2 Sheets
Sheet. 1

Jenks & Goodyear
Loom.

No 55,011. Patented May 22 1866.

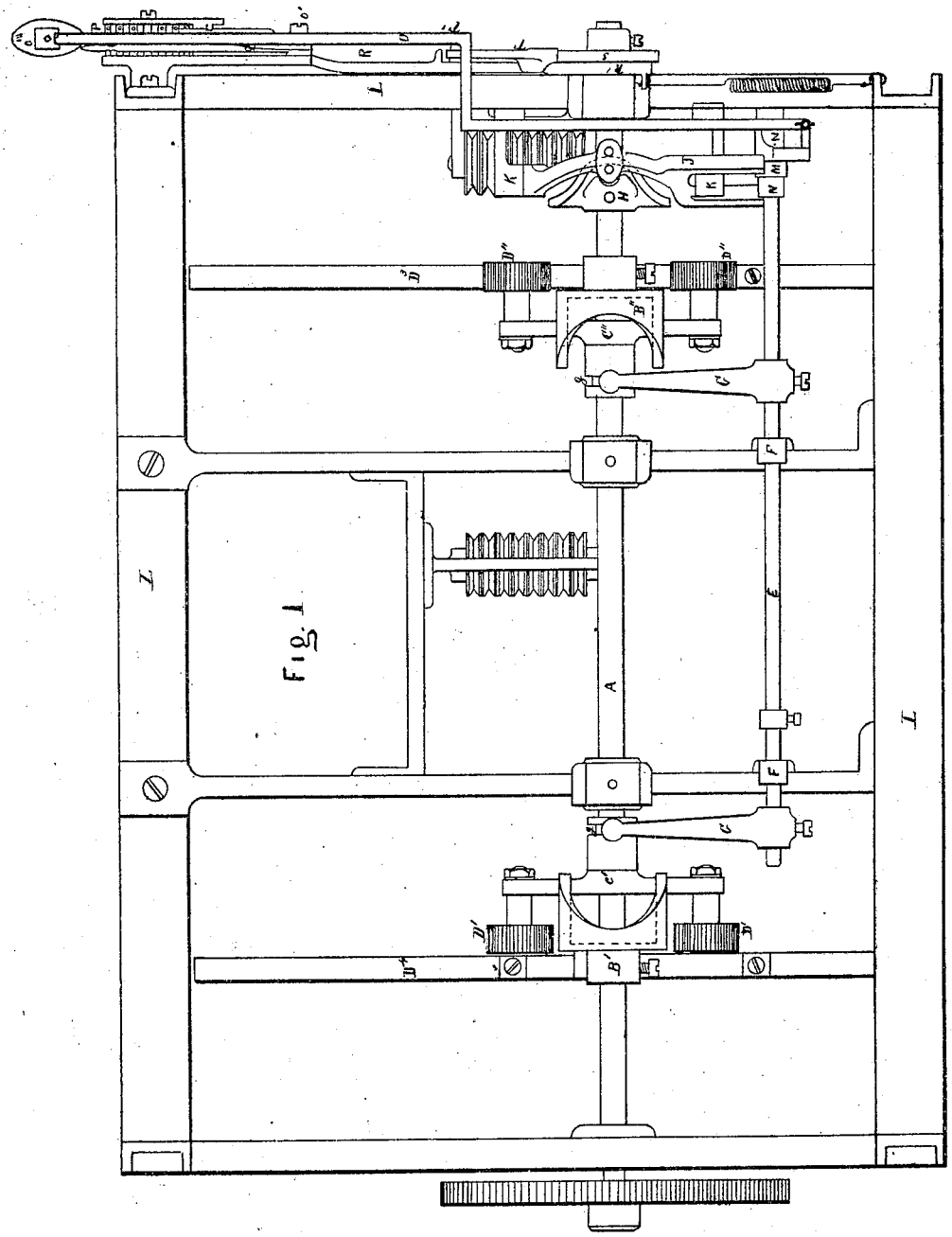

Fig 1

Witnesses:
George Hardy
William Fishell

Inventor:
Barton H. Jenks
Robert Burry Goodyear

Jenks & Goodyear.
Loom.

No. 55,011. Patented May 22, 1866.

