

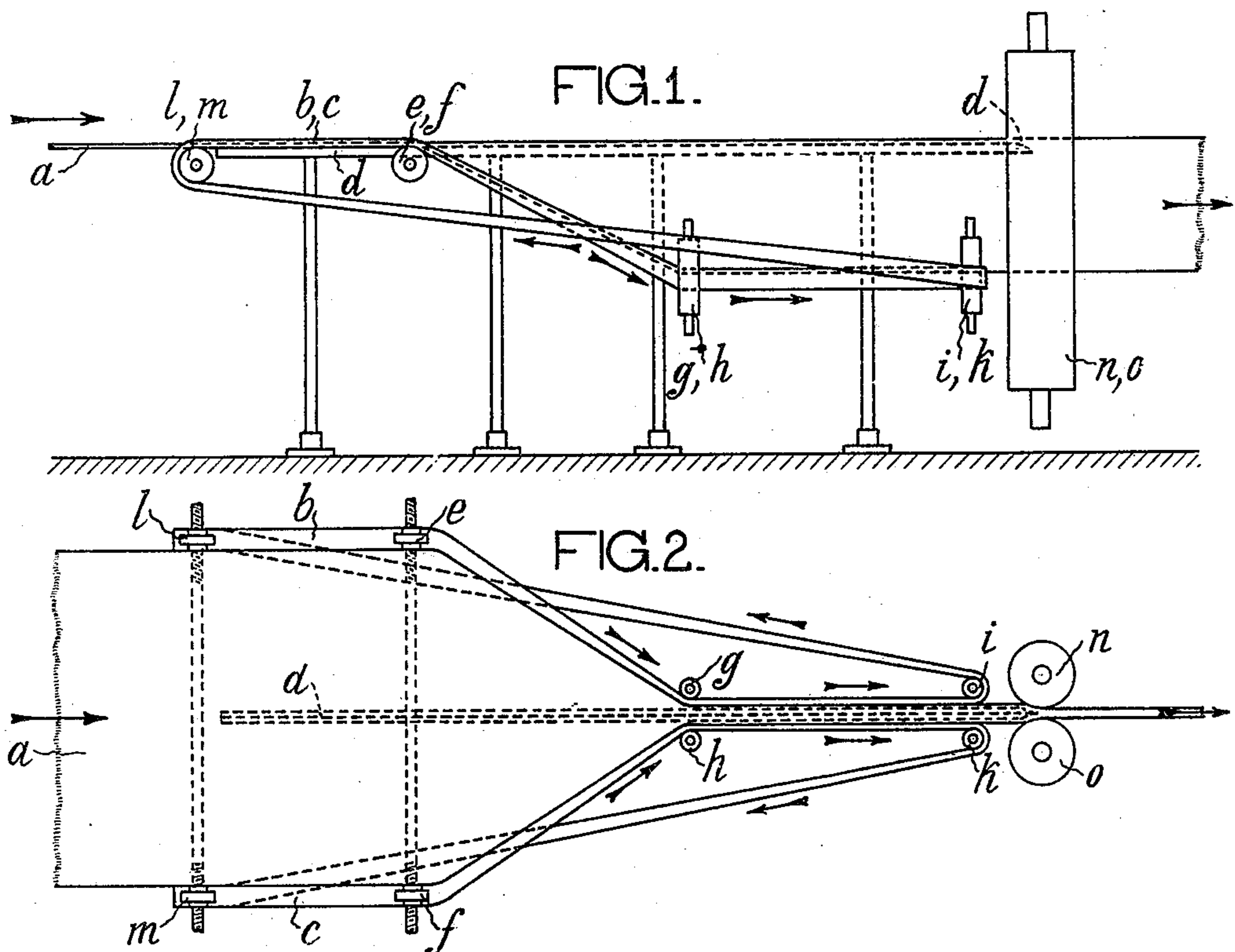
No. 819,991.

PATENTED MAY 8, 1906.

M. A. GUTTE.
MACHINE FOR FOLDING WOVEN FABRICS.

APPLICATION FILED JUNE 27, 1905.

2 SHEETS—SHEET 1.



WITNESSES;

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2 SHEETS—SHEET 2

FIG. 3.

