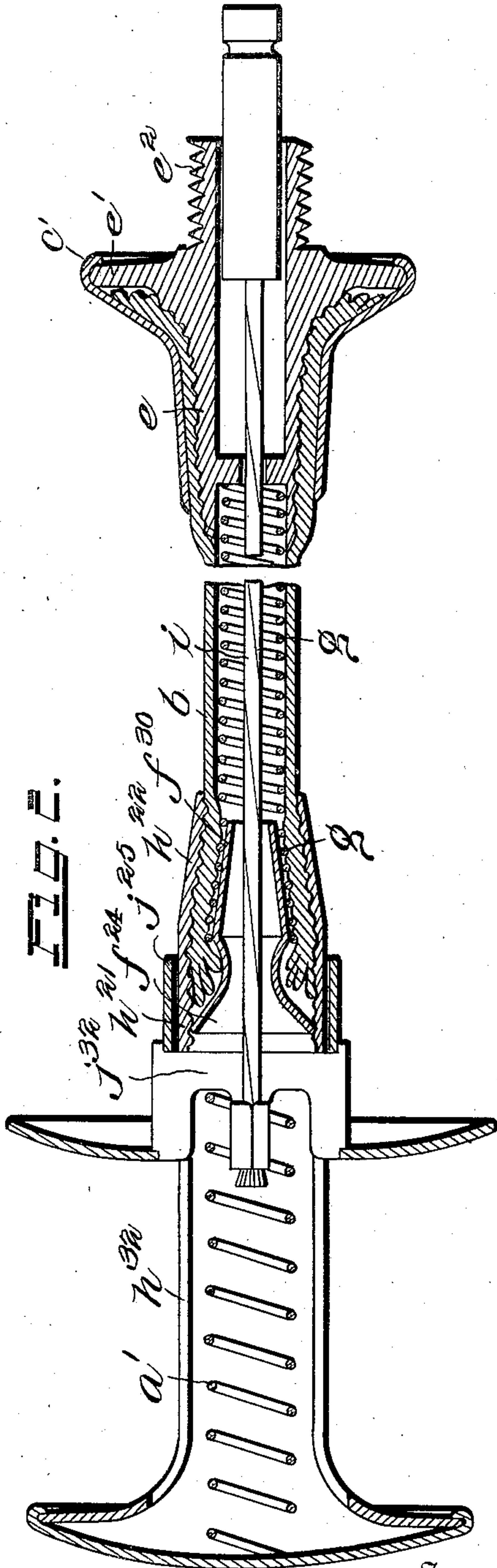


929,573.

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR TRANSMITTING POWER.

No. 929,573.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed March 9, 1907. Serial No. 361,523.

*To all whom it may concern:*

Be it known that I, ARTHUR HENRY EDWARDS, a subject of the King of Great Britain, residing at 96 Lordship road, Stoke Newington, London, England, have invented certain new and useful Improvements in Apparatus for Transmitting Power, of which the following is a specification.

This invention relates to a flexible mechanism for the transmission of power, and it has primarily for its object to provide an improved power transmission apparatus especially suitable for releasing or operating photographic shutters, or for any other purpose where great flexibility in the mechanism is desirable.

Examples of such mechanism may be seen in:—A. H. Edwards's U. S. patent dated 1st July, 1902, No. 703,904. A. H. Edwards's U. S. patent dated 9th September, 1902, No. 708,876. A. H. Edwards's U. S. patent dated 14th August, 1906, No. 828,815.

This invention is especially applicable to any such apparatus or mechanism wherein a plaited outer cover of braid or of a textile material is employed; all of which forms of outer cover I will for the sake of brevity hereinafter refer to as the "braided outer cover".

Now the present invention relates more especially to the attachment of the ends of said braided outer cover to the parts of the mechanism by which the said ends are to be held and secured, and to means for effecting such attachment, a further object being to enable said attachment to be simply, quickly and cheaply effected and in such wise that the extreme ends of said braided outer cover are concealed or inclosed so as to thereby produce a neat and finished appearance of the mechanism at said points of attachment, as well as to effect a strong and reliable attachment at each end of said braided outer cover. And in order that the present invention may be easily understood and readily carried into practice I will—with reference to the accompanying drawing—now proceed to describe the same as carried into practice in the case of a photographic "release" wherein the innermost member consists of a wire inclosed by an open-coiled intermediate member with a braided outer cover or stocking such as referred to in the aforesaid Patent No. 828,815.

