

No. 881,904.

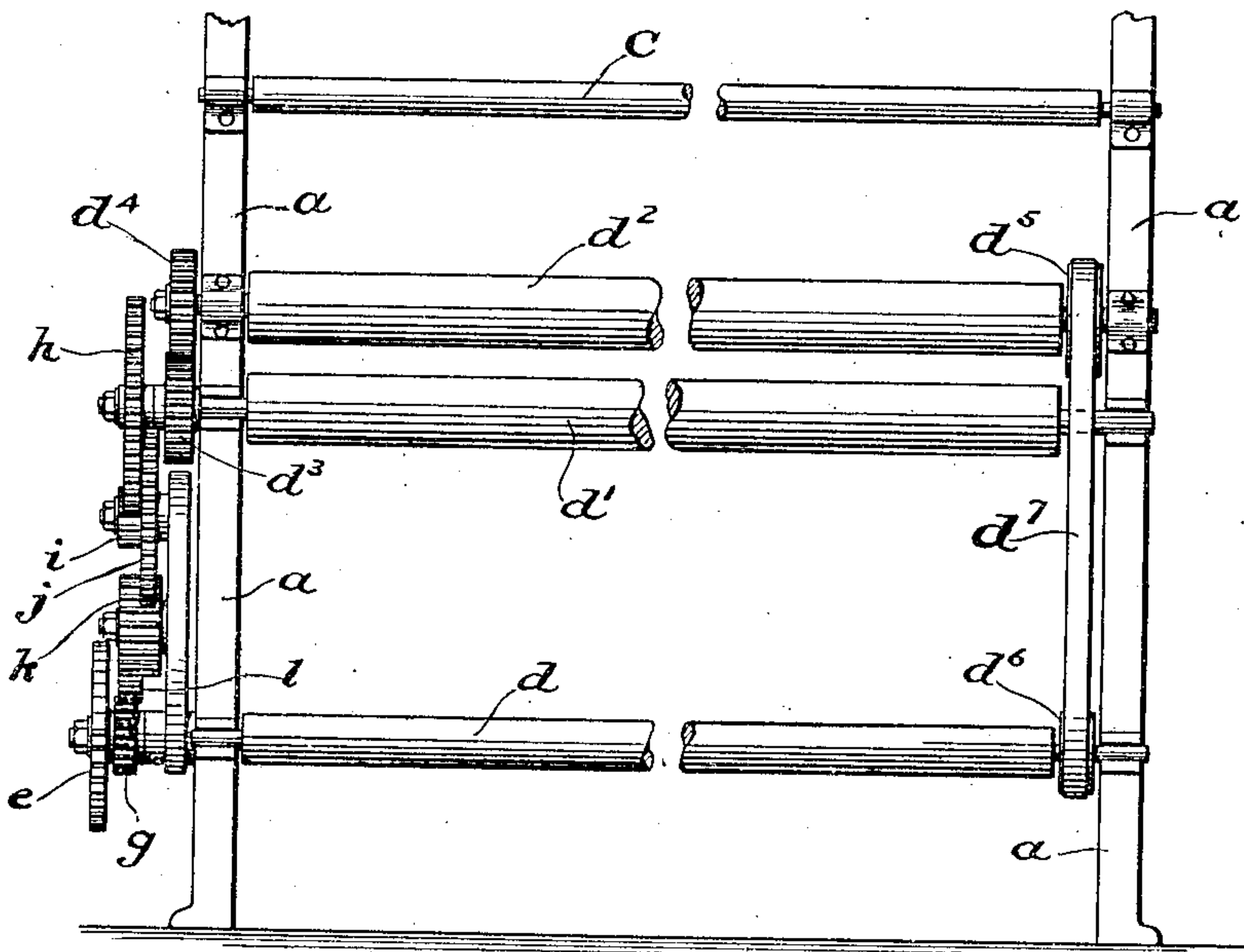
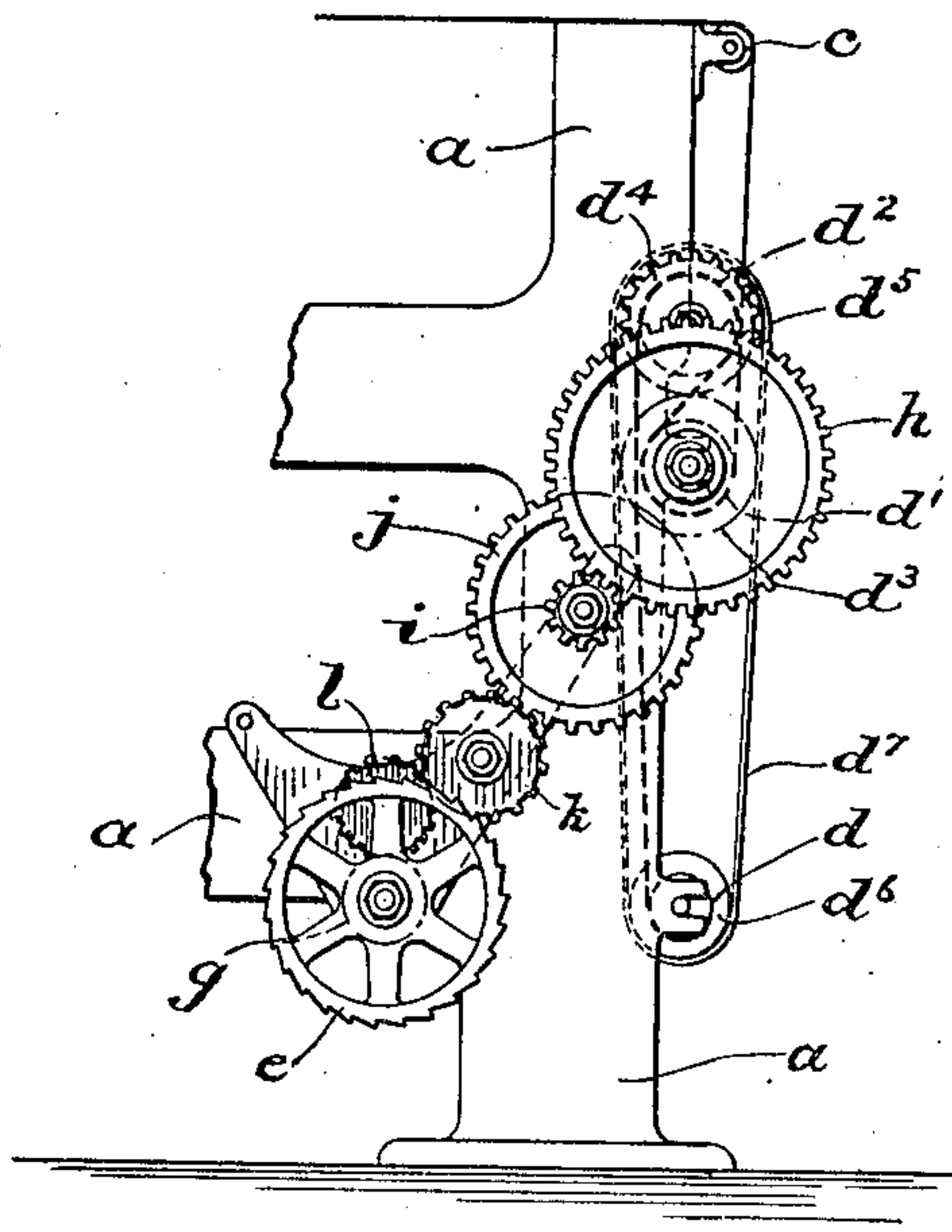
PATENTED MAR. 17, 1908.

