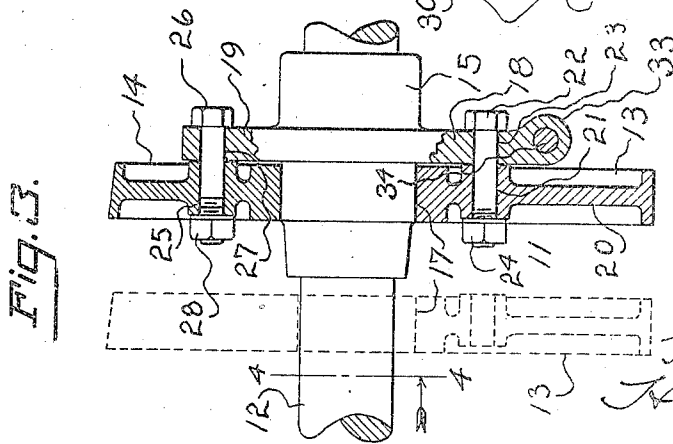
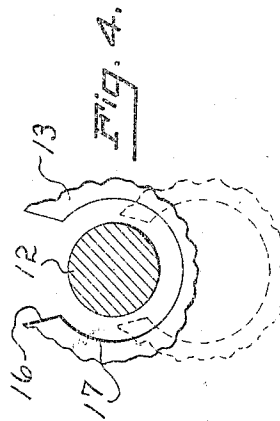
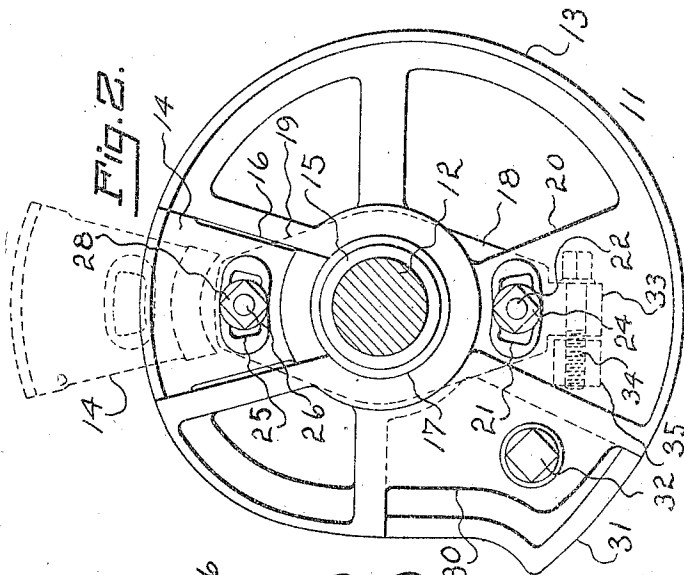
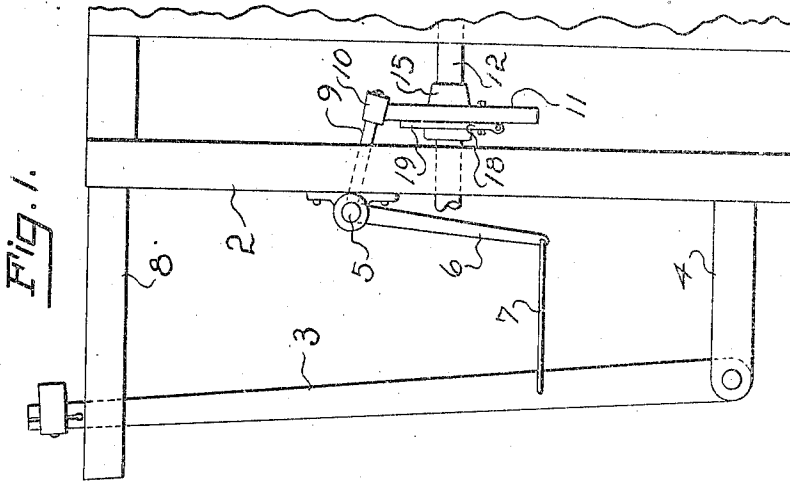


G. M. THORPE.
CAM.

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1,255,952.

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CAM.

1,255,952.

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Patented Feb. 12, 1918.

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To all whom it may concern:

Be it known that I, GEORGE M. THORPE, a citizen of the United States, residing at Millville, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Cams, of which the following is a specification.

This invention relates to cams and more especially to such as are embodied in a loom for operating the picker stick thereof. As is understood a picker stick is actuated by a cam and it is a common occurrence for the cams to be broken owing to the blows they receive in action. At the present time when a cam becomes broken it is a difficult matter to dismount the same. I eliminate this trouble in a highly satisfactory manner by the provision of a cam which can be quickly dismounted and a new and operative one as readily substituted in its place.

In the drawings accompanying and forming part of the present specification I have shown in detail one convenient form of embodiment of the invention which will be set forth fully in the following description to enable those skilled in the art to practise the invention. As may be clear I do not restrict myself to this precise construction. I may depart therefrom in several respects within the scope of the invention defined by the claims following said description.

Referring to said drawings:

Figure 1 is a front elevation of portion of a loom with a cam incorporated therein, involving the invention.

Fig. 2 is an enlarged face view of the cam, its shaft being in cross section and the dotted lines showing how a segment can be removed.

Fig. 3 is a vertical sectional view of the cam and its supporting shaft, the latter, however, in elevation, the dotted lines illustrating how the cam is moved from the bushing.

Fig. 4 is a transverse sectional detail on the line 4-4 of Fig. 3, looking in the direction of the arrow.

Like characters refer to like parts throughout the several views.

