No. 887,702. PATENTED MAY 12, 1908.

G. SCHWABE.

DOBBY LOOM.

APPLICATION FILED SEPT. 22, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

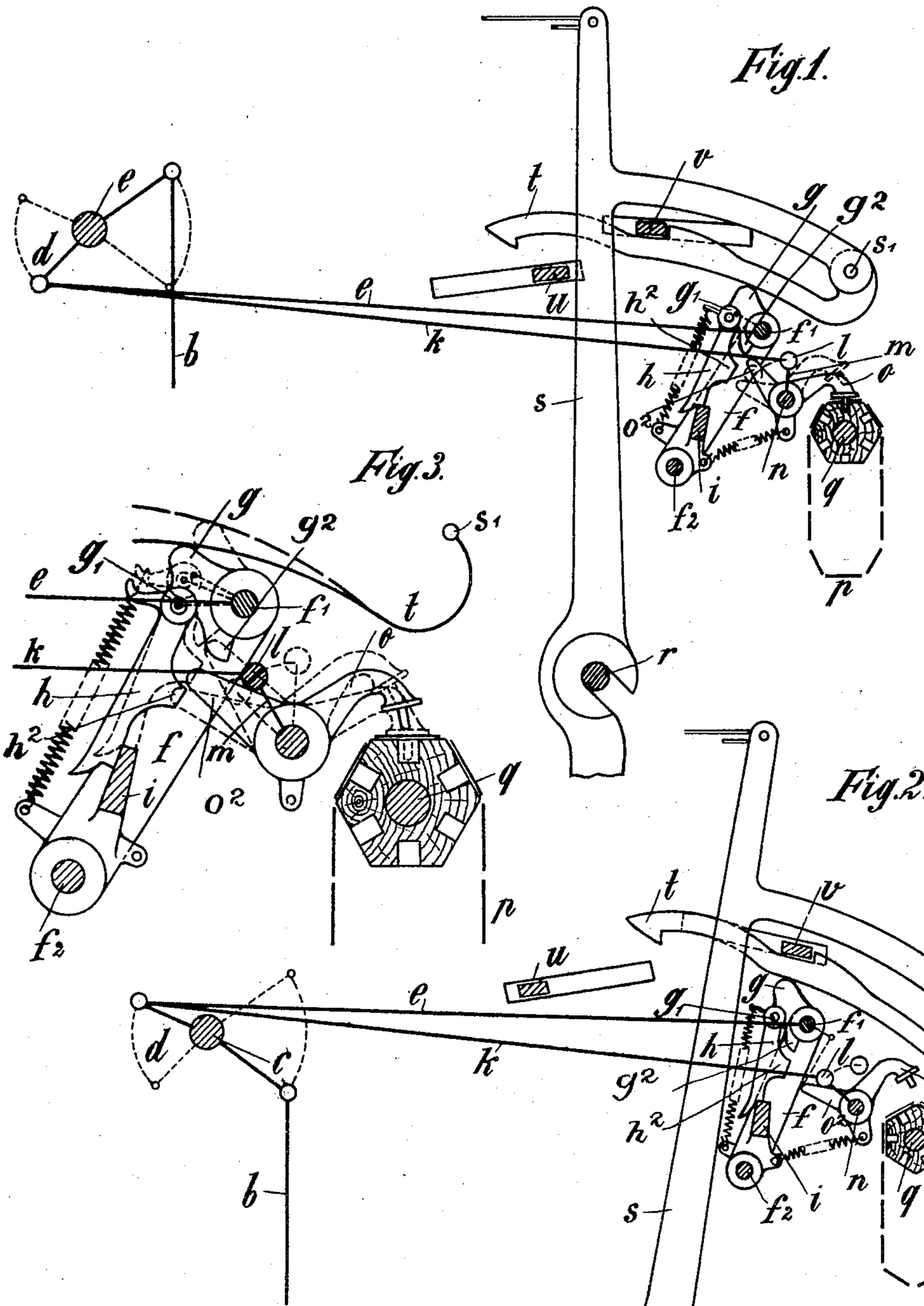

Fig. 3.

Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 4.

