

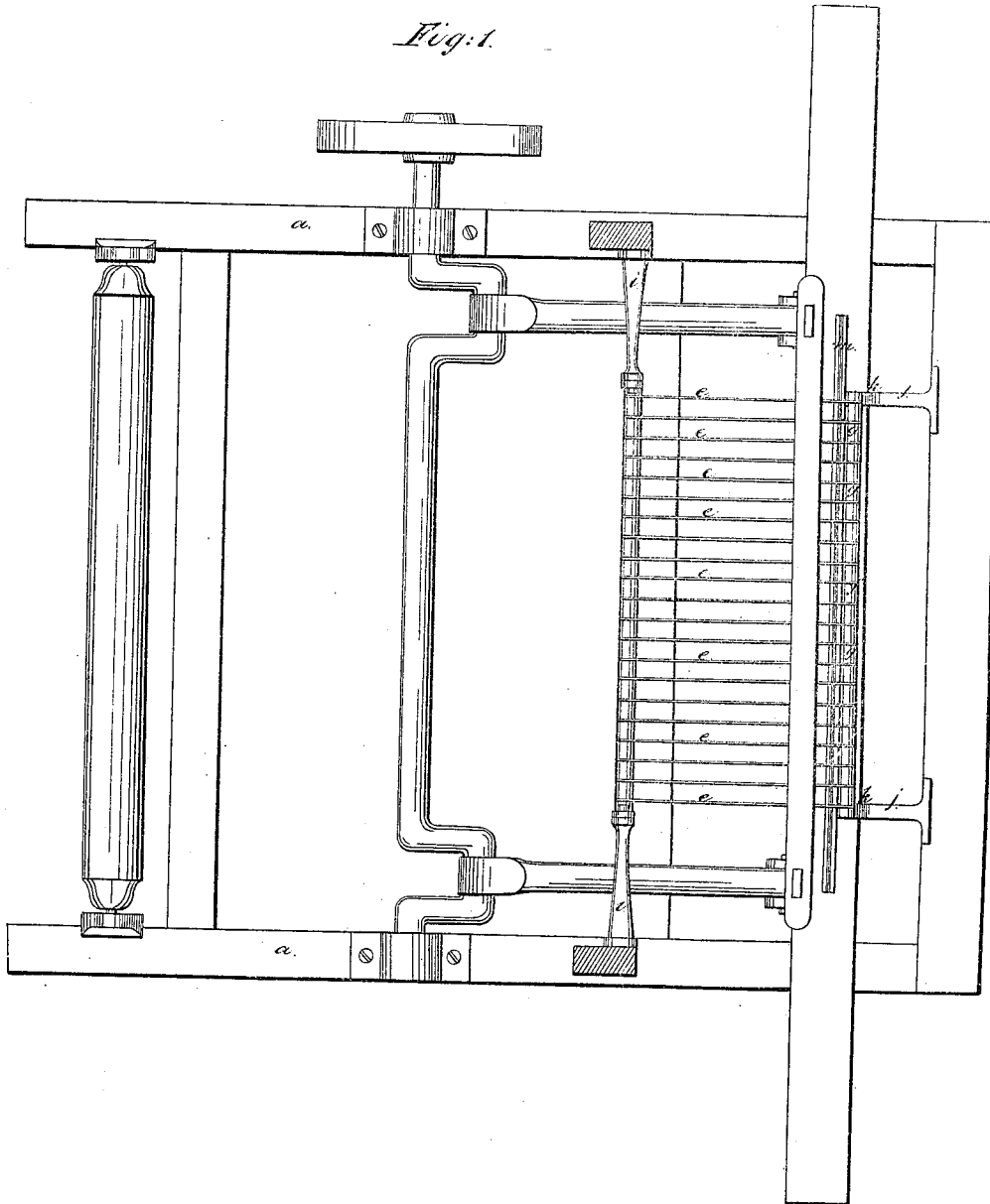
Sheet 1-4 Sheets.

