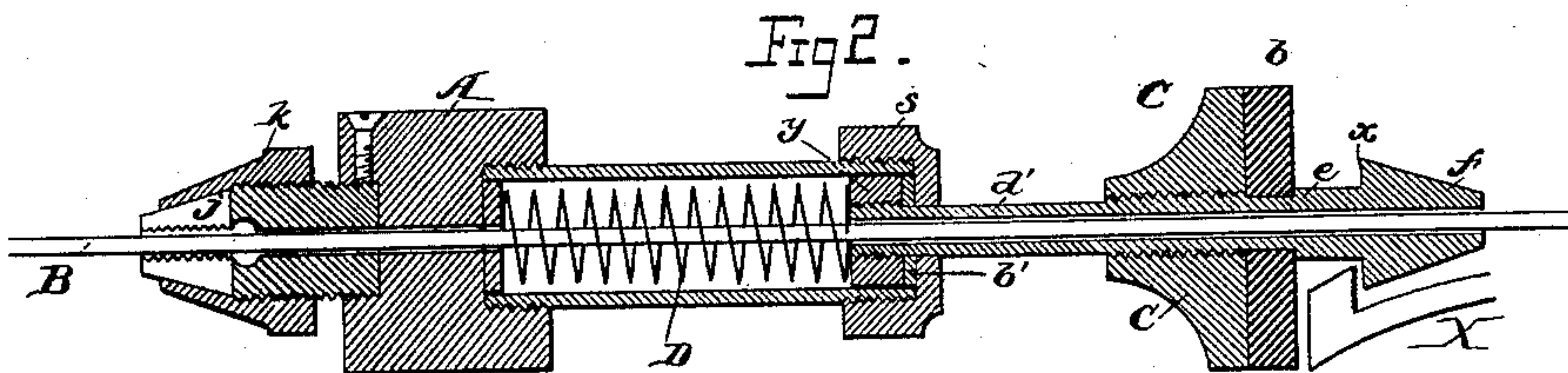
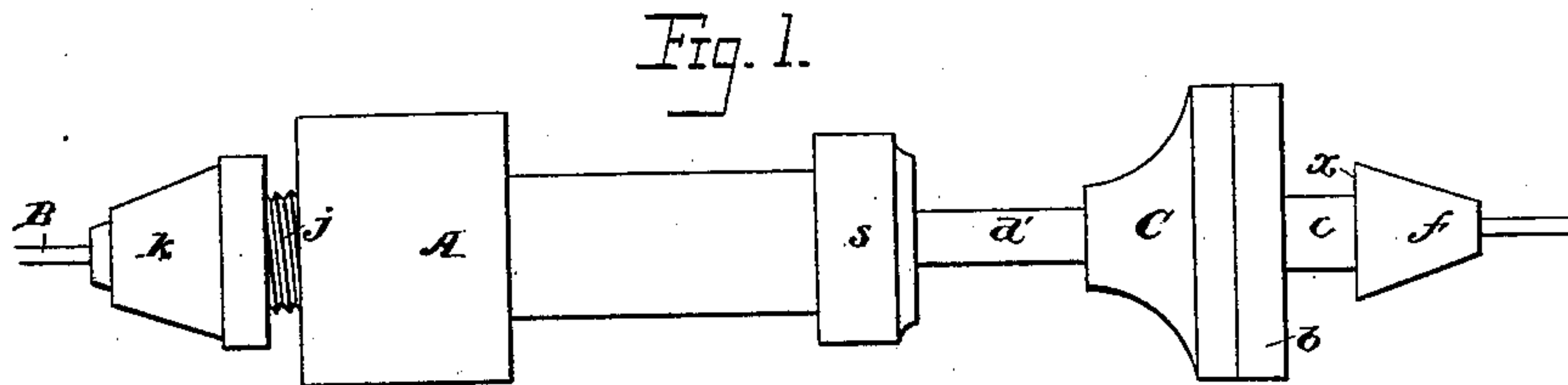


(No Model.)

T. P. FARMER.
BUFFER FOR STORE SERVICE APPARATUS.

No. 452,474.

Patented May 19, 1891.



Attest:

J. P. Town
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Theo. P. Farmer,
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For
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UNITED STATES PATENT OFFICE.

