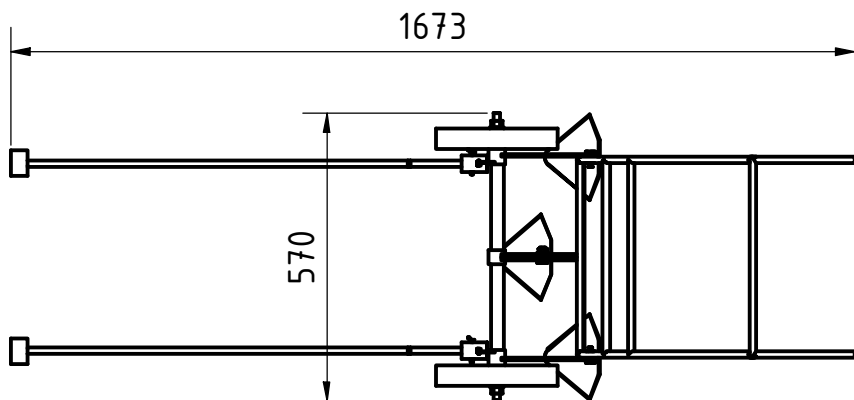
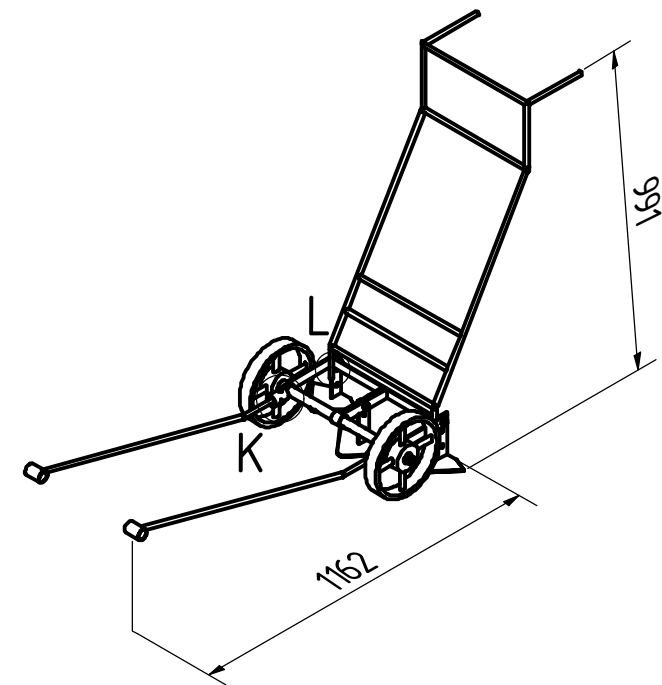
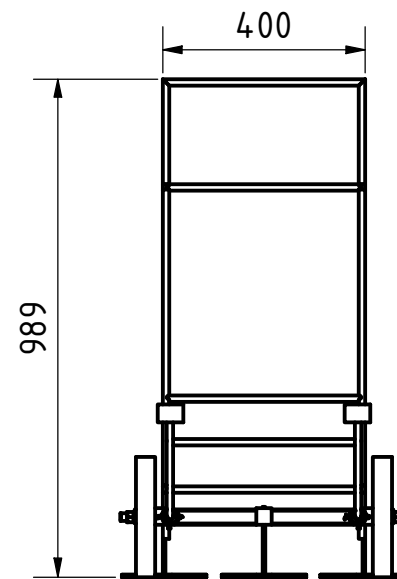
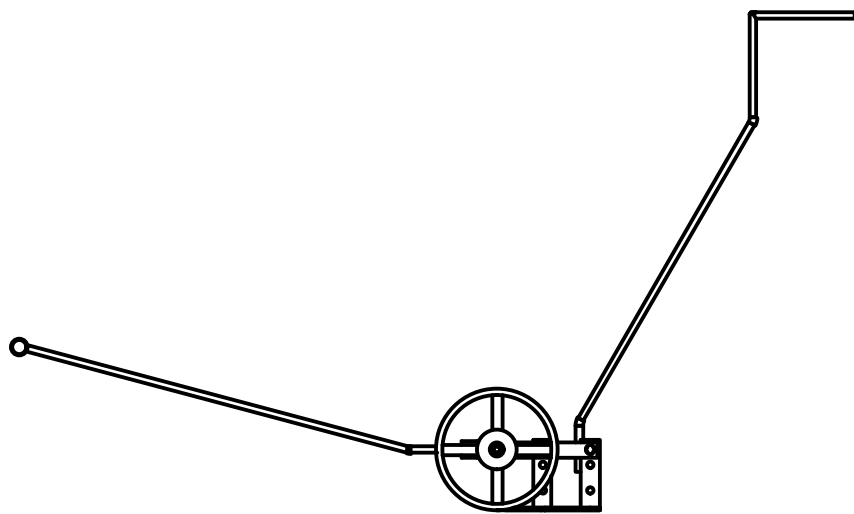
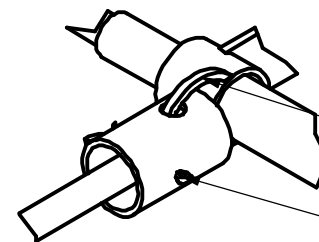




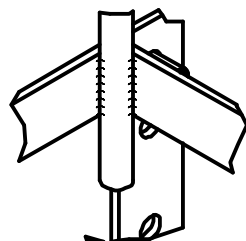
K ( 1 : 3 )



