M. MARES.

PLOWSHARE.

APPLICATION FILED JAN. 23, 1913.

1,136,825.

Patented Apr. 20, 1915.

2 SHEETS—SHEET 1.

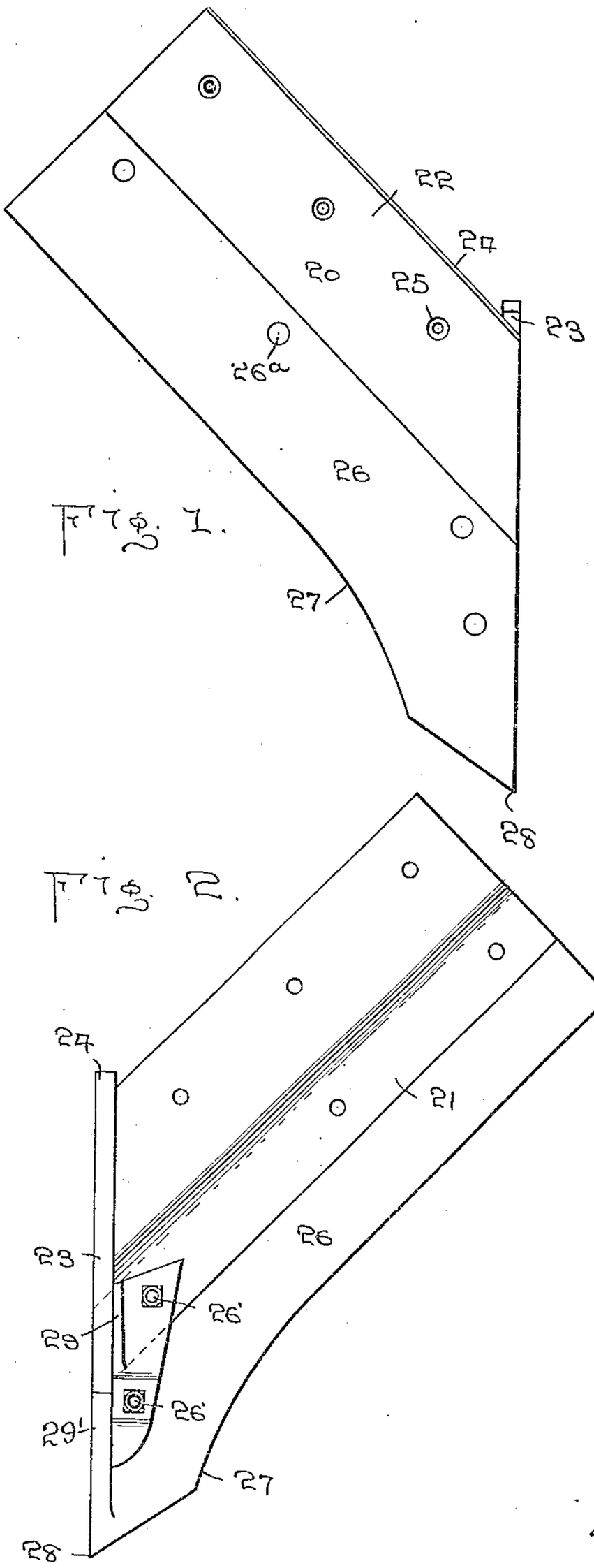

Fig. 1.

Fig. 2.

