

No. 824,208.

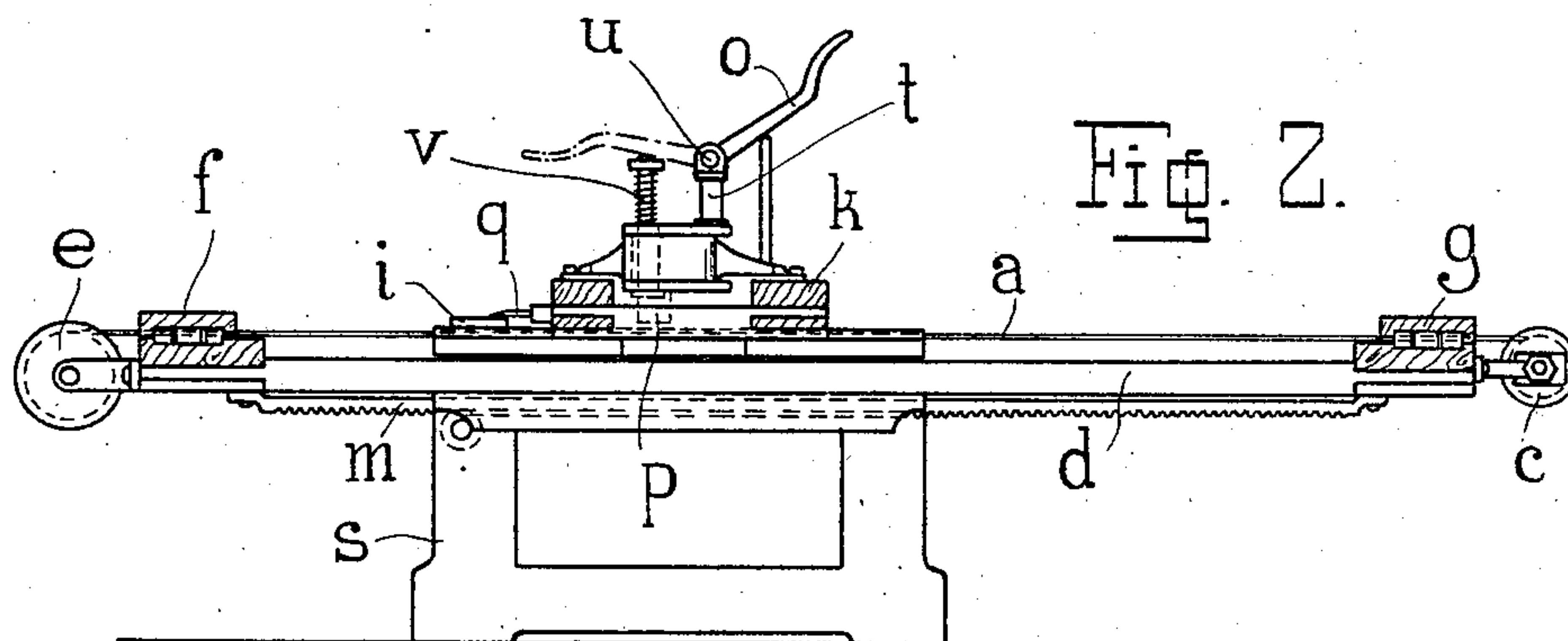
