(No Model.) 2 Sheets—Sheet 1.

# G. W. WEISS.

## SEWING MACHINE.

No. 552,942. Patented Jan. 14, 1896.

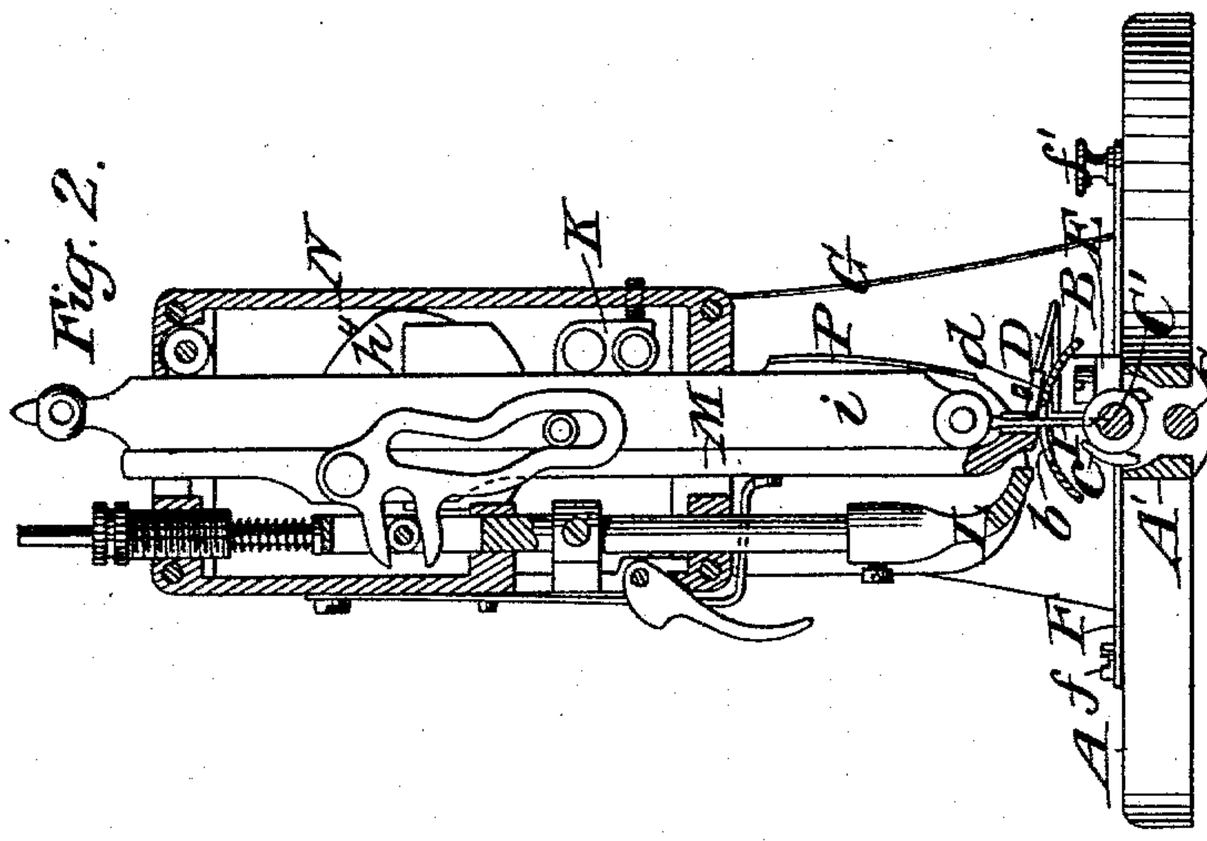

Fig. 2.

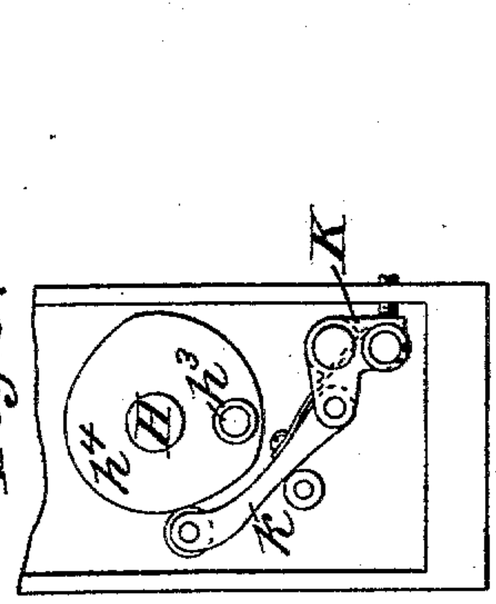

Fig. 3.