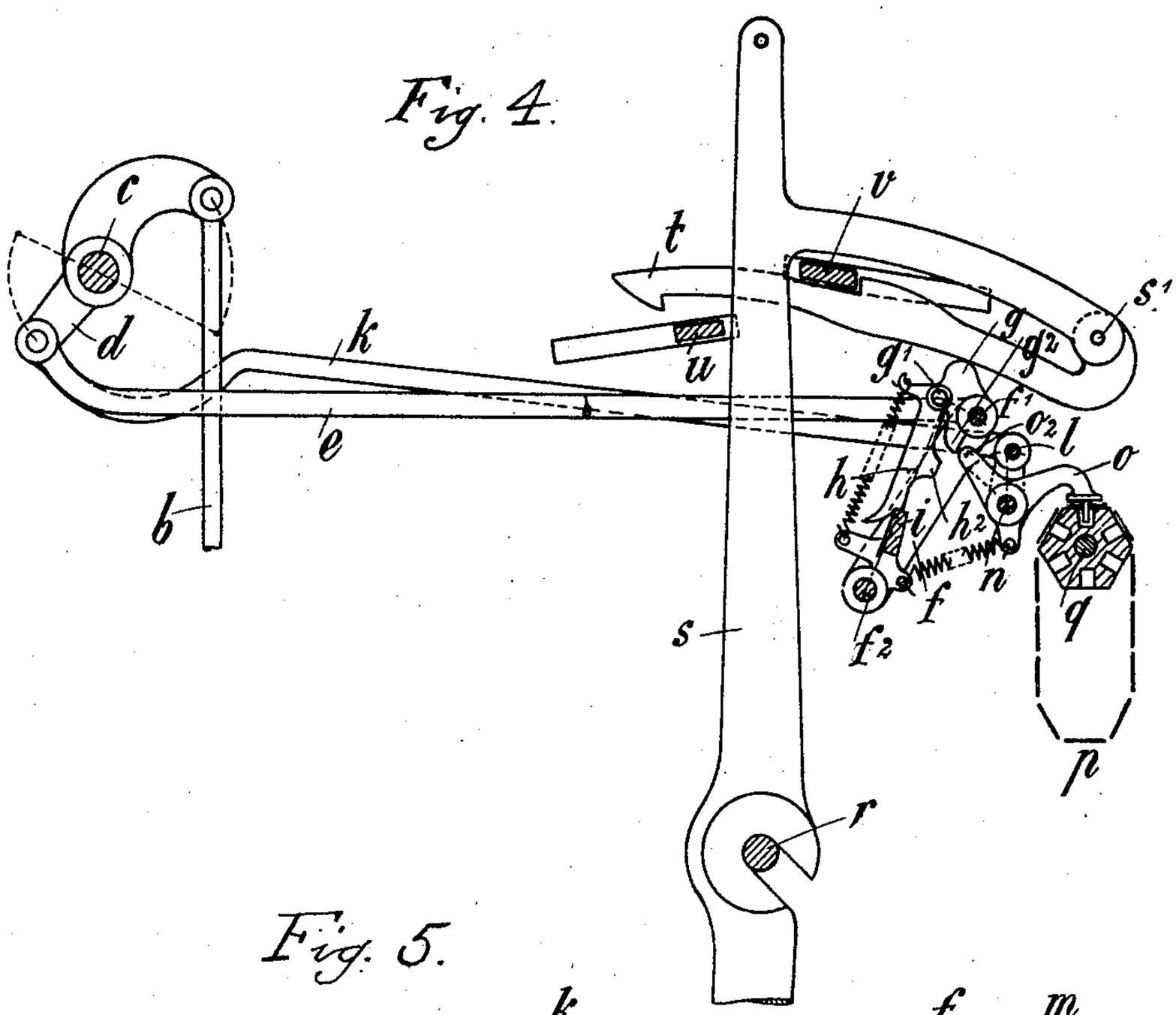
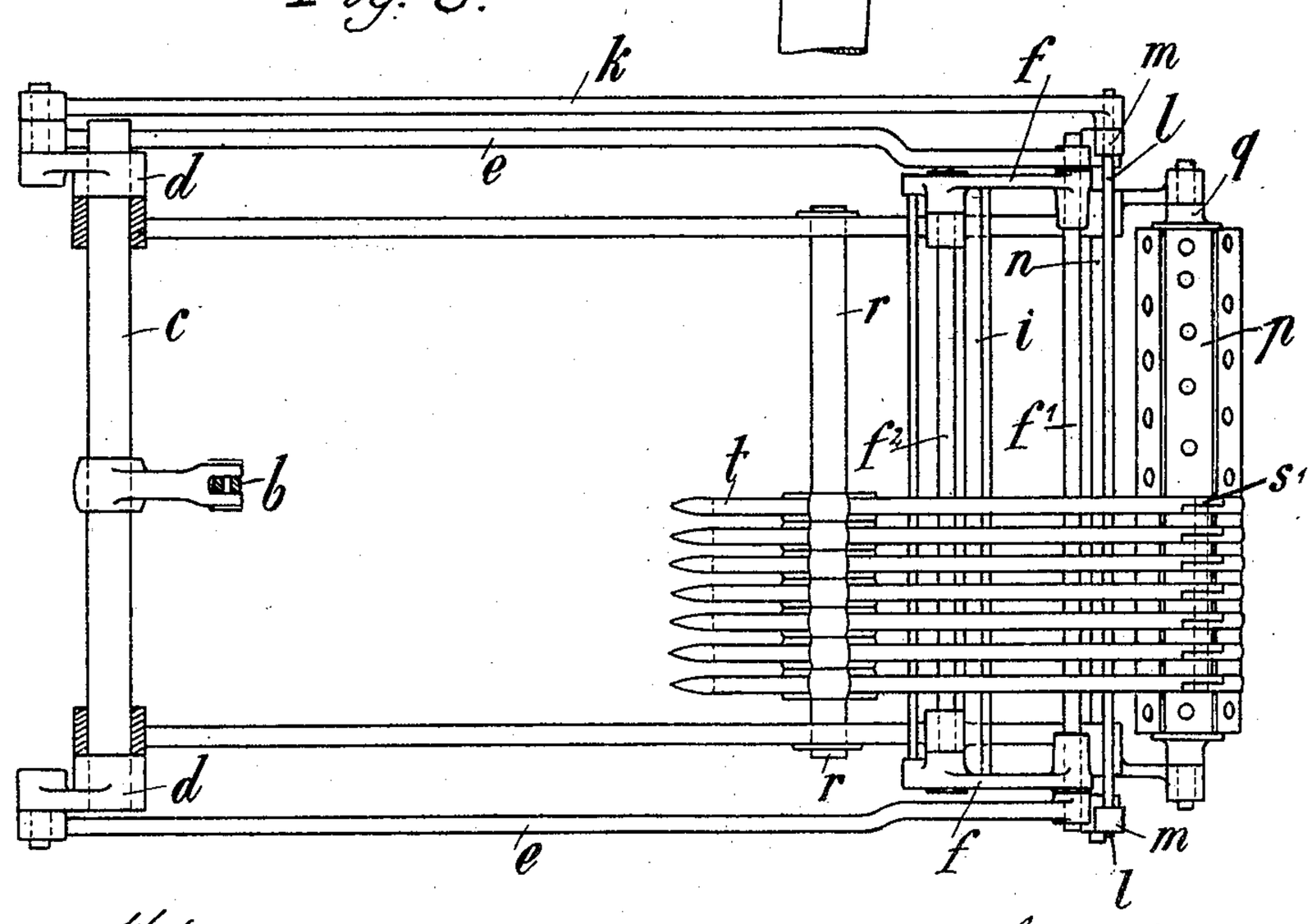


