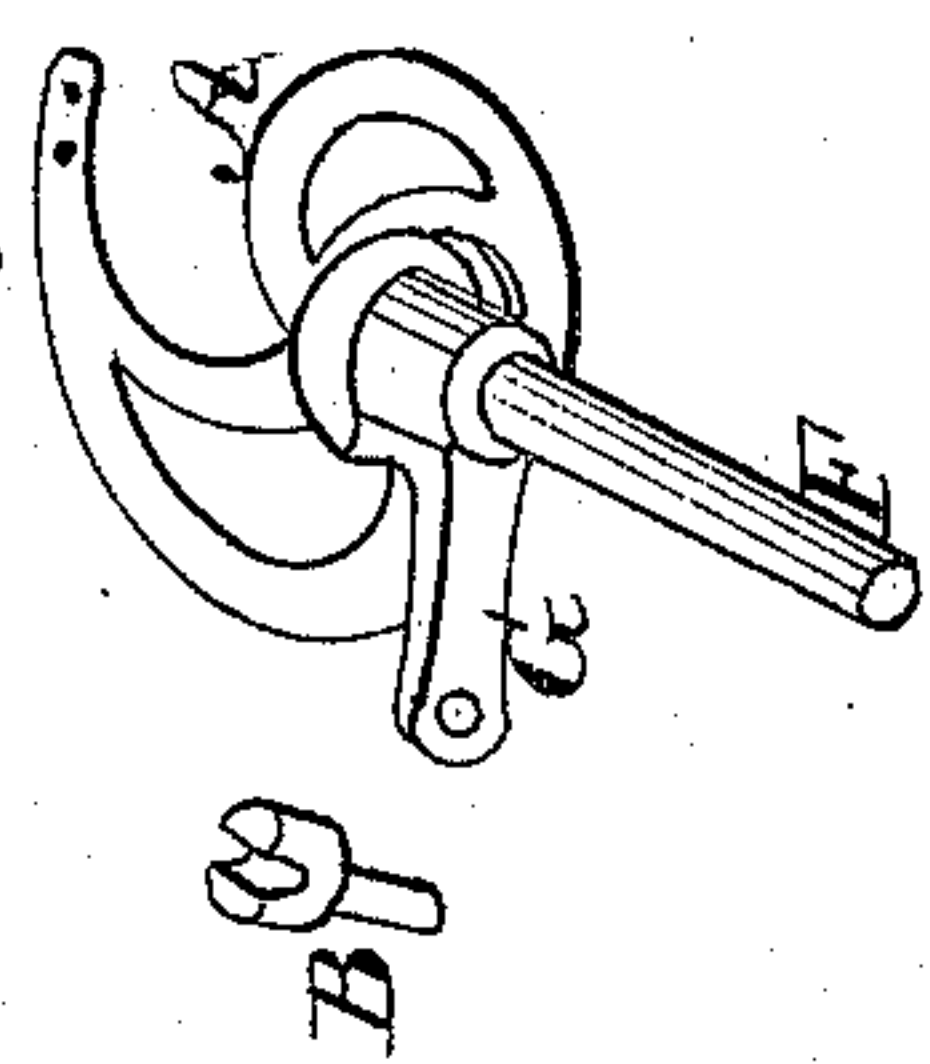


*T. Baker*  
*Paper Mach.*

*N<sup>o</sup> 43,280.*

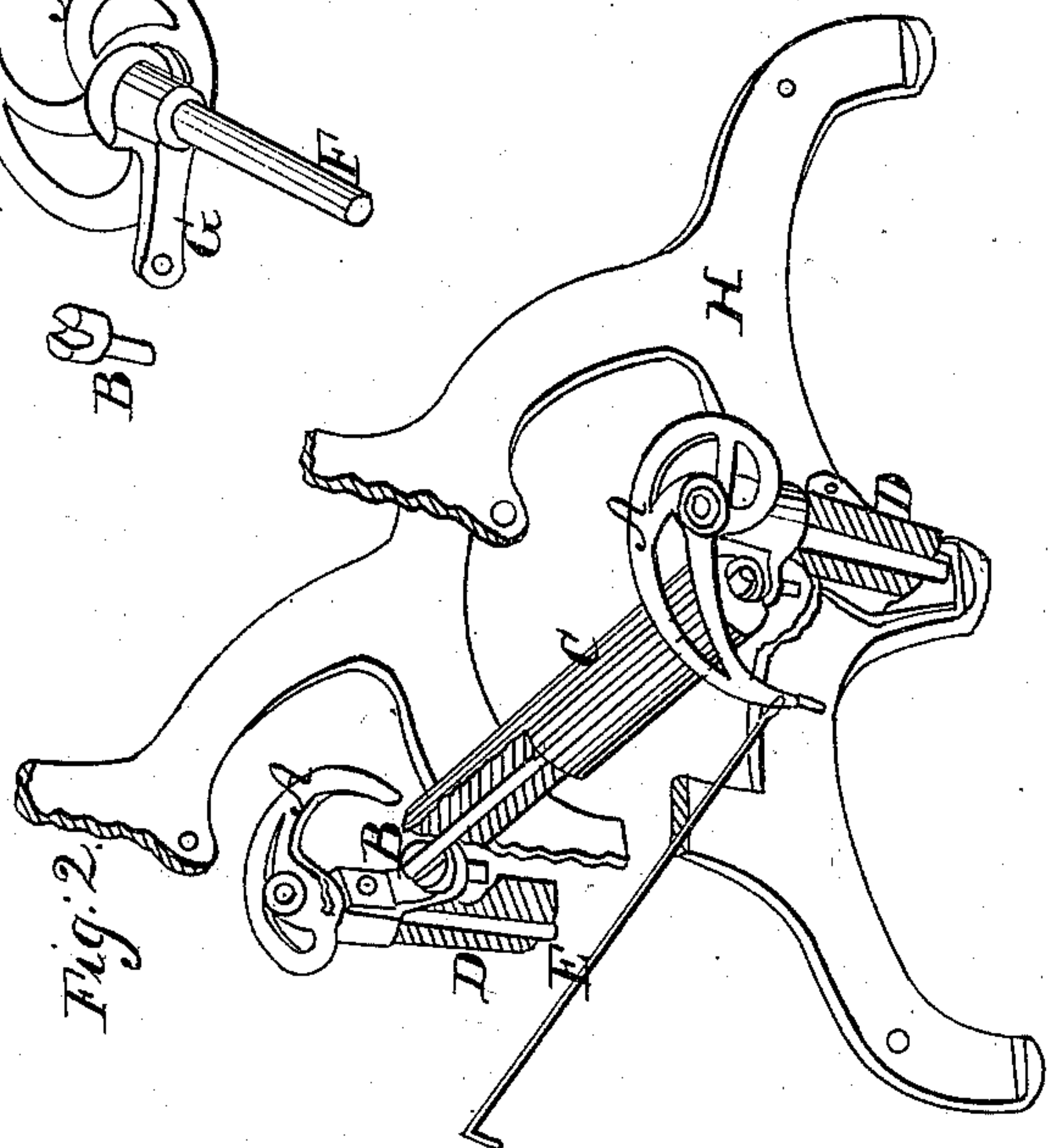
*Patented Jun. 28, 1864.*

*Fig. 4.*

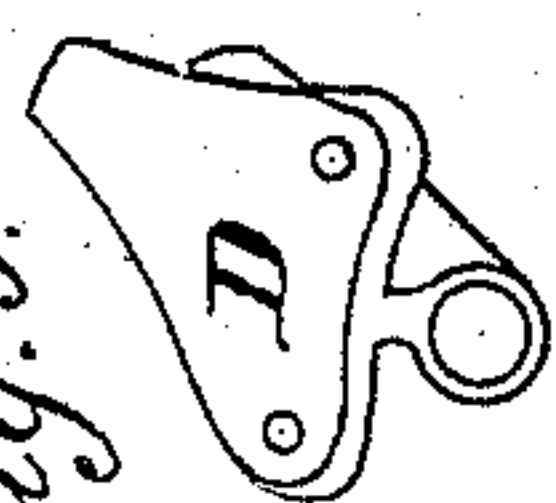


*B*

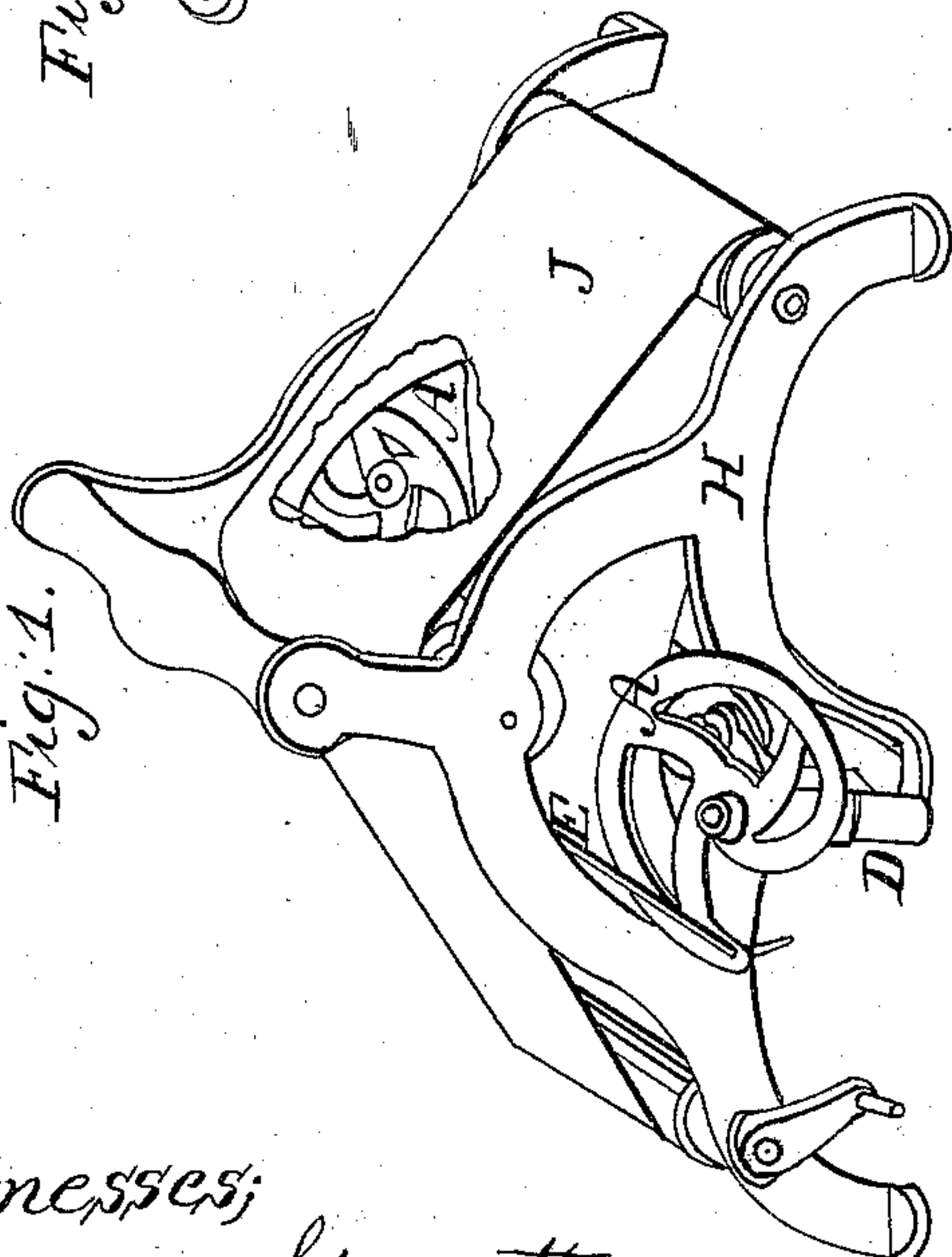
*Fig. 2.*



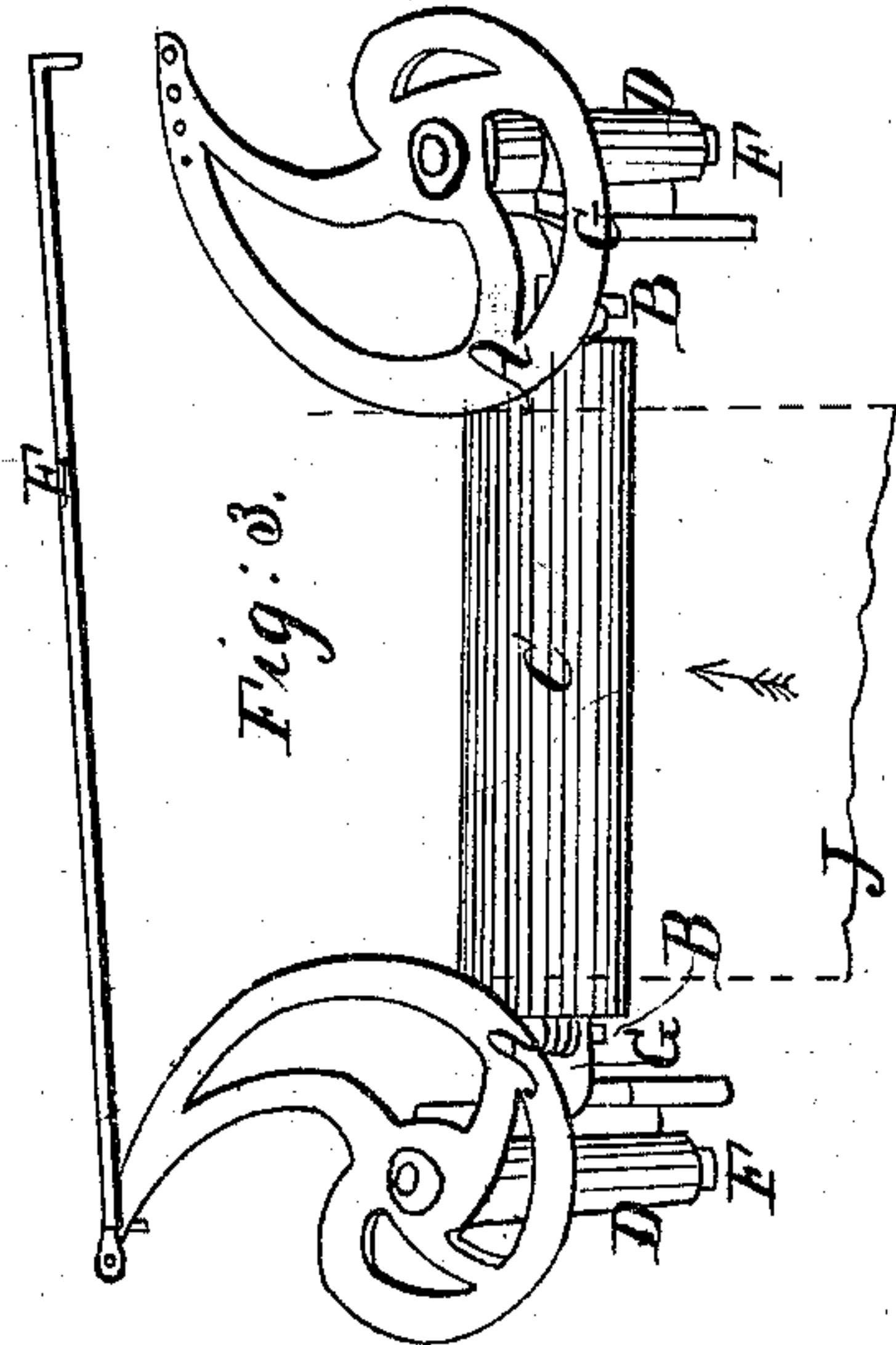
*Fig. 5.*



*Fig. 1.*



*Fig. 3.*



*Witnesses;*  
*Charles Starrett*  
*Benjamin B. Gifford*

*Inventor;*  
*Theodore Baker*



# UNITED STATES PATENT OFFICE.

THEODORE BAKER, OF STILLWATER, NEW YORK.

IMPROVEMENT IN SELF-ACTING FELT-GUIDES FOR PAPER-MAKING MACHINES.

Specification forming part of Letters Patent No. 43,280, dated June 28, 1864.

*To all whom it may concern:*

Be it known that I, THEODORE BAKER, of Stillwater, in the county of Saratoga and State of New York, have invented a new and useful improvement in a self-acting guide