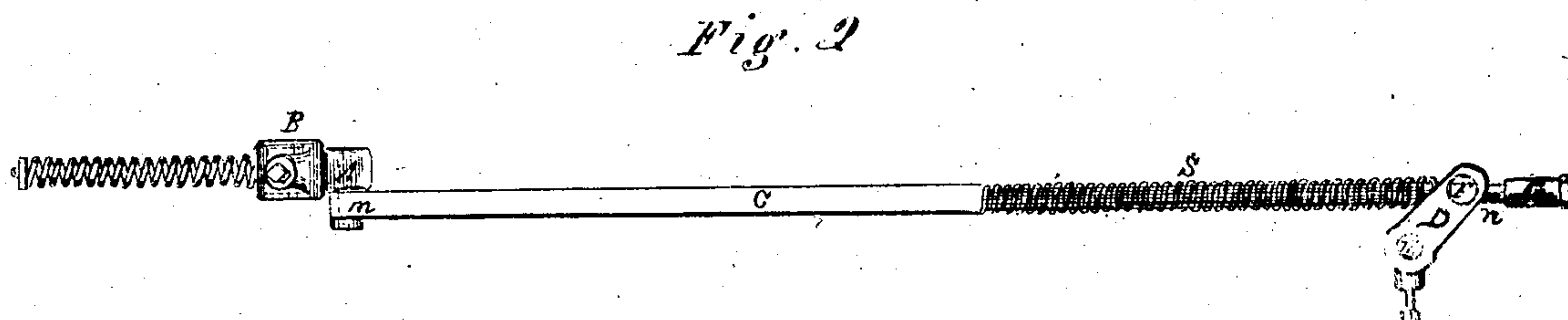
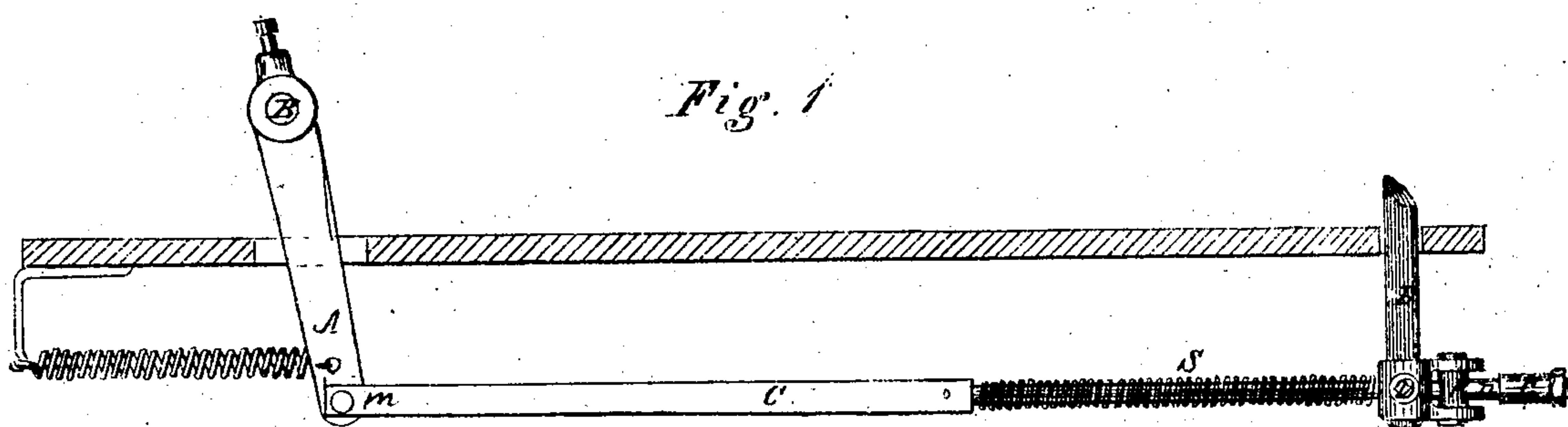


# E. S. Pierce Improved Connecting Rod.

75051

PATENTED  
MAR 3 1868



Witnesses  
Henry J. Bolger  
Jas. L. Emerson.

Inventor  
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# United States Patent Office.

ELIJAH S. PIERCE, OF HARTFORD, CONNECTICUT.

*Letters Patent No. 75,051, dated March 3, 1868.*

## IMPROVEMENT IN CONNECTING-RODS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ELIJAH S. PIERCE, of Hartford, in the county of Hartford, and State of Connecticut, have invented an Improved Connecting-Rod; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate like parts.

Figure 1 is a side view of the improved connecting-rod.

Figure 2 is a top view of the same.

My invention consists in providing a connecting-rod between two cranks, levers, or other moving parts of a machine with a spring attachment, whereby any excess of motion in the moving part will not be communicated to the part moved.

A is a lever or crank attached to the shaft B, and D is a lever or crank attached to the shaft E. C is the connecting-rod joining the levers A and D. One end of the connecting-rod, at *m*, is fastened in the usual manner to the lever A. The other end, *n*, passes through a hole or slide in the piece F, which is attached to the end of the lever D by suitable bearings. S is a spiral spring, resting against a shoulder on the rod C at one end, and against the piece F at the other. This spring is made stiff enough to communicate the required power to the lever D, when the rod C is moved to the right, as shown in the drawings. G is a nut, which prevents the end of C from passing through the hole in the piece F.

The operation of my invention is as follows: Let us suppose that it is wished to move the lever D through a certain arc, at the end of which its motion is arrested, and that the lever A, which communicates motion to it, has an excess of movement for the purpose required. When the rod C commences its motion to the right, the spring S presses against the piece F, and moves the lever D to the end of its assigned motion, where it stops. The parts A and C continuing to move in the same direction, the spring S is compressed, and the rod C passes through the hole in the piece F. This is the position shown in the drawings. When the rod C returns, it moves through the piece F until the nut G comes in contact with it, when it is drawn back by the rod C to its first position.

The advantages of my improved connecting-rod over others, are, that it admits of any desired amount of motion being given to the parts D and E, without any alteration or adjustment of the rod C, merely by stopping the shaft E, or any attached part of the machine, at the point desired; and also that should any part of the machine become clogged or stopped from any cause, the power acts harmlessly against the spring S, instead of breaking or otherwise damaging the machinery.

### Claims.

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

1. An improved connecting-rod, constructed and operating substantially as herein set forth.
2. The combination of the devices C, F, G, and S, or their equivalents, substantially as specified.

ELIJAH S. PIERCE.

Witnesses:

HENRY F. BOLGER,  
JNO. L. EMERSON.