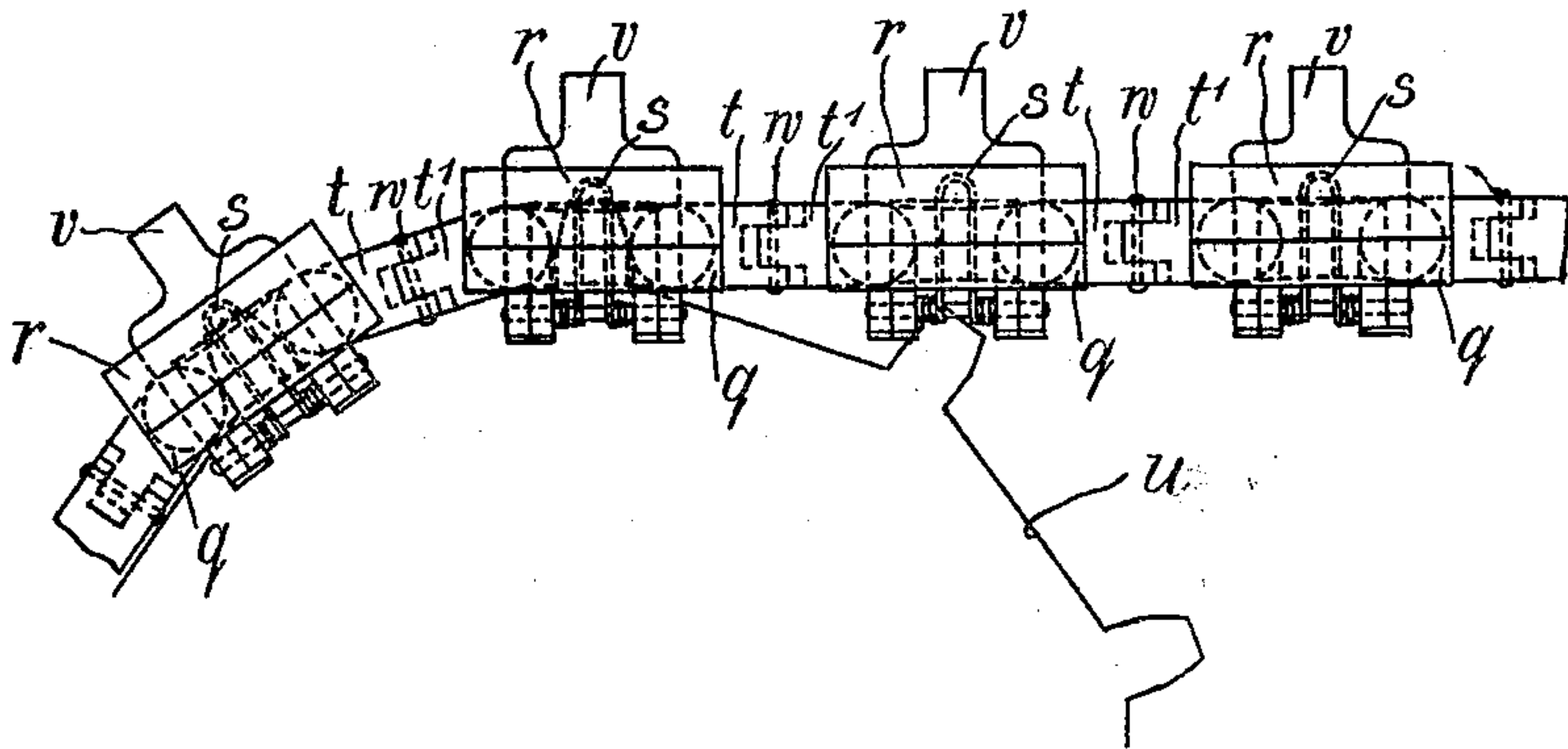


FIG. 4.

