Schmitt & Wodrich,

Reclining Chair,

No. 82,754, Patented Oct. 6, 1868.

Fig 2.

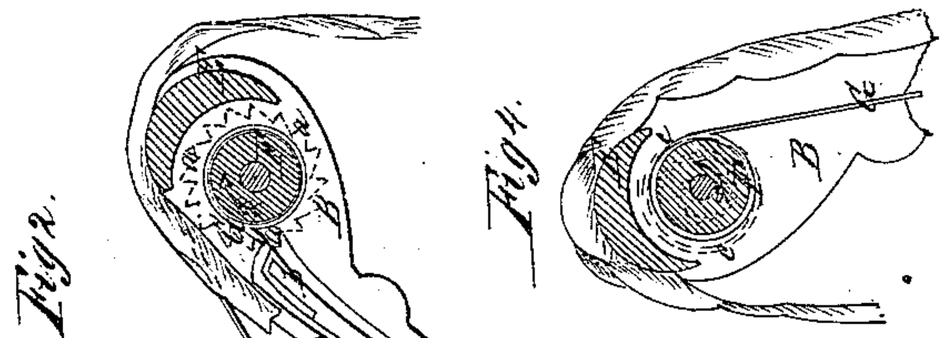


Fig 4.

Fig 3.

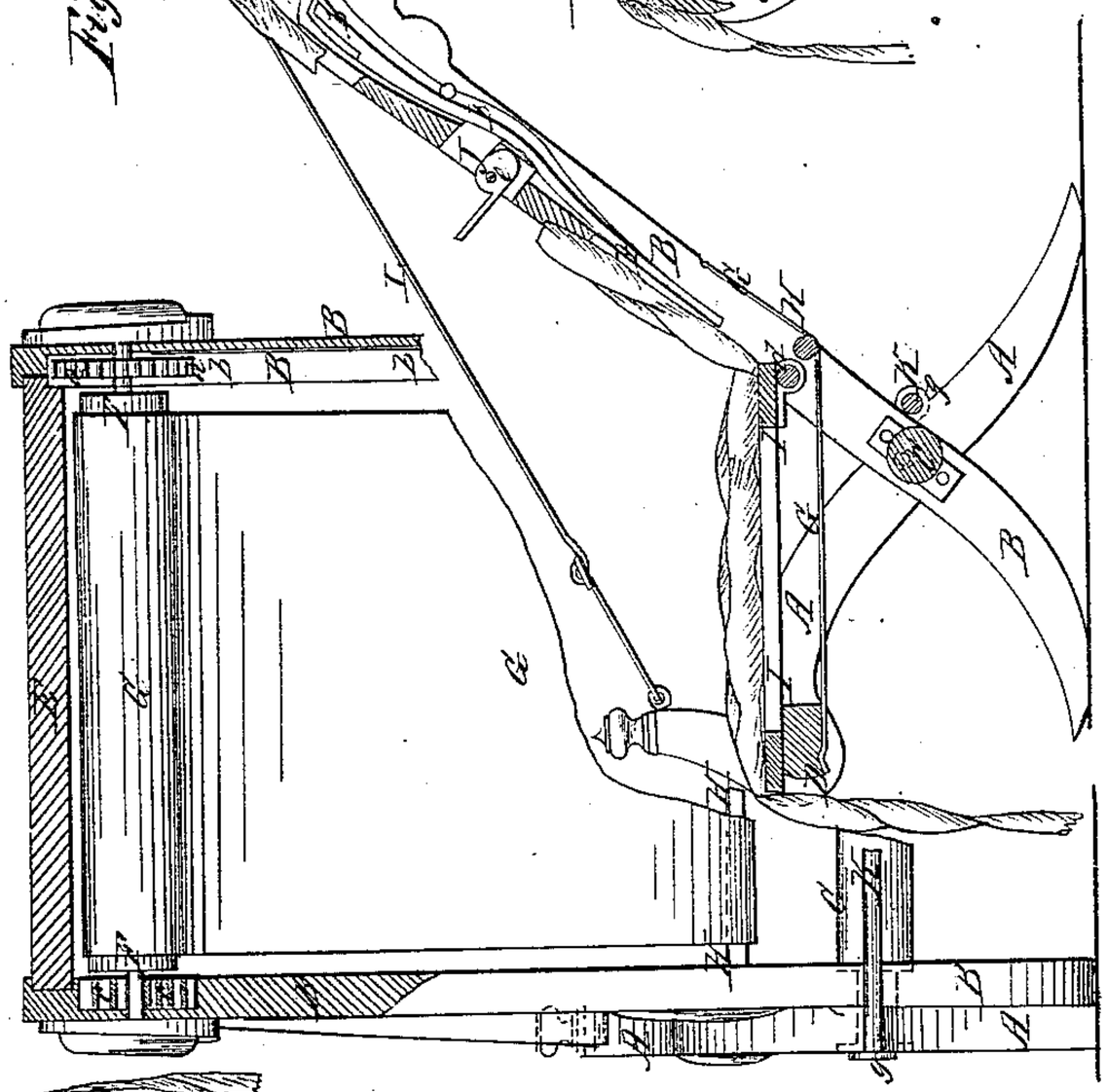
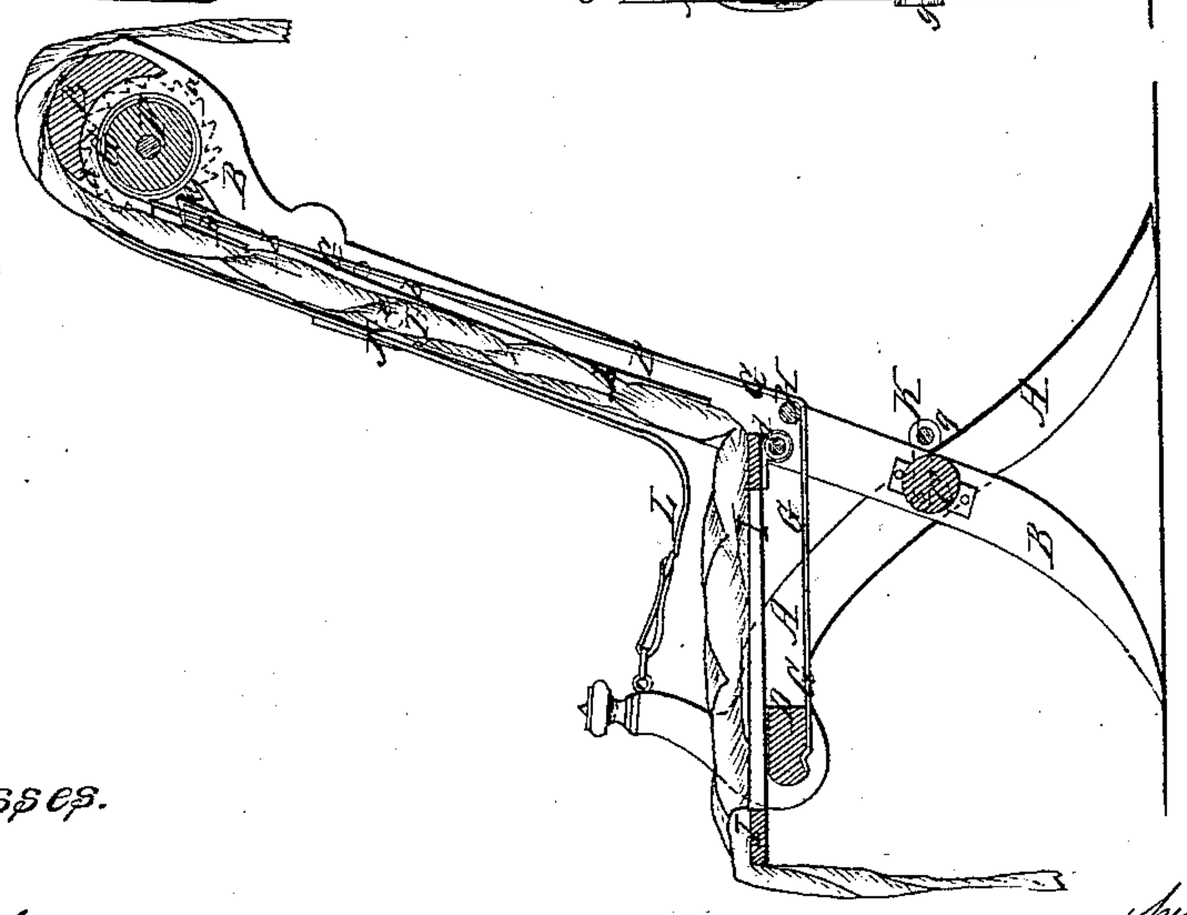


Fig 1.



Witnesses.

Wm A Morgan
G C Cotton

Inventors.
C C. Schmitt
R. Wodrich
per Munn & Co
Attorneys

United States Patent Office.

CHARLES C. SCHMITT AND RUDOLPH WODRICH, OF NEW YORK, N. Y.

Letters Patent No. 82,754, *dated October* 6, 1868.

IMPROVED FOLDING EASY-CHAIR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, CHARLES C. SCHMITT and RUDOLPH WODRICH, of the city, county, and State of New York, have invented a new and improved Folding Easy-Chair; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

Figures 1 and 2 are vertical longitudinal sections of our improved easy-chair, showing it in different positions.

Figure 3 is a detail rear elevation, partly in section, of the same.

Figure 4 is a detail transverse section of the upper rail and roller of the chair-back.

Similar letters of reference indicate corresponding parts.

The object of this invention is to produce an easy-chair which is so arranged that its seat can be adjusted higher or lower, and locked in any desired position, and that its back can be set more or less inclined, and locked at any desired angle of inclination.

