

WILLIAM WELCH.
Warpers.

No. 126,358.

Patented April 30, 1872.

Fig 1

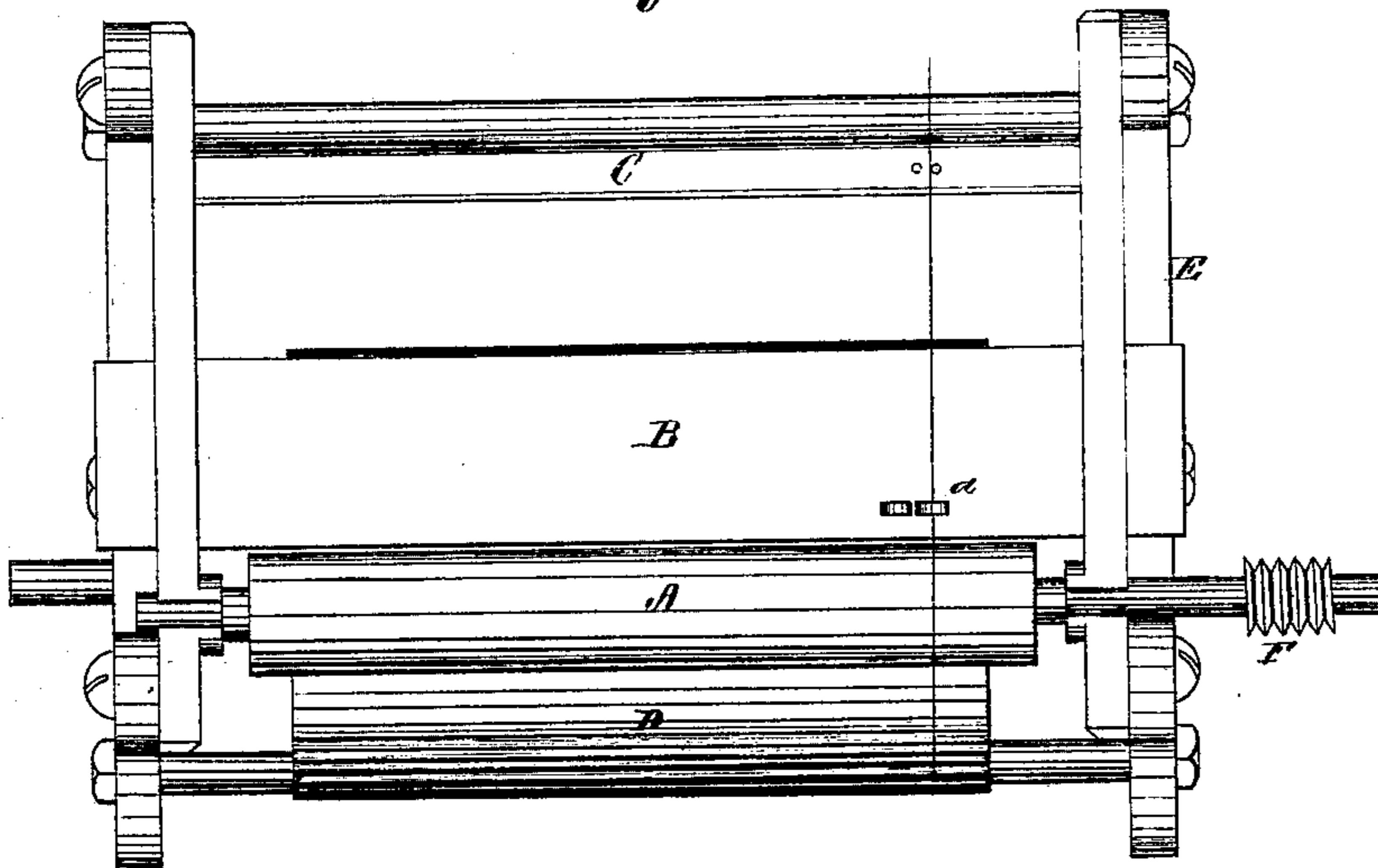
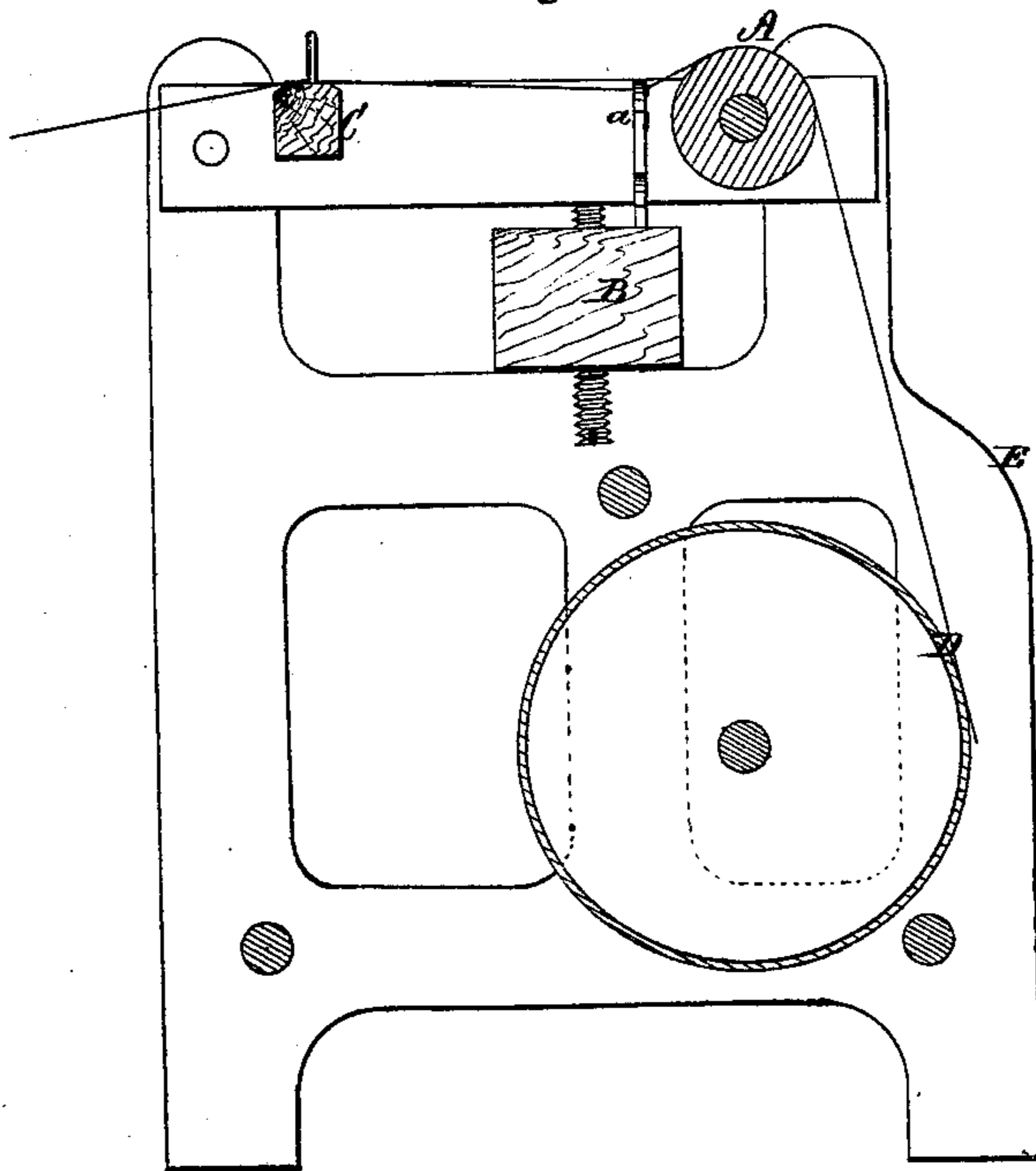


