

No. 868,688.

PATENTED OCT. 22, 1907.

T. F. & A. NAYLOR.
LOOM FOR WEAVING CHENILLE.

APPLICATION FILED JAN. 27, 1906.

3 SHEETS--SHEET 1.

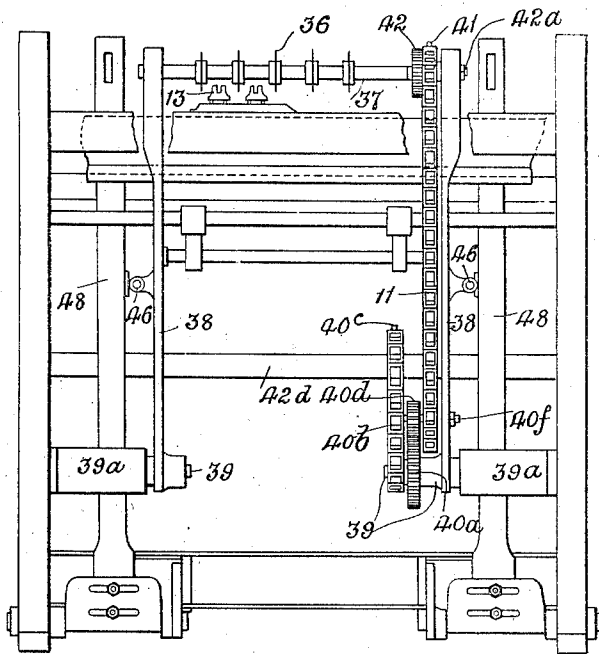
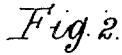
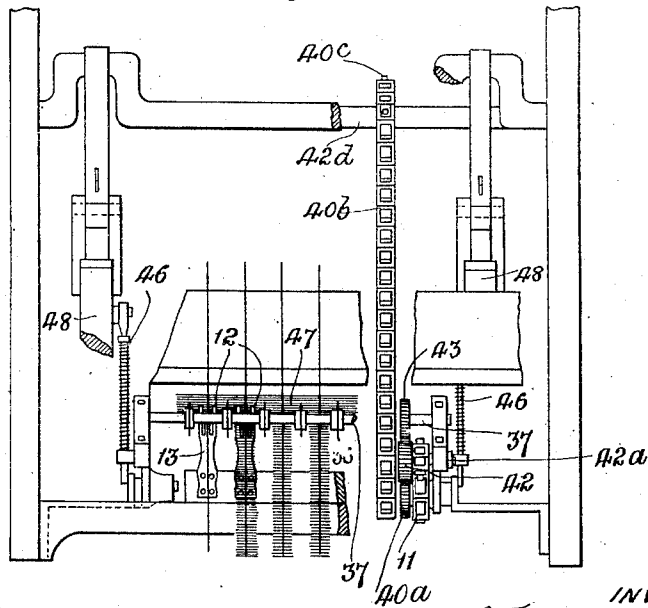


Fig. 1.



WITNESSES

in Petition
John A. Percival.

INVENTORS

Thomas Fox Naylor
Arthur Naylor
The Richards Co

ATTY'S.

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Fig. 2a.

