

(No Model.)

R. D. TUCKER.

FEEDING MECHANISM FOR SEWING MACHINES.

No. 388,005.

Patented Aug. 14, 1888.

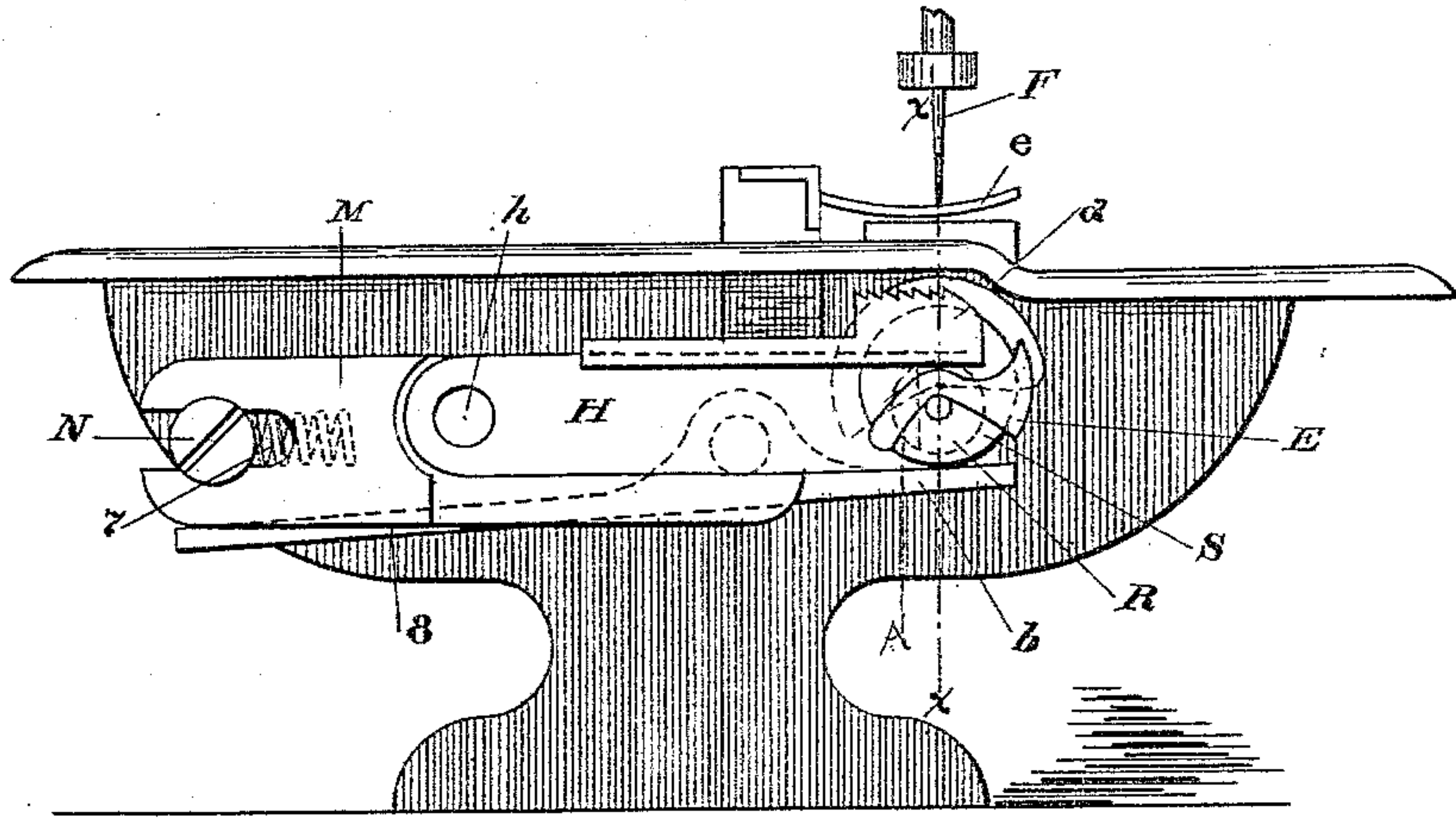


Fig: 1.