Welded ring

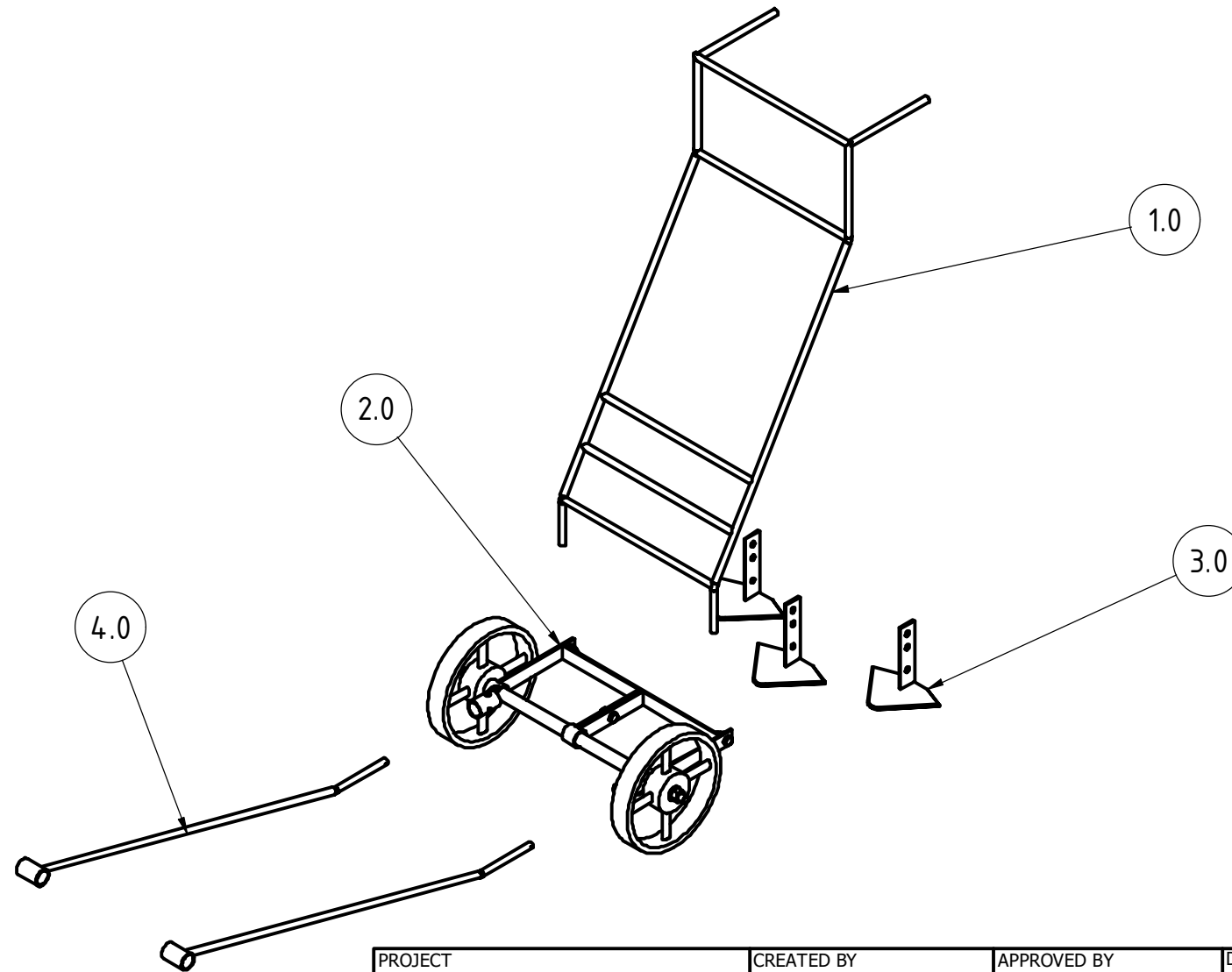
Cotter pin

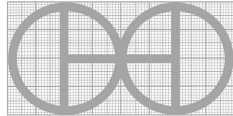
L ( 1 : 3 )



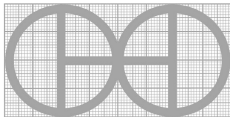
Note: All units in mm.

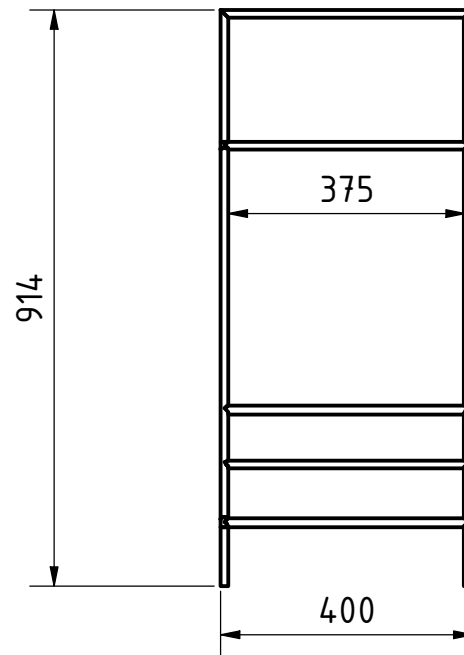
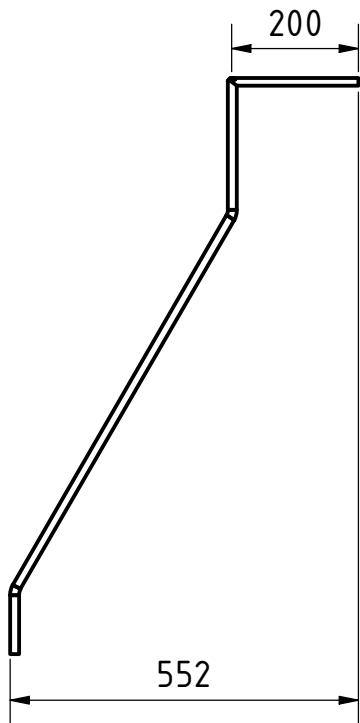
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| PROJECT             | CREATED BY              | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos             | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME               | POS          |            |          |
| 3D views            | Dual purpose Weeder.iam | A1           |            |          |
| DEVELOPED BY        | REDESIGNED BY           | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |                         | Assembly     |            | 1        |
|                     |                         | LICENCE      | SCALE      | SHEET    |
| Practical Action    | OHO e.V.                | CC-BY-SA 4.0 | 1 : 15     | 1 / 14   |



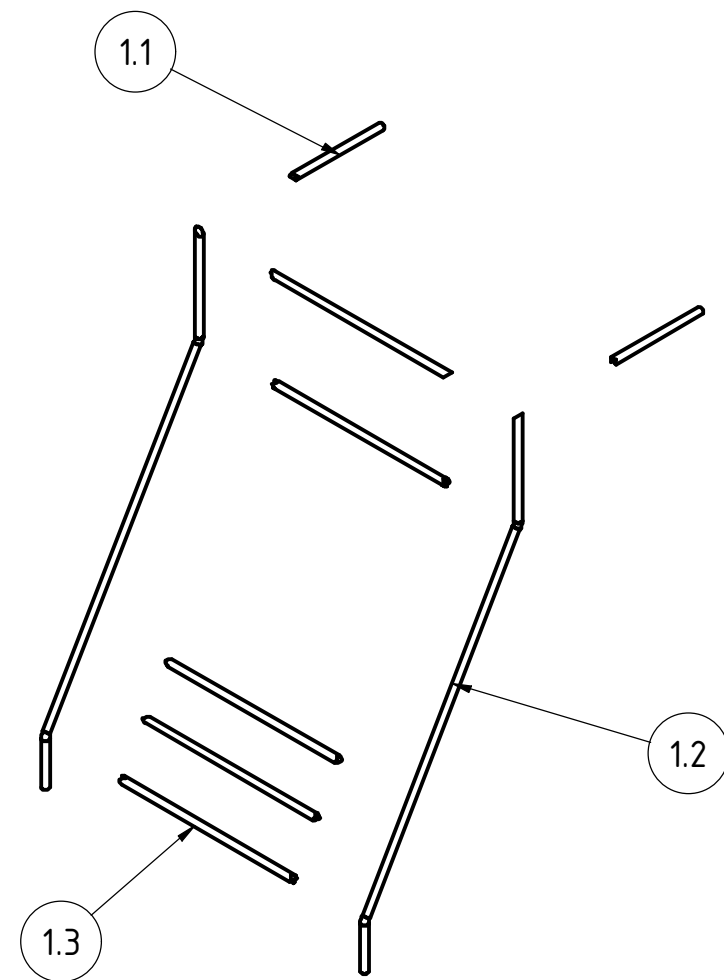
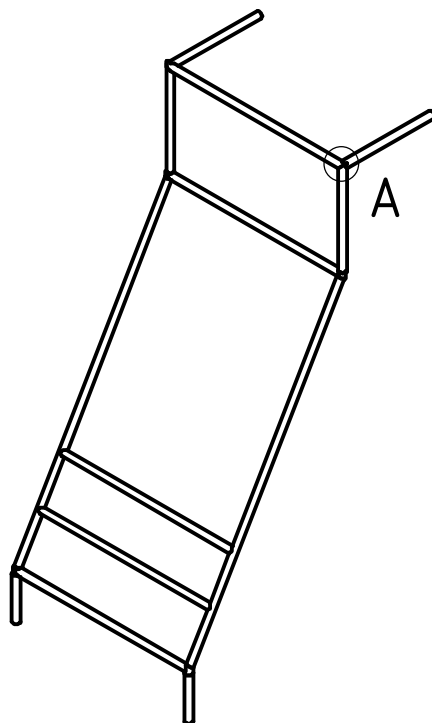
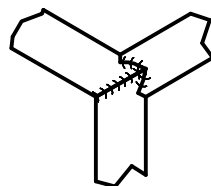
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| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             | POS          |            |          |
| Exploded 3D view    | Dual purpose Weeder.ipn                                                               | A2           |            |          |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
| Practical Action    |  | Assembly     |            | 1        |
|                     |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 12     | 2 /14    |