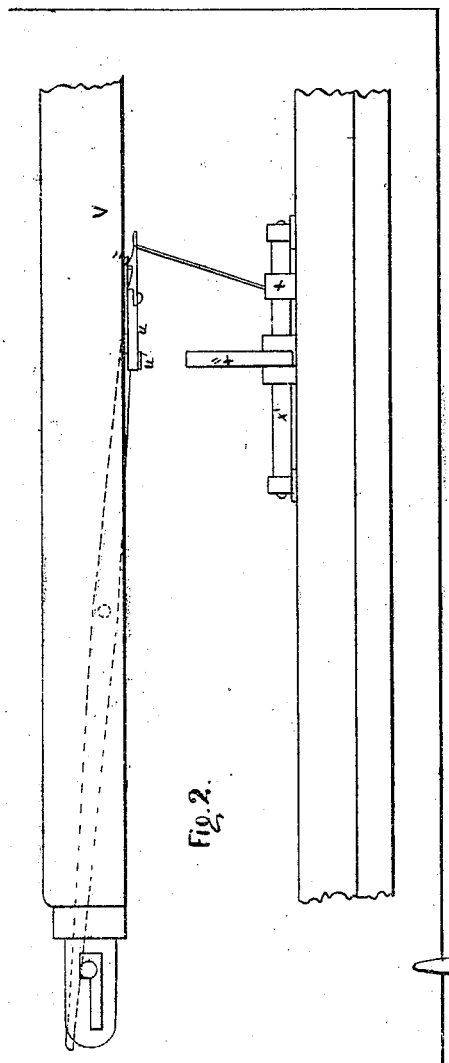

Fig. 2.

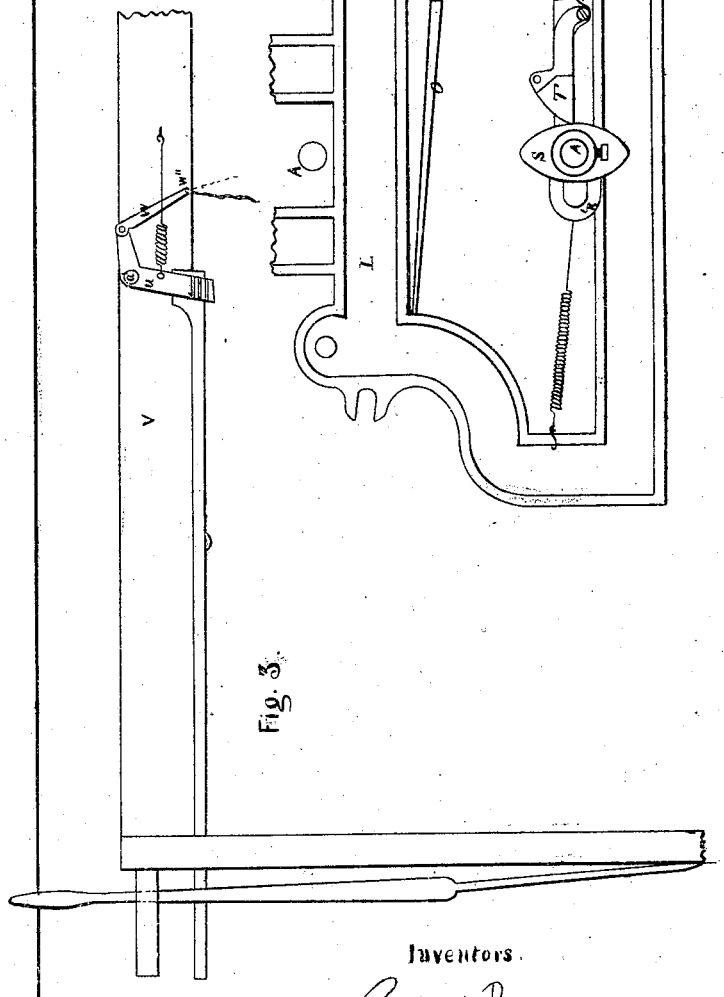

Fig. 3.

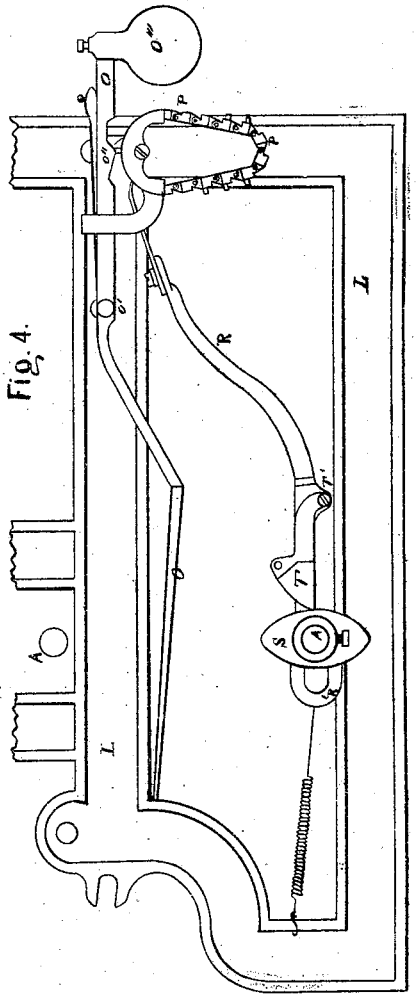

Fig. 4.