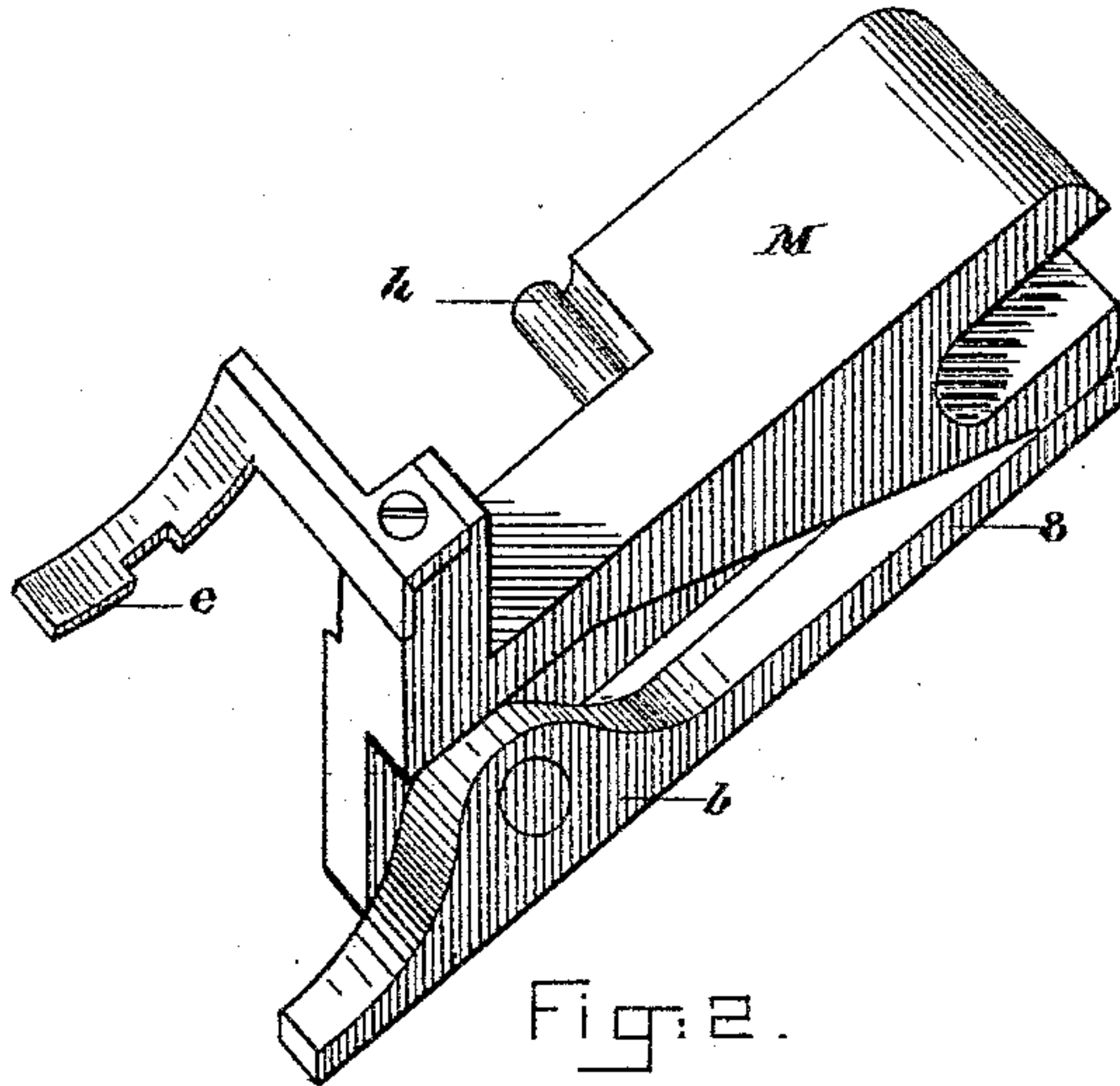


Fig: 2.

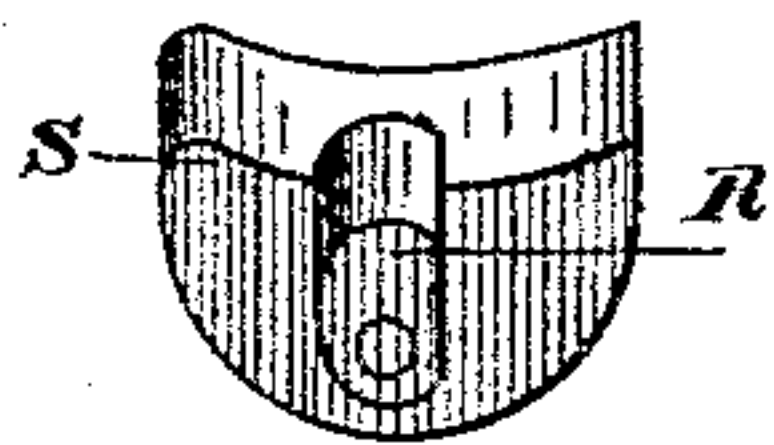


Fig: 4.

