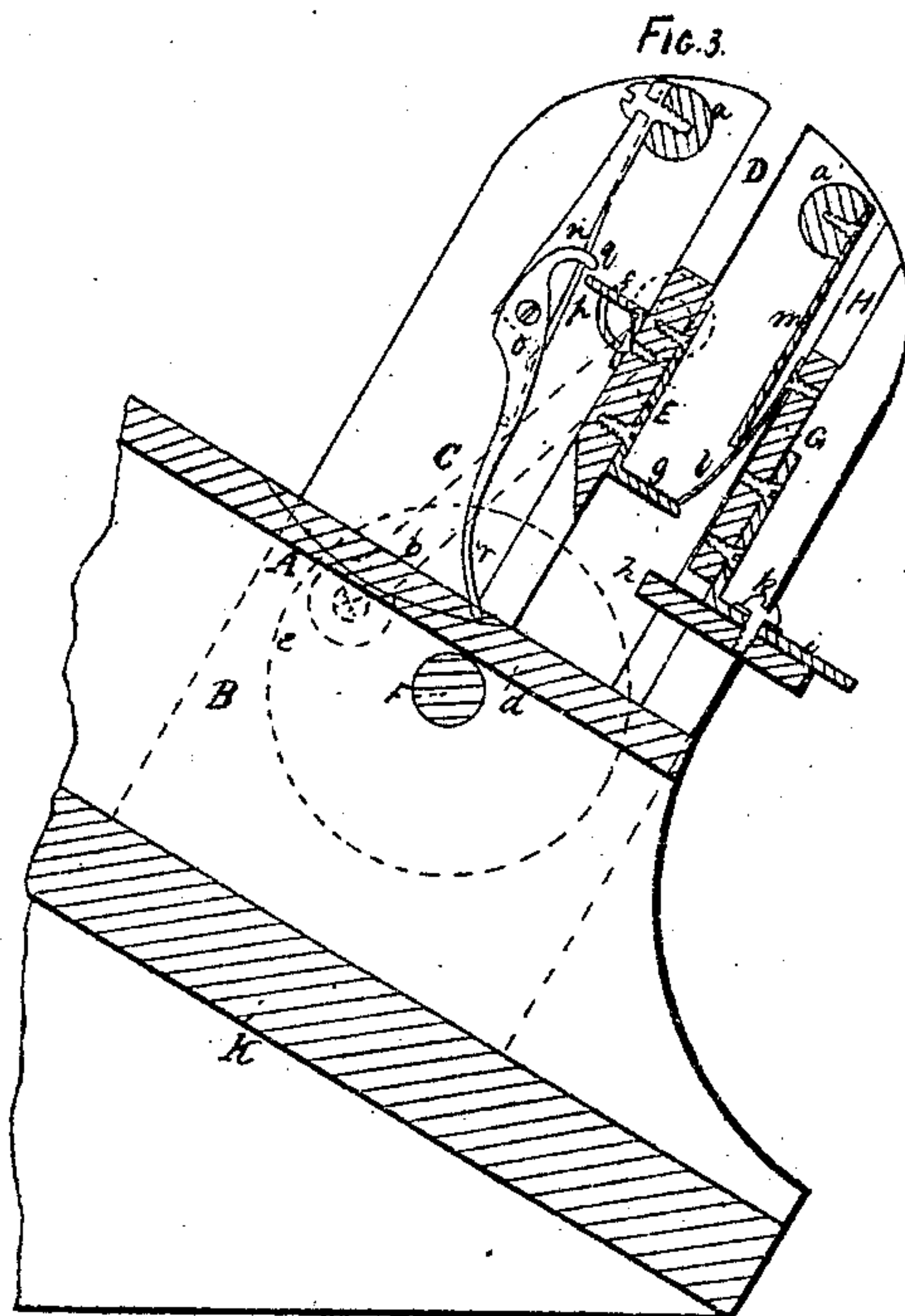
