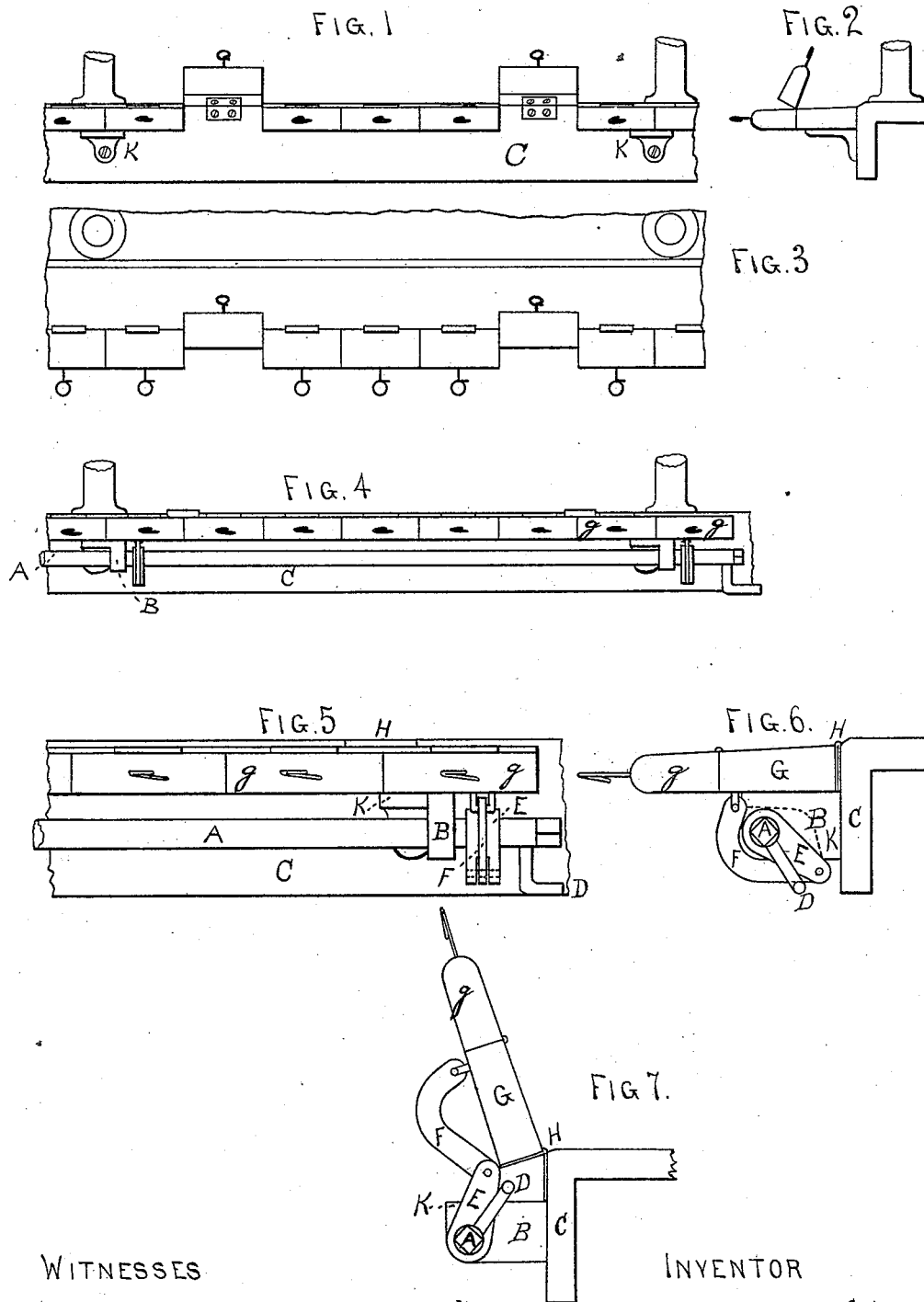


(No Model.)

W. E. SHARPLES.  
RING SPINNING FRAME.

No. 343,074.

Patented June 1, 1886.



