

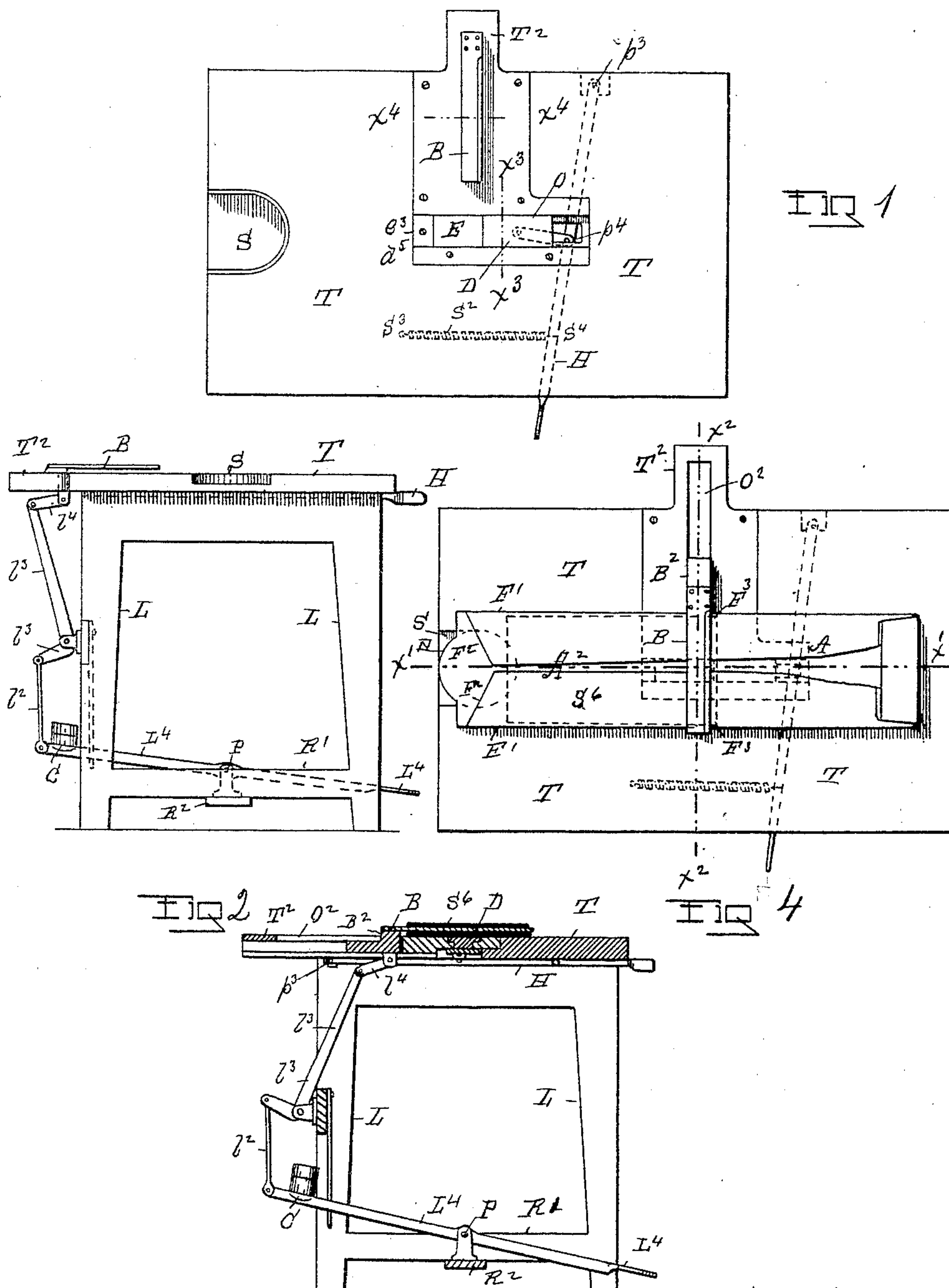
(No Model.)

3 Sheets—Sheet 1.

J. McKAY.
APPARATUS FOR FOLDING SHIRTS.

No. 437,787.

Patented Oct. 7, 1890.



