

(No Model.)

A. S. BLAKE.

HINGE.

No. 298,724.

Patented May 20, 1884.

Fig. 1

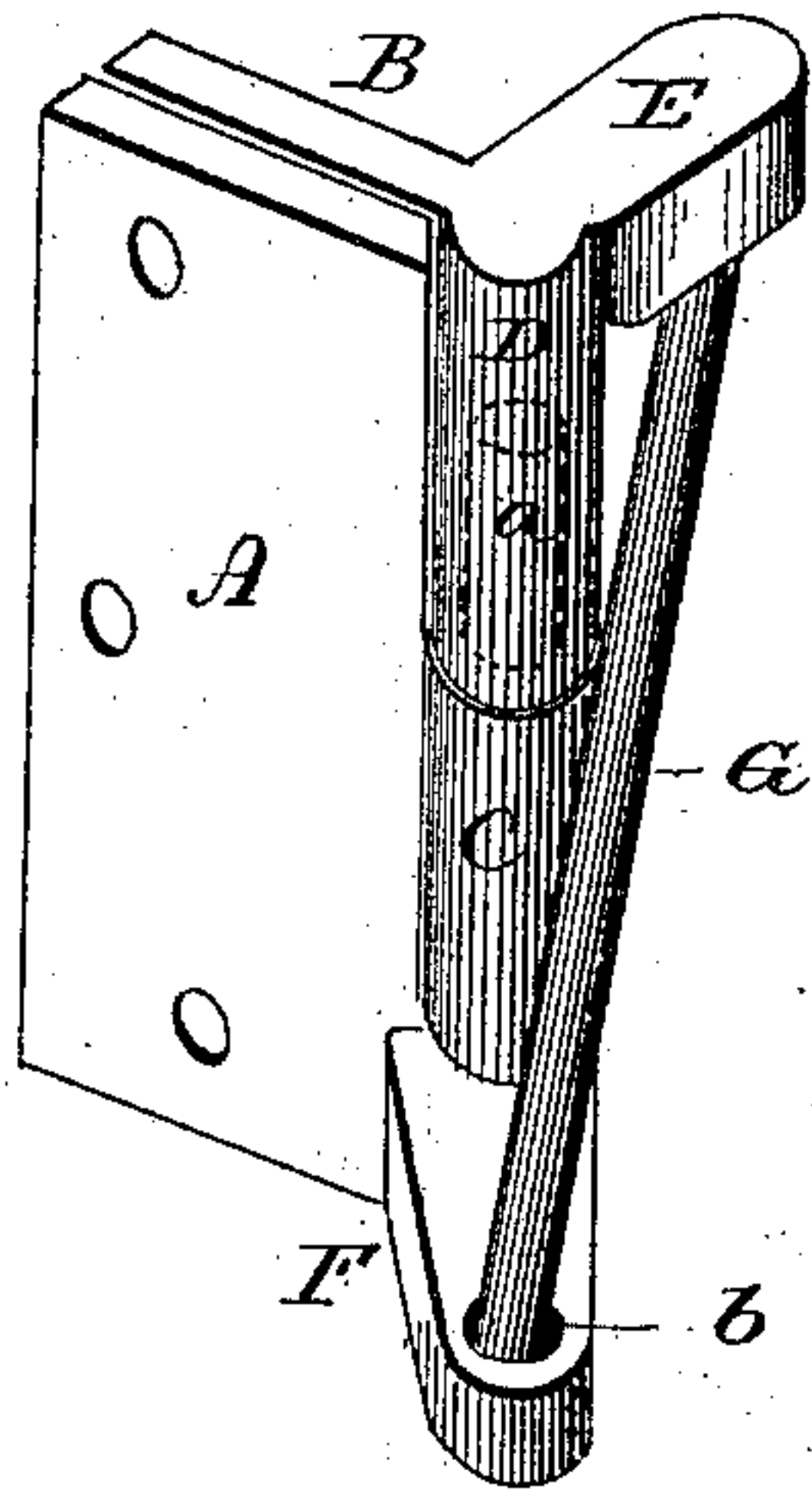


