

(No Model.)

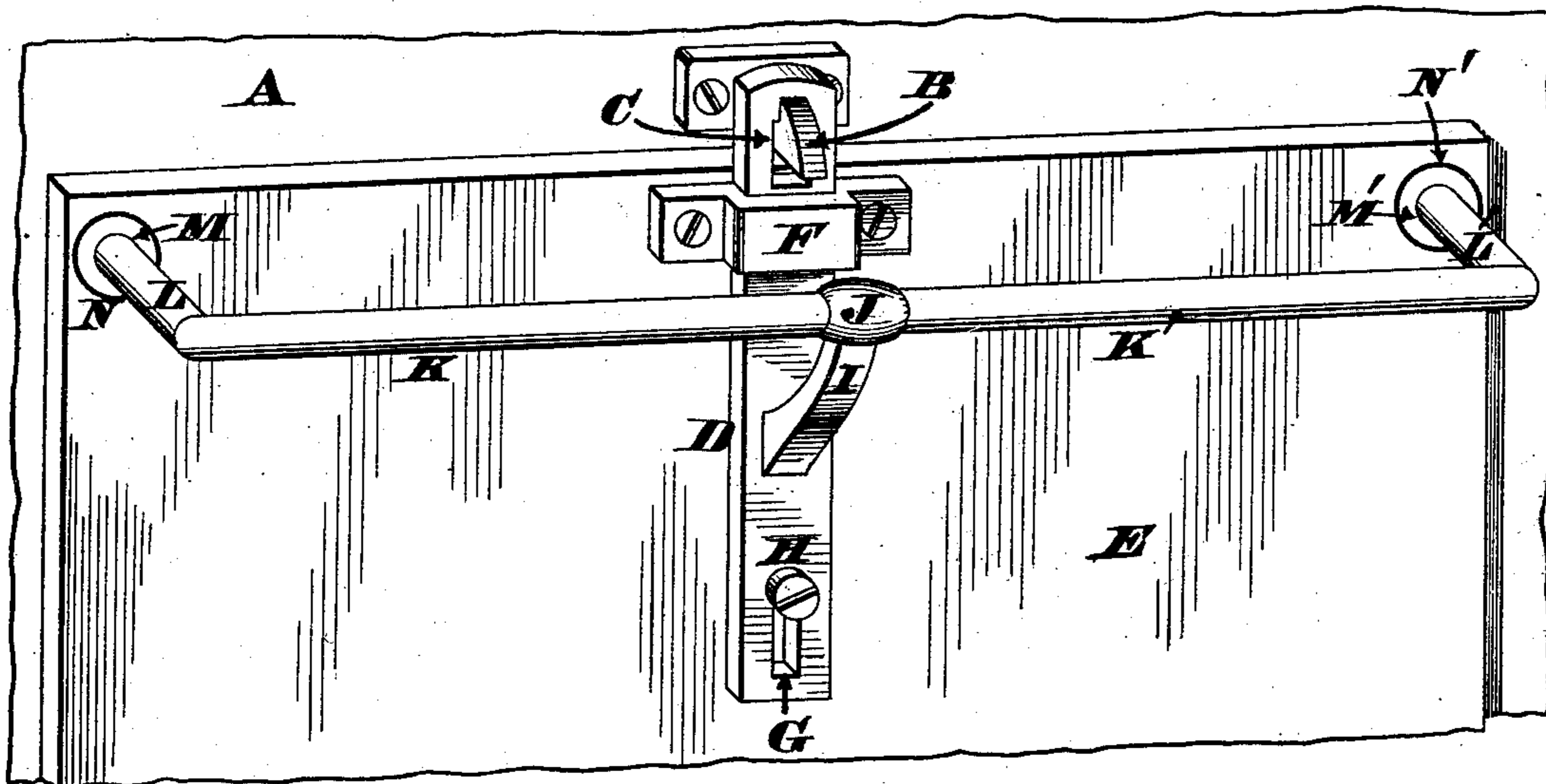
C. BROKATE.