Referring to the accompanying drawing:—Figure 1 is a longitudinal section of a

flexible mechanism for the transmission of power constructed in accordance with my invention. Fig. 2 is a view similar to Fig. 1 showing a modified form of the invention.

At the end of the mechanism, Fig. 1, which is opposite to the end which carries the push button *a*, the end of the braided outer cover *b* has a sleeve *c* slid thereover, which sleeve either carries the means such as the four spring prongs *d* of the well known type by which the mechanism is attached to the photographic shutter (or other part of the thing to be operated) or said sleeve *c* may be attached to said means, for example, as shown in Fig. 2 by spinning or turning in the edge *c'* thereof over the flange *e'* of the inner sleeve *e* which latter by means of its screw-threaded outer end *e'* serves to attach the mechanism to the shutter.

In Fig. 1, the end of the braided outer cover *b* opposite the prongs *d* is held securely between the inwardly tapering end *h*<sup>22</sup> of the sleeve *h*<sup>21</sup> carrying the push button *a*, and the inner sleeve *f*<sup>22</sup> as shown. This sleeve *f*<sup>22</sup> is of short length and terminates in the larger part of the sleeve *h*<sup>21</sup>, as plainly seen in Fig. 1. The cap or part *j*<sup>21</sup> in this case has a sleeve portion *j*<sup>22</sup> adapted to slide freely on the exterior of the sleeve *h*<sup>21</sup> and having fixed thereto a cross-bar *j*<sup>3</sup> adapted to slide in the slotted portion *h*<sup>3</sup> of the sleeve *h*<sup>21</sup>, which sleeve *h*<sup>21</sup> is prolonged and terminates at its extreme end in the push button *a* as shown. To the said cross-bar *j*<sup>3</sup> is attached the inner end of the wire *i*, forming the innermost member of the mechanism and one end of the spring *x*<sup>21</sup> is also attached to the cross-bar *j*<sup>3</sup> and at its other end this spring *x*<sup>21</sup> is fixed in the short thimble *n* which is cramped and locked in the position shown between spring *x*<sup>21</sup> and the open coiled spring *g*.

In Fig. 2, the braided outer cover *b* is securely held in between the tapering end *h*<sup>22</sup> of the outer sleeve and the inner sleeve *f*<sup>30</sup> (which is a short sleeve terminating at *f*<sup>24</sup> after the manner shown in Fig. 1.) the end of the open coiled wire *g* (forming the intermediate member) in this case being shown flared and this flared end located between the tapering portion of the inner sleeve *f*<sup>30</sup> and the tapering portion *h*<sup>22</sup> of the outer sleeve *h*<sup>21</sup>, which latter is prolonged as in Fig. 1, and has the button *a* formed on the end thereof. The cap or part corresponding to *j*<sup>21</sup> in Fig. 1, in this case has the tubular



portion  $j^{25}$  adapted to slide on the exterior of the sleeve  $h^{21}$  and has a cross-bar  $j^{32}$  traveling in the slot  $h^{32}$  in the sleeve  $h^{21}$ , to which cross-bar  $j^{32}$  one end of the wire  $i$  is fixed, the said cap being normally kept pressed away from the button  $a$  by means of the interposed auxiliary spring  $a'$ .

What I claim is:—

1. In a flexible mechanism for the transmission of power, the combination of a braided outer cover of the character referred to, means for securely attaching the end of said braided outer cover, comprising an outer sleeve of tapering form, and an inner sleeve of an externally tapering form between which the end of said braided outer cover is gripped and held concealed, a cap  $j^{21}$  provided with a sleeve portion  $j^{22}$  surrounding said outer sleeve, an inner member  $i$  adapted to slide within said outer cover, means carried by said cap and attached to said inner member at one end for sliding the same, and

means at the opposite end of said mechanism for attaching the same to a camera or other object, substantially as described. 25

2. In a flexible mechanism for the transmission of power, the combination of a braided outer cover, means for securely attaching and concealing the ends of the same, consisting of outer and inner flared sleeves between which said ends are gripped, a flexible coiled spring in said cover, a cap  $j^{21}$  provided with a sleeve portion  $j^{22}$  surrounding one of said outer sleeves, an inner member adapted to slide within said spring, and means for attaching said mechanism to a camera, substantially as described. 30 35

In witness whereof I have hereunto set my hand in presence of two witnesses.

ARTHUR HENRY EDWARDS.

Witnesses:

H. D. JAMESON,

F. L. RAND.