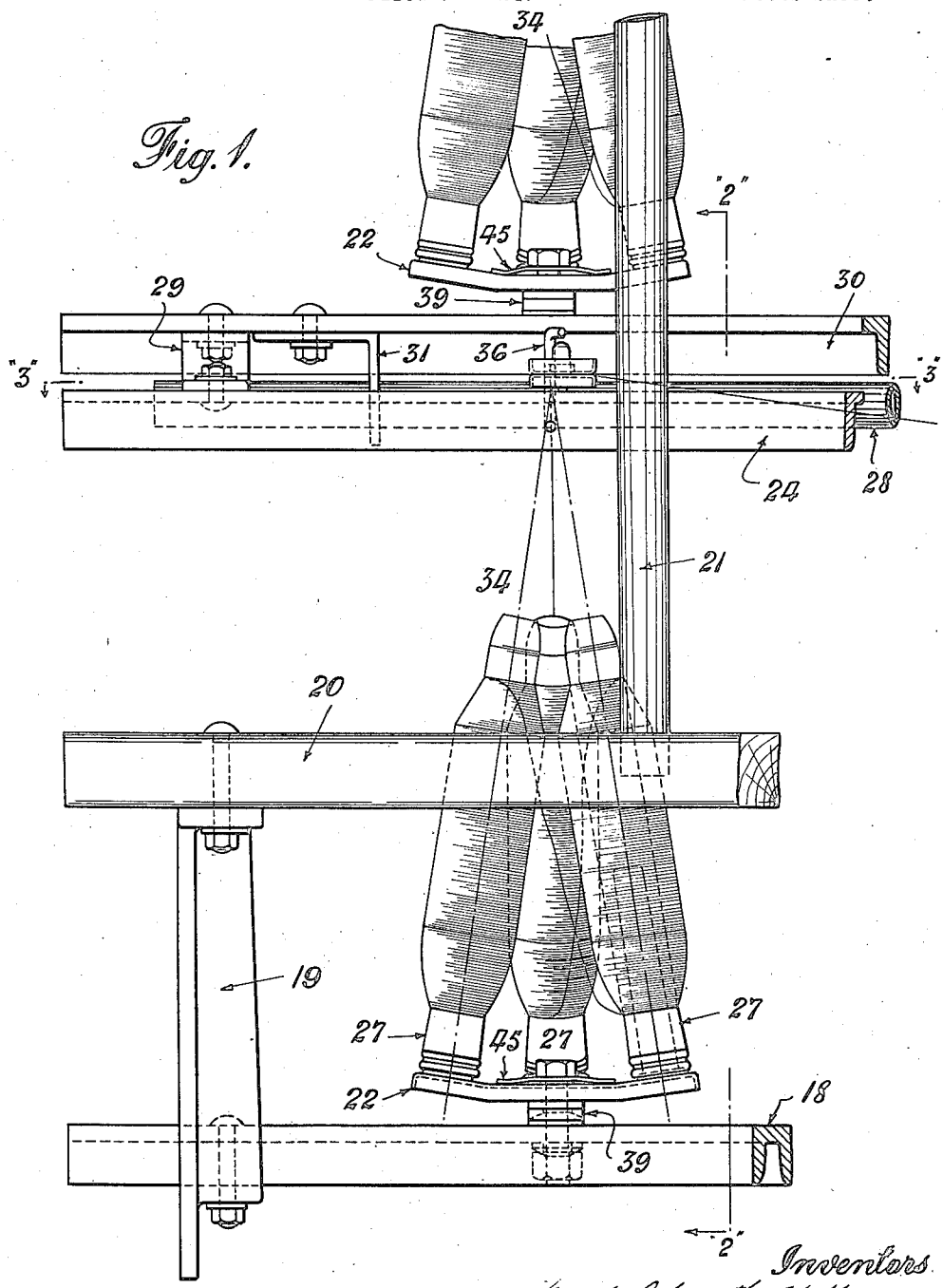
Aug. 21, 1923. 1,465,359

F. A. HOLT ET AL

CREEL AND SUPPORT FOR YARNS

Filed Jan. 26, 1923 3 Sheets-Sheet 1

Fig. 1.