| Parts list |     |                   |                                                |            |                                      |       |
|------------|-----|-------------------|------------------------------------------------|------------|--------------------------------------|-------|
| POS        | QTY | PART NAME         | FILE NAME                                      | PART TYPE  | SPECIFICATIONS                       | SHEET |
| A1         | 1   | 3D views          | Dual purpose Weeder.iam                        |            |                                      | 1     |
| A2         | 1   | Exploded 3D view  | Dual purpose Weeder.ipn                        |            |                                      | 2     |
| B1         |     | Parts list        |                                                |            |                                      | 3     |
| 1.0        | 1   | Frame1            | Frame1.ipn                                     |            |                                      | 4     |
| 1.1        | 2   | Handle bar        | DIN EN 10060 13 1631937790444.ipt              | Production | Steel A36, D 13mm, L 200 mm          |       |
| 1.2        | 2   | Lateral bar       | DIN EN 10060 13 1631937790785.ipt              | Production | Cold bended bar, Steel A36           | 5     |
| 1.3        | 5   | Reinforcement bar | Frame1.iam                                     | Production | Steel A36, D 13mm, L 375 mm          |       |
| 2.0        | 1   | Harrow holder     | Harrow holder.iam                              |            |                                      | 6     |
| 2.1        | 1   | Cross flat bar    | DIN EN 10278 30 x 4 - 400.ipt                  | Production | Steel A36, 30*4*400 mm               |       |
| 2.2        | 2   | Lateral Flat bar  | DIN EN 10278 30 x 4 - 200.ipt                  | Production | Steel A36, 30*4*200 mm               | 7     |
| 2.3        | 3   | Flat bar nut      |                                                | Standard   | DIN 6923 - M10                       |       |
| 2.4        | 3   | Flat bar bolt     |                                                | Standard   | DIN 933 - M10 x 25                   |       |
| 2.5        | 2   | Wheel washer      |                                                | Standard   | DIN 125 - A 15                       |       |
| 2.6        | 2   | Wheel nut         |                                                | Standard   | ISO 4034 - M14                       |       |
| 2.7        | 2   | Wheel             |                                                | Buy        | Heavy duty, ID 20, OD 80, thk 40 mm  |       |
| 2.8        | 2   | Cotter pin        |                                                | Buy        | DIN EN ISO 1234 - 3.2x40             |       |
| 2.9        | 2   | Link hitch        | DIN EN 10210-2 - 33.7 x 2.6 - 50.ipt           | Production | Steel A36, D 33.7, sch 40, L 50 mm   | 8     |
| 2.10       | 1   | Shaft             | Shaft.ipt                                      | Production | Hardened, Steel C45                  | 9     |
| 2.11       | 2   | Link ring         | Ring GB/T 886-1986 40 X 47.ipt                 | Production | Shoulder ring 24*20*4 mm, Steel mild |       |
| 2.12       | 3   | Tubular support   | EN 10210-2 - 33.7 x 2.6 - 30.ipt               | Production | Steel A36, D 33.7, sch 40, L 30 mm   |       |
| 2.13       | 2   | Central flat bar  | DIN 174 - 30 x 4 - 170.ipt                     | Production | Steel A36, 30*4*170 mm               |       |
| 3.0        | 3   | Harrow            | Harrow.iam                                     |            | Hardened, Steel C45                  | 10    |
| 3.1        | 3   | Harrow plate      | Harrow plate.ipt                               | Production | Hardened, Steel C45                  | 11    |
| 3.2        | 3   | Harrow flat bar   | EN 10278 - 36 x 4 - 135.ipt                    | Production | Steel A36                            | 12    |
| 4.0        | 2   | Ox link           | Ox link.iam                                    |            |                                      | 13    |
| 4.1        | 2   | Link bar          | Ox link.iam                                    | Production | Cold bended bar, Steel A36           | 14    |
| 4.2        | 2   | Link hitch2       | DIN EN 10210-2 33.7 x 2.6<br>1631948670053.ipt | Production | Steel A36, D 33.7, sch 40, L 50 mm   |       |

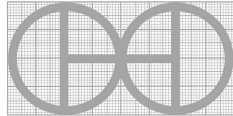
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| PROJECT             |  | CREATED BY                                                                            |  | APPROVED BY  |          | DATE       | VERSION  |
| Dual purpose weeder |  | E. Ceballos                                                                           |  | A. Morillo   |          | 17/09/2021 | 1.0      |
| PART NAME           |  | FILE NAME                                                                             |  |              |          |            | POS      |
| Parts list          |  |                                                                                       |  |              |          |            | B1       |
| DEVELOPED BY        |  | REDESIGNED BY                                                                         |  | DOC. TYPE    | MATERIAL |            | QUANTITY |
|                     |  |  |  | Parts list   |          |            |          |
|                     |  |                                                                                       |  | LICENCE      |          | SCALE      | SHEET    |
| Practical Action    |  | OHO e.V.                                                                              |  | CC-BY-SA 4.0 |          |            | 3 /14    |