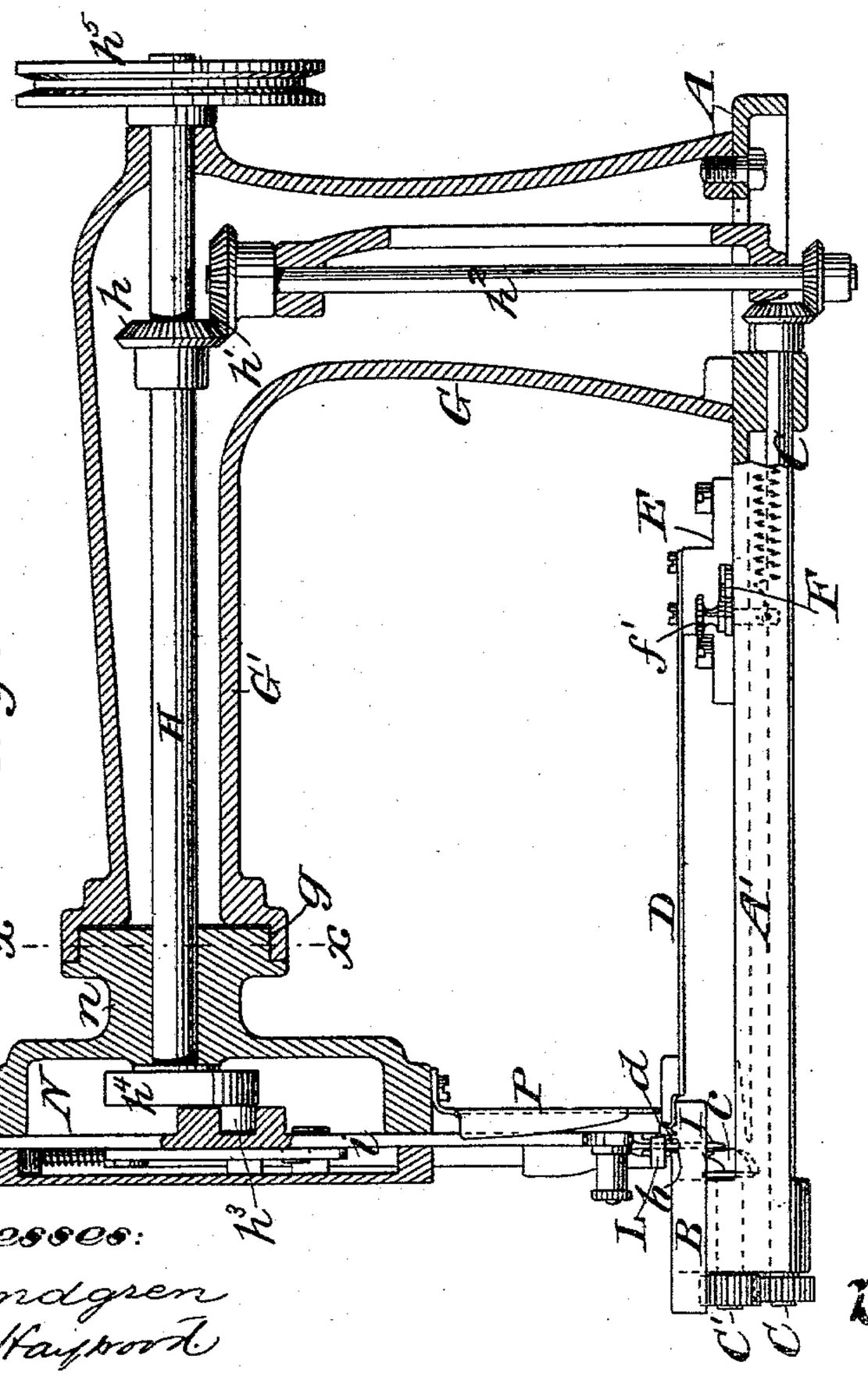

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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## SEWING MACHINE.

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Fig. 4.