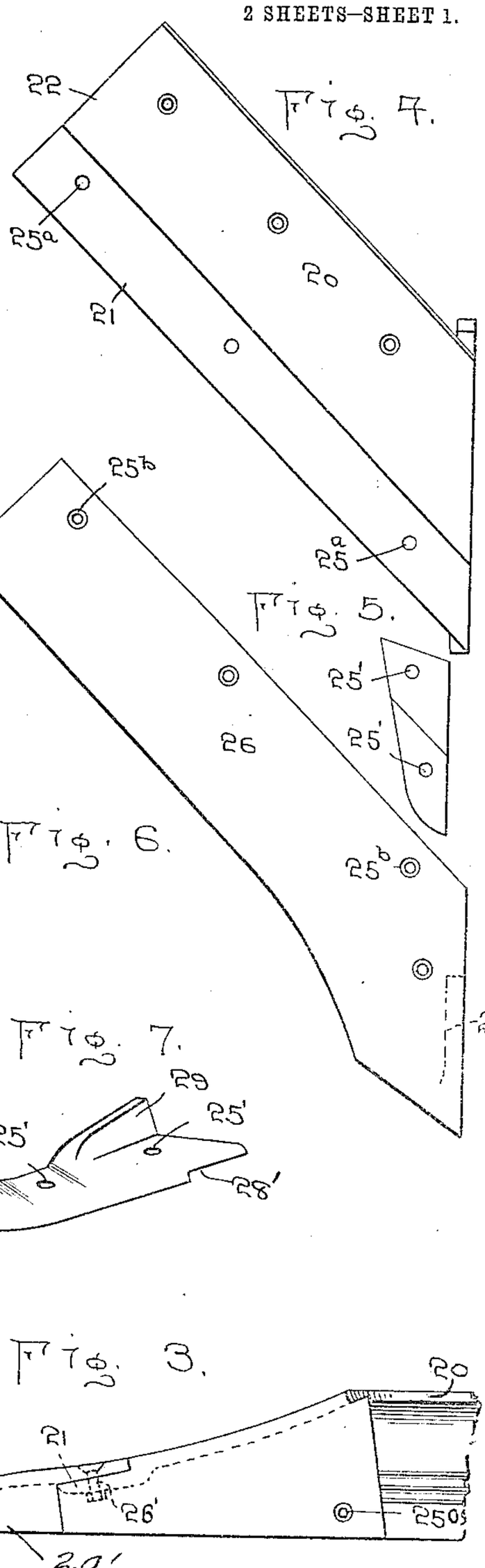

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 3.

WITNESSES:

INVENTOR

J. M. Mares

BY

W. J. Fitzgerald & Co

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

M. MARES.

PLOWSHARE.

APPLICATION FILED JAN. 23, 1913.

1,136,825.

Patented Apr. 20, 1915.