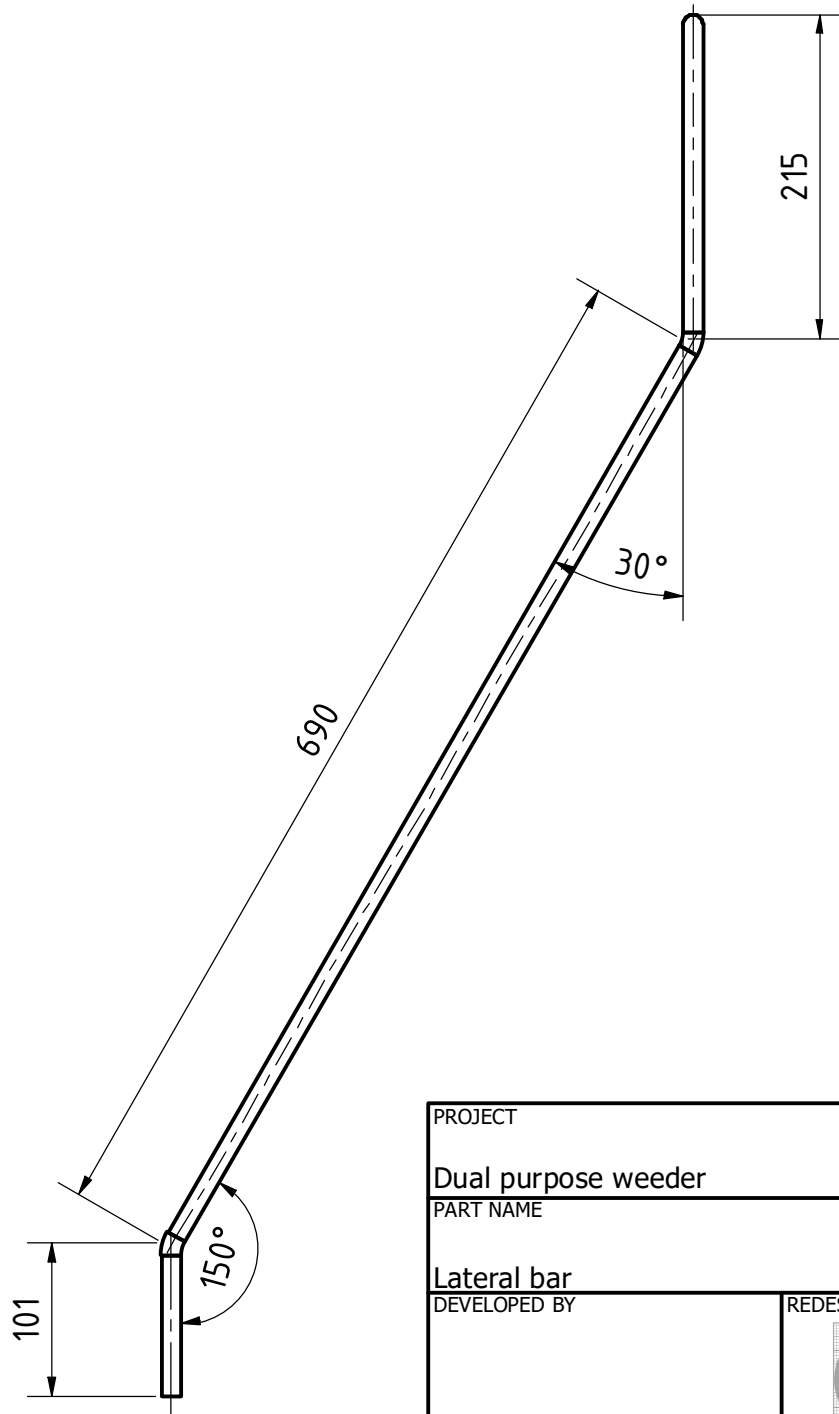


A ( 1 : 2 )

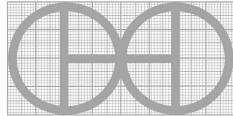


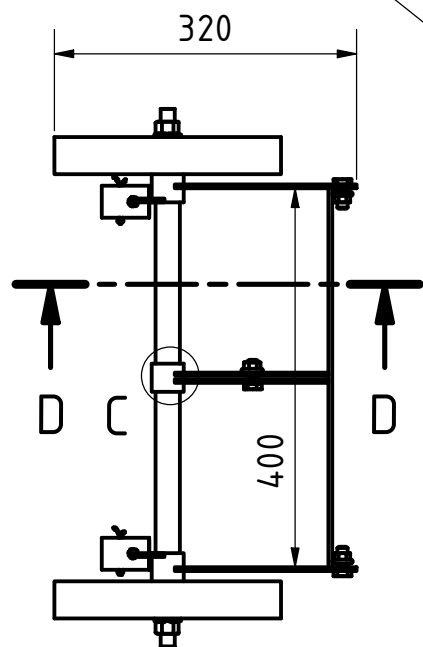
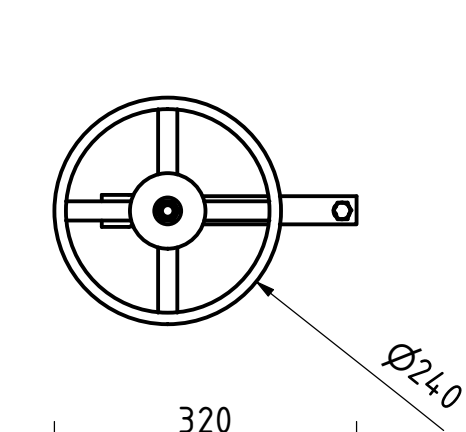
Note: All units in mm.

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| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             | POS          |            |          |
| Frame1              | Frame1.ipn                                                                            | 1.0          |            |          |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
| Practical Action    |  | Assembly     |            | 1        |
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|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 12     | 4 / 14   |

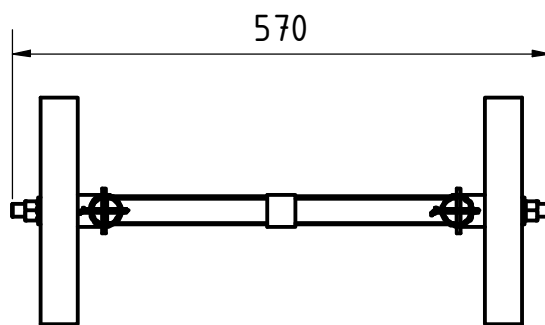
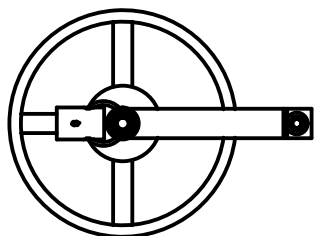


All units in mm

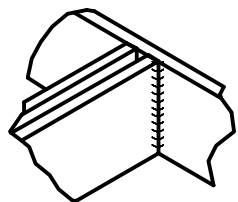
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| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Lateral bar         | Frame1.iam                                                                            |              |            | 1.2      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
| Practical Action    |  | Part         | Steel A36  | 2        |
|                     |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 5      | 5 /14    |



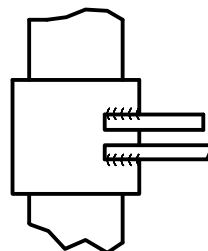
D-D ( 1 : 8 )