Inventors
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By their Attorneys:-

Aug. 21, 1923. 1,465,359

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CREEL AND SUPPORT FOR YARNS

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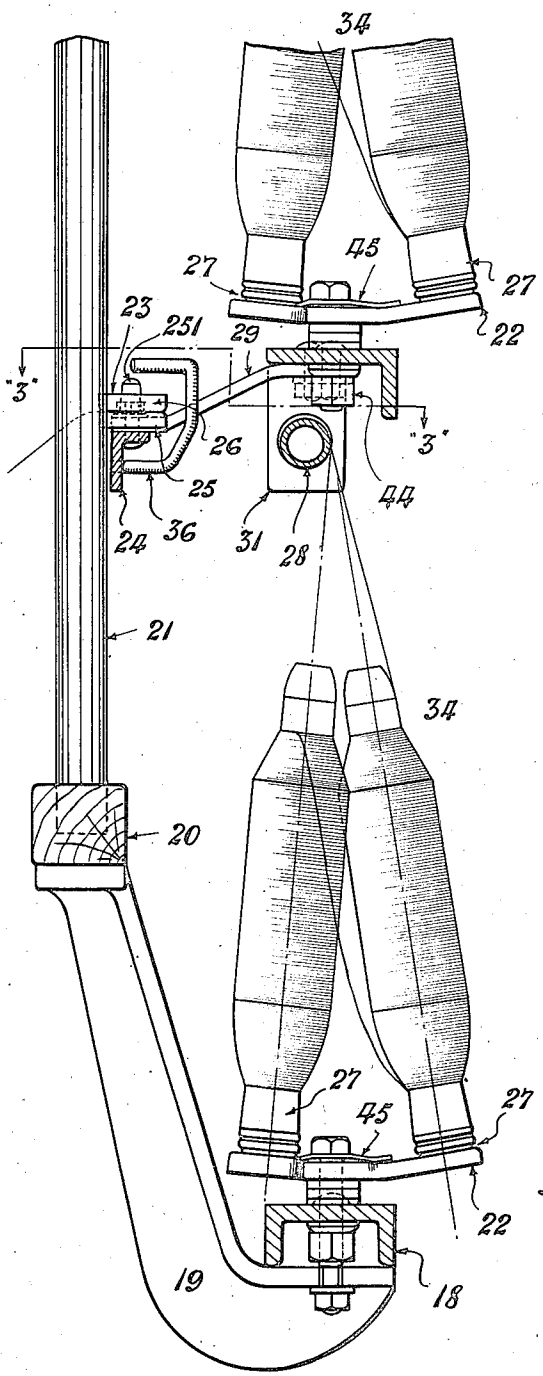


Fig. 2.

Inventors:
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Aug. 21, 1923. 1,465,359

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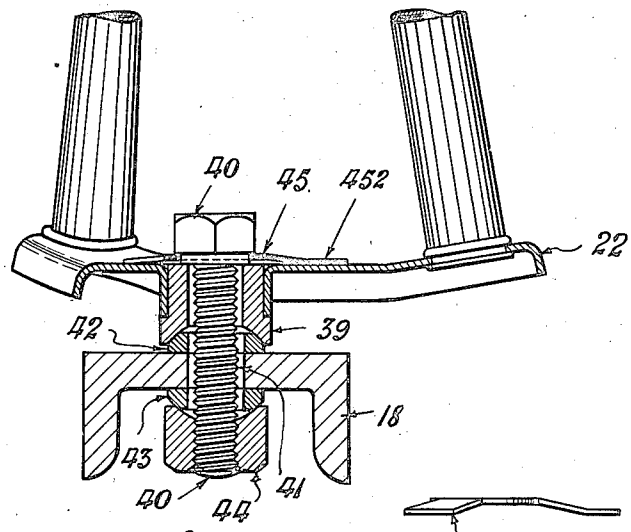


Fig. 3.

