

No. 652,172.

Patented June 19, 1900.

P. DIEHL.

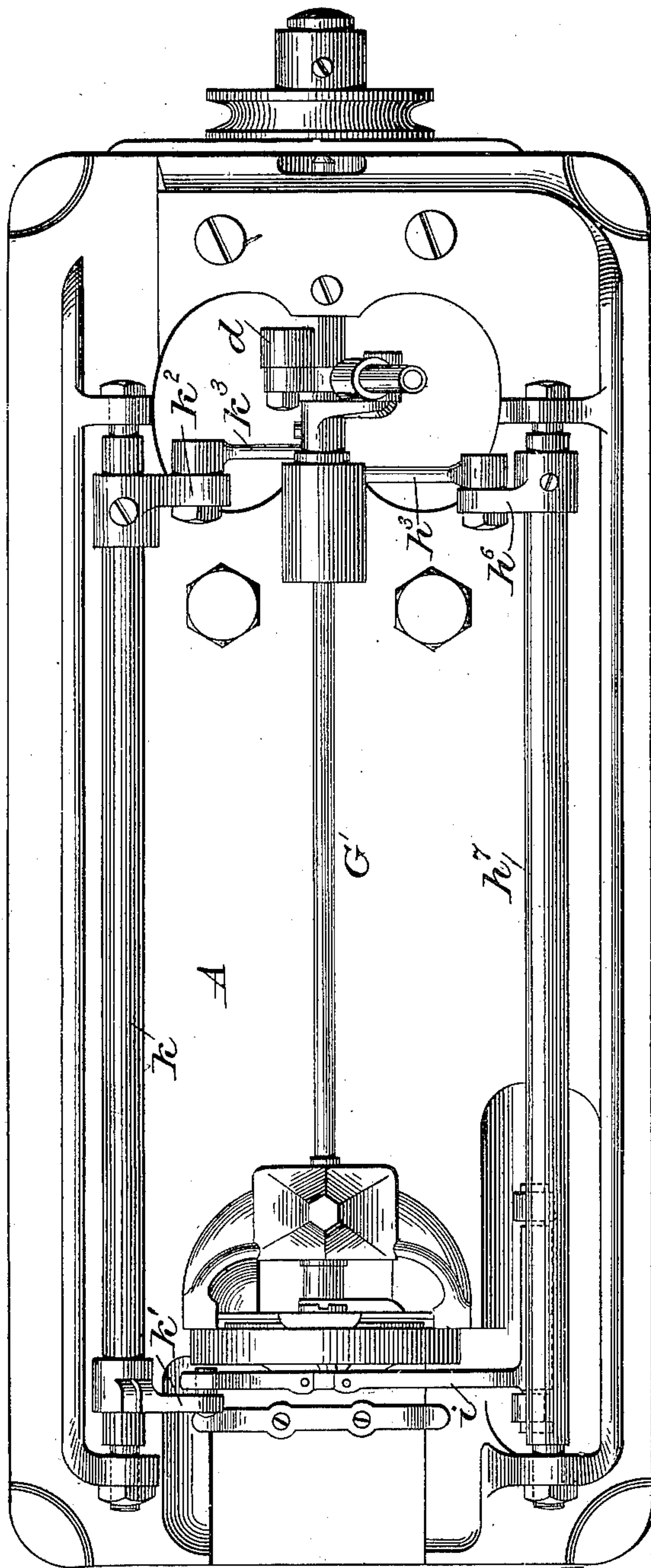
FEEDING MECHANISM FOR SEWING MACHINES.

(Application filed Oct. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses:

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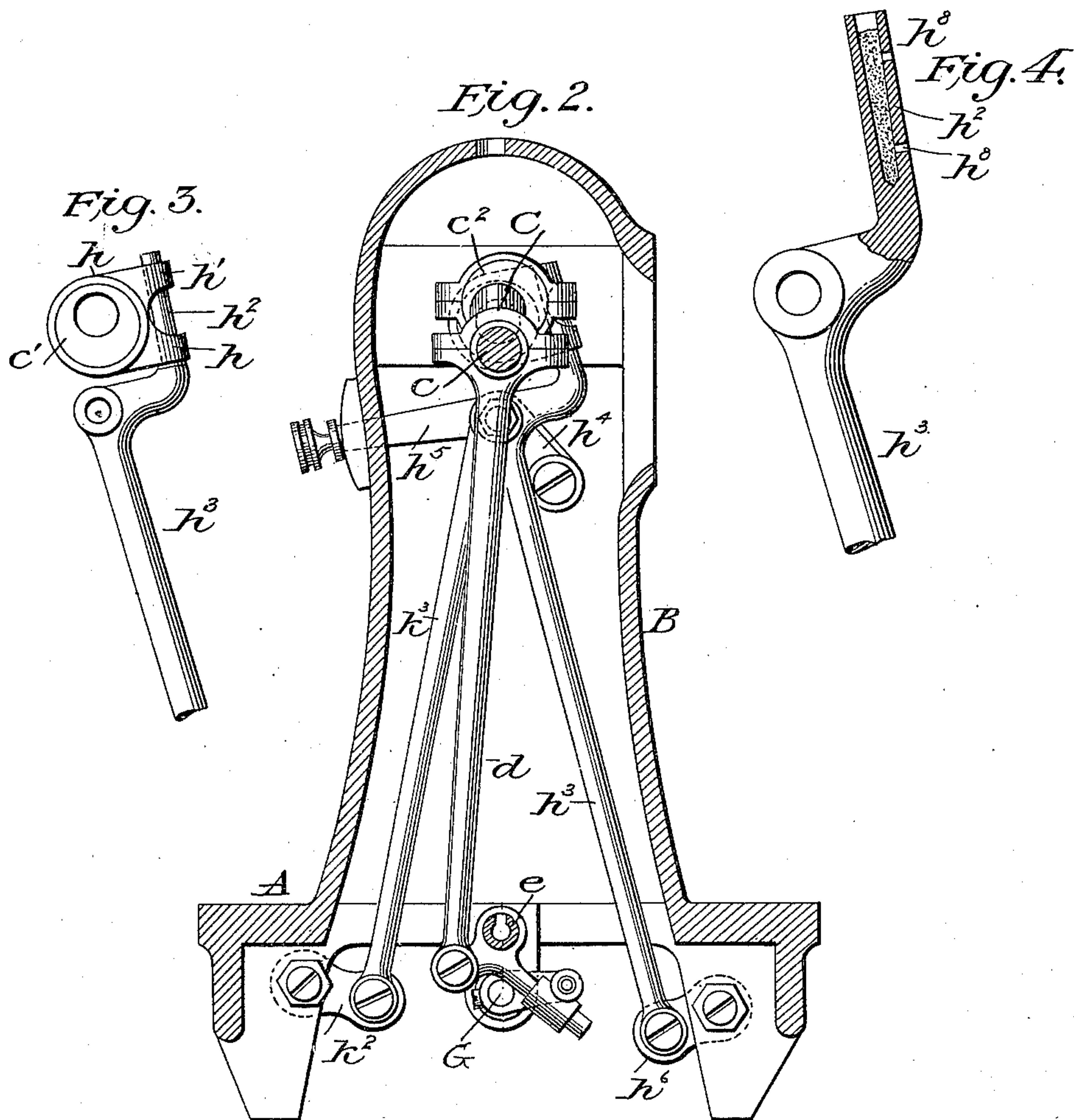
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FEEDING MECHANISM FOR SEWING MACHINES.