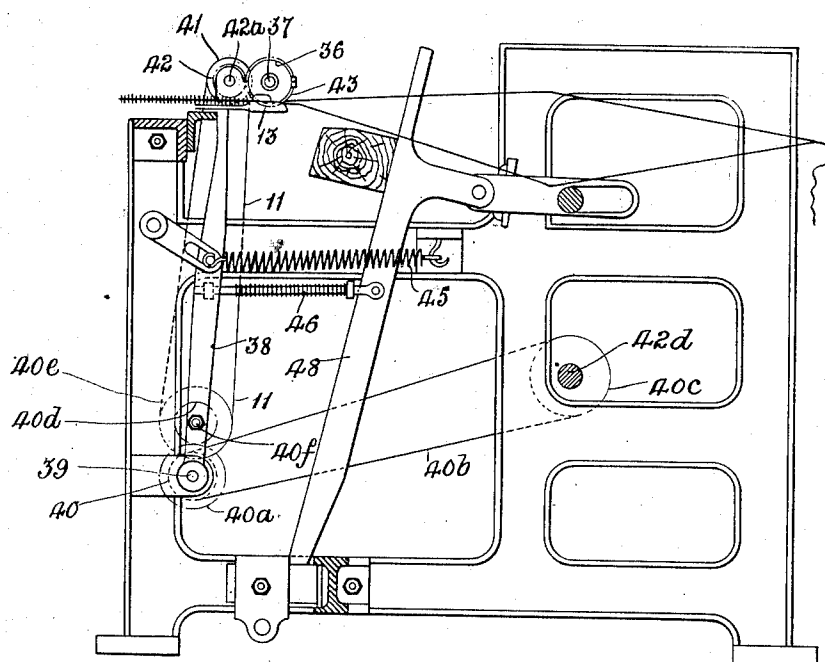


Fig. 8.

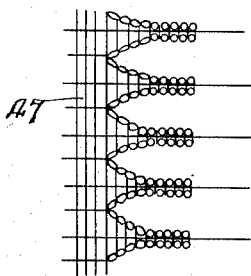


Fig. 6



Fig. 7.

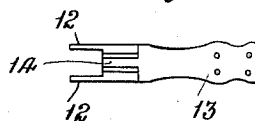


Fig. 9.



WITNESSES

W. B. Pettit
John A. Prewal

INVENTORS

Thomas Fox Naylor
Arthur Naylor
J. Richardson

ATTYS.

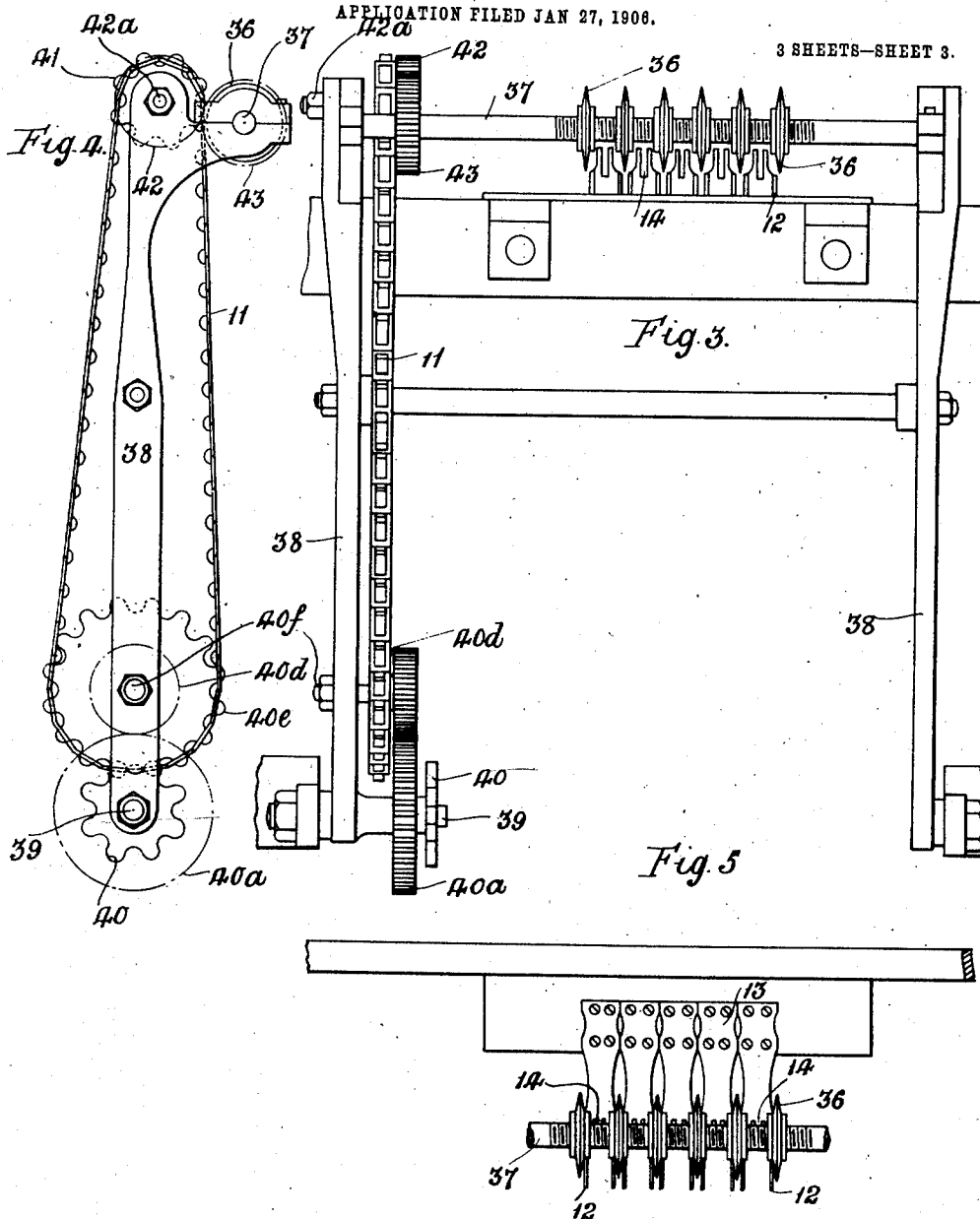
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3 SHEETS—SHEET 3.