Fig. 2

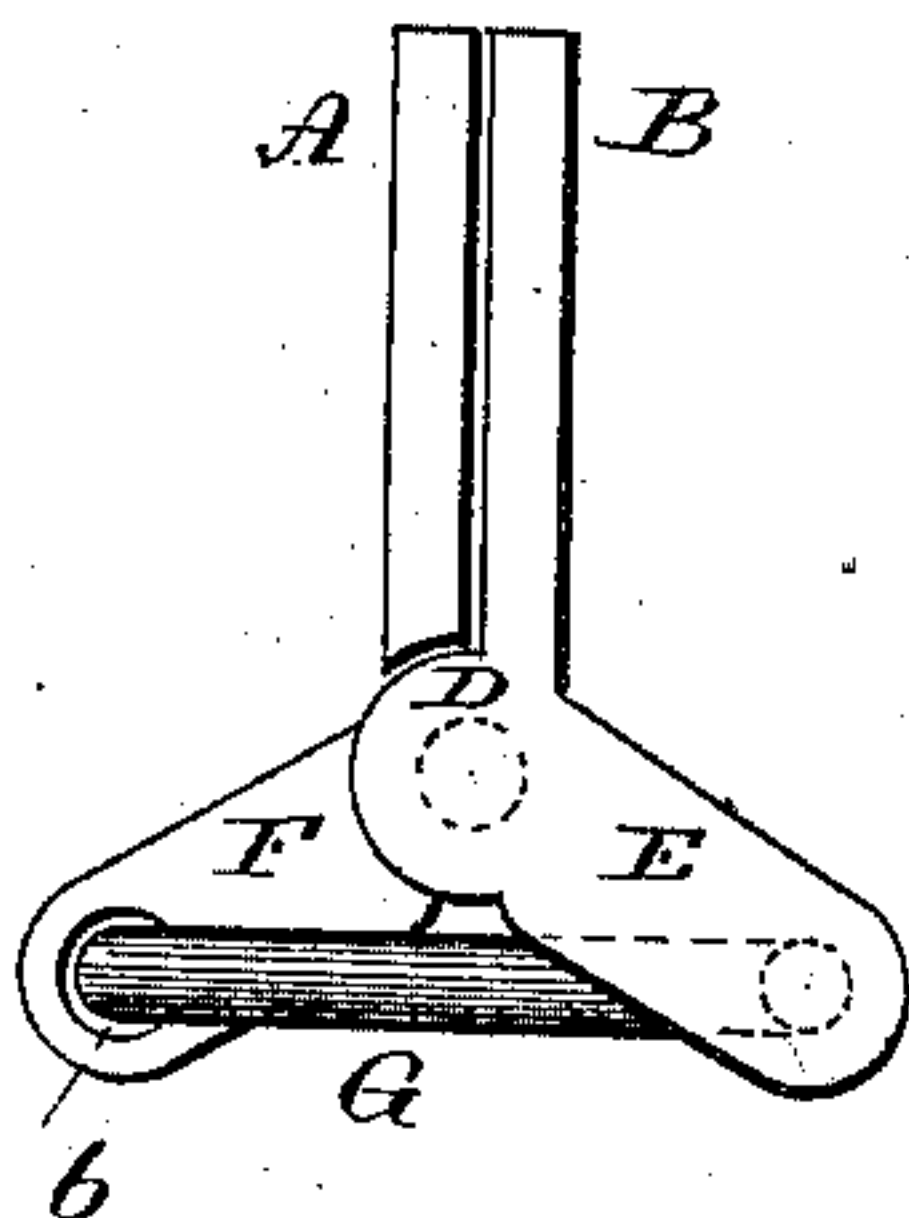
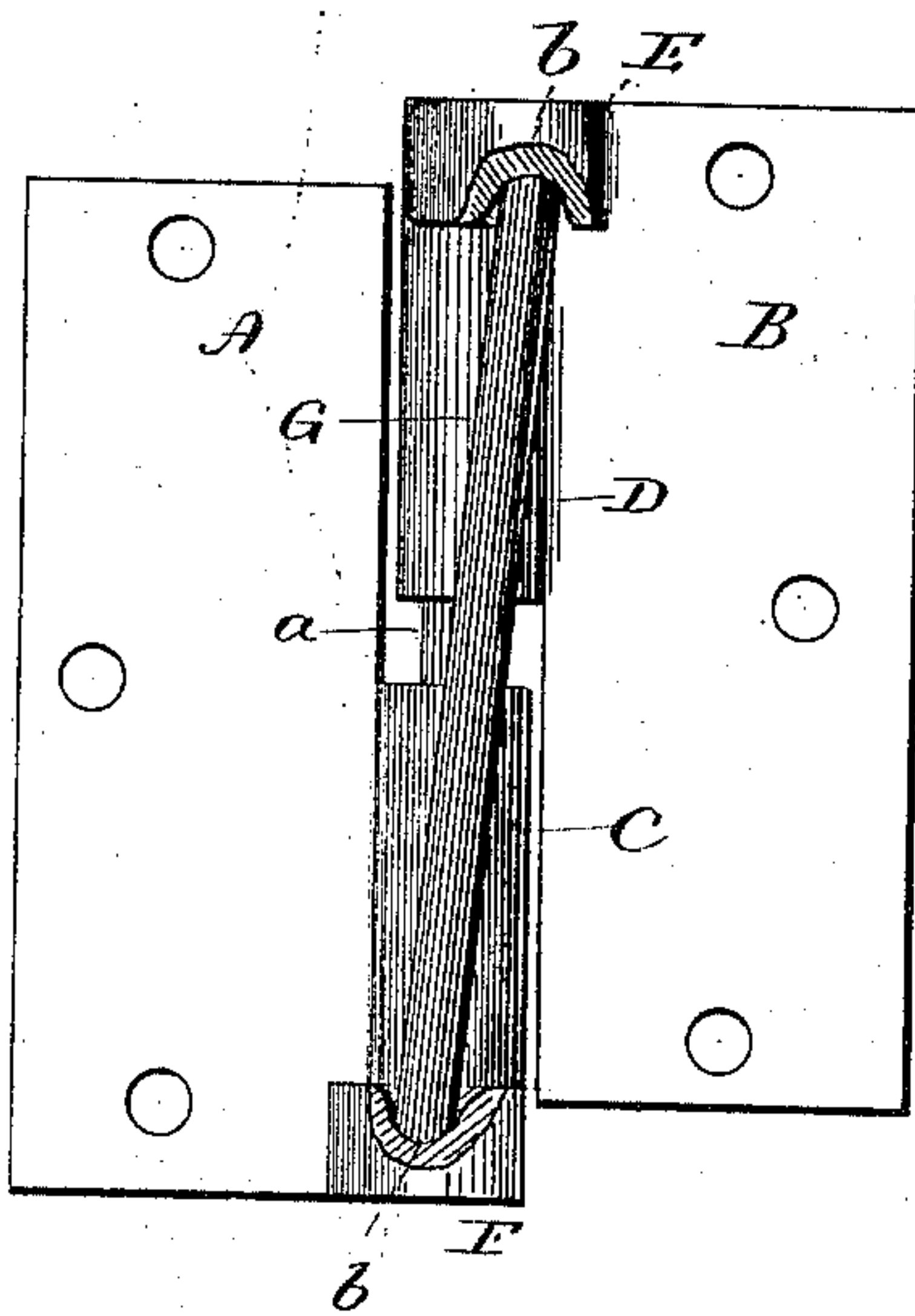


Fig. 3



Witnesses.

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AMOS S. BLAKE, OF WATERBURY, CONNECTICUT.

HINGE.

