

H. CÔTÉ & R. C. SNOW.

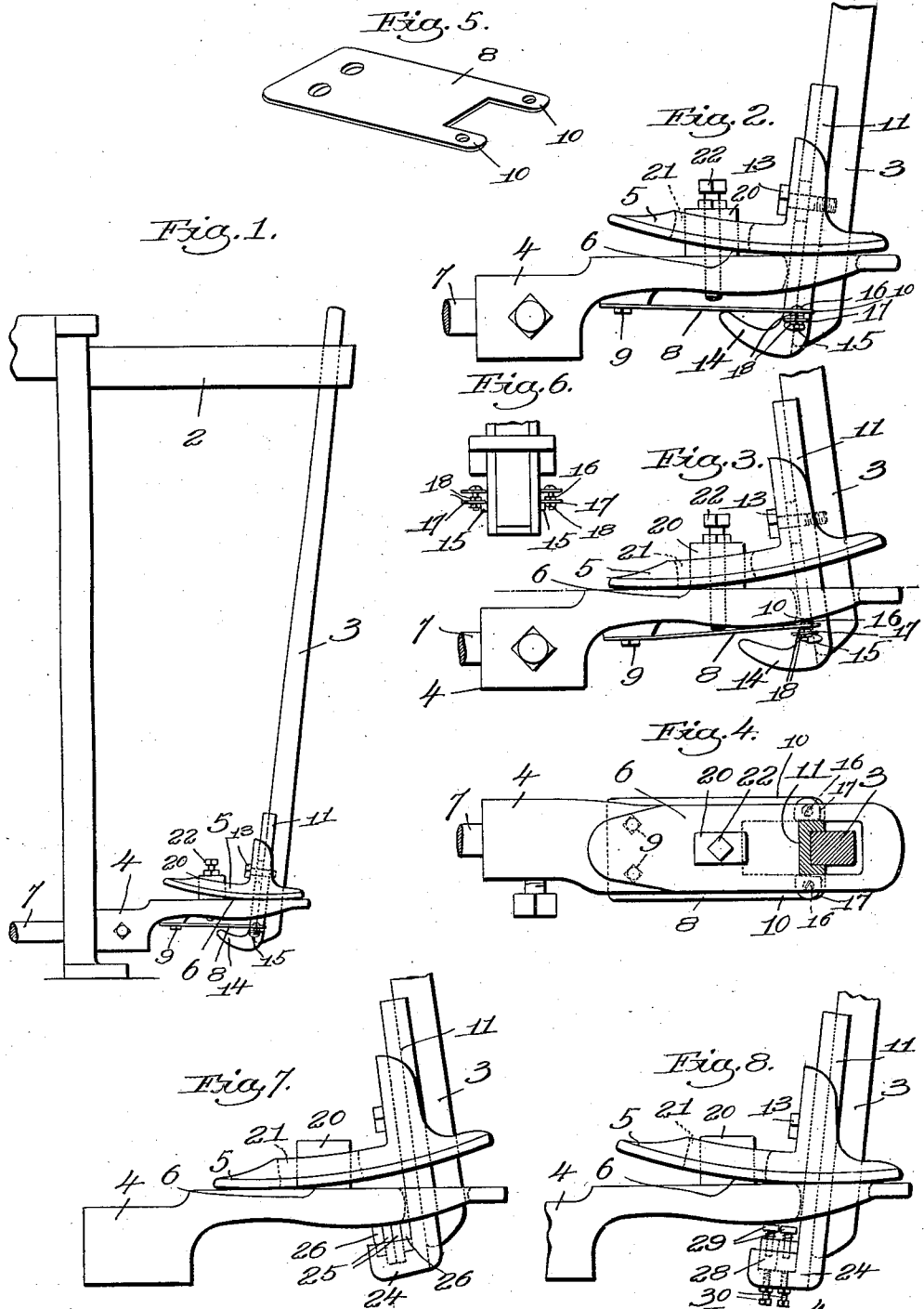
PICKER CHECK.

APPLICATION FILED JAN. 6, 1910.

1,024,036.

Patented Apr. 23, 1912.

3 SHEETS-SHEET 1.



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3 SHEETS—SHEET 2.

