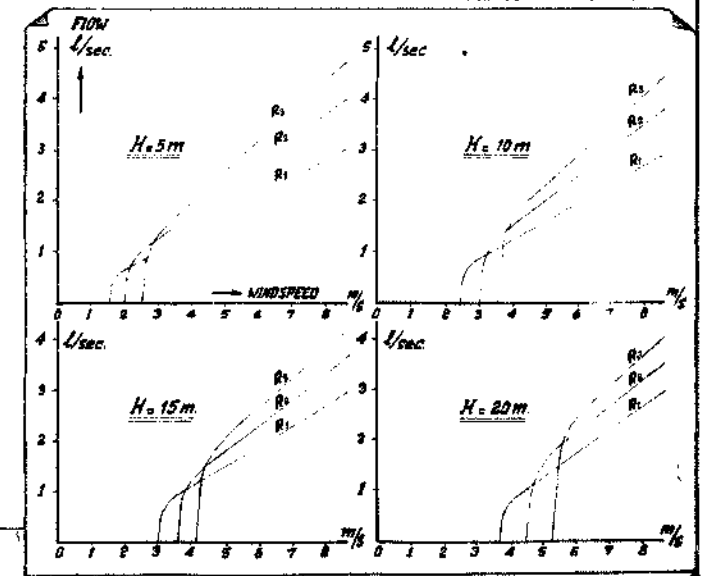
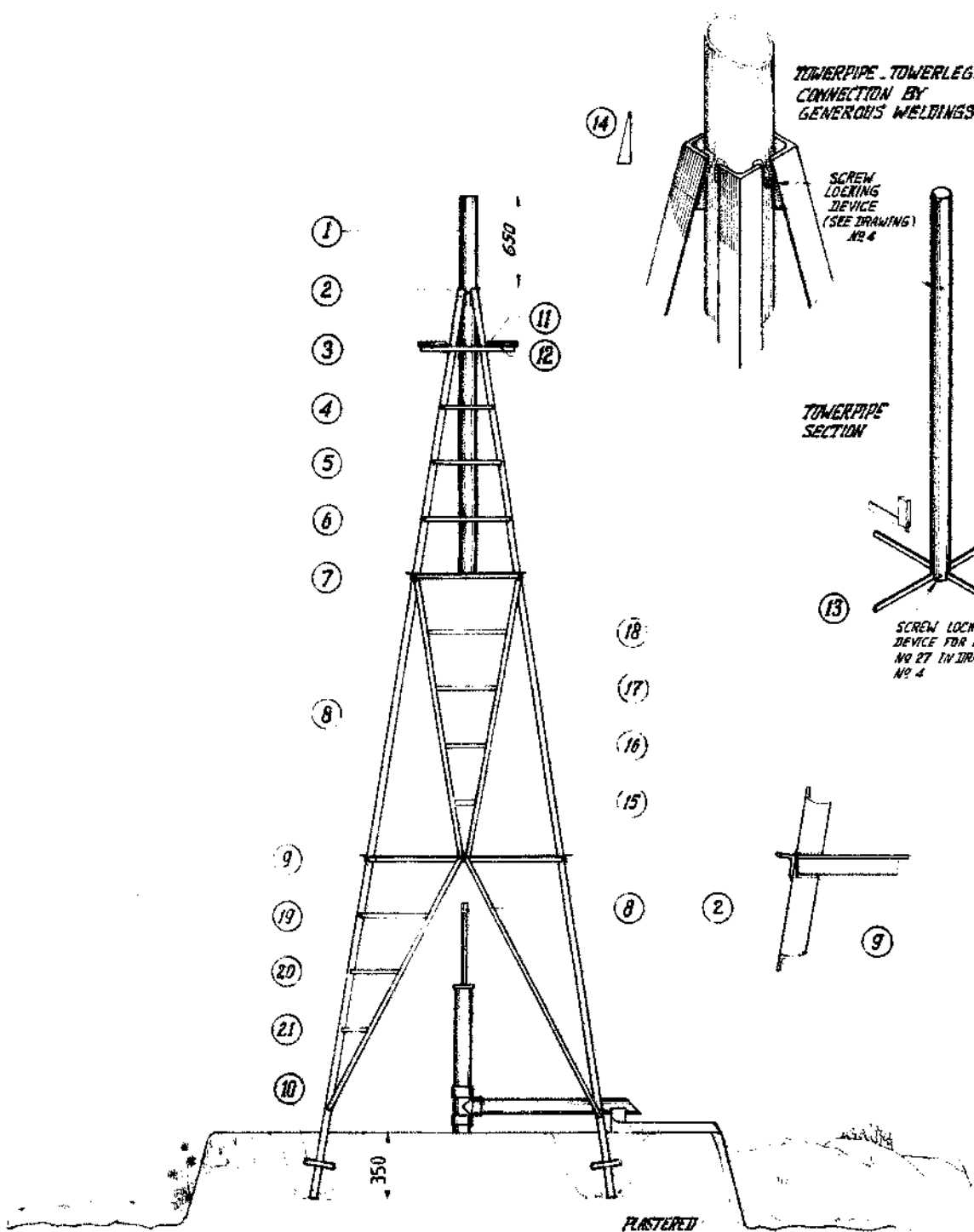


H = ELEVATION HEAD  
 R<sub>1</sub> = 60 mm  
 R<sub>2</sub> = 96 mm - CRANK RADIUS  
 R<sub>3</sub> = 120 mm  
 FOR 150 mm PISTON PUMP:

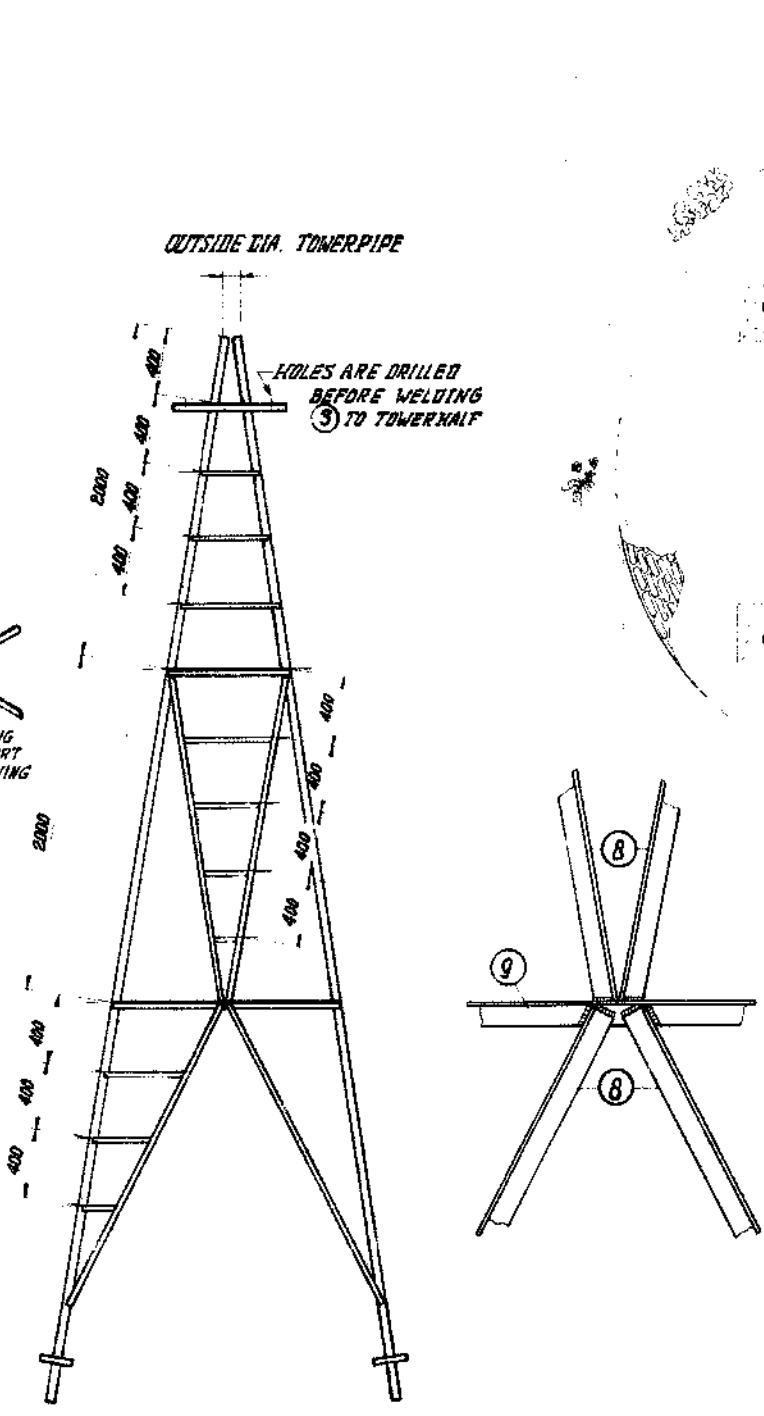


1 OF 7  
**12 PUSHD WINDMILL FOR IRRIGATION**  
 FOR INFORMATION:  
 CIVIL ENGINEERING

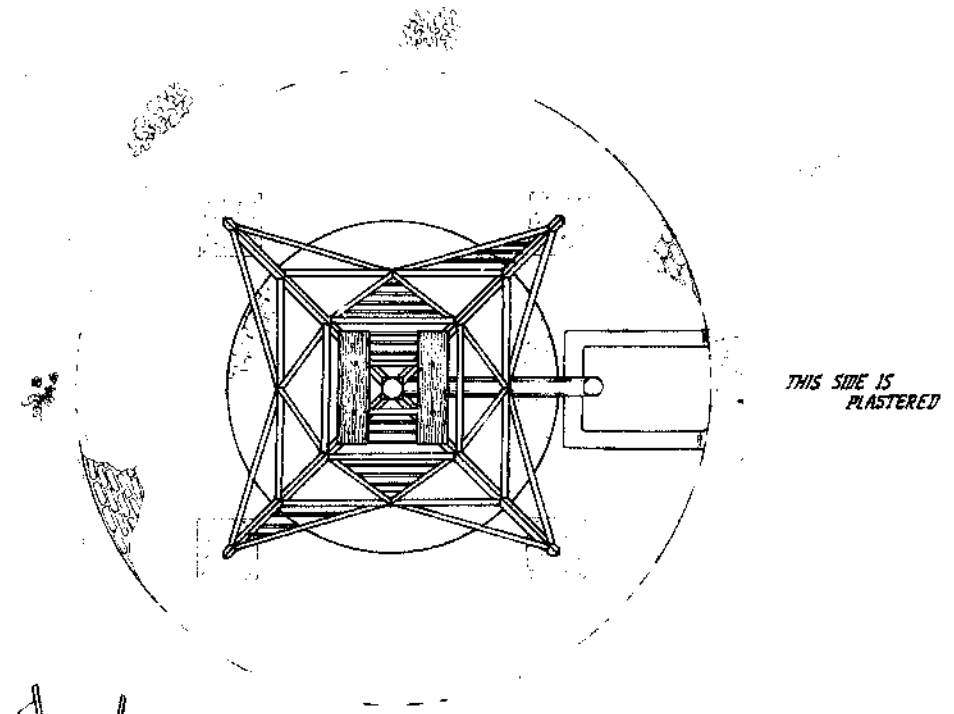
WALL THICKNESS TOWERPIPE NOT LESS THAN 3.5 MM.



IF DESIRED THE LATTICE MEMBERS CAN BE POSITIONED AND WELDED INSIDE THE TOWER LEGS RESULTING IN A MORE ATTRACTIVE APPEARANCE OF THE TOWER. HOWEVER THE FLANGES AT THE ENDS OF THE ANGLE-IRON MEMBERS NO 7 AND NO 9 SHOULD BE CUT AT ANGLES OF 45 DEGREES.

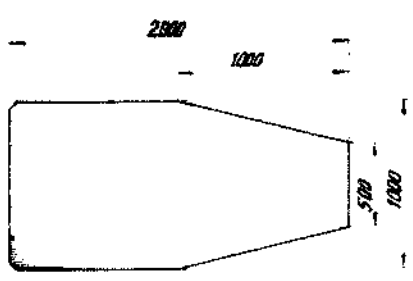


FIRST TWO OF THESE TOWERHALVES ARE PREFABRICATED BOTH HALVES ARE COMPOSED AND THE TOWERPIPE SECTION IS SHIPPED IN AND A COMPLETE TOWER RESULTS



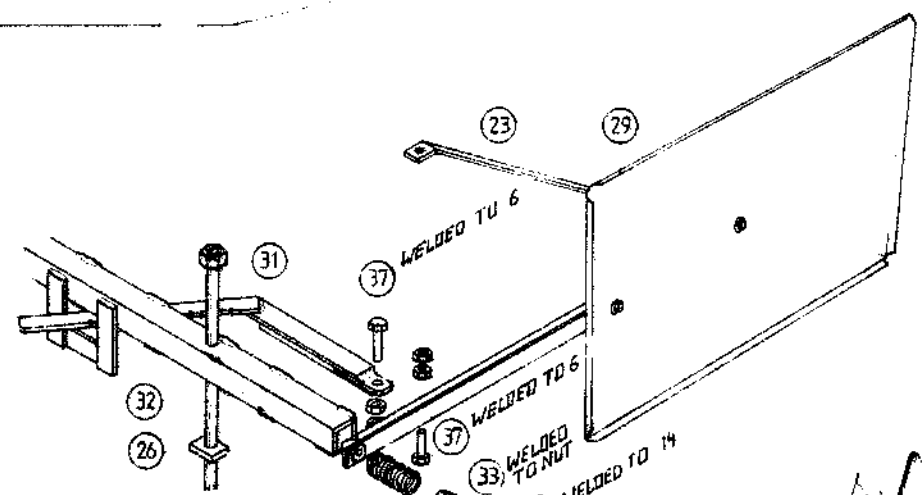
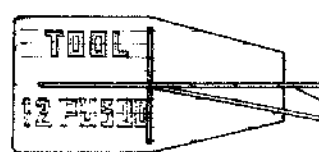
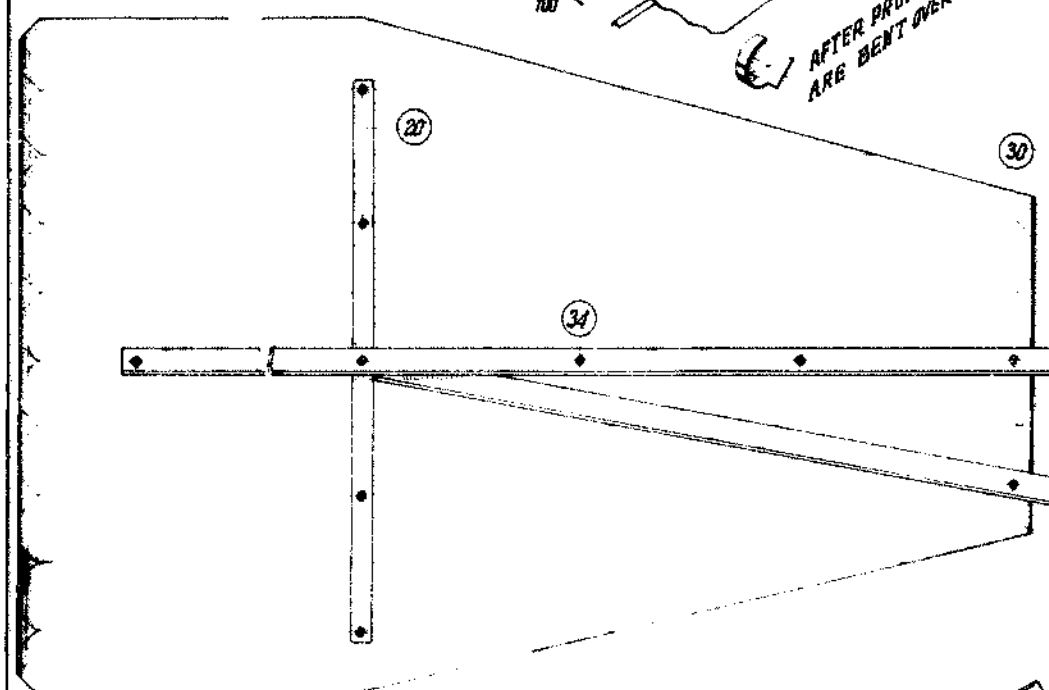
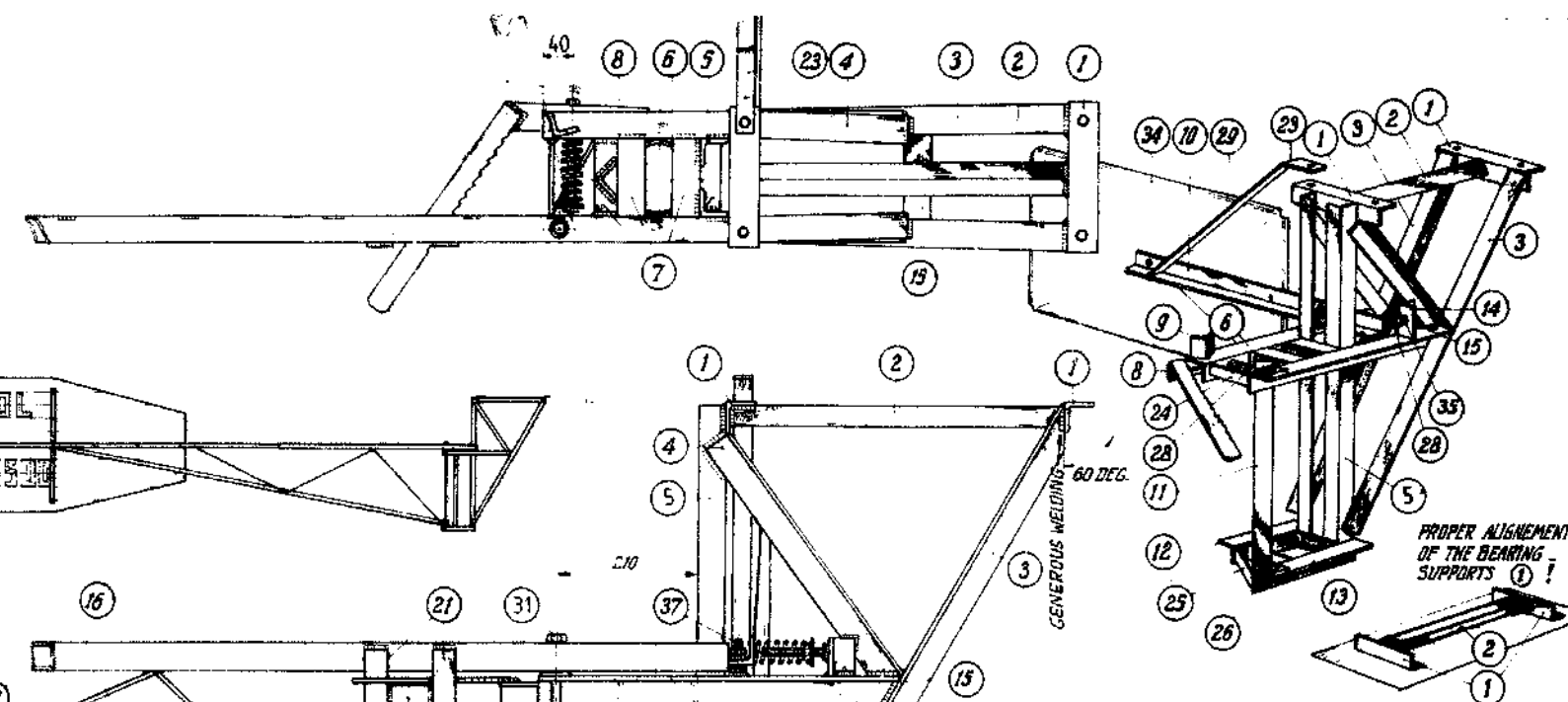
21	2	FLAT IRON	30 X 6 (1 1/4" X 1/4")	X	220
20	2			X	360
19	2			X	500
18	2			X	570
17	2			X	440
16	2			X	310
15	2			X	100
14	8			X	SCRAP
13	4			X	450
12	4	BOLT NUT WASHERS	M 8 (W 9/8")		
11	2	PLANK	30 X 200 X 700		
10	4	ANGLE IRON	30 X 30 X 3 (1 1/4" X 1/4")		SCRAP
9	4			X	1350
8	16			X	1760
7	4			X	700
6	2	FLAT IRON	30 X 6 (1 1/4" X 1/4")	X	570
5	2			X	460
4	2			X	340
3	2	ANGLE IRON	30 X 30 X 3 (1 1/4" X 1/4")	X	660
2	4		40 X 40 X 4 (1 1/2" X 1/2")	X	6500
1	1	TOWERPIPE	4" GAS PIPE	X	2650

