

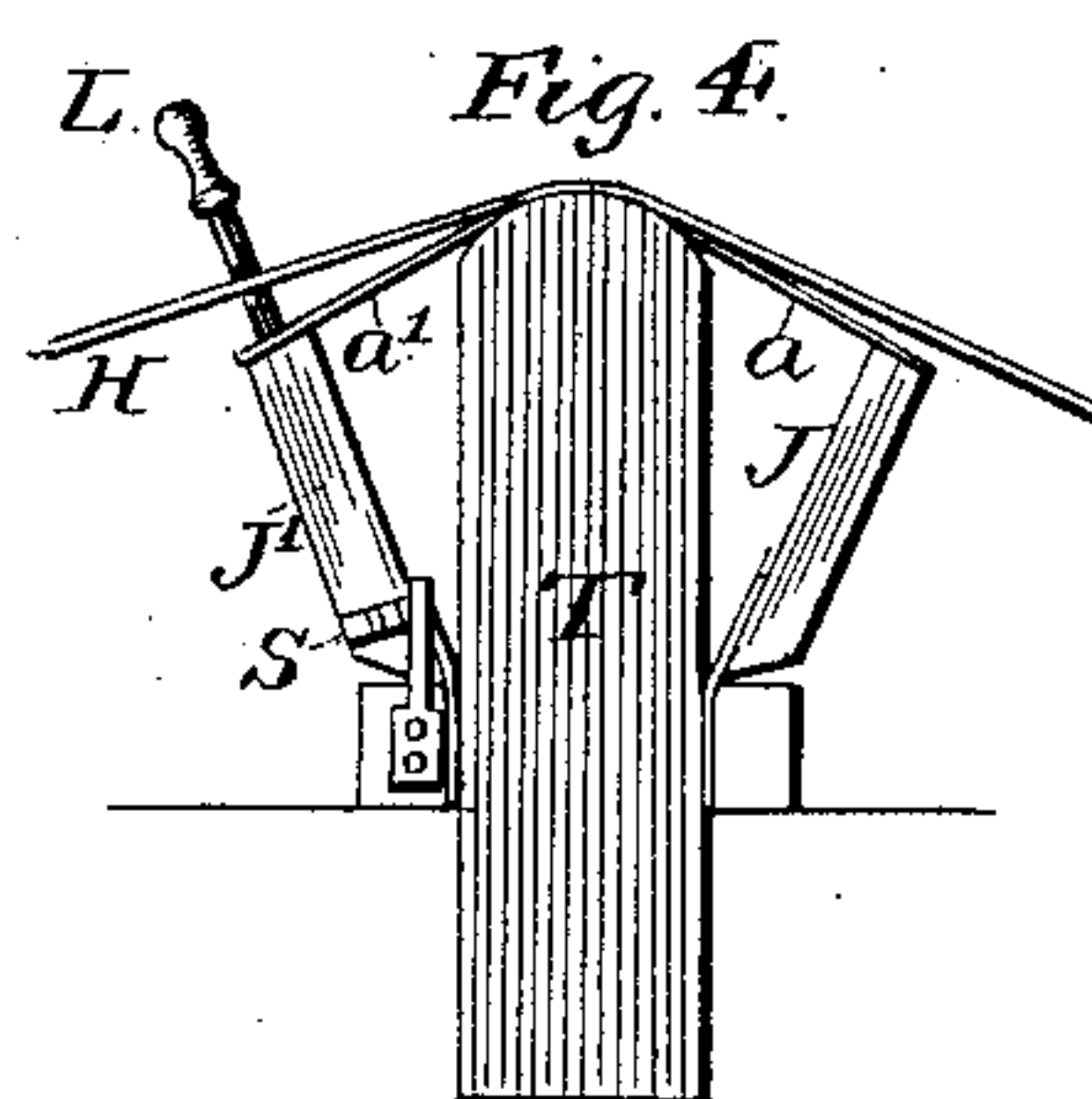