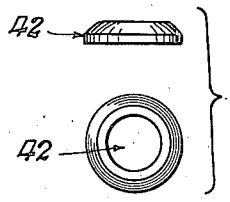


Fig. 5.

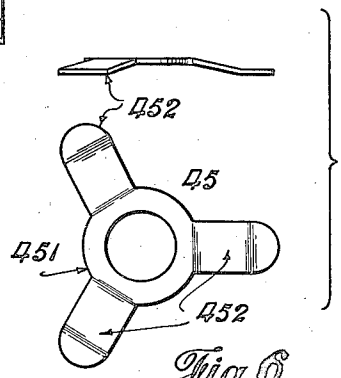


Fig. 6.

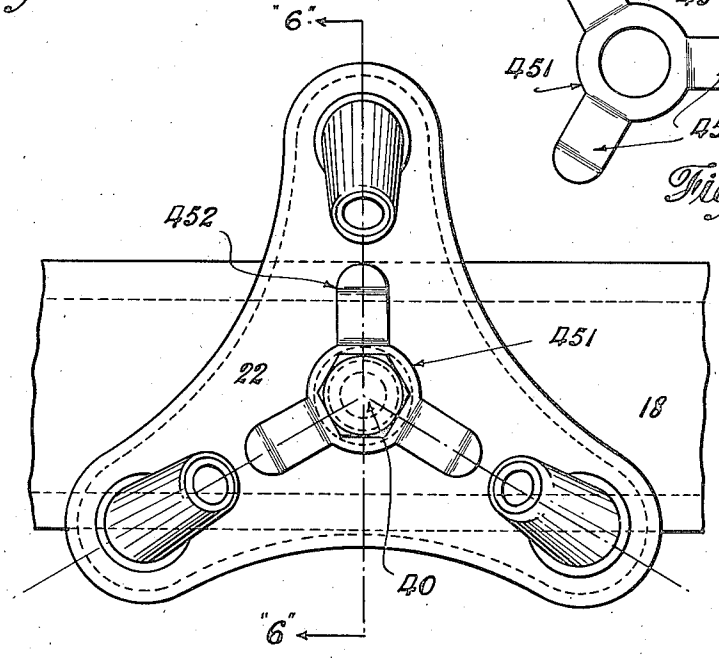


Fig. 4.

Inventors:
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By their Attorneys:- Bromhead & Co

Patented Aug. 21, 1923. 1,465,359

UNITED STATES PATENT OFFICE.

FRANK ASHWORTH HOLT, OF ROCHDALE, AND GRINDROD KERSHAW, OF WHITWORTH, ENGLAND.

CREEL AND SUPPORT FOR YARNS.

Application filed January 26, 1923. Serial No. 615,015.

To all whom it may concern:

Be it known that we, FRANK ASHWORTH HOLT, a subject of the King of the United Kingdom of Great Britain and Ireland, and resident of Noon Sun House, Whitworth Road, Rochdale, in the county of Lancaster, England, and GRINDROD KERSHAW, a subject of the King of the United Kingdom of Great Britain and Ireland, and resident of 62 Market Street, Whitworth, in the county of Lancaster, England, have invented new and useful Improvements in Creels and Supports for Yarns, of which the following is a specification.

This invention of improvements in creels and supports for yarn or thread and the like plates to creels of the kind in which yarn or thread is drawn off cops or ring frame bobbins or other bodies holding or formed of yarn or thread mounted in groups or series on revoluble supports or otherwise, with the beginning of the yarn, thread or the like of one connected with the end of that on another for them to be drawn off successively and fresh cops, bobbins or the like to take the place of those from which yarn, thread or the like has been drawn off can be applied without stoppage of the warping, beaming or other operations for which yarn, thread or the like is being unwound therefrom. The principal objects of the invention are to improve the mounting of revoluble holders for holding yarn in creels of the same kind and to provide simple and convenient means for hindering excessive turning of revoluble supports while allowing the turning requisite from time to time easily to be effected, and thereby to facilitate other machines and the work of attendants or operators on the creels or other machines and the warping, beaming or other operations in which yarn, thread or the like is wound or unwound and the attainment of a high speed of working in cases in which it is desirable.