WITNESSES

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FIG 6

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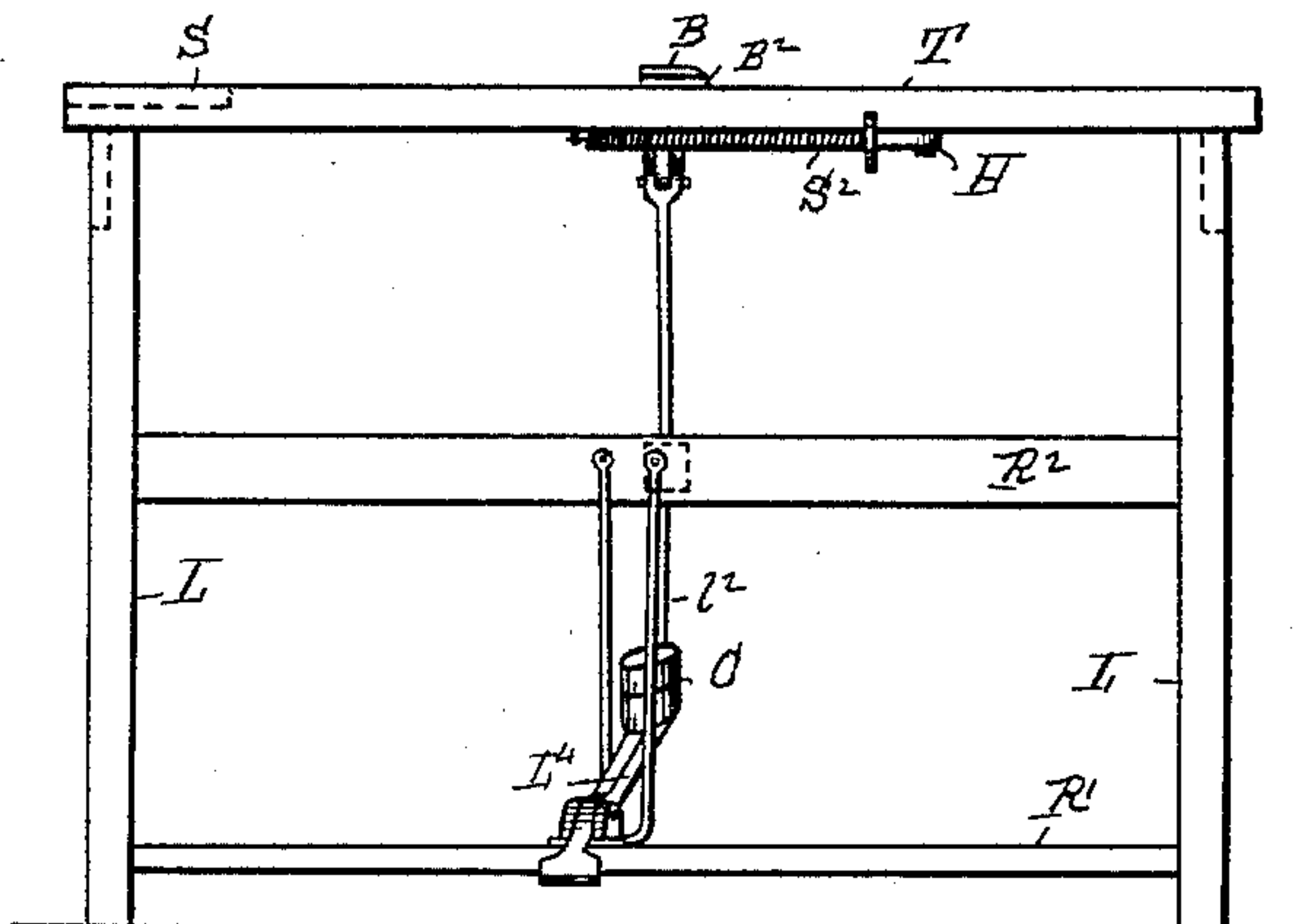