Witnesses:
Geo. Hardy
William Schell

Inventors.
Barton H. Jenks
Robt. Burns Goodyear

UNITED STATES PATENT OFFICE.

BARTON H. JENKS AND ROBERT B. GOODYEAR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO BARTON H. JENKS, OF THE SAME PLACE.

IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. **55,011**, dated May 22, 1866.

To all whom it may concern:

Be it known that we, BARTON H. JENKS and ROBERT B. GOODYEAR, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Looms; and we do hereby declare the following to be a full and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan of the pick-motion. Fig. 2 is a plan of the stop-motion. Fig. 3 is an elevation of the stop-motion. Fig. 4 is an end view of the pick-motion.

Similar letters refer to similar parts in the several drawings.

The first part of my invention consists in a novel means of giving the treadle motion and the shuttle-box changes. It also has for its object a device for stopping the loom and preventing injury to the goods in case the shuttles should not be brought in a line with the race-board, or the picking-straps should break.

A is the shaft giving motion to the machinery; L, the frame of the loom. B′ and B″ are slotted cups keyed on the shaft A. C′ and C″ are sliding tappets, which work backward and forward in the slots in cups B′ and B″. These tappets carry rollers D′ and D″, which strike the picking-treadles D^4 and D^3 at proper regulated intervals.

E is a rod sliding laterally in the sockets F. This rod carries two arms, G G, into which are inserted pins fitting into the grooves *g g*.

H is an eccentric disk having its edge curved, as shown in Fig. 1.

J is a forked swivel, working on pivots in the brackets K K, which are bolted to the frame L. This forked swivel has two pins in the center, which stride the eccentric H, and from which the swivel receives its motion.

M is a double arm vibrating on the shaft E, and prevented from moving sidewise thereon by the collars N N.

O is a lever on a fulcrum, O′. One end of the lever is attached by a cord to the double arm M. The other end has an inclined point, O″, on the under side, resting on the box-chain P. This lever receives its motion from the pins in the box-chain and transmits it to the double arm M. The weight O‴ keeps the lever resting on the chain or pin.

P is the box-chain, which is made to operate this pick-motion by inserting additional pins. The pall Q prevents the chain going backward while the machine is working.

R is a pusher-rod having one end forked and resting on the chain P. The other end terminates in an eye, R′, clasping the shaft A.

S is a double cam keyed on the shaft A.

T is a latch on a fulcrum, T′, screwed into the pusher-rod R. When the shaft A is turned in the proper direction, the cam S is forced against the end of the latch T and works the pusher-rod R, which shoves the box-chain round. If the cam S is turned in the wrong direction, the latch T rises without operating the push-rod R.

The operation is as follows: The chain P is pushed round by the pusher-rod R, latch T, and cam S, as described. The pins on chain P raise the lever O at proper intervals. This brings one of the arms on M in contact with the swivel J, the vibration of which works the rod E endwise, and with it the tappets C′ and C″. Thus the rollers D′ and D″ are brought alternately over the picking-treadles D^4 and D^3, thereby throwing whichever shuttle in a series of movable shuttle-boxes may be required to make the pattern. It will be observed that the motions are not imparted directly from the chain, as in Knowles's English specification, hereinafter mentioned.

I will now describe the stop-motion. (See Fig. 2.) U is a knuckle-lever working on a fulcrum, *u*′. W is a latch having a catch on it, W′. This catch is hooked under the breast-beam V, and a cord goes from the hole W″ to the finger X on the stop-rod X′. X″ is a protecting-finger on the stop-rod X′.

The operation is thus: If the shuttle do not leave the shuttle-box at the proper time, by means of the action upon it of the finger X″, which for this purpose is to be actuated by any of the customary means from the "swell" and through the stop-rod, the latch W′ is liberated from the breast-beam V, throwing the knuckle-lever U down in such a position that it is struck by the protecting-finger X″ and the loom stopped.

We disclaim anything in Knowles's English specification No. 1,261 for 1859; but

What we do claim is—

1. Regulating the movements of the shuttle-boxes and also the picking-motions by two or

more sets of pins on the same chain, when these motions are imparted from the chain through the intermediary means, substantially as described.

2. The combination of the box-chain P, lever O, the double arm M, the forked swivel J, and eccentric-disk H, or their equivalents, for operating the pick, substantially as described.

3. The combination of the knuckle-lever U, attached to the breast-beam V, with the stop-rod X′, to stop the loom and to prevent the yarn from being broken when the shuttles fail to leave the box, substantially as described.

4. The combination of the sliding rod E, arms G, sliding tappets C′ C″, and cups B′ and B″, operating substantially as described.

BARTON H. JENKS.
ROBERT BENJ. GOODYEAR.

Witnesses:
GEORGE HARDING,
WILLIAM SCHELL.