

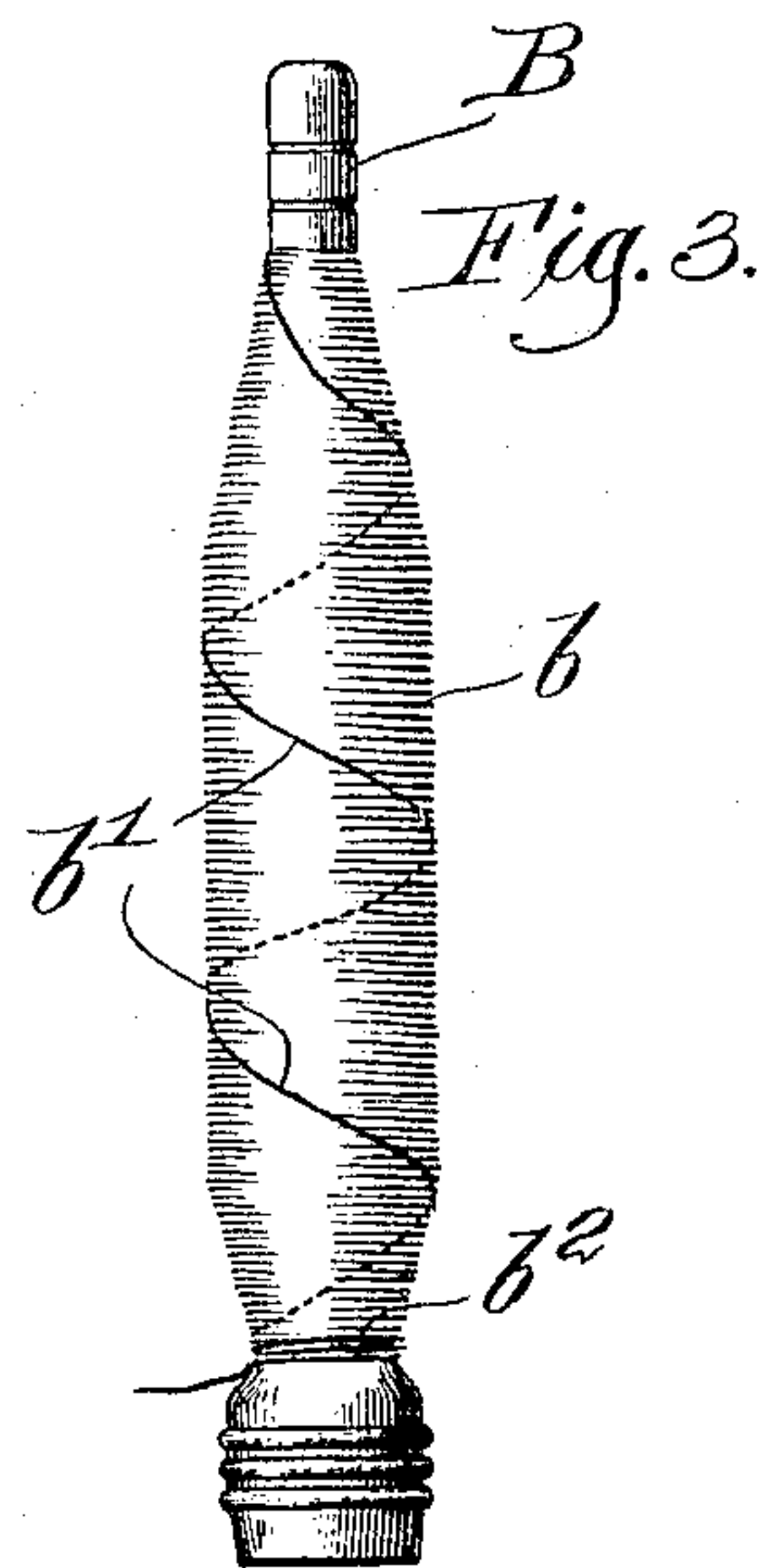
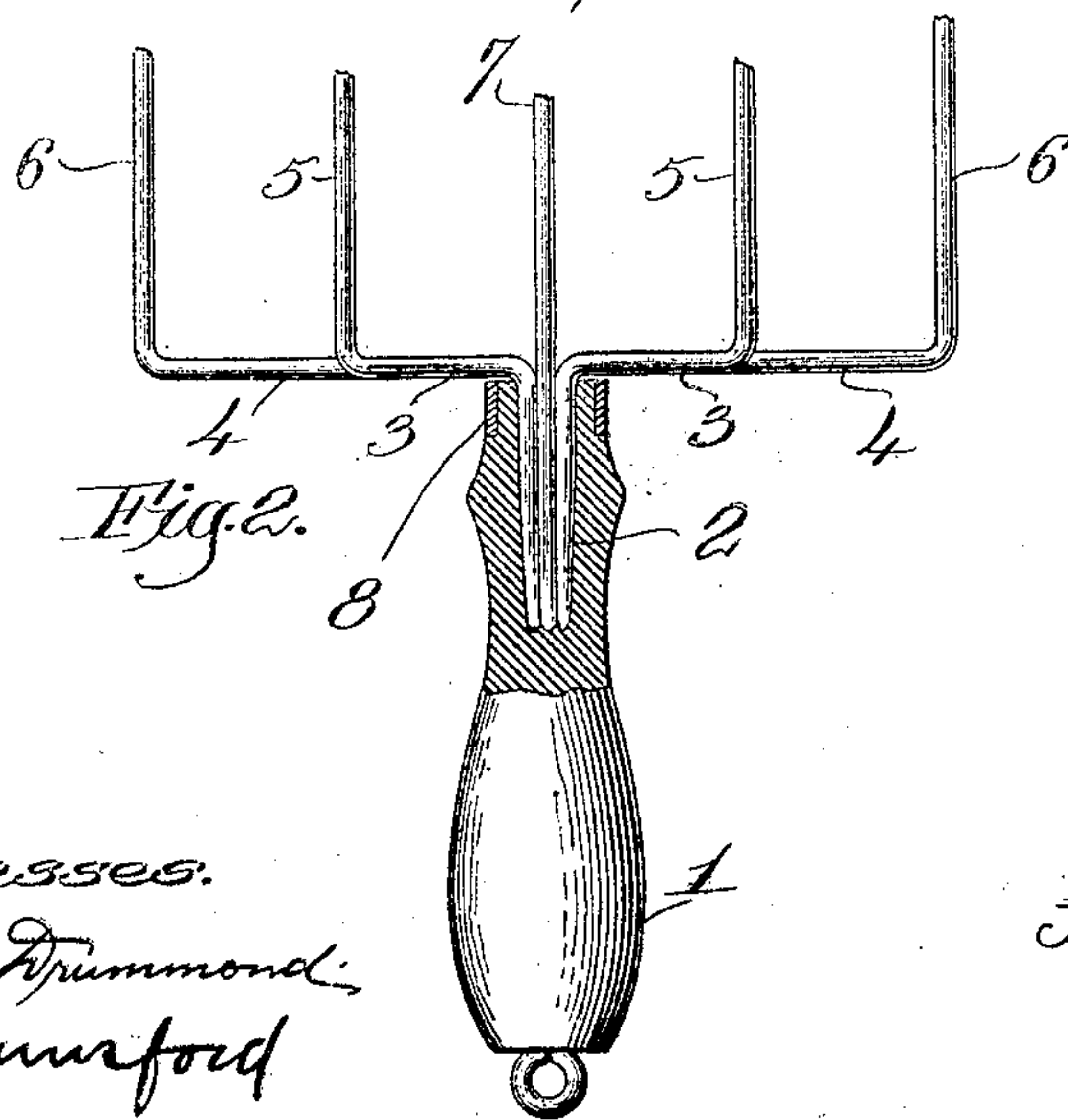