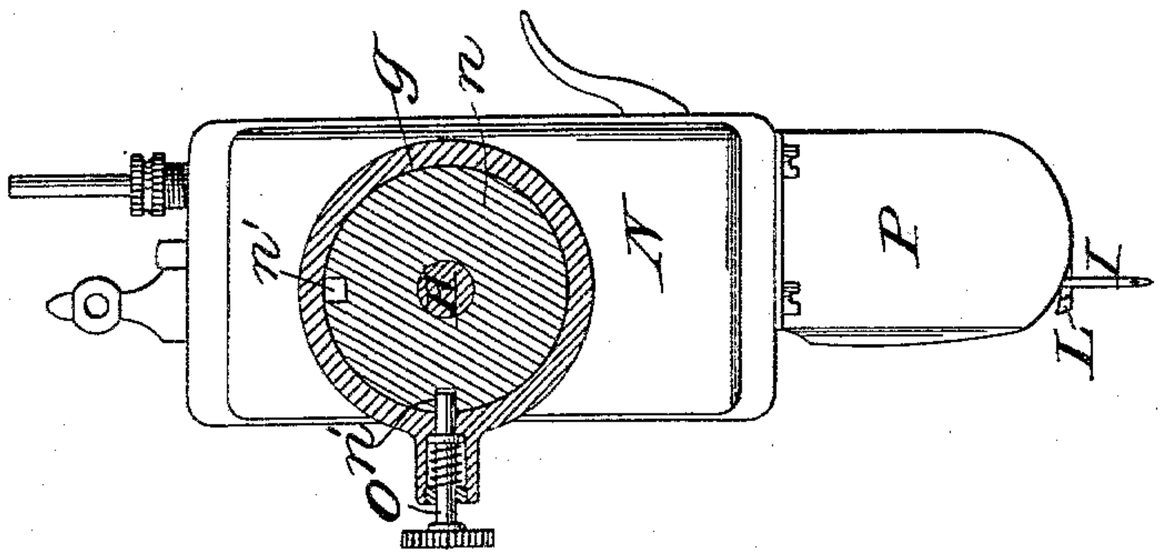
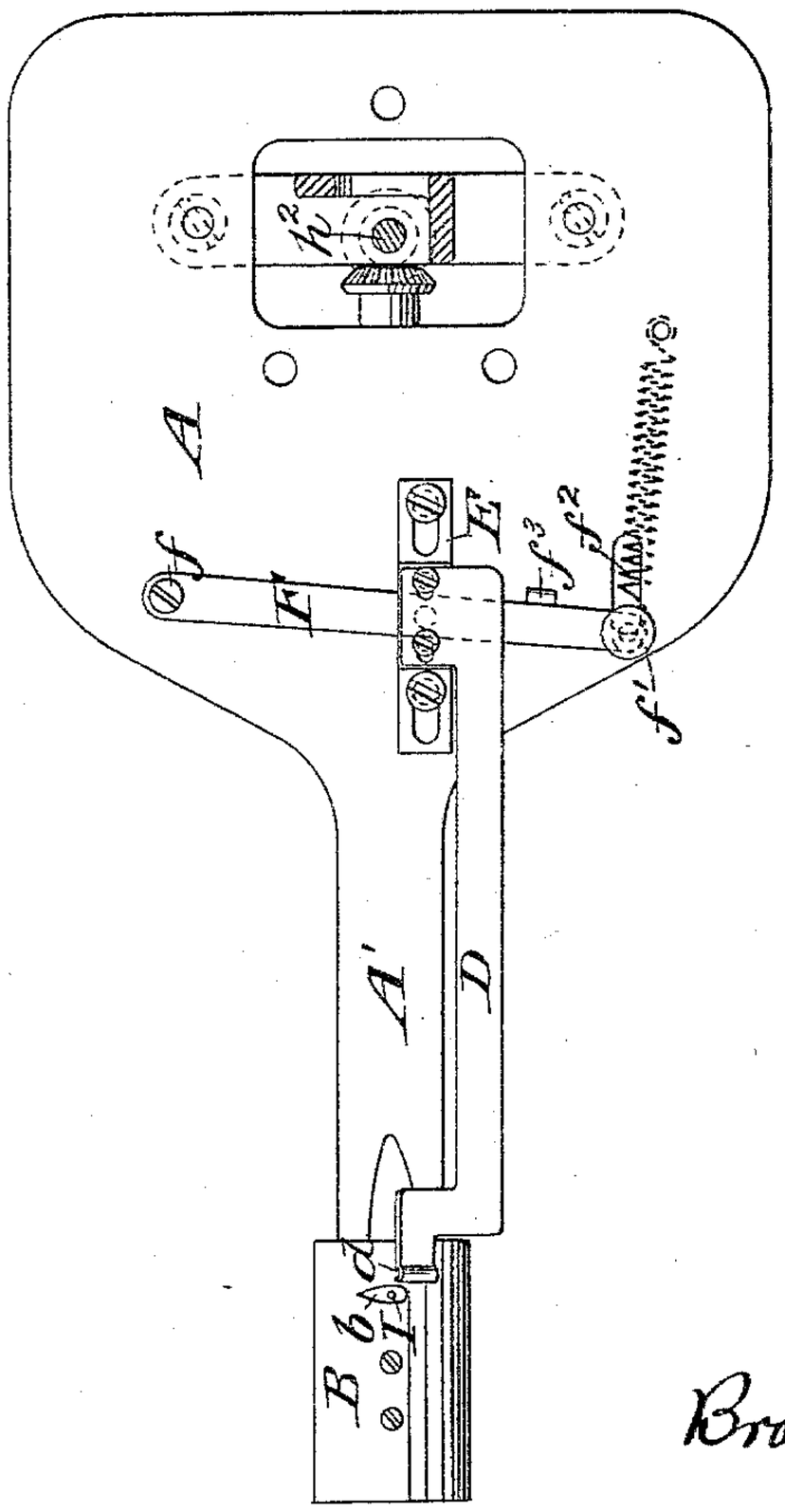