for the felt cloths, wire cloths, and bolts of paper making and other machinery where the same may be used; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the drawings making a part of this specification, in which—

Figure 1 is a perspective view of a frame containing, among other things, my improvement. Fig. 2 is a perspective view of the same, with certain parts removed, the more clearly to show the remainder. Fig. 3 represents my improved devices detached from the main frame, and Figs. 4 and 5 are detailed views.

The perspective, Fig. 1, is a portion of a paper-making machine, with its rolls and felt cloth.

H is the frame.

A A are cams on opposite sides of the frame H, having their peripheries rounded upward to facilitate the passage of the edges of the felt beneath them, as hereinafter explained. Said cams A A are attached to the tops of the posts F F and adjustable on the same by set-screws in their centers.

F F are posts supporting the cams A A and arms G G and resting in the flanged sockets D D loosely.

B B are universal journal-boxes pivoted on and supported by the arms G G and carrying the journals of the roll C.

E is a rod connecting the cams A A, keeping them in the same position in relation to each other, and moving one whenever the other is moved.

J is the felt cloth, moving over the rolls in the direction indicated by the arrows.

The cams A A are adjusted to felts of different widths by bringing up the narrow or wide part of the cam to the edge of the felt.

Operation: Now, as the felt J is—from the

unequal wear of the rolls or their journals, or from the unequal contraction and expansion of the felts running in water, steam, or hot air of different and varying degrees