

(No Model.)

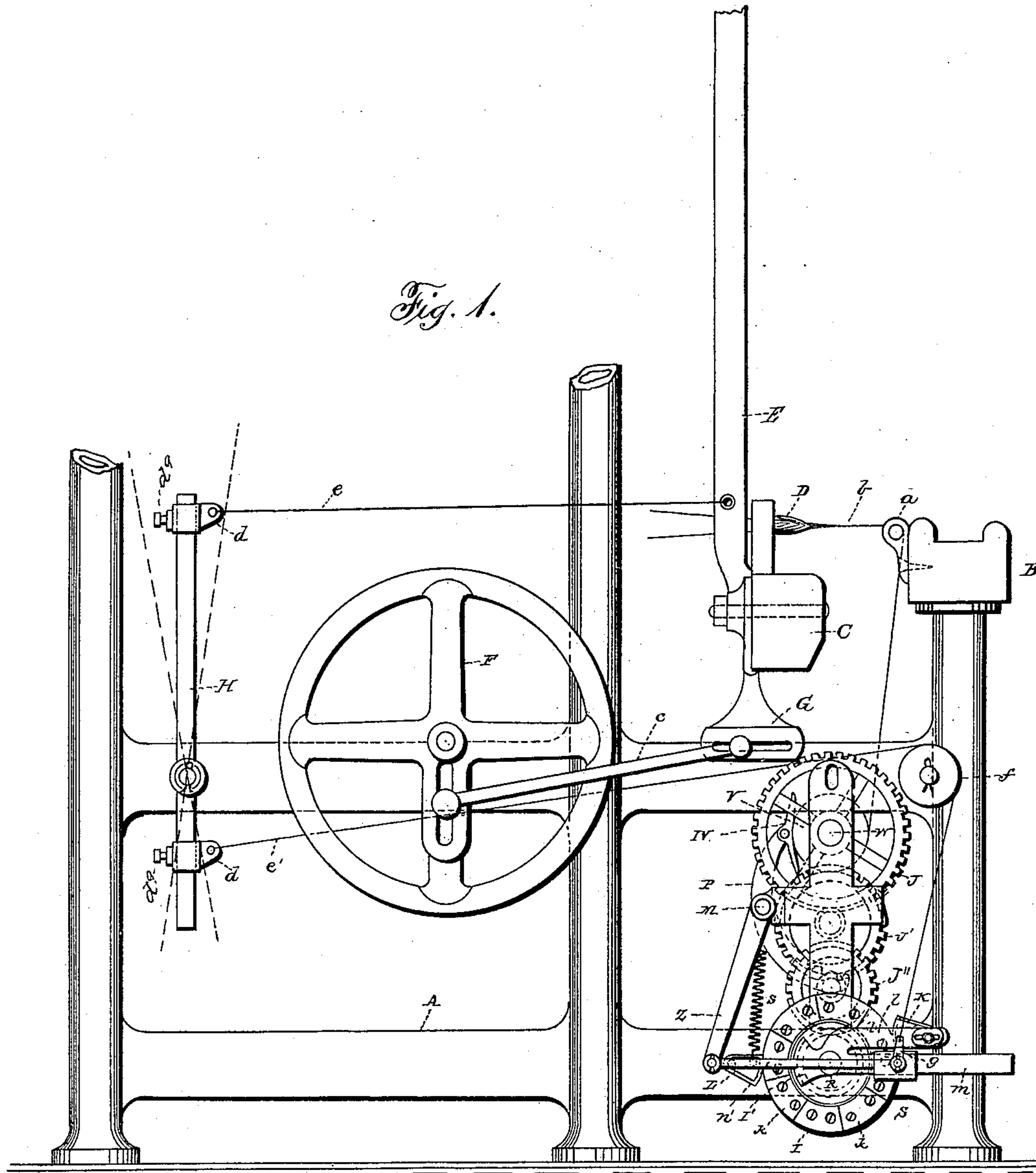
2 Sheets—Sheet 1.

W. P. UHLINGER.
TAKE-UP MECHANISM FOR LOOMS.

No. 390,630.

Patented Oct. 2, 1888.

Fig. 1.



Witnesses
H. H. Harris
C. R. Ferguson

Inventor
William P. Uhlinger

By his Attorney
E. W. Anderson.

UNITED STATES PATENT OFFICE.

WILLIAM P. UHLINGER, OF PHILADELPHIA, PENNSYLVANIA.

TAKE-UP MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 390,630, dated October 2, 1888.

Application filed February 13, 1888. Serial No. 263,882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. UHLINGER, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Take-Up Mechanism for Looms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation of part of a loom, showing my improved take-up and compensator; and Fig. 2 is a view of part of the same, on a somewhat enlarged scale.