In Fig. 1 I have shown portions of a loom. This involves a frame as 2, and a picker stick as 3, the latter being carried by the arm or bearing 4 extending laterally from the frame 2. The picking rock shaft 5 has connected with it the picking arm 6 connected as by the link 7 with the picker

stick 4. The outwardly projecting portion of a lay-beam 8 is also illustrated. The picking rock shaft 5 is furnished with an arm 9 terminating in a roller 10 engageable by the picking tappet or cam 11 on the cam shaft 12 supported by suitable bearings on the frame 2. As will be inferred the invention primarily concerns the picking tappet or cam 11, and its associated parts.

As shown the cam 11 comprises a body or main section 13 and an auxiliary or removable section 14, these two elements in the present case being separably or removably associated to facilitate their disconnection from the bushing or sleeve 15 pinned or otherwise suitably connected to the cam shaft so as to rotate therewith. The body or main section 13 of the cam as shown has a fan-shaped or segmental slot 16 which intersects the central opening 17 of the cam and also the periphery thereof. This slot has its sides inwardly converging and is adapted to snugly receive the segmental auxiliary extension 14 as shown for instance by full lines in Fig. 2. The result is that when the segment or section 14 is in operative relation with the body 13 of the cam, the periphery of the latter is virtually unbroken or continuous. The bushing or sleeve 15 is shown as furnished with oppositely extending and practically radially disposed arms 18 and 19 which are rigid with the bushing or sleeve. This effect may best be obtained by making the arms integral with the bushing or sleeve. The arm 18 in the present instance coöperates with the body 13 of the cam 11. The arm 19 coöperates with the removable segment or section 14, in suitable manner as will now appear. The body 13 of the cam has in the web portion such as in the spoke 20, the segmental slot 21 to receive the bolt 22 which also extends through a perforation 23 in the arm 18, the threaded end of the bolt receiving the nut 24. Owing to the fact that the bolt extends through the segmental slot 21, it will be clear that a certain amount of adjustment of the arm 18 and main section 13 of the cam is provided. The segment 14 has a slot 25 a counterpart of the slot 21, both as will be understood being struck from the center of motion of the cam 11 which in the present case is the longitudinal axis of the shaft 12. Extending through this slot 25 is a bolt or screw 26 which also projects through a perforation

27 in the arm 19, the head of the bolt bearing against the arm and the threaded part of the bolt, receiving the nut 28 which bears against the segment 14.

5 The parts are shown in their assembled relations in Fig. 1 and by full lines in Figs. 2 and 3. When the loom is in action the tappet or cam 11 acts after the fashion of those ordinarily in use, that is to impart
10 the necessary motion to the picker-stick 3. These tappets or cams frequently break as I have already noted, and when they do it is a difficult thing at the present time to dismount one of them. It is necessary in
15 fact to unshift the cam shaft 12 and slip the broken cam from it. By virtue of the present invention this difficulty is altogether avoided. It will be supposed that a cam or tappet as 11 does become broken and
20 that as a consequence it is necessary to dismount it. In this event the following procedure may be adopted: The bolts 23 will first be taken from place, thus altogether disconnecting the cam 11 from the sleeve or
25 bushing 15. At this point the segment 14 will be lifted from the slot 16 as shown by dotted lines in Fig. 2. The body 13 of the cam will then be moved laterally as shown by the dotted lines in Fig. 3, thus taking it
30 entirely free of the bushing, and it can then be separated from the shaft 12. In the construction shown the mouth or inner end of the slot 16 is of slightly greater width than the diameter of the shaft which renders this easily done. To supply a new cam
35 or tappet the body as 13 will be placed over the shaft 12 and slid along the shaft and then onto the bushing or sleeve 15. A segment as 14 will then be introduced into the
40 slot 16 and the two parts of the cam connected with the arms 18 and 19 as already set forth.

The main section 13 of the cam as shown has an aperture 30 to receive the detachable
45 tappet or pick nose 31 which is removably held in place by a bolt 32. It is not always essential that this pick nose 31 should be provided. Its function can be otherwise performed. For instance the auxiliary cam
50 section or segment 14 can be so shaped as to perform the purpose of a pick nose such as that denoted by 31. There are many other ways, as may be inferred in which certain objects can be attained and to which I

need not refer. The invention as will be
55 understood is not limited to certain details.

The arm 18 has a projection 33 to be engaged by the screw 34 threaded through the
60 lug 35 on the main section 13. By turning the screw the parts can be held in their adjusted positions.

What I claim is:

1. A picker-stick-operating cam comprising a main section, and an auxiliary section, and a sleeve on which the cam is mounted
65 and to which the respective sections are detachably connected.

2. A picker-stick-operating cam and a sleeve therefor, the cam having a removable
70 segment, and the segment and the main portion of the cam being removably connected to the sleeve.

3. The combination of a rotary shaft, a sleeve on the rotary shaft, and a picker stick
75 operating cam on the sleeve having a removable segment to permit of its detachment from the sleeve, the segment and the main portion of the cam being removably connected with the sleeve.

4. A picker stick operating cam and a
80 sleeve therefor, the cam having a removable segment and the segment and the main portion of the cam being removably connected with the sleeve, the sleeve having arms, and fastenings removably connecting said arms
85 with the segment and the main portion of the cam.

5. A picker stick operating cam and a sleeve therefor, the cam having a removable
90 segment and the segment and the main portion of the cam being removable from the sleeve, the sleeve having arms, and bolts connecting the arms with the segment and the main portion of the cam.

6. A picker stick operating cam and a
95 sleeve therefor, the cam having a removable segment and the segment and the main portion of the cam being removable from the sleeve, the sleeve having arms, and bolts connecting the arms with the segment and
100 the main portion of the cam.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE M. THORPE.

Witnesses:

JAMES A. HAAS,
WILBERT PANCOAST, Jr