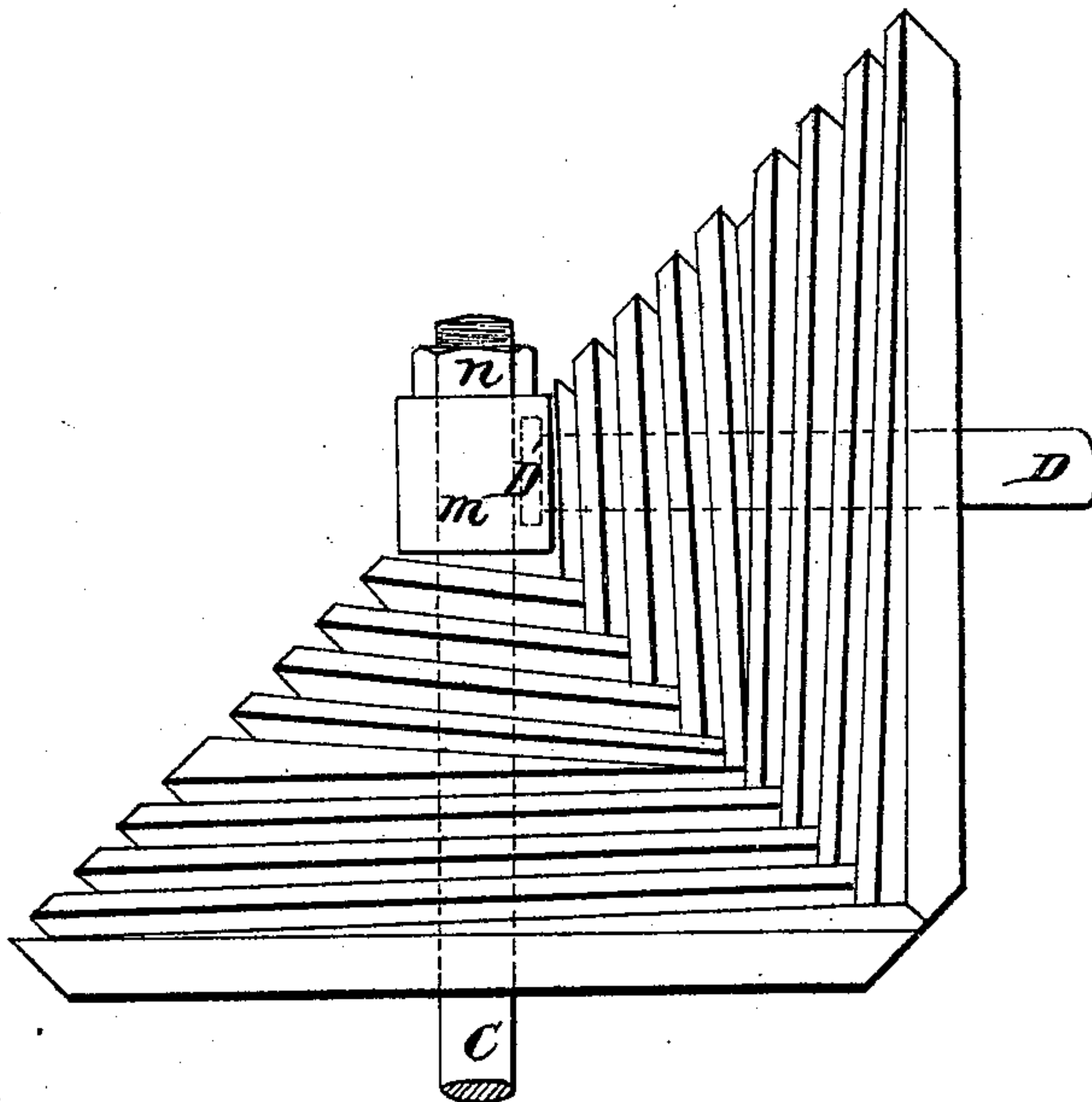


G. LINDSAY.

Devices for Increasing the Friction of Helical
Gearings.

No. 141,149.

Patented July 22, 1873.



Witnesses.

W. C. Dey
Alf. Westbrook.

Inventor:

Geo Lindsay
by his attorney
J. D. Stetson.

UNITED STATES PATENT OFFICE.

GEORGE LINDSAY, OF BELFAST, IRELAND.

IMPROVEMENT IN DEVICES FOR INCREASING THE FRICTION OF HELICAL GEARING.

Specification forming part of Letters Patent No. **141,149**, dated July 22, 1873 ; application filed February 25, 1873.

To all whom it may concern:

Be it known that I, GEORGE LINDSAY, of Belfast, in the county of Antrim, Ireland, have invented certain Improvements relating to Gearing or Apparatus for Transmitting Motion, of which the following is a specification:

The accompanying drawing is appended that others may readily comprehend my invention.

The figure is a side elevation of bevel-gearing drawn with square threads. Right and left threads gear with left and right threads.

In the figure, *m* is what I term my holding-loop, which serves to prevent the shafts from springing apart. It is provided with a nut, *n*, which allows of the shafts being drawn together to compensate for wear. The shafts are marked, respectively, C and D. The shaft C is extended directly through the loop *m*, and carries a tightly-fitted nut, *n*. There may in practice be also a jam-nut, to press against the same, and hold it against accidental displacement. The shaft D is formed with a collar, D', at its end, which is inclosed within the loop *m*, which may be made in two parts, or fitted with adjustable boxes, to properly match to it, and allow of being set up from time to time.

It will be obvious that gearing constructed

in accordance with my invention is suitable for transmitting motion when rotated in either direction, and that it is applicable in many machines and for many purposes.

I prefer that the said screw-threads or helices on the driving-shaft should be slightly larger in diameter than those on the driven shaft, and also that the pitch of the driving-threads or helices should be slightly less than those of the driven threads or helices.

The screw-threads or helices may be of any ordinary form; but when the motion is to be always in one direction I prefer that the one side should stand at nearly a right angle to the axis, while the other side is formed at a greater angle.

Having now described the nature of my said invention, and particularized the same, I claim—

The loop *m*, adapted to embrace the collar D', in combination with said collar, and with wheels having helical threads fixed on the shafts C D, as specified.

GEO. LINDSAY.

Witnesses:

WILLIAM BELL,
WILLIAM BELL, Jr.