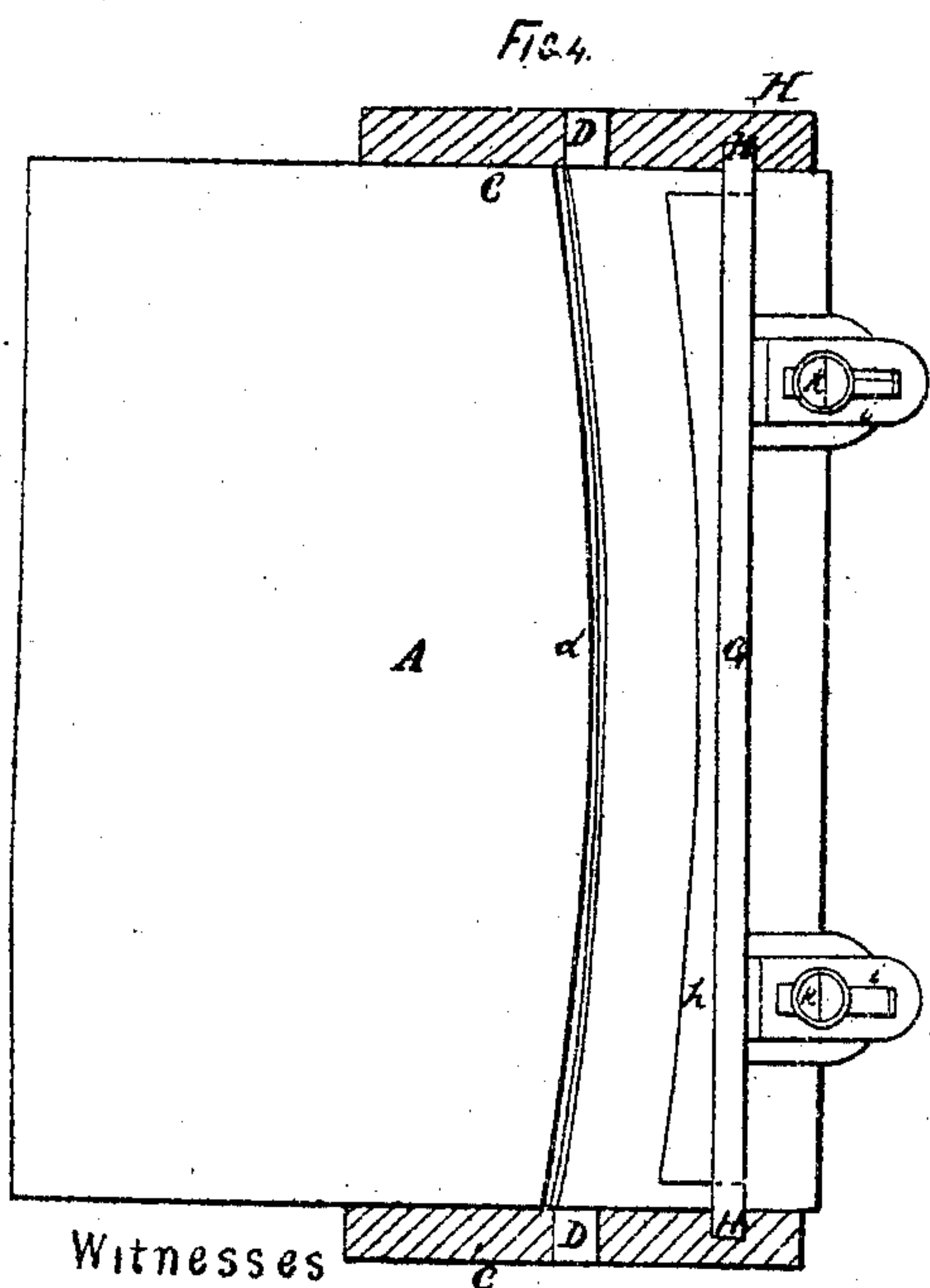
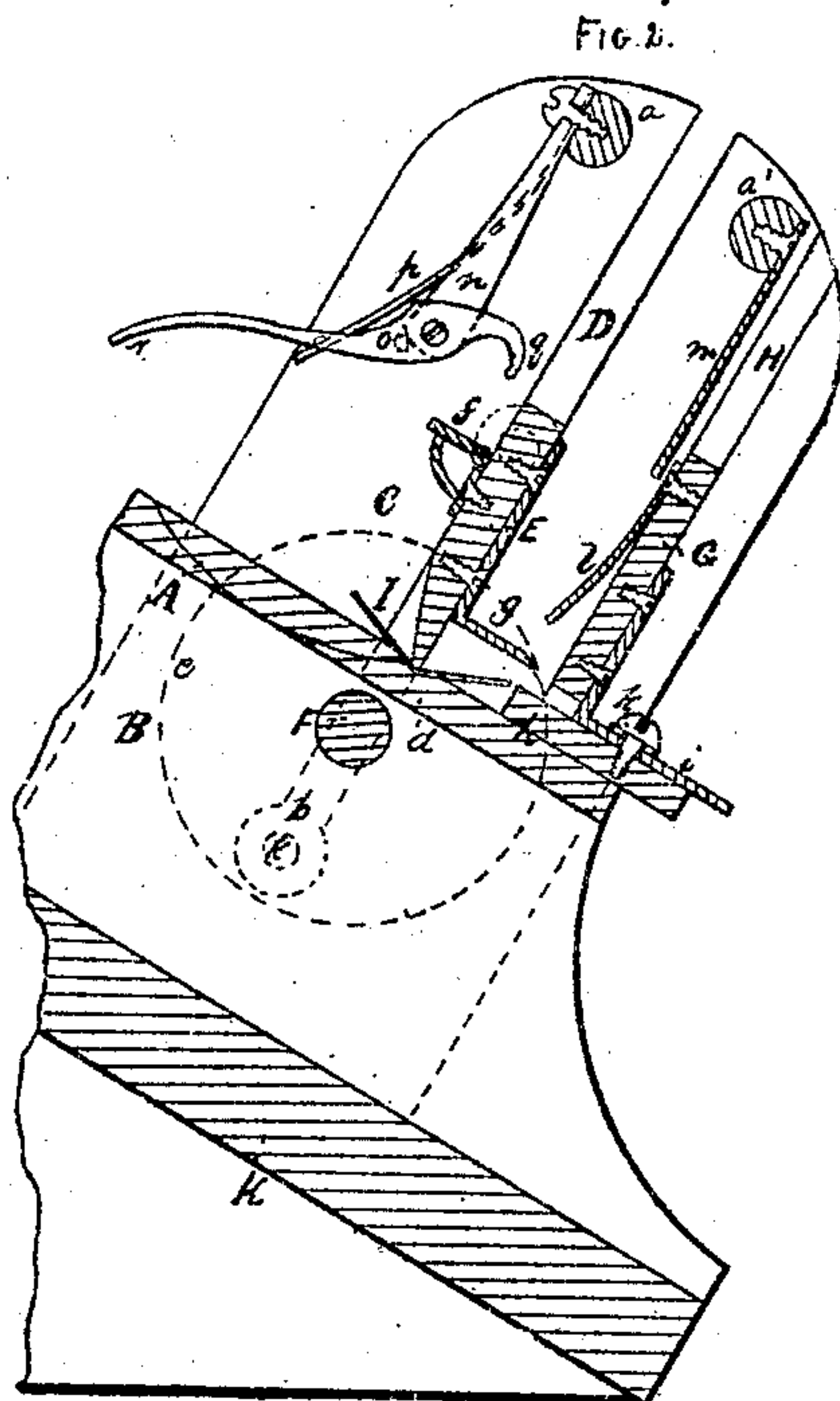