## LATCH LIFTER FOR STOVE AND RANGE DOORS.

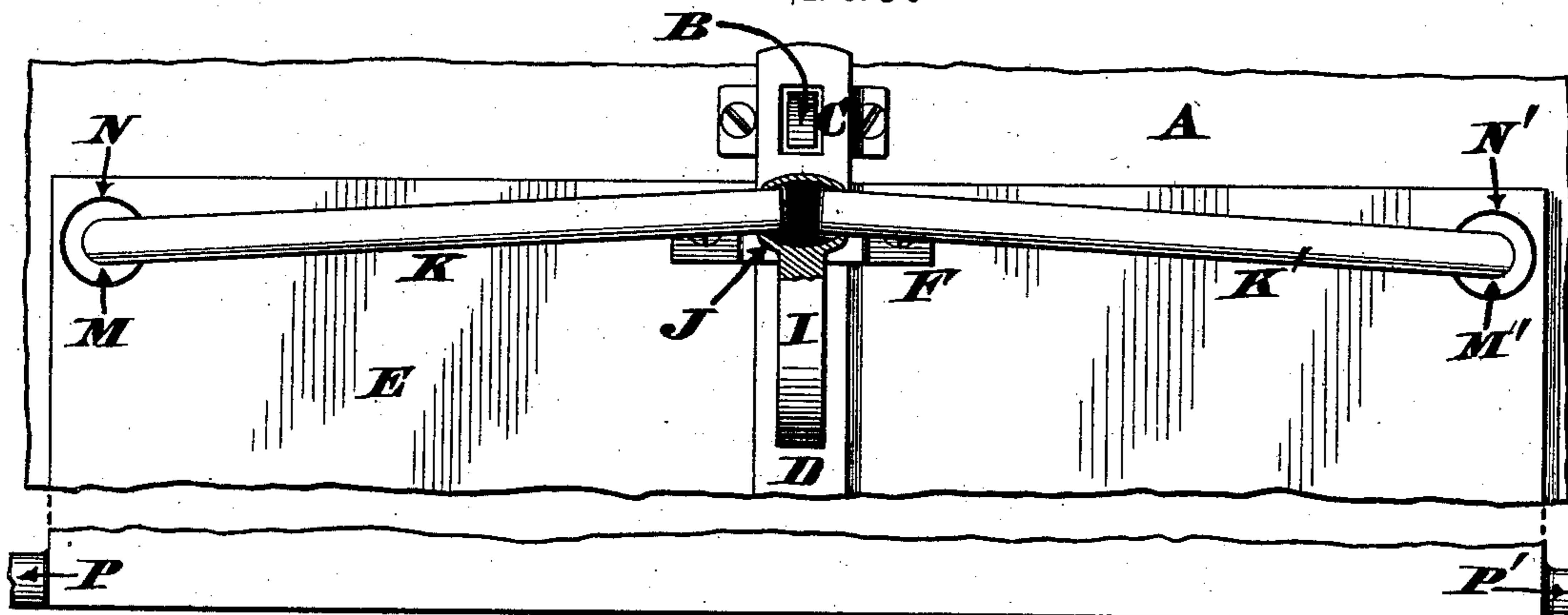
No. 367,360.

Patented Aug. 2, 1887.

