

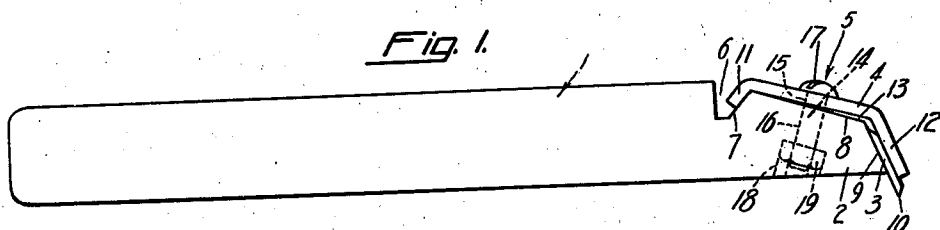
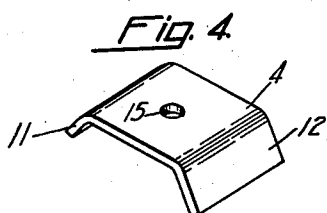
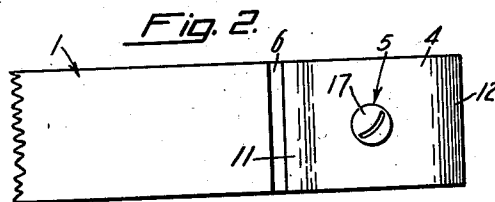
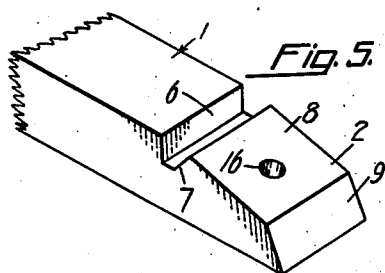
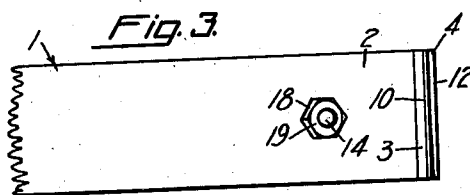
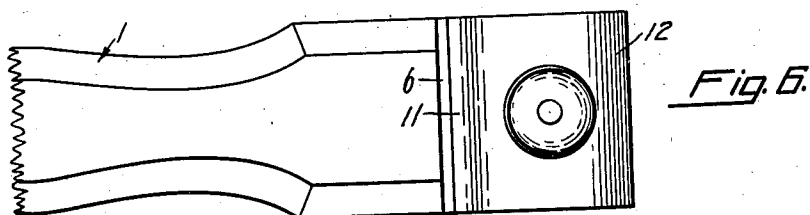
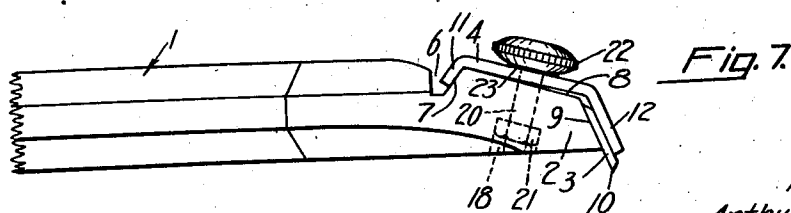
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SCRAPER

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SCRAPER

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9 Claims. (Cl. 30-171)

My invention relates to scrapers.

It has among its objects to provide an improved scraper especially adapted for use on wood or the like, and, more particularly, such a scraper of the type adapted to utilize a separable scraper blade. A further object of my invention is to provide improved clamping means for such a scraper including improved clamping surfaces on the holder, and an improved clamping member cooperating therewith and with the blade, whereby the latter is fixed rigidly to the holder while producing an exceedingly simple, rugged blade clamping construction which is readily tightened or released while also being adapted to be inexpensively manufactured. These and other objects and advantages of my improvements will, however, hereinafter more fully appear.

In the accompanying drawing, I have shown for purposes of illustration certain embodiments which my invention may assume in practice.

In the drawing:

Figure 1 is a side elevation of one form of my improvement;

Fig. 2 is a top plan view of the working end of this scraper;

Fig. 3 is a like bottom plan view thereof;

Fig. 4 is a detail perspective view of the clamping member;

Fig. 5 is a like view of the working end of the holder;

Fig. 6 is a top plan view of the working end of a modified construction of larger size, and

Fig. 7 is a side elevation of this modified construction.