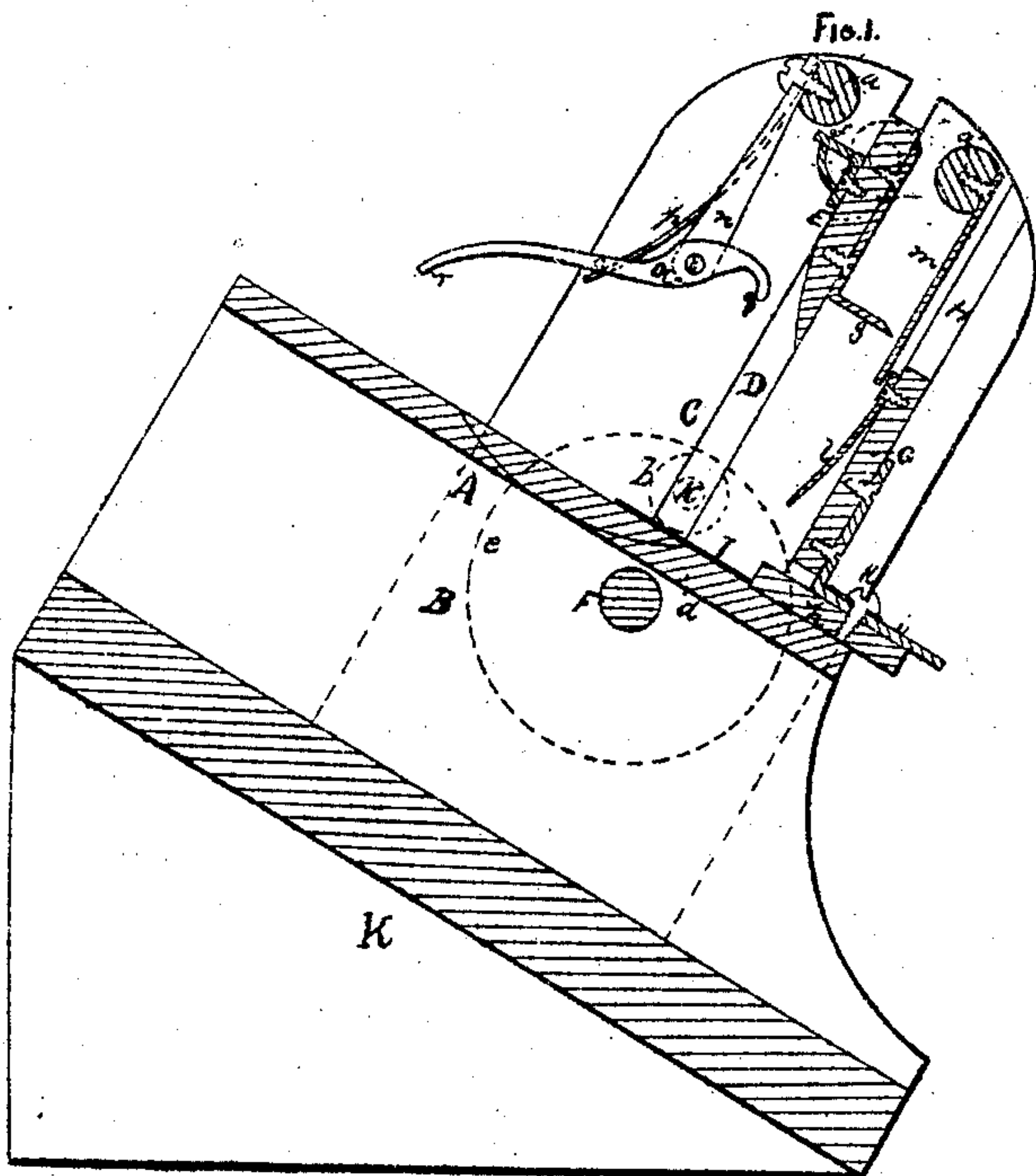