(Application filed Oct. 24, 1899.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

PHILIP DIEHL, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THE SINGER MANUFACTURING COMPANY, OF NEW JERSEY.

FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 652,172, dated June 19, 1900.

Application filed October 24, 1899. Serial No. 734,678. (No model.)

To all whom it may concern:

Be it known that I, PHILIP DIEHL, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Feeding Mechanisms for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has for its object to improve the construction of the feeding mechanism of a certain well-known class of sewing-machines to adapt the same to a higher speed than heretofore, as also to provide better facilities for lubricating some of the running parts.

15 In the accompanying drawings, Figure 1 is a bottom view of a machine embodying the invention. Fig. 2 is a sectional elevation taken through the vertical portion of the arm of the machine. Fig. 3 is a detail view showing the feed-operating eccentric, its strap, and a portion of the feed connection or link; and Fig. 4 is a detail view of the feed connection or link.

25 Referring to the drawings, A denotes the bed-plate, and B the vertical portion of the arm of the machine. The driving-shaft C is journaled in the upper portion of the arm, as usual, and is provided with the shuttle-operating-crank *c*, connected by a pitman *d* to a rocker *e*, which is in turn connected to the shuttle-operating rock-shaft G, located beneath the work-plate of the machine.

35 The driving-shaft C is provided with a feed-operating eccentric *c'*, encircled by a strap *h*, having one or more sleeve-like ears *h'* surrounding an arm *h²* at the upper end of the feed connection or link *h³*, which is joined by a link *h⁴* with the feed-regulating lever *h⁵*, as is usual in the toggle feed mechanism which has long been in use in certain styles of Singer machines, the link or feed connection *h³* being jointed at its lower end to an arm *h⁶* at 45 the rear end of the feed-operating rock-shaft *h⁷*, to an arm or arms at the forward end of which the feed-bar *i* is jointed in the usual manner. The arm *h²* of the feed connection

or link and on which arm the ears of the eccentric-strap *h* slide is preferably bored out 50 or formed hollow and filled with felt or other oil-retaining material, one or more holes *h⁸* being formed in the wall of the said hollow arm for the passage of the oil to the outer surface of said arm to lubricate the same. 55 This construction for operating the feed connection is much lighter and can be kept lubricated much better than the constructions heretofore generally in use in the class of machines to which this invention relates. 60

The feed-bar *i* is raised and lowered in the usual manner by the rock-shaft *k*, having at its forward end an arm *k'*, provided with a stud engaged by a fork on the feed-bar, said shaft having at its rear end an arm *k²*, to 65 which is jointed the lower end of a connecting-rod *k³*, having at its upper end a strap encircling an eccentric *c²* on the driving-shaft C.

Having thus described my invention, I claim and desire to secure by Letters Patent— 70

1. The combination with the driving-shaft C having the eccentric *c'*, the strap *h* provided with one or more ears *h'*, the link or feed connection *h³* having a portion encircled by said 75 ear or ears, the feed-moving rock-shaft *h⁷* with which said link or feed connection is joined, the feed-bar *i*, and means for raising and lowering said feed-bar.

2. The combination with the driving-shaft 80 C having the eccentric *c'*, the strap *h* provided with one or more ears *h'*, the link or feed connection *h³* having a hollow, lubricant-holding portion encircled by said ear or ears, and which hollow portion is provided with one or 85 more oil-escape holes, as *h⁸*, the feed-moving rock-shaft *h⁷* with which said link or feed connection is joined, the feed-bar *i*, and means for raising and lowering said feed-bar.

In testimony whereof I affix my signature 90 in the presence of two witnesses.

PHILIP DIEHL.

Witnesses:

HENRY J. MILLER,
HAROLD W. BROWN.