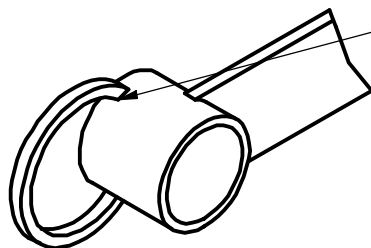
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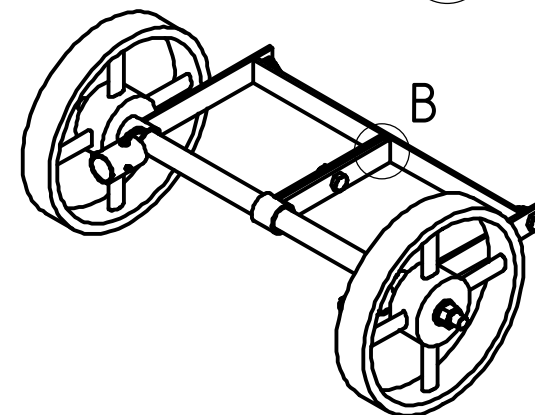
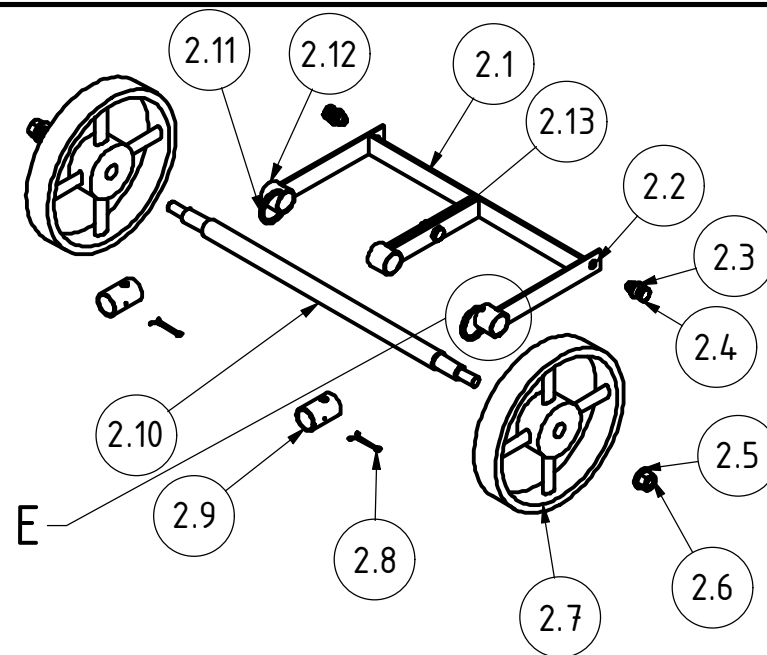
C ( 1 : 2 )



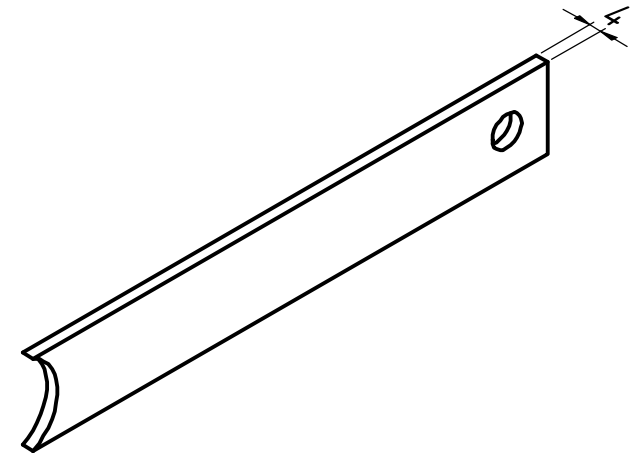
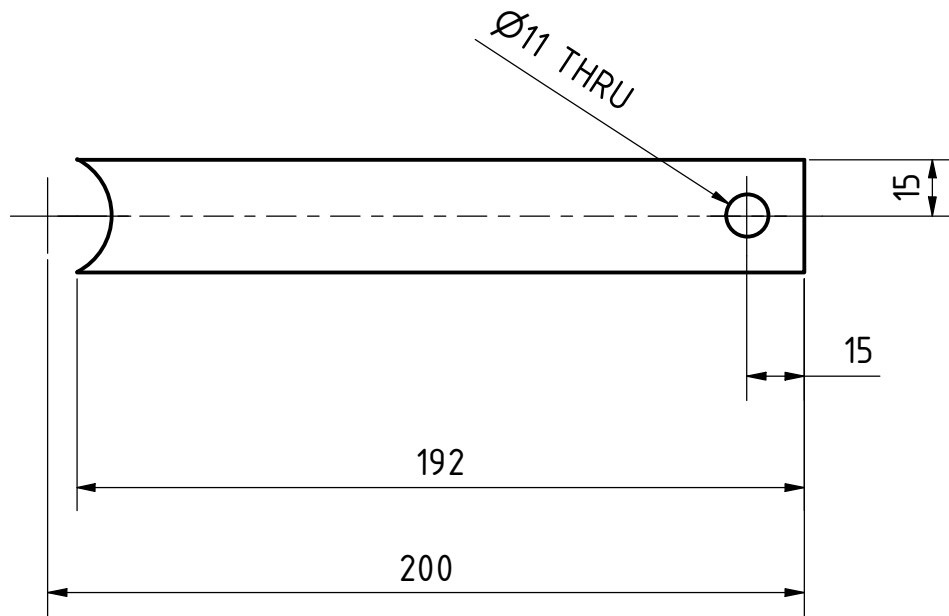
E ( 1 : 2 )

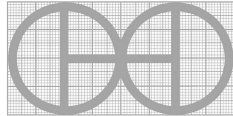


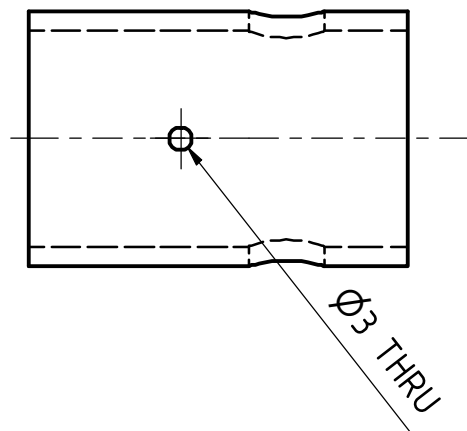
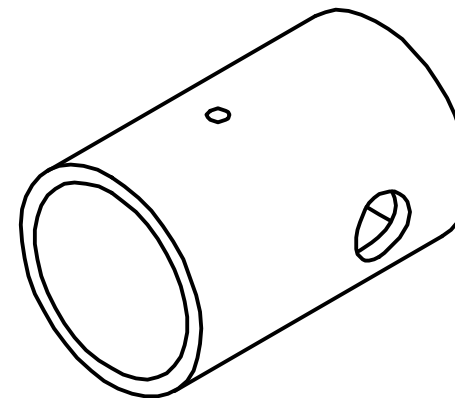
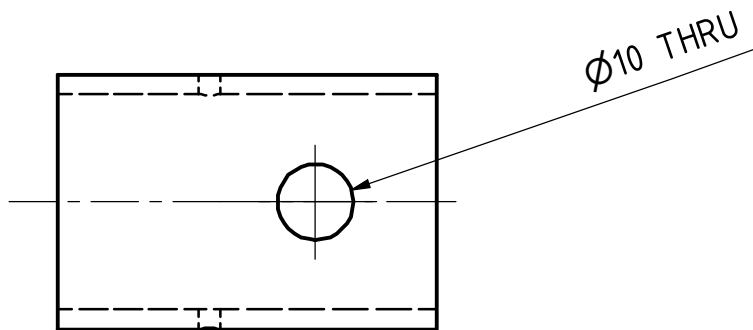
Welded semi ring