NO. 2 OF 7  
**12 PU500 - TOWER CONSTRUCTION**  
 FOR INFORMATION:

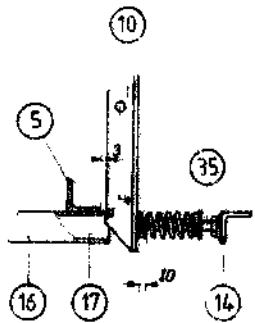
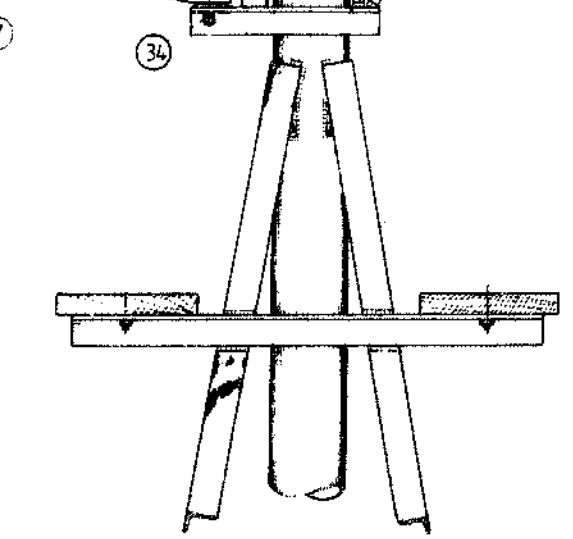
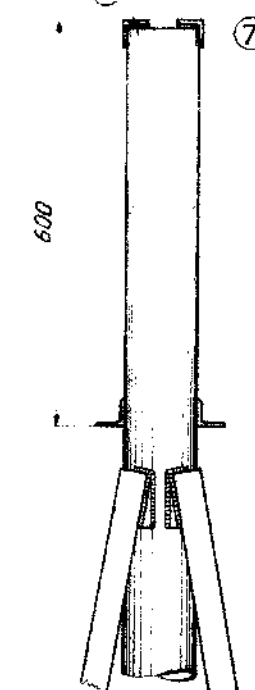


HAMMERING PROFILES INTO THE VANE SHEET INCREASES RIGIDITY

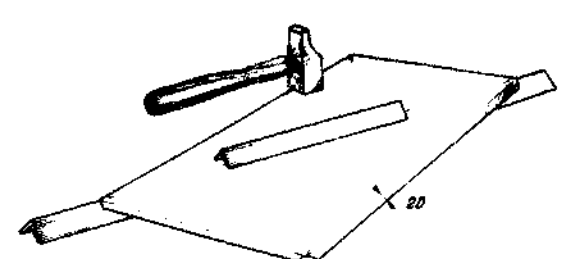
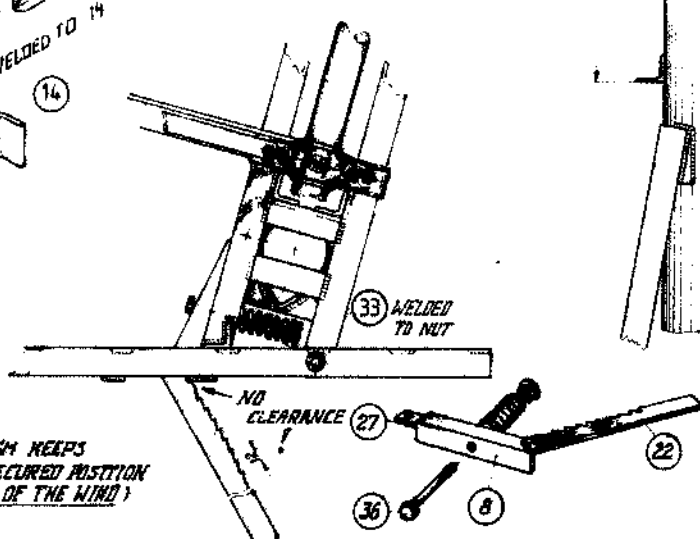
AFTER PROFILING THE EDGES ARE BENT OVER



WEARING FLAT 21



LOCK MECHANISM KEEPS WINDMILL IN SECURED POSITION (75 DEG. OUT OF THE WIND)



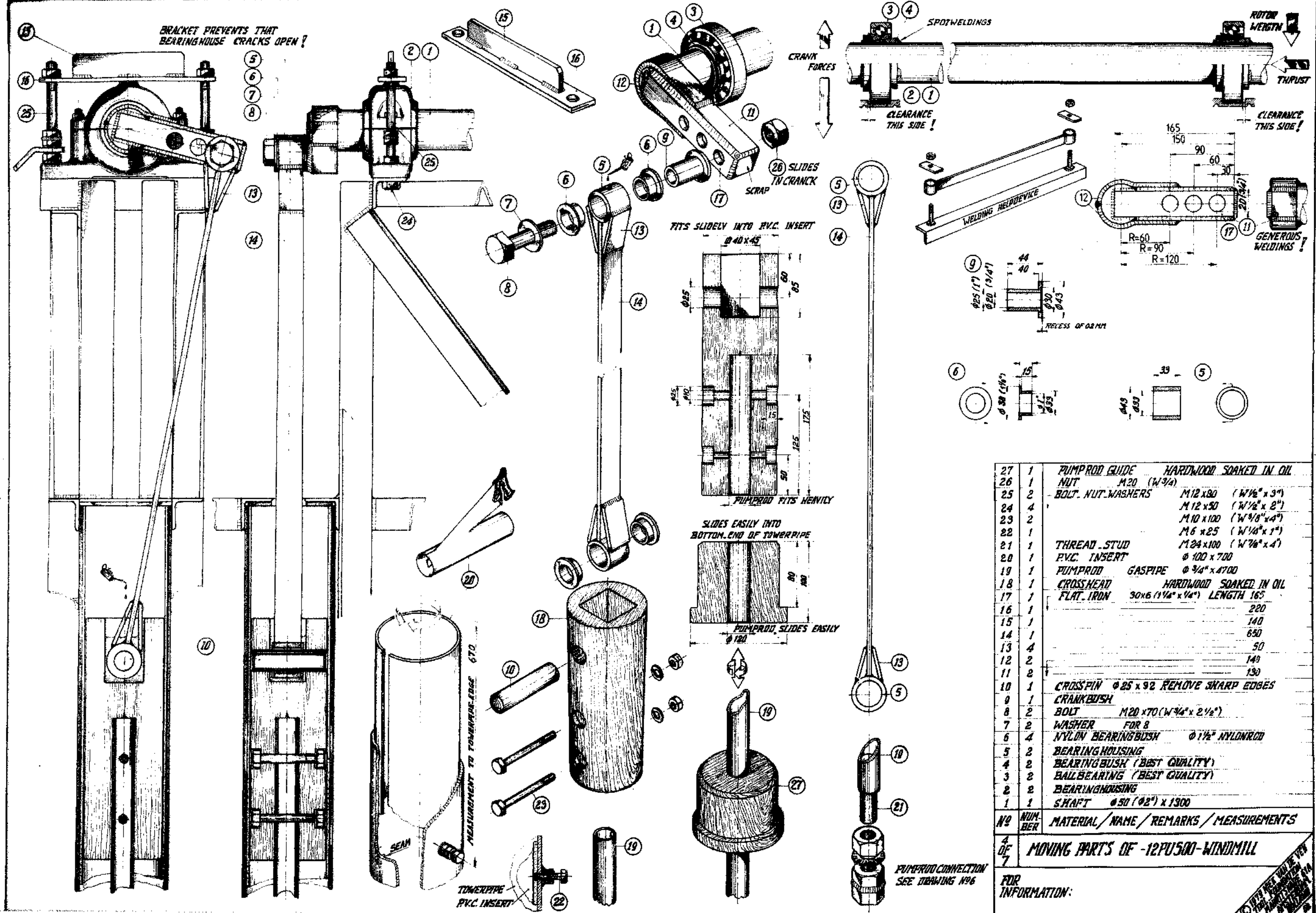
HELPVANE SHEET IS PROFILED DIAGONALWISE AND EDGES ARE BENT OVER 45 DEG.

37	2	BOLT, NUT, WASHER	M 12 x 40	(W 1/2" x 1 1/2")
36	1	---	M 10 x 150	(W 3/8" x 6")
35	1	---	M 12 x 100	(W 1/2" x 4")
34	13	---	M 6 x 25	(W 1/4" x 1")
33	2	WASHER	Ø 12	(Ø 1/2")
32	1	ROD	Ø 18 x 650	(Ø 3/4" x 2'2")
31	1	NUT	M 20	(W 7/8")
30	1	TRIVANE	1 mm SHEET	2000 x 1000
29	1	HELPVANE		1000 x 500
28	2	SPRING	APPR. Ø 30 x 100	Y Ø 4
27	1	FLAT IRON	30 x 6 (1 1/4" x 1/4")	LENGTH 100
26	2			50
25	2			130
24	1			115
23	1			900
22	1			360
21	4			90
20	1			830
19	3			750
18	1	ANGLE IRON	40 x 40 x 4 (1 1/2" x 1 1/2")	LENGTH 3000
17	1			4000
16	1			1500
15	1			120
14	1			60
13	1			280
12	1			200
11	1			580
10	1			1000
9	1			45
8	1			180
7	4			TOWER PIPE DIA.
6	2			540
5	2			1000
4	2			460
3	2			1080
2	1			500
1	2			50 x 50 x 5 (2" x 2") 240

NO. 3 OF 7 HEAD CONSTRUCTION - 12 PU 500 - WINDMILL

FOR INFORMATION:

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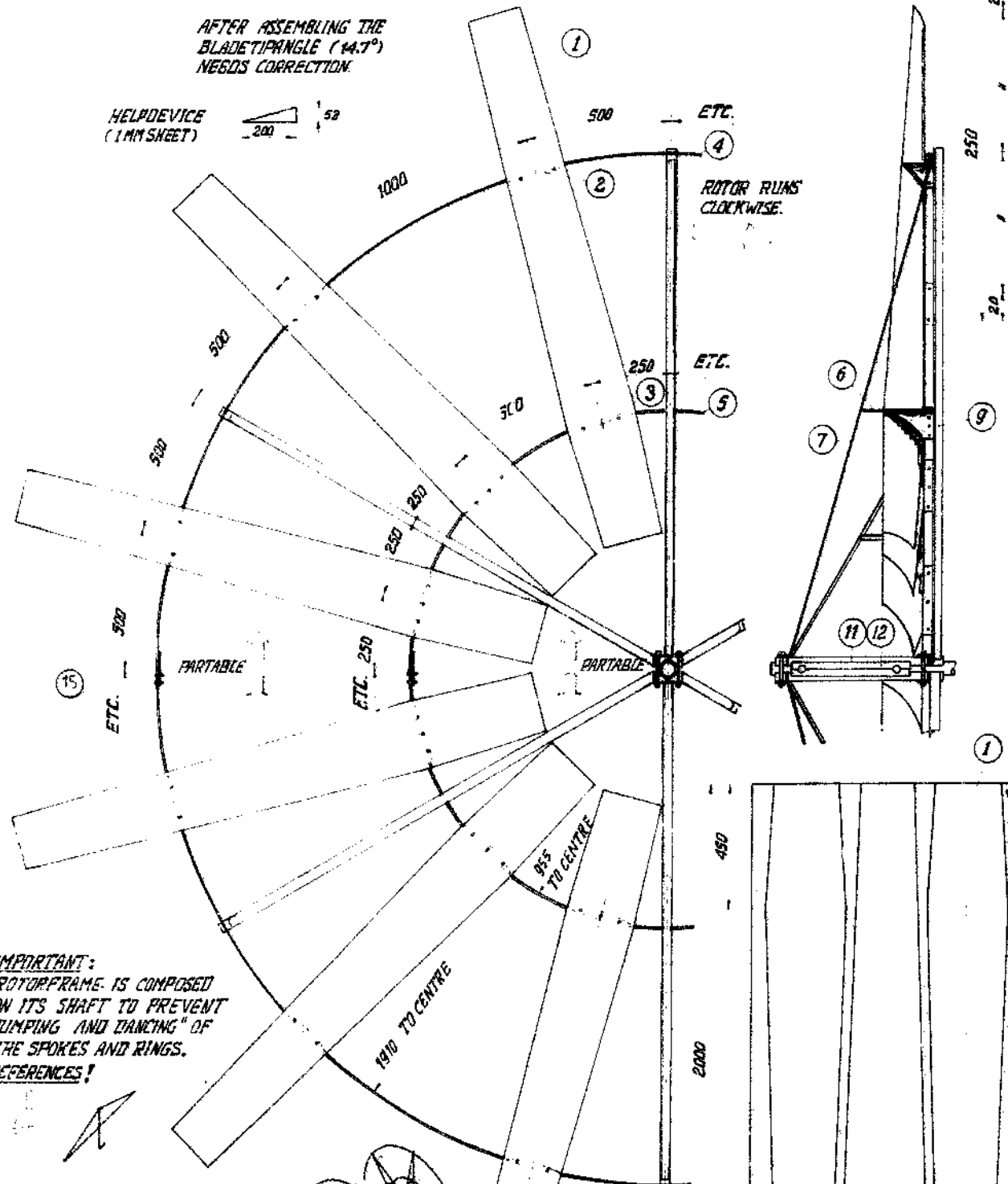
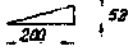


