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THREAD BOARD FOR SPINNING OR TWISTING MACHINES.

APPLICATION FILED OCT. 19, 1904.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 1.

956,248.

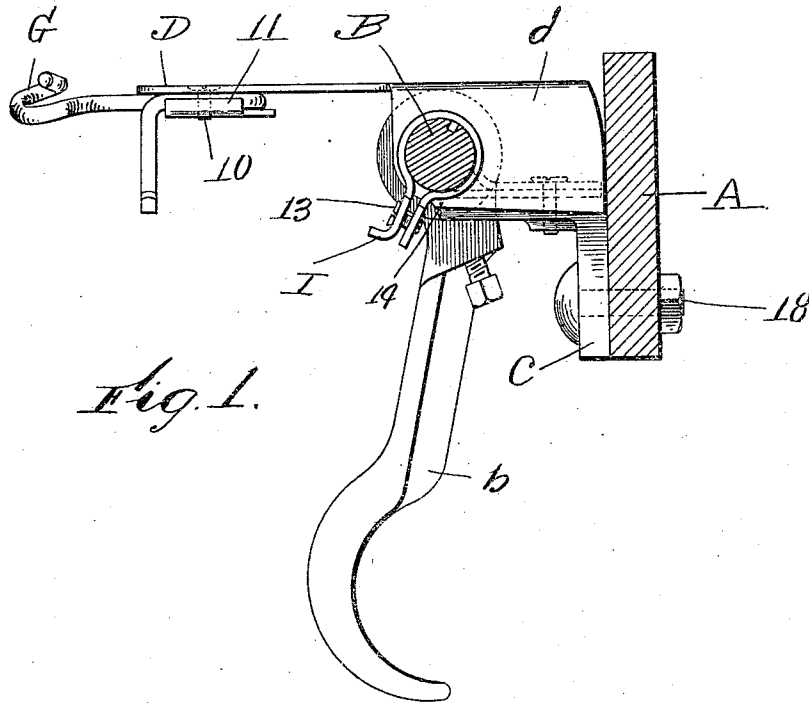


Fig. 1.

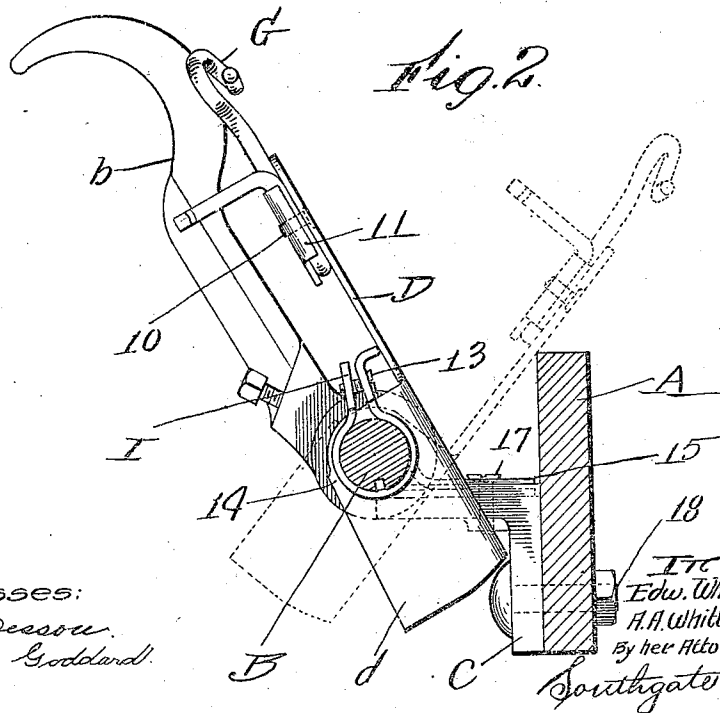


Fig. 2.

