Oct. 28, 1924. 1,513,044

J. W. JONES ET AL

PICKER CHECK

Filed Aug. 6, 1923

Fig. 1.

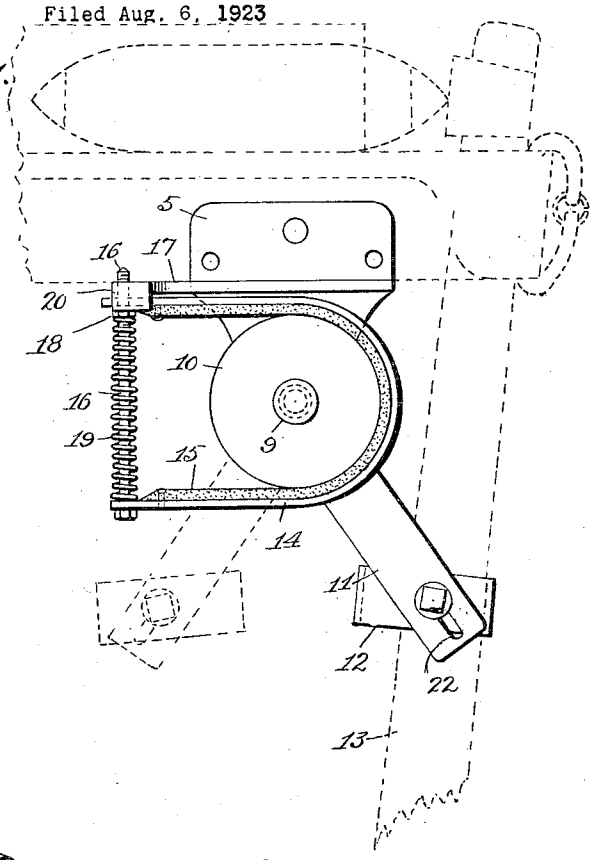


Fig. 2.

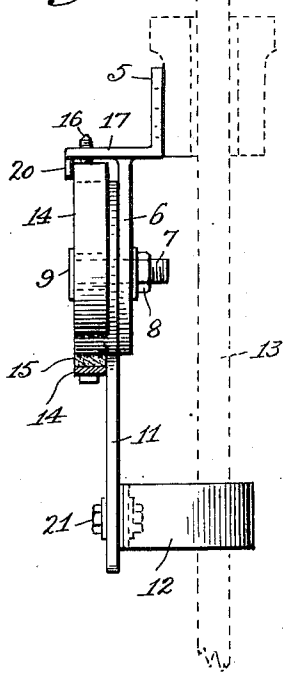


Fig. 3.

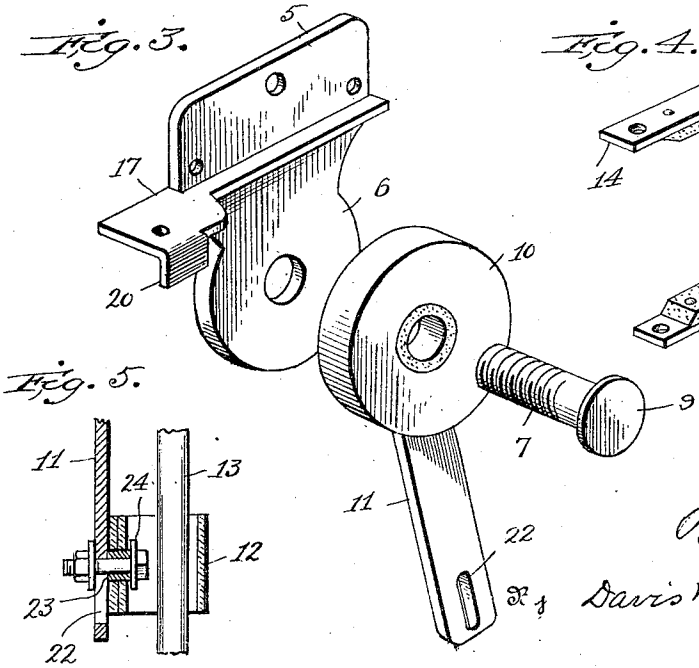


Fig. 4.