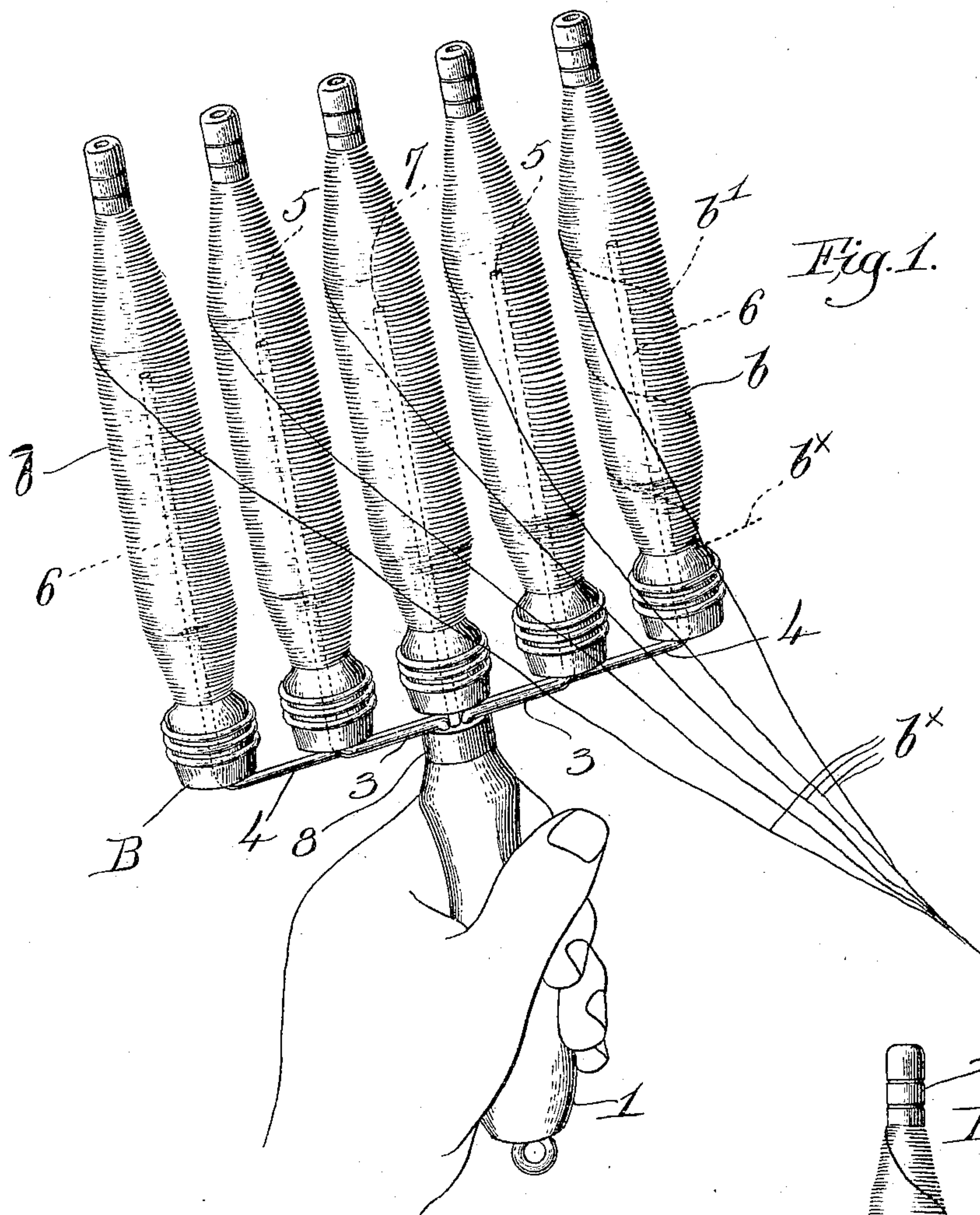
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J. A. PERKINS.