*E. B. Bigelow.*  
*Weaving Pile Fabric.*

*N<sup>o</sup> 7898.*

*Patented Jan. 14, 1851.*

*Fig. 1.*

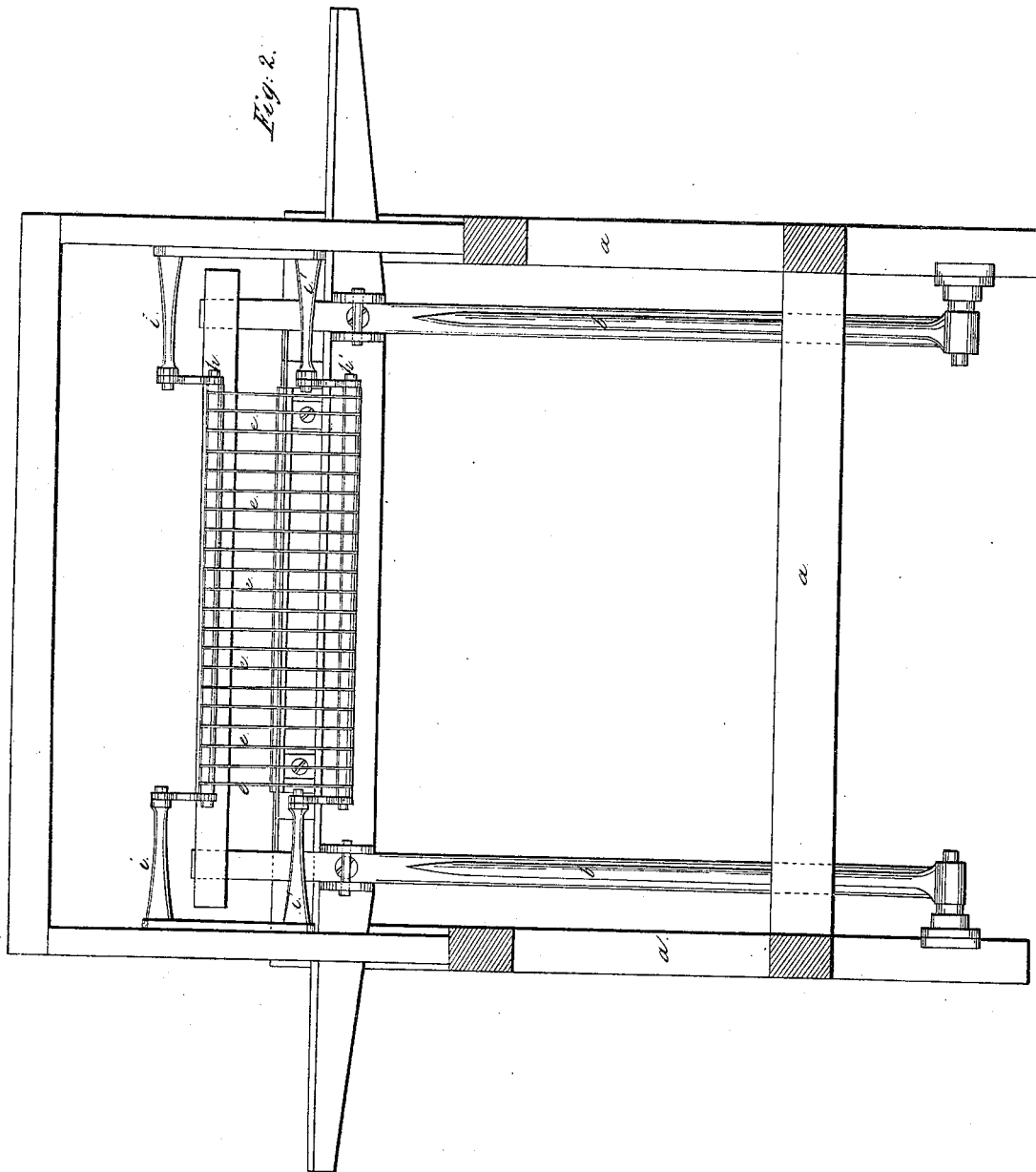


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*E. B. Bigelow.*  
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*N<sup>o</sup> 7898.*