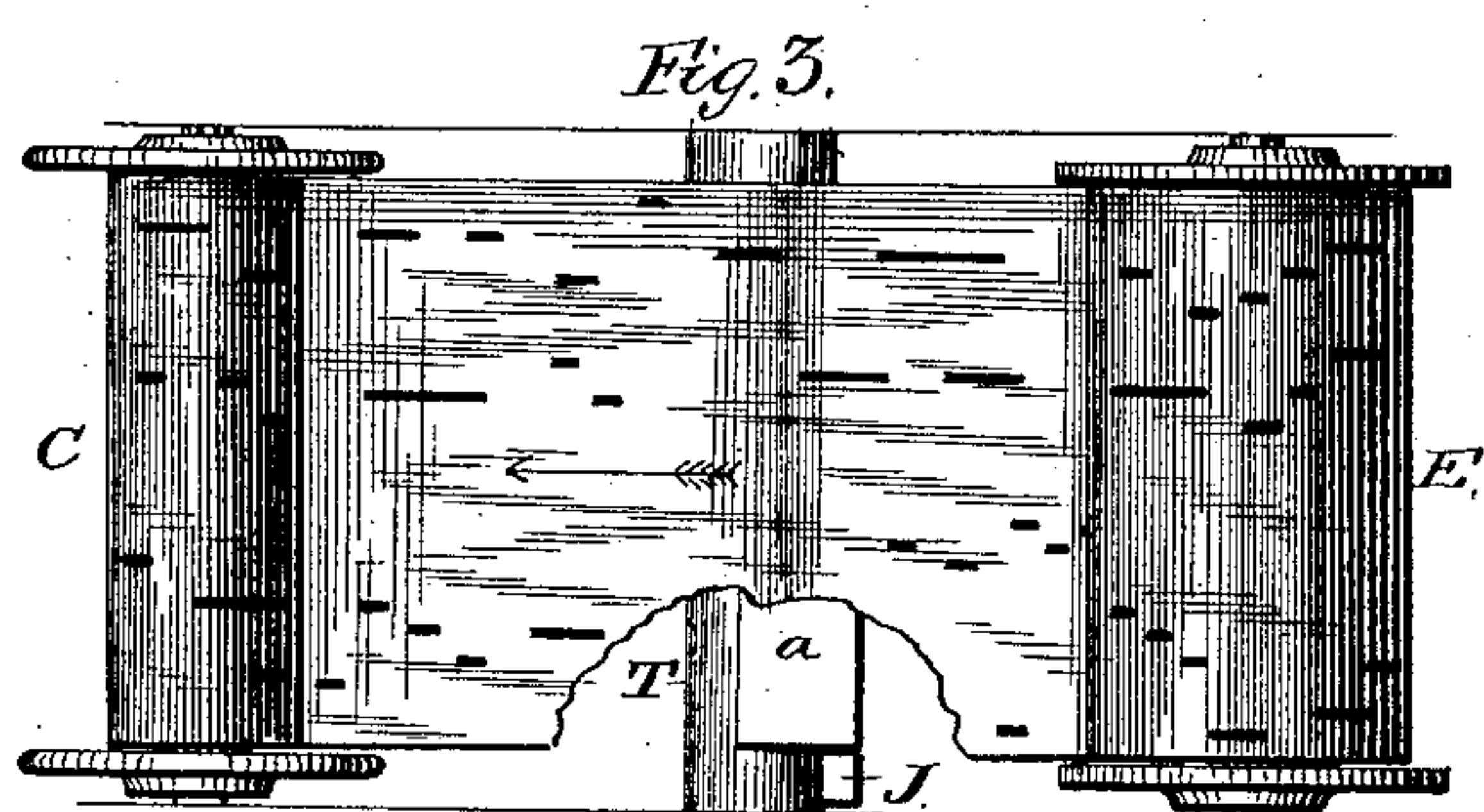
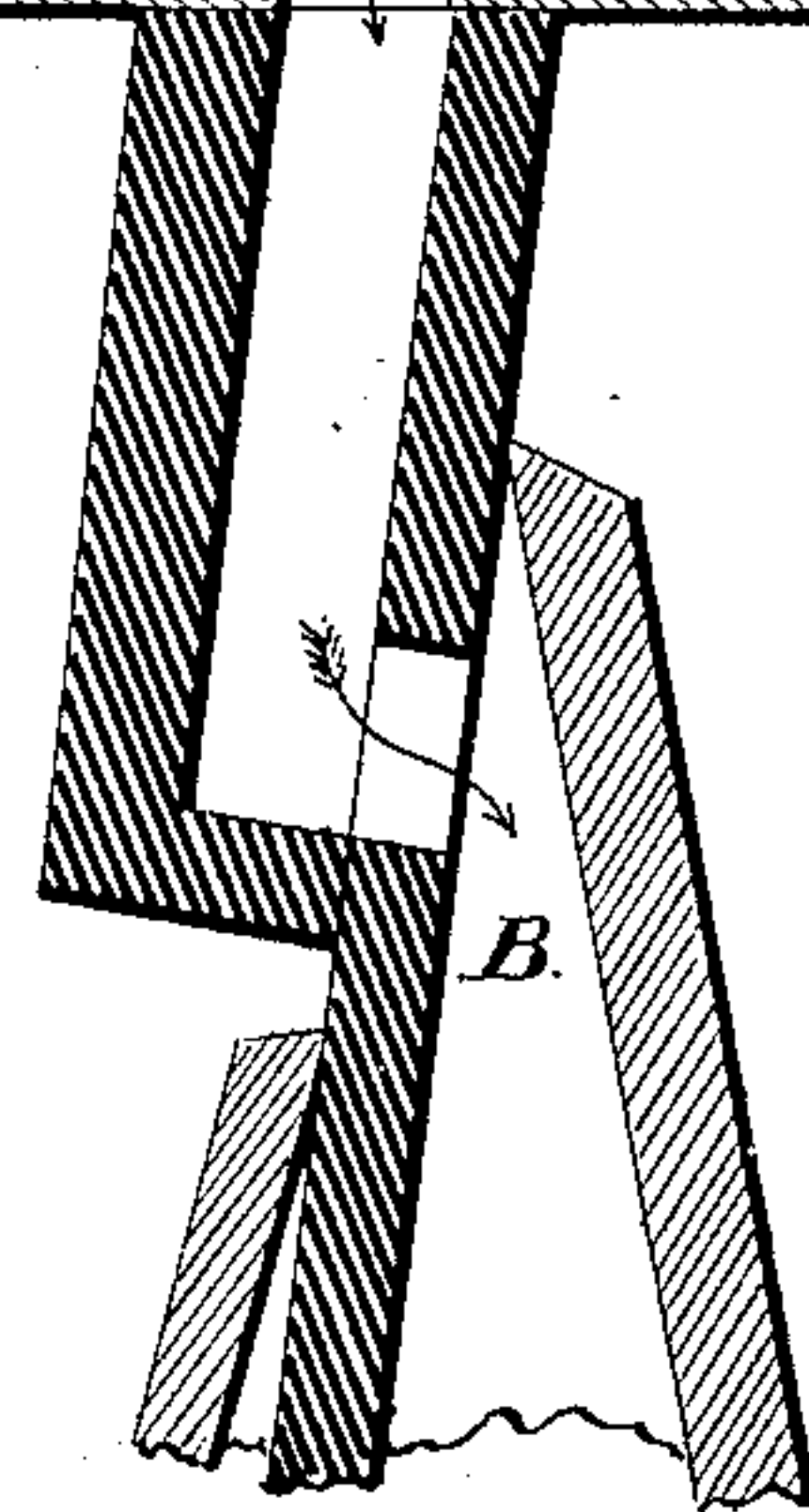
