

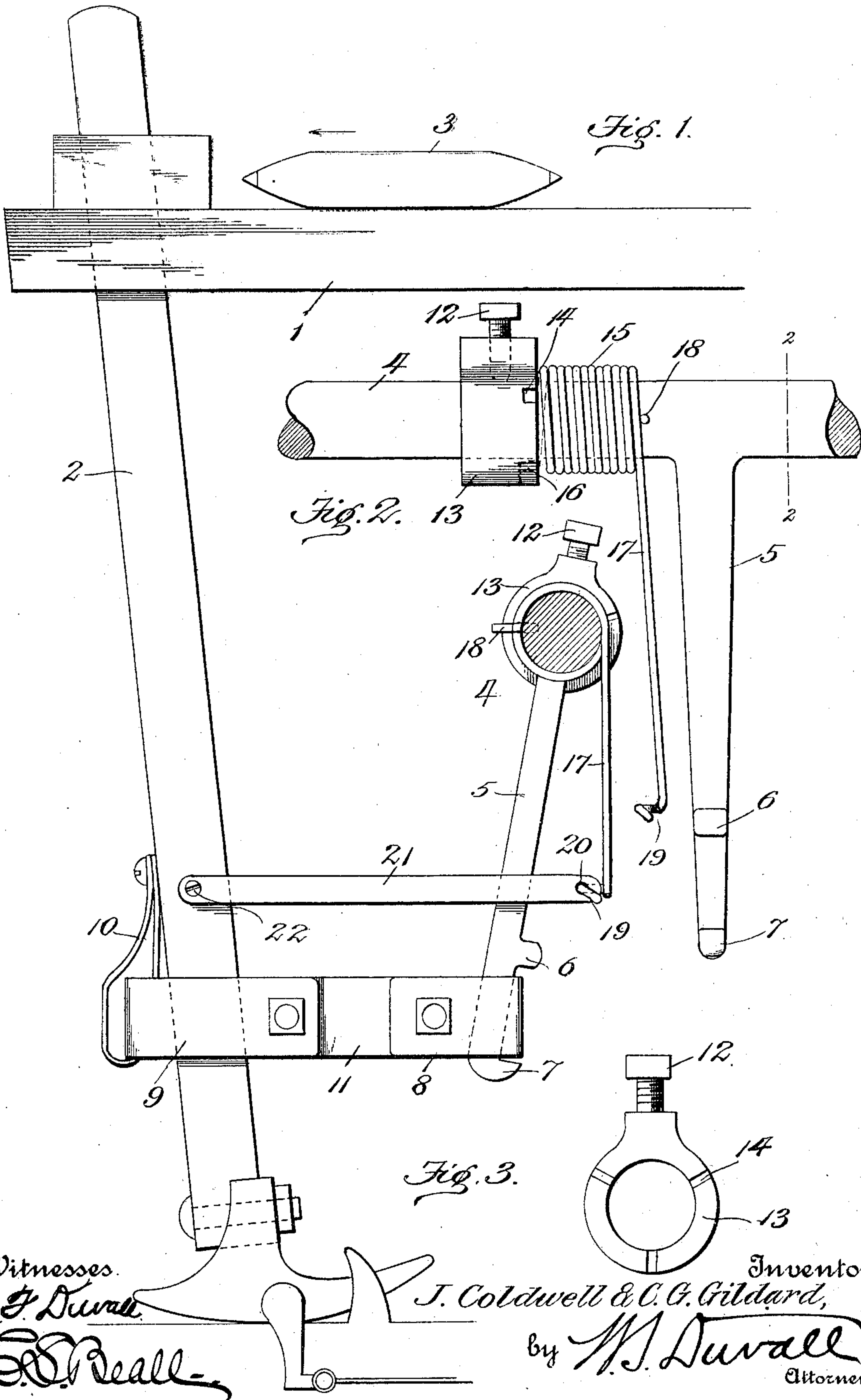
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J. COLDWELL & C. G. GILDARD.  
COMBINED PICKER STAFF AND SHUTTLE CHECK.

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NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOSEPH COLDWELL, OF FALL RIVER, AND CHRISTOPHER GILES GILDARD,  
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## COMBINED PICKER-STAFF AND SHUTTLE-CHECK.

SPECIFICATION forming part of Letters Patent No. 736,581, dated August 18, 1903.

Application filed June 25, 1902. Serial No. 113,137. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH COLDWELL, residing at Fall River, and CHRISTOPHER GILES GILDARD, residing at Swansea, in the county of Bristol and State of Massachusetts, citizens of the United States, have invented new and useful Improvements in a Combined Picker-Staff and Shuttle-Check, of which the following is a specification.

10 This invention relates to improvements in looms, and has particular reference to a new and improved combined picker-staff and shuttle-check.