The invention consists in connecting the upper ends of an X-shaped chair-frame by means of an apron which has one end wound around a roller, by which it is always held stretched, and in pivoting the seat to the rear one of the two chair-sections, its front end resting upon a rail connecting the upper ends of the stays of the front section. However the chair may be folded, the seat will always remain in the horizontal or nearly such convenient position, and the aforesaid apron will always remain stretched, as the aforesaid roller will automatically wind it up, it being connected with a coiled spring for that purpose.

A A are the two stays or main bars forming the rear legs and front seat-supports, and B B are the two stays or main bars forming the front legs and the back of an X-shaped folding-chair frame, the four bars, A A, B B, being all connected by one rod, C, around which they respectively turn, or by two pins, in line with each other, that would be equivalents to the separate ends of the rod C.

The front ends of the bars A are connected by a strong rail, D.

The upper ends of the bars B are connected by a strong rail, E, which covers and protects a roller, F, that has its bearings in the two bars, B, under the rail E, as is clearly shown in the drawing.

G is a cloth, or other flexible band or apron, fastened with one end to the roller F, and with the other end to the rail D, and fitted, *i. e.*, bent around a roller or bar, H, that connects the bars B somewhat above the pin C, as shown.

The roller F carries concealed within one bar, B, a ratchet-wheel, *a*, which is, by a spring-pawl, *b*, or its equivalent, prevented from turning in the wrong direction, the said spring-pawl being also concealed within the bar B.

c is a coiled spring, concealed, also, in one bar, *b*, and connected with the roller F so as to have the constant tendency to turn it in the direction of the arrow in figs. 1, 2, and 4, whereby the band G would be wound upon the said roller.

The pawl *b* prevents the roller F from being turned in the direction opposite to that shown by the arrow, while it allows the same to turn with the arrow, and as moved by the spring *c*.

I is the seat. The same is, by means of a pin, *d*, hinged to the bars B B above the pin C, and rests with its front end upon the rail D, it being not fastened to the latter.

The pin *d* may be either fixed to the bars B or to the seat, as may be desired.

The seat will, when the chair-frame A B is folded more or less apart, always remain in the horizontal or other desired comfortable position, the rail D sliding under it, and retaining its original direction with the pin *d*.

Fig. 1 shows the frame A B folded more together than it is in fig. 2. In the former the seat is higher than in the latter, but in both it has the desired horizontal position.

When the chair is folded more together to raise the seat, the band G will be slackened, and will at once be wound up by the roller F, owing to the action upon the same by the spring; but the pawl *b* will then prevent

the band from being unwound again, *i. e.*, the seat from being lowered, and the band G will therefore bear the whole strain of the weight resting on the seat, and will transmit the same to the ratchet-wheel and pawl.

When it is desired to lower the seat, the pawl has to be thrown out of the ratchet-wheel. For this purpose a cam, J, has, by a pin, *e*, been pivoted to one bar, B, as in figs. 1 and 2.

By turning the cam into the position shown in fig. 2, the pawl will be pushed out of the wheel *a*, and the frame A B may be expanded to lower the seat at will. By then turning the cam, as in fig. 1, the pawl will be liberated, and will again fit into the wheel *a*, to prevent further lowering of the seat.

The seat and back of this chair may be cushioned, upholstered, or constructed in any suitable manner, and we do not confine the use of the invention to any particular kind of seat or back.

To prevent the seat from being lowered, and the frame from being expanded beyond a certain desired limit, a rod, K, has been, with its ends fastened to ears *g*, pivoted to the ends of C, or near the same, so that said rod can rest loose on the back part of A, as in fig. 1, but when the bars B have been bent back as far as in fig. 2, the rod K will fit against both sets of bars A and B, and will prevent their further downward inclination.

L L are bands that may connect the upper ends of the contiguous bars A B, to serve as arm-rests.

It will, from the above, be understood that this chair can always be folded together at will, but can never be expanded, *i. e.*, lowered, unless the cam J is first turned so as to disengage the pawl *b* from the wheel *a*.

The chair is therefore adjustable, and under perfect and most convenient control; all the operating parts are concealed, and the chair can therefore be made of suitable plain or ornamental material.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The application to the roller F, around which the band G is wound, of the spring *c*, ratchet-wheel *a*, and spring-pawl *b*, all made and operating substantially as herein shown and described, for the purpose of locking the chair automatically in any desired position, as set forth.

2. The cam J, arranged in connection with the spring-pawl *b*, for the purpose of allowing the band to be unwound and the seat to be lowered, substantially as herein shown and described.

3. Pivoting the seat I to one set of supports only, of an X-shaped chair-frame, when said frame is provided with a self-acting band, G, and roller F, substantially as and for the purpose herein shown and described.

4. The rod K and lugs *g*, when arranged on an X-shaped stool-frame, to prevent extreme expansion of the same, as set forth.

CHAS. C. SCHMITT.
RUDOLPH WODRICH.

Witnesses:
FRANK BLOCKLEY,
ALEX. F. ROBERTS.