

(No Model.)

T. H. SMITH.

STOP ATTACHMENT FOR TWISTING MACHINES.

No. 549,859.

Patented Nov. 12, 1895.

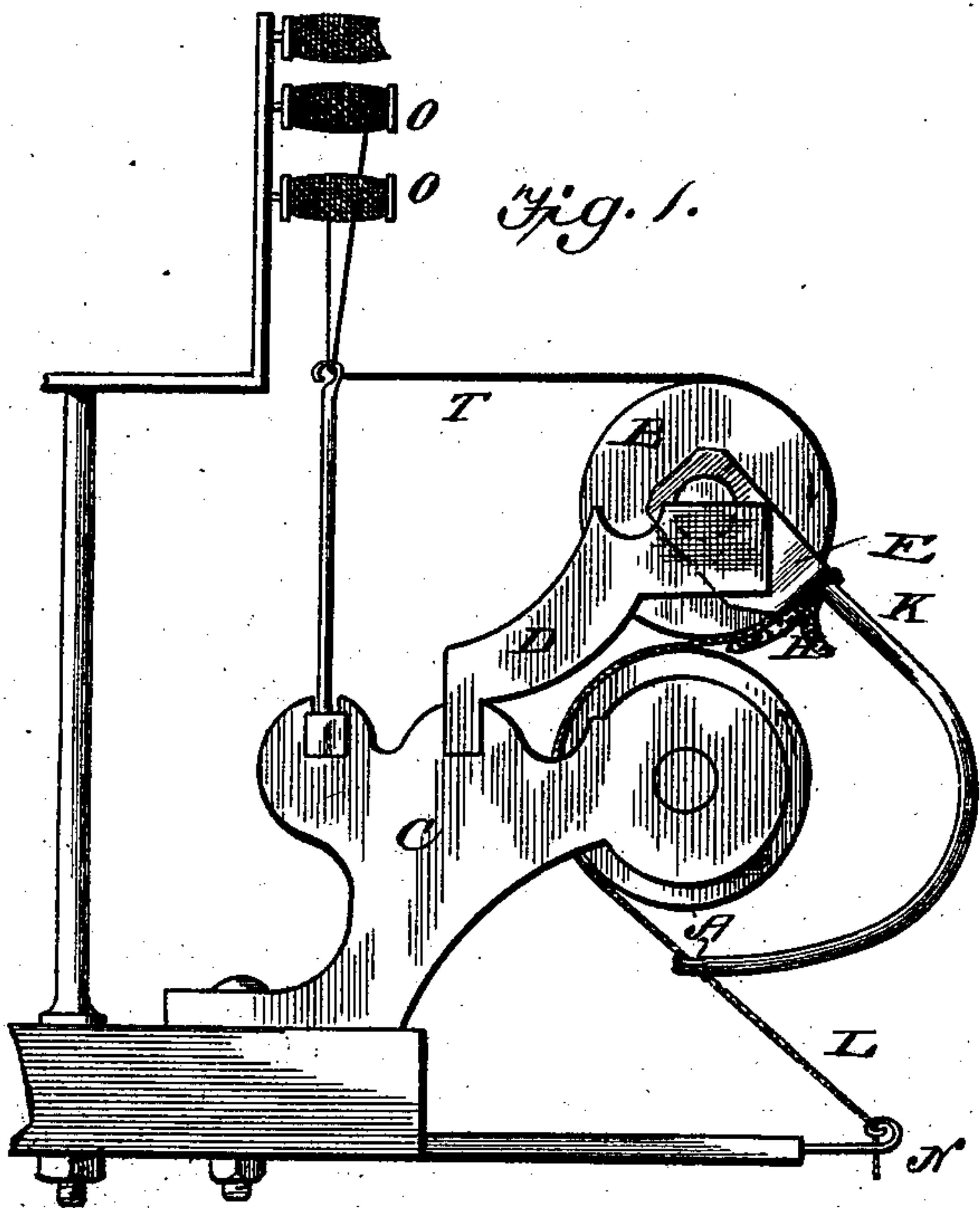


Fig. 1.