Fig 3

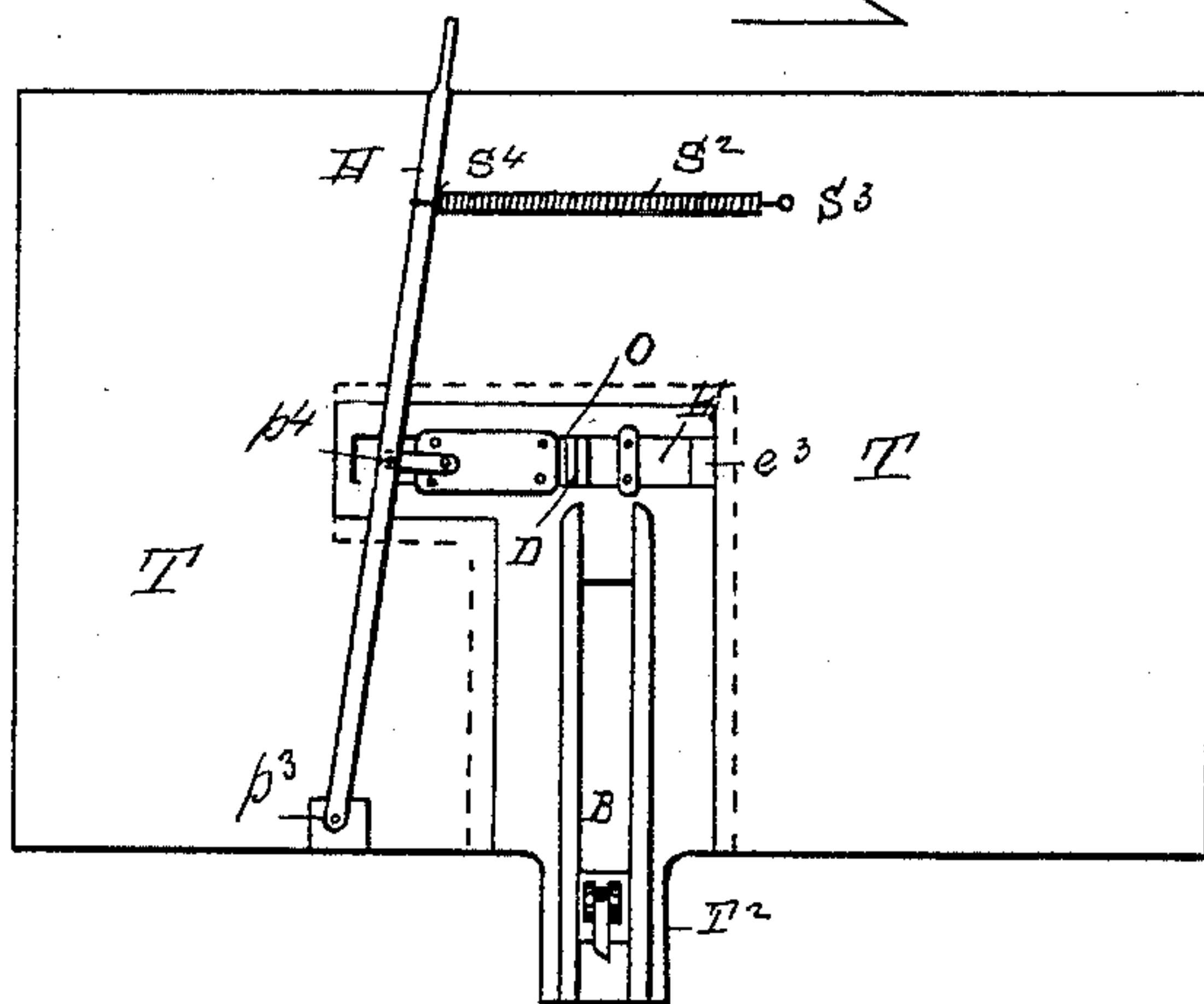


Fig 7

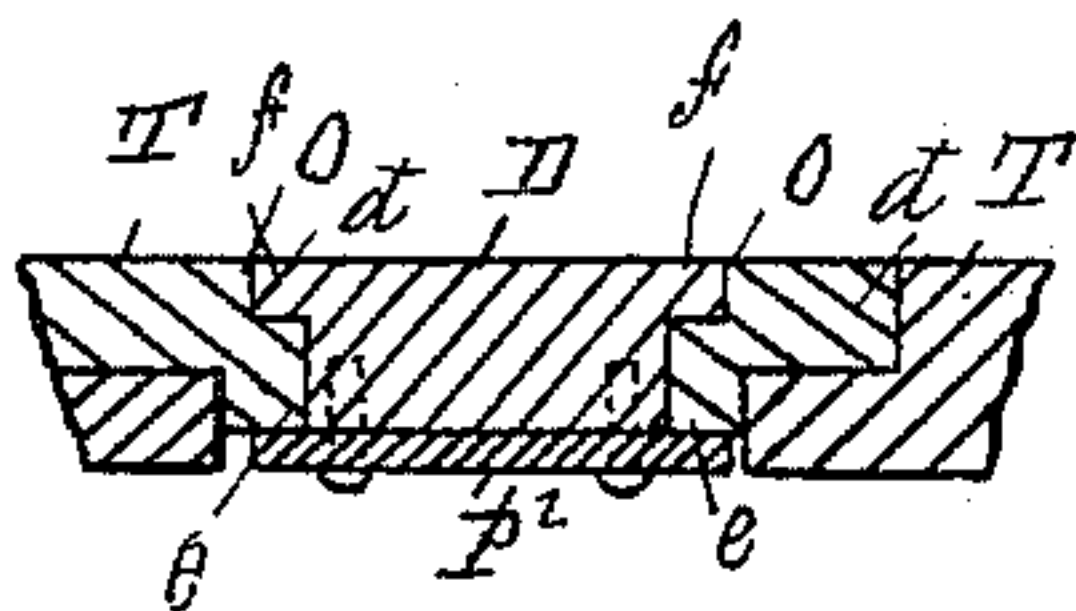


Fig 8