2 SHEETS—SHEET 2.

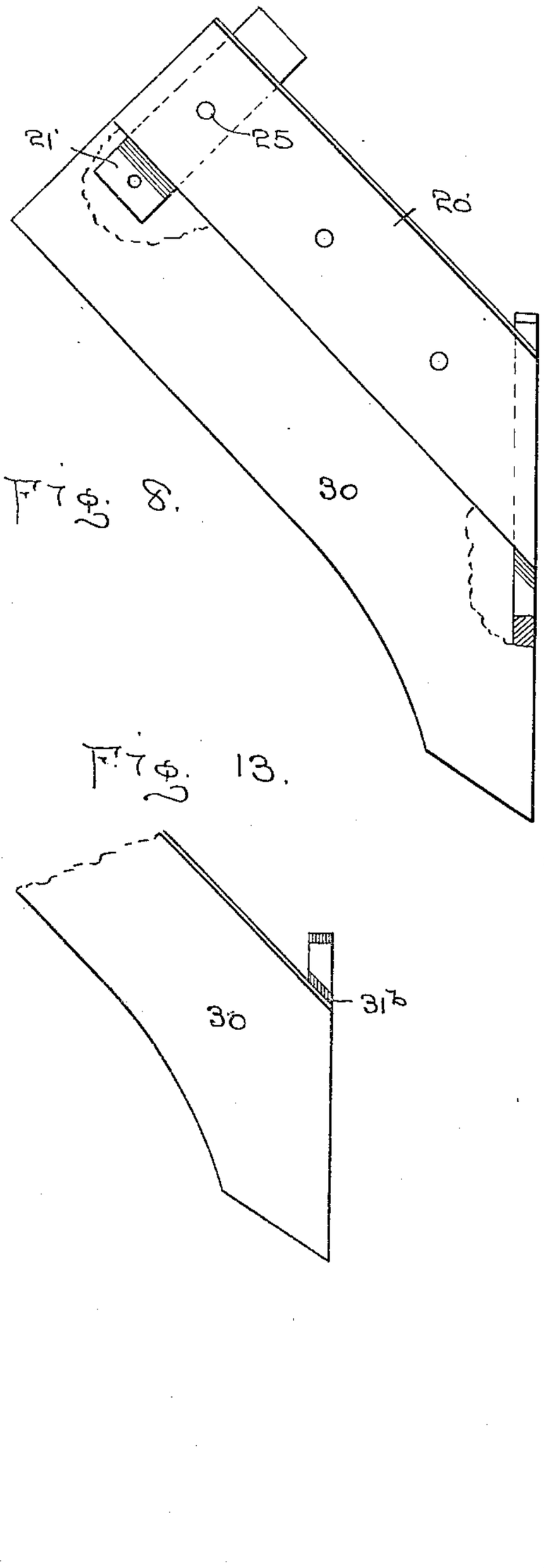

Fig. 8.

Fig. 13.

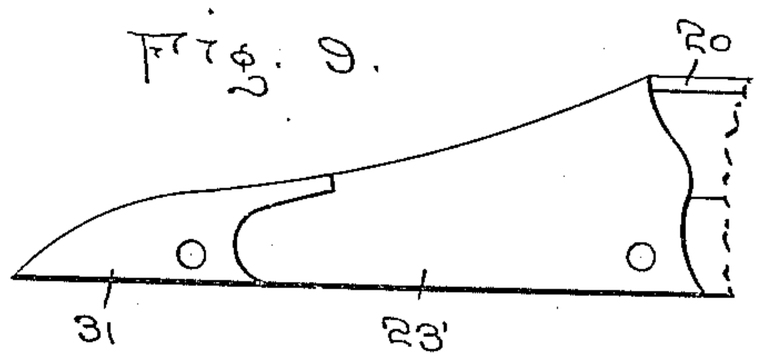

Fig. 9.

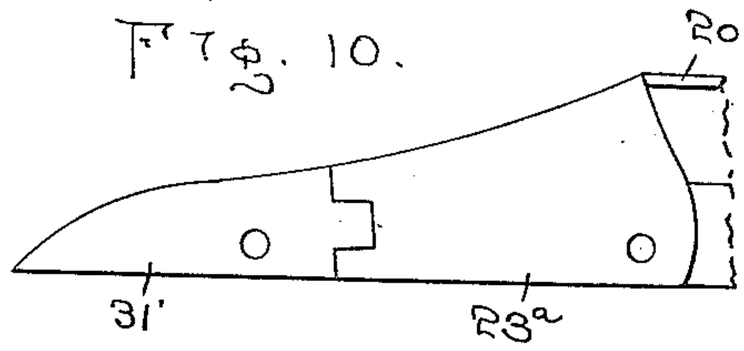

Fig. 10.

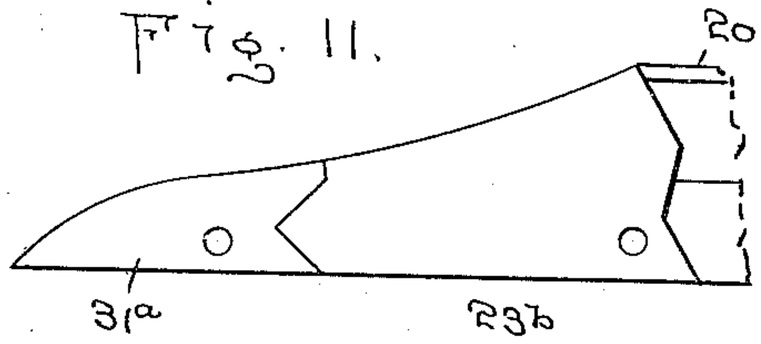

Fig. 11.

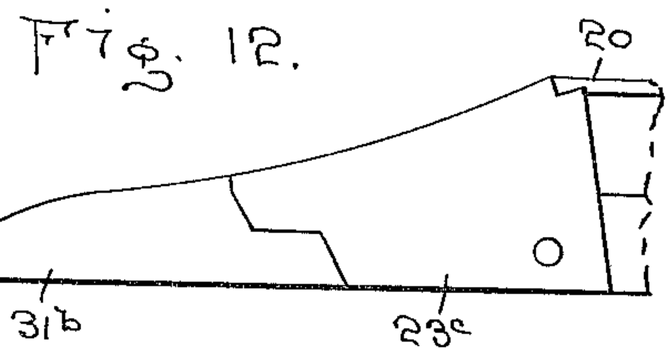

Fig. 12.