WITNESSES

W. B. Pitt
John A. Percival

INVENTORS

Thomas F. Naylor
Arthur Naylor
B. Richardson

ATTYS.

UNITED STATES PATENT OFFICE.

THOMAS FOX NAYLOR AND ARTHUR NAYLOR, OF KIDDERMINSTER, ENGLAND.

LOOM FOR WEAVING CHENILLE.

No. 868,688.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed January 27, 1906. Serial No. 298,226.

To all whom it may concern:

Be it known that we, THOMAS FOX NAYLOR and ARTHUR NAYLOR, both of Green street, Kidderminster, in the county of Worcester, England, carpet manufacturers, have invented certain new and useful Improved Cutting Mechanism for Cutting the Web in a Chenille-Weaving Loom During Weaving, of which the following is a specification.

Our invention relates to an improved cutting mechanism for cutting the web in a chenille weaving loom during the weaving of chenille suitable for use in the manufacture of carpets and the like, such chenille consisting of a single thick core around which are looped the wefts or tufts which, when cut, constitute the pile of the chenille.

The wefts or tufts are woven together into a flat web and they are firmly held together by four sets of leno or doup threads, two sets on either side of each thick core, two threads crossing over the thick core from side to side are laced around every third or fourth weft by passing down and up again between two of the sets of leno threads. The wefts are cut by revolving cutters within say three or four picks of weft of the nip of the cloth. When the wefts are cut they form the pile tufts and the ends being released from the neighboring tufts the ends or tufts are drawn upwards towards each other around the core by the tightness of the cross-over threads, into a bottle or flask shape chenille, the upright tufts resembling the neck and the part around the core resembling the globe of the bottle or flask.

Our improved cutting mechanism for cutting the woven web into chenille strips during the weaving operation consists of a small shaft supported in a horizontal position immediately over the woven web, and near the point of weaving, having circular knives fastened on it and spaced apart accurately so as to divide the web as woven into strips, leaving the tufts practically even in length.