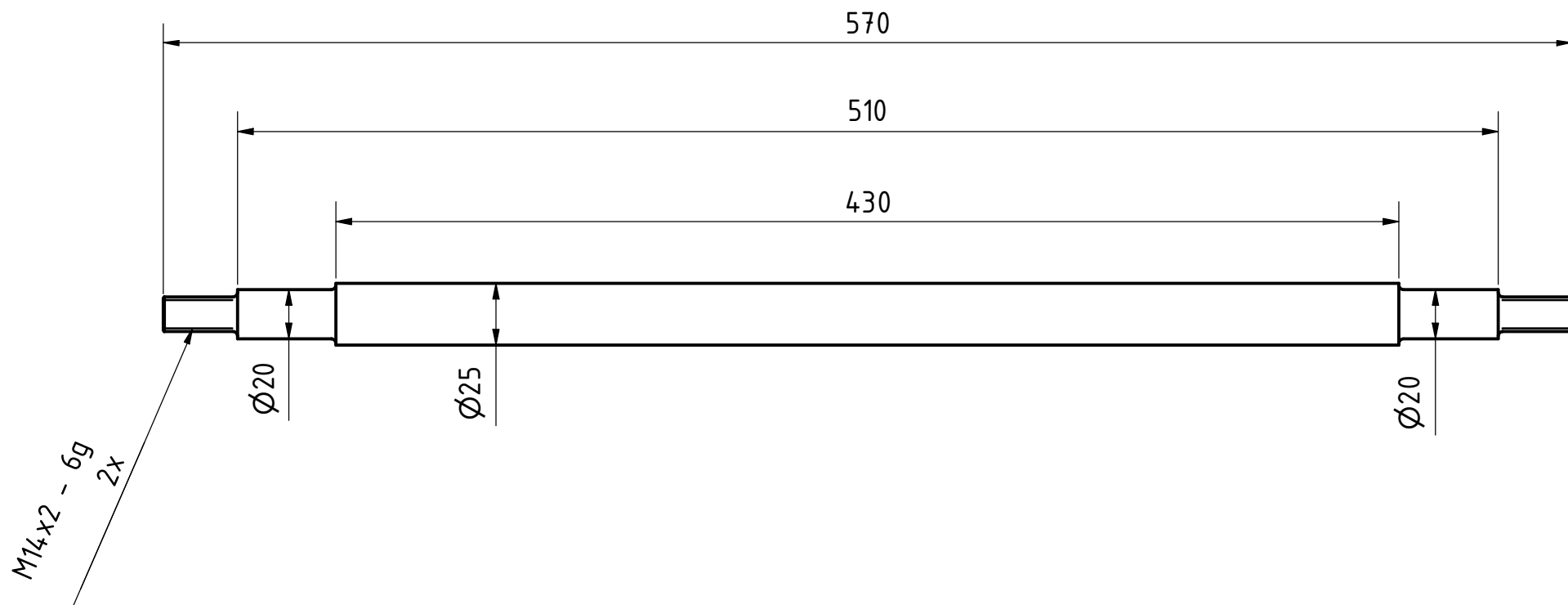
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| PROJECT             | CREATED BY        | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos       | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME         |              |            | POS      |
| Harrow holder       | Harrow holder.iam |              |            | 2.0      |
| DEVELOPED BY        | REDESIGNED BY     | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |                   | Assembly     |            | 1        |
|                     |                   | LICENCE      | SCALE      | SHEET    |
| Practical Action    | OHO e.V.          | CC-BY-SA 4.0 | 1 : 8      | 6 / 14   |



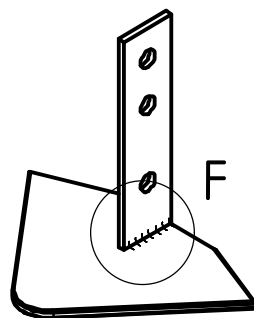
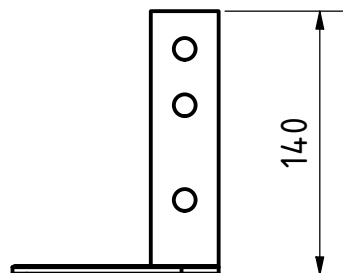
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|---------------------|---------------------------------------------------------------------------------------|--------------|------------|----------|
| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Lateral Flat bar    | DIN EN 10278 30 x 4 - 200                                                             |              |            | 2.2      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
| Practical Action    |  | Part         | Steel A36  | 2        |
|                     |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 2      | 7 /14    |



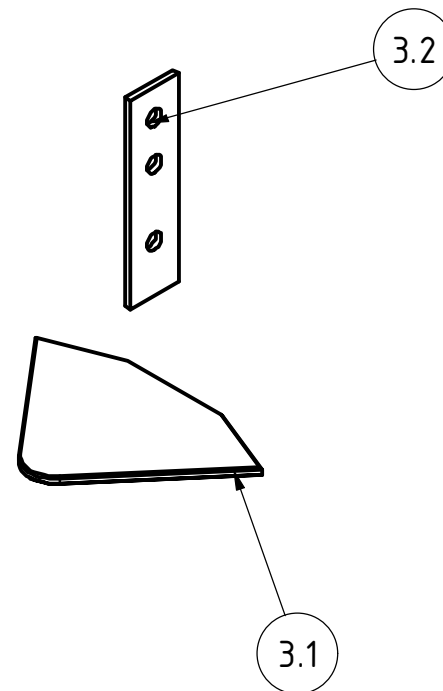
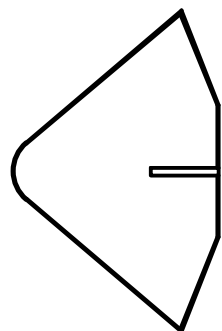
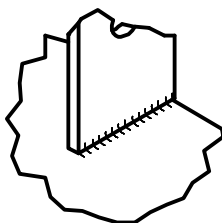
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| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Link hitch          | DIN EN 10210-2 - 33.7 x 2.6 - 50.ipt                                                  |              |            | 2.9      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |  | Part         | Steel A36  | 2        |
| Practical Action    | OHO e.V.                                                                              | LICENCE      | SCALE      | SHEET    |
|                     |                                                                                       | CC-BY-SA 4.0 | 1 : 1      | 8 /14    |