27	1	PUMPROD GUIDE	HARDWOOD SOAKED IN OIL
26	1	NUT	M20 (W3/4)
25	2	BOLT, NUT, WASHERS	M12 x 80 (W1/2" x 3")
24	4		M12 x 50 (W1/2" x 2")
23	2		M10 x 100 (W3/8" x 4")
22	1		M6 x 25 (W1/8" x 1")
21	1	THREAD STUD	M24 x 100 (W3/4" x 4")
20	1	PVC INSERT	Ø 100 x 700
19	1	PUMPROD	GASPIPE Ø 3/4" x 4700
18	1	CROSSHEAD	HARDWOOD SOAKED IN OIL
17	1	FLAT IRON	30x6 (1 1/4" x 1/4") LENGTH 165
16	1		220
15	1		140
14	1		650
13	4		50
12	2		140
11	2		130
10	1	CROSSPIN	Ø 25 x 92 REMOVE SHARP EDGES
9	1	CRANKBUSH	
8	2	BOLT	M20 x 70 (W3/4" x 2 1/2")
7	2	WASHER	FOR 8
6	4	NYLON BEARINGBUSH	Ø 1 1/2" NYLON ROD
5	2	BEARING HOUSING	
4	2	BEARINGBUSH (BEST QUALITY)	
3	2	BALL BEARING (BEST QUALITY)	
2	2	BEARING HOUSING	
1	1	SHAFT	Ø 50 (Ø 2") x 1300
NO	NUM-BER	MATERIAL / NAME / REMARKS / MEASUREMENTS	
4	OF 7	MOVING PARTS OF -12PU500-WINDMILL	
		FOR INFORMATION:	

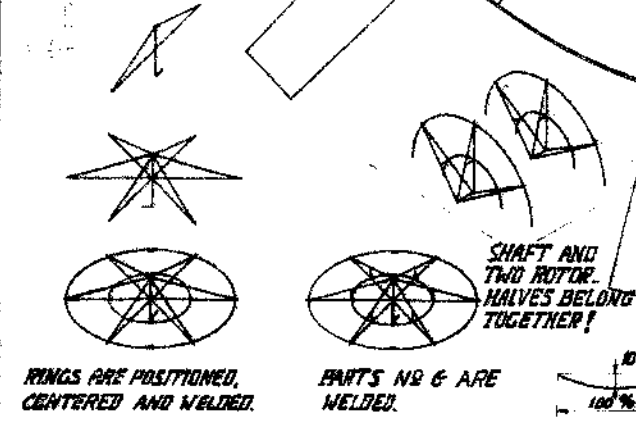
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AFTER ASSEMBLING THE BLADE TIP ANGLE (14.7°) NEEDS CORRECTION.

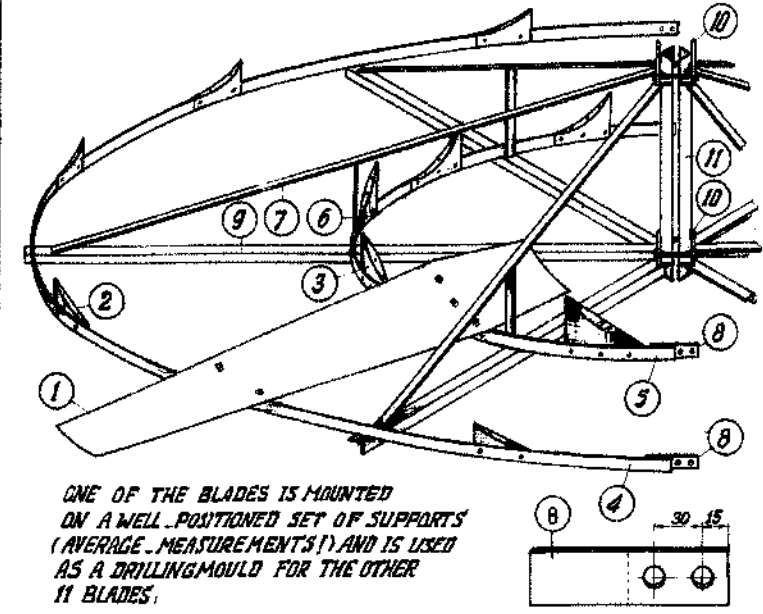
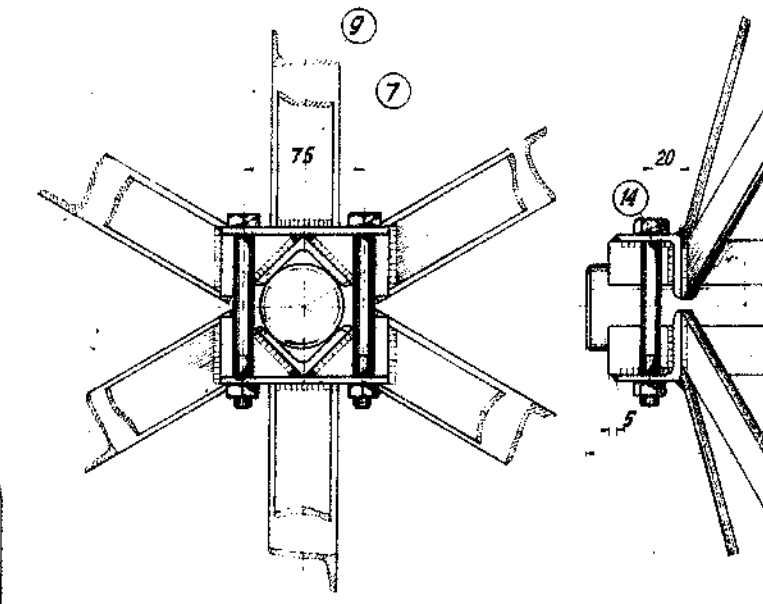
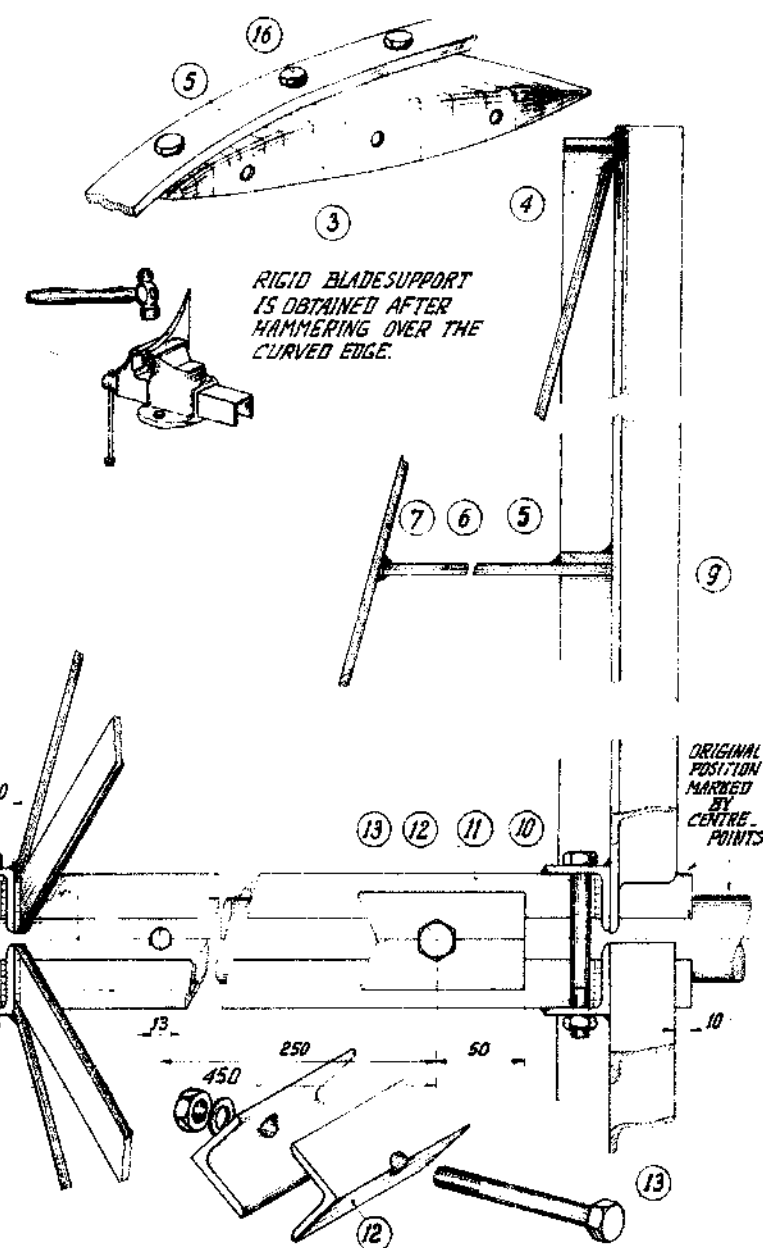
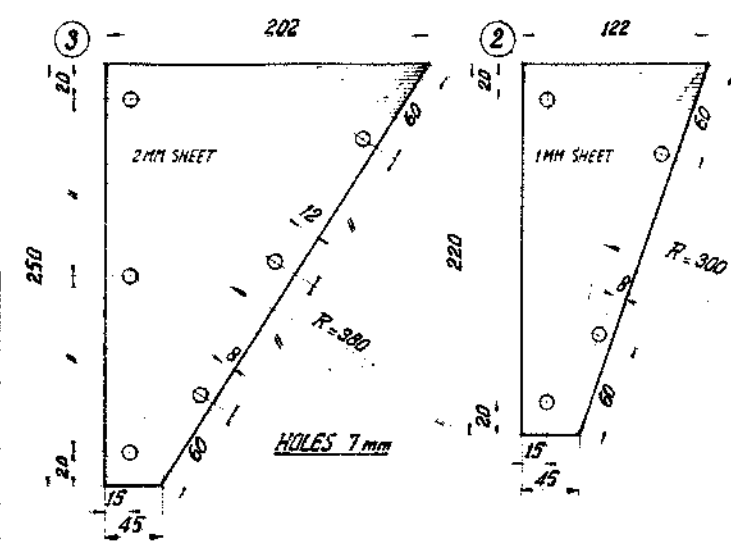
HELPODEVICE (1MM SHEET)



**IMPORTANT:**  
ROTOR FRAME IS COMPOSED ON ITS SHAFT TO PREVENT "JUMPING AND DANCING" OF THE SPOKES AND RINGS.  
REFERENCES!



SHEET IS ROLLED IN A BENDING - RADIUS OF APPR. 300 mm AFTER CUTTING THE RADIUS IS CORRECTED SO THAT 10% CURVED AIRFOILS WILL RESULT.

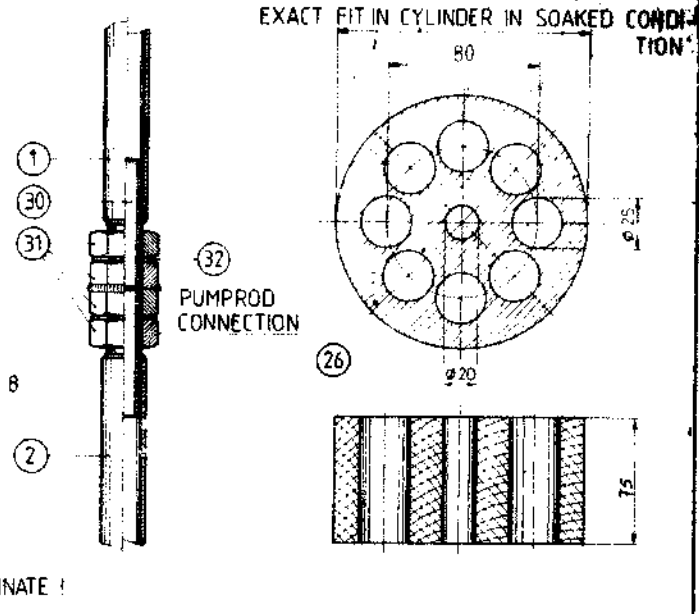
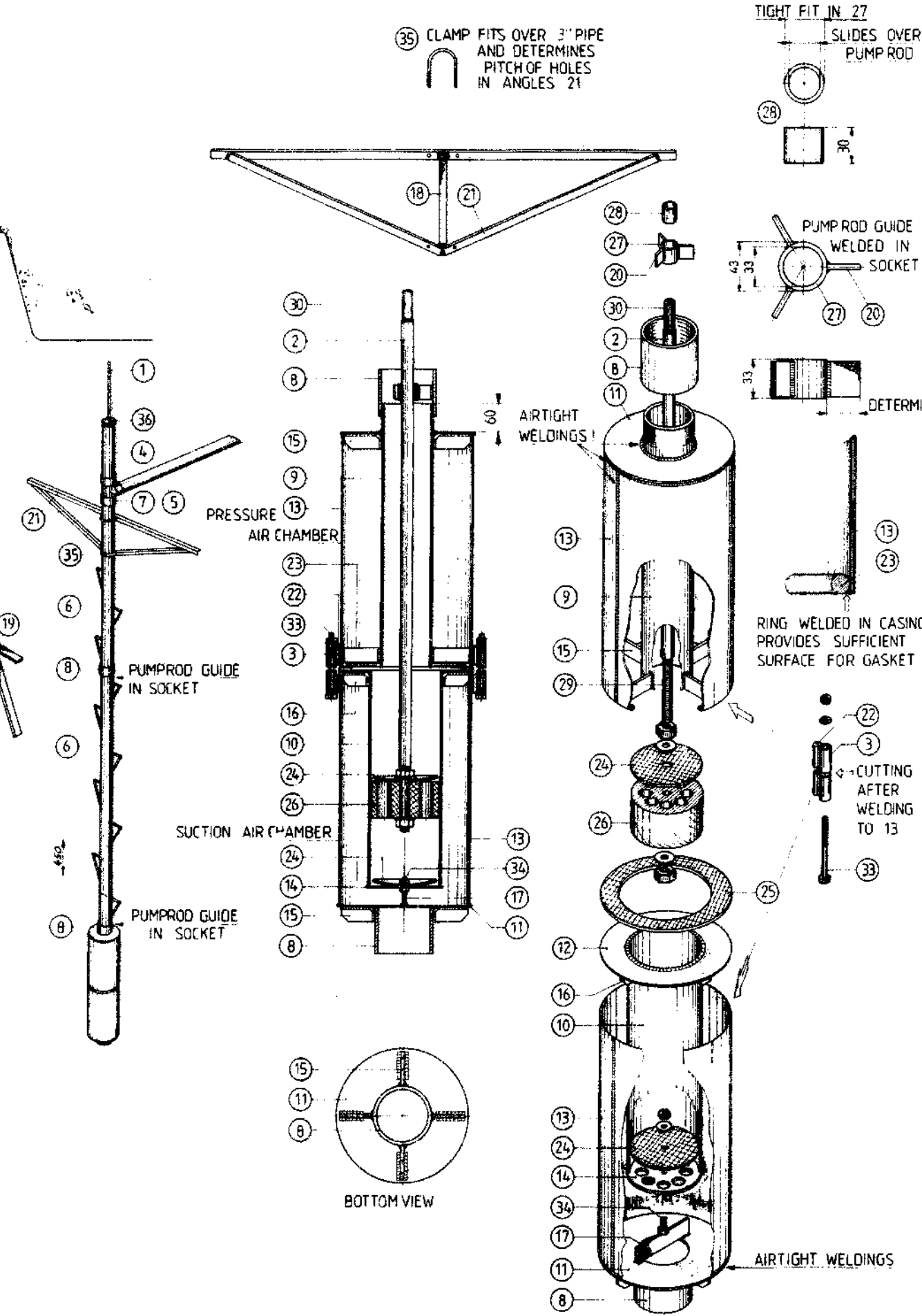
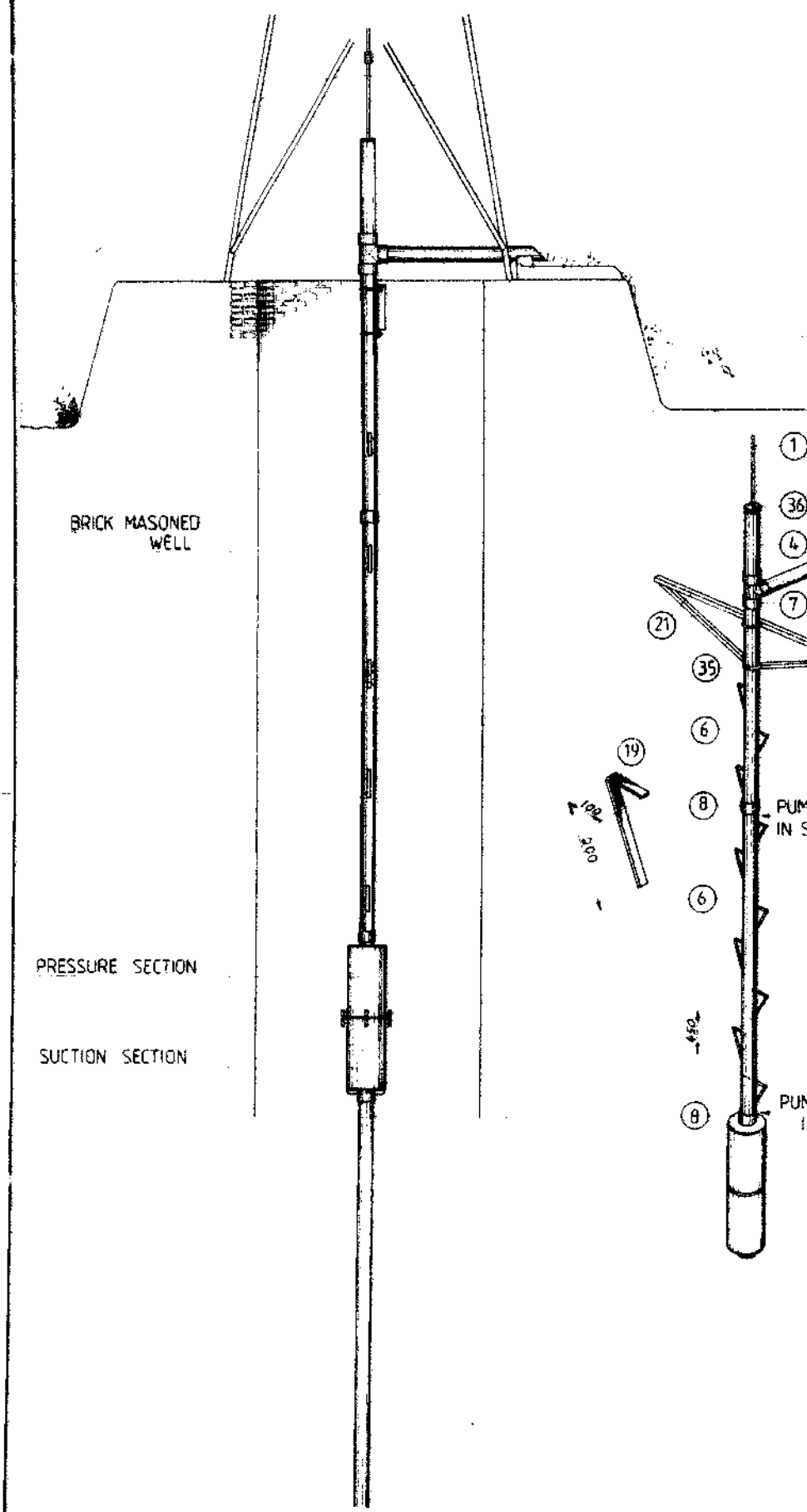