T. Tebbetts.

Collar Machine.

N^o 59680

Patented Nov. 13, 1866



Witnesses

Thos Bennett
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TEMPLE TEBBETTS, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR CREASING PAPER COLLARS.

Specification forming part of Letters Patent No. 59,680, dated November 13, 1866.

To all whom it may concern:

Be it known that I, TEMPLE TEBBETTS, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Creasing Paper Collars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figures 1, 2, and 3 represent sectional views of a machine for creasing paper collars with my invention applied, and Fig. 4 represents a top view of the feed and creasing table of the same and the gage.

Similar letters of reference indicate the same part of the machine in all the figures.

Paper collars, before they are turned over, are passed through a creasing-machine to receive a bend or crease, which is of a curved form, in order to give to the collar the necessary shape when it is turned over. The creases on both ends of the collar must coincide, and to effect this creasing-machines have been made with side and end gages, against which the collar is laid. These gages are straight, and the creasing-knife being curved, great care is required to lay the collar with precision, as any variation in the laying of the collar lengthwise will cause the ends of the collar to be creased unevenly, even if the collar lie close to the side gage. It is, therefore, dangerous for the operator to run such machines at a high speed, as many collars might be spoiled, or his fingers might be caught by the creasing-knife.

On some machines the collars, after having been creased, have to be removed by hand, which is another tedious and dangerous operation; and on other machines the gravity of the collars is depended on for the removal thereof, which often fails to operate satisfactorily.