G. S. COX.

TAKE-UP MECHANISM FOR LOOMS.

APPLICATION FILED DEC. 27, 1905.

FIG. 1.



WITNESSES:

M. M. Hamilton
Thornley B. Wood.

FIG. 2..

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BY

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UNITED STATES PATENT OFFICE.

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WALTER S. COX, OF PHILADELPHIA, PENNSYLVANIA, TRADING AS GEORGE S. COX
AND BROTHER.

TAKE-UP MECHANISM FOR LOOMS.

No. 881,904.

Specification of Letters Patent.

Patented March 17, 1908.

Original application filed June 13, 1905, Serial No. 264,992. Divided and this application filed December 27, 1905.
Serial No. 293,444.

To all whom it may concern:

Be it known that I, GEORGE S. COX, a citizen of the United States, residing at Fitzwatertown, county of Montgomery, and State of Pennsylvania, have invented a new and useful Improvement in Take-Up Mechanism for Looms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

This application is a division of an application filed by me June 13th, 1905, Serial No. 264,992. In that application is described a loom adapted to the manufacture of hair cloth and having various novel features, and the improved take-up mechanism forming part of such loom is the subject matter of this application. It will be understood, however, that this improved take-up mechanism may be found available for use in other types of looms than the one particularly set forth in said application.

The special object of the invention is to have the take-up mechanism act uniformly and with certainty.