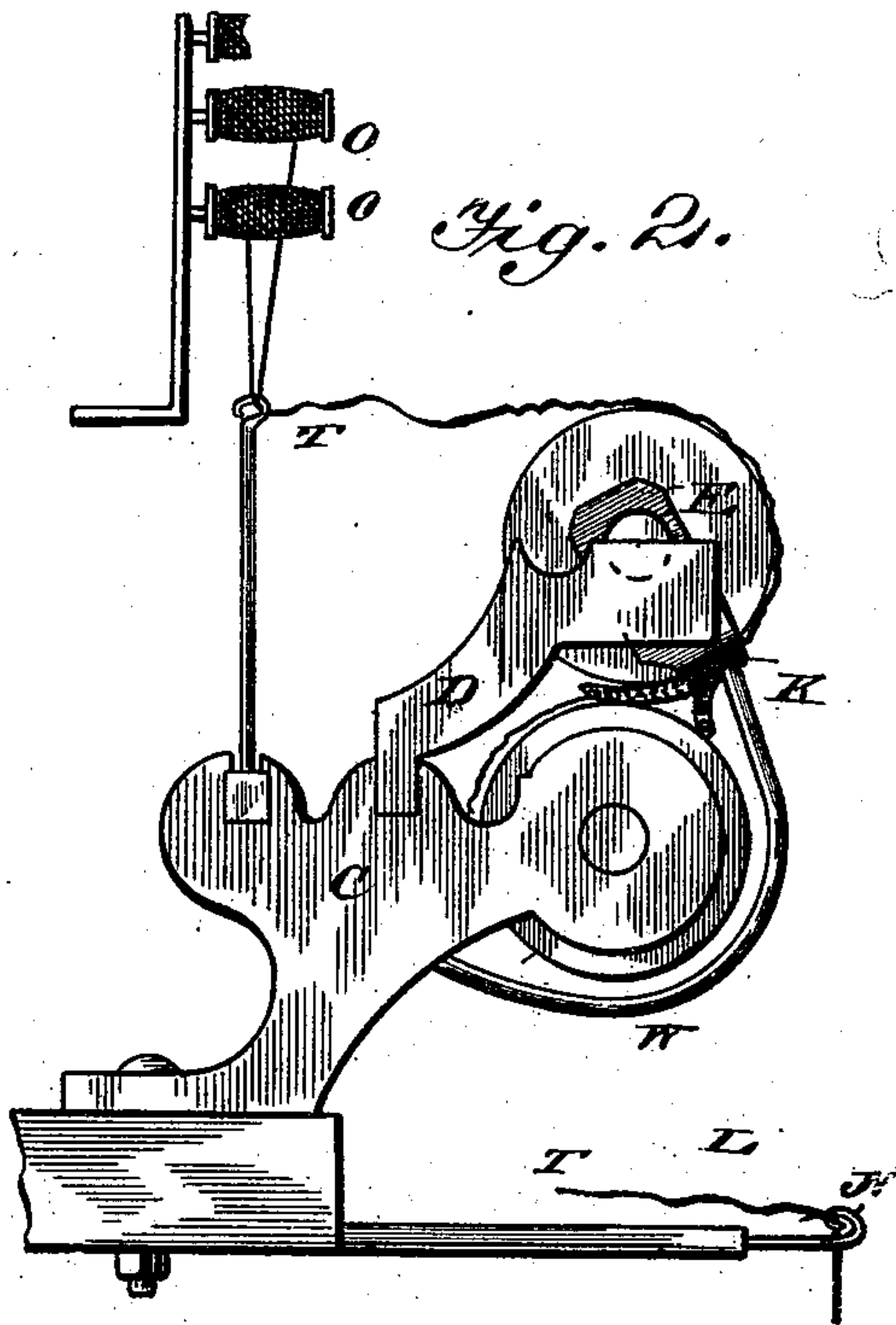


Fig. 2.

