UNITED STATES PATENT OFFICE.

OTIS HUGH STEWART, OF MIDDLEPORT, OHIO.

CABINET FOR SHEET-MUSIC.

SPECIFICATION forming part of Letters Patent No. 725,170, dated April 14, 1903.

Application filed January 30, 1902. Serial No. 91,837. (No model.)

To all whom it may concern:

Be it known that I, OTIS HUGH STEWART, a citizen of the United States, and a resident of Middleport, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Cabinets for Sheet-Music; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form also a part of this specification.

This invention relates to improvements in cabinets of the kind shown and described in a patent issued to me on January 7, 1902, and intended for use to store papers in form of sheets and folios—like sheet-music, for instance. The present invention contemplates certain improvements and changes of construction as against the device described in this previous patent. In said device it was the object to construct such a cabinet in a manner to be of easy, convenient, and ready access and at the same time be provided with means to close the same securely to protect its contents against dust, such closing to be attained without using hinged or swinging members like lids or doors, thus avoiding the obstruction they would form by taking up space or becoming otherwise objectionable while opened out. With this object in view a sectional or flexible cover or sheet was used, forming when closed a part of the inclosing sides of the cabinet and supported in a manner to permit opening by means of a sliding movement. The cabinet was, furthermore, so arranged and constructed with the means used as to be particularly fitted as to size and shape for the intended purpose and to inclose the designated articles in the most advantageous, practical, and economical manner, so as to avoid all loss of space and undue increase in size.

This present invention relates to improvements and changes in the construction of the means for supporting the sliding cover.

It further relates to new means for internally bracing such a cabinet, and it finally relates to such details of construction as are incidentally due to the features first mentioned.

In the following specification, and particularly pointed out in the claims following, is found a full description of the invention, together with its manner of use, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 is a front view of such a cabinet partly open and portions broken away. Fig. 2 is a horizontal section of the cabinet between its top and bottom. Fig. 3 is a vertical longitudinal section of it between its sides. Fig. 4 is an enlarged detail view showing a part of the outer side of one of the sides near one of the upper corners, it showing at the same time a modified construction. Fig. 5 is an enlarged sectional detail view of the preceding figure, showing also a further modification.

The cabinet consists, primarily, of two sides 10 10, connected to each other by means internally bracing the cabinet and which means may also serve to support part or all of the intended contents. These means may be a shelf or bottom 11, upon which the contents are piled or stacked up, or a number of such shelves may be used, as shown at 11^a in Fig. 5, thus furnishing a possibility to arrange and assort the contents. Near the upright rear edges of the sides they may be connected by a vertically-disposed brace member 12, which, particularly in the form shown in Figs. 1 to 3, is of advantage as providing additional means to increase the stability of the cabinet. As will be seen, there are no permanently-connected front, top, or rear sides to this cabinet, and such members are all contained in a flexible cover formed by a number of parallel-arranged strips or cleats 13, connected to each other along their inner longer edges by means of articulated joints. In practice this cover may be constructed by providing a sheet of belting or canvas 14, upon which these strips are secured. The width of the cover, or what is the equivalent, the length of the strips of which it is composed, is such as to enable them to reach fully over the edges of the sides, and they carry projections 15, all of equal size, forming guide-pieces which occupy and are fitted into grooves 16 in the outer surface of the sides near their edges thereof and parallel thereto. As shown in Figs. 1 to 3, these grooves are in the edges of the sides, and in the forms shown in Figs. 4

UNITED STATES PATENT OFFICE.

CHARLES R. SUTTON, OF DAYTON, OHIO, ASSIGNOR TO JESSE M. HECKMAN AND HARVEY SNELL, OF UNION, OHIO.

MEANS FOR REPAIRING PUNCTURED PNEUMATIC TIRES.

SPECIFICATION forming part of Letters Patent No. 725,171, dated April 14, 1903.

Application filed June 14, 1902. Serial No. 111,636. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. SUTTON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented new and useful Improvements in Means for Repairing Punctured Pneumatic Tires, of which the following is a specification.

My invention relates to improvements in means for repairing punctured pneumatic tires; and its novelty, utility, and practical advantages will be fully understood from the following description and claims, when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a sectional view illustrating the first step incident to the repair of a punctured pneumatic tire with the aid of my improved devices and in accordance with my invention; Figs. 2 and 3, sectional views illustrating the second and third steps, respectively, in the making of the repair; Fig. 4, a detail view of the plug employed in making the repair; and Figs. 5, 6, and 7, detail views of the tube, awl, and push-rod, respectively, of my improvements.

Similar letters of reference designate corresponding parts in all of the several views of the drawings, referring to which—

A is a pneumatic tire; B, a plug of rubber or other suitable material provided with a head *a*, which is conical, and also with a cord *b*; C, a tube of metal or other suitable material having an interior shoulder *c* and also having a flat handle-flange *d* at its outer end, an exterior shoulder *e* at an intermediate point of its length, and an exteriorly-tapered inner end *f*; D, an awl having a flat handle-flange *g* at its outer end and a shoulder *g'* at an intermediate point of its length and also having a conical point *h* at its inner end designed to project beyond the tapered end *f* of tube C, Fig. 1; and E, a push-rod having a ring or other suitable handle *i* at its outer end and a conical cup *j* at its inner end, as shown.

In repairing a punctured tire with my improved devices the tube C and awl D in the relative positions shown in Fig. 1 are inserted in the puncture until the shoulder *e* of the tube brings up against the tire. When the tube and awl are thus placed in the puncture, it will be observed that by virtue of the shoulder *g'* abutting against shoulder *c* the awl-point *h* forms a continuation of the taper *f* of the tube, and consequently there is no liability of the rubber or textile fabric of the tire being cut, torn, or otherwise injured. On the other hand, the awl-point and tube simply pass between and separate threads of the fabric and stretch the rubber, and in consequence the puncture is not enlarged, which is an important advantage, particularly when the tire being repaired is of the heavy automobile type. After the tube is placed, as stated, in the puncture the awl D is withdrawn and cement is suitably supplied to the inner side of the tire around the puncture through the tube. Cement is then placed on the inner side of the head of the plug B, and the plug is inserted stem foremost in the tube and forced, through the medium of the rod E and after the manner shown in Fig. 2, through the tube and into the tire. Incident to such forcing of the plug through the tube C the cup *j* of the push-rod engages the apex of the cone-shaped plug-head *a*, and in consequence the head is enabled to fold back between the cup *j* and the wall of the bore. From this it follows that incident to its passage through the tube the plug is stretched or increased in length, and consequently its diameter or thickness is diminished. This is materially advantageous, since it permits of the introduction through a comparatively small tube, and one that does not enlarge the puncture, of a large plug calculated to assist materially in the making of a perfect air-tight repair. After the plug is placed in the tire the workman removes the push-rod E and then draws gently on the cord *b* until the stem of the plug reënters the tube and its head rests on the inner end of the tube. With this done the workman holds the cord *b* taut and draws the tube C outwardly until the inner end thereof is flush with the inner side of the tire, after which he turns the tube and the plug on the inner end of the tube in order to spread the cement well between the plug-head and tire. He then, while still hold-