The shaft with its cutters is mounted on two standards, one near each edge of the web. These are supported on studs near the bottom of the loom so that they may oscillate backward and forward with the beat-up of the lathe or slay. That is to say, when the lathe or slay goes back for shuttling, the revolving knives follow nearly to the nip of the cloth, revolving all the time, and when the lathe comes forward for the beat-up the revolving knives move back or away so as not to come in contact with the reed. In order to keep the weft against the edges of the knives, we fix a flat bar to the breast beam, under the web, and between the breast beam and the shuttle race. On this bar are mounted projecting brackets which are spaced apart to correspond with the revolving knives so as to project between them, and which nearly fill the spaces between the knives. At the projecting end of each

bracket are two thin blades or tongues which project still further, so that when the lathe beats the weft in, the tongues enter spaces left in the reed. The tongues on one bracket are set or spaced very near to the tongues on the neighboring brackets, leaving only just enough room for the revolving knives to pass between. As the web is woven the wefts are laid over the top edges of the tongues, so that with the forward movement of the blades, while revolving, a scissor like action is produced, which severs the wefts as they approach the cutters.

In the accompanying sheet of drawings.—Figures 1, 2 and 2^a are respectively plan, front and end elevations of the loom. Figs. 3 and 4 are detailed front and end elevations of the swing circular cutting arrangement for dividing the web as woven into strips of chenille. Figs. 5, 6 and 7 are detail views of the mounted projecting brackets. Figs. 8 and 9 are plan and side view respectively of the chenille.

In these views, the revolving cutters 36 are shown fixed on a shaft 37 journaled in bearings on standards 38 which oscillate on studs 39. The cutter shaft 37 is driven continuously from the back shaft 42^a or other convenient shaft, by a chain wheel 40^a and chain 40^b which gives motion to a chain wheel 40 mounted upon stud 39; or by any other convenient drive. A spur wheel 40^a is combined with the chain wheel 40 and this wheel 40^a gears into a spur wheel 40^d combined with a chain wheel 40^e both mounted upon a stud 40^f secured to one of the standards 38, the chain wheel 40^e drives by a chain 41 a chain wheel 41 combined with a spur wheel 42 fixed on a shaft 42^a. The spur wheel 42 gears into and drives a spur wheel 43 fixed on the cutter shaft 37 whereby the cutters 36 receive a continuous revolving motion so long as the loom is running.

As the chenille web 47 (Fig. 1) is being woven it is drawn towards the revolving cutters 36 and on to the thin blades or tongues 12 on brackets 13 which support the wefts of the web 47 to be cut as they are presented to the cutters 36.

The standards 38 with the revolving cutters 36 are pulled forward by the springs 45 so as to be able to cut the web as it is woven within three or four picks of weft of the nip of the cloth, and pushed backwards or away from the reed by the rods and springs 46 in order to be away from the reed when the beat-up takes place. The standards 38 are moved forward and backward by the movement of the lathe 48 when beating up. The brackets 13 remain stationary and the projecting blades or tongues 12 enter the spaces formed to receive them in the reed.

The tongues 12 on one bracket 13 are set or spaced very near to the tongues on the neighboring brackets see Fig. 5, leaving only just enough room for the revolving cutters 36 to pass between. As the web is woven in the loom the wefts are laid over the top edges of the tongues,

so that with the forward movement of the blades, while revolving a scissor like action is produced, which severs the wefts as they approach the cutters 36. There will be only two, three or four wefts left uncut at each stroke.

- 5 On the top side of the projecting brackets 13 a groove 14 in each is formed for the cut chenille to immediately pass through and as the wefts are cut they are thus assisted in the turning up operation, so as to form the pile tufts of the chenille.

- 10 What we claim and desire to secure by Letters Patent of the United States is:—

In a chenille weaving loom, cutting mechanism for cutting the web while being woven into strips of chenille said

mechanism consisting of revolving cutters, a shaft carrying the cutters and constantly driven while the loom is running, oscillating standards carrying the shaft and which are moved by and with the movement of the frame, and stationary projecting blades for supporting the wefts, while being cut by the forward movement of the revolving cutters all substantially as and for the purposes herein described. 15 20

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

THOMAS FOX NAYLOR,
ARTHUR NAYLOR.

Witnesses:

JAMES MORTON,
FRED GADSBY.