ONE OF THE BLADES IS MOUNTED ON A WELL POSITIONED SET OF SUPPORTS (AVERAGE MEASUREMENTS) AND IS USED AS A DRILLING MOULD FOR THE OTHER 11 BLADES.

16	120	BOLT, NUT, WASHER	M6 x 20 (W 1/4" x 9/16")
15	8		M10 x 25 (W 3/8" x 1")
14	4		M12 x 100 (W 1/2" x 4")
13	2		M12 x 125 (W 1/2" x 5")
12	2	ANGLE IRON	50 x 50 x 5 (2" x 2") x 350
11	2		40 x 40 x 4 (1 1/2" x 1 1/2") x 685
10	4		x 100
9	6		x 1900
8	4	FLAT IRON	30 x 6 (1 1/4" x 1/4") x 120
7	6		x 1900
6	6		x 250
5	2		x 3000
4	2		x 6000
3	12	BLADE SUPPORT	2mm SHEET
2	12		1mm
1	12	BLADE	4 STANDARD SHEETS 1000 x 2000 x 1

NO	QTY	MATERIAL/NAME/REMARKS/MEASUREMENTS
5	OF	7
ROTOR FOR - 12 PU 500 - WINDMILL (λ=2)		
FOR INFORMATION:		

R 2 Y 2



\* AMOUNT OR SIZE DEPEND ON CIRCUMSTANCES

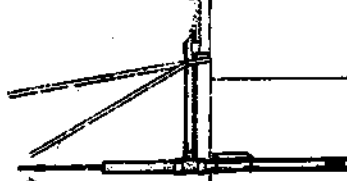
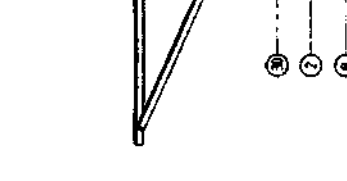
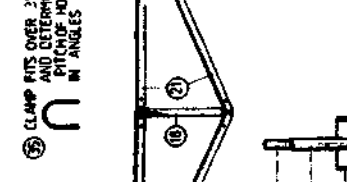
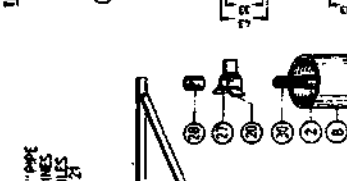
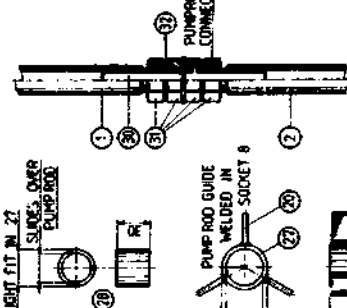
36	1	WOODEN PUMPROD GUIDE	27 IN DRAWING NO 4
35	2	CLAMP	ROD $\phi 12$ ( $\frac{1}{2}$ " ) $\times 300$
34	1	BOLT - NUT - WASHER	M12 $\times 20$ (W $\frac{1}{2}$ " $\times \frac{3}{4}$ " )
33	4	BOLT NUT WASHER	M12 $\times 25$ (W $\frac{1}{2}$ " $\times 5$ " )
32	*	SPRING WASHERS	M24 (W $\frac{7}{8}$ " )
31	*	NUTS	M24 (W $\frac{7}{8}$ " )
30	*	THREAD STUD	M24 $\times 100$ (W $\frac{7}{8}$ " $\times 4$ " )
29	1	THREAD STUD	M24 $\times 150$ (W $\frac{7}{8}$ " $\times 6$ " )
28	*	GUN METAL BUSH	$\phi 33 \times 30$
27	*	STEEL BUSH	$\phi 43 \times 33$
26	1	PISTON	TEAK WOOD
25	1	GASKET	SOLE LEATHER $\phi 250 \times 6$
24	2	VALVE	$\phi 125 \times 6$
23	1	RING	ROD $\phi 8$ ( $\frac{7}{8}$ " ) $\times 74.5$
22	8	FILLING PIECE	$\times 40$
21	2	ANGLE IRON	40 $\times 40 \times 4$ ( $1\frac{1}{2}$ " $\times 1\frac{1}{2}$ " ) $\times$ "
20	3	FLAT IRON	30 $\times 6$ ( $1\frac{1}{4}$ " $\times \frac{1}{4}$ " ) $\times$ "
19	*		$\times 300$
18	1		$\times 450$
17	1		$\times 155$
16	4		$\times 50$
15	12		$\times 75$
14	1	FOOT VALVE	2 mm SHEET $\phi 145$
13	2	CASING	500 $\times 775$
12	1	CASING FLANGE	$\phi 250$
11	2	CASING FLANGE	$\phi 250$
10	1	CYLINDER SEAMLESS	5" GASPIPE $\times 460$
9	1	DELIVERY PIPE	3" $\times 560$
8	*	SOCKET	FOR 3"
7	1	T - SOCKET	3"
6	*	DELIVERY PIPE (EXTENSION)	3" $\times$ "
5	1	EXHAUST PIPE	3" $\times$ "
4	1	TOP PIPE	3" $\times 750$
3	4	PIPE	$\frac{1}{2}$ " $\times 100$
2	1	PUMPROD	$\frac{3}{4}$ " $\times 950$
1	*	PUMPROD EXTENSION	$\frac{3}{4}$ " $\times$ "

NO	NUMBER	MATERIAL / NAME / REMARKS	MEASUREMENTS
6	OF	5" PISTON PUMP	FOR 12 PU 500
7			

FOR INFORMATION :

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 ROCK FOUNDATION  
 AUSTRALIA MADE IN  
 AUSTRALIA

EXACT FIT IN CYLINDER IN SOAKED CONDENSED THIN



\* AMOUNT OR SIZE DEPEND ON CIRCUMSTANCES

30	1	WOODEN PUMP ROD GUIDE	27 IN DRAWING NO 6
35	2	CLAMP	ROD $\phi$ 12 (1") $\times$ 300
36	1	BOLT - NUT - WASHER	M 12 $\times$ 20 (1/2" $\times$ 8")
33	4	BOLT - NUT - WASHER	M 12 $\times$ 125 (1/2" $\times$ 5")
32	4	SPRING WASHERS	M 12 (1/2")
31	1	NUTS	M 26 (1 1/4")
30	1	THREAD STUD	M 18 $\times$ 100 (3/4" $\times$ 4")
29	1	THREAD STUD	M 26 $\times$ 150 (1 1/4" $\times$ 6")
28	1	QUA METAL BRUSH	$\phi$ 33 $\times$ 30
27	1	STEEL BRUSH	$\phi$ 43 $\times$ 33
26	1	PISTON	PEAR WOOD
25	1	GASKET	SOLE LEATHER $\phi$ 50 $\times$ 6
24	1	VALVE	$\phi$ 125 $\times$ 6
23	1	RING	ROD $\phi$ 8 (5/8") $\times$ 755
22	0	FLANG PIECE	ANGLE IRON
21	2	ANGLE IRON	30 $\times$ 30
20	3	FLAT IRON	30 $\times$ 6 (1 1/4") $\times$ 300
19	1		$\phi$ 165
18	1		$\phi$ 175
17	1		$\phi$ 185
16	1		$\phi$ 250
15	1		$\phi$ 250
14	1		$\phi$ 250
13	2	CASING FLANGE	5" GASPIPE $\times$ 60
12	2	CYLINDER SEAMLESS	FOR
11	1	DELIVERY PIPE	FOR
10	1	DELIVERY PIPE	FOR
9	1	DELIVERY PIPE (EXTENSION)	FOR
8	1	DELIVERY PIPE	FOR
7	1	DELIVERY PIPE	FOR
6	1	DELIVERY PIPE	FOR
5	1	DELIVERY PIPE	FOR
4	1	DELIVERY PIPE	FOR
3	1	DELIVERY PIPE	FOR
2	1	DELIVERY PIPE	FOR
1	1	DELIVERY PIPE	FOR

FOR INFORMATION:  
 5" PISTON PUMP FOR 12 PU 900

BRICK MASONED WELL

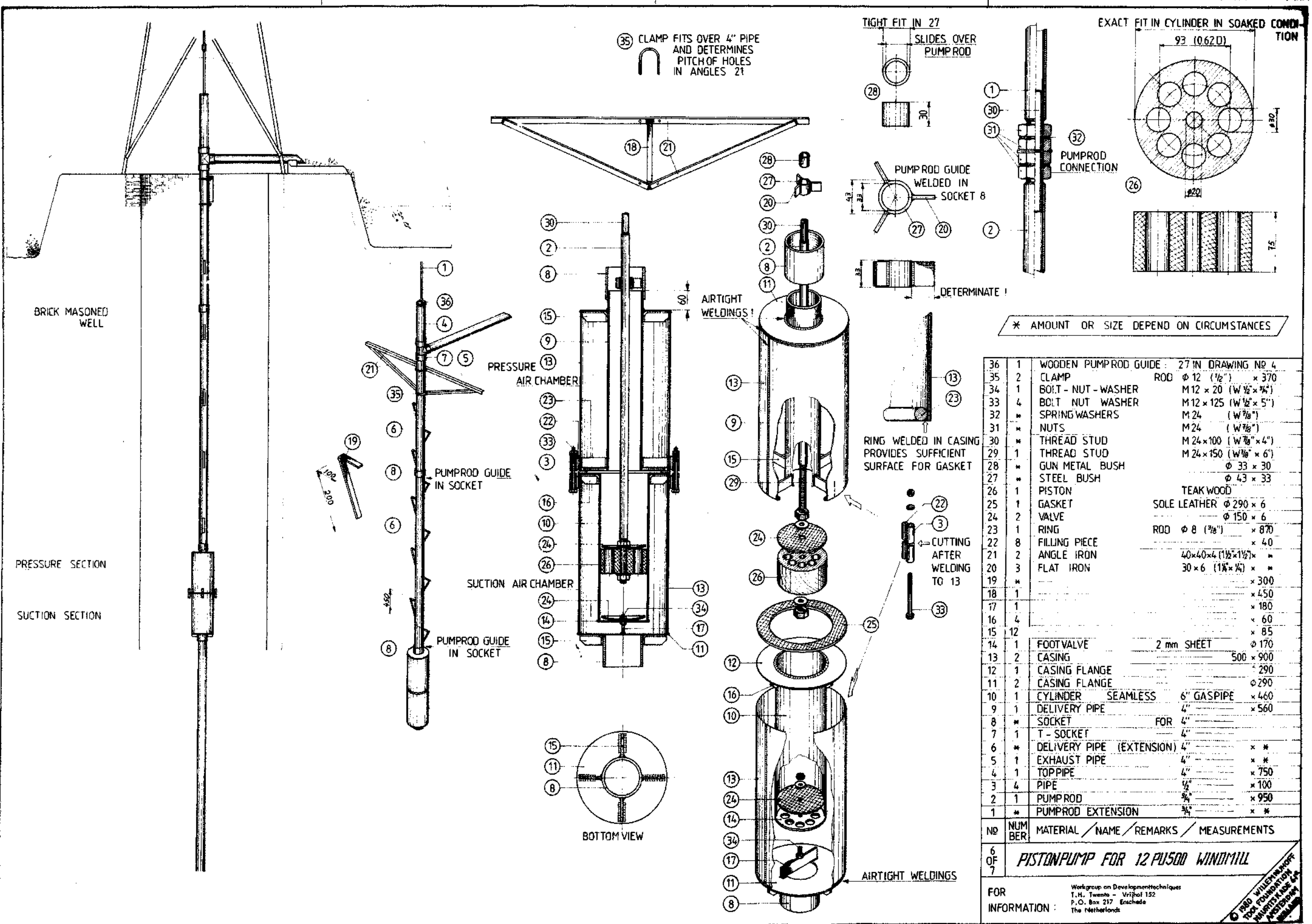
PRESSURE SECTION

SUCTION SECTION

AIR TIGHT WELDINGS

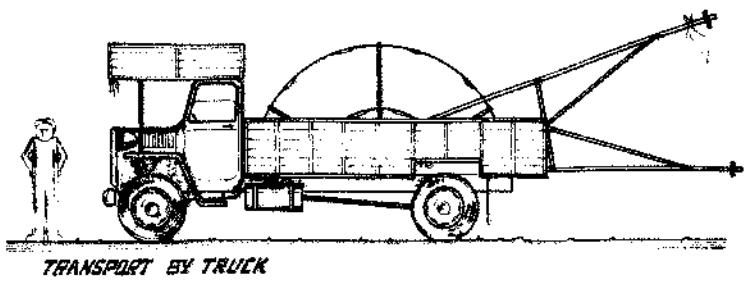
BOTTOM VIEW



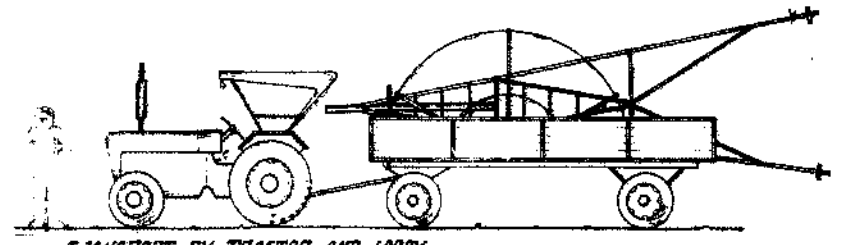


NO	NUM	MATERIAL / NAME / REMARKS / MEASUREMENTS
36	1	WOODEN PUMPROD GUIDE: 27 IN DRAWING NO 4
35	2	CLAMP ROD $\phi 12$ ( $\frac{1}{2}$ " ) x 370
34	1	BOIT - NUT - WASHER M12 x 20 (W $\frac{1}{2}$ " x $\frac{1}{4}$ " )
33	4	BOIT NUT WASHER M12 x 125 (W $\frac{1}{2}$ " x 5")
32	*	SPRING WASHERS M24 (W $\frac{7}{8}$ " )
31	*	NUTS M24 (W $\frac{7}{8}$ " )
30	*	THREAD STUD M24 x 100 (W $\frac{7}{8}$ " x 4")
29	1	THREAD STUD M24 x 150 (W $\frac{7}{8}$ " x 6")
28	*	GUN METAL BUSH $\phi 33$ x 30
27	*	STEEL BUSH $\phi 43$ x 33
26	1	PISTON TEAK WOOD
25	1	GASKET SOLE LEATHER $\phi 290$ x 6
24	2	VALVE $\phi 150$ x 6
23	1	RING ROD $\phi 8$ ( $\frac{3}{8}$ " ) x 870
22	8	FILLING PIECE x 40
21	2	ANGLE IRON 40x40x4 (1 1/2" x 1 1/2" ) x *
20	3	FLAT IRON 30 x 6 (1 1/8" x 1/4" ) x *
19	*	x 300
18	1	x 450
17	1	x 180
16	4	x 60
15	12	x 85
14	1	FOOTVALVE 2 mm SHEET $\phi 170$
13	2	CASING 500 x 900
12	1	CASING FLANGE $\phi 290$
11	2	CASING FLANGE $\phi 290$
10	1	CYLINDER SEAMLESS 6" GASPIPE x 460
9	1	DELIVERY PIPE 4" x 560
8	*	SOCKET FOR 4"
7	1	T - SOCKET 4"
6	*	DELIVERY PIPE (EXTENSION) 4" x *
5	1	EXHAUST PIPE 4" x *
4	1	TOPPIPE 4" x 750
3	4	PIPE 1/2" x 100
2	1	PUMPROD 3/4" x 950
1	*	PUMPROD EXTENSION 3/4" x *