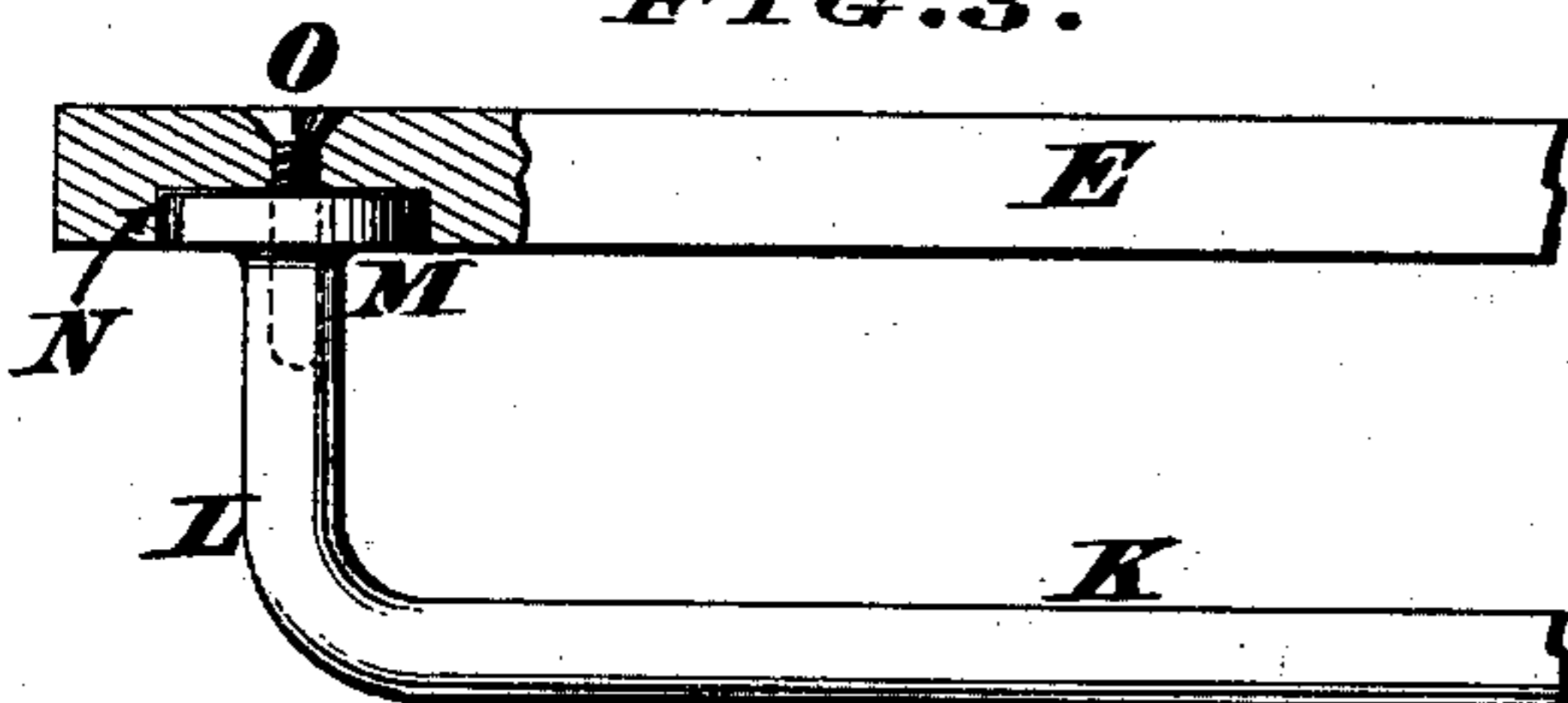
**FIG. 1.**



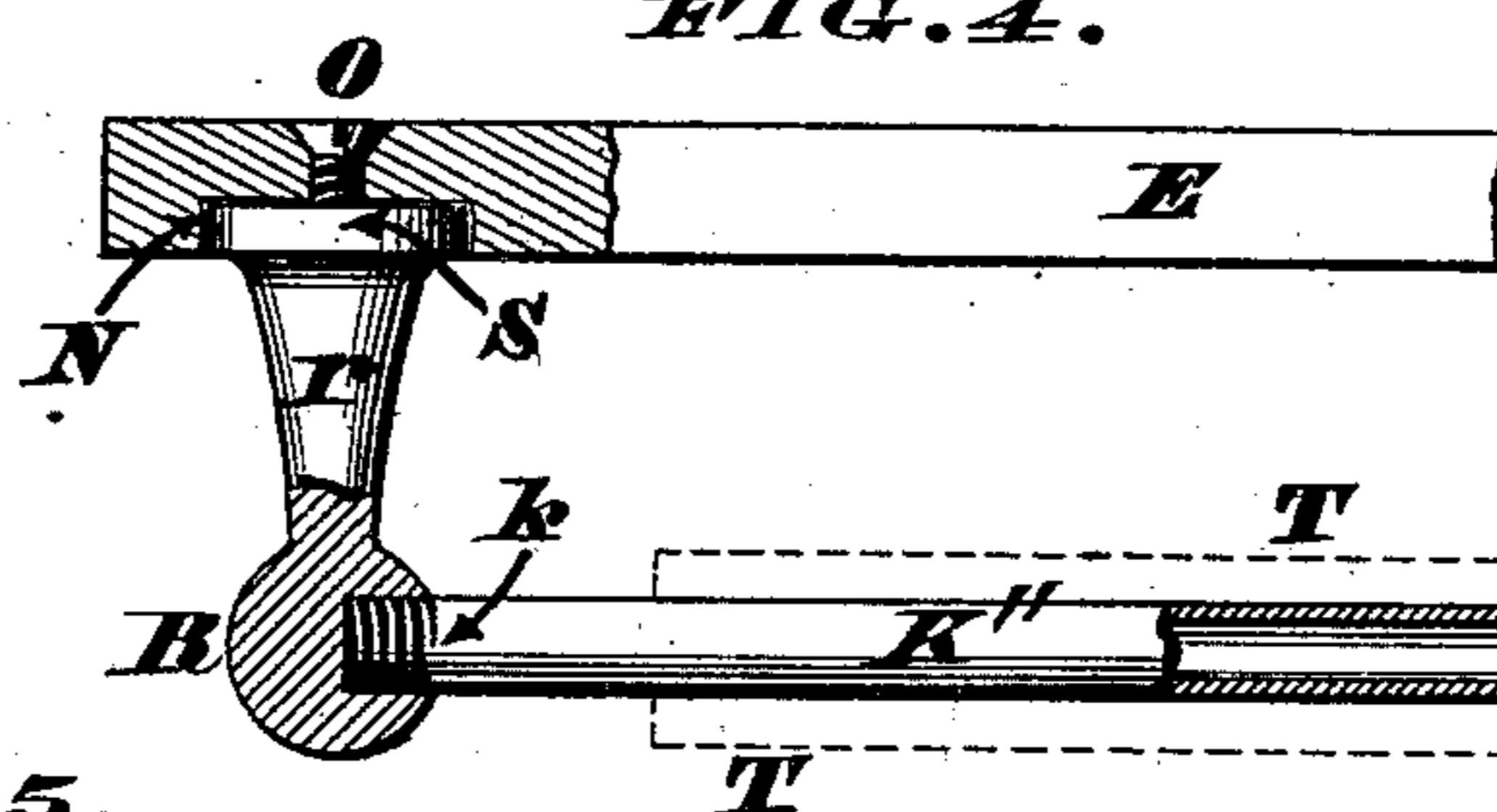
**FIG. 2.**



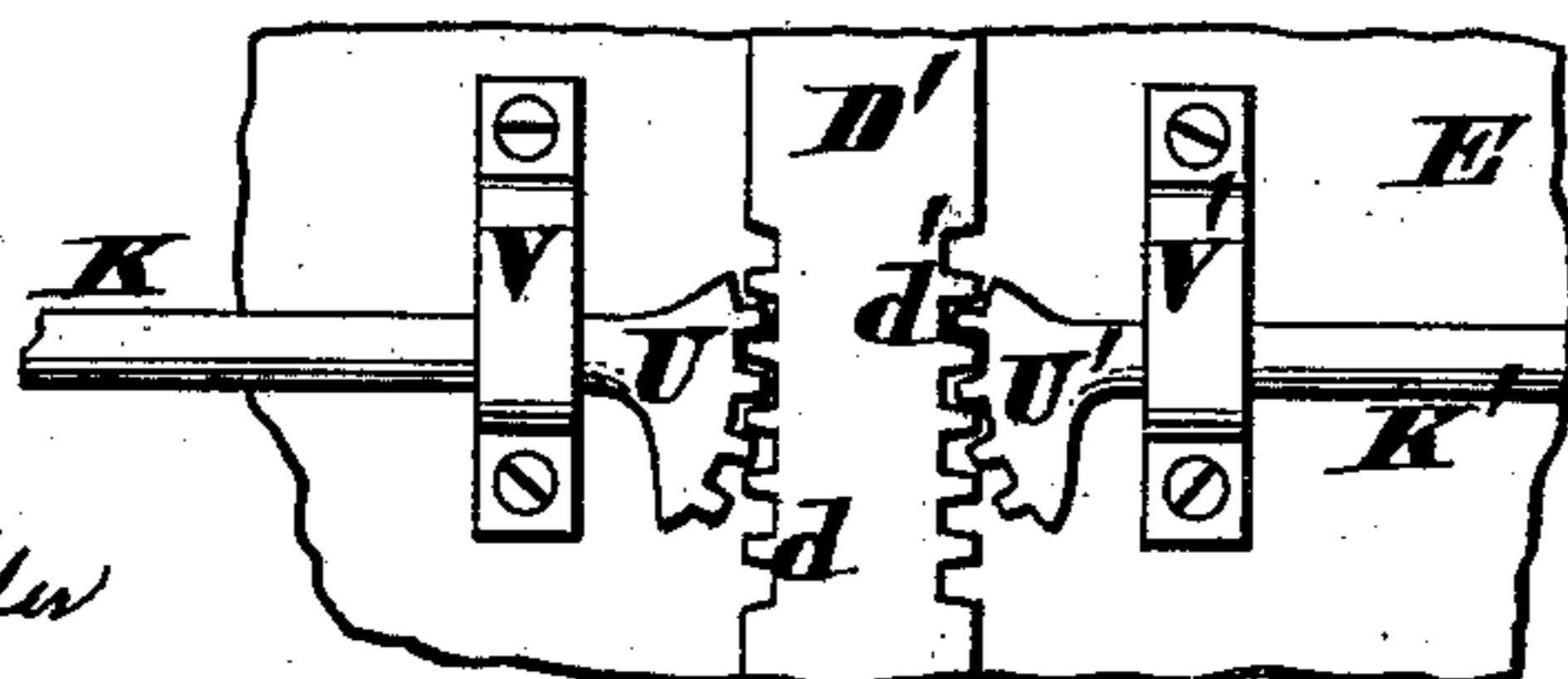
**FIG. 3.**



**FIG. 4.**



**FIG. 5.**



Attest.  
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# UNITED STATES PATENT OFFICE.

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## LATCH-LIFTER FOR STOVE AND RANGE DOORS.

SPECIFICATION forming part of Letters Patent No. 367,360, dated August 2, 1887.

Application filed April 15, 1887. Serial No. 234,951. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES BROKATE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Latch-Lifters for Stove and Range Doors, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to those stove or range doors which are provided with gravitating or drop latches or bolts that engage over catches on the main shell or casing of the heating or cooking apparatus, and