In the form of my invention shown in Figures 1 to 5, I have shown a scraper including a body or handle portion, generally indicated at 1, and having an improved working end 2 and a narrow double-edged blade 3 clamped in an improved manner on this working end by an improved clamping member 4 which is clamped in operative position by clamping means 5; the several elements being improved and cooperating in an improved manner, as hereinafter described.

Referring more particularly to the holder 1 and the working end 2 thereof, it will be noted that while the holder may be of various forms, it herein is in the form of an elongated oblong form of substantially uniform cross section, suitable for use in connection with so-called "inch" type scrapers, while the working end 2 of this holder of an improved construction. More particularly, it will be observed that a transverse slot 6 is provided in the top of this working end at a point adjacent the front or working end 2

thereof. This slot 6 herein extends clear across the holder and has a front inclined wall 7 inclined upward and toward the extremity of the working end, as shown, and lower than the other wall of the slot which is vertically disposed. Herein, also, a downwardly sloping flat surface 8 is provided sloping from the upper edge of this wall 7 downwardly and forwardly, this surface also extending over the entire width of the working end. As shown, a front angularly disposed abutment face 9 extends downwardly and forwardly from the front edge of this surface 8 in such manner as to provide an inclined blade abutment adapted to engage all but the projecting cutting edge portion 10 of the elongated narrow double-edged blade 3.

Cooperating with the inclined surfaces 7 and 9 on the working end 2 is my improved clamping member 4. Herein this member is also of the same width as the working end 2 and in the form of a rigid slightly longer plate having angularly disposed flanges 11 and 12 along its opposite edges. Of these, the flange 11 is short and disposed on substantially the same angle as the surface 7, which it is adapted to engage when the adjacent part of the body of the member 4 engages the surface 8 adjacent its surface 7; while the flange 12 is longer than the flange 11 and extends downward angularly in spaced relation to the surface 9, preferably to a point below the bottom of the latter and in such manner as to extend close to the exposed edge of the blade 3. When the member 4 is disposed in clamping position, as shown in Fig. 1, it will be noted that, due to the presence of the blade between the flange 12 and the inclined portion 9 on the body 2, a triangular space 13 is provided over the front portion of the body thereof and between the latter and the surface 8, while the inside surface of the clamping member 4 engages the surface 8 at a point adjacent the inclined surface 7. Thus a very effective clamping action is obtained when the member 4 is moved bodily toward the working end 2 by the clamping means 5, with the flanges 11 and 12 pressed downward against the diverging surfaces 7 and 9.

Herein, these clamping means include a single bolt 14 extending angularly through the working end 2 and passing through suitably centrally located registering apertures 15 and 16 in the member 4 and working end 2. This bolt 14 herein has a slotted head 17 overlying the member 4 and nut means on its opposite end. As shown, a hexagonal angularly disposed recess 18 is provided in the bottom of the working end 2 in align-

ment with the apertures 15 and 16, and a hexagonal nut 19 is carried on the opposite end of the bolt 14 and held against rotation in this hexagonal recess 18 in such manner as to permit the bolt 14 to be tightened or released when a screw driver is inserted in the slotted head 17 thereof which is readily accessible on the upper surface of the scraper.

In the use of this improved construction, it will be apparent that a very effective clamping action is produced, due to the angular relation of the surfaces 7 and 9 on the working end 2 of the holder to one another and to the angularly disposed flanges 11 and 12 on the clamping member 4. More particularly, when the bolt 14 is rotated to tighten the clamp 4, the latter will bear and pivot on the surface 8 at a point adjacent the top of surface 7 in such manner as, due to the rigidity of the member 4, thus to utilize the diverging clamping surfaces 7 and 9 on the holder and 11 and 12 on the clamping member to produce a very rigid clamping action, and consequent rigid clamping of the blade 3. Also, it will be evident that when the bolt 14 is reversely rotated, the clamp will be released in such manner as to permit ready removal of the blade and its reversal to expose a sharp edge, or the substitution of another blade, as desired.