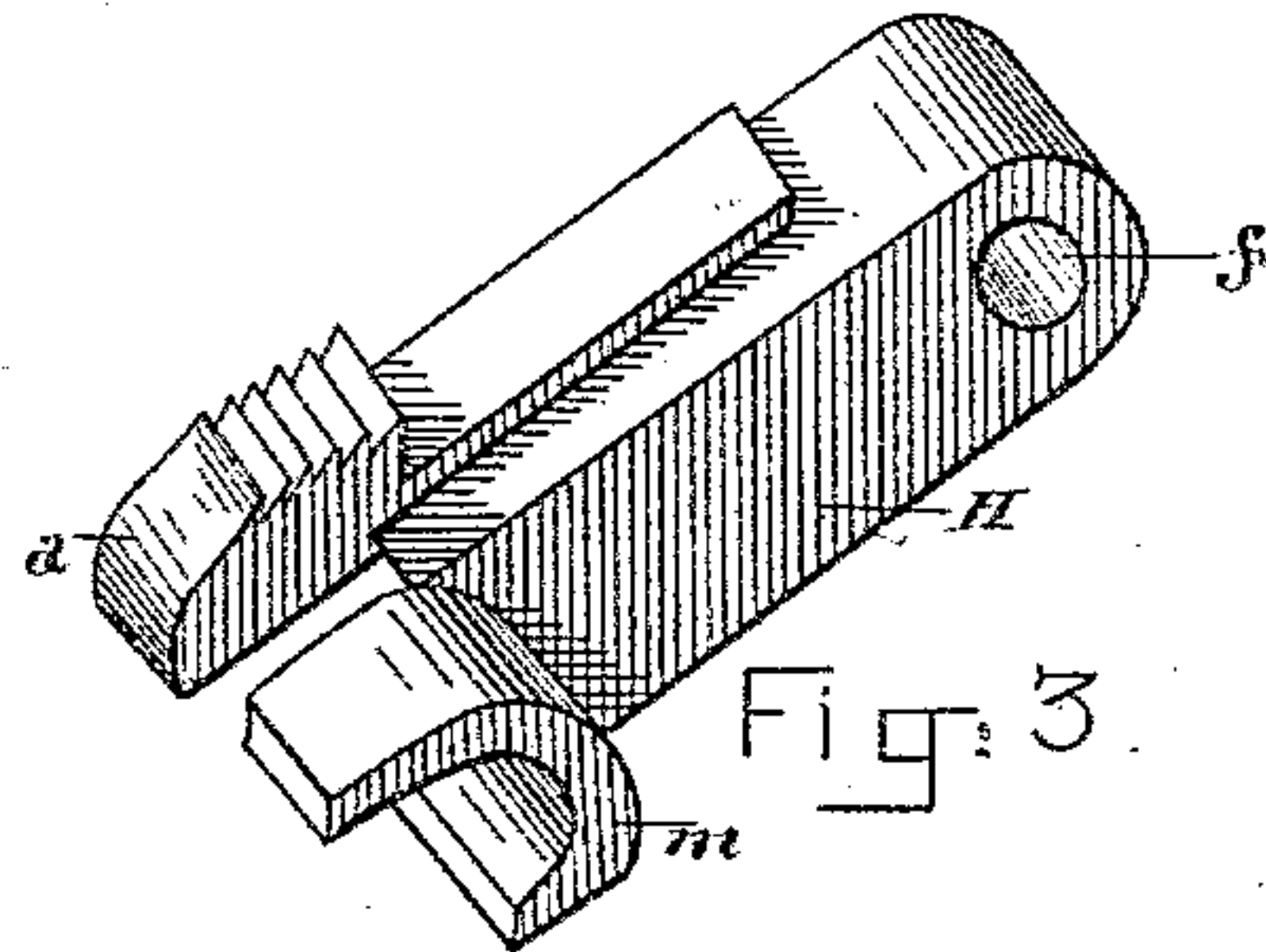


Fig: 3.