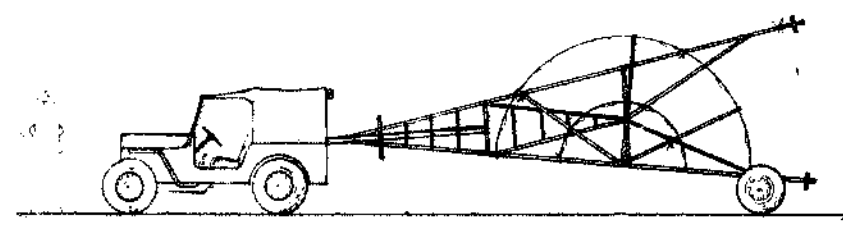




TRANSPORT BY TRUCK

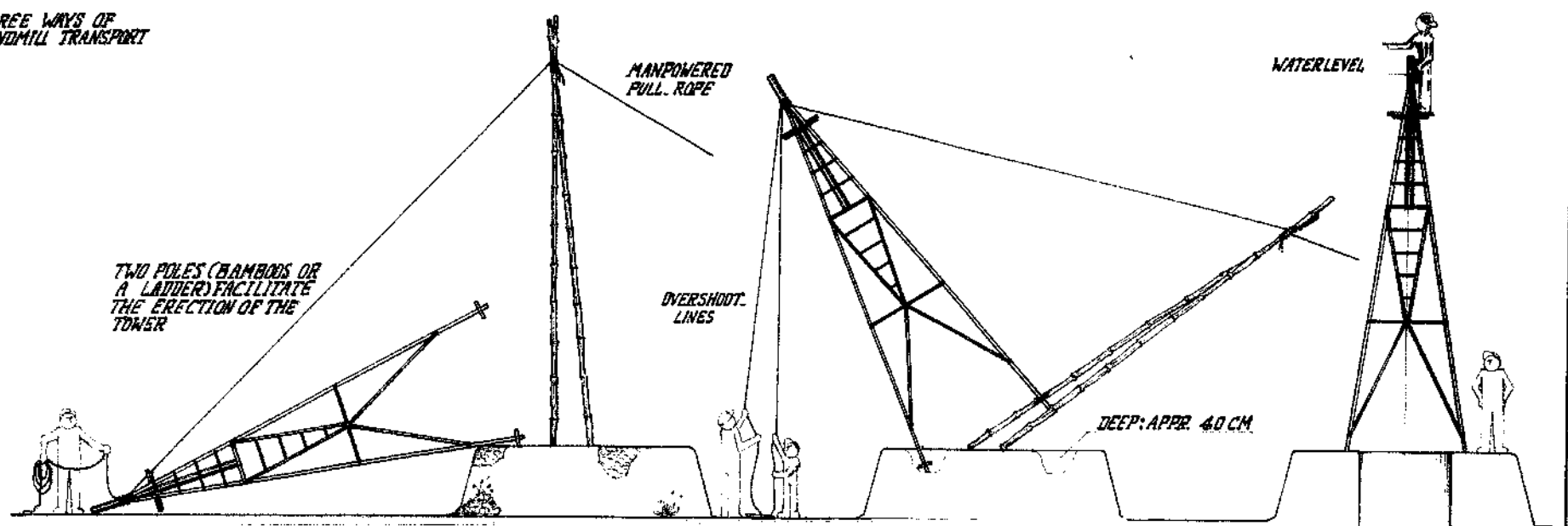


TRANSPORT BY TRACTOR AND LORRY



TRANSPORT BY JEEP AND ROLLING HELPDEVICE

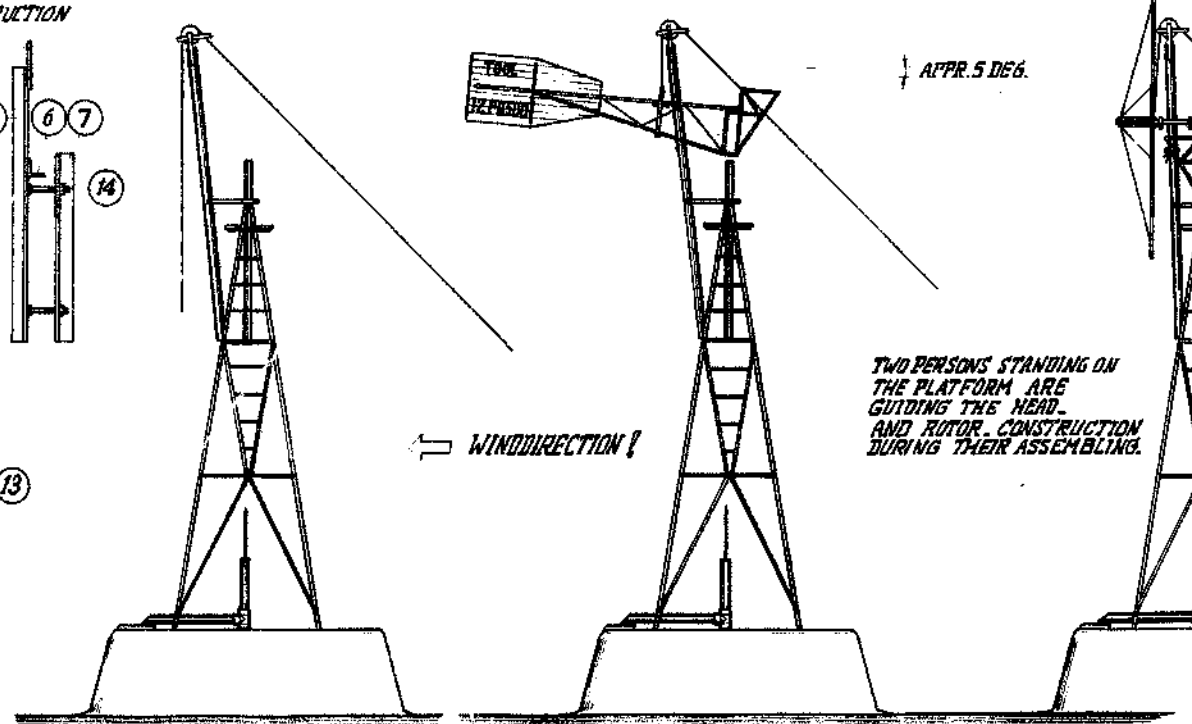
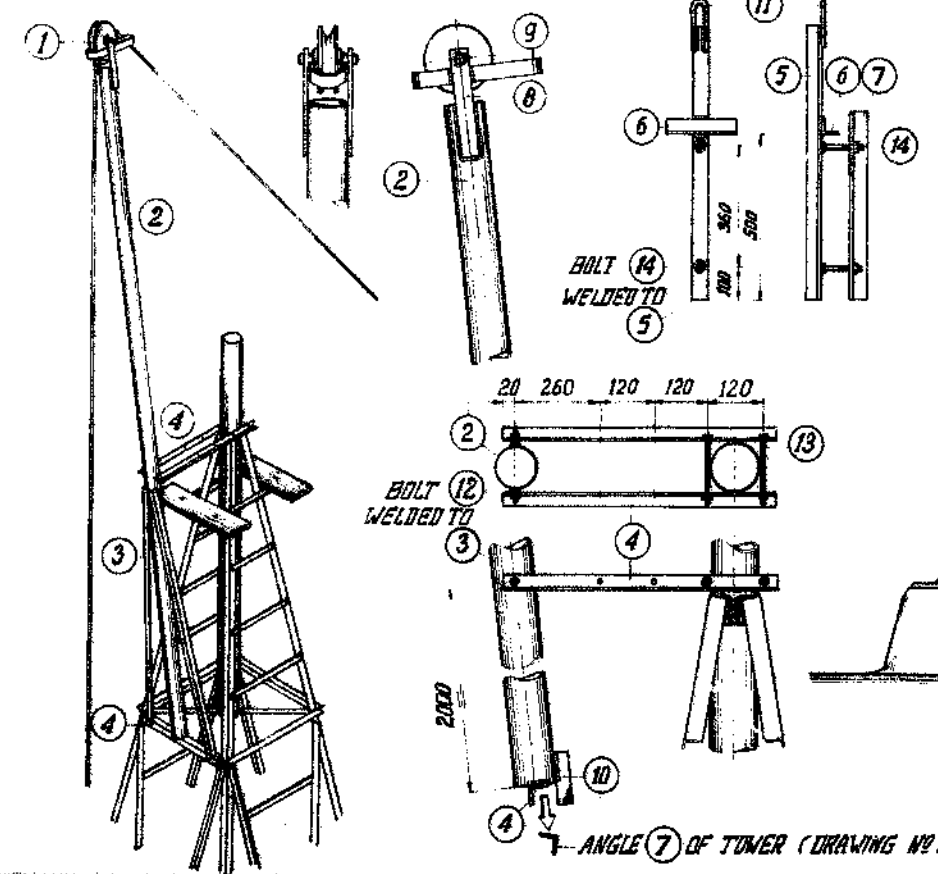
THREE WAYS OF WINDMILL TRANSPORT



**IMPORTANT:** AFTER PLACING THE TOWER THE TOWERLEGS ARE POURED IN WITH CONCRETE AND AFTER APPR. 5 DAYS THE HEAD AND ROTOR CONSTRUCTION CAN BE INSTALLED SAFE AND QUICK BY MEANS OF LIFTING DEVICES. DURING THE DRYING PERIOD OF THE CONCRETE FUNDATION THE PISTON PUMP IS FIXED INTO THE WELL ACCORDING TO THE SPECIFICATIONS!

"JIB" LIFTING HELPDEVICE

LIFTING HOOK FOR HEAD CONSTRUCTION



SINCE THE CENTRE OF GRAVITY OF THE HEAD CONSTRUCTION IS SITUATED ABOVE THE UPPER TAIL ANGLE A SPECIAL LIFTING HOOK IS APPLIED. A SMOOTH SLIDING OVER THE TOWERPIPE IS ACHIEVED IF THE FRONT IS OUT OF BALANCE APPR 5 DEGR.