*Patented Jan. 14, 1851.*

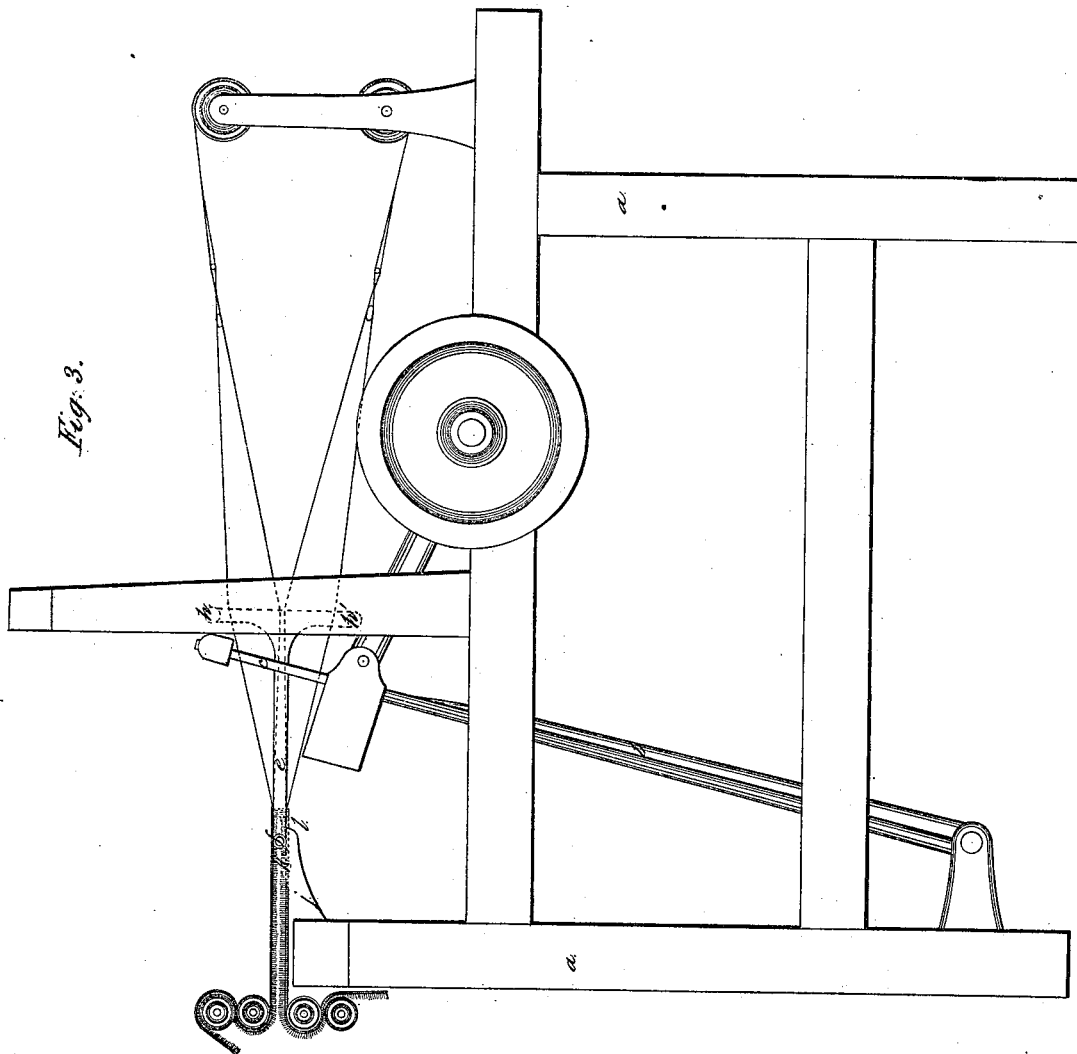


*E. B. Bigelow.*  
*Weaving Pile Fabric.*

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*N<sup>o</sup> 7898.*

*Patented Jan. 14, 1851.*

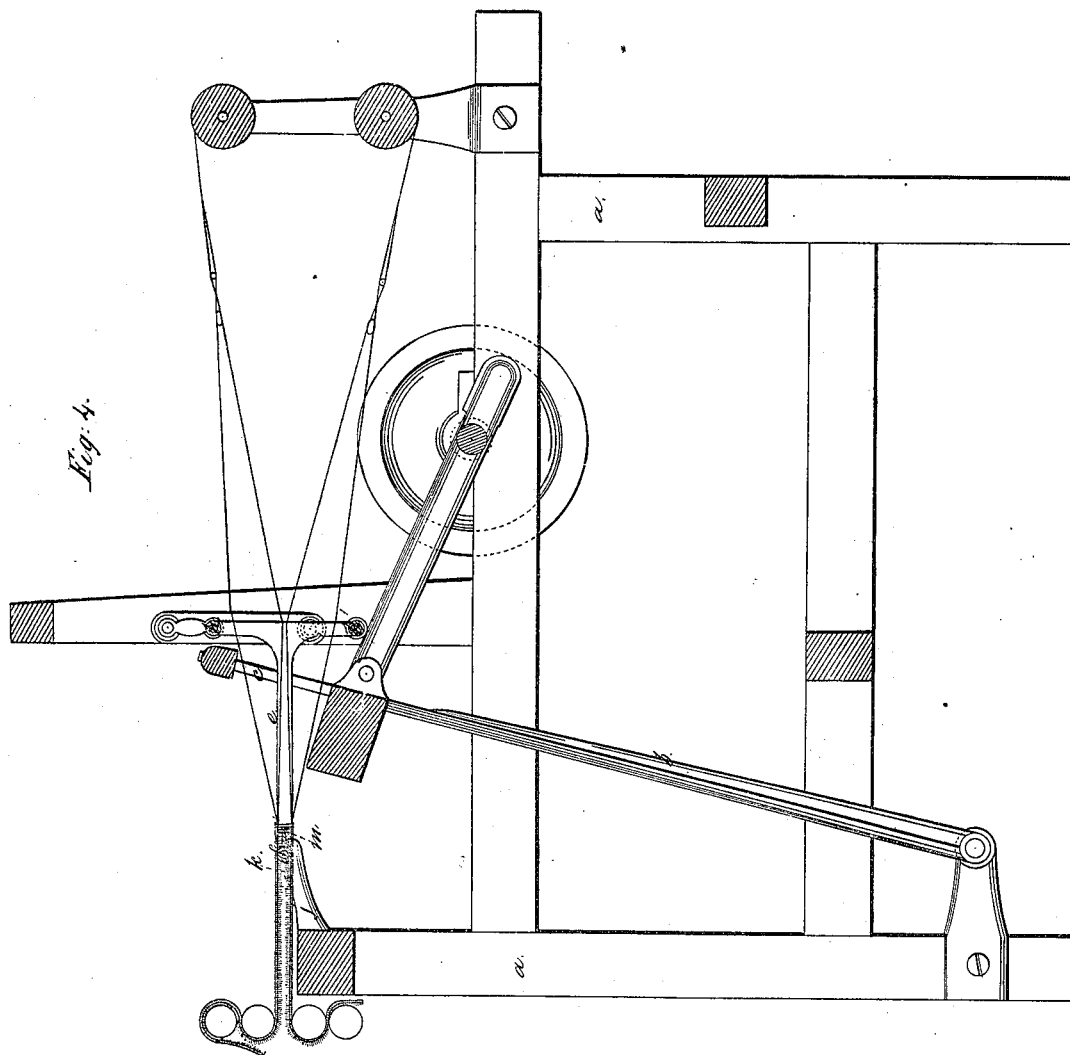


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*N<sup>o</sup> 7898.*

*Patented Jan. 14, 1851.*



# UNITED STATES PATENT OFFICE.

E. B. BIGELOW, OF CLINTON, MASSACHUSETTS.

## IMPROVEMENT IN LOOMS FOR WEAVING PILED FABRICS.

Specification forming part of Letters Patent No. 7,898, dated January 14, 1851.

