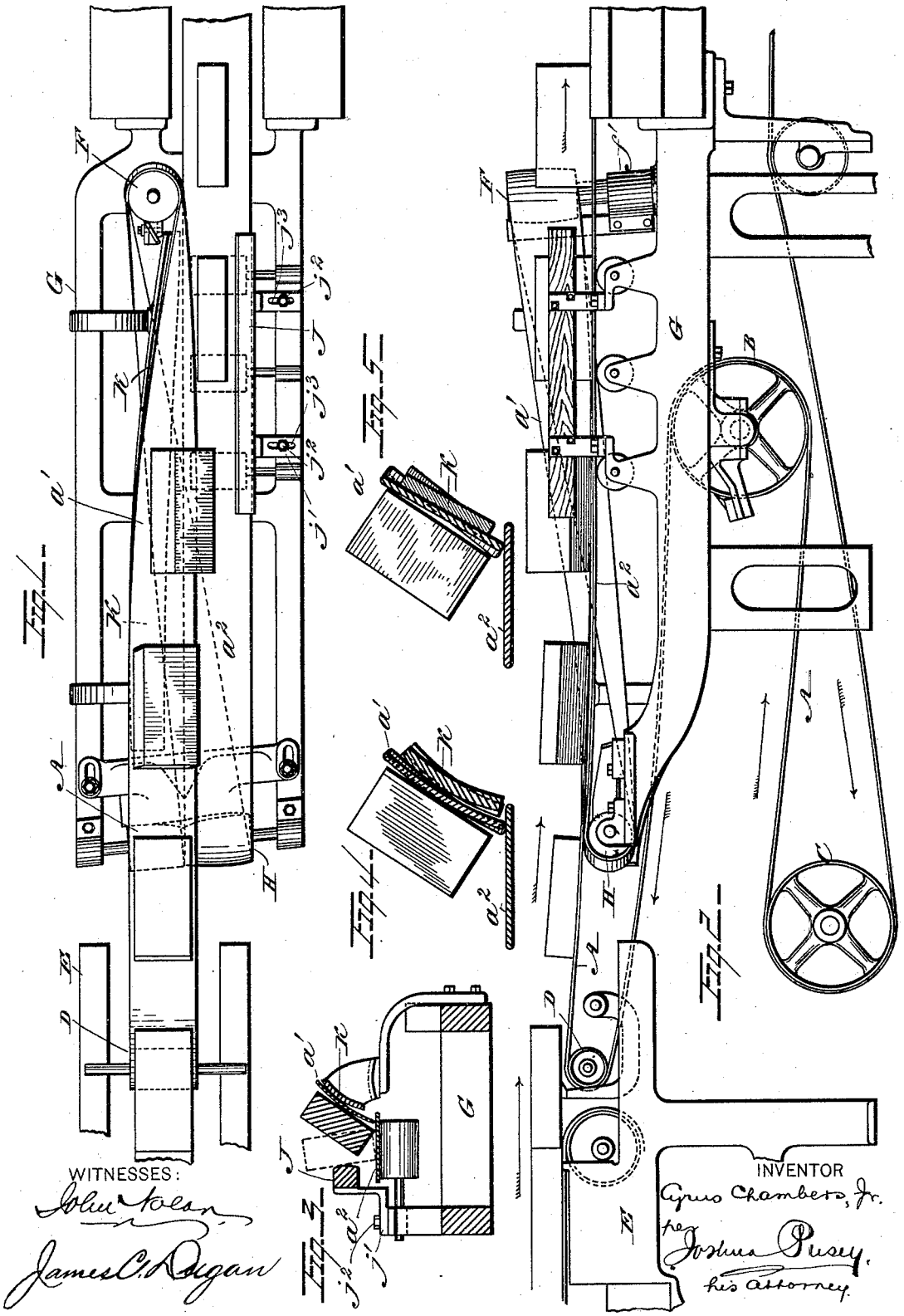
(No Model.)

C. CHAMBERS, Jr.

OFF BEARING BELT FOR BRICK MACHINES.

No. 421,385. Patented Feb. 18, 1890.



WITNESSES:
John Tolan
James C. Dugan

INVENTOR
Cyrus Chambers, Jr.
per Joshua Pusey
his Attorney

UNITED STATES PATENT OFFICE.

CYRUS CHAMBERS, JR., OF WYNNEWOOD, ASSIGNOR TO THE CHAMBERS BROTHERS COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

OFF-BEARING BELT FOR BRICK-MACHINES.

SPECIFICATION forming part of Letters Patent No. 421,385, dated February 18, 1890.

Application filed April 22, 1889. Serial No. 308,082. (No model.)

To all whom it may concern:

Be it known that I, CYRUS CHAMBERS, Jr., a citizen of the United States, residing at Wynnewood, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Brick-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of the receiving end of a brick-machine off-bearing belt and adjuncts embodying my invention, the adjacent end of the cut-off frame and belt being shown. Fig. 2 is a side elevation thereof. Fig. 3 is a transverse section through the off-bearing belt, &c., taken at a point where the brick is nearly edged. Figs. 4 and 5 are like sections through the belt and its supporting-bar, showing the latter curved and plane, respectively.