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Fried. S. Grumbaf.  
Joseph M. Ward.

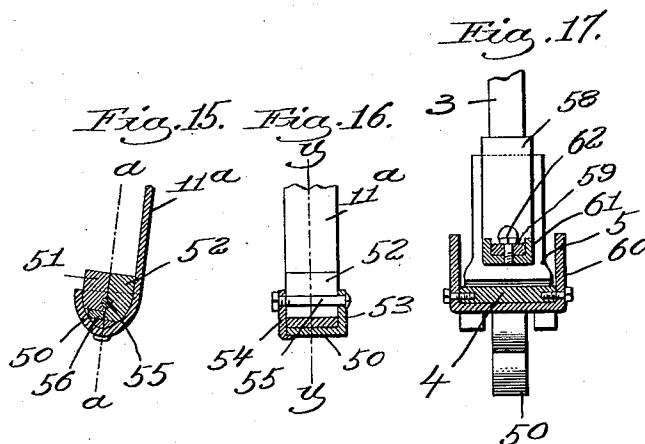
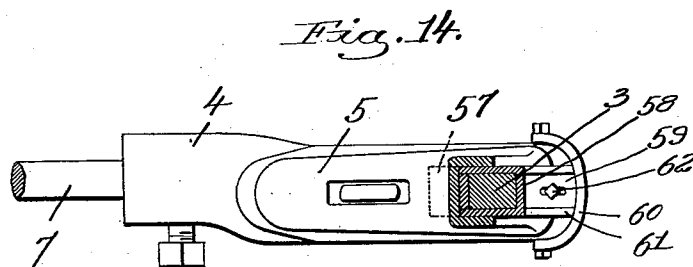
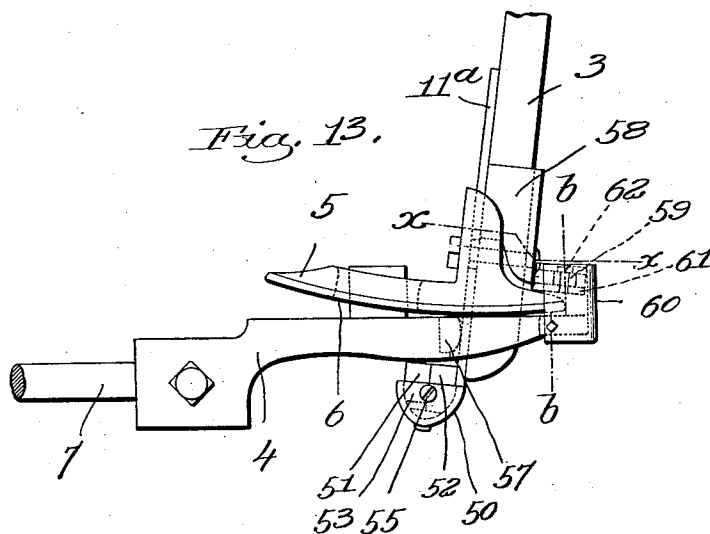
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3 SHEETS-SHEET 3.

1,024,036.



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# UNITED STATES PATENT OFFICE.

HENRY CÔTÉ, OF WEST WARREN, AND RENCELER C. SNOW, OF WARE, MASSACHUSETTS, ASSIGNORS TO WARE MACHINE & LOOM COMPANY, OF WARE, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

## PICKER-CHECK.

1,024,036.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed January 6, 1910. Serial No. 536,679.

*To all whom it may concern:*

Be it known that we, HENRY CÔTÉ, a citizen of the United States, residing at West Warren, county of Worcester, and State of Massachusetts, and RENCELER C. SNOW, a citizen of the United States, residing at Ware, county of Hampshire, and State of Massachusetts, have invented an Improvement in Picker-Checks, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to picker checks for looms and has for its principal object to provide a novel picker check which is associated with the rocker foot. The picker stick of a loom usually passes up through a slot in the bottom of the shuttle box and in order to prevent the picker stick from becoming injured by striking the ends of the slot it is customary either to provide a buffer or bunter at the ends of the slot which are intended to cushion the blow of the picker stick, or to provide some kind of check device to act on the picker stick and check or limit its movement.

It is the object of our invention to provide such a check device, which is associated with the rocker foot.