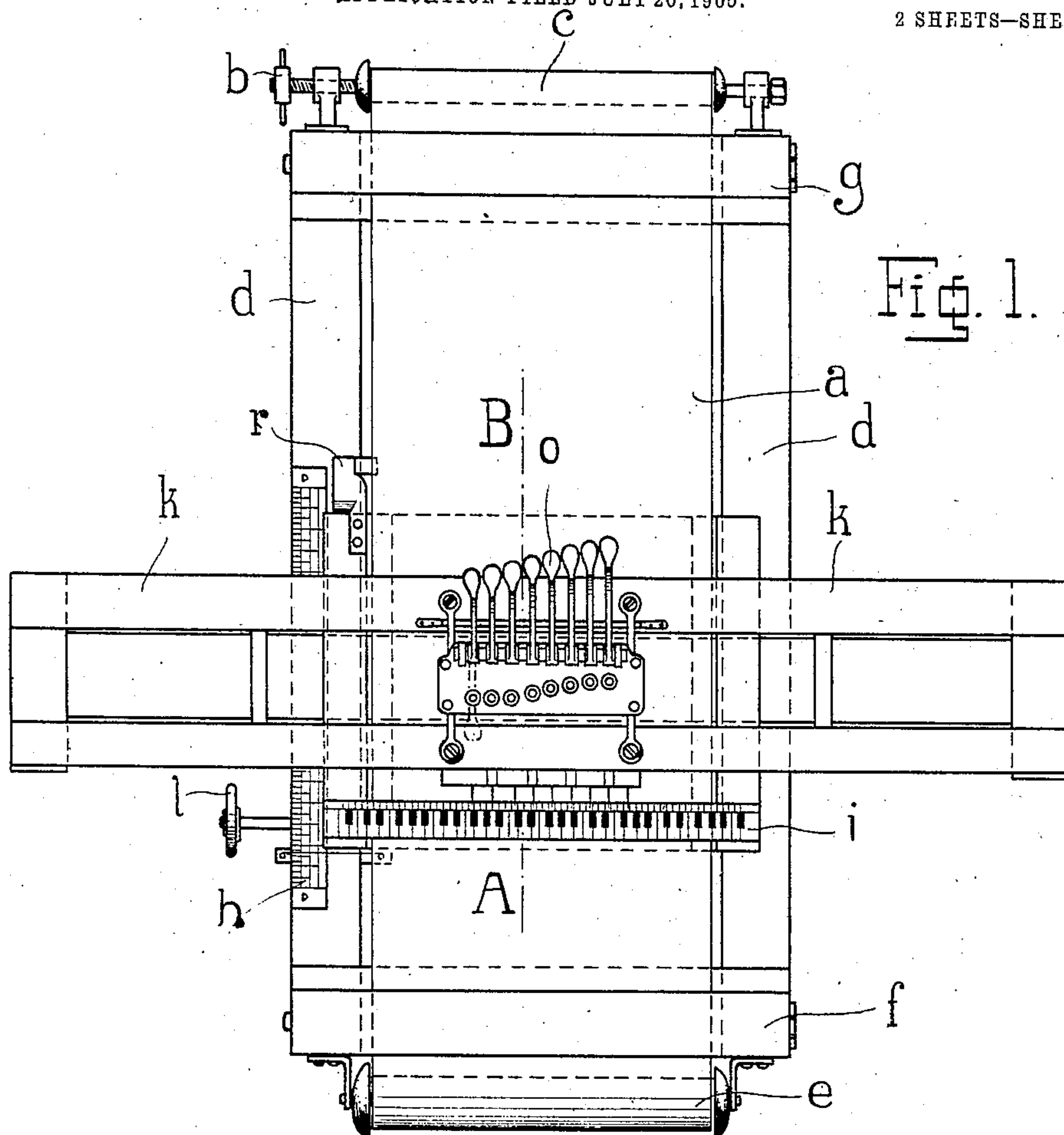
A. ROTHERMUNDT.