Hereinafter for simplicity "yarn" will be used to mean "yarn or thread" and in reference to yarns or threads considered separately either "yarn" or "thread" or "yarns" or "threads" will be used as may be desirable for clearness, "yarn bodies" will be used to mean cops or ring frame bobbins or other bodies of or holding yarn and "connected yarn bodies" will be used to mean cops or ring frame bobbins or other bodies of or holding yarn with the beginning of the yarn of one connected to the end of yarn of another.

With the objects stated the invention consists in mountings for facilitating accurate adjustment and fixing of pivots or bearings for carrying revoluble holders for connected yarn bodies in creels and in resilient washers by which possibilities of undesirable movement of revoluble holders for connected yarn bodies due to slackness or faulty fitting or other causes are taken up and it is ensured that yarn bodies applied on the holders shall be presented in such positions that yarn can be freely and properly drawn off and by which the holders may be kept from continuing unduly to turn.

In the accompanying drawings which illustrate this invention, parts applied to or in a creel of the kind in which yarn is wound from connected yarn bodies are shown in connection with or relation to the parts of the creel to or with which they are applied or employed while the creel as a whole is omitted, the general construction arrangement and use of creels of the kind being well known. Fig. 1 is a side elevation; Fig. 4 is a plan; Figs. 5 and 6 include both side elevations and plans of the parts represented, and Figs. 2 and 3 are sections on planes indicated by the correspondingly numbered lines in other figures.

The same numerals of reference indicate corresponding parts in different figures.

In Figs. 1 and 2, 22 are revoluble holders for supporting yarn bodies the two holders 22 shown serving as examples of the several tiers of holders 22 arranged in vertical rows.

According to this invention in order to facilitate accurate adjustment and fixing of pivots or bearings for carrying revoluble supports in a creel in which yarns are drawn from connected bodies of yarn the pivot on which a revoluble support is to be mounted or the bearing to receive a pivot formed on or secured to a revoluble support is formed or provided, as illustrated in the case of pivots 39 by Figs. 1, 2, 3, 4 and 5, conveniently by the provision of a bolt 40 made to pass through it, with a shank screw threaded throughout or in part to be passed through a hole 41 large enough to allow free passage and some lateral movement to it in the rail or support 18 or 30 by which the revoluble holder 22 is to be carried and two

washers 42, 43, with flat or like or other appropriate faces on one side to bear against that rail or support 18 or 30 and on the other side of a spherical or approximately spherical curvature to bear in corresponding hollows formed in a part of the pivot or bearing 39 and in a nut 44 to be screwed upon the screwed shank.

The pivot or bearing 39 is formed externally with a journal and shoulder around and on which the holder 22 is mounted and made to rest. Fig. 5 shows the collar 42 detached in side elevation and plan. The holes in the pivot or bearing 39 and washers 42, 43 like the hole 41 in the rail 18 or 30 are made larger than the screwed shank of the bolt 40 to facilitate adjustment. When the pivot or bearing 39 is applied to the rail or support 18 or 30 for carrying it, the flat or other appropriate faces of the washers 42, 43 being made to bear against the rail or support 18 or 30, the pivot or bearing 39 and shank of the bolt 40 may be adjusted in any direction requisite relatively to the rail or support 18 or 30 and after adjustment secured in position, the spherically or approximately spherical curved faces allowing the pivot or bearing 39 and the nut 44 for securing it to be tilted or set in any position requisite relatively to the washers 42, 43 and the nut 44 to be screwed into securing position whatever may be the position of the pivot or bearing 39 and the nut 44 relatively to the washers 42, 43 against which they respectively bear. In the case illustrated, guide rods 28 of which only one is shown being provided above the groups 34 of yarn bodies it is requisite that the bolts 40 and groups 34 of yarn bodies shall be adjusted, so that their centre lines shall be in line with the sides of the guide rods 28 which are directed inwardly in the creel.