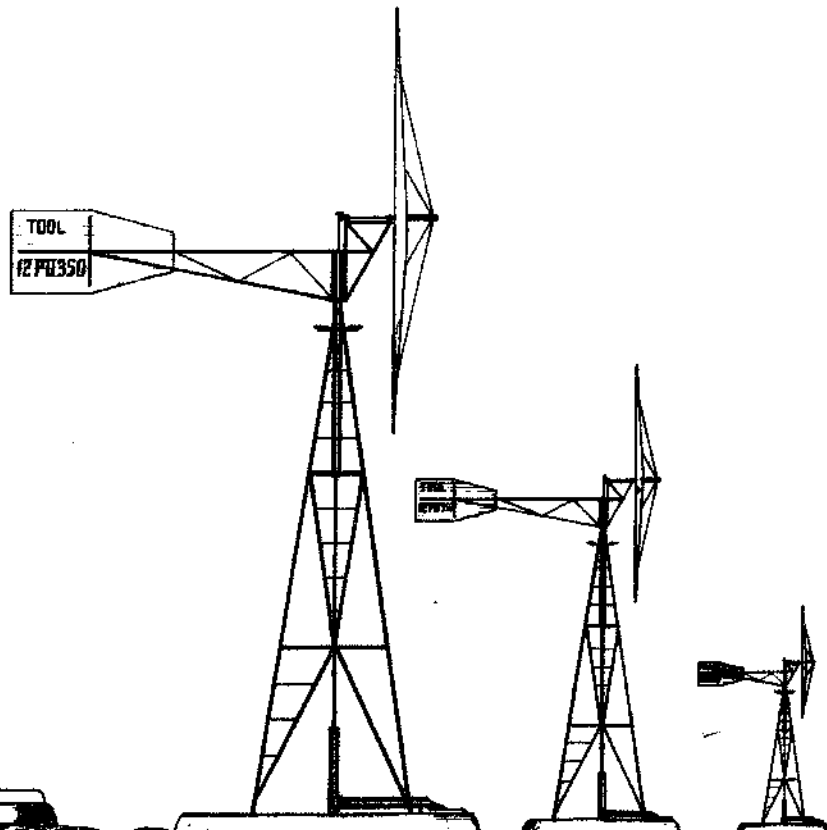
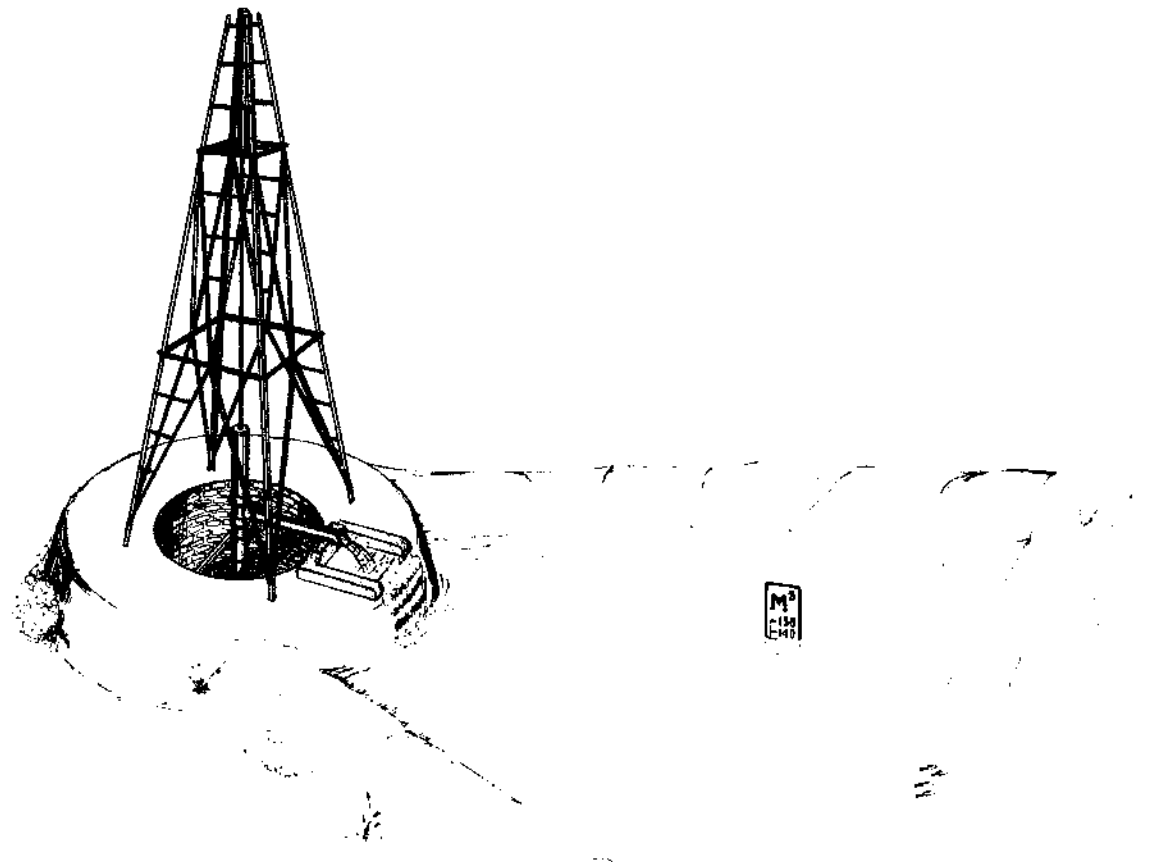
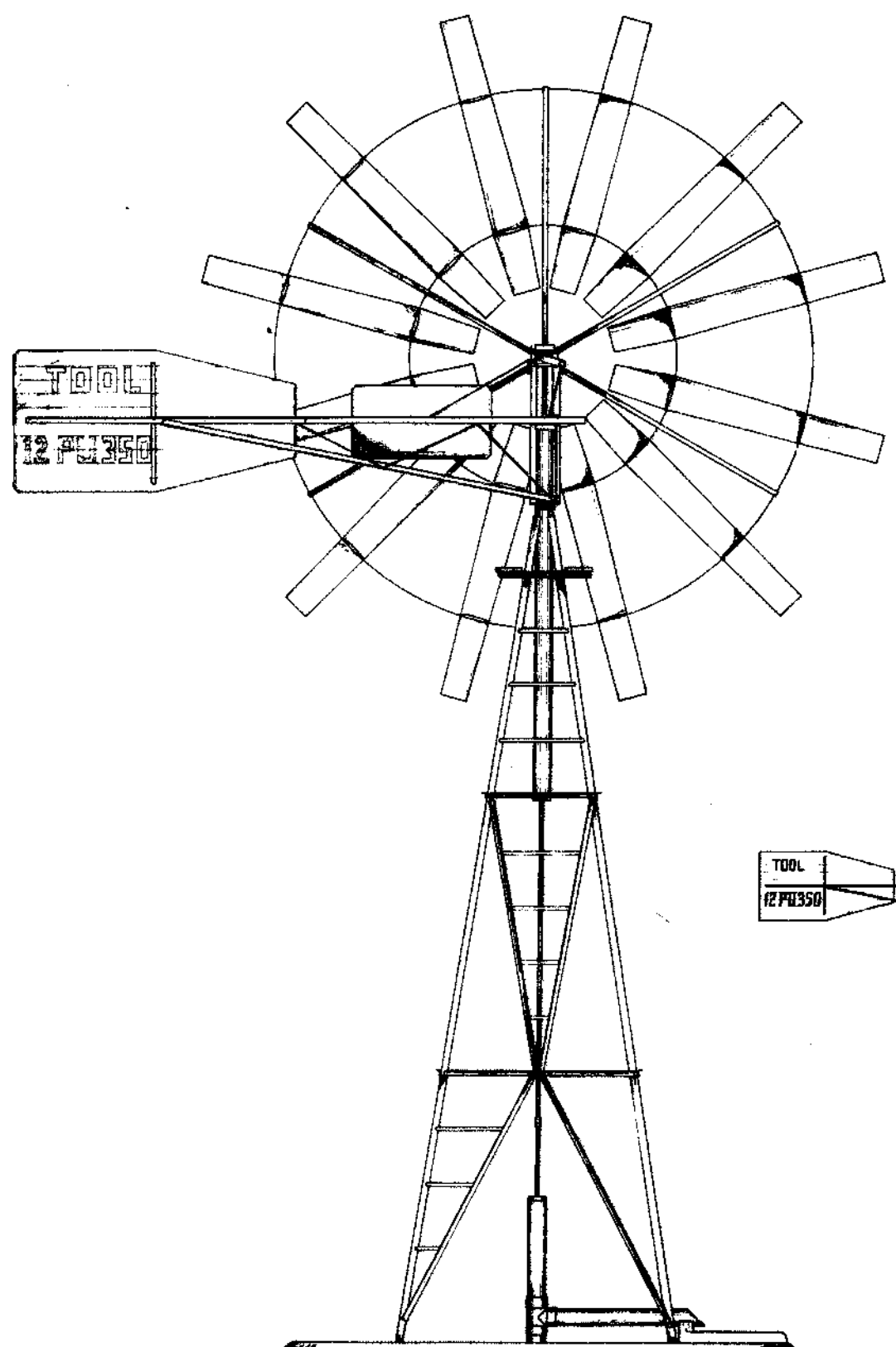
ROTOR IS LIFTED WITH THE SHAFT COMPLETE WITH BEARINGS FIXED IN THE ROTORHUB IN ITS ORIGINAL POSITION (CENTRE POINTS!) AND FIXED ON THE HEAD CONSTRUCTION. NOW THE "JIB" CAN BE REMOVED AND THE BLADES, SAFETY DEVICE AND MOVING PARTS ARE ASSEMBLED.

NO	NUM BER	MATERIAL / NAME / REMARKS / MEASUREMENTS
14	2	BOLT NUT WASHER M12 x 75 (W 1/8" x 3")
13	2	M12 x 150 (W 1/8" x 6")
12	2	M12 x 50 (W 1/8" x 2")
11	1	ROD Ø 10 (Ø 3/8") x 200
10	1	FLAT 30x6 (1 1/4" x 1/4") x 100
9	1	x 600
8	2	x 200
7	1	ANGLE IRON 40x40x4 (1 1/2" x 1 1/2") x 530
6	1	x 200
5	1	x 800
4	3	x 600
3	2	x 2000
2	1	GASPIPE Ø 3" x 4500
1	1	PULLEY SHAFT AND ROPE OR STEELCABLE (30 M)

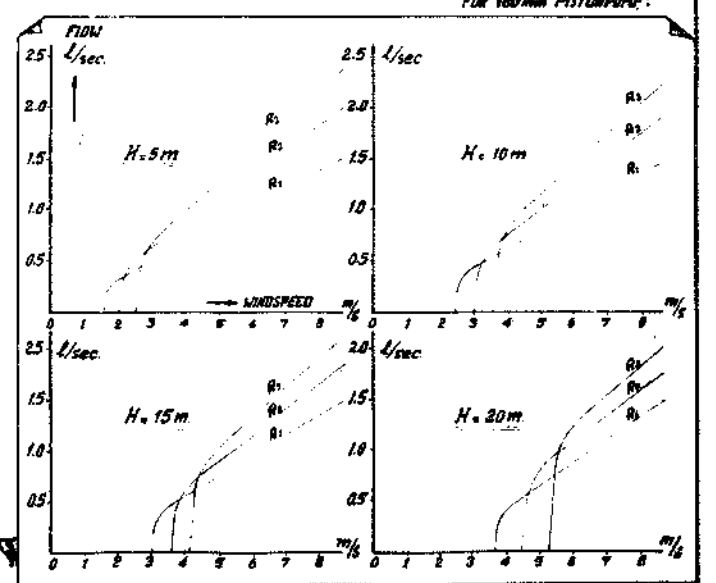
7 OF 7 INSTALLING THE WINDMILL — 12 PU 500 —

FOR INFORMATION:

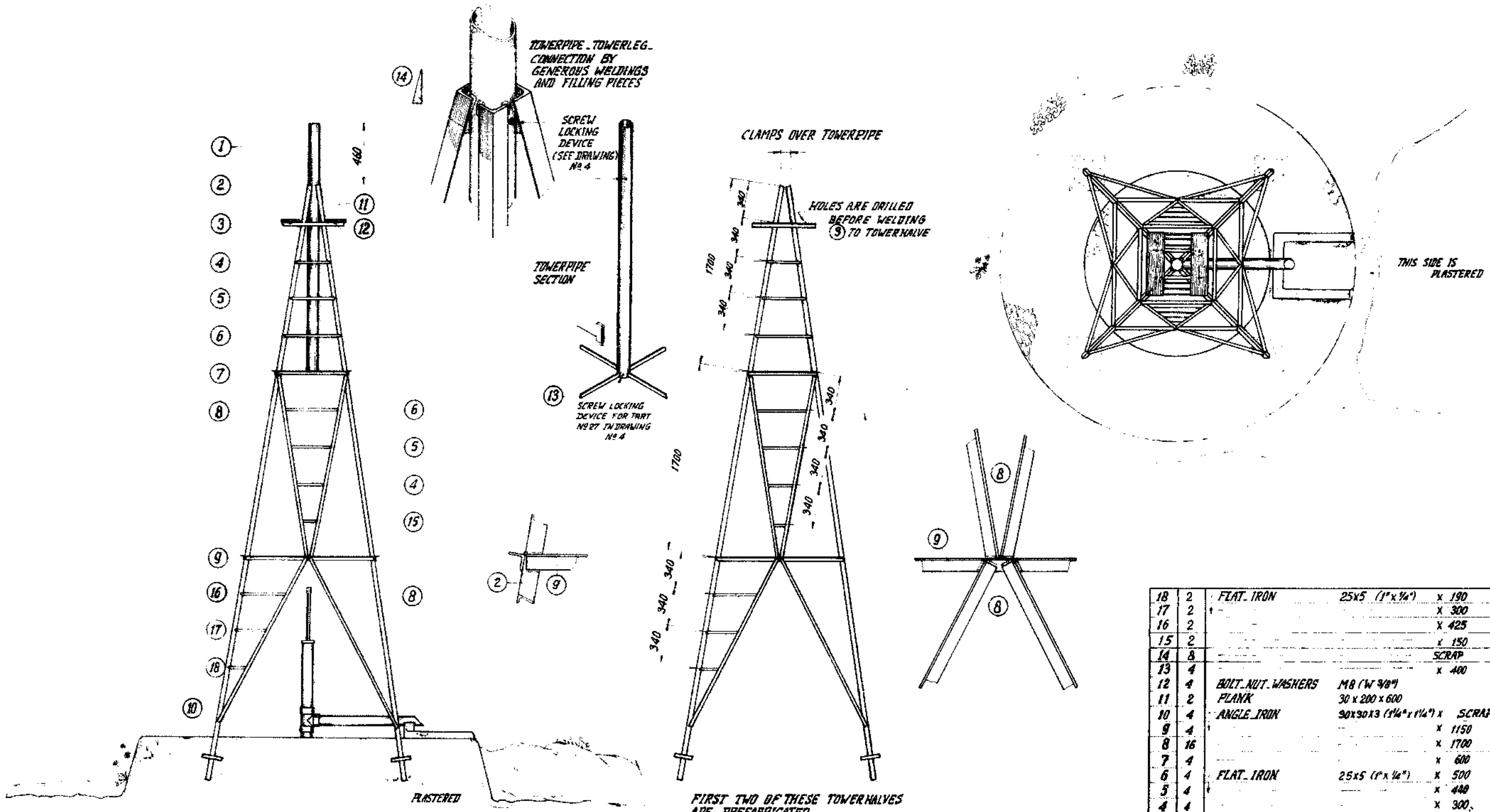




H = ELEVATION HEAD  
 R = 45 mm  
 R<sub>c</sub> = 675 mm - CRANK RADIUS  
 R<sub>s</sub> = 90 mm  
 FOR 100 mm PISTON PUMP:



12 PU 350 WINDMILL FOR IRRIGATION  
 FOR INFORMATION:

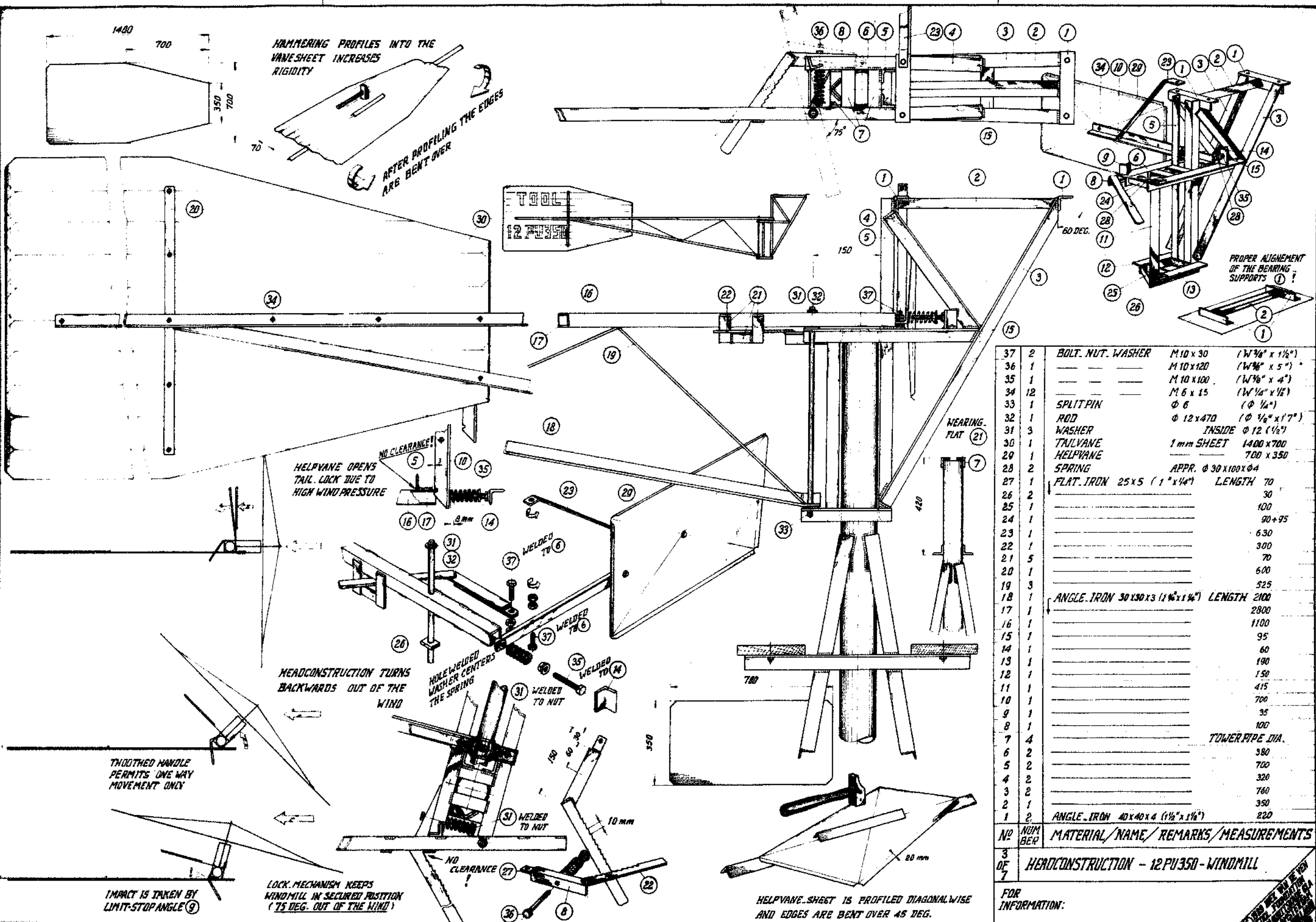


IF DESIRED THE LATTICE MEMBERS CAN BE POSITIONED AND WELDED INSIDE THE TOWERLEGS RESULTING IN A MORE ATTRACTIVE APPEARANCE OF THE TOWER. HOWEVER THE PLANGES AT THE ENDS OF THE ANGLE IRON MEMBERS NO 7 AND NO 9 SHOULD BE CUT AT ANGLES OF 45 DEGREES.