Fig 2



Witnesses.

S. N. Piper.

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by his attorney

R. M. Day.

UNITED STATES PATENT OFFICE.

WILLIAM WELCH, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR TO "HOPE-DALE MACHINE COMPANY," OF HOPEDALE, MASSACHUSETTS.

IMPROVEMENT IN WARPERS.

Specification forming part of Letters Patent No. 126,358, dated April 30, 1872.

To all persons to whom these presents may come:

Be it known that I, WILLIAM WELCH, of Woonsocket, of the county of Providence, of the State of Rhode Island, have invented a new and useful Improvement in Warpers; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and Fig. 2 a vertical section of the front portion of a warper including my invention, which relates to the arrangement of the measuring-roller relatively to the reed, the drop-wire box of the "stop-motion," and the warp-beam operative cylinder.

In warpers as heretofore constructed the measuring-roller has been disposed in rear of the drop-wire box, rendering it necessary for an attendant in piecing up a warp-yarn to reach to and beyond the reed and the measuring-roller, often requiring a very tall person to reach the distance required.

My improvement enables an operative to tend the machine easily, and besides effects a reduction in the size of the machine and, as a necessary consequence, a diminution of expense in its manufacture. My invention also dispenses with the ordinary guide-rollers in advance of the drop-wire box, and situated over the cylinder D, hereinafter mentioned, or, in other words, enables one roller to be substituted for the two guide and measuring rollers, as heretofore employed, and, by so doing, to obtain a more extensive bearing of the

warp on the surface of the measuring-roller, whereby not only a smaller roller can be used but a nearer approach to accuracy in the measurement of the warps be obtained.

In carrying out my invention, I arrange the measuring-roller A in advance of the drop-wire box B, and the reed C disposed in rear of such drop-wire box, in which case it will be nearest to the warp-beam, which usually rests on and is revolved by the cylinder D, arranged below the said drop-wire box B of the "stop-motion." The frame is shown at E, and the operative worm of the measuring-register is exhibited at F as fixed in the usual manner on the shaft of the measuring-roller.

The yarns pass through the reed, thence through the lifter-wires *a* of the drop-box, thence over and partially around the measuring-roller, thence to and about the warp-beam when resting on its operative cylinder D.

I make no claim to the ordinary arrangement of the measuring-roller in rear of the drop-wire box.

I claim—

In a warper the measuring-roller A, its worm F, the reed C, and the lifter-wires *a* of the drop-wire box B of the stop-motion, arranged together and with the warp-beam cylinder D, all substantially in manner as shown in the drawing, and as hereinbefore explained.

WILLIAM WELCH.

Witnesses:

WM. F. DRAPER,
W. S. COTTRELL.