PATENTED JUNE 26, 1906.

DEVICE FOR PERFORATING MUSIC ROLLS FOR SELF PLAYING PIANO
ATTACHMENTS.

APPLICATION FILED JULY 20, 1905.

2 SHEETS—SHEET 1.



Witnesses:

Chas. M. Havell,
E. J. Brereton

Inventor:

Adolf Rothermundt

By *Stephen H. Brooks*
att'y.

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2 SHEETS—SHEET 2.

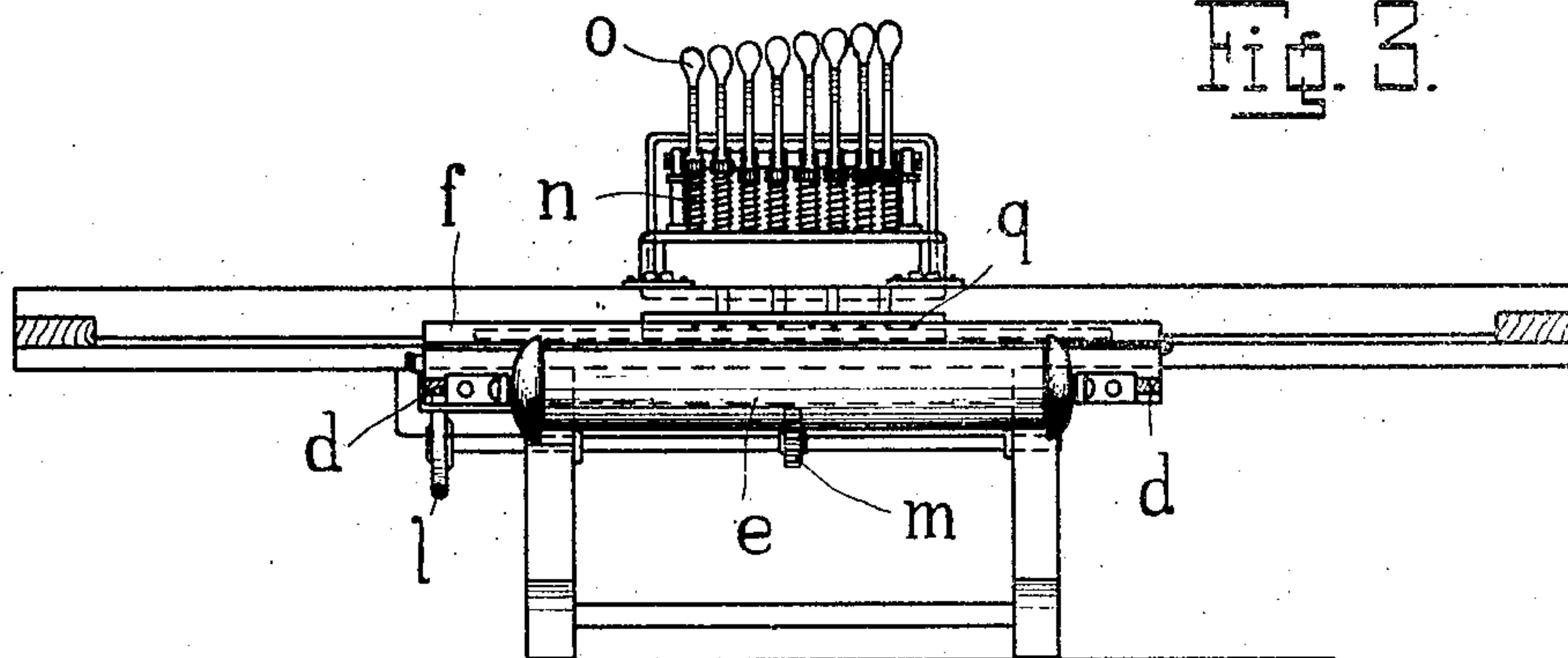


Fig. 3.