The features wherein our invention resides will first be described and then the novel features of the invention will be pointed out in the appended claims.

Referring to the drawings, Figure 1 is a view of one end of the lay of a loom showing the picker stick and our improved picker check; Fig. 2 is an enlarged side view of the rocker foot and the lower end of the picker stick showing the manner in which the backward movement of the picker stick is checked; Fig. 3 is a similar view showing the manner in which the forward movement of the picker stick is checked; Fig. 4 is a top plan view of Figs. 2 and 3; Fig. 5 is a perspective view of the checking spring illustrated in Figs. 2 and 3; Fig. 6 is an end view of the rocker foot shown in Figs. 2 and 3; Figs. 7, 8, 9, 10, 11 and 12 are views showing modifications of the invention; Fig. 13 illustrates a still further modification of the invention wherein means are employed for taking up the wear on the plug usually carried by the rocker-foot; Fig. 14 is a sec-

tion on the line  $x-x$ , Fig. 13; Fig. 15 shows a view of the check removed from the picker stick taken on the line  $y-y$ , Fig. 16; Fig. 16 is a view taken on the line  $a-a$ , Fig. 15; Fig. 17 is a section view taken on the line  $b-b$ , Fig. 13.

In the drawings 2 indicates the shuttle box; 3 the picker stick; 4 the rocker foot which is sustained by the rock-shaft 7; and 5 the rocker that is secured to the picker stick and is provided with the curved under surface 6 that rocks on the rocker foot 4 in usual manner.

We have not illustrated herein the lug-strap and other mechanism for operating the picker as this forms no part of the present invention, and we do not wish to confuse the drawings.

As stated above, our invention provides a checking device which is associated with the rocker foot. In Figs. 1 to 6 this checking device is in the nature of a checking spring 8 which is secured to the rocker foot and is arranged to act on the picker stick for checking its movement in either direction. As herein illustrated the spring is rigidly secured at one end to the rocker foot as by means of bolts 9, and the other end of the spring is forked, and the two arms 10 thereof are situated either side of the picker stick.

11 indicates the rocker tongue which may be of usual construction and which partially embraces the picker stick 3, as best seen in Fig. 4. The rocker 5 is secured to the picker stick by a screw or bolt 13 which passes through a slot in the rocker tongue in usual manner. The lower end of the rocker tongue is provided with the finger 14 which is adapted to engage the spring 8 when the picker stick is thrown backwardly, as seen in Figs. 1 and 2, and by its engagement with the spring said finger checks the backward movement of the picker stick. The rocker tongue is also provided with two laterally-extending lugs 15, one on each side thereof which are adapted to cooperate with the arms 10 of the checking spring thereby to check the movement of the picker stick when it is swung forwardly to throw the shuttle. It is within our invention to have these lugs engage the spring 8 directly, but we prefer to provide the arms 10 of the spring with screws or projections 16 which carry

washers 17 that are adapted to be engaged by the lugs 15. These washers are adjustably sustained on the screws or projections 16 by means of set nuts 18, and the position of the washers may, therefore, be adjusted vertically.

The rocker foot is provided with the usual positioning lug 20 which passes up through the slot 21 in the rocker. We have shown a screw 22 passing down through this positioning lug and adapted to engage the spring 8. The purpose of this screw is to vary the tension of the spring as desired according to the demands put upon the spring in the actual use of the loom.

With the embodiment as above described, it will be evident that when the picker stick is swung forwardly, the lugs 15 will engage the washers 17 just before the picker stick reaches the forward limit of its movement, and said spring will act to cushion the further movement of the picker stick and prevent it from being damaged by striking the end of the slot in the shuttle box. The tension of the spring and consequently the extent of its checking action may be regulated by the screw 22, for when said screw is screwed down through the lug 20 so as to engage the spring 8, said spring will become stiffer and have a greater checking action than when the set screw is in the position shown in Fig. 2. When, on the other hand, the picker stick swings backwardly, as shown in Fig. 2, the finger 14 will engage the spring and the backward movement of the picker stick will thus be checked.