thereby maintain the door securely in its closed condition; and my improvement consists in applying one or more independent lifting-levers to such latches or bolts. These lifting levers or handles are composed of bars or tubes arranged about parallel with the front of the door and at a suitable distance from the same, the free ends of said lever being so coupled to the gravitating latch or bolt as to readily operate the latter. The other or pivoted ends of these levers are adapted to have a slight turning movement within bearings of the door, in order that the free ends of said lifters may have the necessary play when the latch is operated, as hereinafter more fully described.

30 In the annexed drawings, Figure 1 is a perspective view of the upper part of a stove or range door embodying my invention, the latch being shown engaged with the catch, thereby causing the independent lifting-levers to assume their normal or horizontal position. Fig. 2 is a front elevation of a portion of said door, the free ends of said lifting-levers being elevated to disengage the latch from the catch, and the clutch of the latch being sectioned. Fig. 3 is an enlarged horizontal section through one of the pivoted bearings of a lifting-lever. Figs. 4 and 5 are modifications of my invention.

45 A represents a portion of the main shell or casing of a cooking or heating stove or range or other similar apparatus, and B is a customary catch projecting therefrom, said catch being adapted to traverse the longitudinal slot C of a gravitating or drop latch or bolt, D, which latter may be attached to the door E in any suitable manner. In the drawings, however,

the upper portion of said latch is shown as passing through a box, F, while its lower portion is slotted longitudinally at G to admit a screw or guide-pin, H.