THEODORE P. FARMER, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEW JERSEY.

BUFFER FOR STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 452,474, dated May 19, 1891.

Application filed February 19, 1885. Serial No. 156,427. (No model.)

To all whom it may concern:

Be it known that I, THEODORE P. FARMER, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Store-Service Buffers, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of store-service apparatus in which the carriers travel upon ways consisting of wires stretched between the termini; and my invention consists in certain improvements in what are usually termed the "buffers" or "bumpers," fully set forth hereinafter, whereby the motion of the carriers is gradually arrested without noise or injurious jars or strains and the rebound of the carriers is prevented.

In the drawings, Figure 1 is a plan view of my invention, showing the same applied to a wire. Fig. 2 is a longitudinal section thereof.

The improved buffer consists, essentially, of three parts—a part A, which is secured to the wire B, a part C, which slides upon the wire, and a spring D, interposed between these parts in such a manner as to tend to separate them—the said parts being so constructed or connected that the loose part has only a limited movement in respect to the fixed part, and the said loose part being provided with a circular or annular shoulder for insuring the engagement of the buffer with a hook of the carrier whatever may be the position of the latter.

The part A is perforated for the passage of the wire and is provided with the clamping-nipple *j*, by means of which it can be secured in any position on the wire to which it is to be adjusted, and the part C is provided with a neck *e*, terminating in a conical head *f*, forming an annular shoulder *x*, the whole being perforated, so as to slide upon the wire, and the spring D is interposed between the parts A and C.

The separation of the two parts A and C is prevented by the extension of one part into or through the other and by a shoulder or bearing limiting the movements of the loose portions, as by the tubular extension *d'* of the part C, sliding in the socket of the part A, formed by the cylinder A', and bearing

against the coil-spring D, while the enlargement *y* on the extension *d'*, by contact with the closed end *s* of the cylinder A', limits the forward movement of the part C.

The part A is clamped to the wire by means of the split nipple *j* and a conical sleeve *k*, which, when carried from the end of the nipple, causes the jaws thereof to bite the wire, the sleeve *k* constituting a tapering nut and the nipple *j* being conical and threaded, so that its jaws will be compressed by screwing the nut away from the end.

The device constructed as above described is mounted upon the wire and the carrier is provided with any suitable catch X, having an inclined end or shoulder, which engages with any shoulder upon the buffer—for instance, with the shoulder *x*—and as the latter is annular the engagement of the catch therewith is insured, even where the carrier arrives at the termination of its travel in an inclined position, as frequently happens, owing to the swinging of the carriage on the wire during its movement. The end of the catch first strikes against the front face of the part C and then the shoulder of the catch is stopped by the shoulder *x*, the spring D yielding sufficiently to prevent too sudden an arrest of the carrier's movement, but gradually stopping the same, thereby avoiding the undue jolting and straining of the carrier.

To prevent noise from the contact of the catch with the part C, the face of the latter is covered with an elastic material *b*, as leather, rubber, felt, &c., and to prevent noise on the rebound a similar material *b'* is interposed between the bearings which make contact when the spring throws the part C outward.

The buffer above described serves effectually to arrest the sudden movement of the carrier without noise or objectionable jars or strains, the movement being absorbed and arrested by the spring and extension of one part of the buffer through the other, and the use of the enlargement *y* limits the movement of one part in respect to the other longitudinally.

Having thus described my invention, what I claim is—

The combination, with a wireway, of a split threaded nipple thereon, a conical sleeve upon

the said nipple, a block secured to the forward
end of the said sleeve, a cylinder having a
closed forward end surrounding the said way
and having its rear end secured to the said
5 block, a conical head having a tubular rear-
ward extension surrounding the way and
having an annular shoulder at the base of its
cone, an enlargement at the rear of the tubular
extension contained in the said cylinder, and
10 a spring surrounding the said way and within

the said cylinder between the enlargement on
the tubular extension and the said block, as
described.

In testimony whereof I have signed my
name to this specification in the presence of 15
two subscribing witnesses.

THEODORE P. FARMER.

Witnesses:

AMBROSE EASTMAN,

JAMES R. POWERS.