Fig. 5.



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DOBBY-LOOM.

No. 887,702. Specification of Letters Patent. Patented May 12, 1908.

Application filed September 22, 1906. Serial No. 335,770.

To all whom it may concern:

Be it known that I, GEORG SCHWABE, a manufacturer, and a subject of the Emperor of Austria-Hungary, residing at Bielitz, near Biala, in Austrian Silesia, part of the Empire of Austria-Hungary, have invented certain new and useful Improvements in Dobby-Looms, of which the following is a specification.

My invention relates more especially to the control of Crompton dobbies by means of perforated cards and is illustrated by the accompanying drawings, in which

Figure 1 shows the position of the parts after the jacks have been raised, Fig. 2 the position when the card prism has been turned through half a step, Fig. 3 the position after the jacks have been lowered, the last named figure being drawn to an enlarged scale. Fig. 4 is a view similar to Fig. 1 showing more clearly the construction of parts represented diagrammatically in Figs. 1 to 3. Fig. 5 is a plan view.

The shaft *c*, in this case the knife lever shaft, is rocked by a crank, on the shaft of the loom, through a rod *b*. The arm *d* on this rocking shaft is linked by a rod *k* to an arm *m* on a rocking shaft *n*, which arm carries a pin *l*; the arm *d* is also linked by a rod *e* to an arm *f* mounted at one end on a pivot f^2 and carrying at its opposite end a pivot *f'*. On the latter turns a stop lever *g* to which is pivoted at *g'* a dog *h* adapted to engage a bracket *i* on the arm *f* and to be kept in such engagement by a spring. The jack *t* rests on the lever *g* and is centered at the point *s'* of the harness lever *s*. On the shaft *n* turns the pin lever *o*, one arm of which carries the pin while the other is adapted to bear against the lever *g* or the dog *h* as the case may be. The pin either rests on the perforated card *p* or enters through a perforation, the hole in the prism *q* on which the card is carried. A small spring insures the contact of the pin with the card.