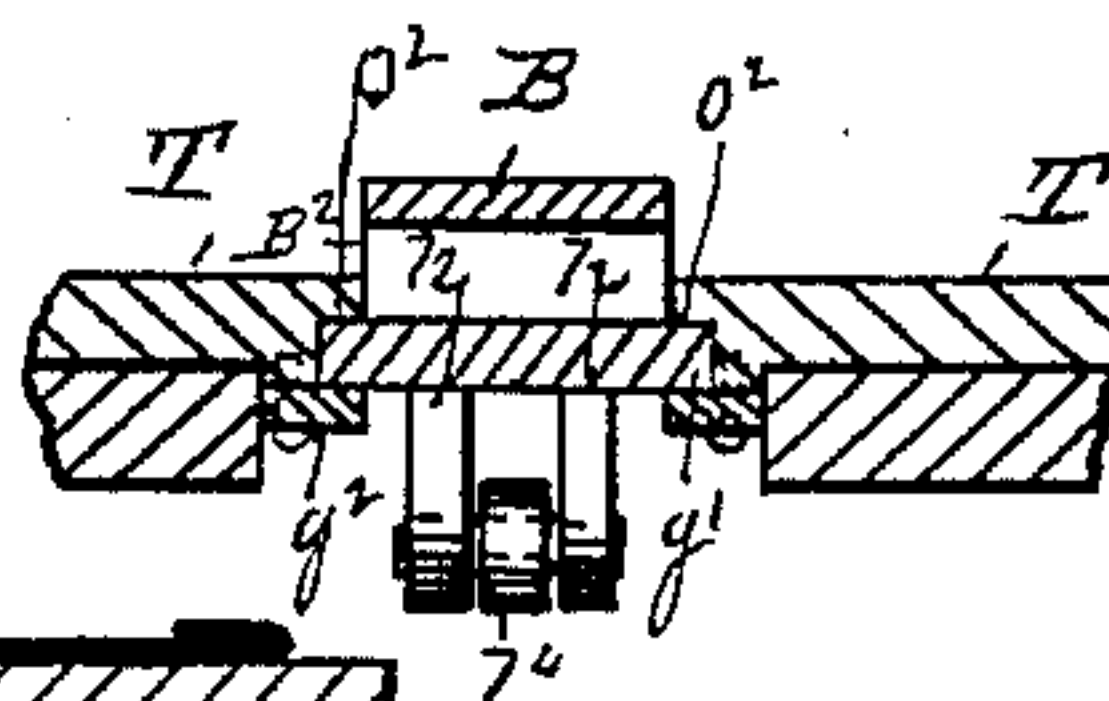


Fig 9

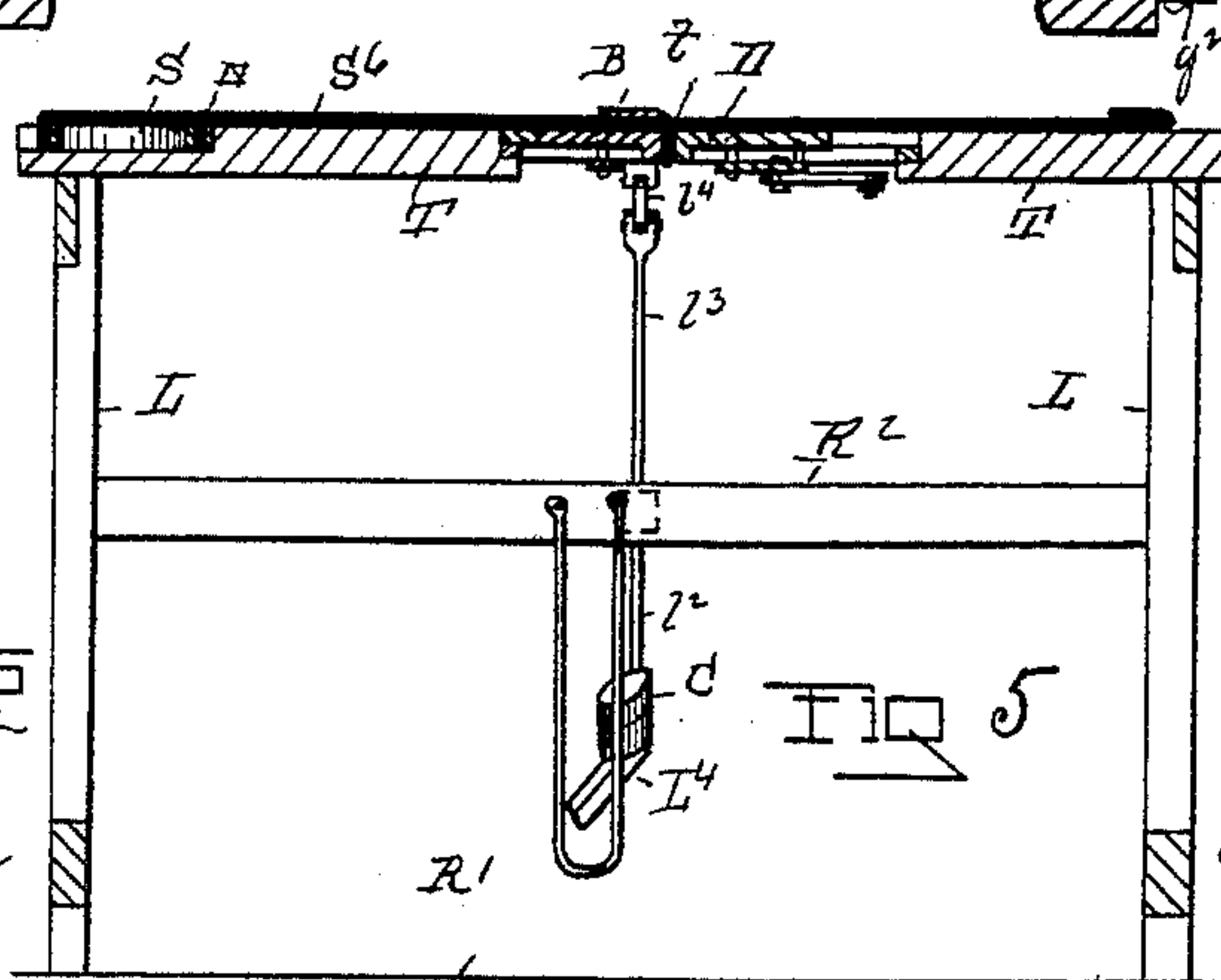


Fig 5

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(No