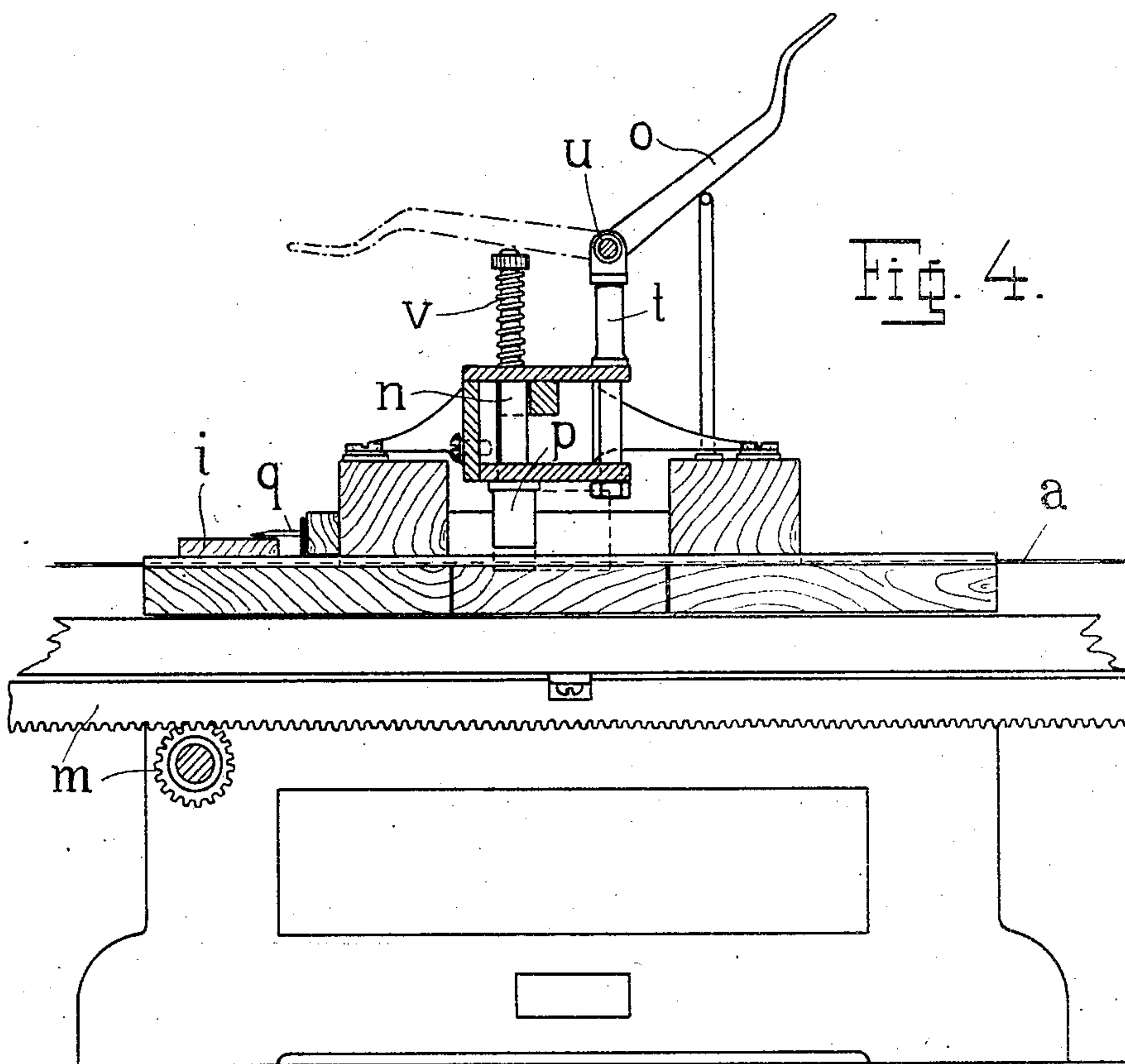


Fig. 4.

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UNITED STATES PATENT OFFICE.

ADOLF ROTHERMUNDT, OF DRESDEN-BLASEWITZ, GERMANY.

DEVICE FOR PERFORATING MUSIC-ROLLS FOR SELF-PLAYING PIANO ATTACHMENTS.

No. 824,208.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed July 20, 1905. Serial No. 270,585.

To all whom it may concern:

Be it known that I, ADOLF ROTHERMUNDT, a subject of the Czar of Russia, residing at Dresden-Blasewitz, Germany, have invented a certain new and useful Device for Perforating Music-Rolls for Self-Playing Piano Attachments, of which the following is a specification.

The present invention has reference to a device for stamping out the holes and slots in music-bands, such as are used in self-playing piano attachments; and it relates more especially to a device for the purpose indicated by means of which any one able to play on the piano can readily prepare his own music-rolls.

In order to make the invention more readily understood, I will now describe it with reference to the accompanying sheets of drawings, in which—

Figure 1 represents a plan view; Fig. 2, a side view; Fig. 3, a front view; and Fig. 4, a cross-section through the device, the latter figure on an enlarged scale and being partly broken away.