WITNESSES.

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FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 388,005, dated August 14, 1888.

Application filed September 23, 1885. Renewed December 3, 1887. Serial No. 256,841. (No model.)

To all whom it may concern:

Be it known that I, ROLLIN D. TUCKER, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Feeding Mechanism for Sewing-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to sewing-machines, and particularly to that part of a sewing-machine known as the "feed mechanism," for moving or feeding along the material to be sewed.

Referring to the drawings, Figure 1 is an end elevation of a machine provided with my improvement. So much only of the machine is represented as is needful to fully illustrate the combination and operation of my improvements therewith. Figs. 2, 3, and 4 are detail views, to be referred to and more fully described hereinafter.

This invention has for its object to provide a feed mechanism that will clamp the material on both sides and then move forward to advance the material while it is thus secured.

The invention further pertains to certain details of construction whereby the mechanism adapts itself automatically to the varying thickness of the material, and whereby the economical arrangement and durability of the parts are obtained.

This invention or feed mechanism consists of a clamp made in two parts, both mounted on a movable block and located in the machine, so as to clamp the opposite sides of the material, to prevent the same from getting out of position while the forward movement takes place. It may be here premised that my improved feed mechanism is particularly useful when two or more pieces of material are lapped or folded together; but it is equally serviceable to feed forward a single piece or layer.

The upper jaw, *e*, of the clamp is mounted upon an extension of the block *M*, as represented in Fig. 2. Said block also carries the spring-lever *b*, which lever is pivoted to the block and bears one end against the block, its other end being extended forward, as fully shown in said Fig. 2, which is a perspective view of these three parts. In the machine this forward end of the spring-lever bears upon the periphery of the cam *S*, (see Fig. 4,) which

cam is fixed upon the end of shaft *A*, which is the looper-shaft of an ordinary Willcox & Gibbs chain-stitch sewing-machine. The cam is fixed upon the shaft just behind the ordinary looper, *E*. (See Fig. 1.) This cam, when revolved by the shaft, operates in conjunction with the spring *b* to lift and depress the block *M*, and consequently the jaw *e*. The spring *b* is allowed to yield freely at the point *S*, thus allowing the jaw *e* to lift the block, and so accommodate itself to pass over seams or uneven places in the material. The block *M* is attached to and supported in the machine by means of the screw *N*. Said screw passes through an elongated hole in the block and fixes into the end of the machine-frame, thus serving as a pivot on which the block *M* may be oscillated sufficiently to lift and depress the jaw *e*, and it may also be advanced forward and backward to move the material along. The lower jaw, *a*, or feed dog proper, of the clamp is mounted on the small block *H*, which is fully represented in Fig. 3. Said block *H* is mounted upon the block *M*, a hole, *f*, in the block *H* being arranged to receive a pin, *h*, on the block *M*, the two being thus pivoted together, as shown in Fig. 1. The block *H* is formed with a cavity or mouth, *m*, to receive the cam *R*. This cam *R* is represented in the drawings (see Fig. 4) as integral with the cam *S*; but it might be made a separate cam, if desired. It is fixed upon the looper-shaft in rear of, but adjacent to, the looper *E*, being thus located between the looper *E* and the cam *S*. When revolved by the shaft, it operates to lift and depress the lower jaw or feed dog *a*. It further operates to push forward the block *H*, which carries with it the block *M*, by reason of the two blocks being jointed together, as described. Thus is effected the advance movement of the feed-clamp. The reverse movement of the clamp is effected by a spring, *7*, which for this purpose is located in a recess in the block *M* (see Fig. 1) with one of its ends bearing against the pin *N* and its opposite end against the block *M*. The parts of the machine not shown and described herein are constructed in the usual and customary way, for which reference may be had to the well-known Willcox & Gibbs machine.

I claim—

1. In a sewing-machine, a clamp having up-

per and lower jaws supported on a block, cams
for lifting and depressing said clamps and for
moving the block forward, a spring-lever
adapted to give a yielding pressure to the said
5 clamps, and means for returning the block, sub-
stantially as described.

2. In a sewing-machine, the combination of
the block M, having upper jaw, *e*, the block H,

having lower jaw, *a*, the spring-lever *b*, and
cams on the main shaft, all substantially as de-
scribed.

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Witnesses:

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