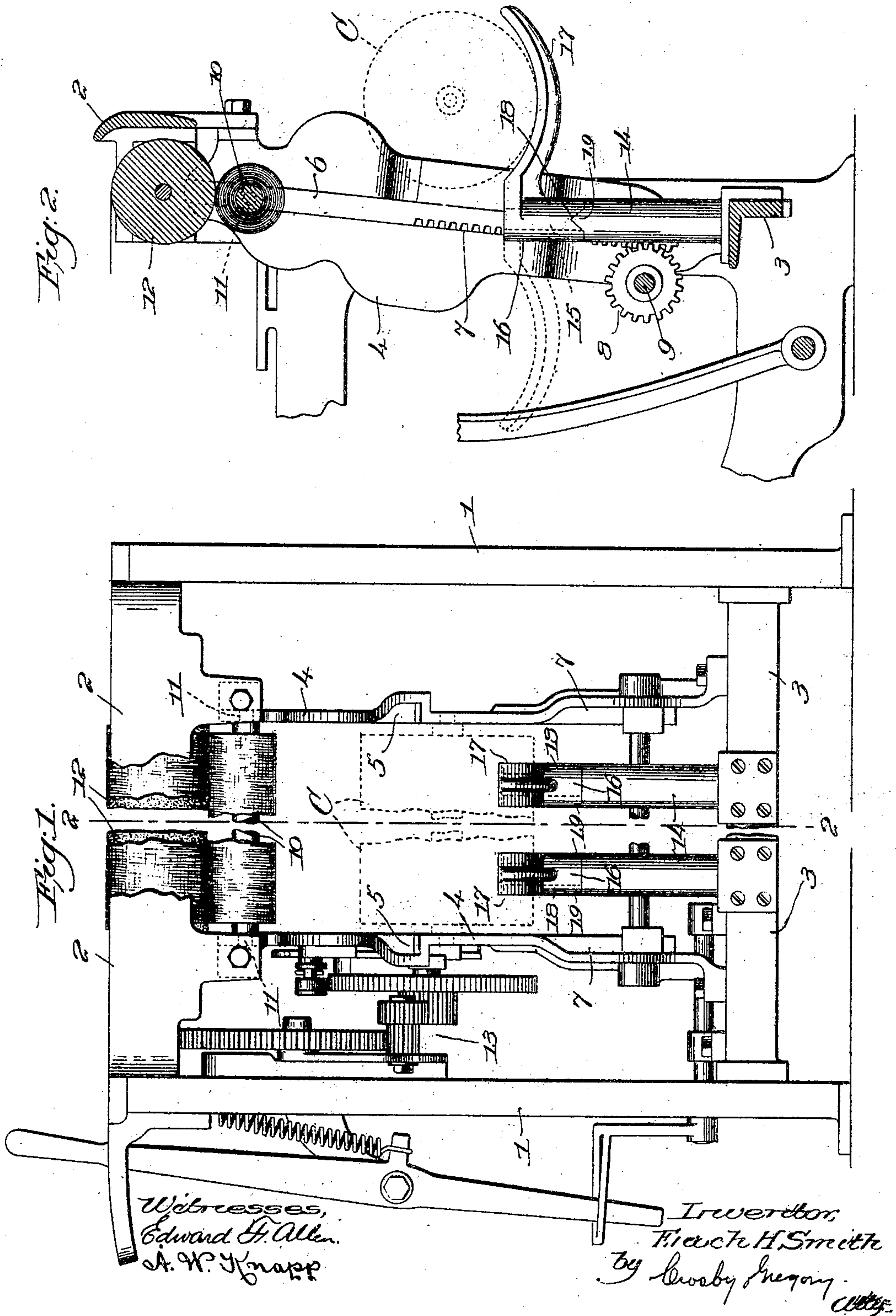


No. 795,555.

PATENTED JULY 25, 1905.

E. H. SMITH.
TEMPORARY CLOTH ROLL SUPPORT FOR LOOMS.
APPLICATION FILED MAR. 30, 1905.



UNITED STATES PATENT OFFICE.

ENOCH H. SMITH, OF BELTON, SOUTH CAROLINA, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

TEMPORARY CLOTH-ROLL SUPPORT FOR LOOMS.

No. 795,555.

Specification of Letters Patent.

- atented July 25, 1905.

Application filed March 30, 1905. Serial No. 252,802.

To all whom it may concern:

Be it known that I, ENOCH H. SMITH, a citizen of the United States, and a resident of Belton, county of Anderson, State of South Carolina, have invented an Improvement in Temporary Cloth-Roll Supports for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention has for its object the production of means for temporarily supporting the roll of cloth after the "cut" has been completed and the cloth-roll journals have been withdrawn from the bearings in which they are supported during the formation of the cut.

During the winding of the cloth on the cloth-roll the journals of the latter are supported in suitable bearings generally arranged to move away from the take-up roll as the diameter of the roll of cloth increases. When the cut is completed, the roll of cloth is removed from the loom and carried away, and this operation usually requires the combined efforts of two persons, one at each end of the roll of cloth, either to shoulder the roll or to prevent one end from contacting with the dirty floor, as would happen if one operative handled it. In the case of broad looms, and in other looms where the cut is so heavy that it cannot be handled by one operative, the roll of cloth is generally carried away on the shoulders of two men.