FIRST TWO OF THESE TOWERHALVES ARE PREFABRICATED BOTH HALVES ARE COMPOSED AND THE TOWERPIPE SECTION IS SHIFTED IN AND A COMPLETE TOWER RESULTS

18	2	FLAT IRON	25x5 (1"x 1/4")	x 190
17	2			x 300
16	2			x 425
15	2			x 150
14	8			SCRAP
13	4			x 400
12	4	BOLT NUT WASHERS	M8 (W 9/8")	
11	2	PLANK	30 x 200 x 600	
10	4	ANGLE IRON	90x90x3 (1 1/4" x 1 1/4")	SCRAP
9	4			x 1150
8	16			x 1700
7	4			x 600
6	4	FLAT IRON	25x5 (1"x 1/4")	x 500
5	4			x 440
4	4			x 300
3	2	ANGLE IRON	90x90x3 (1 1/4" x 1 1/4")	x 550
2	4			5500
1	1	TOWERPIPE	3" GASPIPE	2150

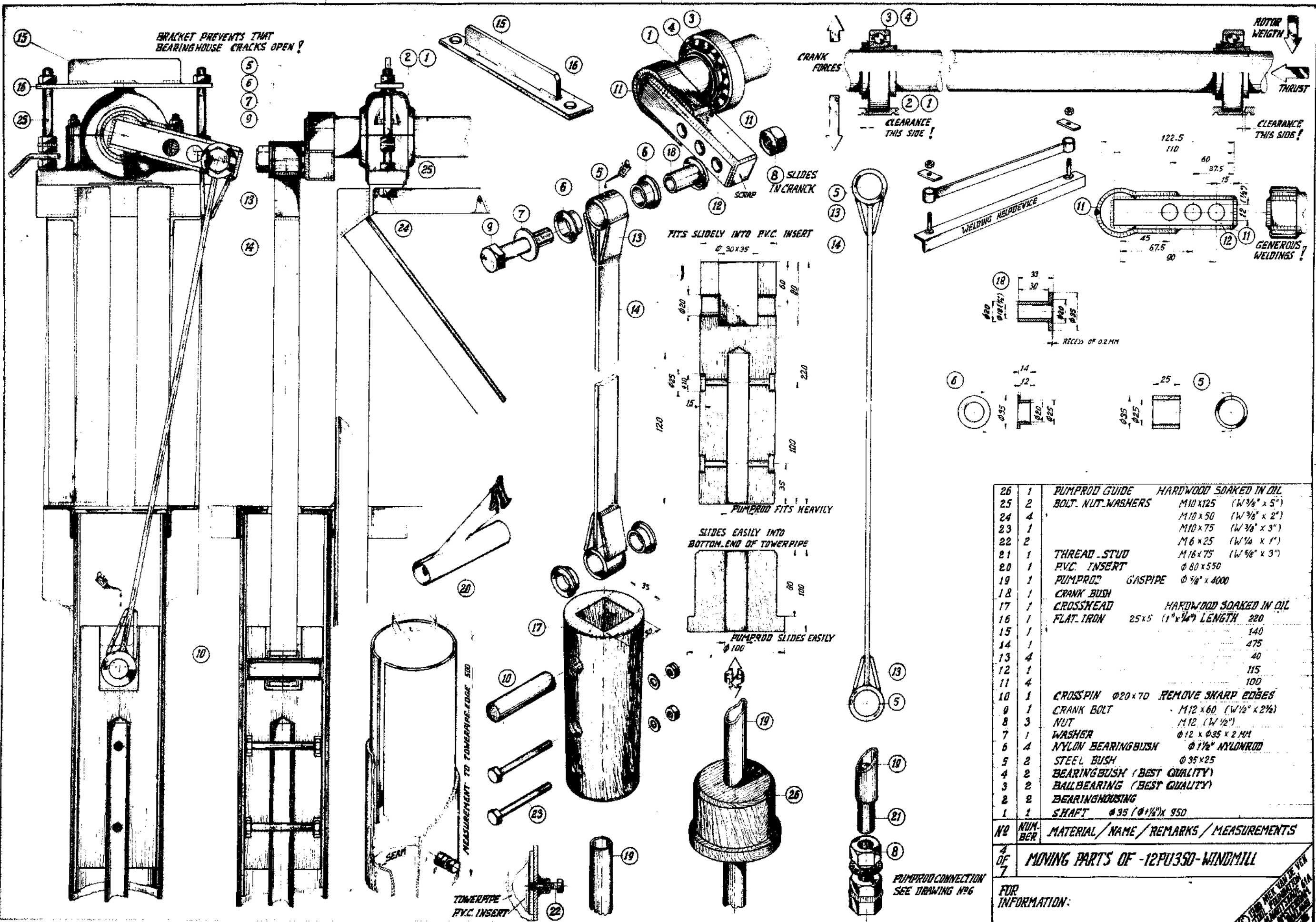
NO. OF 2 OF 7  
 -12 PU 350 - TOWER CONSTRUCTION  
 FOR INFORMATION:



37	2	BOLT. NUT. WASHER	M 10 x 30	(W 3/8" x 1 1/2")
36	1	---	M 10 x 120	(W 3/8" x 5")
35	1	---	M 10 x 100	(W 3/8" x 4")
34	12	---	M 6 x 15	(W 1/4" x 1/2")
33	1	SPLIT PIN	Φ 6	(Φ 1/4")
32	1	ROD	Φ 12 x 470	(Φ 1/2" x 17')
31	3	WASHER	INSIDE Φ 12 (1/2")	
30	1	TAILVANE	1 mm SHEET	1400 x 700
29	1	HELPVANE		700 x 350
28	2	SPRING	APPR. Φ 30 x 100 x Φ 4	
27	1	FLAT IRON	25 x 5 (1" x 1/4")	LENGTH 70
26	2	---		30
25	1	---		100
24	1	---		90 + 95
23	1	---		630
22	1	---		300
21	5	---		70
20	1	---		600
19	3	---		525
18	1	ANGLE IRON	30 x 30 x 3 (1 1/4" x 1 1/4")	LENGTH 2100
17	1	---		2800
16	1	---		1100
15	1	---		95
14	1	---		60
13	1	---		190
12	1	---		150
11	1	---		415
10	1	---		700
9	1	---		35
8	1	---		100
7	4	---		TOWER PIPE DIA.
6	2	---		380
5	2	---		700
4	2	---		320
3	2	---		760
2	1	---		350
1	2	ANGLE IRON	40 x 40 x 4 (1 1/2" x 1 1/2")	220

NO	NUM BER	MATERIAL/NAME/REMARKS/MEASUREMENTS
3	OF	HEAD CONSTRUCTION - 12 PU 350 - WINDMILL
7		

FOR INFORMATION:



26	1	PUMPROD GUIDE	HARDWOOD SOAKED IN OIL
25	2	BOLT. NUT. WASHERS	M10x125 (W 3/8" x 5")
24	4		M10x50 (W 3/8" x 2")
23	1		M10x75 (W 3/8" x 3")
22	2		M6x25 (W 1/4" x 1")
21	1	THREAD STUD	M16x75 (W 3/8" x 3")
20	1	PVC INSERT	Ø 60 x 550
19	1	PUMPROD GASPIPE	Ø 7/8" x 4000
18	1	CRANK BUSH	
17	1	CROSSHEAD	HARDWOOD SOAKED IN OIL
16	1	FLAT IRON	25x5 (1" x 1/4") LENGTH 220
15	1		140
14	1		475
13	4		40
12	1		115
11	4		100
10	1	CROSSPIN	Ø 20 x 70 REMOVE SHARP EDGES
9	1	CRANK BOLT	M12 x 60 (W 1/2" x 2 1/2")
8	3	NUT	M12 (W 1/2")
7	1	WASHER	Ø 12 x Ø 35 x 2 MM
6	4	NYLON BEARINGBUSH	Ø 1 1/8" NYLON ROD
5	2	STEEL BUSH	Ø 35 x 25
4	2	BEARINGBUSH (BEST QUALITY)	
3	2	BALL BEARING (BEST QUALITY)	
2	2	BEARINGHOUSING	
1	1	SHAFT	Ø 35 (Ø 1 1/4") x 950
NO	NUM.	MATERIAL/NAME/REMARKS/MEASUREMENTS	
4	OF	MOVING PARTS OF -12PU350-WINDMILL	
7		FOR INFORMATION:	

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AFTER ASSEMBLING THE BLADE TIP ANGLE (14.7°) NEEDS CORRECTION.

HELPDEVICE (1 MM SHEET)  $\frac{36}{140}$

ETC.

ROTOR RUNS COUNTERCLOCKWISE.

ETC.

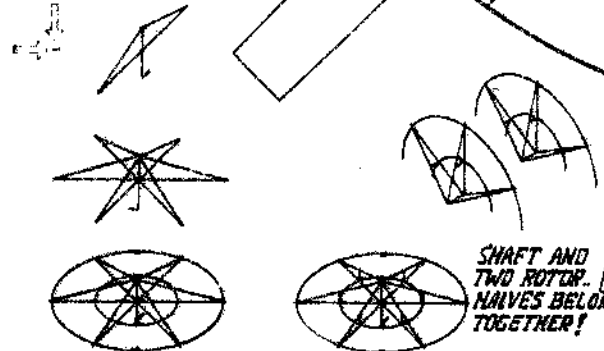
PORTABLE

PORTABLE

689 TO CENTRE

1337 TO CENTRE

**IMPORTANT:**  
ROTOR FRAME IS COMPOSED ON ITS SHAFT TO PREVENT "JUMPING AND DANCING" OF THE SPOKES AND RINGS. REFERENCES!

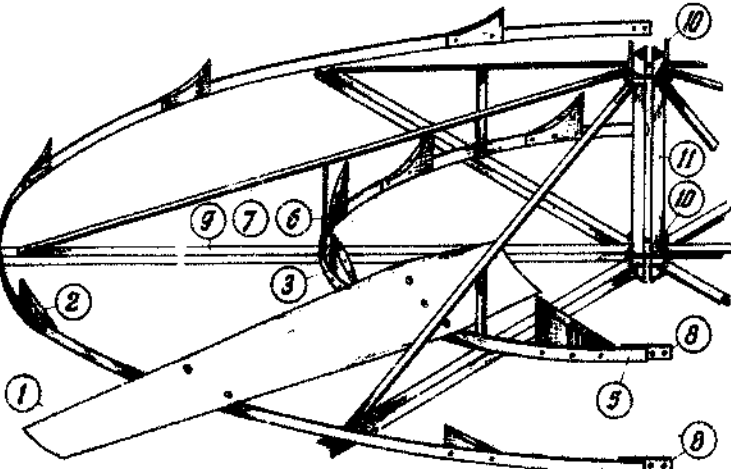
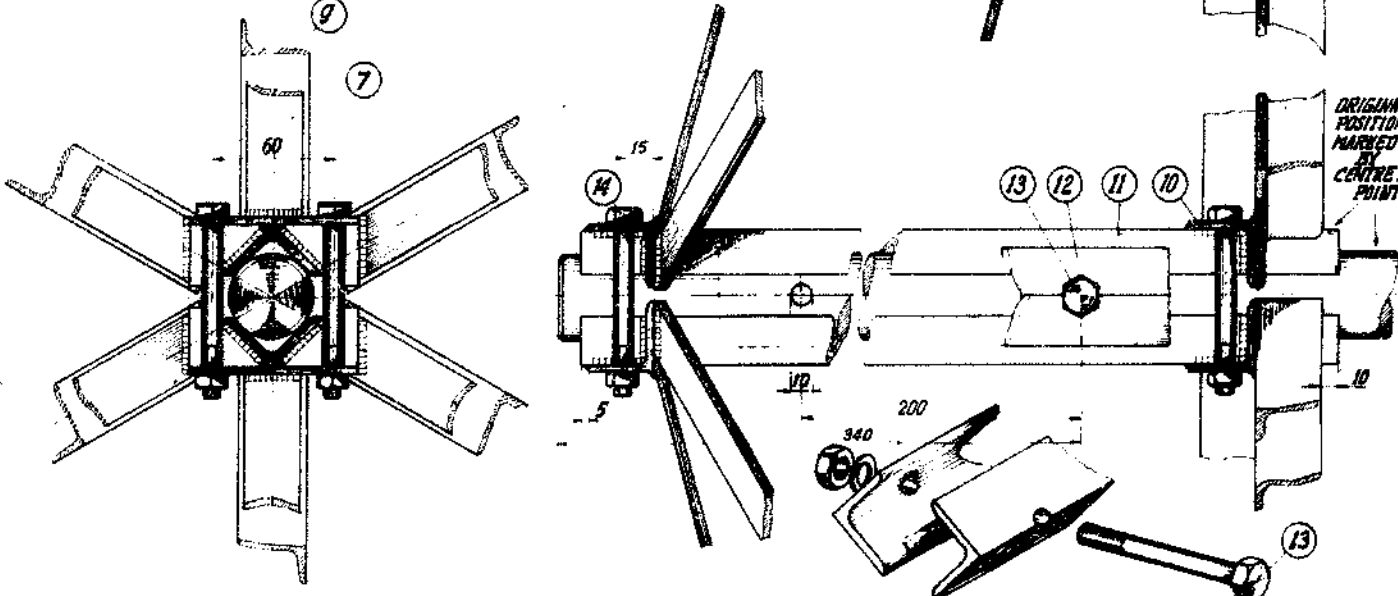
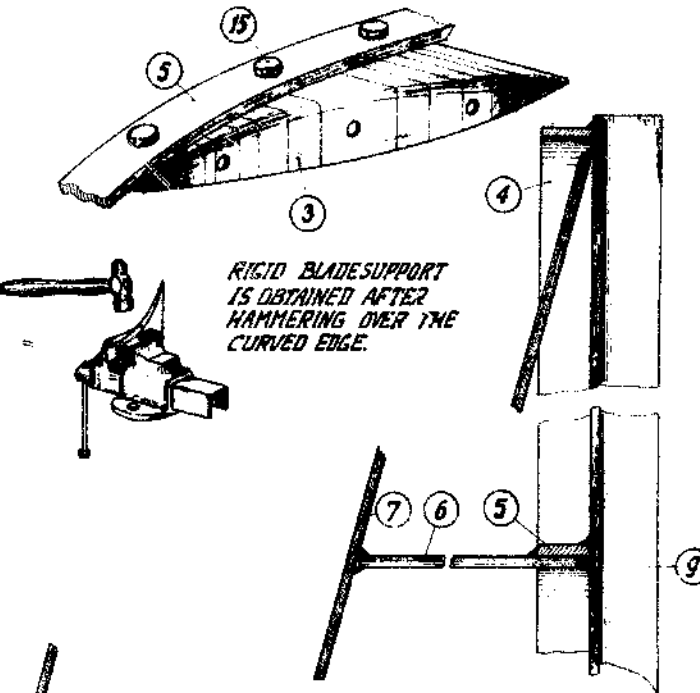
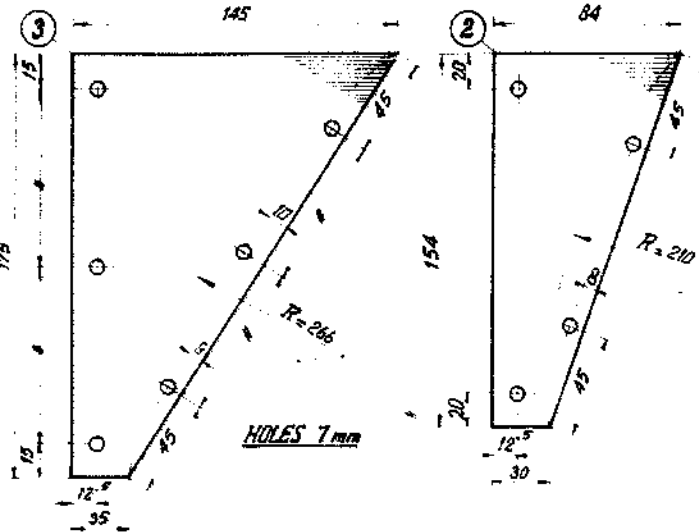


RINGS ARE POSITIONED, CENTERED AND WELDED.

PART NO 6 IS WELDED.

SHAFT AND TWO ROTOR HALVES BELONG TOGETHER!

SHEET IS ROLLED IN A BENDING - RADIUS OF APPROX. 200 mm. AFTER CUTTING THE RADIUS IS CORRECTED SO THAT 10% CURVED AIRFOILS WILL RESULT.