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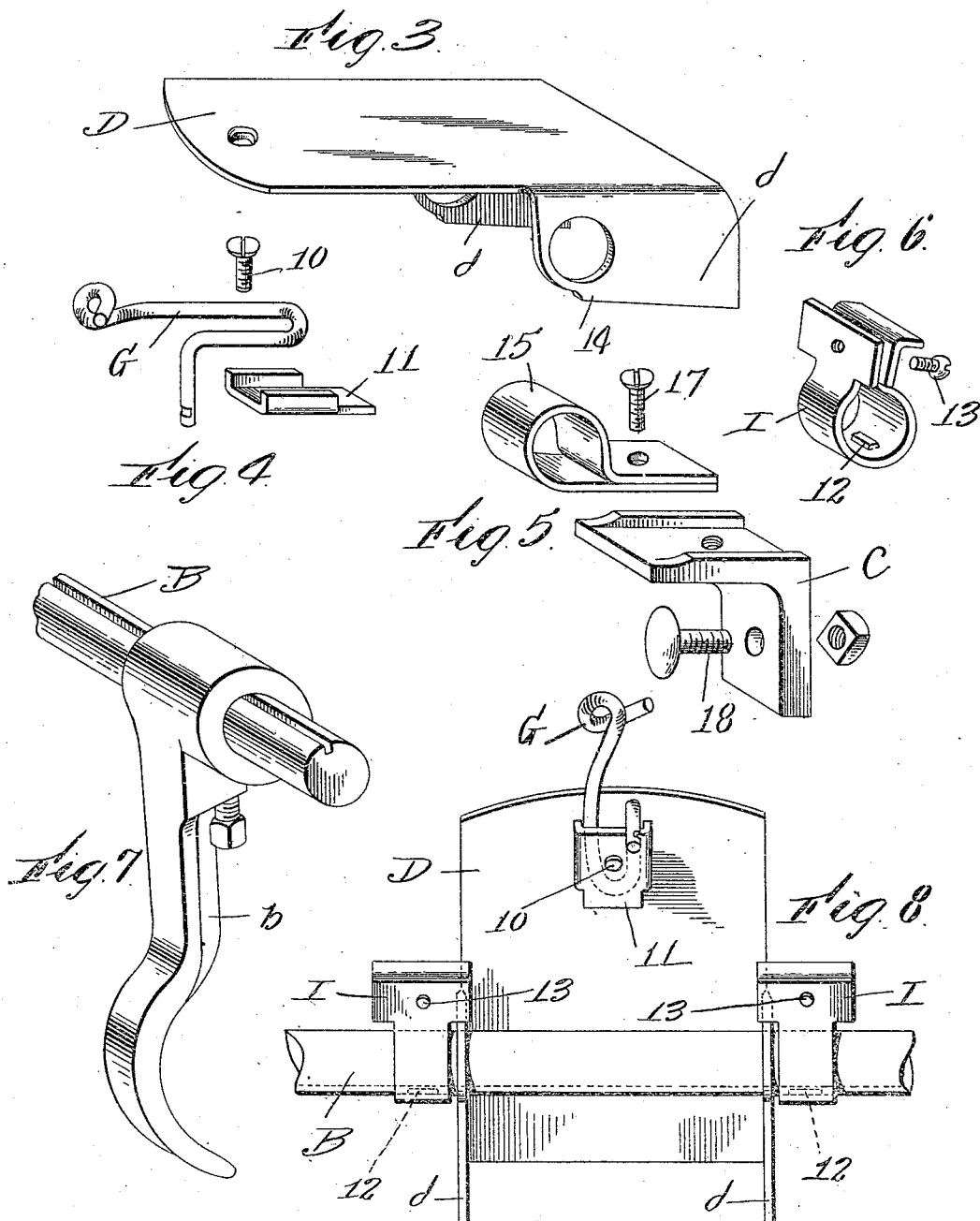
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UNITED STATES PATENT OFFICE.

ANNIE A. WHITTUM, OF FALL RIVER, MASSACHUSETTS, EXECUTRIX OF EDWARD WHITTUM, DECEASED, ASSIGNOR TO LEWIS T. HOUGHTON, OF WORCESTER, MASSACHUSETTS.

THREAD-BOARD FOR SPINNING OR TWISTING MACHINES.

956,248.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed October 19, 1904. Serial No. 229,208.

To all whom it may concern:

Be it known that EDWARD WHITTUM, deceased, late a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, did invent a new and useful Thread-Board for Spinning or Twisting Machines, of which the following is a specification.