Fig. 5.

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# UNITED STATES PATENT OFFICE.

GEORGE W. WEISS, OF BROOKLYN, ASSIGNOR TO JOHN STEWART, OF NEW YORK, N. Y.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 552,942, dated January 14, 1896.

Application filed January 16, 1893. Serial No. 458,558. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. WEISS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Sewing-Machines, of which the following is a specification.

My invention relates to an improvement in sewing-machines, and more particularly to sewing-machines for sewing sweat-bands to hats.

The object of my invention is to provide a machine by which a hat-sweat can be sewed into a hat (stiff or pliable) without difficulty, to provide means for the proper guidance and manipulation of the sweat-band, and to protect the hat or hat-brim from the operating parts of the machine.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the machine in longitudinal vertical section, partly in elevation. Fig. 2 is a view in end elevation with the face-cap removed. Fig. 3 is a view in detail of the mechanism for producing the needle-feed. Fig. 4 is a vertical transverse section through line $x\,x$ of Fig. 1, looking toward the needle end; and Fig. 5 is a top plan view of the base and work-table, the standard and overhanging arm with the mechanism supported thereby being removed.

The bed-plate consists of a broad portion A farthest from the needle and a narrow horn or neck portion A′ at the end nearest the needle. A curved cloth-plate B is secured to the extreme end of the horn A′ and is elevated therefrom. A looper-driving shaft C extends along within the horn A′ and gears with a short counter-shaft C′ carrying a looper $c$ on its inner end beneath the needle-slot $b$ in the cloth-plate B. An adjustable work-guide D is elevated from the bed-plate and is secured to a slide E on the bed-plate A, and extends thence along and is spaced from the horn A′ to a point over the cloth-plate B in proximity to the needle-slot $b$. At its extreme end the guide D is provided with a transverse groove $d$, preferably formed by curving its extreme end, and this groove is adapted to receive and guide the reed edge of the sweat-band and hold it in proper position with relation to the needle while the reed covering and sweat-band are being sewed into the hat. The reed edge of the sweat-band is that edge along which a small reed is commonly inserted in the band to make a rounded finished edge, and the japanned-cloth strip united along one of its edges with the under side of the sweat-band projects past the reed edge to receive the stitches which unite it with the hat, the sweat-band when turned into the crown of the hat serving to conceal both the cloth strip and stitches.

The slide E is guided by screws passing through elongated slots in said slide and fixed in the bed-plate, and said slide moves sufficiently to advance the free end of the guide inwardly to the inner edge of the cloth-plate B for inserting the sweat-band beneath the guide, between it and the horn A′. A lever F pivotally secured to the bed-plate at $f$ and loosely connected with the slide E by passing freely through a slot therein is provided with an operating-knob $f'$. A retracting-spring $f^2$ is connected with the under side of the bed-plate and to an extension of the knob $f'$ of the lever F to throw the latter into a normal or retracted position, and the said lever F and hence the guide D is held in advanced or operative position against the tension of the spring $f^2$ by a stop $f^3$ on the base.

