

No. 638,543.

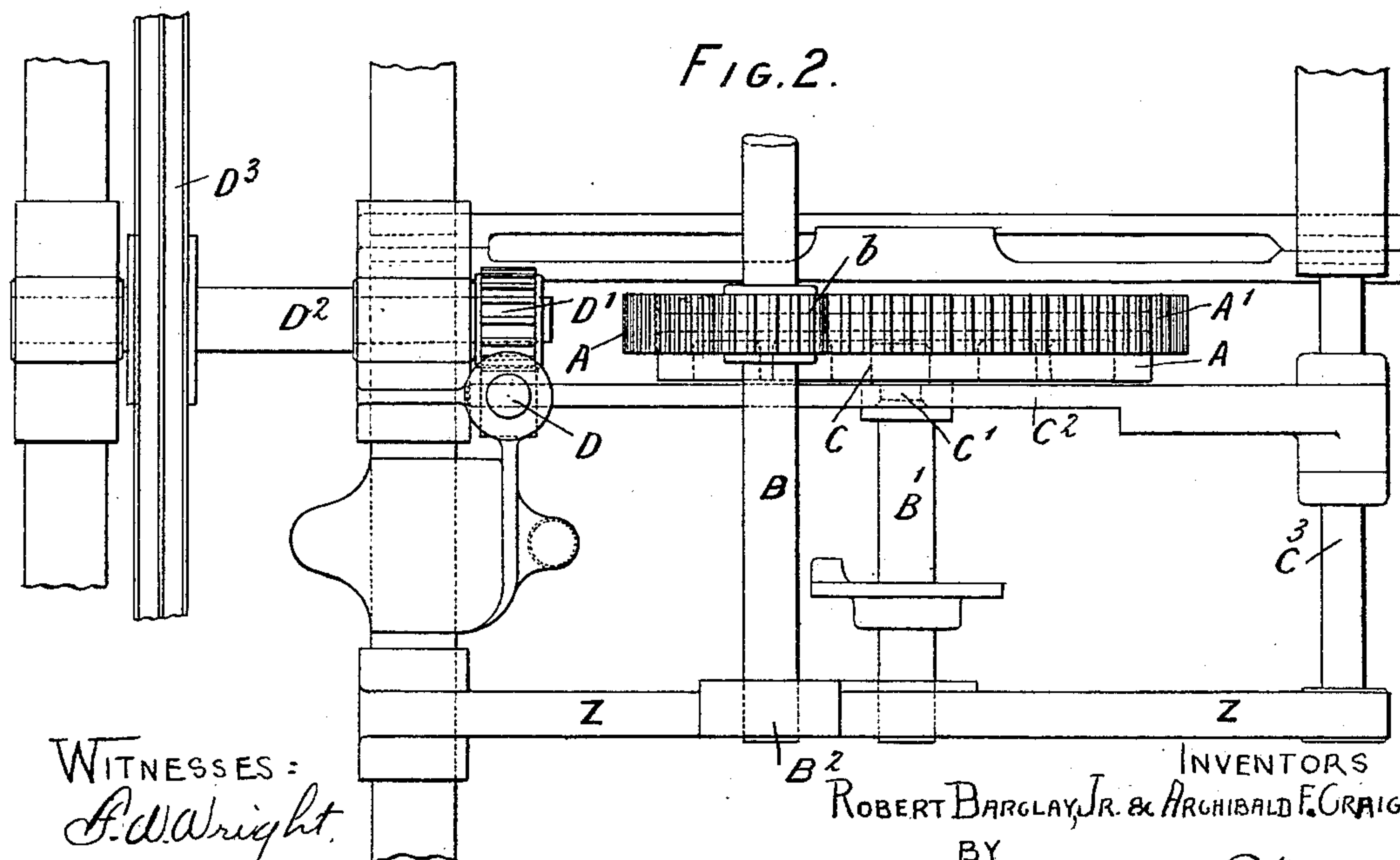
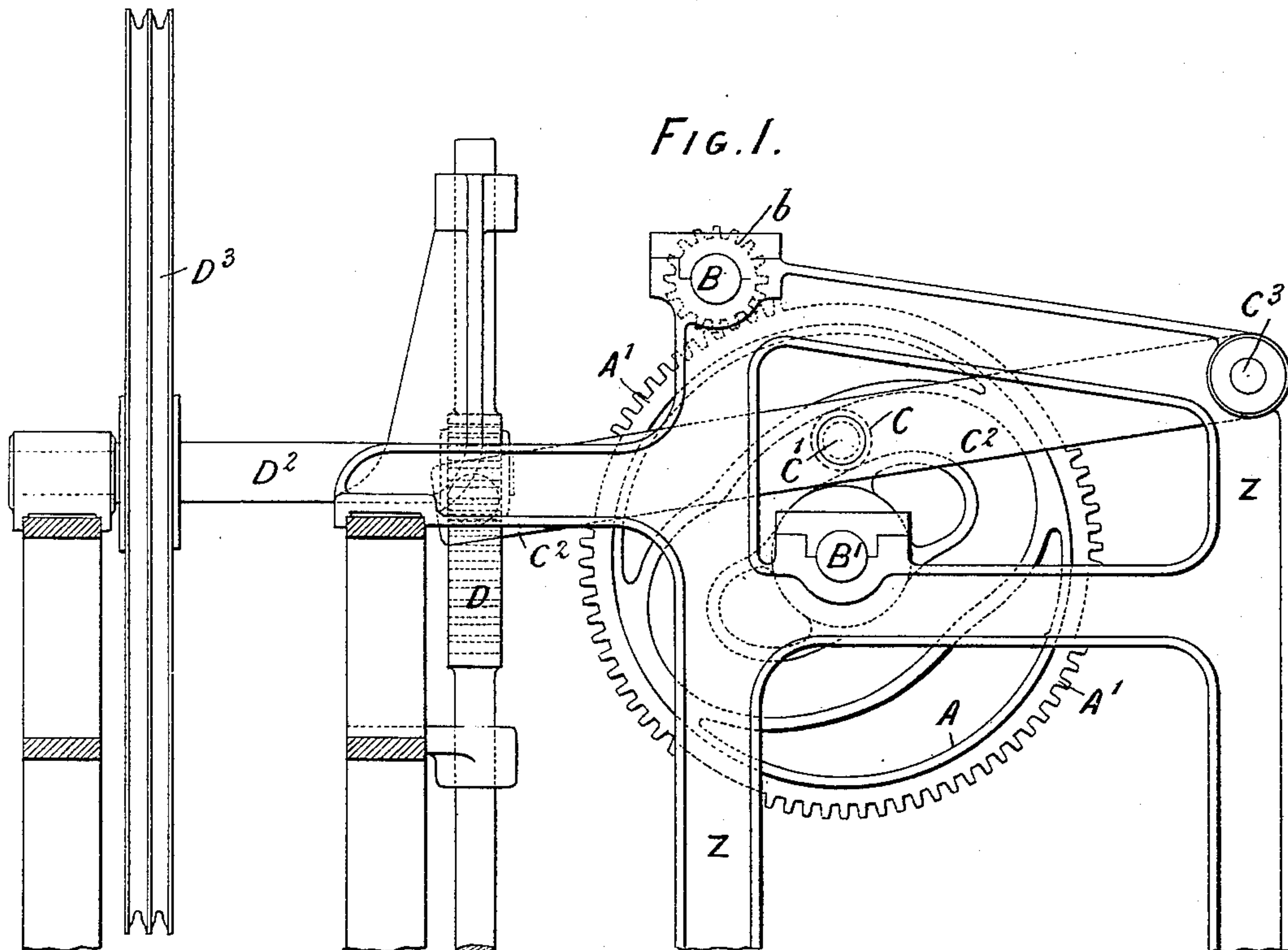
Patented Dec. 5, 1899.