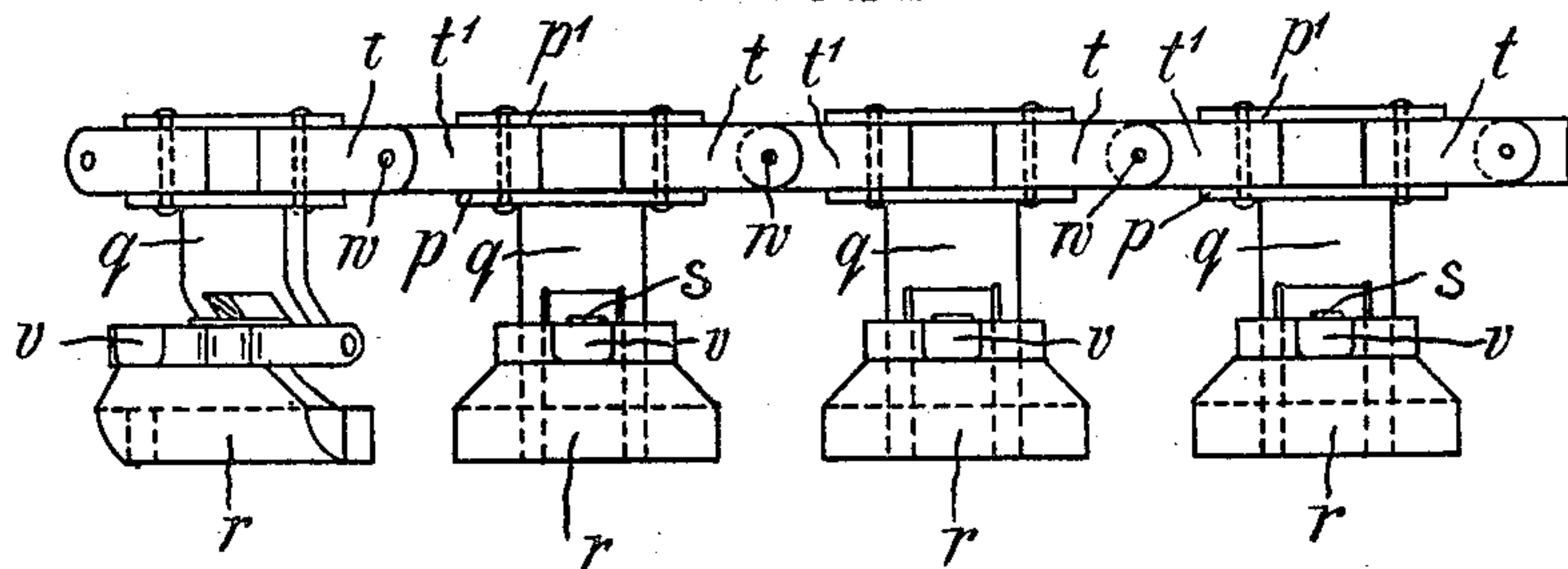
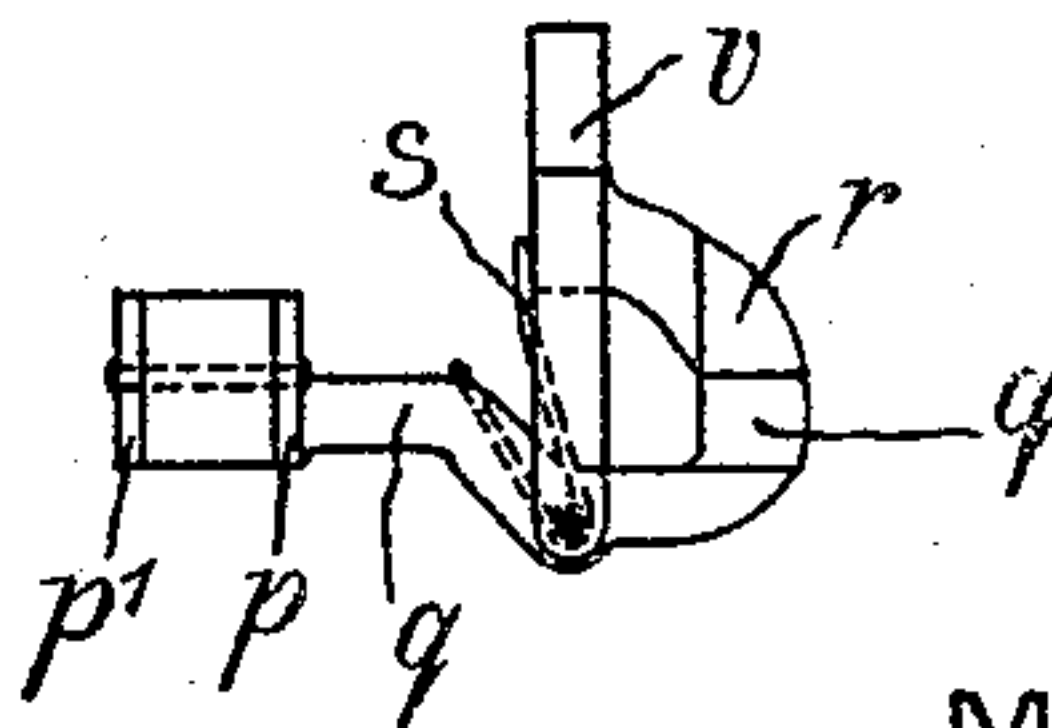


FIG. 5.



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UNITED STATES PATENT OFFICE.

MORITZ ADOLF GUTTE, OF REICHENAU, GERMANY.

MACHINE FOR FOLDING WOVEN FABRICS.

No. 819,991.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed June 27, 1905. Serial No. 267,181.

To all whom it may concern:

Be it known that I, MORITZ ADOLF GUTTE, a subject of the King of Saxony, residing at house No. 195, Reichenau, in the Kingdom of Saxony and Empire of Germany, have invented new and useful Improvements in Machines for Folding Woven Fabrics, of which the following is a specification.