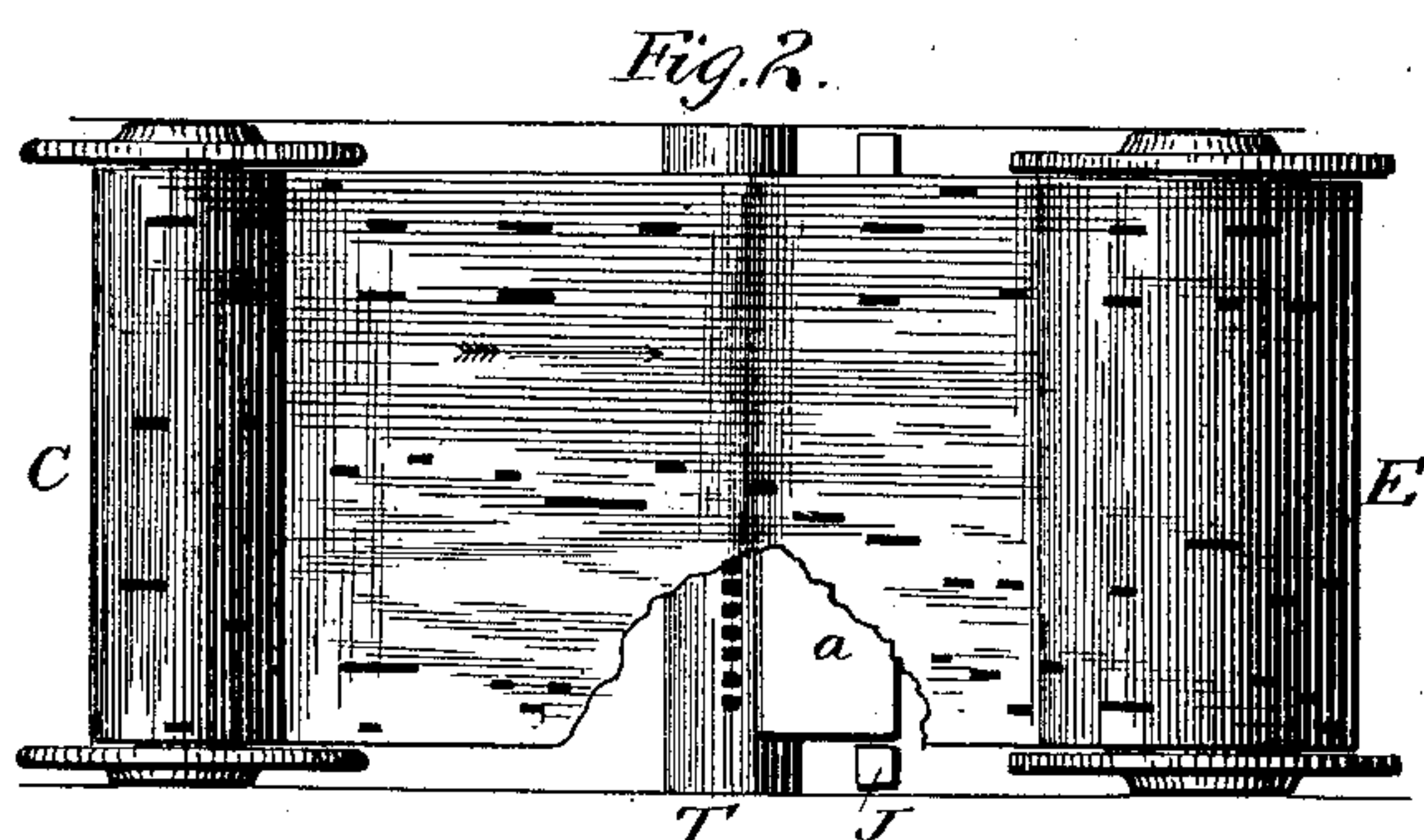
