A. FURRER.

TONGS FOR SEPARATING SPINNING CYLINDERS.

APPLICATION FILED APR. 19, 1911.

1,020,139. Patented Mar. 12, 1912.

Fig. 1

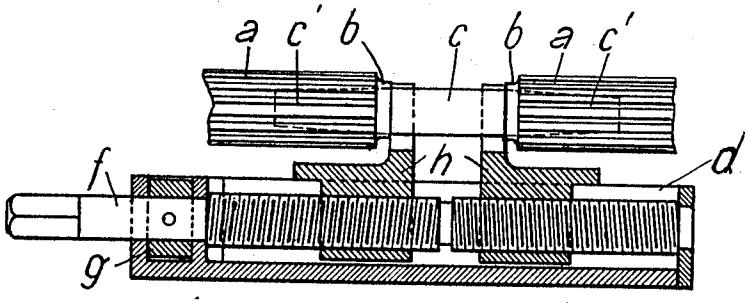


Fig. 2

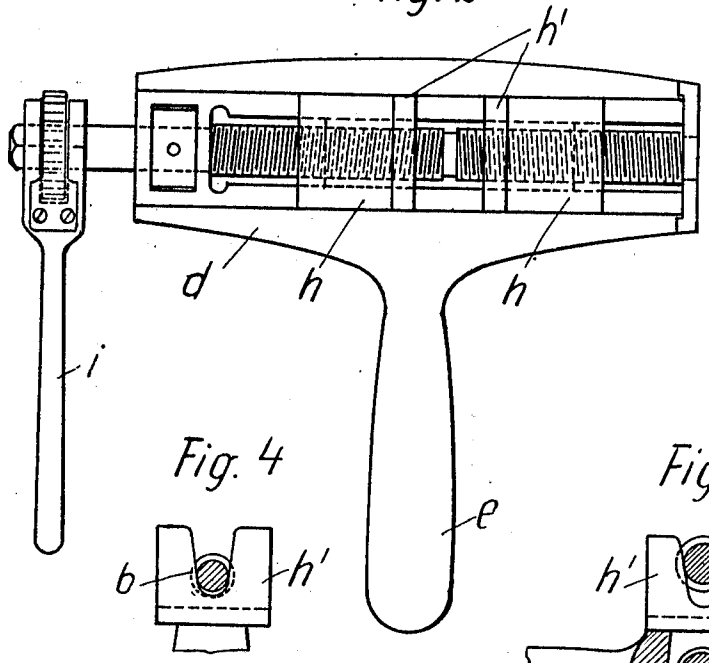
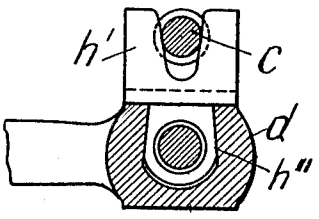


Fig. 4

Fig. 3



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TONGS FOR SEPARATING SPINNING-CYLINDERS.

1,020,139. Specification of Letters Patent. Patented Mar. 12, 1912.

Application filed April 19, 1911. Serial No. 621,972.

To all whom it may concern:

Be it known that I, ALFRED FURRER, manager of spinning-mill and a citizen of Switzerland, residing at Altstadt, near Tetschen a. Elbe, Austria-Hungary, have invented Improved Tongs for Separating Spinning-Cylinders, of which the following is a specification.

My invention has for its object, to afford in a simple way the separation of cylinders, sticking fast into one another, by forcing the same in an exact axial direction.

The tongs heretofore known and being in use for the spiked-cylinders of spinning and twisting machines are not affording an axial separation of the cylinders, as the same do not grip the shoulders centrally, but at one side, even if the tong parts are actuated by a screw with counter-threads. Even though the jaws will be moved parallel to one another, nevertheless with the existing tongs by the one-sided pressure on the shoulders of the cylinders, a bending of the latter will always occur, so that the same are subjected to the possibility of being strained, whereby also the separating of the same will be rendered difficult. A favorable fitting of the shoulders with the existing tongs is impossible also in consequence of the insufficient guidance of the jaws, so that the shoulders will easily be injured. The necessity of the axial separation of such or similar cylinders when sticking in to one another, is satisfied by the present improved tongs in a simple and effective manner. For causing an axial separation, a central gripping of the shoulders is necessary, and besides regard must be paid for the different diameters appearing on the spiked cylinders. Furthermore an exact guidance of the jaws is necessary and an arrangement must be provided for, which prevents the jaws assuming an inclined position under the pressure of separation.

In the drawing, forming part of this specification, Figure 1 is a sectional elevation of the improved tongs, when applied for separating cylinders. Fig. 2 is a top plan view of the instrument with a handle and a ratchet-brace for turning the thread spindle in the known manner. Fig. 3 shows a cross-section through the connecting-link with the jaws of the tongs inserted. Fig. 4 shows one of the jaws of the tongs with a spiked cylinder of the smallest dimension inserted therein.

The known elements of the instrument are a block with a handle e, a spindle with opposite running threads, which is held in position by a collar g, and which, when rotated moves the two nuts in opposite direction. The threaded spindle may be rotated in any known way intermittingly by means of a ratchet-brace i or in any other suitable manner. The block d according to the present invention is formed to a connecting-link, which in its inner part is preferably cut out in dove-tail shape, to form an exact lateral guidance for the nuts, which latter on their upper ends are shaped like the mouth of tongs. The spindle is therefore situated fully within the connecting-link. The lateral cheeks d of the same form a guide for the angle-like shaped jaws of the tongs, and the flanges h of the same are sufficiently long, to receive together with the dove-tailed inner slide-guide h'' the whole tilting-moment when the cylinders are forced from one another, which relieves the thread spindle of this strain. By this the threads will be saved and the tongs will always remain easily movable. The other flanges h' of the jaws have the shape of a mouth with a lower semicircular channel of a size, which corresponds to the intermediate piece c of the smallest existing spiked-cylinders. Fig. 4 shows that hereby the shoulders b of the cylinders are gripped transversely from both sides, so that an accurate axial pressure will be exercised upon the same. The mouth is tapering, so that on inserting of the greatest existing cylinders (see Figs. 1 and 3) the ends of the jaws will still embrace the diameter of the cylinder to such an extent, that on both sides of the same the shoulders touch the jaws h' with a sufficient surface to exert an axial pressure for loosening the cylinders.

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

Tongs for separating spiked cylinders, comprising a block having a tapering recess, a pair of headed jaws having correspondingly flaring projections that snugly engage said recess, the heads of said jaws

having a pair of alined flaring slots that decrease in width from top to bottom, whereby shafts of different diameters and carrying said spiked cylinders are adapted to be seated within said slots, a spindle with right and left threads journaled in the block and engaging the jaws, and means for operating the spindle.

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

ALFRED FURRER.

Witnesses:
HEINRICH SCHMIDT,
ADOLPHE FISCHER.