of heat and saturation—inclined to vary from side to side of the machine in moving over the guide-roll C in the direction indicated by the arrows in Fig. 3, and inclines to either of the cams A, its edge will run under the rounded edge of the cam A, and by its filling the space between the cam A and revolving-roll C will cause the cam to move by the said friction or pressure, changing at the same time the position of the guide-roll C through the medium of the journal-box B, arm G, and post F, and by the peculiar shape of the cams A A. As they are moved they recede from the felt and immediately relieve it from pressure. When the position of the roll has been sufficiently changed, the felt J will incline to the opposite side and eventually find its true central position, thus forming a self-acting guide, keeping the felts always true on the machine and avoiding the constant attention of a man to set the roll.

I know there has been a self-acting guide invented to work by pressure against the edges of the felt, but this injures the felt and will only guide a stiff felt; but my improvement will guide the most delicate felt without injury, as it does not guide by pressing against the edges of the felt, but by pressure between the guide-roll C and cam A, connecting them, as by frictional gear, whenever the felt J runs between them.

What I claim, and wish to secure by Letters Patent, is—

The cam A and journal-box B, when used in connection with the guide-roll C as a self-acting guide for felt cloths and wire-cloths of paper-making and other machinery in its passage over the rolls, in the manner described, and for the purpose specified.

THEODORE BAKER.

Witnesses:

BENJAMIN B. GIFFORD,  
CHARLES STARRETT.