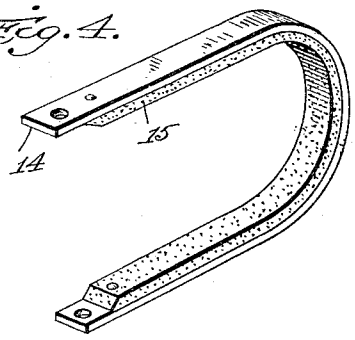


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN WATTS JONES AND EDWARD LAWRENCE JONES, OF GREENVILLE, SOUTH CAROLINA.

PICKER CHECK.

Application filed August 6, 1923. Serial No. 656,049.

To all whom it may concern:

Be it known that we, JOHN WATTS JONES and EDWARD LAWRENCE JONES, citizens of the United States of America, and residents, respectively, of Greenville, county of Greenville, and State of South Carolina, have invented certain new and useful Improvements in Picker Checks, of which the following is a full and clear specification.

The picker-check now universally used consists of a leather or canvas strap about 20 inches long. The object of the present invention is to do away with the use of this long strap and to substitute a much shorter strap, thereby economizing in the use of leather or canvas material, the construction being such that the picker-stick will be checked in such manner as to avoid rebound of the shuttle, as more fully hereinafter set forth.

In the drawing—

Fig. 1 is a side elevation of our device;

Fig. 2 is an edge elevation thereof, the brakeband being shown in cross-section;

Figs. 3 and 4 are perspective views of details hereinafter more particularly described;

Fig. 5 is a detail vertical section taken through the picker-stick loop.

Referring to the drawing by reference-characters, 5 designates a bracket which is adapted to be attached to the lay at about the same point where the long check-loop is now located. Mounted in a depending plate 6 of this bracket is a short horizontal shaft 7, preferably in the form of a bolt provided with a nut 8 threaded on one end of the bolt and with a head 9 at its other end. Mounted rotatively on this bolt between the head 9 and the depending plate 6 is a friction brake-disk 10 provided with a depending arm 11. Attached to the lower end of the depending arm 11 is a flexible loop 12, preferably made of canvas or leather.

The picker-stick shown in dotted lines at 13 extends upwardly and loosely through the loop 12, so that as the picker-stick is vibrated the friction-disk 10 will be oscillated on the bolt-shaft 7. Partly surrounding the friction-disk 10 is a spring metal yoke 14 whose free arms extend laterally in a plane parallel with the plane and movement of the picker-check. The inner surface of the curved part of the yoke 14 is lined with a suitable friction material 15, such as leather or brake-lining. The free ends of the arms of the yoke are connected by a bolt 16 passed loosely through a hole in the lower arm and threaded through a hole in the upper arm. The extreme upper end of this bolt 16 is threaded through a horizontal member 17 of the bracket 5, and a nut 18 is threaded on the bolt 16 at a point below the upper yoke-arms. A coil-spring 19 surrounds the bolt between said nut 18 and the upper surface of the lower arm of the yoke. The coil-spring tends to spread the arms of the yoke, and, by screwing down the nut 18 on the bolt 16, the tension of the spring may be increased. By means of the tension-nut 18 and the tapping of the upper end of the bolt into the upper yoke-arm and also the bracket member 17, it is obvious that the degree of friction exerted by the friction-band 15 on the periphery of the friction-disk 19 may be regulated. To hold the yoke in position on the friction-disk, I provide one edge of the bracket-plate 17 with a depending ear 20.