Model.)

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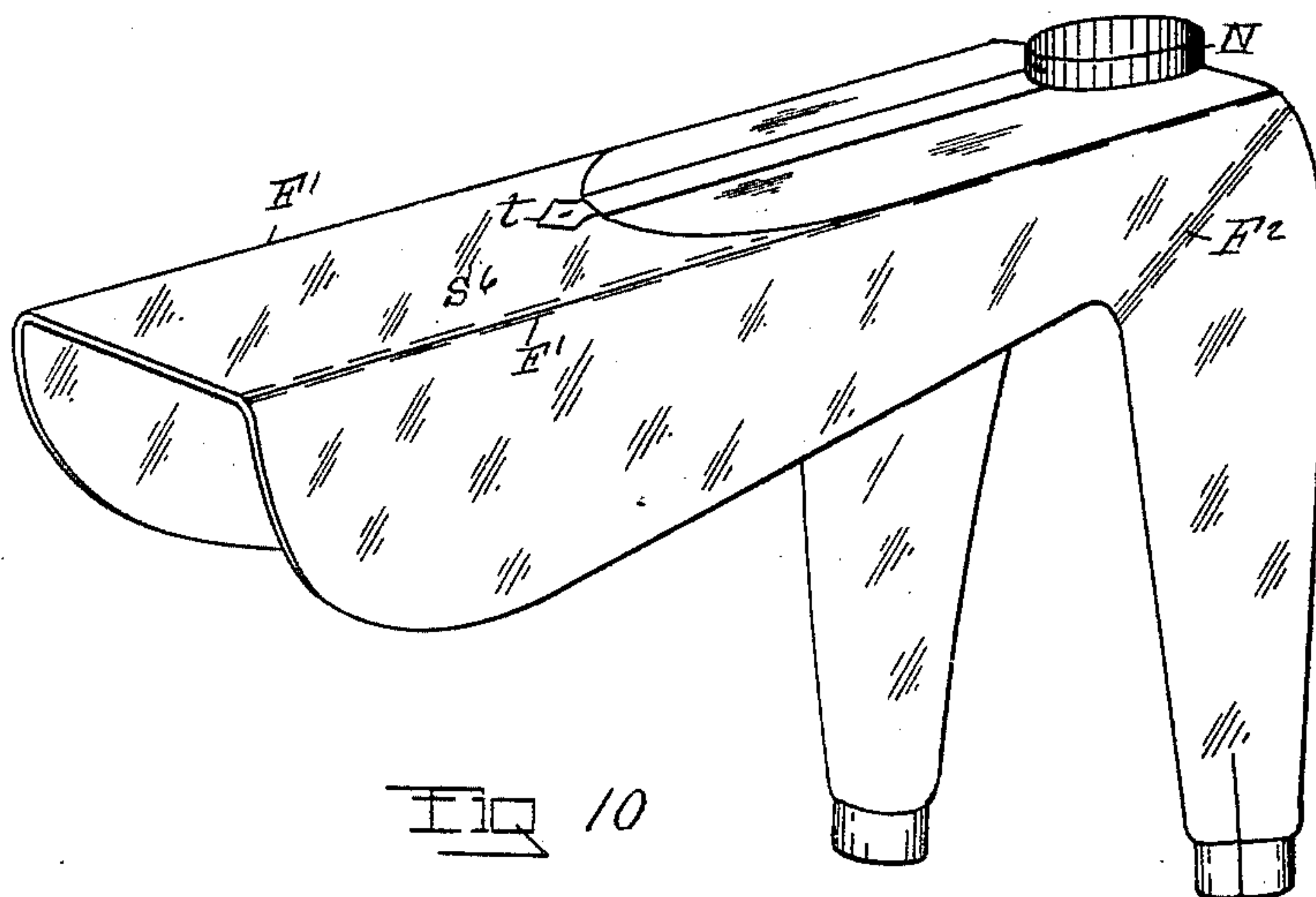