This invention relates to an improvement in brick-machines, and more particularly in the off-bearing belts thereof, whereby the bricks when delivered upon said belts will be set on edge by the latter, and thus be in position to be removed by the off-bearers without liability of the side edges of the bricks being marred or defaced. Mechanism for effecting such edging of the bricks is illustrated in Letters Patent No. 301,471, granted July 8, 1884, to George H. Aregood, (and subsequently assigned to me,) to which patent reference may be had, said mechanism consisting of a supplementary inclined or twisted belt arranged with respect to the usual off-bearing belt, together with a guide for deflecting the advancing bricks upon said supplementary belt, whereby the latter takes up the bricks and redelivers the same edgewise upon the off-bearing belt.

My invention has for its object to accomplish this edging of the bricks in a more perfect, simple, and less violent manner; and to this end it consists, primarily, in a certain arrangement of the off-bearing belt whereby it shall directly perform such edging; also, in a certain guard-frame disposed with relation to the said belt; also, in a belt-supporting bar of peculiar construction, all of which will be hereinafter fully described and definitely claimed.

Referring to the annexed drawings, A represents the receiving end of an off-bearing belt of a brick-machine—such, for example, as the well-known Chambers machine shown and described in various Letters Patent of the United States. This belt passes around the tightener-pulleys B C and around the pulley D on the end of the cut-off frame E in the usual manner. It is then passed around a forward upright pulley F, whose shaft is journaled in a box f' in the off-bearing frame G, said pulley being slightly elevated above the latter, as seen in Fig. 2. This pulley F gives the belt a quarter-turn at a'—*i. e.*, changing it from a horizontal to a vertical plane. The belt is then passed back and around a horizontal pulley H, mounted at the end of the frame E, which pulley returns the belt to a horizontal plane, as at a^2. In such position it proceeds under the quarter-turned portion a' as appearing, and on out in the usual manner, to the end of the off-bearing frame any desired distance. It will be observed that these pulleys stand so that their leading sides line with the approaching belt, as is common with quarter-turn belt-pulleys.

The operation is as follows: The bricks are delivered from the cut-off belt I at short intervals apart upon the off-bearing belt A, which is driven at a greater speed than the former belt in the usual and well-known way. The belt A carries the bricks forward, and as they approach the pulley F they are gradually inclined toward the lower horizontal portion a^2 of the belt till they reach a certain point, where they are carried along by both belt portions moving in unison, and the incline is sufficient to up-edge the bricks, whereupon they are delivered wholly upon the horizontal portion a^2 of the belt, as clearly shown.

It will sometimes happen when the machine is running at a high rate of speed, making, say, one hundred bricks per minute, that the bricks will be thrown with such force by and from the twisted portion of the belt as to fall over beyond a perpendicular, (indicated by dotted lines in Fig. 3,) and thus drop sidewise upon or even drop entirely off the belt. To remedy this defect, I arrange above the outer edge of the belt-section a^2, near the perpendicular of the twisted section, a guard-piece J, of wood or other suitable material, which is supported in brackets j', that are adjust-

ably secured to the side of the off-bearing frame by means of bolts j^2, passing through slots j^3 in said brackets.

I sometimes secure to the frame E, adjacent to the upper twisted portion a' of the belt, a correspondingly-twisted bar K, which is designed to support the latter. Although this bar may be flat in cross-section, as shown in Fig. 5, I prefer to curve or convex its bearing-face, as the belt will conform to the curvature, and thus relieve the corners of the bricks from under pressure and prevent marring thereof.

Having thus described my invention, I claim as new and wish to secure by Letters Patent—

1. In a brick-machine, the off-bearing belt having the inclined or twisted first receiving-section upon which the bricks are wholly delivered and the adjacent horizontal section upon which the bricks are edgewise deposited by said first receiving-section, substantially as described.

2. In a brick-machine, the combination, with the cut-off and off-bearing frames, of the horizontal pulleys D and H and the upright pulley F, arranged with reference to each other substantially as shown and described, and the single off-bearing belt with its inclined or twisted first receiving-section a' and the adjacent horizontal section a^2, substantially as set forth.

3. In a brick-machine, the combination, with the off-bearing frame and the off-bearing belt provided with the inclined or twisted section a' and the adjacent horizontal section, of the guard-frame, arranged with relation to said sections substantially as described.

4. The combination, in a brick-machine, with the off-bearing frame and the off-bearing belt provided with the inclined or twisted section a' and the adjacent horizontal section a^2, of the guard-frame arranged with relation to said sections and consisting of a longitudinal bar J, supported in slotted brackets j', adjustably connected by means of bolts j^2 with the side of the off-bearing frame, substantially as described.

5. In a brick-machine, the combination, with the off-bearing frame and the twisted off-bearing belt mounted thereon, of a correspondingly-twisted supporting-bar secured to said frame with respect to the belt, substantially as and for the purpose described.

6. In a brick-machine, the combination, with the off-bearing frame and the twisted off-bearing belt mounted thereon, of a correspondingly-twisted supporting-bar secured to said frame with respect to the belt and having its bearing-face curved or convex in cross-section, substantially as described.

In testimony whereof I have hereunto affixed my signature this 5th day of March, A. D. 1889.

CYRUS CHAMBERS, JR.

Witnesses:
ISABEL CHAMBERS,
HELEN CHAMBERS.