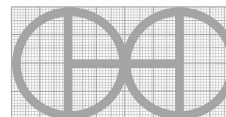
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| PROJECT             | CREATED BY    | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos   | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME     |              |            | POS      |
| Shaft               | Shaft         |              |            | 2.10     |
| DEVELOPED BY        | REDESIGNED BY | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |               | Part         | Steel C45  | 1        |
|                     |               | LICENCE      | SCALE      | SHEET    |
| Practical Action    | OHO e.V.      | CC-BY-SA 4.0 | 1 : 2.5    | 9 /14    |

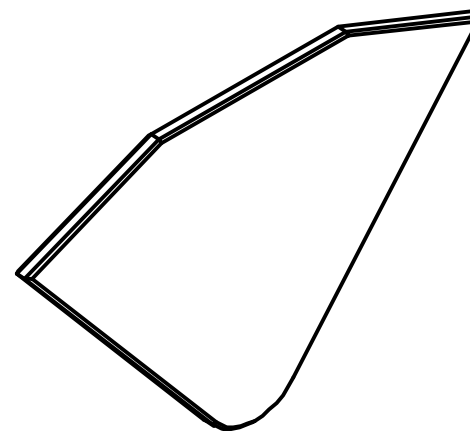
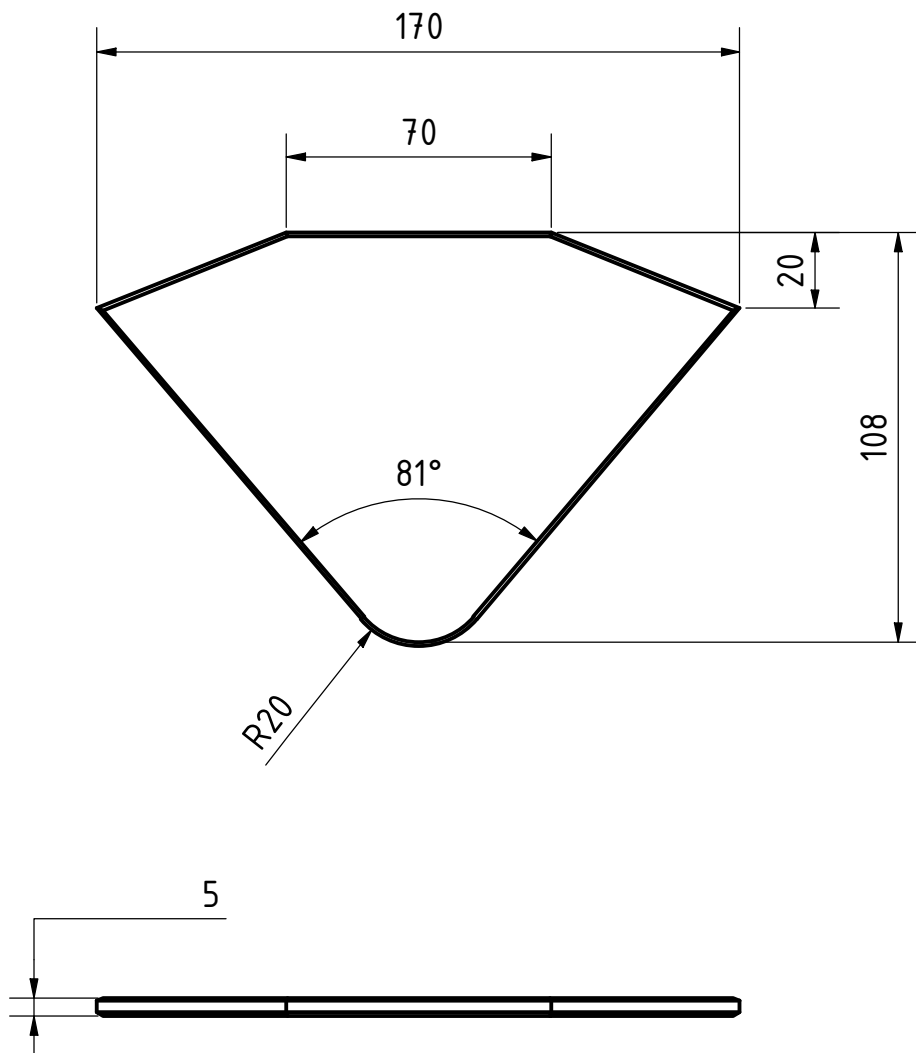


F ( 1 : 2 )

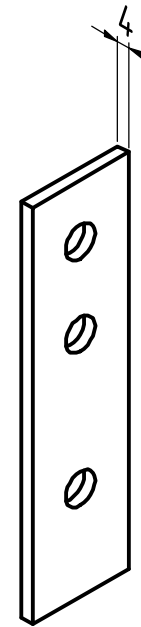
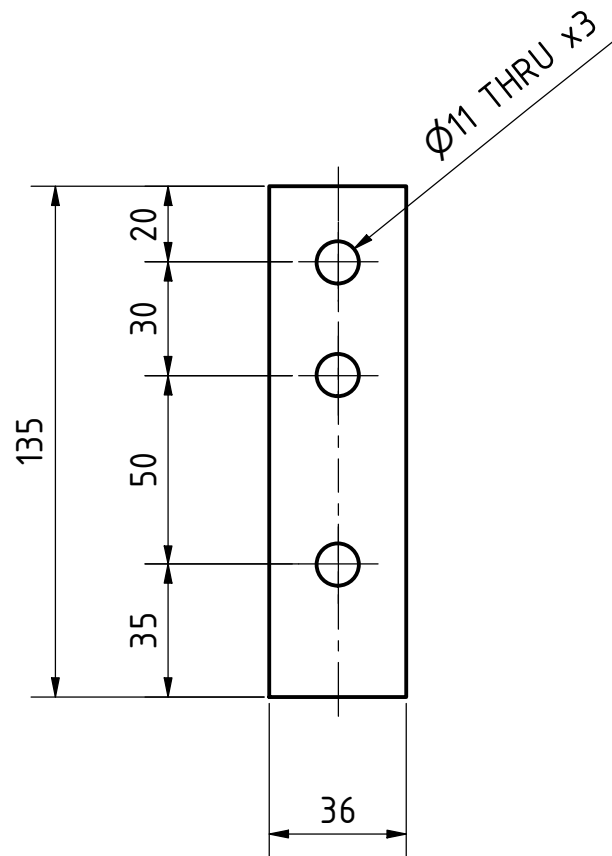


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| PROJECT             | CREATED BY    | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos   | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME     | POS          |            |          |
| Harrow              | Harrow.iam    | 3.0          |            |          |
| DEVELOPED BY        | REDESIGNED BY | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |               | Assembly     |            | 3        |
|                     |               | LICENCE      | SCALE      | SHEET    |
| Practical Action    | OHO e.V.      | CC-BY-SA 4.0 | 1 : 4      | 10 /14   |