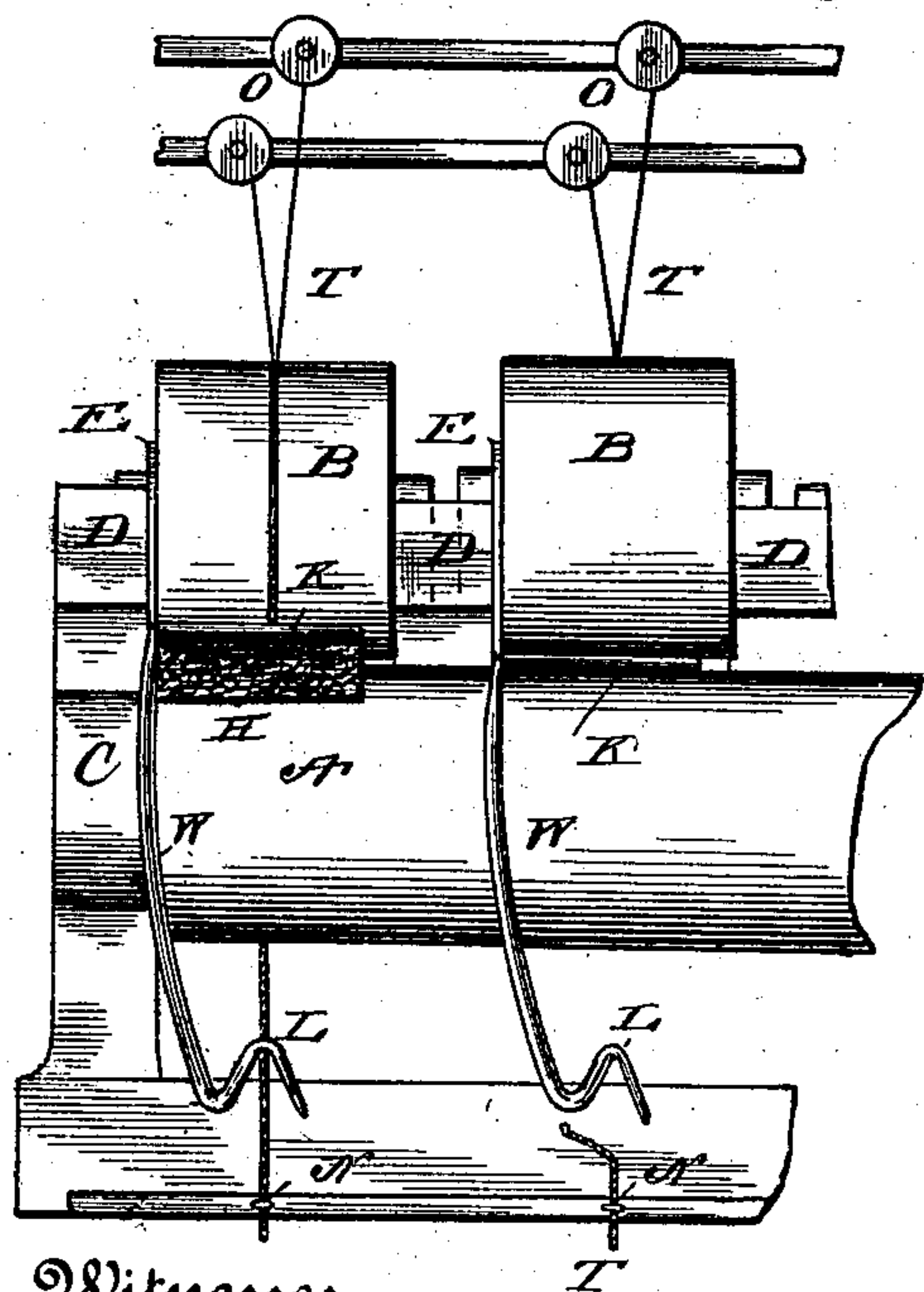


Fig. 3.