SPECIFICATION forming part of Letters Patent No. 298,724, dated May 20, 1884.

Application filed March 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, AMOS S. BLAKE, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Self-Closing Hinges; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view; Fig. 2, a top view; Fig. 3, a rear view, showing the parts in an open position.

This invention relates to an improvement in common slip-joint hinges, the object being to construct the hinge so that it may be used as a self-closing hinge, and without interfering with its use as a common butt-hinge when desired; and the invention consists in constructing each part of the hinge with an arm projecting diagonally from it, the arm on the one in direction opposite to the arm on the other, combined with a rod of greater length than the distance between the two arms, its ends set in a socket in the respective arms, and whereby, as the hinge is turned upon its pintle, tending to bring the arms into the same vertical plane, the rod will cause the one part of the hinge to rise upon the pintle as the rod approaches the perpendicular; but when free the weight upon the one part of the hinge will tend to force that part downward; but, resting upon the rod in its inclined position, the downward force or weight will cause the hinge to turn upon its pintle into the closed position, and as more fully hereinafter described.

A represents the one part, and B the other part, of a common slip-joint hinge, the knuckle C of the one part, B, provided with the usual pintle, *a*, (indicated in broken lines, Fig. 1,) the other part with a like knuckle, D, provided with a seat for the pintle, and so that the one part may slip upon the other. From the one knuckle, D, an arm, E, extends diagonally, and from the other knuckle, C, a like arm, F, extends in the opposite direction. These arms are best formed at the extreme end of the knuckles. Each arm is constructed with a cavity, *b*, upon its face toward the other arm.

These arms, when the two parts are set together, project the one to the right and the other to the left, as seen in Fig. 2, so that the cavities *b* come one upon the one side of the pintle and the other upon the opposite side, as seen in Fig. 1.

G is a straight rod, in length corresponding to the distance between the two cavities *b b* when the hinge is in its closed position, and is set one end into one cavity and the other end into the other cavity, as seen in Fig. 1, and so that its two ends are seated respectively in said cavities. In this condition the rod stands diagonally to the pintle. As the hinge is opened, one arm, E, will approach a position over the other arm, F, and in so doing will turn the rod toward its vertical position, as seen in Fig. 3, and, because the rod G is longer than the distance vertically between the two arms, it will cause the one part, B, of the hinge to rise from the other, as seen in Fig. 3. Then, if the hinge be left free, the weight upon the part which was raised will come upon the rod G, and, because of the inclined position of the rod, that weight will tend to force the rod in the direction of its inclination and until the hinge be closed. Thus the weight which, in opening, is lifted serves as a weight to close the hinge. If, in opening, the hinge be turned so far as to cause the rod to pass the perpendicular, then the tendency of the weight will be to throw it in the opposite or open direction.

The hinge is applied to a door in the usual manner, and in positions where the door may be opened beyond the point which will bring the rod to the opposite inclination, the same hinge may serve to hold the door wide open, as well as to close the door when, in returning the door, the rod passes the vertical position.

If the self-closing device is not required, it is only necessary to raise the door upon its hinges, so as to permit the removal of the rod G. That removed, the hinge operates the same as a common slip-joint butt-hinge. Another advantage of this construction is that the wear upon the meeting-faces of the knuckle is avoided, for so soon as the hinge commences to turn the one part of the knuckle is raised from the other, thus avoiding the rubbing wear between the two knuckles.

While designed specially for a butt-hinge, the invention is applicable to any slip-joint hinge.

I claim—

- 5 A slip-joint hinge having the one part constructed with an arm, E, extending diagonally therefrom, the other part with a corresponding part, F, extending diagonally therefrom in the opposite direction to the arm E, each of
10 said arms constructed with a cavity, b, com-

bined with the rod G, one end seated in the cavity of one arm, the other in the cavity of the opposite arm, and so that the said rod, when the hinge is in its closed position, stands diagonally across the plane of the pintle, substantially as described. 15

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Witnesses:

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