The object of this invention is to remedy these evils, so that such machines may run at a high speed without danger for the operator, and the operation of laying the collars and the removing thereof shall always be positive.

The nature of this invention consists in making the side gage for the collar of the same curve, or nearly so, as the creasing-knife, or

making the curve of the creasing-knife and the curve of the side gage concentric. This will always insure the crease at the ends of the collars to coincide, even if no end gage is used.

The nature of this invention further consists in a doffer being applied to a creasing-machine, which shall remove the creased collar therefrom.

To enable others skilled in the art to make and apply my invention to use, I will now describe its construction and operation, with reference to the drawings.

A is a feed-table, which is placed and supported upon end pieces, B, Figs. 1, 2, and 3. At each end of the feed-table A a standard, C, is attached to the end piece, B. The standards C are connected at their upper ends by means of braces *a a'*. A slit, D, which passes through the upper part of the standards C, serves as a guide for the creasing-knife E. The edge of said creasing-knife is made curved, so as to correspond with the groove *d* in the feed-table, Fig. 4. Each end of the creasing-knife E is connected by means of a connecting-arm, *b*, Figs. 1, 2, and 3, with a crank-pin, *x*, placed on the wheel *e*, eccentrically to the shaft F, as represented in Figs. 1, 2, and 3 by dotted lines.

To the front of the creasing-knife E a trip, *f*, is hinged, and to the back of said creasing-knife an arm, *g*, is firmly attached, projecting from it at right angles, or nearly so.

G, Figs. 1, 2, and 3, is a guide-piece for the gage *h*, which is attached to it and made adjustable by means of the slitted arms *i* and screws *k*. The ends of the guide-piece G are fitted into grooves H in the standard C in such a manner that the said guide-piece can freely slide therein. The front of said guide-piece G has a spring, *l*, attached to it, the swinging end of the spring extending downward.

m, Figs. 1, 2, and 3, is a thin arm extending downward from the brace *a'* in front of the spring *l*. *n*, Figs. 1, 2, and 3, is a support extending downward from the brace *a*. To the lower end of this support a doffer, *o*, Figs. 1, 2, and 3, is hinged, which is held in proper position by means of a spring, *p*, Figs. 1, 2, and 3. The front of the gage *h* is made curved, so

as to correspond with the curved edge of the creasing-knife E or the groove *d*, Fig. 4, and be concentric therewith, or nearly so.

In Figs. 1, 2, and 3 the machine is represented as being supported upon a table, K, at an inclined position, which facilitates the laying of the collars to the gage and the removing of the same.

In Fig. 1 the machine is represented with the creasing-knife E raised, and a collar, I, (represented in red,) being laid upon the feed-table against the gage. When the creasing-knife descends to crease the collar, as represented in Fig. 2, the trip *f* will lift up as the creasing-knife E passes the short arm *g* of the doffer *o*, and the arm *g* of the creasing-knife will pass by the spring *l* without disturbing the gage *h*. After the collar is creased and the creasing-knife is raised, the end of the arm *g* strikes under the end of the spring *l*, and in this manner raises the gage *h* from the feed-table, so as to allow the collar to be removed and slide down under the gage from the feed-table. During the upward motion of the creasing-knife, after the gage has been raised sufficiently, the trip *f* is brought in contact with the short arm *g* of the doffer *o*. This

causes the long arm *r* of the doffer to strike suddenly against the creased collar and remove it. This position of the machine is represented in Fig. 3. After the collar has been removed the arm *m*, Figs. 1, 2, and 3, during the upward motion of the creasing-knife and gage, will relieve the spring *l* from the arm *g* and cause the gage to drop down on the feed-table, and as the trip *f* relieves the short arm *g*, the spring *p*, Figs. 1, 2, and 3, causes the doffer *o* to assume again its first position.

Having thus fully described my improvements in machines for creasing paper collars, what I claim therein as new and as my invention, and desire to secure by Letters Patent, is—

1. A curved gage, in combination with a curved creasing-knife, constructed and operating substantially as and for the purpose herein fully described.

2. A doffer, in combination with a creasing-knife and gage, constructed and operating substantially as and for the purpose set forth.

TEMPLE TEBBETTS.

Witnesses:

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