Figure 1 is a side elevation of a portion of the loom frame and the take-up mechanism; and Fig. 2 is a front elevation of the same.

The other parts of the loom are not shown, as their specific construction is of no importance.

a is the frame of the loom having suitable bearings for the spindles of the guide roller *c*, cloth roller *d*, and take-up rollers *d'* and *d''*, and for the shaft of the ratchet wheel *e*.

g is a spur gear on the shaft of ratchet wheel *e*.

h is a spur gear on the spindle of the take up roller *d'*.

i, *j*, *k*, *l* are the gears connecting gears *g* and *h*.

d''' is another gear on the shaft of roller *d'*, engaging a gear *d''* on the shaft of roller *d''*.

d'' is a pulley on the shaft of roller *d''*.

d'' is a pulley on the shaft of the cloth roller *d*, and *d''* is a belt connecting pulleys *d''* and *d''*. The ratchet wheel, which is operated by the lay in the usual manner, operates the take up rollers *d'* and *d''*, through the chain of gearing above set out, and the roller *d'''* operates the cloth roller *d* by means of the belt and pulley connection described. The cloth from the loom passes down to, under, and partially around take-up roller

d', thence up to, over, and partially around take up roller *d'''*, and thence down to the cloth roller. The take up rollers *d'* and *d'''* are roughened.

Take-up mechanism for hair cloth looms, as usually constructed, consist of a roughened roller, on which is superimposed a pressure bar. Sometimes a roller, driven positively or frictionally, is substituted for the pressure bar. The cloth passes between the roughened roller and the pressure bar, the cloth being carried along by reason of the pressure bar holding the cloth in contact with the roughened surface of the take-up roller as the latter turns. In course of time, this constant frictional contact of the pressure bar and take-up roller wears away the roughened surface of the roller, so that the feeding action of the same becomes uncertain. This results in an occasional and sometimes frequent failure of the cloth to feed forward after each beat of the lay, causing the cloth to contain more picks to the inch than the take-up wheel indicates. Thus two evils are produced, one of which is an irregularity in the closeness of the picks, while the other of which is that the manufacturer suffers loss by reason of the cloth containing more picks to the inch than enter into his calculations.

The improved take-up mechanism above described entirely obviates these defects. The two take-up rollers arranged as shown and spaced apart act as an effective substitute for the single take-up roller and pressure bar commonly used. As these rollers are not in contact with each other, and do not feed the cloth forwardly by pressing the cloth between them, there are no conditions giving rise to any wearing away of the roughened surface of either of the take-up rollers. Consequently, these take-up rollers are extremely durable and will last indefinitely without any diminution in their efficiency.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. In a take-up mechanism for looms, in combination, a cloth roller, take-up rollers, having a roughened surface, to and about which the cloth is adapted to pass on its way to the cloth roller, said take-up rollers being spaced apart a distance sufficient to permit

a given length of cloth on its way from one take-up roller to the other to be out of contact with either roller, and means positively actuating the take up rollers.

5 2. In a take-up mechanism for looms, in combination, a cloth roller, take-up rollers, having a roughened surface, to and about which the cloth is adapted to pass on its way to the cloth roller, each roller being spaced
10 from the next roller of the series a distance sufficient to permit a given length of cloth between such rollers to be out of contact with either roller, means positively actuating the take-up rollers, and driving connections
15 from the take-up rollers to the cloth roller.

3. In a take-up mechanism for looms, in combination, a take-up roller down to and under which the cloth is initially fed, a
20 second take-up roller above the first take-up roller up to and over which the cloth is fed from the first take-up roller, said take-up rollers being spaced apart a distance sufficient to permit a given length of cloth on its way from one roller to the other to be out of

contact with either roller, a cloth - roller 25 beneath the first take - up roller down to which the goods are fed from the second take up roller, and means to positively drive all the rollers.

4. In a take-up mechanism for looms, in 30 combination, the cloth-roller, a plurality of take-up rollers, one, nearer the cloth-roller, to which the cloth is fed from the guide-roller, and one, nearer the guide-roller, from which the cloth is fed to the cloth roller, and 35 means to positively drive the take-up rollers, each roller being spaced apart from the next roller of the series a distance sufficient to permit a length of cloth at any given time feeding between them to be out of contact 40 with either roller.

In testimony of which invention, I have hereunto set my hand, at Philadelphia, on this 21st day of December, 1905.

GEORGE S. COX.

Witnesses:

HOWARD L. GODFREY,
E. C. SEIBERLICH.