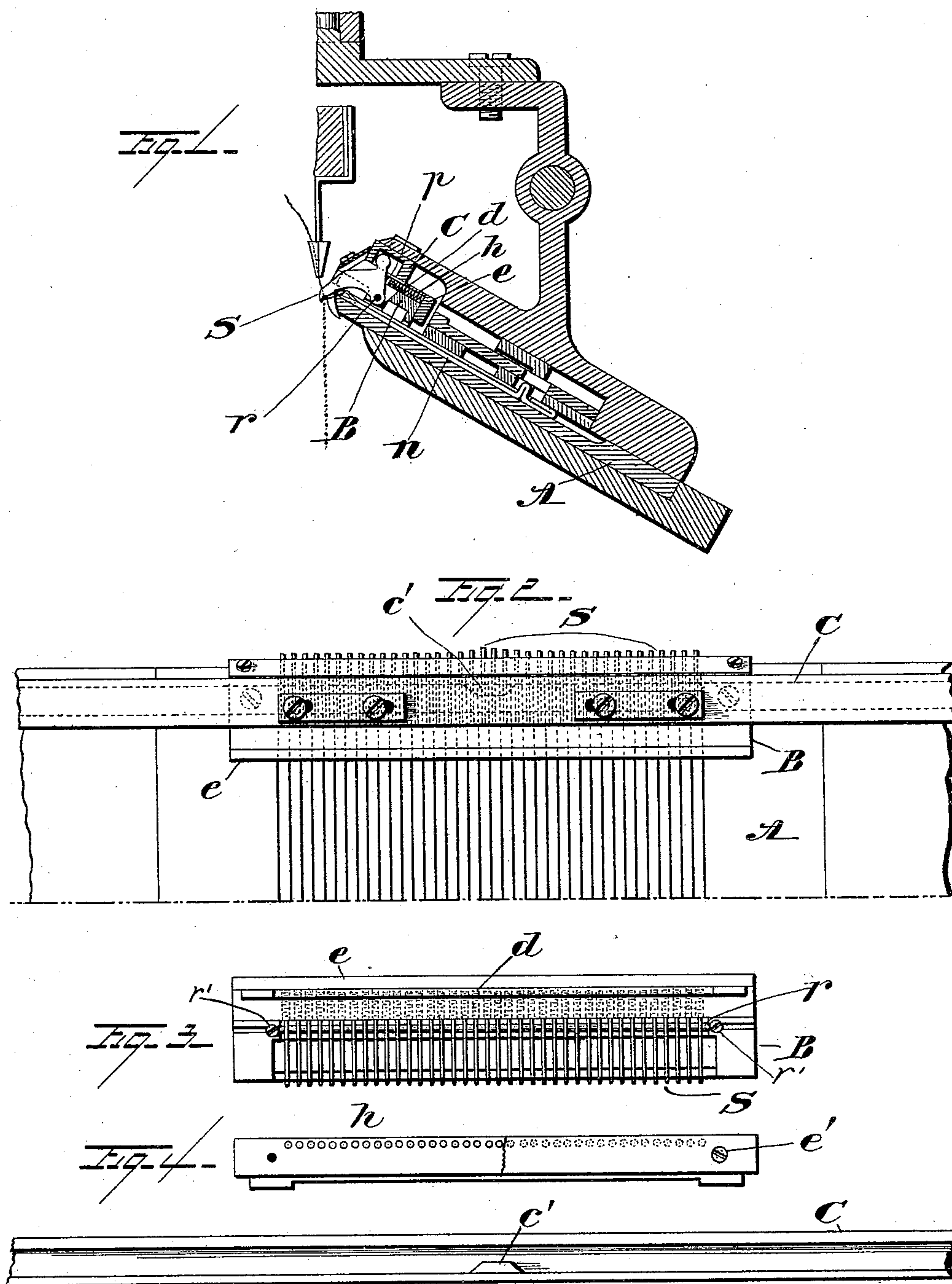


(No Model.)

J. G. POWELL.
STRAIGHT KNITTING MACHINE.

No. 496,062.

Patented Apr. 25, 1893.



Witnesses:
Walter C. Pusey.
Chas. Beck

Fig. 5

Inventor:
John G. Powell,
per Joshua Pusey,
attorney

UNITED STATES PATENT OFFICE.

JOHN G. POWELL, OF PHILADELPHIA, PENNSYLVANIA.

STRAIGHT-KNITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,062, dated April 25, 1893.

Application filed January 13, 1892. Serial No. 417,919. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. POWELL, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Straight-Knitting Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

10 Figure 1 is a transverse vertical section through one of the inclined needle-beds, the cam-carrier and adjuncts of a straight knitting machine in which my sinker mechanism is employed. Fig. 2 is a partial plan of said
15 bed, showing the sinkers and their supporting and operating bars. Fig. 3 is a separate view of the sinker-bar and its sinkers, inverted. Fig. 4 is an edge view of said bar, the retaining plate partially broken away.
20 Fig. 5 is an under side view of the sinker operating cam-bar.

This improvement has relation to the sinkers of knitting machines, such, for example, as that described and shown in Letters Patent No. 440,389, granted November 11, 1890, to Joseph Bennor, to which reference may be had in order to the more clearly understand my present invention.

The invention consists in a certain construction wherein is combined with each individual sinker an individual spring which bears against the sinker, whereby its hook is thrown into a yielding action with the yarn, and the cutting of the latter, which has been found to
35 occur, by the former positive in-throwing of the cam action, is obviated, each sinker-hook adjusting itself to the varying sizes of yarns, and to knots and other irregularities therein.

Referring to the annexed drawings, A marks
40 one of the usual needle bed plates such as seen in said Bennor patent.

B is the supporting bar which is secured to the forward end of the needle bed, as seen in Fig. 1, which bar carries the series of hooked
45 sinkers, S, which latter are independently

pivoted on a rod, *r*, that is fastened by screws *r'* to the bar B, thus rendering the said rod readily detachable.

C is the longitudinally channeled cam-bar, provided with the cam-piece *c'* therein, which, 50 as the bar is reciprocated by suitable mechanism, actuates the sinkers with relation to the action of the needles, *n*, Fig. 1.

In the rear of and in line with each sinker I drill in the back of the sinker-bar, B, a hole, 55 *h*, and insert therein first a short plunger, *p*, and against the latter, a small open spiral spring *d*. The series of springs is retained in place by means of a plate, *e*, which is secured to the edge of the bar B by means of 60 screws, *e'*, and thus readily detachable in order to allow the removal and replacing of any of the springs when necessary or desirable. It will be seen that the forward end of the plunger bears against the vertical limb of the 65 sinker extending into the channel of the cam-bar, and that the spring bears against the plunger, as seen in Fig. 1, and also that the series of springs is retained in place by means of the plate which is screwed to the back edge 70 of the sinker bar.

It will be obvious that each sinker has yielding or spring controlled action independent of the others.

Having thus described my invention, I 75 claim—

In a knitting machine, the combination of the sinkers, the sinker bar, or frame, provided with the series of holes in line with the sinkers, the independent spiral springs therein, 80 the back plate, and the sinker-operating cam bar, substantially as and for the purpose recited.

In testimony whereof I have hereunto affixed my signature this 9th day of January, 85 A. D. 1892.

JOHN G. POWELL.

Witnesses:

GEO. W. REED,
JOSHUA PUSEY.