This invention relates to an improved thread-board construction for supporting the thread-guides of spinning or twisting machines.

The objects of the present invention are to provide a more convenient and efficient yarn-guide holding mechanism for spinning or twisting machines; also to provide a guide holder plate that can be inexpensively constructed of metal and of such character as will permit the guide-holder being readily freed from the collection of lint that settles thereon.

Another object is to dispense with the usual thread-board rail and dual sets of hinges, and to provide a tiltable guide-holder that extends from the guide to the roller-beam in a single plate without intermediate joint, and that is tiltable upon the rod or axis disposed at a point beneath the guide-holder plate.

Another object is to provide mechanism for the purpose named comprising a supporting rod and swinging guide-holders pivotally supported thereon, and means adapted for simultaneously swinging an entire series of guides up or down by rotation of the rod, and also permitting the independent swinging up and down of the single guide-holder pivotally upon said rod as more fully hereinafter explained.

These objects are attained by a mechanism constructed and organized for operation as more fully explained in the following description and specified in the claims and illustrated in the accompanying two sheets of drawings, in which,

Figure 1 is a transverse sectional view illustrating a yarn-guide holder mechanism embodying this invention. Fig. 2 is a similar view showing the manner in which a holder may be lifted. Fig. 3 is a perspective view of the holder plate. Fig. 4 is a perspective view of the guide and fastening clip thereof. Fig. 5 is a perspective view of one of the hinge supports of the shaft. Fig.

6 is a perspective view of one of the plate lifting dogs. Fig. 7 is a fragmentary perspective view of a portion of the shaft and of its lifting handle, and Fig. 8 is a fragmentary view showing the operation of the lifting dogs in raising the plate.

Referring to the drawings, the reference letter A designates the part of the spinning machine frame commonly termed the "roller-beam," and from which the thread-guide mechanism is usually supported.

B designates the supporting rod or axis-shaft of the improved mechanism which shaft extends along the front of the roller-beam for the full length of the series of guide-holders, and which is mounted in bearing brackets C fixed on the roller-beam, and which may have a rocking action by any suitable means, as an arm *b*.

D designates the guide-holder plate formed from sheet metal with its edges bent downward and perforated for the reception of the rod or shaft which extends laterally through the side portions and forms an axis on which the holder-plate is tilted.

The thread-guide G is secured to the plate D by means of a screw 10 having its head fitting into a counter-sunk socket in the guide-holder plate, and having its lower end threaded into a clamp-piece 11. The guide-holder plates are made with flat top surfaces and of proper width to correspond with the gage or spacing of the spindles on the spinning machine, usually about two and one-half inches, more or less. Said plates extend from the front end, wherein the guide is secured, completely back to the roller beam A without intermediate joints or hingings in their length, so that the series of guide-holders present a smooth plain top surface that will not tend to catch lint or dust, and which can be readily wiped off clean without offering obstructions to the wipers.

I designates a lifter dog and stop device fixed upon the shaft B and held rigidly thereon by a key 12 which engages a spline in the shaft B and by a screw 13. Said lifter dog consists of a piece of sheet metal having a turned up end which projects forward and stands in horizontal position and forms a rest for the guide-holder plate when the guide is at normal working position.

The lower lateral projection of the lifter also serves as a back-stop against which a projection 14 of the side member of the guide-holder plate contacts when the latter is tipped up. The perforated side portions *d* of the plate form a pivotal connection and support for the guide-holder upon the rocking shaft B, so that the guide holder can be tilted back upon said shaft as a center axis independent of the lifter device. The lateral relation of the guide holders can be adjusted by loosening the lifters and slipping the lifter hub to the right or left on the shaft.

The bearings for supporting the shaft are best illustrated in Fig. 5, and preferably comprise sheet metal straps 15 which are fastened to brackets *c* by means of screws 17. The supporting brackets *c* are bolted to the roller-beam A by means of bolts 18.

In operation each of the guide holders D can be tilted on the shaft B as a pivotal axis independently of the others. Also the entire series can be tilted for raising the guides G simultaneously during doffing and changing bobbins by partially rotating the rocker-shaft B by means of the arms *b* attached to the shaft for such purpose. This movement swings up the lifters beneath the plates D, and consequently tilts up the guide-holders, the front end with the guide swinging upward and the rear end of the guide-holder swinging downward. When the shaft is rocked forward, the lower lateral projections of the lifters bring all the guides simultaneously to normal working position.