R. BARCLAY, JR. & A. F. CRAIG.

DRIVING MECHANISM FOR PILE FORMING APPARATUS FOR LOOMS.

(Application filed Dec. 27, 1897.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

ROBERT BARCLAY, JR., AND ARCHIBALD F. CRAIG, OF PAISLEY, SCOTLAND.

DRIVING MECHANISM FOR PILE-FORMING APPARATUS FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 638,543, dated December 5, 1899.

Application filed December 27, 1897. Serial No. 663,637. (No model.)

*To all whom it may concern:*

Be it known that we, ROBERT BARCLAY, Jr., and ARCHIBALD FULTON CRAIG, subjects of the Queen of Great Britain and Ireland, and residents of Paisley, county of Renfrew, Scotland, have invented certain new and useful Improvements in Driving Mechanism for Pile-Forming Apparatus for Looms for Weaving, (for which we have obtained a patent in Great Britain, No. 22,993, bearing date October 7, 1897,) of which the following is a specification.

This invention has reference to improvements in driving mechanism for pile-forming apparatus in looms for weaving, and comprises an improved combination of cam and spur-wheel for driving the reciprocating rack-bar which operates through a spur-pinion the rope-drum that gives the reciprocatory to-and-fro motion to the wires for raising the pile of carpet.

In order that others skilled in the art to which our invention relates may understand how same may be carried into practice, we have hereunto appended an explanatory sheet of drawings, in which—

Figure 1 represents in elevation, and Fig. 2 in plan view, part of a loom to which our improvements are shown applied.

Referring to the drawings, by our improvements we cast or combine in one the cam A and a spur or toothed wheel A' and mount same to rotate loosely on the second-motion shaft B'. The first-motion shaft B is extended and its end B<sup>2</sup> carried in bearings in an end frame Z, and a pinion b is keyed on same to gear into the spur-teeth A' of cam-wheel A, so that same shall be actuated in time unison with the second-motion shaft B'.

A roller C is mounted on a projecting stud C', carried on the lever C<sup>2</sup>. The one end of this lever C is loosely fulcrumed on a stationary spindle C<sup>3</sup>, while its other end is slotted and by the motion from cam A reciprocates the bar D, which is formed with rack-teeth. This rack D gears into a pinion D', mounted on the spindle D<sup>2</sup> of drum D<sup>3</sup>, and by this means reciprocatory to-and-fro motions are given to the wires for raising the pile of carpet.

By this construction looms can be made to weave fabrics of greater width than can be woven in looms as heretofore constructed with the wire-operating cam keyed on the cam-shaft, and the reason is that by our construction the power is applied to the periphery of the cam-wheel A A' instead of at the center.

We claim as our invention—

In a pile-forming apparatus for looms, the combination of the cam-shaft with a toothed wheel and cam combined and mounted loosely on the said cam-shaft, a driving-shaft having a pinion gearing into said toothed wheel and a lever operated by the said cam-wheel to give motion to the pile-wires, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ROBT. BARCLAY, JR.  
A. F. CRAIG.

Witnesses:

JOHN OGILVIE,  
ADAM COOK.