In my present invention I have provided the loom with means to temporarily support the roll of cloth, the construction and arrangement being such that the weaver can first remove one of the cloth-roll journals from its bearing and temporarily support the roll at that end, whereupon the weaver removes the other journal and places the adjacent end of the roll on its support. From the temporary supporting means the roll is readily shouldered and carried away. The temporary supporting means also conveniently sustains the roll when the shaft or bar on which the cloth is wound is pulled out, if the bar be removed at the loom. It is often customary to take away the bar and cloth and unwind the cloth from the bar.

The various 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 front elevation, centrally broken out, of a sufficient portion of a loom to be understood, showing the temporary supporting means for the roll of cloth in operative position; and Fig. 2 is a transverse section on the line 2 2, Fig. 1, looking toward the right, the temporary support being shown by dotted lines in inoperative position.

The loom sides 1, breast-beam 2, cross-girth 3, connecting the lower portions of the loom sides, the fixed and longitudinally-slotted upright guides 4, secured to the breast-beam and cross-girth and having offset open portions 5, Fig. 1, the bearings 6, shown as slidable longitudinally in the guides 4 and having rack-teeth 7 in mesh with pinions 8 on a controlling-shaft 9, the cloth-roll or shaft 10 upon which the cloth is wound and having journals 11 to enter suitable notches or sockets in the bearings 6, the take-up roll 12, and the train of gearing 13 to actuate it (see Fig. 1) may be and are all substantially as in United States Patent No. 610,636 to Northrop, dated September 13, 1898.

As the cloth is wound upon the roll or shaft 10 bearings 6 gradually descend as the roll of cloth increases in diameter until the desired length of cloth has been wound, forming the cut. When this has been severed from the web of cloth still in the loom, the bearings are moved to bring the cloth-roll journals opposite the openings 5 of the guides 4, and the roll of cloth can then be removed. This operation when the roll is a large one, and particularly when the roll is long, as in a broad loom, ordinarily requires the services of two operatives. I have provided means herein to obviate the necessity for such additional labor in taking off the cut and to greatly facilitate the work of the weaver. To this end I provide auxiliary cloth-roll supports, which are shown as movable into position at the front of the loom to temporarily receive and support the cut when the journals 11 are removed from the bearings 6. Upright stands 14 are rigidly secured to the cross-girth 3, one near each of the guides 4, so that the stands are located between the guides. The upper end of each stand has a cylindrical extension 15 of relatively small diameter (shown in dotted lines, Fig. 2) and constituting a fulcrum for the hub 16 of a laterally-extended swing-arm 17, longitudinally concaved. (See Fig. 2.) When the weaver is ready to remove the

roll of cloth, he swings the two arms 17 into full-line position, Fig. 2, so that they project forward below the openings 5 of the guides. Then one journal 11 is withdrawn from its bearing and the adjacent end of the roll of cloth is dropped onto the arm 17 near it and the operation is repeated with the other journal, the first-named arm 17 supporting the freed end of the roll of cloth until the weaver frees the other journal and drops that end of the roll onto the adjacent arm.

In Figs. 1 and 2 I have shown in dotted lines the roll of cloth C as sustained by the auxiliary supports, from which it can be readily removed and taken away. The supporting-arms 17 are then swung back out of the way into dotted-line inoperative position, Fig. 2.

I have provided simple locking means to keep the arms 17 in operative or inoperative position until positively changed by manual action.

The lower ends of the hubs 16 are each provided with opposite A-shaped notches 18 to be entered by correspondingly-shaped upright lugs 19 on the upper ends of the stands 14, so that when the lugs are in the notches the arms cannot swing laterally on their fulcrums 15.

When there is no weight on the arms, a push in one direction or the other thereon will cause the sides of the notches to ride up over the lugs, and one-half a revolution of the hubs must be made before they will be again locked.

My invention is not restricted to the precise construction and arrangement herein shown and described, for the same may be modified or varied in different particulars by those skilled in the art without departing from the spirit and scope of my invention.

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

1. In a loom, bearings for the cloth-roll journals during the formation of a cut, and independent auxiliary supports movably mounted on the loom-frame and adapted to temporarily sustain the completed roll of cloth when the journals thereof are withdrawn from said bearings.

2. In a loom, slidable bearings for the cloth-

roll journals during the formation of a cut, and auxiliary supports mounted on the loom-frame independent of said bearings and adapted to be moved into position to receive and temporarily sustain the completed roll of cloth when the journals thereof are removed from the bearings.

3. In a loom, sliding bearings for the cloth-roll journals, fixed guides for said bearings, having open portions for the insertion and removal of the cloth-roll journals, and auxiliary supports adapted to extend forward near and between the guides to receive and temporarily sustain the roll of cloth when the journals thereof are removed from the bearings.

4. In a loom, sliding bearings for the cloth-roll journals, fixed guides for said bearings, having open portions for the insertion and removal of the cloth-roll journals, an auxiliary support mounted to swing on a vertical axis adjacent each guide, to temporarily sustain the contiguous end of the roll of cloth when its journals are removed from the bearings, and means to lock said auxiliary supports in operative or inoperative position.

5. In a loom, movable bearings to sustain the cloth-roll journals during the winding of the cloth, manually-controlled auxiliary supports mounted to swing on vertical axes and each having a concave arm adapted to extend beneath and temporarily sustain one end of the cloth-roll when its journals are removed from the bearings, and means to lock the supports in operative roll-supporting position.

6. In a loom, take-up mechanism, including a roll on which the cloth is wound, means to sustain the roll while the cloth is being wound thereupon, and separate means mounted on the loom and manually movable into position to temporarily receive the ends of the roll of cloth when its journals are removed from the sustaining means.

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

ENOCH H. SMITH.

Witnesses:

LERROY A. WERTS,
LEWIS D. BLAKE.