E. C. PREBLE & J. A. PEOPLES.

Wood-Planing Machines.

No. 217,238. Patented July 8, 1879.

Fig 1

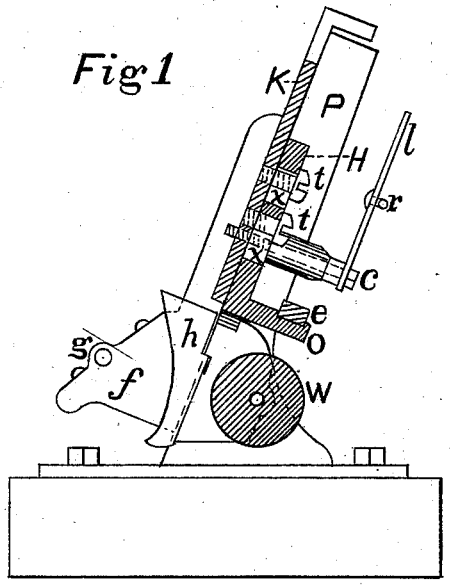


Fig 3

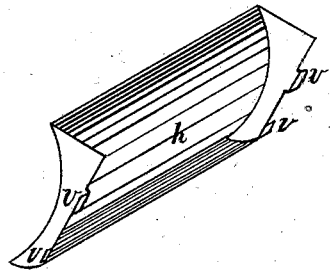
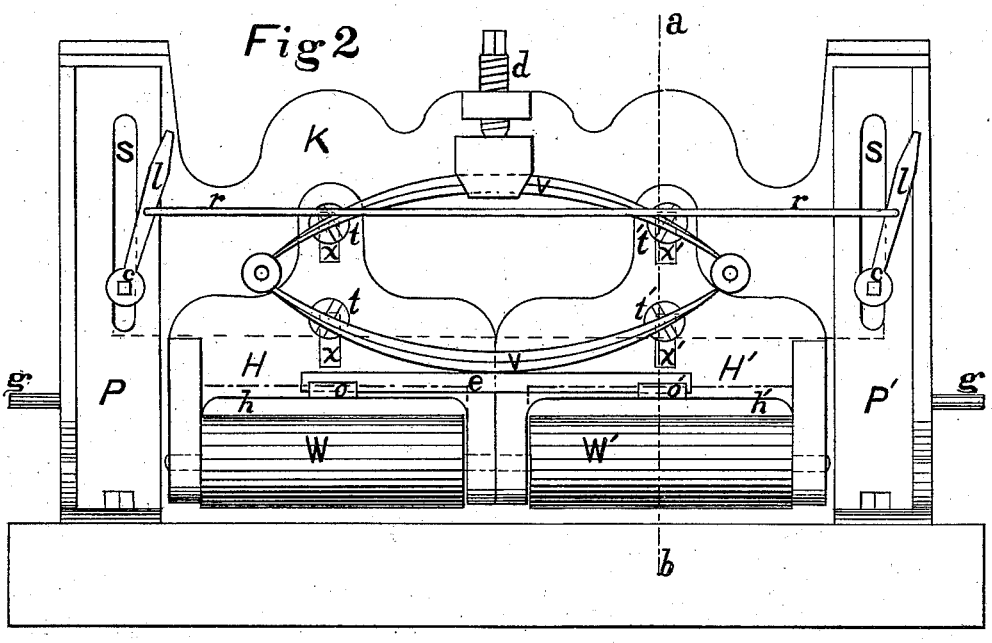


Fig 2



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UNITED STATES PATENT OFFICE.

EBER C. PREBLE AND JAMES A. PEOPLES, OF CHICAGO, ILLINOIS; SAID PEOPLES ASSIGNOR TO SAID PREBLE.

IMPROVEMENT IN WOOD-PLANING MACHINES.

Specification forming part of Letters Patent No. **217,238**, dated July 8, 1879; application filed May 2, 1879.