This invention has relation to looms, and refers especially to certain improvements in the take-up motion and compensating devices connected therewith, all as hereinafter set forth.

The improvements are particularly designed for use in connection with ribbon-loom, although they may be employed in other looms, if desired. The fine and exact character required in the work of ribbon-loom renders the invention of comparatively greater importance in this class of weaving-machines.

Referring to the accompanying drawings, illustrating this invention, the letter A designates the frame-work of the loom, and B the breast-beam thereof, having the guide *a* for the work *b*.

C is the lathe, and D represents the shuttle in position.

E is the lathe-arm, having a pendant, G, which is connected to the crank and fly-wheel F by the rod *c*. In rear of this crank and fly-wheel is the rocking-lever H, which is pivoted in the frame and stands in an upright position. This lever is provided with slides *d d*, which may be secured in any adjusted position by means of set-screws *d'*, and to which are connected the ends of the cords or connections *e e'*, of which one extends to the lathe and the other passes over the guide-roller *f* and is connected to the link *g*, thereby transmitting reciprocatory motion to the said link. By means of the slides *d d* the feed can be adjusted to the number of picks to the inch required in the work.

The take-up rolls V are keyed on the shaft W by set-screws *n*, so that they will turn with said shaft, which is pivoted in bearings of the frame and is provided with a gear-wheel, J, the diameter of which is about equal to the full diameter of the roll and the work wound thereon. By intermediate gearing, J' J'', as indicated, this wheel J is put in connection with a cog-wheel, J''', on the shaft R, which carries the friction-wheel I, which is preferably made of wooden sections *k k*, having the grain of the wood extending radially. The outer curved surface of the friction-wheel is a true cylinder.

On the shaft R is keyed a take-up lever, I', which is usually made with two arms, *l* and *m*, one below the other and parallel to each other. The upper arm, *l*, carries pivoted thereto the friction-pawl K, which is of sector shape, its curved end having, however, a slight eccentricity, so that it will have a purchase upon the friction-wheel I, in connection with which it is designed to operate. On the lower arm, *m*, is a movable sleeve or slide, S, to which is pivoted a link, *g*, to which the end of the cord or connection *e'* is attached, and to which is also pivoted the forward end of the connection *n'*, the rear end of which is pivoted to the swinging arm Z, which is keyed on the shaft M.

L is a holding-pawl of similar character to the pawl K, and pivoted to the loom frame in rear of the friction-wheel, as indicated. A spring, *s*, holds the pawl L to the work.

A compensating pressure-lever, P, is also keyed to the shaft M and is provided with a pivoted head, IV, which bears on the work as it is wound on the roll V. The lower end of the lever curves or extends forward and is provided with a weight, *w*, which may be, in order to render it adjustable, furnished with a bail or loop adapted to engage one of a series of notches in the upper edge of the lever.

In this take-up the friction-roll is designed to be turned while the lathe is moving forward to beat up and the warp is closing, so that there is no appreciable strain on the work. As the winding increases upon the rolls V, the pressure-head moves outward and the pressure-lever P turns the shaft M, and thereby swings the arm Z forward. This movement pushes forward the sleeve S on the arm *m* of

the lever I' toward the end of said arm, so that the circular motion communicated to the lever I' by the lathe through the medium of the rocking lever H and cords *e e'* will be gradually decreased. In this manner the feed of the friction-wheel I, and consequently the circular movement of the roll V, will be gradually and proportionately decreased, as the winding on said roll increases, and a steady and uniform take-up of the proper number of picks to the inch will be preserved as the work is being wound up while the weaving process is going on.

To obviate undue wear, the curved ends of the pawls K and L may be covered with thin rubber.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a loom, the combination with the lathe and take-up roll, of the compensating pressure-lever P on the shaft M, provided with a pivoted head and moved by the cloth winding on said roll, the weight, the friction-wheel I,

consisting of the sections *k*, the pawls K L, the swinging arm Z, keyed on the shaft M, the take-up lever I', having the parallel arms, the movable sleeve on the lower arm, the connections *n'* and *e e'*, the lever H, and the gearing J J' J'' J''', substantially as specified.

2. In a loom, the combination, with the lathe and take-up roll, the rocking lever H, provided with the adjustable slides, the set-screws *d''*, and cords *e e'*, of the compensating pressure-lever P, having the pivoted head, the weight, the arm Z, the shaft M, the connection *n'*, the friction-wheel I, the pawl L, pivoted to the frame, the holding-spring, the take-up lever, having parallel arms, the upper arm of said lever having the sector-shaped pawl, the slide on the lower arm, the link *g*, and the gearing J J' J'' J''', substantially as specified.

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

WILLIAM P. UHLINGER.

Witnesses:

C. R. FERGUSON,
M. B. HARRIS.