

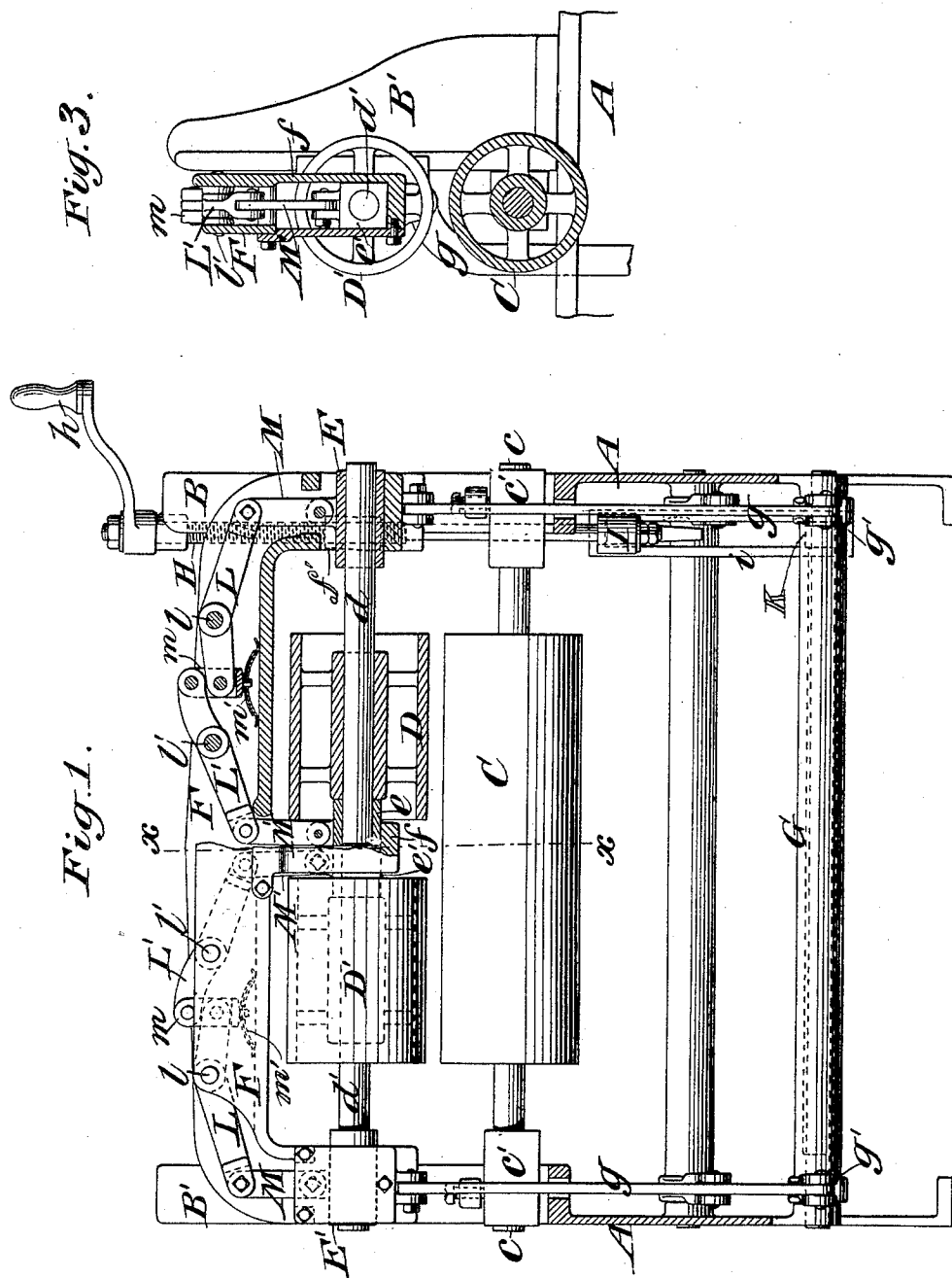
(No Model.)

2 Sheets—Sheet 1.

A. B. HUTCHINSON.
FEED MECHANISM FOR PLANING MACHINES.

No. 468,045.

Patented Feb. 2, 1892.



Witnesses:

O. Sundgren
B. H. Haynes

Inventor:
Alfred B. Hutchinson
by attorneys
Brown & Leonard

(No Model.)