FIG 10

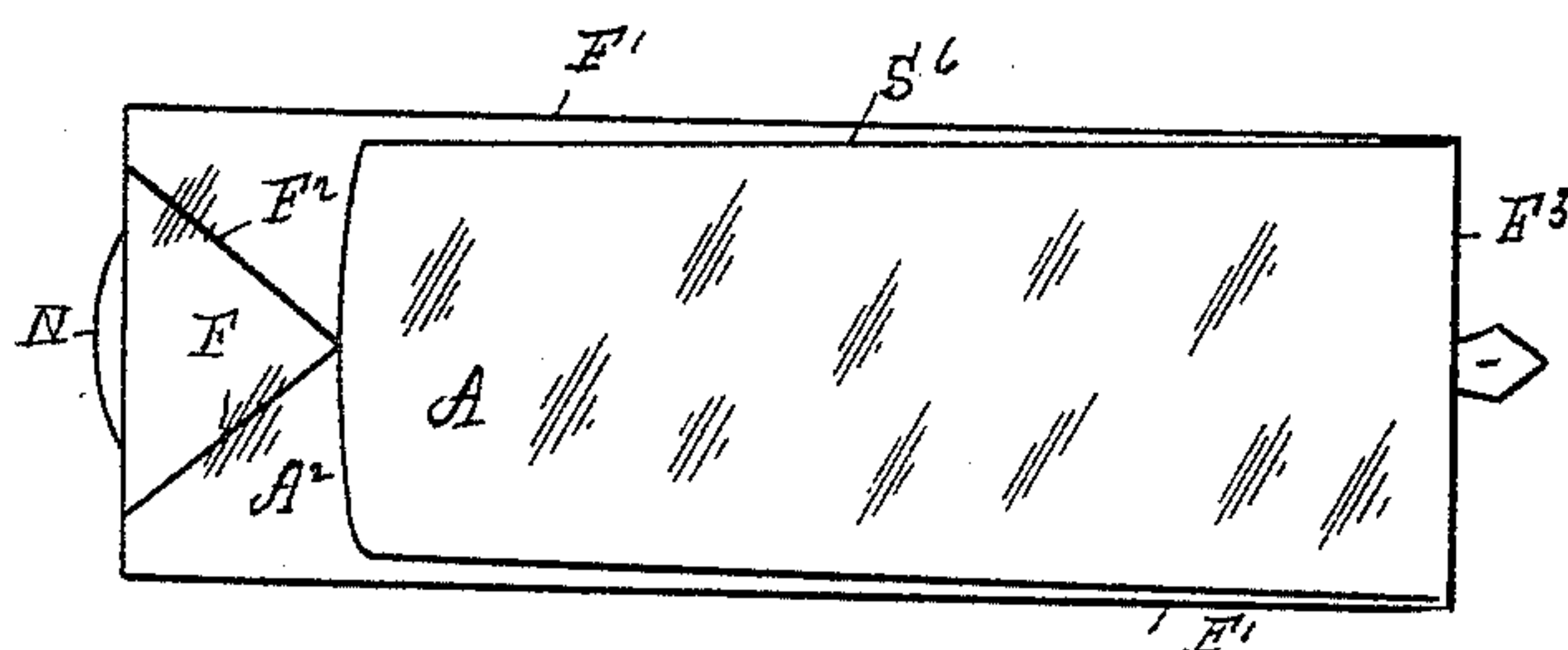


FIG 11

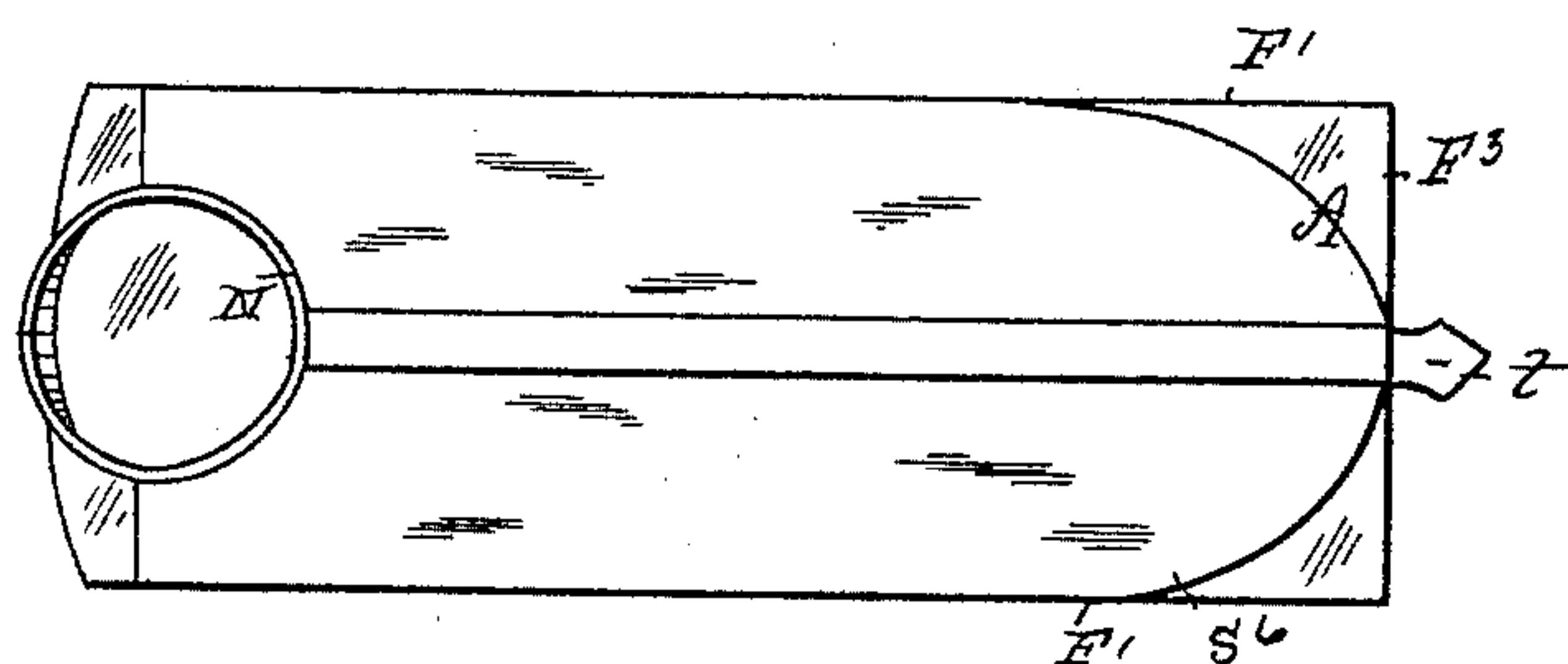


FIG 12

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UNITED STATES PATENT OFFICE.

JOSEPH MCKAY, OF TROY, NEW YORK.

APPARATUS FOR FOLDING SHIRTS.

SPECIFICATION forming part of Letters Patent No. 437,787, dated October 7, 1890.

Application filed February 19, 1890. Serial No. 341,005. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MCKAY, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Apparatus for Folding Shirts, of which the following is a specification.

My invention relates to an apparatus for box-folding shirts; and the object and purpose of my invention are to facilitate the operation of folding, to give uniformity to the work, and to cheapen the cost of doing it.

My invention consists, as will be more fully detailed hereinafter in connection with its illustration, of a table or platform that is provided with a sink having a rounded-edge form to adapt it for the insertion of the outwardly-extended neckband of the shirt when placed therein with its bosom side down, a means arranged in the table for grasping and holding the bosom-tab while the shirt is so placed, and a folder-bar operated to move across the table and over the shirt after the side and sleeve folds have been made therein, along which bar the shirt-body may be folded cross-wise back on itself as to length to complete the operation.