The main objects of the invention are to so  
15 locate a yielding check with relation to the picker-staff and the picking-shaft arm that the movement of either will give to the yielding check hereinafter described a similar movement, thereby requiring less motion of  
20 the spring; to construct a check that will maintain the picking-ball closely against the cam, whereby the picking of the loom is rendered much easier and surer in cases of any sudden changes or variations in the speed of  
25 the loom, and finally to construct the check in a durable, cheap, and simple manner.

Other objects of the invention and of more or less importance will hereinafter appear, and the novel features of the invention will  
30 be particularly pointed out in the claims.

Referring to the drawings, Figure 1 shows so much of an ordinary loom provided with our improvements as is necessary in order to fully illustrate our invention, the picking-shaft being shown in section on the line 2 2  
35 of Fig. 2. Fig. 2 shows the picking-shaft and parts carried thereby in elevation, the ends of the shaft being broken away. Fig. 3 is a detail hereinafter referred to.

40 Similar numerals of reference indicate similar parts in all the figures of the drawings.

1 designates the lay-beam, 2 the picker-staff, and 3 the shuttle, all of the conventional form of loom, the shuttle being shown as it appears  
45 in its flight toward the picker-staff.

4 designates the picking-shaft, from which depends the picker-shaft arm 5, the latter having the upper and lower lugs 6 and 7, respectively. Loosely engaging the picking-shaft arm between the lugs 6 and 7 is the  
50 usual small lug-strap 8, and likewise engag-

ing the picker-staff 2 is the usual large lug-strap 9, the latter being supported by a loop 10, engaging said strap and secured above the same to the outer face of the picker-staff. 55 These two straps 9 and 10 are connected by the center piece 11, as is the usual practice.

A collar 13, having a series of recesses radially disposed, as at 14, in one face, (see in detail Fig. 3,) is mounted on the picking-shaft 60 4, and the same may be tapped at its upper side, at which point it is provided with a set screw or bolt 12, the inner point of which may be caused to bind or impinge upon the picking-shaft, and thus the collar rigidly secured 65 in position. Located upon and coiled about the shaft 4, between the arm 5 and said collar, is a spring 15, one terminal 16 of which may, as shown by dotted lines, be bent and terminate in a convenient one of the recesses 70 14 of the collar 13 and the other terminal of which may be disposed tangentially to the axis of the spring and constitute a yielding arm 17. For the purpose of confining the  
75 spring in proper position upon the shaft against the collar a pin, as 18, may be let into the shaft, or any other well-known means may be employed—such, for instance, as one or more washers or rings.

The arm 17 is of course yielding and terminates above the lugs 6 and 7 in a hook 19, the latter engaging with a perforation 20, formed in a connecting-strap 21, of leather or other material, the opposite end of said strap being connected to the side of the picker-staff 85 by any ordinary means—as, for instance, by means of a screw 22.

It will be obvious that the tension of the spring may be readily increased or diminished simply by loosening the set bolt or 90 screw 12 of the collar 13, partially rotating the latter about the shaft 4, and retightening the said bolt when the desired tension is secured. It is obvious that the picker-staff is thus yieldingly supported against movement 95 and against the sudden impact of the shuttle, so that it gives with the blow of the shuttle, whereby the latter is prevented from rebounding in the shuttle-box and “banging off” or “knocking off” in addition to breaking its cop. In this manner the shuttle is brought to a gradual stop, the mechanism be- 100



ing set or regulated so as to avoid as much as possible any sudden jerking.

It will of course be obvious that other forms of spring-checks will readily suggest themselves, and, in fact, some have heretofore been used, but none, so far as we are aware, have been mounted directly on the picking-shaft and picker-staff. Therefore we do not wish to be understood as limiting our invention to the precise form of check herein shown and described.

Having described our invention, what we claim is—

1. The combination, in a loom, comprising a picker-staff and a picking-shaft, of a resilient arm extending from the latter, means for increasing or decreasing the tension thereof, and a flexible connection between said arm and staff.
2. The combination, in a loom, comprising a picker-staff and picking-shaft, of a resilient arm depending from the shaft and a flexible connection between the end of the same and the said staff.
3. The combination, in a loom, comprising a picker-staff and picking-shaft, of a spring

coiled on the shaft and terminating in an arm, and a connection between the free end of the latter and the said staff.

4. The combination, in a loom, comprising a picker-staff and picking-shaft, of a spring coiled upon said shaft and terminating in a depending arm, a connection between the same and the picker-staff, and means for adjusting the tension of said coiled spring.

5. The combination, in a loom, comprising a picker-staff and picking-shaft, of a coiled spring mounted on the shaft and having one end extended to form an arm, a connecting-strap between the free end of the arm and the staff, a retaining means at one side of the spring, and an adjustable collar at the opposite side, the latter having a recess for the end of the spring and provided with a binding-nut.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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