WITNESSES:

Thos. W. Piercy

W. Newcomb

INVENTOR

M. Mares

BY

W. J. FitzGerald & Co

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MATTHEW MARES, OF RACINE, WISCONSIN.

PLOWSHARE.

1,136,825. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed January 23, 1913. Serial No. 743,867.

To all whom it may concern:

Be it known that I, MATTHEW MARES, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Plowshares; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to plows, and it more particularly relates to plow-shares.

A great difficulty experienced by the user of plows is that of properly sharpening the cutting edge and point thereof, and in order to avoid this difficulty, another difficulty is frequently resorted to, viz., sending the plow-share to the factory or to a special shop for repairs, which is attendant with considerable expense and loss of time to the owner or user of the plow. It is well known, that the best plow-shares and points in use are manufactured from the best grade of cast iron, hardened by the expensive process of "chilling", or else they are manufactured from steel hardened by tempering; therefore, these plow elements are not only expensive, but extremely difficult to repair and sharpen.

An object of the invention, therefore, is, first, to provide a relatively narrow and thin cutter blade of hardened steel, thereby to provide the maximum efficiency consistent with the minimum expense.

Another object of the invention is to provide a plow-share element of less expensive material and having formed thereon a seat for supporting the cutter blade.

Another object of the invention is to provide a plow-share of this character which may be fitted onto the frog of an ordinary turning plow, and which will support the cutter blade in proper relation to said moldboard.

Another object of the invention is to provide a sectional share of this character, each section of which has a sectional portion of a landside formed thereon.

Other objects and advantages may be recited hereinafter and in the claims.

In the accompanying drawings which supplement this specification, Figure 1 is a top plan view of one form of sectional plow-share, according to my invention, Fig. 2 is a bottom plan view thereof, Fig. 3 is a fragmental elevation view, as seen from the right in Fig. 1, Fig. 4 is a top plan view of the upper section of the plow-share, Fig. 5 is a top plan view of a frog and reinforcement for the share sections, Fig. 6 is a top plan view of the blade of lower section of the plow-share, Fig. 7 is an enlarged perspective view of the frog shown in Fig. 5, Fig. 8 is a fragmental top plan view of a modified form of a sectional share; Figs. 9 to 12 inclusive illustrate other modified forms, from the view point of Fig. 3 and Fig. 13 illustrates a fragmental top plan view of still another modified form.

Referring to these drawings in which similar characters correspond with similar parts throughout the several views the upper section 20 of the share illustrated in Figs. 1 to 4 inclusive is provided with a flange or blade seat 21 which is formed integrally therewith and has its top surface extended in parallel relation to the top surface 22 of the blade or section 20. This section 20 is also provided with a share landside 23 which extends slightly rearward of the surface 22 and of the rear and upper edge 24, which latter is designed to fit snugly against the lower forward edge of the moldboard of an ordinary turning plow, while the share landside 23 is designed to fit under said lower edge of the moldboard and abut against the rear section of the landside, so as to form one of the sectional elements of the landside. This section 20 is provided with countersunk holes 25^a adapted to receive bolts for securing it to the cutter blade 26 of the plow, together with the moldboard (neither of the latter being shown, while the share landside 23 is provided with a hole 250, for receiving the bolt for connecting this landside section to the frog of the plow.