Projecting from the latch D is a bracket, I, whose upper end carries a clutch, J, which is simply a hollow shell, within which the free ends of the separate or independent lifting-levers K K' are inserted loosely, the opposite ends of said levers being bent to form extensions L L'. These extensions cause the levers K K' to be parallel or nearly parallel with the front of the door, as more clearly seen in Figs. 3 and 4, and to be so far away from said door as to remain moderately cool at all times. It is preferred to provide the inner ends of these extensions with disk-shaped integral collars M M', that turn in cylindrical counterbores N N' of the door.

O are screws or rivets that retain said collars within said counterbores or bearings.

P P' in Fig. 2 are portions of the gudgeons or pintles of the door-hinges. When the oven or range door E is closed, the latch D engages over the catch B, as seen in Fig. 1, in which normal position of the latch the levers K K' are preferably horizontal, so as to add to the symmetrical appearance of the stove or range; but when it is desired to let the door swing down to its open position a slight upward pressure of the hand against either of said levers lifts the latch sufficiently to disengage it from the catch, as seen in Fig. 2. The door is then allowed to swing down to a horizontal position while the hand still grasps the lever, thereby preventing any violent slamming and consequent straining or breaking of the hinges. Furthermore, while the door is thus being gradually opened there is no danger of a person's hand being burned by coming in contact with the upper edge of the door, which accident occurs daily where the customary knobs or handles are used. When the door is closed, the latch D automatically engages over the catch B, the levers K K' adding somewhat to the weight of said latch, and thereby insuring its prompt action. During the elevation and dropping of the latch the free ends of the levers partake of the same movements, thereby causing a slight turning

of the collars M M' within the bearings N N', which turning is not sufficient to loosen the screws O or other pivots. The free ends of the levers, being simply inserted in the clutch  
5 and not fastened thereto, enable these lifting devices to work without binding or occasioning any material friction, and on this account the door can be handled as readily as though it were provided with an ordinary latch.

10 In Fig. 1 the extensions L L' are shown as making a right angle where they join the levers K K'; but in Fig. 3 the members L and K curve or bend where they meet, thereby avoiding a sharp corner.

15 In Fig. 4 the extension is omitted and the end of the tubular lever K" is threaded at k to engage with a knob, R, whose shank r has a collar, S, that turns within the bearing N. The dotted line T in this illustration shows a  
20 wooden or other non-conducting handle or wrapping that may be applied to the tubular lever, although such an expedient is not to be adopted in every case.

Fig. 5 shows another but more complicated  
25 modification of my invention, wherein the latch D has racks d d' on its opposite edges to engage with segment-gears U U' on the free ends of levers K K'. V V' are guides for keeping these segments in gear with said  
30 racks. It is evident these modifications embody the leading features of my invention—that is to say, an independent lever or a pair of independent levers having one end jointed to the door and the opposite extremity so coupled  
35 to the gravitating latch as to raise the same and descend therewith, in order that the door may be opened by simply pressing the hand upwardly against a comparatively cool lifter,

and thereby avoid grasping a hot knob or handle of the latch, as in the ordinary construction of such devices. 40

I claim as my invention—

1. In combination with the door of a stove or range or other cooking or heating apparatus, a gravitating latch engaging with a catch, 45 and an independent lifter located in front of the door and at a suitable distance from the same, the free end of said lifter being coupled to said latch, and its opposite end being pivoted, for the purpose described. 50

2. In combination with the door of a stove or range or other cooking or heating apparatus, a gravitating latch engaging with a catch and a pair of independent lifters located in front of the door and at a suitable distance 55 from the same, the free ends of said lifters being loosely inserted in a common clutch of said latch, and their opposite ends being pivoted, for the purpose described.

3. The oven or range door E, having a 60 gravitating latch, C D, that engages with the catch B, in combination with a pair of independent lifters, K K', located in front of the door and at a suitable distance from the same, the free ends of said lifters being loosely inserted in the common clutch, J, of said latch, 65 and their opposite ends being provided with collars M M', journaled in the sockets N N' of said door, for the purpose described.

In testimony whereof I affix my signature in 70 presence of two witnesses.

CHARLES BROKATE.

Witnesses:

JAMES H. LAYMAN,  
WILLIAM MILLER.