While there is illustrated and described a particular form in which the invention may be embodied, it is evident that many modifications may be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims.

What is claimed and desired to be secured by Letters Patent of the United States is:—

1. A yarn-guide-holder mechanism, comprising an axial supporting-shaft, an independently-swinging guide-holder mounted on said shaft and extending from the guide to the roller-beam, in a single length without intermediate divisional hinging, the yarn-guiding eye carried by said holder, and means for arresting the swinging movement of said holder when the guide is at working position, said means comprising a curved surface on the guide-holder adapted to engage the side of the roller beam.

2. A yarn guide holder mechanism comprising a supporting shaft, and an independently swinging guide holder mounted on said shaft, said guide holder being provided with a yarn guiding eye at one end and with a sheet metal guide holder plate having its edges bent at right-angles to the upper surface thereof to form side portions

which are perforated for the reception of said shaft, the rear ends of said downwardly bent edges being curved whereby they will engage the roller beam and normally hold the yarn guide in operative position.

3. A yarn guiding holder mechanism comprising a supporting shaft, a guide holder mounted to swing on said shaft, said guide holder comprising a plate formed from sheet metal with its edges bent downwardly at substantially right-angles to the edges of the plate to form side portions which are perforated for the reception of the shaft, a yarn guiding eye, a clamp piece, and a screw for securing the clamp piece to the guide holder and the end of the yarn guiding eye between the clamp piece and guide holder.

4. A thread-guide holder mechanism comprising a supporting shaft and a swinging guide-holder mounted on said shaft, said guide-holder being provided with a yarn guiding eye and comprising a sheet metal plate having its edges bent downwardly from the upper surface thereof to form side portions, said side portions being provided with perforations in alinement with each other through which said shaft passes.

5. A yarn guide holder mechanism comprising an axial supporting shaft at a distance from the roller beam, an independently swinging guide holder having a continuous upper surface mounted on said shaft, and extending from the guide to the roller beam in a single length without intermediate divisional hinging, and means on the rear end of said guide holder for engaging the front vertical surface of the roller beam and resisting the swinging movement of said holder when the top surface thereof is substantially horizontal.

6. A yarn guiding holder mechanism comprising an axial supporting shaft at a distance from the roller beam, an independently swinging guide-holder mounted on said shaft and comprising a sheet metal guide-holder plate having its edges bent at right angles to the upper surface thereof to form side portions, said side portions having opposite perforations constituting bearings for the shaft, said plate having a continuous upper surface extending from the guide to the roller beam in a single length without intermediate divisional hinging, and a yarn guiding-eye at one end of said plate.

7. A yarn-guide holder, comprising a flat-topped metal plate having downwardly-turned perforated sides, said plate provided with a guide-eye, a supporting-rod passing transversely through said perforated side portions, a lifter device secured to the rod and a forward projection on the rod for engaging the plate and lifting said plate by partial rotation of the rod and lifter device.

8. A yarn guide holder, comprising an oscillatable supporting rod, a plate swingingly mounted thereon, a guide-eye on the plate, a lifter device on the rod, whereby the rod
5 may be turned on its axis, and a projection on the rod extending forwardly for engaging the plate and lifting it by partial rotation of the rod and lifter device.
9. A yarn-guide-holder mechanism, comprising an axial supporting shaft, an independently-swinging guide-holder mounted on said shaft, a yarn-guiding eye carried by said holder, and means for arresting the swinging movement of said holder when the
10 guide is at working position, said means
- 15

comprising a curved surface on the guide-holder adapted to engage the front of the roller beam.

In testimony whereof, I, ANNIE A. WHITTUM, executrix of the last will and testament 20 of said EDWARD WHITTUM, deceased, have hereunto set my hand in the presence of two subscribing witnesses.

ANNIE A. WHITTUM,
Executrix of the estate of Edward Whittum,
deceased.

Witnesses:

LILA F. SIMMONS,
HENRY H. EARL.