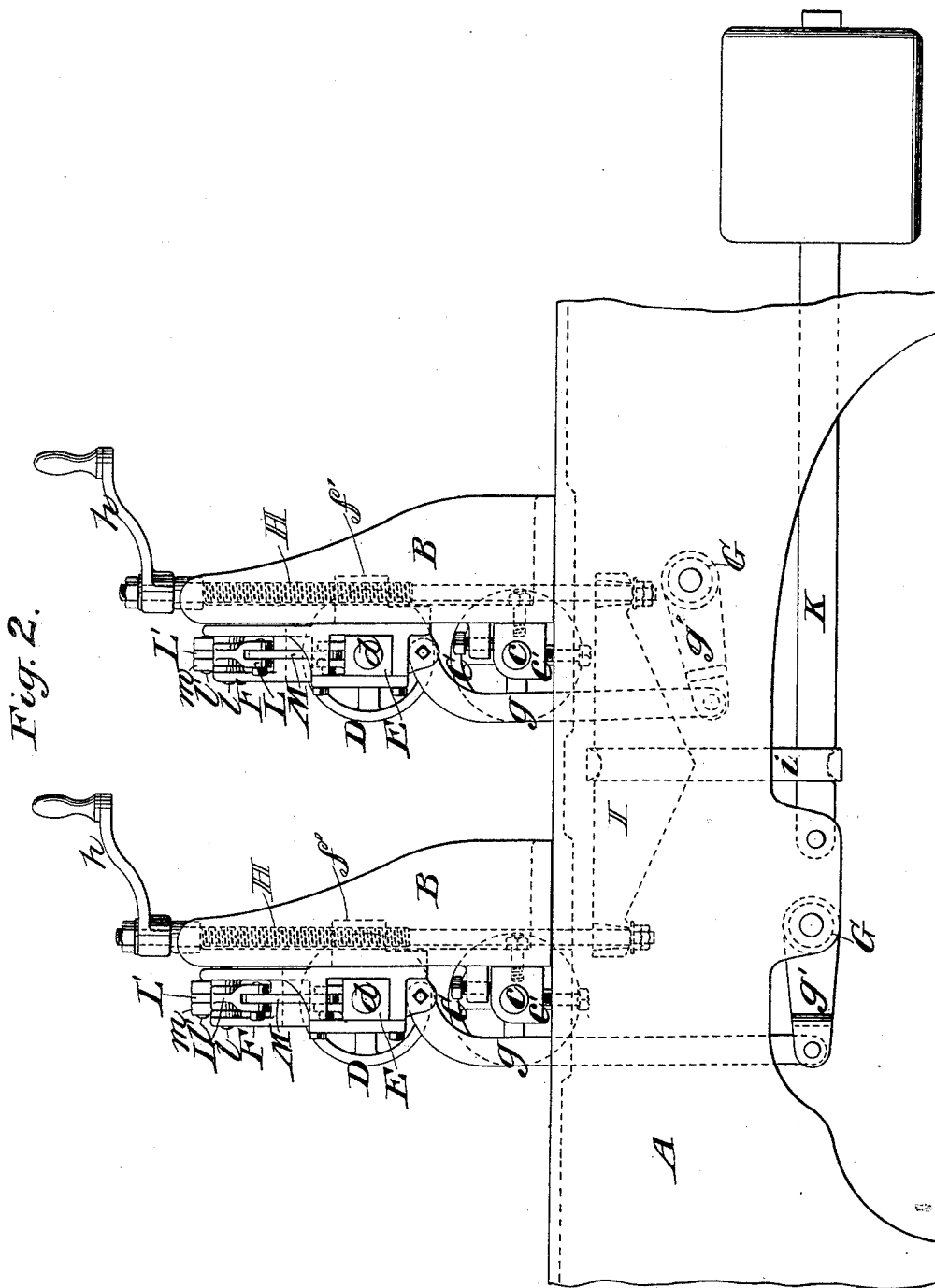
2 Sheets—Sheet 2.

A. B. HUTCHINSON.

FEED MECHANISM FOR PLANING MACHINES.

No. 468,045.

Patented Feb. 2, 1892.



Witnesses:

O. Sundgren
W. H. Haywood

Inventor:
Alfred B. Hutchinson
by attorneys
Brown & Howard

UNITED STATES PATENT OFFICE.

ALFRED B. HUTCHINSON, OF BROOKLYN, ASSIGNOR TO THE GLEN COVE MACHINE COMPANY, LIMITED, OF NEW YORK, N. Y.

FEED MECHANISM FOR PLANING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 468,045, dated February 2, 1892.

Application filed July 18, 1891. Serial No. 399,905. (No model.)

To all whom it may concern:

Be it known that I, ALFRED B. HUTCHINSON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Feed Mechanism for Planing-Machines, of which the following is a specification.

My invention relates to an improvement in feed mechanism for planing-machines, in which the upper or pressure roll is divided and supported in a vertically-adjustable yoke, while the sections of the said roll have at the same time an independent vertically-yielding movement directly toward and away from the lower roller, whether the lifting strain upon their faces be exerted equally or unequally throughout their lengths.