The cutter blade 26 comprises the forward cutting edge 27, which terminates in a sharp point at 28, and a front landside section 29′. When this plate or blade 26 is in position on the flange 21, the front landside section 29′ abuts against the intermediate landside section 23, while the end 24 of this intermediate landside section is adapted to abut against the rear landside section (as shown). In Figs. 2 and 3 it will be seen that the flange 21 constitutes a reinforcing and strengthening rib or ridge at the junction of the upper and lower sections of the share, so that the section or blade 26 may be relatively thin, and yet be sufficiently strong in consequence of this supporting rib or

ridge 21. Two advantages are obtained by thus making the blade relatively thin viz., first, the quantity of material and the consequent first cost are minimized, and second, the time and work of sharpening the blade are minimized. It is well known that the greater amount of wear takes place at the front portion of the plow-share, and that the least wear takes place at the rear portion thereof; therefore, the front portion needs renewing before the rear or other portion, while said rear or upper portion needs renewing before the moldboard, in consequence of wear. Therefore, it may not only be necessary to form the cutter blade 26 from more durable material than is employed in forming the section 20, but the cutter blade may even then have to be renewed much oftener than the sections 20, and so, the primary object of making these shares sectional is quite obvious. This principle applies as well to the landside as to the share, and therefore the object of making the landside in separable sections is obvious. If the sectional landside elements were made separate from the sectional share elements, this should involve considerable extra time and trouble in removing and replacing the different sections of the landside and the different sections of plow share, but by forming the landside sections integral with the respective share sections, said extra trouble is avoided.

The reinforcing member or connection shown in Figs. 5 and 7 are provided with holes 25′, which are adapted to register with certain of the holes 25^a and 25^b, in the sections 20 and 26 respectively for receiving bolts 26′, the remaining holes 25^a and 25^b being adapted to receive bolts 26^a for securing the sections 20 and 26 together. This reinforcing member is provided with a recess 28′, adapted to fit over the flange 21, and it is also provided with a supporting lug 29, adapted to fit against the share landside section 23, for bracing said landside section.

In lieu of the forms shown in Figs. 1 to 7, I may provide the upper landside section 20′ with one or more detachable blade-supporting elements 21′, and these supports may be secured by the bolts 25, and may extend rearward beyond the upper section 25, so as to provide a suitable bearing or seat for the moldboard. I may also modify the construction of the cutting blade by omitting certain of the holes therethrough, as illustrated at 30 in Fig. 8. The landside sections are susceptible of a great many modifications, without materially departing from the spirit of my invention, and some of these contemplated modifications are illustrated in Figs. 9 to 13, in these figures, the front landside sections are designated 31, 31′, 31^a, and 31^b. In these modifications, the intermediate sections of the landside are accordingly modified, as illustrated at 23′, 23^a, 23^b, and 23^c; so that the forward edges of these intermediate sections conform to the rear edges of the front sections of the landside.

It will be seen that I have provided a sectional plow-share which is fully capable of attaining the foregoing objects and in a thoroughly practical and efficient manner.

I do not limit my invention to the exact details of construction shown in any of the several modifications but my invention may only be limited by a reasonable interpretation of the claims.

I claim:

1. A plow share comprising; a cutter blade, an upper share section and a frog connecting said cutter blade and said upper plow section together, said frog consisting of a body portion having a recess in one end thereof, a supporting lug on the recessed end of said body portion, and a plurality of apertures through said body portion, said recess, lug and apertures fastening said cutter blade and upper share section together in interlocked position.

2. A plow share comprising; a cutter blade having a landside section, and with a plurality of apertures parallel with one edge portion of the cutter blade, an upper section having a land side section to match and seat flush with the landside section of the cutter blade, an offset flange to said upper section having a plurality of apertures parallel to the edge of said flange, said flange adapted to seat over the edge portion of the cutter blade so that the apertures in the flange will register with the apertures in the cutter blade, fastening devices passing through said apertures, and fastening said flange to the cutter blade, a frog having a recess portion to seat over a portion of said flange, and having a supporting lug adapted to seat against the landside section of the upper plow section, one edge of said frog resting against the landside section of the cutter blade to prevent lateral play and said supporting lug supporting the landside section of the upper plow section flush with the landside section of the cutter blade, and a fastening device passing through said frog and said cutter blade to retain said frog in position, one end of said frog being retained by one of the fastening devices fastening the upper plow section to the cutter blade.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MATT MARES.

Witnesses:
FRANK VACEK,
MARGARET SORENSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."