The spring 8 acts not only to check the movement of the picker stick, as above described, but it also acts to restore the picker stick to its normal position again, for it will be observed that when the picker stick is thrown forwardly and the spring 8 is flexed, as shown in Fig. 3, the resiliency of the spring will tend to cause the picker stick to return to its normal position. We propose to give the spring sufficient tension so that it will thus act as a picker-stick-restoring means.

In Fig. 7 we have illustrated a slightly different embodiment of our invention wherein the rocker tongue 11 is provided at its lower end with the foot 24 carrying blocks 25, 26 of rubber, leather, or similar cushion material. In the operation of this embodiment of the invention whenever the picker stick swings forwardly, as shown in Fig. 7, the block 26 nearest the picker stick will engage the under side of the rocker foot and thus check the swinging movement of the picker stick, while when the picker stick swings backwardly, the other block 25 will strike the under side of the rocker foot and thus act as a check. It will be noted that the pocket in the foot 24 into which the blocks 25, 26 are set is deeper at the center

than at the ends and that the blocks 25 are larger than the blocks 26. We employ this construction because by reversing the position of the blocks, a greater checking action may be secured than with the arrangement shown.

In Fig. 8 we have shown another embodiment of the invention wherein the foot 24 of the rocker tongue 11 is provided with a recess or pocket in which are two blocks 28 each carrying a spring-pressed plunger 29. One of these spring-pressed plungers acts to cushion or check the picker stick during its backward movement, and the other to cushion the picker stick during its forward movement. These blocks may be adjusted vertically in the pocket by means of adjusting screws 30.

In the embodiment thus far described, the usual heel strap and heel strap spring are not employed. In Figs. 9 and 10 we show a construction wherein such heel strap spring is employed. In this embodiment the rocker tongue 11 is provided at its lower end with two fingers 32 and 33 extending in opposite directions. The finger 32 coöperates with a checking spring 80 which is secured at one end to the rocker foot at 90, and the finger 33 coöperates with another checking spring 81 which is secured on an extension 82 of the rocker foot. The spring 80 serves to check the backward movement of the picker stick, while the spring 81, checks the forward movement thereof, as clearly seen from Figs. 9 and 10. Suitable adjusting screws 84 and 22 may be employed for adjusting the tension of the spring. In this embodiment of the invention the usual heel strap spring 91 is used to which is connected the heel strap 92 that passes up through an opening 93 in the finger 33 and is connected to the picker stick in usual manner, this spring serving to throw the picker stick backwardly.

In Figs. 11 and 12 we have shown another embodiment of the invention wherein the rocker tongue 11 has at its lower end the foot 71 provided with a recess having a rounded bottom, and in this recess is a block 72 having a rounded surface to fit the recess and provided with a cap of cushion material 73. The block 72 has extending therefrom a projection 74 which plays in a slot 75 formed in the bottom of the foot. This device also acts to check both movements of the picker as will be readily seen from Figs. 11 and 12. The rocker foot is shown in said Figs. 11 and 12 as having a projection against which the pad 73 engages.

In Figs. 13 to 17 we have shown an embodiment of the invention which is somewhat similar to that shown in Figs. 7 to 12. In this embodiment, however, the rocker tongue 11<sup>a</sup> does not embrace the picker stick, but merely lies against the front face there-

of. It is made of a strip of sheet iron which is bent at its lower end into hook shape, as at 50, and in this lower end are two pads 51, 52 of felt, rubber or similar material that are adapted to engage the under side of the rocker foot and check the picker stick, as above described. The lower end of the rocker tongue is formed with the two ears or wings 53 and 54 which serve to hold the cushioning pads in place, and the wing 54 may conveniently be made removable to permit the ready removal of the pads. Said pads and the wing 54 are held in place by a bolt 55, the pads being grooved to receive the bolt. The front pad 51 is that which checks the backward movement of the picker stick and in the actual operation of the loom, this movement of the picker stick needs to be checked more or less, depending on various conditions, such as the weather, the character of the shuttle being used, etc. If the weather is damp, the shuttle will stick somewhat in the box, and the less checking is required, while if the weather is dry, the shuttle will require a greater amount of checking. By putting in shims 56 of different thicknesses, the pad 51 can be adjusted to properly check the picker stick under all conditions. This adjustment of the pad 51 can easily be effected by simply removing the bolt 55 and the cheek piece 54.