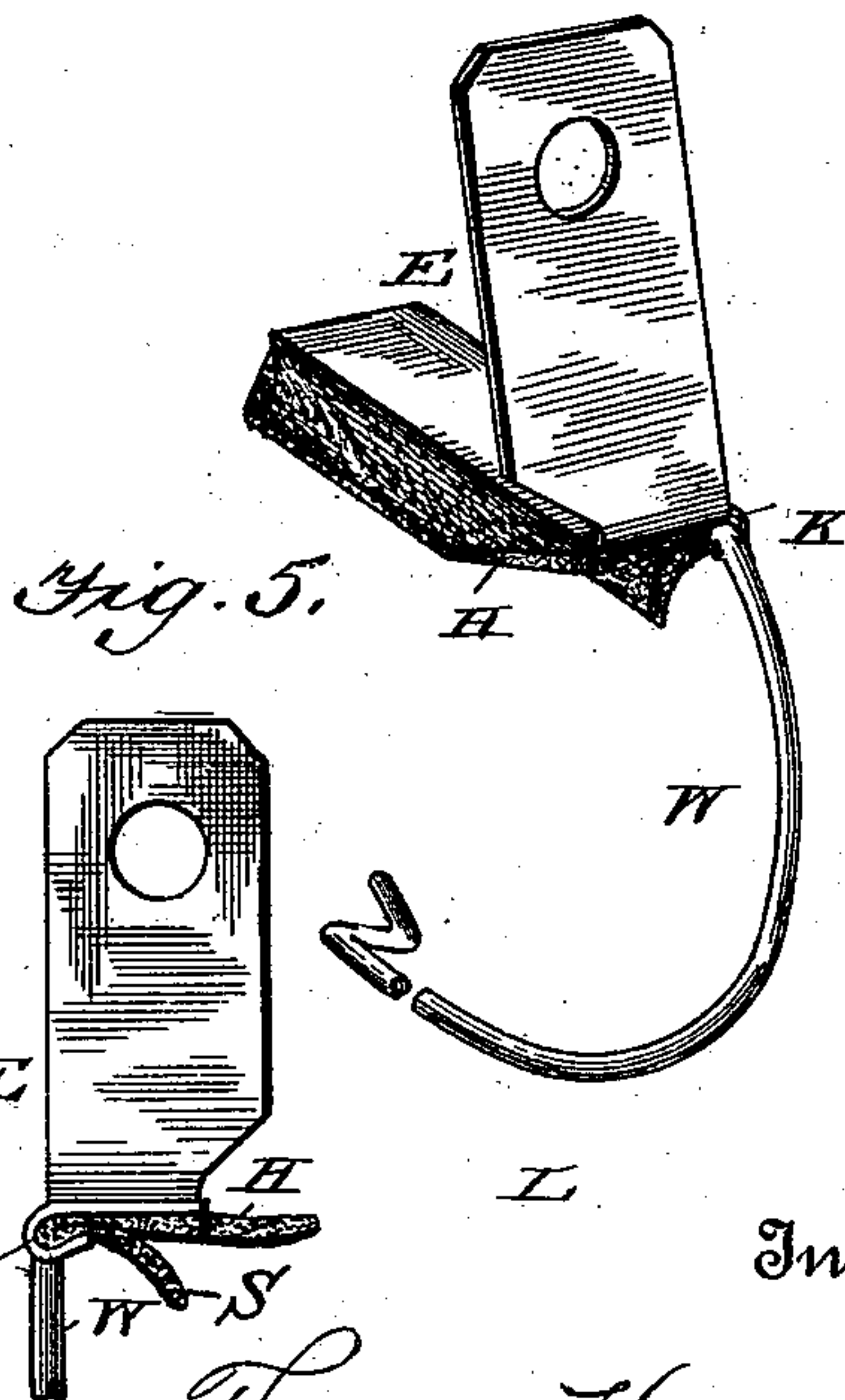


Fig. 4.