The cutting-out or punching device proper is mounted on a carriage traveling sidewise, while the music-band clamped in a frame is caused to travel to and fro rectangularly to and below the carriage. The music-band *a*, consisting of tough paper or fabric, is unwound from the supply-roller *c*, held by the clamping device *b*, is then conducted between the sides of the machine-frame *d g d f*, and is finally wound upon the roller *e*. The necessary tension is given the band by means of two felt-lined clamping devices *f* and *g*, which at the same time form the short sides of the machine-frame. The one side part *d* carries a removable scale *h* for measuring the time-measures on the music-band. The to-and-fro movement of the frame *d g d f* on the pedestal *s* is obtained by means of a rack-and-pinion gearing *m*, actuated by the hand-wheel *l*. The traveling carriage *k* carries the punching devices and can be shifted by hand from side to side independently of the frame movement.

The stamping device proper is shown on a somewhat enlarged scale in Fig. 4 and consists of a number of punches *n p*, ordinarily held in the inoperative position by the helical springs *v*. Hand-levers *o*, pivoted at *u* to pillars *t*, serve to depress the punches. To the front of the device are secured a number of fingers *q*, each one of which corresponds to

one of the punches and extends above a blind keyboard *i*, rigidly secured to the pedestal *s*.

The cutting-faces of the punches are such that from left to right the first punch will stamp out of the paper strip a hole of about three thirty-seconds of an inch in diameter, while the succeeding punches will stamp out slots, the increasing lengths of which correspond to the respective note value.

The operation of the described parts is as follows: If it is desired, for instance, to cut out a one-fourth-time note, the carriage *k* is shifted until the finger *q*, corresponding to the one-fourth-time-note punch points to the key on the blind keyboard corresponding to the pitch of the note to be punched. The lever *o*, and by it that punch, is depressed, the cutting length of which corresponds to a one-fourth note, and a slot of this length is cut out of the paper strip. If an accord is to be taken down, the other composing notes are cut out in similar manner on shifting of the carriage after each note. For advancing to the next measure the frame *d g d f* is advanced by actuating the hand-wheel *l*, the exact extent of displacement being read off on the scale *h*. After in this manner several measures have been stamped out a mark is made on the paper band—for instance, a pencil-line—at the point indicated by the indicator *r*, rigidly secured to the pedestal *s*. The frame *d g d f* is then rearwardly displaced by turning the hand-wheel *l*. The clamping devices *f* and *g* are eased, and the punched part of the music-band is wound upon the roller *e* until the pencil-mark coincides again with the indicator *r*. The clamping devices *f* and *g* are now tightened again and the punching operations repeated, as above described.

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

1. In a device for perforating music-rolls for self-playing piano attachments, the combination of a pedestal, a frame traveling on said pedestal, means for traveling said frame, rollers and clamping devices for the music-band at either end of said traveling frame, a graduated scale on said frame, an indicator and a blind keyboard on said pedestal, a carriage traveling on said pedestal rectangularly to and above said traveling frame, sets of punches of varying cutting lengths and actuating means therefor on said carriage, and a corresponding number of fingers on said carriage and traveling over said blind

keyboard, the various parts being constructed, arranged and coöperating substantially as and for the purpose set forth.

2. In a device of the character described, a sheet-carriage, a blind keyboard thereon, a punch-carriage, punches on the punch-carriage, and means for bringing one of the punches into line with a selected key of the blind keyboard to perforate the sheet.

3. In a device of the character described, a reciprocating carriage, a blind keyboard thereon, a punch-carriage movable transversely of the sheet-carriage, punches thereon, and means for bringing a selected punch into a relative position to a selected key of the keyboard for perforating the sheet of the sheet-carriage.

4. In a device of the character described, a

reciprocating sheet-carriage, a blind keyboard thereon, a punch-carriage movable transversely of the sheet-carriage, punches of different punching area on the punch-carriage, means for bringing a selected punch into a relative position to a selected key of the keyboard for perforating the sheet contained in the carriage, means for moving the sheet and sheet-carriage simultaneously, and means for moving the sheet independently of the sheet-carriage.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ADOLF ROTHERMUNDT.

Witnesses:

EUGEN HÜLSMANN,
FRANK SIMON.