It is customary to place a plug 57 of wood or similar material in the aperture in the rocker foot to form a fulcrum against which the rocker tongue or the picker stick turns. This plug limits the forward or inward movement of the rocker when the picker stick is thrown forward. When this plug gets worn, the rocker 5 is permitted to have a sliding movement on the rocker foot as well as a rocking movement, and said sliding movement is more or less detrimental to the operation of the loom. We have provided a simple device for taking up this wear and preventing any sliding movement of the rocker foot. As herein shown, the picker stick is embraced by a member 58 U-shaped in cross section and which carries the bolt for connecting the rocker tongue thereto. This member is provided with a foot 59 which is adapted to engage a flange 60 extending upwardly from the rocker foot. The foot 59 is made extensible so that as the plug 57 wears, said foot may be extended to always maintain contact with the flange 60. The said foot may be made extensible in a variety of ways, but we have herein shown it as made in two sections 59 and 61 which are capable of sliding on each other and are clamped together by set screws 62. The flange 60 may either be cast on the rocker foot 4 or may be in the form of a specially-shaped sheet metal member secured to the rocker foot, as illustrated in the drawings. The advan-

tage of this construction is that all lost motion due to the wear of the plug 57 can be taken up and all sliding movement of the rocker on the rocker foot will be prevented.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe situated beneath the rocker foot and which moves toward and from the rocker foot as the picker stick swings, and a cushion device situated between the toe and rocker foot and coöperating with said toe and rocker foot to check the movement of the picker stick.

2. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe situated below the rocker foot, and a cushion device situated between the toe and the rocker foot and adapted to check the movement of the picker stick in both directions.

3. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe, and a cushion device situated between the toe and the rocker foot and adapted to check the movement of the picker stick in both directions.

4. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a projection extending laterally from the picker stick beneath the rocker foot and movable toward and from the rocker foot as the picker stick swings, and a cushioning member situated between said projection and said rocker foot and arranged to check the movement of the picker stick as it approaches the limit of its movement.

5. In a loom the combination with a rocker foot and a rocker, of a picker stick, a cushioning member situated beneath the rocker foot and means situated beneath the cushioning member and connected to the picker stick to move toward the rocker foot and coöperate with the cushioning member to check the movement of the picker stick as it approaches the limit of its motion in either direction.

6. In a loom, the combination with a rocker foot, of a picker stick mounted thereon, a projection extending laterally from the picker stick beneath the rocker foot and a cushioning member carried by said projection and adapted to engage the under side of the rocker foot as the picker stick approaches the limit of its movement in either direction.

7. In a loom, the combination with a rocker foot, of a picker stick mounted there-

on, a projection extending laterally from the picker stick beneath the rocker foot, and a cushioning device carried by said projection and adapted to engage the under side of the rocker foot as the picker stick approaches the limit of its movement.

8. The combination with a picker staff and a rocking support therefor, of a picker check adjustably mounted in the support and secured to the same above the fulcrum of the staff, a lateral projection on said picker check, a yieldable member carried by said lateral projection for checking purposes below the fulcrum and coöperating with the underside of the support.

9. A picker staff, a rocking support therefor, and a picker check including a member shaped to partly embrace the staff, a laterally-projecting foot carried by said picker check, a yielding contact carried by said

foot to coöperate with the rocker bed, to check the outward movement of the staff and means for securing said check between the staff and rocking support.

10. A picker staff including a member shaped in part to embrace the picker staff, said member having a lateral projection at its lower end, and a spring-pressed pin slidably mounted in said projection and designed when in position to extend in approximately parallel relation with the staff.

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

HENRY CÔTÉ.  
RENCELER C. SNOW.

Witnesses:

LOUIS C. SMITH,  
THOMAS J. DRUMMOND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

It is hereby certified that in Letters Patent No. 1,024,036, granted April 23, 1912, upon the application of Henry Côté, of West Warren, and Renceler C. Snow, of Ware, Massachusetts, for an improvement in "Picker-Checks," an error appears in the printed specification requiring correction as follows: Page 4, line 25, after the word "staff" insert the word *check*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 14th day of May, A. D., 1912.

[SEAL.]

C. C. BILLINGS,  
*Acting Commissioner of Patents.*