TEMPORARY HOLDER FOR FILLING CARRIERS OR BOBBINS.

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UNITED STATES PATENT OFFICE

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TEMPORARY HOLDER FOR FILLING-CARRIERS OR BOBBINS.

No. 803,191.

Specification of Letters Patent.

Patented Oct. 31, 1905.

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To all whom it may concern:

Be it known that I, JOHN A. PERKINS, a citizen of the United States, and a resident of Salem, county of Essex, State of Massachusetts, have invented an Improvement in Temporary Holders for Filling-Carriers or Bobbins, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

In the "Northrop" type of automatic filling-replenishing loom, such as shown in United States Patent No. 529,540 and others of later date, the running shuttle is automatically provided with fresh filling when necessary, the reserve supplies of filling in the form of filling-carriers or bobbins being carried in a filling-feeder or hopper, from which they are removed one by one and inserted in the running shuttle at the proper time. A single weaver can attend a large number of these looms, from eighteen to twenty-four, particularly when such looms are equipped with automatic warp-stop-motion devices. The weaver's duties are then confined largely to piecing up broken warps and starting the looms thereafter and to keeping the feeders supplied with filling-carriers to take the place of those transferred to the shuttle. The filling-carriers are inserted in the feeder as occasion demands, and when inserted the filling end must be led from the tip end of each filling-carrier to an end holder and there fastened, so that when transfer takes place the filling will be held at the replenishing side of the loom during at least the shot of the shuttle to the opposite side. When a filling-carrier or bobbin receives its full yarn-load on the spinning-frame, the winding is completed with the rail at the upper end of the bobbin, and then the rail is caused to descend while the bobbin rotates to make a binding-wind in a spiral form, the binding-wind being finished off at the lower end or butt of the bobbin. This prevents the yarn from becoming loose or unwinding in the interval between spinning and weaving. Before such a bobbin can be inserted in the feeder or hopper of an automatic loom the weaver heretofore has usually had to draw the final turns of the binding-wind off the bobbin in the direction of the butt and then reverse the bobbin when all or nearly all of the binding-

wind has been drawn off, so that the yarn will draw off from the tip end of the bobbin, and then the latter can be placed in the hopper or feeder of the loom and the filling end secured. The described method of drawing off the filling end which forms the binding-wind tends to disarrange the main body of yarn, particularly near the butt of the bobbin, loosening or otherwise disturbing the yarn so that a "bunch" will often come off and be woven into the cloth. It is customary for the weaver to take several bobbins, five or more, in one hand and remove the binding-wind as described, the operation consuming considerable time at best and requiring a good deal of practice and the acquirement of the "knack" before it can be done satisfactorily. Even then the ends from the different bobbins are apt to become snarled together and to so interfere with each other that time is lost in separating them.