In the machines heretofore known for folding woven fabrics the folding takes place by conducting the fabric over the upper corner of a sloping triangular table and then through a double rule or straight-edge, the two lists of the fabric hanging down loosely and passing through a guide which, although requiring the whole attention of the workman, gives unsatisfactory results. In such an arrangement the two opposite lists of the fabric are subject to relative displacements both in the longitudinal and transverse direction, and thus give rise to baggy winding. With the machine constructed according to my invention these drawbacks are obviated, the lists of the fabric while the latter is stretched over a creasing or folding edge being conducted together by positive motion through the agency of suitably-guided chains adapted to hold the lists before the fabric laid together passes between a pair of pressing-rolls.

In the accompanying drawings I have shown two diagrams of the improved machine, Figure 1 being a side elevation. Fig. 2 is a plan of the same. Fig. 3 is a side view, and Fig. 4 is a plan showing a chain of devices for holding the lists of the fabric, and Fig. 5 is a side view showing one of these devices.

The fabric *a* is guided between two endless guide-chains *b* and *c*, the upper front portions of which run parallel or nearly parallel to each other, the said chains being arranged to be adjusted relatively to one another in the manner well known in stretching-machines. These endless chains *b* and *c* are provided in the well-known manner with devices serving to hold the lists of the fabric *a*. Midway between the two chains in the plane of the parallel or nearly parallel front portions of the same I fix a bar *d*, the upper edge of which is designed for creasing or folding the fabric.

Referring to the devices for holding the lists, I have shown a form in which each device consists of a jaw *q*, firmly connected to the link *p* of a chain, and a jaw *r*, pivoted to

the jaw *q* and forced against the latter by the spring *s*. The list of the fabric is clamped between the jaws *q* and *r*. The links *p* are connected with links *p'* to form pairs, which, together with pivoted double links *t* and *t'*, constitute a chain which is conducted over chain-wheels *u*. The jaws are opened mechanically by fixed catches provided at suitable points on the machine and acting upon the projections *v* on the said jaws. In the drawings the clamping-chain is shown running in a vertical plane. When running in a horizontal plane, it passes over horizontally-rotating chain-wheels, and it bends by turning upon the pivots *w* of the double links *t* and *t'*. This holding device may be replaced by any other suitable device for the same purpose.

After the two chains have passed the upper portions of their path, where they are guided by two pairs of horizontal rolls *l m* and *e f*, they are conducted downward and round two pairs of vertical guide-rolls *g h* and *i k*, so as to move in proximity to each other. While the chains are thus conducted the fabric is continually stretched, the portions of the chains being properly adjusted relatively to each other and to the said creasing or folding bar *d*. From the second pair of vertical guide-rolls *i k* the two chains return idle to the horizontal guide-rolls *l m* in front. Immediately after the lists of the fabric are released by the two stretching-chains the folded fabric passes between a pair of pressing-rolls *n o* and is then conducted to the winding device, which may be of any appropriate construction.

It is expedient to arrange the creasing or folding bar *d* so as to extend from between the front rolls *l m* as far as practicable between the pair of pressing-rolls *n o*. When the lists of the fabric are conducted together by positive motion through the intervention of the two chains *b* and *c*, a relative displacement of the lists in the longitudinal or transverse direction of the fabric is rendered impossible, and the folding takes place in quite a uniform manner, so that the fabric will thereafter be wound up smoothly.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for folding woven fabrics, two endless guide-chains adapted for holding the lists of the fabric and for conducting them toward each other from an upper to a

lower horizontal plane, and a stretching and folding bar placed midway between the chains in the said upper plane.

2. In a machine for folding woven fabrics, 5 two endless guide-chains adapted for holding the lists of the fabric and for conducting them toward each other from an upper to a lower horizontal plane, a pair of pressing-rolls, and a stretching and folding bar placed 10 midway between the chains in the said upper plane and extending to between the said rolls.

3. In a machine for folding woven fabrics, two endless guide-chains adapted for holding 15 the lists of the fabric and for conducting them first parallel to each other in an upper horizontal plane, then toward one another in an inclined plane, and thereafter parallel again in a lower horizontal plane, and a 20 stretching and folding bar placed midway between the chains in the said upper plane.

4. In a machine for folding woven fabrics, two endless chains adapted for holding the

lists of the fabric and for conducting them toward each other from an upper to a lower 25 plane, a pair of pressing-rolls, and a stretching and folding bar placed midway between the said chains and extending to between the said rolls.

5. In a machine for folding woven fabrics, 30 two endless guide-chains adapted for holding the lists of the fabric, two pairs of horizontal guide-rolls arranged in one horizontal plane, two pairs of vertical guide-rolls arranged in a second horizontal plane below the first, a pair 35 of pressing-rolls, and a stretching and folding bar placed midway between the said chains and extending in the upper horizontal plane to between the said pressing-rolls.

In testimony whereof I have signed my 40 name to this specification in the presence of two subscribing witnesses.

MORITZ ADOLF GUTTE.

Witnesses:

FRIEDRICH KAYSEL,
HERBERT SMITH.