Accompanying this specification to form a part of it there are three plates of drawings containing twelve figures illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of the illustrations, Figure 1 is a top view of the apparatus. Fig. 2 is an end view of the same. Fig. 3 is a side elevation of the apparatus with what is its front side facing the view. Fig. 4 is a top view of the apparatus with a shirt placed thereon in which the side infolds and sleeve infolds have been made and with the cross-fold bar in position to fold the shirt back on itself to complete the folding operation. Fig. 5 is a longitudinal central section taken on the line $x'x'$ of Fig. 4. Fig. 6 is a cross-section taken on the line x^2x^2 of Fig. 4. Fig. 7 is a plan view of the under side of the table and the parts thereof. Fig. 8 is a section taken on the line x^3x^3 of Fig. 1. Fig. 9 is a section taken on the line x^4x^4 of Fig. 1. Fig. 10 shows a laundered shirt into which the bosom side-fold lines and the angular sleeve-fold lines have been creased. Fig. 11 shows the shirt after having been box-folded, and

Fig. 12 shows the shirt after having been box-folded, with the bosom side shown as uppermost. 55

The several parts of the apparatus thus illustrated are designated by letter reference, and the function of the parts is described as follows:

The letter T designates a table or platform 60 that is supported on legs L, having bottom rails or braces R' and a horizontally and centrally placed bar R².