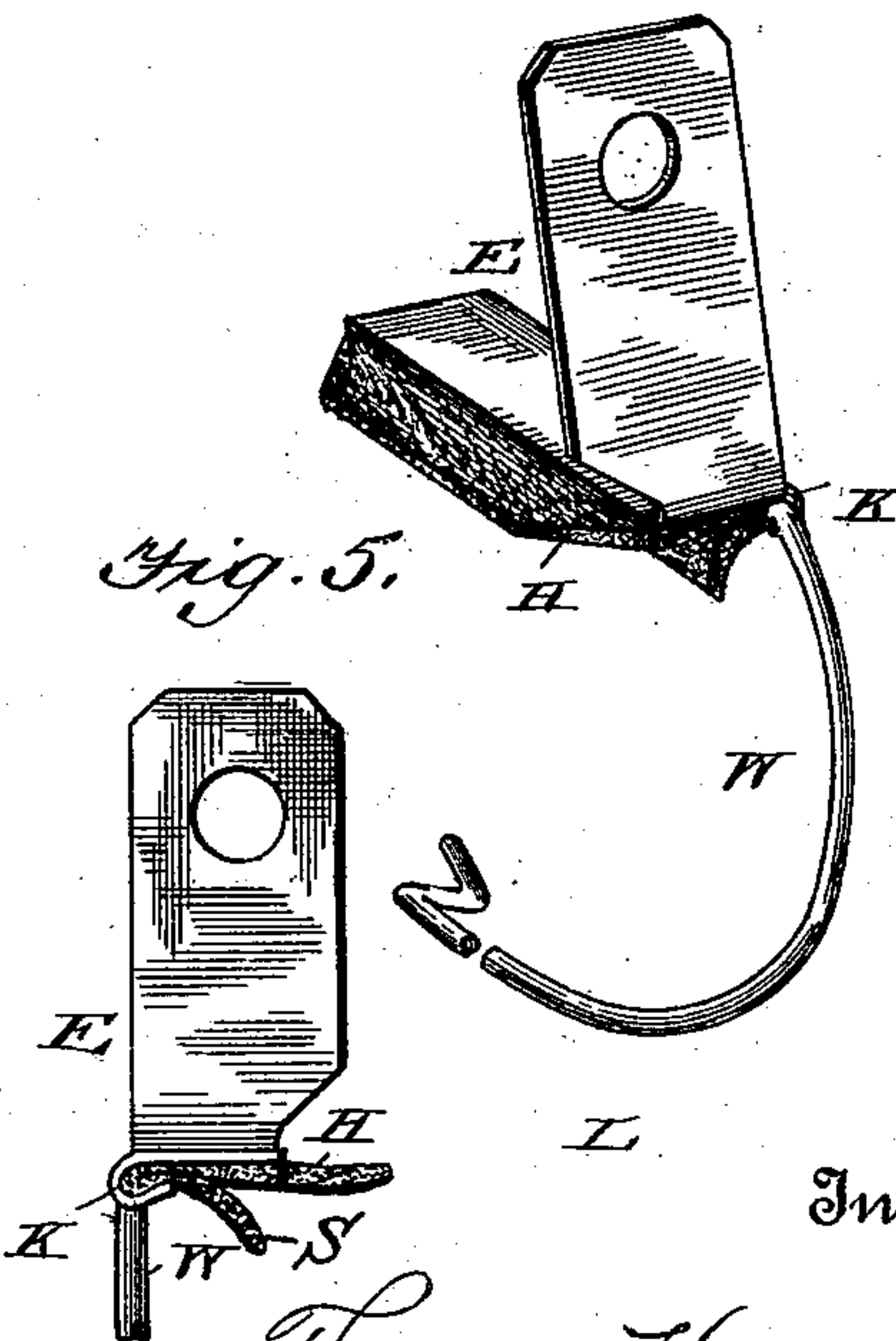


Fig. 5.

Witnesses

John D. Smith
N. E. Thomas

Inventor

Thomas Henry Smith
Per
Harris & Baldwin
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS HENRY SMITH, OF JAMESTOWN, NEW YORK.

STOP ATTACHMENT FOR TWISTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 549,859, dated November 12, 1895.

