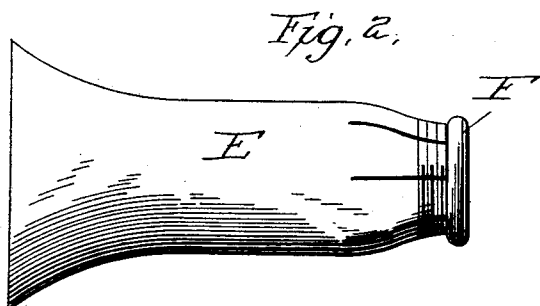
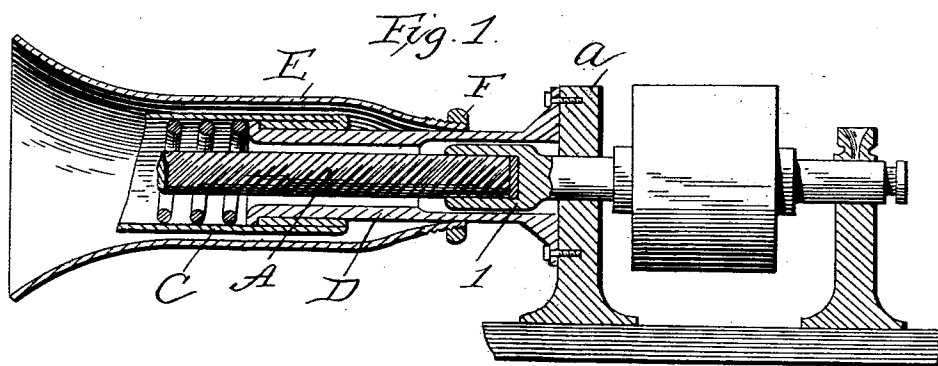


(No Model.)

N. STOW.
FLEXIBLE SHAFTING.

No. 541,297.

Patented June 18, 1895.



Attest
Wm. F. Hall

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Nelson Stow
by J. L. Middleton
ATTY

UNITED STATES PATENT OFFICE.

NELSON STOW, OF BINGHAMTON, NEW YORK.

FLEXIBLE SHAFTING.

SPECIFICATION forming part of Letters Patent No. 541,297, dated June 18, 1895.

Application filed September 14, 1894. Serial No. 523,054. (No model.)

To all whom it may concern:

Be it known that I, NELSON STOW, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Flexible Shafting, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to flexible shafting, and particularly to means for limiting the lateral bending or movement of the shafting at its driving connection to prevent weakening or rupture of said shafting at this point, said limiting means providing a gradual curved surface for directing the flexible shaft laterally without any sharp bends.

My invention is an improvement or attachment to the shafting shown in Reissued Letters Patent No. 8,607 of the United States, granted to me March 4, 1879.

My invention includes a sleeve arranged over the flexible shafting and extending forward of the driving means and having a flaring mouth to direct the shafting laterally without a sharp bend or break and in the manner of adjustably supporting the said sleeve.

In the accompanying drawings, Figure 1 represents a longitudinal section of the shafting with the flaring sleeve in place, and Fig. 2 is a side elevation of the said flaring sleeve.

In the drawings the shaft A represents a flexible shafting of any suitable form connected with the driving power by the socket L. This shaft is inclosed within a flexible tubular covering C which is secured at its end to a metallic sleeve D, fixed to the standard α and projecting out over the driving socket. Inclosing this sleeve is an outer sleeve E, which is supported upon the rear end thereof and is held adjustably thereto. The outer sleeve is slitted at one end, forming a series of spring tongues, and these are screw threaded to receive a ring nut F. By turning this the outer sleeve is clamped upon the inner sleeve at any suitable point, and by this means it may be adjusted to the front or to the rear over the shaft. The rear threaded end of the outer sleeve is tapered to secure the clamping effect. The front end of the sleeve is bell mouthed or flared outwardly,

and extends forward over the flexible shafting, and it will be seen by this arrangement that the flexible shaft may bend freely laterally a sufficient extent for all purposes, but its movement will be limited so that there will be no sharp bend adjacent to the driving means and at the end of the stationary sleeve and there will be no weakening at this point and no liability to break. The flexible covering will be limited also, and there will be no sharp bend in this at its point of connection with the stationary sleeve and by limiting the lateral movement of the flexible covering and its contained coil, the lateral movement of the shaft will be limited.

Having thus described my invention, what I claim is—

1. The combination of the shaft, the driving means connected therewith, and the flaring sleeve extending over the shaft and adapted to limit the lateral movement of the shaft to prevent breaking, substantially as described.

2. The combination of the shaft, the driving means connected thereto, and the flaring sleeve extending over the shaft and adjustably supported, said sleeve being arranged to limit the lateral movement of the flexible shaft substantially as described.

3. In combination with a flexible shafting, the shaft, the driving means, the inner sleeve, and the outer flaring sleeve carried thereby and extending over the shaft, substantially as described.

4. In combination with a flexible shafting, the driving means, the inner sleeve, and the outer flaring sleeve adjustably carried thereby, substantially as described.

5. In combination with a flexible shaft, the driving means, the inner sleeve, the outer sleeve having a rear tapered portion slitted longitudinally and screw threaded, and the nut for clamping the outer sleeve to the inner, said outer sleeve having a bell mouth extending over the flexible shaft, substantially as described.

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

NELSON STOW.

Witnesses:

HENRY E. COOPER,
WALTER DUCALON.