The letter S designates a sink made in the top and at one end of the table T, as shown at 65 Figs. 1, 2, 4, and 5, and the function of this sink is to receive the shirt-neckband when the shirt is laid bosom side down on the table T.

The letter D designates a slide made to move in an opening O made in the table T 70 by means of flanges f in the side of the slide, guides d made in the table on the upper face of said slideway, and a plate p^2 on the under side of the slide, which underruns the edge e of the opening O, as shown in detail at Fig. 75 8. This slide is operated by a hip-lever H, that at its rear end at p^3 is pivoted to the under side of the table, is centrally pivoted at p^4 to a link connecting said slide and lever, and is provided with a spiral spring S², one 80 end of which is connected to the under side of the table at S³ and the other end to said hip-lever at S⁴, as shown at Fig. 7. The function of this slide is to open to receive and close to retain the bosom-tab when the shirt 85 has been placed upon the table bosom side downward, with the neckband in the sink S, as before described, and to hold the shirt while the shirt parts are infolded. The position of the shirt with the bosom-tab t held by the 90 slide is shown at Fig. 5.

The letter B designates a fold-bar that is mounted in the table-top at the rear thereof on a slide-block B², so as to project above the table-top and overrun a shirt when side 95 folded and placed thereon. This slide-block B² is provided with slide-guides $g'g^2$, made on the edges of an opening O², the latter being formed in part on the table proper and part in a rearward projection T² made in the 100 latter, as shown at Figs. 1, 2, 6, and 7.

The letter L⁴ designates a foot-lever centrally pivoted at P and having a counterpoise C at its rear end.

The letter l^2 designates a rod that is pivoted at its lower end to the rear end of said lever L^4 and at its upper end to a bell-crank lever l^3 , the latter at its upper end being pivoted to a link l^4 and the latter to the slide-block B^2 between two hangers h , downwardly projected therefrom, so that at the front the fold-bar B is projected frontwardly over the shirt, as shown at Fig. 4. The function of this fold-bar B is to hold the shirt down and furnish a fold-line that will be at right angles to the sides of the shirt over which the shirt may be folded back on itself to produce the cross-fold line F^3 .

The apparatus thus constructed and arranged is operated as follows: The shirt S^6 having had its side folds F' creased therein and the angular sleeve-fold lines F^2 produced therein, as shown at Fig. 10, is laid on the table with the neckband N thereof downwardly projected into the sink S , when, by the hip-lever H , the slide D is moved back for the bosom-tab t to enter therein and be clasped by the slide D between the end of the latter and the end of the opening made in the table in which the slide moves, so that the shirt is held between the downwardly-projected neckband N and the tab t . In this position the side folds are made in the shirt on the lines shown at Fig. 10, and the sleeves are infolded on an angle shown therein, in which position the lever L^4 is operated to move the fold-bar B across and at right angles to the side folds of the shirt, as shown at Fig. 4, in which position the body part A is folded back on the line of the bar B to produce the fold F^3 , and so as to lap over the part A^2 , in which condition the folds A and A^2 are pinned together at the corners. The angular fold-lines F^2 ,

produced in the sleeve, and the bosom side folds F' may be previously creased in the shirt, or the latter may be folded to correspond thereto without their having been previously put in.

The letter E designates a block arranged in the opening O , against which the clamping end of the slide D abuts to hold the tab, and this block is adapted as to distance from the neckband sink at which the slide D shall engage with the bosom-tab by means of an end block e^3 and screw d^5 , so that the table may be used for differing lengths of tab and bosom.

As thus made and arranged, the apparatus can be used to fold laundered shirts with accuracy and dispatch.

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

1. The combination, with the table T , made with the sink S , of the opening O , made with the spring-slide D , constructed to be operated in said opening, substantially in the manner as and for the purposes set forth.

2. The combination, with the table T , made with the sink S , and spring-slide D , of the fold-bar B , constructed to be moved across said table and over a shirt placed thereon, substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 25th day of November, 1889, and in the presence of the two witnesses hereto.

JOSEPH MCKAY.

Witnesses:

W. E. HAGAN,
CHARLES S. BRINTNALL.