My present invention has for its object the production of a very simple but most efficient and convenient device to temporarily hold several bobbins in such manner that by a single movement of the hand the weaver can draw off the binding-wind, the bobbins being supported separately so that the different filling ends will not interfere or snarl either with each other or with the bobbins.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a perspective view of the temporary bobbin-holder with bobbins thereon, showing the mode of using the same. Fig. 2 is a front elevation of the holder, the handle being partly shown in section; and Fig. 3 is a side elevation of a filling-carrier or bobbin, showing the binding-wind thereon as it comes from the spinning-room.

In the present embodiment of my invention the temporary holder consists of a handle 1 of a form suitable to be grasped in the hand of the weaver, as in Fig. 1, the upper end of the handle having driven thereinto the ends 2 of lateral arms 3 and 4, and herein I have shown two oppositely-extended and shorter arms 3 and alongside of each one the longer arm 4. The arms 3 are upturned at their outer ends to form upright supports 5, and in like manner the outer ends of the arms

4 are upturned to form upright supports 6. The arms and supports are preferably made of stout round wire, the arrangement being such that the several supports are substantially parallel to each other and to the handle 1. A central support 7 is fixed in the handle between the ends 2 of the arms, and, as shown in Fig. 2, the five supports shown are laterally separated in practice far enough to each receive a full filling-carrier or bobbin B, Fig. 1, with ample space between the peripheries of the several yarn-loads b . A ferrule 8 is preferably secured to the end of the handle surrounding the inserted ends of the several arms and the adjacent end of the support 7 to prevent splitting of the handle. The several upright supports are arranged substantially in a line at the upper end of the handle when the device is in use, each support being of such size as to readily enter the usual bore of a bobbin and rotatably sustain the same tip uppermost, the butt-ends resting on the arms, as shown in Fig. 1.

Referring to Fig. 3, the binding-wind is indicated at b' , a number of spirals of the yarn being wound around the yarn load or mass b from the tip downward to the butt, and then a number of turns are made, as at b^2 , to fasten the binding-wind in place. The weaver drops a bobbin onto each of the upright supports and holding the handle 1 in the left hand slips the thumb and first finger of the right hand around each bobbin in turn at the turns b^2 to pull off the filling end. Having pulled off the several filling ends, the latter being held bunched together, a straight lateral pull thereon serves to draw all of the binding-winds off, the bobbins rotating freely on their supports. The turns b^2 first unwind and then the long spirals b' , an instant being sufficient to run off the binding-wind to the upper ends of the bobbin in the condition illustrated in Fig. 1, the several filling ends being indicated at b^x . Now all that is necessary is to pull off one bobbin after another, place it in proper position in the feeder, and fasten the drawn-off filling end.

By means of the device described no disarrangement of the yarn-loads is possible, the filling ends will not tangle with each other and with the different bobbins, and much time and labor is saved in this department of loom attendance.

In Fig. 1 the binding-wind b' and the end b^x are indicated by dotted lines in their positions relative to the bobbin at the right-hand end

of the holder before the binding-wind has been drawn off.

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

1. A temporary holder for filling-carriers or bobbins, consisting of a handle having rigidly-attached and oppositely-extended lateral arms, and a plurality of separated upright supports on the arms, each adapted to rotatably sustain a filling-carrier or bobbin in position to enable the binding-wind to be drawn off by a straight lateral pull.

2. A temporary holder for filling-carriers or bobbins, consisting of a handle having rigidly-attached and oppositely-extended lateral arms, and a plurality of upright supports on the arms, parallel to each other and to the handle and laterally separated, each support being adapted to rotatably sustain a filling-carrier or bobbin separated from its fellows and tip uppermost in position to enable the filling end to be drawn off by a direct pull.

3. A temporary holder for filling-carriers or bobbins, consisting of a handle, a plurality of arms rigidly secured to one end thereof and laterally extended in opposite directions, the outer end of each arm being upturned to form a support to rotatably sustain a filling-carrier or bobbin, and a central support projecting directly from the end of the handle in parallelism with the other supports.

4. A temporary holder for filling-carriers or bobbins, consisting of a handle, and a row of laterally-separated, upright and parallel supports rigidly connected with the handle and each adapted to rotatably sustain a filling-carrier or bobbin in position to enable the filling end to be drawn off therefrom.

5. A portable, temporary holder for filling-carriers or bobbins, comprising a plurality of separated supports arranged in a row, and on which the filling-carriers are adapted to be mounted, and a rigidly-attached handle by which said holder may be carried about and held in position to enable the filling ends to be drawn off from filling-carriers mounted on the supports.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN A. PERKINS.

Witnesses:

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