A hollow supporting-standard G with an overhanging arm G′ rises from the base portion A. The main drive-shaft H is mounted in the arm G′ and carries a pinion $h$ which gears with a pinion $h'$ on an upright shaft $h^2$, which also is geared with the looper drive-shaft C.

The needle is denoted by I and is carried by a needle-bar $i$, reciprocated vertically by a crank-pin $h^3$ on a cam-disk $h^4$ fixed on the shaft H. The needle-bar $i$ is vibrated to feed the work by an angle-lever K operated by a lever $k$ controlled by the cam-disk $h^4$.

The needle-bar controls the movements of the presser-foot bar L to the extent of releasing the pressure at the moment of feed by means of an intervening feed-bar M connected with the needle-bar and presser-foot bar in a well-known manner.

The needle-bar, feed-bar, presser-foot bar and their connecting mechanism are mounted

in a box head-piece N, swiveled on the drive-shaft H by means of a hub or neck $n$, the end of which fits within a socket $g$ in the end of the overhanging arm G′.

The drive-pulley $h^5$, removably secured on the shaft H at one end of the frame and the cam-disk $h^4$, secured on the end of the said shaft within the box head-piece N, serves to hold the head-piece in position with the end of its neck within the socket $g$. That portion of the neck $n$ which enters within the socket $g$ is provided with notches $n'$ in its periphery for locking the head N in the desired adjustment for operating upon the work and for inserting and removing the work. A spring-actuated catch O is mounted in the wall of the socket $g$ in position to extend through the wall of said socket and into the notches $n'$ to effect the locking of the head.

A guard-piece P, Fig. 4, secured at its upper end to the under side of the head N, extends downwardly parallel with and along the inner side of the needle-bar and needle to a point within a short distance of the work-table B, to separate the hat-brim from unintentional contact with the moving parts. The guard is also provided with an extension arranged at a right angle to the main part and projecting in front of the needle and needle-bar, as shown in Fig. 1. It will thus be seen that the hat-brim or other part of the hat will be thoroughly protected from the operating parts of the machine above the bed-plate during the operation of sewing.

In operation when it is desired to adjust the hat and sweat-band for attaching the latter to the hat, the head N may be first swung around to carry the needle off to one side of its normal position. The guide D is then thrown inwardly to bring its free end at the edge of the cloth-plate. The sweat-band is then inserted between the guide D and the horn A′ with its reed edge on the cloth-plate B in proximity to the needle-slot and with its covering-strip over the needle-slot. The guide D is then shifted outwardly to bring the groove in its end on the reed edge of the sweat-band. The hat may then be inserted in position by passing its brim through the free open space between the head N and the cloth-plate B to bring its body portion adjacent to the brim where the seam is to be made over the needle-slot, and the head N may then be swung back into its normal position with the needle over the cloth-plate, and the seam is then formed. When the seam is completed, the hat with its sweat-band attached thereto may be removed from the machine by again turning the head N off to one side and shifting the guide D inwardly.

While I have shown in the present instance a rotary looper-hook for forming the stitch, a reciprocating shuttle of well-known or approved construction might be utilized if it were found desirable to form a lock-stitch instead of a chain-stitch.

What I claim is—

1. The combination with the bed-plate having a narrow horn-extension, of a throat-plate secured to the outer end of the horn and elevated therefrom, a slide supported and guided on the bed-plate adjacent the inner end of the horn, a guide carried by said slide at an elevation from the bed-plate and extending lengthwise of, and spanning the distance between, the slide and throat-plate, means for normally holding the guide retracted, means for shifting the guide, and means for holding the guide in operative position; substantially as described.

2. The combination with the bed-plate having a throat-plate secured thereto and elevated therefrom, of a slide supported and guided on the bed-plate at a distance from the throat-plate, a guide carried by said slide at an elevation from the bed-plate and spanning the distance between the slide and throat-plate, means for normally holding the guide retracted, a lever pivoted to the bed-plate and loosely connected to the slide for shifting said guide, and means for holding the guide in operative position; substantially as described.

3. In a sewing machine, the combination with the head thereof carrying a needle bar and needle, of a needle guard secured to and depending from the head adjacent to and parallel with the bar, and comprising two plates arranged at a right-angle to each other and disposed respectively in front, and at one side, of the needle; substantially as described.

GEORGE W. WEISS.

Witnesses:
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I. B. DECKER.