As my invention relates solely to the means for supporting the sections of the pressure-roll and their arrangement with respect to the support common to the two, I have shown only such parts of a planing-machine as are sufficient to represent in an intelligent manner the construction and arrangement of the feeding mechanism.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view taken transversely through the machine-bed, showing a set of lower and upper feed-rolls and their supports partly in elevation and partly in section. Fig. 2 is a side view of a portion of the machine-bed, showing two sets of feed-rolls in end elevation; and Fig. 3 is a view in detail representing a transverse section through one set of feed-rolls on the line $x x$ of Fig. 1.

A represents the bed of the machine, and B B' the members of each pair of uprising standards for supporting the feed-rolls in their position.

C represents the lower feed-roll, the journals c of which are mounted in bearings c' , secured to the lower portions of the standards B B'.

The sections of the upper feed-roll are represented by D and D', the former mounted on a short shaft d and the latter upon a similar shaft d' , the opposite ends of said shafts being journaled in boxes E and E', located in the ends of a vertically-movable yoke F, and

their adjacent ends are journaled in boxes e and e' , supported in a hanger f depending from the central portion of the yoke F. The boxes E E' and $e e'$ are allowed a limited vertical movement within the ends of the yoke F and the hanger f . The yoke F itself is allowed a vertical movement with respect to the roll C and its support B, the opposite ends of said yoke being connected by links g with arms g' , fixed to the rock-shaft G, so as to cause the opposite ends of said yoke to rise and fall simultaneously. An adjusting-screw H, one for each set of rolls, is seated in the end standard B, and engage a threaded socket f' in the end of the yoke. The screws H are free to turn in their seats in the standard and are held at all times depressed by means of the yoke I, loosely connected with their lower ends and itself connected by means of a link i with a weighted lever K, by means of which pressure may be simultaneously imparted to the two sections of the upper divided roll, as has heretofore been common.

As a convenient means for rotating the screws H, I have shown cranks h . As the screws H are turned, they will, by their engagement with the threaded sockets f' , cause the yoke carrying the upper feed-roll to move toward and away from the lower feed-roll, as may be desired, to accommodate different thicknesses of material.

The boxes E e and E' e' are connected in pairs, so as to have a movement independent of each other toward and away from the lower feed-roll C with their faces parallel with the face of the lower feed-roll. The mechanism which I have shown for accomplishing this purpose consists of a pair of levers L L', pivotally secured, as at $l l'$, to the yoke F and having their opposite ends connected by means of links M and M' with the boxes E and e , respectively, while their adjacent ends are connected by a link m . The lower end of the link m rests upon a spring-cushion m' , supported upon the yoke F, the tension of which tends to throw the adjacent ends of the levers L L' in a direction to lower the boxes E E', and hence the roll D, toward the roll C. It therefore follows that if a strain be applied tending to lift either end of the roll D such strain will be exerted through the system of

levers L L' and links M M' and *m* so as to lift the opposite end of said roll simultaneously therewith. Such lift or strain will be opposite to the tension of the spring *m'*, so
5 that there will be in effect an auxiliary yielding movement allowed each section of the pressure-roll independent of the yielding tension of the two rolls under the simultaneous action of the yoke F and its weight and independent of the tension of another section
10 of the same roll. This will admit of the separation of the rolls when they are pressed apart by any unexpected enlargement independent of the adjustment which they may have had
15 by the movement of the yoke F, and whatever be the shape of the surface presented to the sections, whether it bear more upon one end than upon the other or equally upon both, the roll-section will at all times present its
20 face parallel to the lower feed-roll.

What I claim is—

1. The combination, with the divided pressure-roll and the means for adjusting its parts and holding them simultaneously under tension, the said sections of the divided roll being
25 allowed a vertical movement with relation to their common support, of a system of levers connecting the adjustable supports at the opposite ends of one of the sections, whereby the strain exerted upon one end of

said section will be transmitted to the opposite end of said section, substantially as set forth.

2. The combination, with a vertically-adjustable yoke, the means for applying tension thereto, and the sections of a divided roll, having vertically-adjustable supports seated in said yoke, of a system of levers connecting the supports at the opposite ends of a section, and a tension device for holding said levers
40 normally in position for depressing the roll-section, substantially as set forth.

3. The divided roll, the yoke in which the sections of the divided roll are journaled, the journal-boxes having a limited vertical movement within the yoke, a pair of levers pivotally secured to the yoke and having their adjacent ends connected, a tension device located in position to operate simultaneously upon the adjacent ends of the levers, loose
50 connections between the opposite ends of said levers and the journal-boxes at the opposite end of a roll-section, and means for adjusting the sections simultaneously and imparting tension thereto, substantially as set forth.

ALFRED B. HUTCHINSON.

Witnesses:

FREDK. HAYNES,
GEORGE BARRY.