To all whom it may concern:

Be it known that we, EBER C. PREBLE and JAMES A. PEOPLES, of the city of Chicago, in the county of Cook and State of Illinois, have jointly invented a new and useful Improvement in Pressure-Rollers and Chip-Breakers for Planing-Machines, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are elevations showing the parts of a planing-machine embodying our invention. Fig. 3 is a perspective of one of the chip-breakers detached.

Like letters of reference denote similar parts.

K is the cross-head, which is adjusted to the posts P P′, so as to be readily raised or lowered, and firmly secured at any desired height by means of suitable mechanism. In practice vertical screws and clamps are generally used.

We do not claim as part of our invention either the posts P P′, the slots *s s*, the set-screws *c c*, the levers *l l*, or the connecting-rod *r*.

The spring V rests upon the equalizing-bar *e*, to which it is secured, and it is adjusted by means of the screw *d*, as shown.

W W′ are the pressure-rollers, journaled as shown. H H′ are the housings on roller-carriers, which are provided with the slots *x x x′ x′* and the projections *o o′*, upon which projections the equalizing-bar *e* rests. The housings are held firmly against the cross-head by the bolts *t t t′ t′*, and the slots permit the housings, respectively, to rise whenever they are crowded upward with sufficient force to overcome the resistance of the spring. The lower slots, *x x′*, are wider than the bolts which pass through them, and consequently each of the housings has an independent lateral as well as an independent vertical motion.

The chip-breakers *h h′* (partially shown by broken lines in Fig. 2, and one being shown in perspective by Fig. 3) are attached to the housings, which are provided with grooves therefor, by means of projections *v v v v*, (indicated in Fig. 3,) substantially as shown in Figs. 1 and 2, immediately behind the rollers, and just in front of the cylinder *g*. The knives of the cylinder are not shown in the drawings. They are constructed and arranged in the usual manner, and are too well known to need further description. The chip-breakers, respectively, may be moved independently, as they are not fastened rigidly to the housings. The boards, as they pass under the rollers to the knives, and immediately in front of the knives, are borne upon squarely by the weight of the chip-breakers, respectively.

By the use of our invention the planing-machine may be used in working lumber that is badly warped or otherwise presents uneven surfaces. For example, a board of only an inch in thickness may pass under one roller while an inch-and-a-half board is passing through under the other, and, though one were warped to the right and the other to the left, either would be held firmly in place by means of its roller and chip-breaker. In case a board is beveled—that is, thicker at one edge than at the other—the rollers in general use that we have seen only touch and press upon the thicker edge; but our rollers immediately adapt themselves to such a surface and touch and press evenly across the whole width of the beveled board, holding it firmly, and automatically adjusting themselves to any inequalities or variations in the plane or planes of its surface by means of the mechanism herein shown and described.

The cylinder revolves so as to cut toward the chip-breakers, and in the opposite direction to the motion of the boards, which are propelled by a moving bed in the usual manner.

A practical difficulty has been heretofore experienced on account of the chips or shavings splitting ahead in advance of the knives, thus being torn rather than shaved or cut away, and leaving the surface rough and ragged.

A chip-breaker has been used consisting of a cylindrical plate reaching from post to post and provided with a spring at either end. This has been found of little utility, as it does not readily adjust itself to boards of varying thickness.

The chip-breakers co-operate with the rollers

in holding the boards during the process of planing, and also prevent the chips or shavings from checking or splitting ahead, and hence the boards come from the machine smooth and even and of a uniform thickness.

We claim as our invention—

1. In a planing-machine, the housings H H′, provided with the slots *x x x′ x′* and the projections *o o′*, in combination with the rollers W W′, substantially as shown and described, and for the purpose set forth.

2. The combination and arrangement of spring V, equalizing-bar *e*, housings H H′, and rollers W W′, all substantially as and for the purpose specified.

3. The housings H H′ and the chip-breakers *h h′*, in combination with the cross-head K and rollers W W′, operating substantially as and for the purpose specified.

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