WITNESSES

*Richard B. Borden*  
*Herbert H. Horton.*

INVENTOR

*William E. Sharples*



# UNITED STATES PATENT OFFICE.

WILLIAM E. SHARPLES, OF FALL RIVER, MASSACHUSETTS.

## RING-SPINNING FRAME.

SPECIFICATION forming part of Letters Patent No. 343,074, dated June 1, 1886.

Application filed December 27, 1884. Serial No. 151,302. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. SHARPLES, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Ring-Spinning Frames, of which the following is a specification.

This invention consists in hinging the guide-wire board of a ring-spinning frame, twisting-frame, or similar machine so that said board can be swung to raise and lower all the guide-wire blocks pivoted thereto at the same time, and in employing the means hereinafter described and claimed for raising and lowering the guide-wire board; and it further consists in so arranging the means for raising and lowering the guide-wire board that the latter will be locked by the former in a raised position, and preferably also in a lowered position, as will hereinafter appear.

Heretofore, as far as I am aware, the guide-wire board has been rigidly secured to the frame, and in the operation of removing the full bobbins from the spindles the guide-wire blocks have had to be raised singly or a few at a time and returned singly or a few at a time after the spindles have been supplied with empty bobbins, thereby consuming much time in doffing, necessitating a stoppage of the machine for a considerable time, and causing many of the threads to be displaced from the guide-wires.

The object of the invention is to save time in doffing and to prevent a displacement of the threads, which object is attained, as will hereinafter appear.

In the accompanying drawings, Figure 1 shows in front elevation a portion of the roller-beam and the guide-wire blocks and board of a ring-spinning frame of ordinary construction, two of said blocks being turned up. Fig. 2 represents an end view of the same. Fig. 3 shows a top view of the same. Fig. 4 represents in front elevation a portion of the roller-beam and guide-wire blocks and my improved means for raising and lowering the latter. Fig. 5 shows on a larger scale a front view of a smaller portion of the parts represented in Fig. 4. Fig. 6 represents an end

view of the same. Fig. 7 shows an end view of the same with the guide-wire board and its blocks raised or elevated.

C is the roller-beam of the frame. G is the guide-wire board, and *g* the guide-wire blocks, hinged thereto in a well-known manner. K are the usual arms projecting from the roller-beam to support the guide-wire board in a substantially horizontal position.

In carrying out my invention I hinge the guide-wire board G to swing with relation to the roller-beam by means of a suitable number of hinges, H, Figs. 4, 5, 6, and 7, so that said board and its blocks *g* can be swung upwardly by raising the board by hand or by mechanism substantially such as hereinafter described. For raising the board, I prefer to employ a rock-shaft, A, Figs. 4, 5, 6, and 7, located beneath the said board and in front of the roller-beam, and turning in brackets or supports B. The shaft A is furnished with arms E, secured thereto, which arms are connected to the guide-wire board G by links F, pivoted or hinged to said board and arms, and said shaft is provided with a crank or handle, D, by which the shaft can be turned.

By raising the crank or handle D the shaft A is partially rotated and the guide-wire board G and its blocks *g* are raised into the position shown in Fig. 7, so that the doffing operation can be conveniently performed, and by turning the crank in the opposite direction the guide-wire board and its blocks are returned to normal position. (Shown in Fig. 6.)

The guide-wire board and its blocks are locked both in an elevated and a lowered position by the passage of the pivotal point between the arms E and links F inside of a line drawn through the center of the shaft A and the pivotal point between said links and the guide-wire board, as shown, respectively, in Figs. 7 and 6, so that the board is securely retained in such positions.

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

1. The combination, with the roller-beam C, of the guide-wire board G, hinged to swing with relation thereto as described, the rock-shaft A, provided with arms E, means for



supporting said rock shaft, and the links F, hinged to said arms and board, substantially as set forth.

2. The combination, with the roller-beam  
5 C, of the guide-wire board G, hinged to swing with relation thereto as described, the rock-shaft A, furnished with arms E, means for supporting said rock-shaft, and the links F,

hinged to said arms and board, the said arms and links being arranged to swing as described, so as to lock the guide-wire board in position, substantially as set forth.

WILLIAM E. SHARPLES.

Witnesses:

RICHARD B. BORDEN,  
HERBERT H. HORTON.