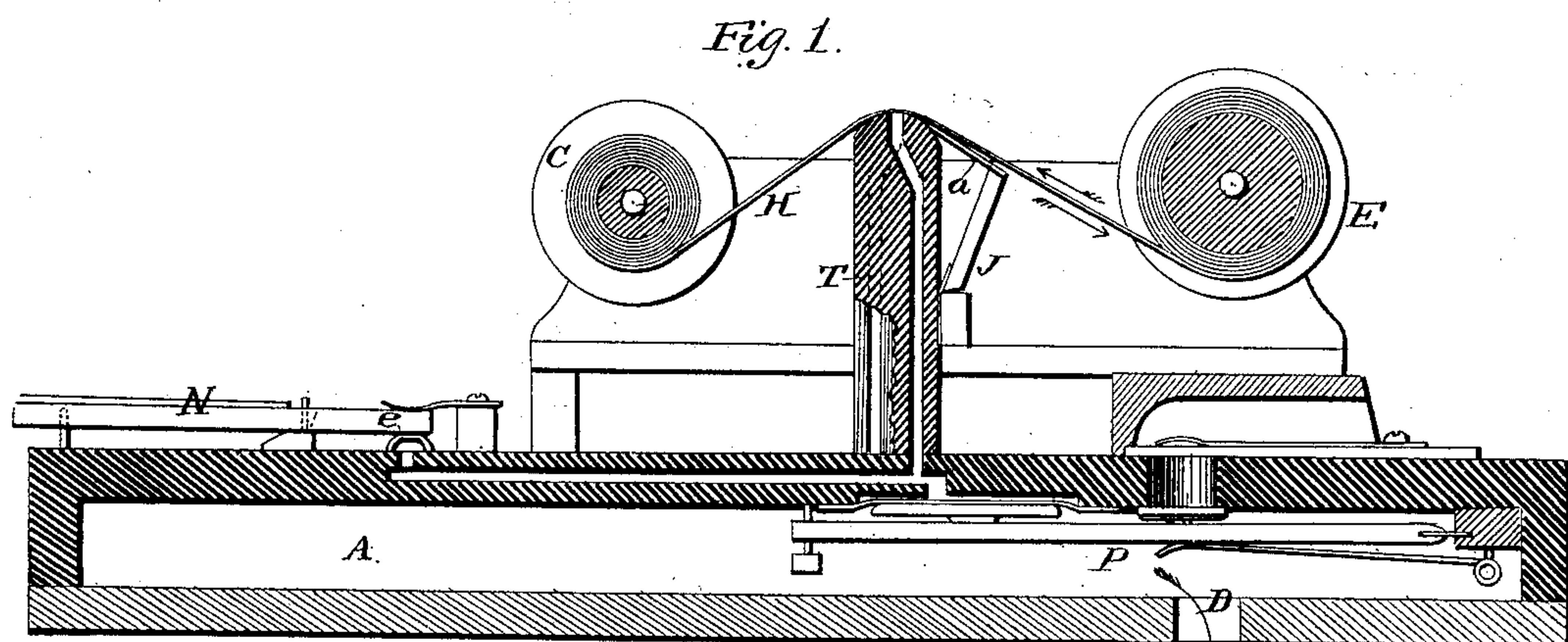
(No Model.)

