J. Gabler.

Shuttle Positioning Means for Filling Replenishing Looms.

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Fig. 1.

Fig. 2.

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To all whom it may concern:  
Be it known that JOHANNES GABLER, head foreman, 
32 Altkirchnerstrasse, subject of the German Emperor, 
5 residing at Mulhausen, in the Province of Alsace and 
5 German Empire, have invented certain new and useful 
Improvements in Shuttle-Positioning Means for Filling- 
Replenishing Looms, of which the following is a 
full, clear, and exact description.

This invention relates to apparatus for securing the 
10 shuttle of power looms in their shuttle-boxes in the po- 

tion fit for the replacing of the empty pinçons in the 

shuttle by a full one.

The accompanying drawings show one construction of 
15 apparatus in accordance with this invention; Figures 
1, 2 and 3 being respectively a front view, a top plan, 
and a side elevation of the loom with its lay, while Fig. 
4 is a diagrammatic representation of one method where- 
by apparatus in accordance with this invention is con- 
20 nected with the weft fork.

Referring to the accompanying drawings, the guide 
25 b which is firmly secured to the lay a has journaled in 
its a vertical shaft c, to the upper end of which is at- 
tached the bent arm d and to its lower end there are 
secured the striker e and the pulley f. The spiral spring 
30 i, which is attached to the lay as by a bracket h, and the 
action of which is neutralized when the striker e comes 
in contact with the lay a, is connected with the roller 
j by means of the chain g. The bent arm d, when at 
rest, is parallel to the lay a, as shown in Fig. 2.

As the lay moves forward in the direction of the arrow 
35 j the bent arm d comes in contact with the roller i on 
the lever m n mounted on the frame t of the loom which 
forms a stop, and is caused to assume the position indi-
cated by dotted lines in Fig. 2, the shuttle being thus, 
when the impulse is too powerful, prevented from re- 
coiling; while, when the impulse is too weak, the shut- 
tle is by means of the arm d pushed into its proper po- 

sition in the lay.

The lever m n is mounted to rotate around its pivot 
45 n and is held up by the action of a spiral spring o with 
which it is connected through a chain p which passes 
over a guide pulley r and around the pulley y. The 
lever in question is at the right moment moved down- 
wards by means of a chain q suspended from the pulley 
45 y and lever mechanism actuated by the weft fork or the 
feeler. When the lever m n is in its higher position its 
roller k is raised out of the path of the bent arm d; while 
when the lever is in its lower position its roller comes in 
contact with this arm. Consequently the safety ap- 
patus is actuated only when it is necessary for the 

shuttle in the shuttle box to assume the position requi- 

site for the replacing of the empty pinçon by a full one.

Fig. 4, as already stated, represents diagrammatical- 
55 ly the method of connecting the safety apparatus with 
the weft fork. The weft fork u is pivotally mounted 
upon the upper part v of the lever w, w, x, the free end 
of which is connected with the lever m n through the 
chain t. If, when the shot miscarries, the weft fork 
60 u passes through the grid y pertaining thereto into 
the path of the lay, its heavier rear end, which is formed 
as a hook, will engage with the weft hammer z, 1, 2, 
the portion 2 of which rests upon the eccentric 3 which 
is driven from the mainshaft 0 by means of the wheels d', 
5'. The weft hammer z will upon its backward move- 
ment in the direction of the arrow 7, carry the lever v, 
65 w, x, of the weft fork along in the same direction, the 
roller k of the lever m n being thus lowered and so 
brought into contact with the bent arm d, which is 
thereby moved into the position d'.

What I claim and desire to secure by Letters Patent 
70 is—

1. In a shuttle-positioning means, a lay, a shaft jour-
naled vertically at one side thereof, the upper end of the 
75 shaft being provided with an arm, and the lower end with 
a striker and a pulley, a rolled spring connected at one end 
with the lay to the rear of the shaft, a flexible connector 
from the other end of the spring to said pulley for nor-

mally holding the striker against the side of the lay, a 
80 stop for engaging with said arm and moving its free end 
in front of the shuttle box, means for moving the stop 
into its operative position and means for moving the stop 
out of its operative position.

2. In a shuttle-positioning means, a lay, an arm pivot- 
85 ally mounted thereon, a lever provided with a roller for 
engaging with the arm and moving its free end in front 
of the shuttle box, a spring for normally holding said lever 
and stop in an operative position, a second lever connected 
at one end with the stop lever and provided at the other 
end with a weft fork, and means adapted to be engaged 
by the weft fork for causing the stop lever and its roller 
90 to be moved into the operative position.

3. In a shuttle-positioning means, a lay, an arm pivot- 
95 ally mounted thereon, a stop for engaging with the arm 
and forcing its free end in front of the shuttle box, means 
for moving said stop into its operative position, a lever 
for actuating said means, a shoultered weft fork pivotally 
connected with one end of said lever, a weft hammer, 
one end of which is adapted to be engaged by the weft fork, 
a cam for engaging with the other end of the weft hammer, 
wherewith the stop is caused to engage with said arm and 
activate it whenever the weft fork is in engagement with 
the weft hammer and means for moving the stop out of 
its operative position.

In witness whereof, I subscribe my signature, in pres- 

ence of two witnesses.

JOHANNES GABLER.

Witnesses:
EMILIE KASPER,
WALTER C. SCHNEIDER.