In cases in which the revoluble supports have pivots formed on or secured to them the bearings or the shanks provided for them may be formed with sockets to receive the pivots or with holes or bearings through which the pivots may be made to extend and, if need be, nuts, collars or pegs or other means appropriate may be provided, in either case, for holding the pivots in the sockets or holes or bearings.

Further according to this invention there are provided for use with revoluble holders for connected yarn bodies in creels, resilient washers which take up possibilities of movement of such holders due to slackness or faulty fitting or other causes and ensure that, when once the holders are adjusted for work, the pegs or fingers for carrying the yarn bodies shall remain pointing in such directions that yarn can be freely and properly drawn off and may act as brakes to keep the holders from continuing unduly to turn. Such a resilient washer is formed of or comprises a plate of resilient metal having a central part of circular or other shape convenient formed with a circular or other suitable hole and with arms extending from it and divergent from the plane of the central part on one face or on both faces as illustrated in the case of one face in Figs. 1, 2, 3, 4 and 6 which show plates 45 each formed of a central collar 451 with three divergent arms 452 bent so that when placed around the shoulders or journals formed on the bolts 40 to which they are respectively applied the divergent arms 452 are downwardly directed so that the central part may be made to bear against or to embrace one object, in the case illustrated a bolt 40, while the tips of the diverging arms 452 may be made to bear against another, in the case illustrated a holder 22, or so that tips turned in opposite directions my be made to bear against different objects whether or not the central part is made to bear against or to embrace either of those objects or another. A washer of this kind being applied around the pivot of a revoluble holder or a bolt or the like used therewith and being made to bear against the holder by the tips of its arms or being applied between such a holder and some other adjacent surface so as to bear against one with the tip or tips of one or more of its arms and against the other with the tip or tips of its other arm or arms will take up any possibilities of movement due to slackness or faulty fitting and will prevent the revoluble holder from continuing unduly in movement while allowing it to be moved with the freedom necessary.

What we do claim as our invention and desire to secure by Letters Patent is:

1. Supporting means for carrying a revoluble holder for connected yarn bodies in a rail in a creel comprising a carrying part for receiving and allowing turning of the revoluble holder and having a hollow to receive a washer and provided with a screw threaded shank to be passed through a hole in the rail and to receive a nut two washers applied around the shank one presenting a face to bear against the rail and a rounded face to enter the hollow in the carrying part and the other a face to bear against the rail and a rounded face to enter a hollow in a nut and a nut to be screwed on the shank and presenting a hollow to receive the rounded face of the second washer.

2. Supporting means for carrying a revoluble holder for connected yarn bodies in a rail in a creel comprising a carrying part for receiving and allowing turning of the revoluble holder and having a hollow to receive a washer and having a hole for the passage of a bolt, a bolt to be passed through such a hole and a hole in the rail and to receive a nut, two washers applied around

the bolt one presenting a face to bear against the rail and a rounded face to enter the hollow in the carrying part and the other a face to bear against the rail and a rounded face to enter a hollow in a rail a nut screwed on the bolt and presenting a hollow to receive the rounded face of the second washer.

3. Supporting means for carrying a revoluble holder for connected yarn bodies in a creel comprising a carrying part for receiving and allowing turning of the revoluble holder and having a part to receive a washer means for securing such carrying part in position and a resilient washer applied to the carrying part and having a central part with a hole whereby it may be mounted on such carrying part and be held in position by the means which secure the carrying part and having arms extending from the central part and diverging from the plane thereof to bear on the revoluble holder.

In testimony, that we claim the foregoing as our invention, we have signed our names this fifth day of January 1923.

FRANK ASHWORTH HOLT.
GRINDROD KERSHAW.