It will be observed that the vibration of the picker-stick will carry the depending arm 11 back and forth through the medium of the short check-strap 12. This check-strap loop, as shown, is sufficiently loose around the picker-stick to permit the picker-stick to have a free flying action on both strokes for a limited distance. In this way, the friction devices, altho in action all the time, will exert a drag on the picker-stick only at the ends of its forward and backward strokes, thus permitting the picker-stick to impart the necessary sharp impact to the shuttle and at the same time exert the desired drag on the picker-stick toward the ends of its strokes. The usual pull-back spring (not shown) will, of course, pull back the picker-stick, but the friction devices may be adjusted so that this pull-back spring will not pull the picker-stick all the way back, but will be balanced by the drag of the friction devices at a point near the end of its back stroke; thus stopping the picker-stick at a point near the end of its return stroke serves to utilize the friction drag devices as a buffer or cushion for the shuttle, thus slowing up or retarding the shuttle when it hits the bumper on the picker-stick, thereby killing all tendency of the shuttle to rebound in the shuttle-box.

Desirably, the loop 12 is attached to the

depending arm 11 by means of a horizontal bolt 21 with a head at one end and a nut at the other end and passing through a longitudinal slot 22 in the arm 11 and through the overlapped ends of the strap. The slot 22 enables the loop to be vertically adjusted on the arm 11 to exactly suit the throw of the picker-stick. This making of the flexible check-tube 12 bodily adjustable on the arm 11 is an important feature in our device, as it enables us to set the loop at a point where it is needed in order to check the return movement of the picker-stick at a point where it is most desirable.

The connection of the loop with the arm is such that the loop may have a free vertical oscillation on the bolt to enable it to maintain an approximately horizontal position as it follows the picker-stick. To insure this pivotal movement on the bolt and at the same time permit the bolt to be clamped tightly to the arm 11, we provide a sleeve 23 on the bolt, this sleeve being clamped between the inner washer 24 and the inner face of the arm 11. Of course, any other means for pivotally clamping the loop to the arm may be adopted, if desired.

What we claim is:

1. A picker-check comprising adjustable friction devices and a flexible loop connecting the same to the picker-stick, means being provided whereby the loop may swing freely in a vertical plane at all points in the strokes of the picker-stick to enable it to adjust itself to the varying inclination of the picker-stick, the loop being sufficiently larger than the picker-stick to permit the same to have a free flying action at the beginning of each stroke.

2. A picker-check embodying adjustable friction devices having a depending arm, and a flexible loop attached to this arm and surrounding the picker-stick so as to be moved back and forth with the same, this flexible loop being sufficiently larger than the picker-stick to permit the same to have a free flying action at the beginning of each stroke, means being provided whereby the loop may swing freely in a vertical plane at all points in the strokes of the picker-stick to enable it to adjust itself to the varying inclination of the picker-stick.

3. A picker-check comprising adjustable friction devices and a flexible loop connecting the same to the picker-stick, said friction devices embodying a yoke lined with a friction material, an oscillating disk and means connecting the same to the aforesaid loop, and spring tensioning means connecting the arms of the yoke, the loop being sufficiently larger than the picker-stick to permit the same to have a free flying action at the beginning of each stroke.

4. A picker-check embodying adjustable friction devices having a depending arm, and a flexible loop attached to this arm and adapted to surround the picker-stick and be moved back and forth with the same, said loop being attached to the arm so as to swing or oscillate in a vertical plane at all points in the strokes of the picker-stick, the loop being sufficiently larger than the picker-stick to permit the same to have a free flying action at the beginning of each stroke.

5. A picker-check comprising adjustable friction devices and a loop connecting the same to the picker-stick, said friction devices embodying a rockable friction disk and means for supporting it on the lay, an adjustable friction member constantly working on said disk, and devices connecting said loop with said friction disk to rock the friction disk during the intermediate part of each stroke of the picker-stick.

In testimony whereof we hereunto affix our signatures this 4 day of August, 1923.

JOHN WATTS JONES.
EDWARD LAWRENCE JONES.