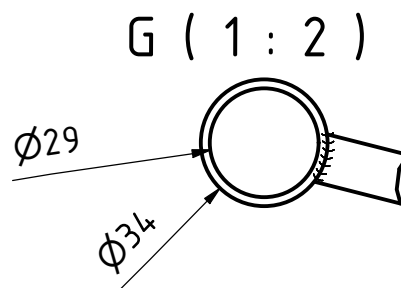
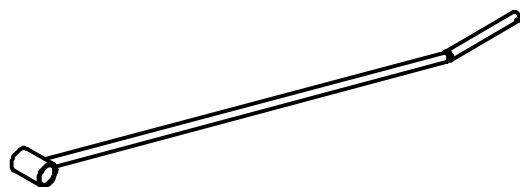
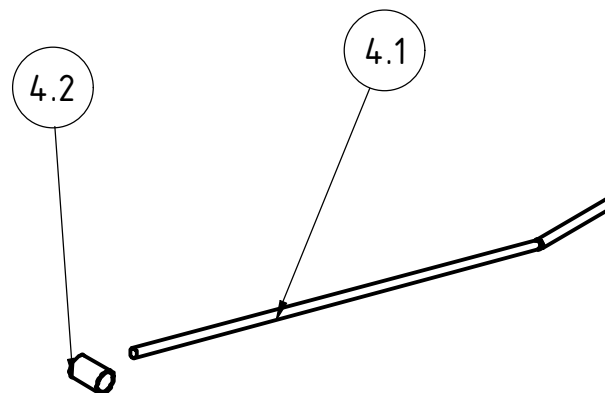
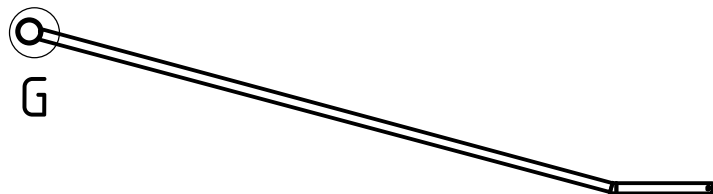


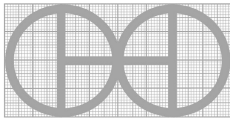


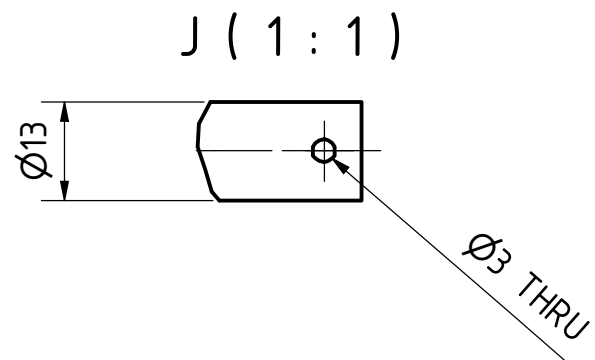
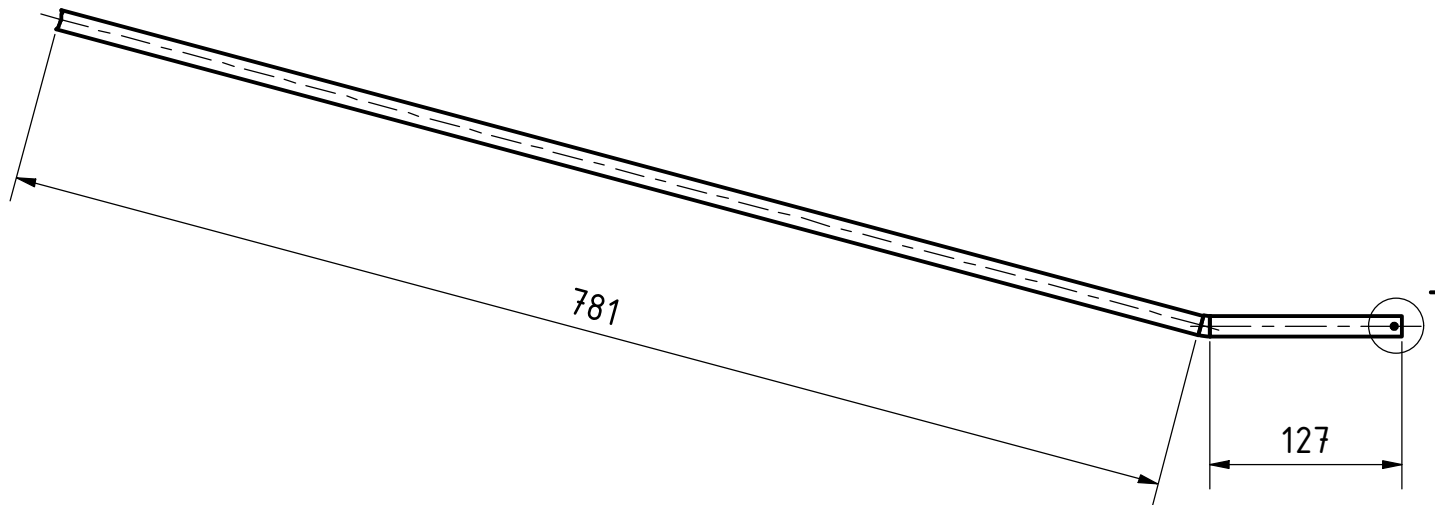
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| PROJECT             | CREATED BY       | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos      | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME        |              |            | POS      |
| Harrow plate        | Harrow plate.ipt |              |            | 3.1      |
| DEVELOPED BY        | REDESIGNED BY    | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |                  | Part         | Steel C45  | 3        |
|                     |                  | LICENCE      | SCALE      | SHEET    |
| Practical Action    | OHO e.V.         | CC-BY-SA 4.0 | 1 : 2      | 11 /14   |

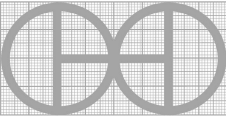


|                     |                                                                                       |              |            |          |
|---------------------|---------------------------------------------------------------------------------------|--------------|------------|----------|
| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Harrow flat bar     | EN 10278 - 36 x 4 - 135.ipt                                                           |              |            | 3.2      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
| Practical Action    |  | Part         | Steel A36  | 3        |
|                     |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 2      | 12 /14   |



|                     |                                                                                       |              |            |          |
|---------------------|---------------------------------------------------------------------------------------|--------------|------------|----------|
| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Ox link             | Ox link.iam                                                                           |              |            | 4.0      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |  | Assembly     |            | 2        |
| Practical Action    |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 10     | 13 /14   |



|                     |                                                                                       |              |            |          |
|---------------------|---------------------------------------------------------------------------------------|--------------|------------|----------|
| PROJECT             | CREATED BY                                                                            | APPROVED BY  | DATE       | VERSION  |
| Dual purpose weeder | E. Ceballos                                                                           | A. Morillo   | 17/09/2021 | 1.0      |
| PART NAME           | FILE NAME                                                                             |              |            | POS      |
| Link bar            | Ox link.iam                                                                           |              |            | 4.1      |
| DEVELOPED BY        | REDESIGNED BY                                                                         | DOC. TYPE    | MATERIAL   | QUANTITY |
|                     |  | Part         | Steel A36  | 2        |
| Practical Action    |                                                                                       | LICENCE      | SCALE      | SHEET    |
|                     | OHO e.V.                                                                              | CC-BY-SA 4.0 | 1 : 5      | 14 /14   |