*To all whom it may concern:*

Be it known that I, E. B. BIGELOW, of Clinton, in the State of Massachusetts, have invented certain new and useful Improvements in Power-Looms for Weaving Cut Pile Fabrics Double—that is, two fabrics at one operation and face to face—of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan of my improvement with so much of the loom as is necessary to show the application of my improvement. Fig. 2 is a back elevation; Fig. 3, a side elevation, and Fig. 4 a longitudinal vertical section.

The same letters indicate like parts in all the figures.

The kind of fabrics to be produced in my improved loom are wrought double—that is, two cloths one above the other—and the pile or figuring warps are alternately wrought or woven, first in one and then in the other cloth, the two cloths being kept at the required distance apart by intersecting bars or plates which determine the length of pile for the two fabrics, which is afterward cut to separate them. In the power-loom as heretofore essayed for the weaving of this kind of fabric the interposed bars or plates which separate the two fabrics, and which pass between the dents of the reed, were made stationary or immovable, the pile being cut by means of a knife, which vibrates in slots near the front ends of the said bars or plates. This fixed position of the bars or plates is a serious objection, as it prevents the proper vibratory motion of the cloth at the time of the beat and the shedding of the warps.

The object of my invention is to avoid this difficulty; and to this end the nature of my invention consists in so connecting these intersecting bars or plates with the loom that they shall be free to vibrate to the beat of the lathe and to the shedding of the warps.

My invention also consists in the employment of a stop or stops to arrest the motion of the said bars or plates at a given point, so that the reed in beating up the cloth shall cause the woven cloth to advance on them.

The accompanying drawings only represent my improvements in connection with the frame and lathe of a loom, as the other parts

are not required for a proper understanding of my said improvements.

In the drawings, *a* represents a loom-frame, and *b* the lathe, with its reed *c*. These parts may be of the usual or any appropriate construction. There are a series of flat bars or plates *e* that pass between the dents of the reed. Their breadth should be equal to the intended distance between the ground-cloths of the two fabrics, so as to determine the length of pile. They should be made as thin as practicable with due regard to strength. At their forward ends they are all connected together by a rod *f*, which passes through a hole in each, washers *g* of the required thickness being interposed between them to keep them at the required distance apart. These bars or plates back of the lathe are T-formed and connected in the same manner as the front end by means of two rods *h h'* with interposed washers, and the ends of these rods *h h'* are connected by jointed pendulous links with studs *i i' i''*, projecting inward from the frame, so that by this mode of connection the series of bars or plates thus connected together will be free to vibrate back and forth, their front end being made to rest or slide on the upper face of two studs *j j*, which are formed with shoulders *k k* or stops to determine the extent of their forward motion, and thus stop them at the required point, so that the continued beat of the lathes shall cause the woven cloth to be moved forward over them to the required distance. Near the front end there is a slot *l* made in each bar or plate, to receive the knife or cutter *m*, which cuts the pile to complete the two fabrics. As the mode of locating and operating this knife makes no part of my invention, it is deemed unnecessary to give a description of it.

I do not wish to limit myself to the particular mode of connecting the series of bars or plates to admit of the required vibration, as other modes of connecting them may be employed—as, for instance, instead of hanging them back of the lathe by pendulous jointed links, the rods by which they are connected may be adapted to work in slides; but I have described and represented the mode which I have essayed with success and deem the best.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Connecting the intersecting bars or plates

with the loom, substantially as described, so that they shall be free to vibrate and yield to the beat of the lathe and shedding of the warps, as described.

2. Combining with the said vibrating bars or plates a stop or stops to arrest them at the required point, substantially as described,

that the continued beat of the lathe may cause the fabric to move forward over them, as described.

E. B. BIGELOW.

Witnesses:

ALEX J. PORTER BROWNE,  
C. A. WM. BROWNE.