Application filed August 26, 1895. Serial No. 560,585. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HENRY SMITH, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Stop Attachments for Twisting-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to make a simple and cheap stop attachment for twisting-machines and one so arranged that whenever the thread that is being twisted breaks the upper roll is stopped, the thread being held in position until it is taken up to be tied, and when this is done the attachment is set for further use, all of which will be readily understood by this specification and the accompanying drawings, in which—

Figure 1 shows a side elevation of roller-stand with attachment in position and thread unbroken. Fig. 2 shows the roller-stand with attachment caught between the rolls, the thread broken, and the upper roll raised, so as to stop its motion. Fig. 3 shows the position of rolls. Fig. 4 shows the stop attachment. Fig. 5 shows the attachment in detail.

In the drawings, A is the bottom roll of a twisting-machine, the rolls of which run inward from the front.

B B are short friction-rolls mounted above the long roll, having bearings, so as to be independent of each other, having short journals, and, resting on the bottom roll A, are driven by friction in the usual way.

Fig. 4 shows my stop attachment E as being a thin metal plate made, preferably, of steel, having a hole near its upper end to allow it to be readily inserted on the journal of the upper roll B, as shown in Fig. 1. This plate is turned at a right angle near its center, the edge K being rolled over to firmly secure the wire W, to hold its upper end, and also to hold the flexible double tongue H S, as shown. This flexible double tongue is

preferably made of rawhide lace-leather; but any strong flexible material will do.

Other methods might be employed for securing the parts together; but the one described is found to serve a good purpose.

The upper roll is raised, and the plate E is inserted on its journal through the hole, as shown in Figs. 1 and 2.

In operating the attachment the thread on coming off the bobbins goes over the upper roll and back of the under roll and to a spool below. (Spool not shown in drawings.) The wire leg of the attachment rests lightly on the thread below the rolls at its lower end, holding the flexible double tongue far enough away from the bite or nip of the rolls. As soon as the thread is broken the wire falls down, the flexible tongue is caught between the rolls and drawn in far enough to stop the upper roll, which then rests on the metal plate E, stopping instantly the delivery of the yarn, the lower tongue only coming in contact with the lower roll, which has a continuous motion. As soon as the thread is tied up again the wire is placed on the thread and the twisting goes on as before.

It will be readily understood that this simple attachment saves not only the making of waste, but facilitates the tying of the thread, since no waste is lapped around the under roll to be cut off, and the thread is held in position by the upper leather tongue and runs out when the lever is lifted. The top roll does not need to be lifted out of the cap-bar, thus saving time and cut threads, which are sometimes caused by putting the top roll down too heavily. All wear on twisting machinery when stop occurs is prevented. It is instantaneous in its action. It holds the broken thread in place until the thread is tied up. The double tongue prevents attachment being drawn through the rolls and holds the wire leg from contact with bottom roll.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A stop attachment for twisting machines, consisting of a flat metal strip having a hole at one end to go over the journal or pin of the upper friction roll, the lower part of the piece turned at right angles, having one edge lapped

or turned over to secure the upper end of a wire leg or lever, the other end of the same being bent to rest on the thread as it is twisted, the plate also holding one end of a flexible tongue, substantially as shown and for the purpose set forth.

2. A stop attachment for twisting machines, consisting of a flat metal piece provided with a hole at one end to go over the journal or pin of the loosely mounted roll as shown, the flat piece being bent or turned over at one edge to secure a double flexible tongue and a wire leg curved at its lower end to rest on the thread while being twisted, as shown and described.

3. A stop attachment for twisting machines, consisting of a flexible double tongue adapted to engage the nip or bite of the twisting rolls, the tongue being securely mounted in a metal hanger that rests on the pin or journal of the upper roll, in combination with a metal leg secured to said hanger and curved so as not

to come in contact with the rolls, its lower end being formed to rest on the thread being twisted, so as to hold the flexible tongue from the nip or bite of the rolls, as shown and set forth.

4. A stop attachment for twisting machines, consisting of the flat metal piece E, mounted on the journal of the upper roll B, the wire leg or lever W securely fastened to this flat metal piece at one end, the other end of piece W being bent in a suitable form to rest on the thread, in combination with a flexible tongue H, S, securely fastened at one end by the metal piece E, and projecting beyond the metal to take the bite of the rolls, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS HENRY SMITH.

Witnesses:

N. W. INGERSON,
MILO HARRIS.