lateral edges or corners of the pins which project above the log after the pin has been driven into place, with which corners the stay-lines or warps are or may be brought in contact when use for the purpose above described. The

result is that the chafing and friction and consequent wear upon the stay-lines or warps are thereby reduced to the minimum, and a great saving of expense is thereby effected. 20

What I claim as my invention, and desire to secure by Letters Patent, is— 25

A rafting-pin made in wedge form having a slot extending up from its thin flat end for receiving and grasping the connecting-line *b* and having the lateral corners or edges *c c* of the part of the pin projecting above the log 30 when the pin has been driven into place rounded, whereby the stay-lines or warps connecting or staying the raft are preserved from wear, substantially as herein set forth.

JOHN TREAT.

Witnesses:

H. D. LYMAN,  
JOHN B. B. FISKE.