Before the prism *q* turns (Fig. 2) the pin lever *o* is lifted by the rod *k* connected to the pin *l* which is drawn to one side by the movement of the shaft *c*, so that the pin does not prevent the prism from turning. At the same time the arm *f* is moved towards the lever *s* by the rocking shaft *c*, and, carrying with it the lever *g* and dog *h*, allows free movement of the pin lever *o*.

The operation of the dobby by the knives *u* or *v* occurs at the same time and in the instance illustrated the jack *t* is carried backwards by the knife *v*. Nevertheless the jack merely slides along the lever *g* without being raised or lowered thereby, because the centers f^2 and *f'* are in line with the fulcrum of the lever *s*, which line is a radius of the curved surface of the jack that bears on the lever *g*.

By the time the turning movement of the prism *q* is over, the rod *k* has brought back the pin *l* into its original position, allowing the pin lever *o* to return, so that its pin either rests on or extends through the card *p*. In the latter case the other arm o^2 of lever *o* strikes against the member g^2 of lever *g* and raises it together with the jack *t* and the dog *h*, thus bringing the last named again into engagement with the bracket *i*; this is what has just happened in Fig. 1. If the pin rests on the card, the arm o^2 of the lever *o* strikes against a boss h^2 on the dog *h* and pushes it out of engagement with the bracket *i*, thus allowing the lever *g* and the jack *t* to fall; this position is shown in full lines in Fig. 3.

The rise or fall of the jack *t* happens when the lever *s* is in the position shown in Fig. 1, so that the jack is in correct position for engaging with the knife *v* or *u* as the case may be.

The pressure caused by the movement of the arm *f* while the lever *g* and jack *t* are being raised is transmitted to the shaft *n* through the arm o^2 of lever *o*, so that there is no pressure on the card.

Having thus described my invention, what I claim as new, and desire to secure by Letters-Patent is:

1. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, an adjustable support for the jack, and a movably supported perforated pattern, of a lever carrying a pin adapted to enter the perforations in the pattern, means for vibrating said lever to carry the pin thereon to and from the pattern, and means actuated by said lever for shifting the adjustable jack support to different positions as said pin enters a perforation in the pattern or bears on the pattern surface between perforations therein.

2. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, an adjustable support for the jack, and a movably supported perforated pattern, of a lever fulcrumed at an intermediate point in its length and having one

arm provided with a pin adapted to enter the perforations in the pattern and a second arm adapted to coact with the adjustable jack support to shift said support to different positions according as said pin enters a perforation in the pattern or rests on the surface thereof, and means for rocking said lever.

3. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, a movably supported perforated pattern, and a pivotally mounted support for the jack, of means for reciprocating said jack support, a lever carrying a pin adapted to enter the perforations in the pattern, said lever having an arm adapted to be adjusted to engage the jack support and thereby effect an adjustment of the jack, and means for rocking said pin lever.

4. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, a movably supported perforated pattern, of a pivotally mounted support for the jack, a dog connected with said jack support and normally acting to hold it in an intermediate position, a rocking carrier having at one end a pin adapted to enter the perforations in the pattern, an arm connected with said pin carrier and adapted to engage the jack support to rock it upwardly from its normal position or to release said dog and permit said support to move downwardly from normal position, according as the pin on said carrier enters an aperture in the pattern or bears on the surface thereof, and means for moving said pin carrier.

5. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, a movably supported perforated pattern, of a swinging frame, a jack support pivotally mounted on said frame, a dog connected with said jack support and normally engaging the frame to hold said support in an intermediate position, a rocking carrier having at one end a pin adapted to enter the perforations in the pattern, means for rocking said pin carrier, and an arm connected with said carrier and adapted to be positioned in the path of said dog or an arm on the swinging jack support according as said pin bears on the surface of the pattern or enters a perforation therein, substantially as and for the purpose described.

6. In a loom, the combination with a harness lever, a jack pivotally connected with said lever, a movably supported perforated pattern of a swinging frame, a support for the jack pivotally connected with said frame, a spring acting to rock said jack support downwardly, a dog for normally preventing such downward movement of said support, a rocking carrier having at one end a pin adapted to enter the perforations in the pattern, means for rocking said carrier, and an arm connected with said carrier and adapted when said pin enters a perforation in the pattern to intercept the movement of the jack support and cause the same to be rocked upwardly and to disengage said dog and allow said spring to rock the jack support downwardly when the pin rests upon the surface of the pattern, substantially as described.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

GEORG SCHWABE.

Witnesses:
ALVESTO S. HOGUE,
FRIEDRICH RUNGE.