M. GALLY.

MECHANICAL MUSICAL INSTRUMENT.

No. 370,466.

Patented Sept. 27, 1887.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 370,466, dated September 27, 1887.

Application filed July 25, 1887. Serial No. 245,225. (No model.)

To all whom it may concern:

Be it known that I, MERRITT GALLY, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Mechanical Musical Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

In the accompanying drawings, Figure 1 is a transverse sectional view showing the pneumatic action of a mechanical musical instrument, the operating music-sheet, and the cut-off for rendering the sheet inoperative. Fig. 2 is a plan view of the music-sheet, partly cut away, showing the pneumatic tracker-range and the cut-off in position when the music-sheet is operative. Fig. 3 is a plan view of the music-sheet, partly cut away, showing the tracker-range and the cut-off in position when the music-sheet is rendered inoperative; and Fig. 4 is an end view of the tracker with double cut-off.

My invention relates to that class of mechanical musical instruments which are operated by means of a perforated or slotted music-sheet, and is applicable to any instrument in which the music-sheet is used in connection with a pneumatic action, whether the instrument is sounded by means of air on reeds or pipes, or by percussion on strings or bells, or by the vibration of the teeth of musical combs.

The object of the invention is to render the pneumatic action inoperative through the tracker-range at certain times when it is desirable to move, propel, or adjust the music-sheet without thereby sounding the instrument.