In Figures 6 and 7, the construction is essentially similar to that heretofore described, although shown applied to a wider scraper. Herein, however, it will be observed that instead of showing a construction requiring the use of a screw driver, a bolt 20 is used having its head 21 in the recess 18 and a manually rotatable knurled nut 22 on its upper end which projects above the clamping member 4, a washer 23 also being disposed between the nut and the clamp 4. Obviously, thus nut may be of various forms, but it is preferably of shallow type, as illustrated, in such manner as to permit the same to be comfortably disposed in the palm of the hand when the scraper is held against the work. As a result of this construction, while obtaining the advantage of tight clamping and ready adjustment by adjusting means on the top of the scraper, it is also made possible to eliminate the necessity for the use of a screw driver, effective clamping being obtained by the mere use of the fingers.

As a result of my improved construction, while obtaining the desired rigid connection of the blade, it will also be observed that the construction is exceedingly simple and of a type adapted to be very inexpensively manufactured. Thus, the holder structure 2 may be readily formed from wood or the like, while the clamping member 4 is of a simple construction adapted to be inexpensively formed of bent metal. Attention is also directed to the rugged character of the construction and to the facility with which the clamp may be tightened or released. If desired, this structure is also adapted to use on larger scrapers, while two or more clamping bolts may also be provided in such scrapers, spaced along the member 4 and blade 3.

While I have in this application specifically described certain forms which my invention may assume in practice, it will be understood that the same are shown for purposes of illustration, and that the invention may be modified and embodied in various other forms without departing from its spirit or the scope of the appended claims.

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

1. In a scraper, a holder having spaced relatively inclined diverging faces on its working end, and a top surface therebetween, one of said faces forming a blade abutment on the extremity of said holder and the other of said faces being remote from said abutment, and clamping means for pressing a blade against said abutment including a clamping member pivotally engaging said holder at a point remote from said extremity and having spaced depending portions, one clamping said blade against said abutment and the other engaging said remote face on the holder, and means for moving said clamping member about its pivot on said holder.

2. A scraper as claimed in claim 1, and also having said top surface on the holder, when a blade is between said abutment and said clamping portion, spaced below the intermediate portion of said clamping member between the pivot thereof and said abutment to permit said clamping member to move in a clamping direction about its pivot.

3. A scraper as claimed in claim 1, and also having said top surface angularly related to the intermediate portion of said clamping member when a blade is between said abutment and said clamping portion, and said top surface sufficiently spaced from said intermediate portion to permit said clamping member to move in a clamping direction about its pivot.

4. A scraper as claimed in claim 1, and also having said depending clamping portion longer than the depending portion engaging said remote face, and said remote face forming the adjacent wall of a transverse groove in the top of said holder.

5. In a scraper, a holder block having an elongated handle portion and a scraper attaching portion at its front end having a transverse groove in the top surface of said holder adjacent said front end and a downwardly inclined front extremity engageable by a blade, a blade holding plate having an intermediate portion disposed substantially within the vertical limits of said block and overlying said scraper attaching portion between said groove and front extremity and having depending flanges including a rear flange engaging the front wall of said groove and a front flange extending downward along said extremity and overlying and pressing the blade against said front extremity, and means carried by said scraper attaching portion for securing said plate in blade clamping relation thereto.

6. In a scraper, a holder block having an elongated handle portion and a scraper attaching portion at its front end having a transverse groove in the top surface of said holder adjacent said front end and a downwardly inclined front extremity engageable by a blade, a blade holding plate having an intermediate portion disposed substantially within the vertical limits of said block and overlying said scraper attaching portion between said groove and front extremity and having depending flanges including a rear flange engaging the front wall of said groove and a front flange extending downward along said extremity and overlying and pressing the blade against said front extremity, and means carried by said scraper attaching portion for securing said plate thereto, the top of said attaching portion being downwardly inclined toward the latter and engageable by the rear edge of said plate adjacent said groove, and said securing means being disposed substantially perpendicular to said plate.

7. A holder for scrapers comprising a bar-like body having a working end, and transversely disposed longitudinally spaced diverging faces, one being shorter than the other and on the top of said body and the other comprising the end face of said working end, said faces being spaced at their upper ends by an inclined connecting surface leading upward to said shorter face.

8. A holder for scrapers comprising a bar-like body and having a transverse groove across the top face of said body and forming a working end, and transversely disposed longitudinally spaced

diverging faces, the rear face forming the front side of said groove and said faces being spaced at their upper ends by an elongated connecting surface, said front transverse face being longer than the rear transverse face and forming the front extremity of said working end.

9. A scraper clamp comprising a rigid clamping plate having an intermediate flat body portion and front and rear depending angularly disposed flanges on its opposite edges, the front flange of said flanges being longer than the rear flange.

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