Fig. 1 shows in transverse section the pneumatic action of a reed-organ adapted to be operated by a mechanical music-sheet, and also by manual finger-keys. The music-sheet H is shown as partly wound on its spool C and partly on the take-up roller E, and passes from spool to roller over the face of the pneumatic tracker-range T.

It is frequently desirable to move or replace the music-sheet in the instrument or to skip certain passages of the music during the performance of a piece of music, while the air-tension remains in the pneumatic chamber. This, however, cannot be ordinarily done with-

out improperly sounding the instrument; or if "expression-music" is used, disarranging or displacing some of the stops or expression apparatus of the action. To prevent these undesirable results I use a cut-off, *a*, between the music-sheet and the ducts of the tracker-range, so as to render at such times the pneumatic action inoperative as to the music-sheet. This cut-off is preferably made of thin flexible sheet material, so that it will adapt itself to the face of the tracker-range under the pressure of the music sheets, but may be more rigid and substantial, if required. The cut-off *a* is shown attached to a hinged piece, J, which, in position shown in Fig. 2, removes the cut-off *a* from the ducts of the tracker-range and allows the music-sheet 4 to be operative, but in position shown in Fig. 3 brings the cut-off *a* between the music-sheet and the ducts of the tracker-range and renders the music sheet inoperative.

To adjust or replace the music-sheet, or to skip any passage of music without disturbing the pneumatic action, it is only necessary for such time to bring the cut-off *a* in position shown in Fig. 3.

In propelling the music-sheet it is wound from the music-sheet spool C onto the take-up roller E, and is afterward rewound on the spool C to remove the sheet from the instrument and replace it with another. No winding or rewinding apparatus is shown in the drawings, as any of the ordinary methods and apparatus may be used, either hand-cranks, clock-work, or wind-motor, as desired.

In rewinding the music-sheet it is in some cases desirable to preserve the air-tension of the instrument, and it is customary, to prevent the sounding of the instrument, if a winding instrument, to use a valve at D for closing the passage between the bellows B and the reeds or pipes of the instrument. This, however, for such purposes is an undesirable and defective device. First, when open it more or less obstructs the windway at D, which should be perfectly free both as to space and direction; second, when closed it is difficult to have it perfectly so, as so long a valve as is required is harder to work or becomes defective in operation by means of particles of dirt, and, being within the instrument, is difficult to re-

pair; and, thirdly, when closed it renders inoperative the entire instrument and produces a delay in the performance for rewinding the sheets.

5 It will be seen that by the use of my motion, as shown in Fig. 1, only the music-sheet is rendered inoperative for the time of rewinding and the pneumatic action and sounding devices all left operative and intact, to be operated during the rewinding of the sheet by
10 means of the manual finger-keys N.

The cut-off *a* in Fig. 1 acts automatically at the time of winding or rewinding of the music-sheet, as the friction of the music-sheet in
15 its movement toward take-up roller E draws the cut-off away from the openings of the tracker-range, and the movement of the music-sheet toward spool C draws the cut-off *a* between the music-sheets and the openings of
20 the tracker-range. The same cut-off may be used for the skipping of passages in the music, or winding without playing, if held in position. I however show in Fig. 4 an additional cut-off, *a'*, for this purpose, operated by handle L, and a friction-catch, S, for holding it in
25 position.

What I claim as my invention is—

1. In a mechanical musical instrument, the combination, with the tracker-range, of a sliding imperforate plate movably attached to the
30 instrument in position to slide over the mouth of said tracker-range, substantially as described.

2. In a mechanical musical instrument, the combination, with the tracker-range, of a sliding imperforate piece in position to close the
35 mouth of the tracker-range, and a stop for retaining said piece in adjusted position.

3. In a mechanical musical instrument, the combination, with the tracker-range, of two
40 levers, one hinged at each side of the tracker-range, and a plate attached to each lever in position to cover or uncover the mouth of the tracker-range, substantially as described.

In testimony whereof I affix my signature in
45 presence of two witnesses.

MERRITT GALLY.

Witnesses:

O. L. SPENGLER,
D. B. GALLY.