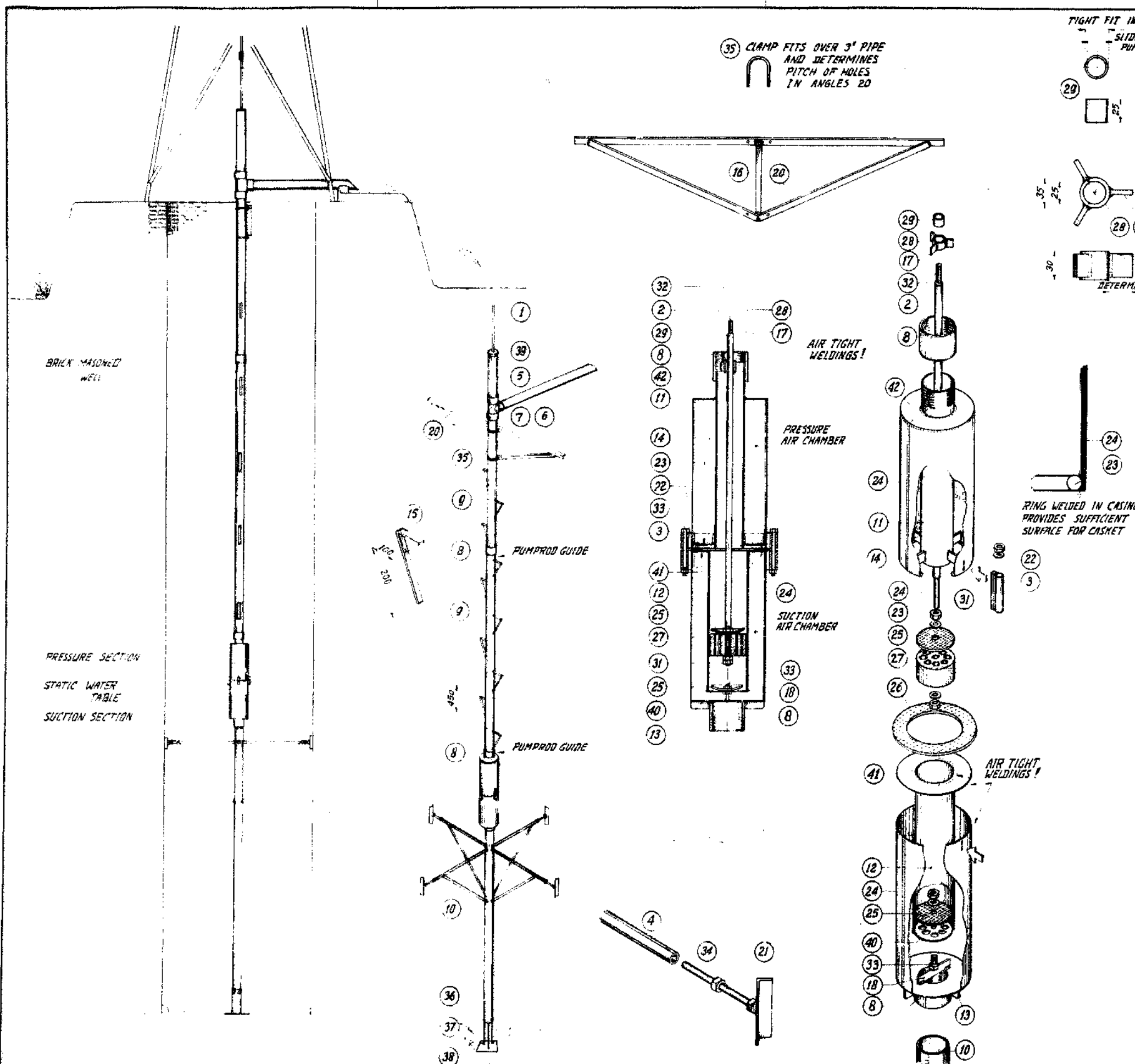
16	8	BOLT NUT WASHER	M10x25 (W 3/8" x 1")
15	120		M6x15 (W 1/8" x 1/2")
14	4		M10x100 (W 3/8" x 4")
13	2		M10x100 (W 3/8" x 4")
12	2	ANGLE IRON	30x30x3 (1 1/4" x 1 1/4") x 300
11	2		x465
10	4		x100
9	6		x1330
8	4	FLAT IRON	25x5 (1" x 1/4") x 120
7	6		x1330
6	6		x190
5	1		2 x 2100
4	1		2 x 4200
3	12	BLADE SUPPORT	1 mm SHEET
2	12		
1	12	BLADE	1 mm SHEET

NO. 5 OF 7 MATERIAL/NAME/REMARKS/MEASUREMENTS

ROTOR FOR - 12 PU 350 - WINDMILL (A-2)

FOR INFORMATION:





42	2	CASING - FLANGE	2mm SHEET Ø220
41	1	FOOT VALVE	(SCRAP FROM NO 41)
39	1	WOODEN PUMPROD GUIDE: 26 IN DRAWING NO 4	
38	1	BOTTOM SHEET	2mm SHEET Ø 300
37	1	MESH	Ø 350
36	3	FOOT BAR	ROD Ø 8 (3/16) x 400
35	2	CLAMP	Ø 8 (3/16) x 300
34	4	BOLT - NUT	M24 x 200 (W 1/2 x 8")
33	5	BOLT - NUT - WASHER	M12 x 75 (W 9/16 x 3")
32	*	THREAD STUD	M16 x 75 (W 5/8 x 3")
31	1	NUTS	M16 (W 5/8")
30	*	BRONZE BUSH	Ø 25 x 25
29	1	STEEL BUSH	Ø 35 x 30
28	1	PISTON / FOOTVALVE	TEAKWOOD
27	2	GASKET	SOLE LEATHER Ø 225 x 6 mm
26	1	VALVE	Ø 100 x 6 mm
25	2	CASING	2mm SHEET 350 x 660
24	1	RING	ROD Ø 8 (Ø 3/8")
23	4	FILLING PIECE	ROD Ø 8 (Ø 3/8") x 40
22	4	ANGLE IRON	30 x 30 x 3 (1 1/4 x 1 1/4) x 200
21	2		x 700
20	2		x 700
19	4		x 700
18	1	FLAT IRON	25 x 5 (1 x 1/4) x 120
17	3		x *
16	1		x 450
15	*		x 300
14	4		x 300
13	4		x 300
12	1	CYLINDER SEAMLESS	4" GASPIPE x 325
11	1	DELIVERY PIPE	3" x 425
10	1	SUCTION PIPE	3" x *
9	1	DELIVERY PIPE (EXTENSION)	3" x 3M
8	*	SOCKET FOR	3"
7	1	T-SOCKET	3"
6	1	EXHAUST PIPE	3" x *
5	1	TOP PIPE	3" x 700
4	4	POSITIONING PIPE	1" x *
3	4	PIPE	3/8" x 50
2	1	PUMPROD	5/8" x 750
1	*	PUMPROD EXTENSION	5/8" x *

NO NUM. MATERIAL / NAME / REMARKS / MEASUREMENTS

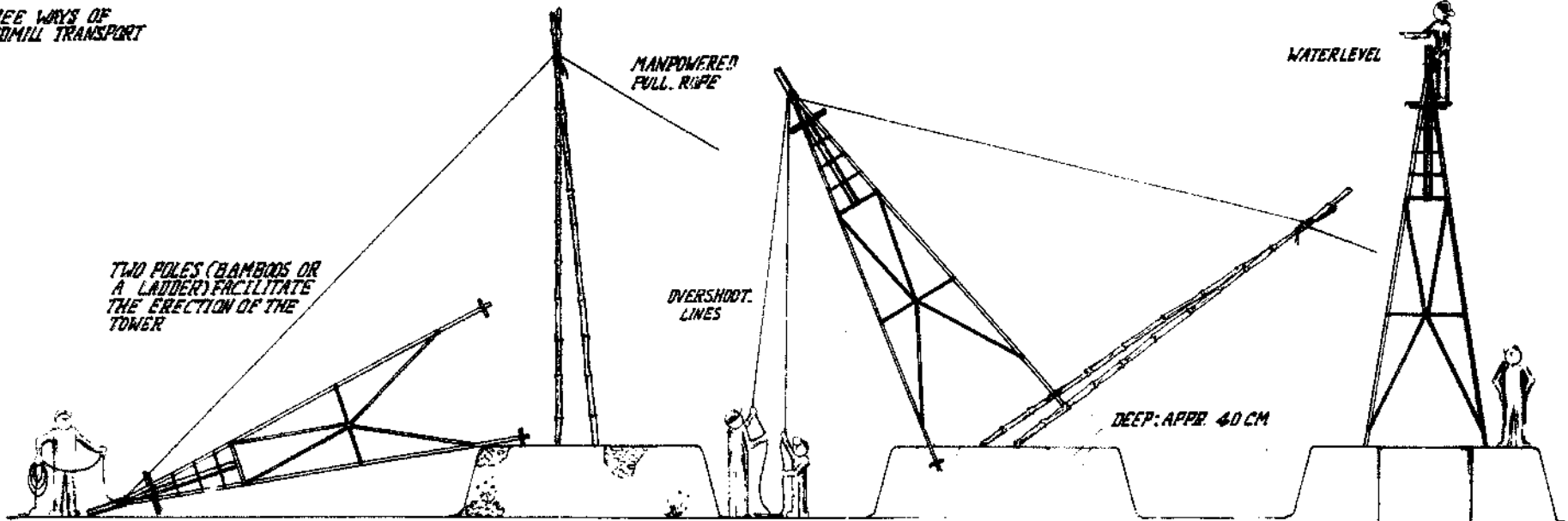
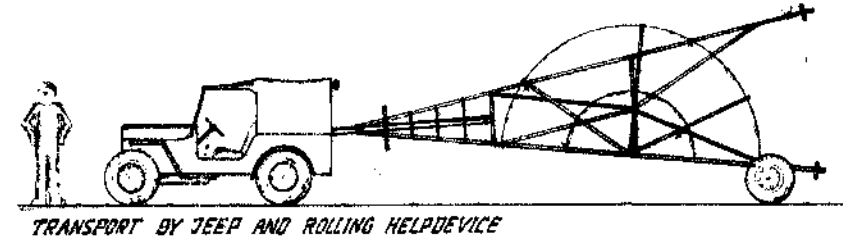
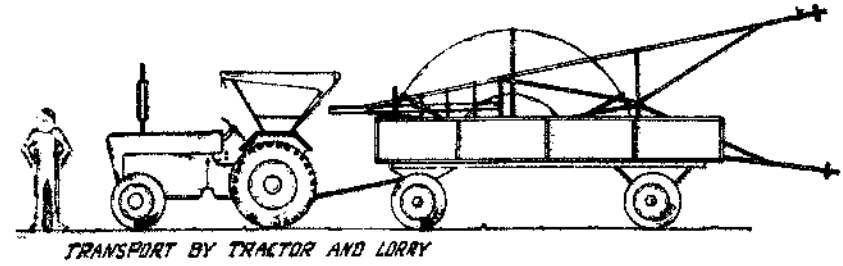
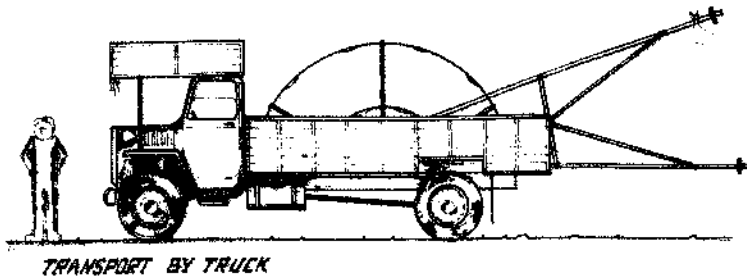
6 OF 7 4" PISTON PUMP FOR 12 PU 350 WINDMILL

FOR INFORMATION:

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 VAN DE WINDMOLLEN  
 WINDMOLLEN



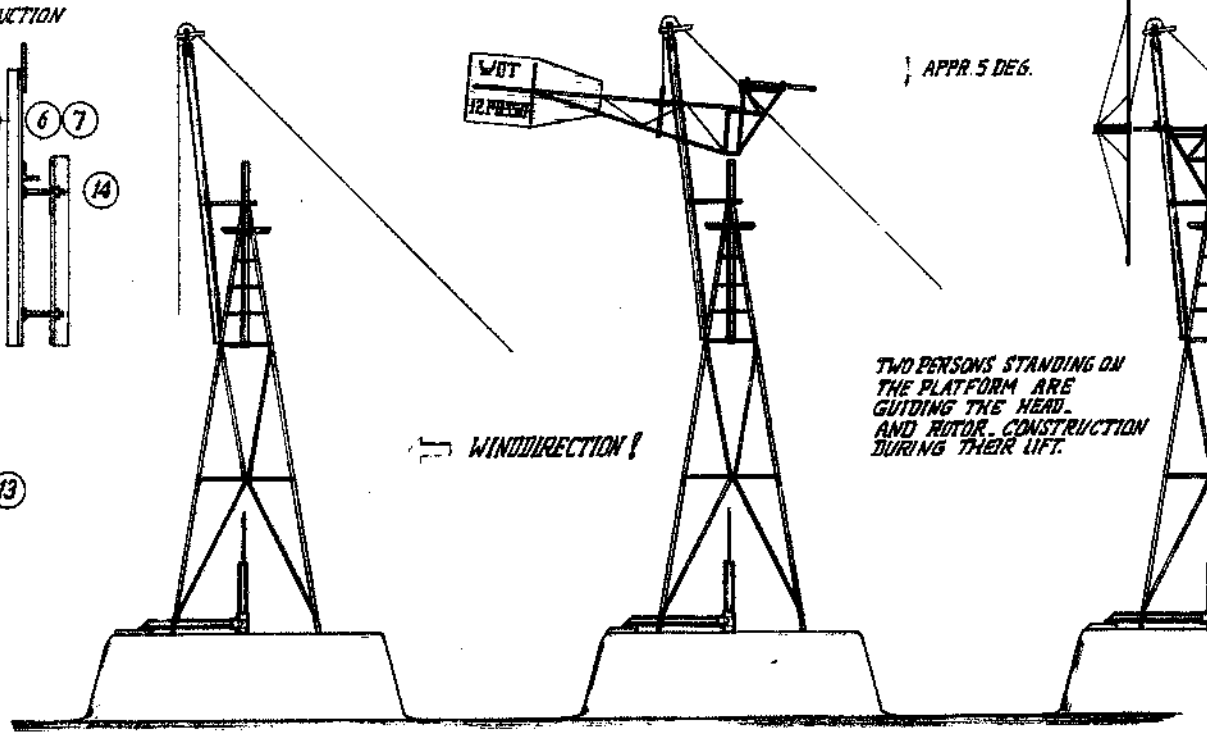
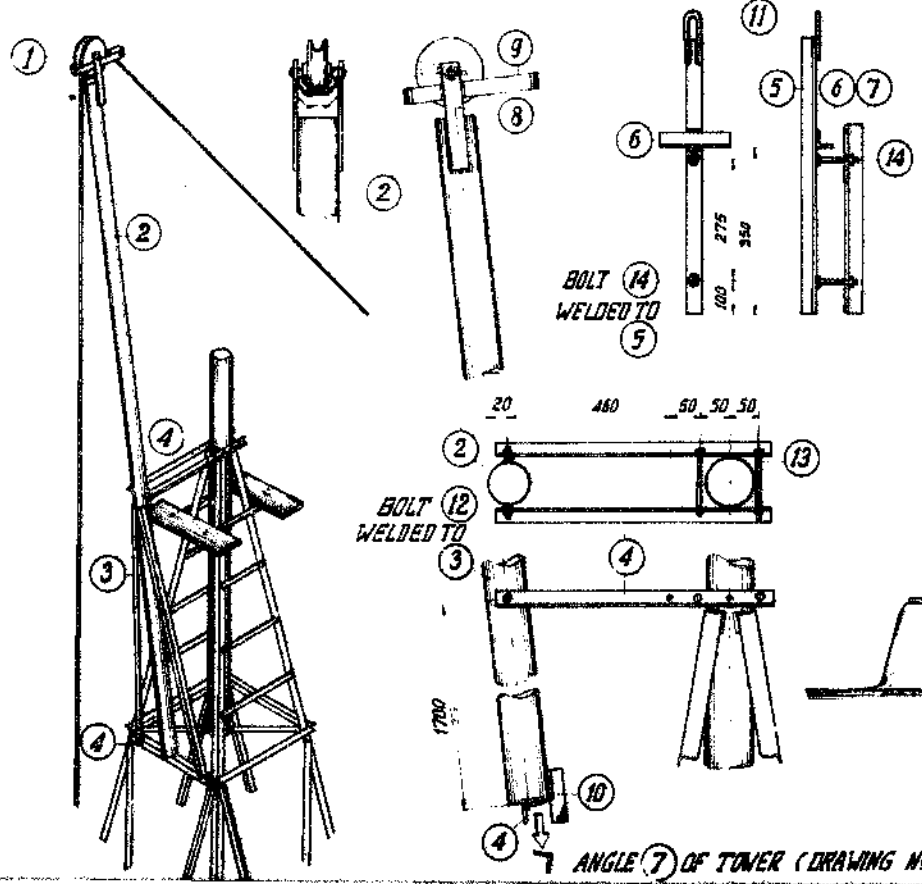
THREE WAYS OF WINDMILL TRANSPORT



**IMPORTANT:** AFTER PLACING THE TOWER THE TOWERLEGS ARE POURED IN WITH CONCRETE AND AFTER APPR. 5 DAYS THE HEAD AND ROTOR CONSTRUCTION CAN BE INSTALLED SAFE AND QUICK BY MEANS OF LIFTING DEVICES. DURING THE DRYING PERIOD OF THE CONCRETE FUNDATION THE PISTON PUMP IS FIXED INTO THE WELL ACCORDING TO THE SPECIFICATIONS!

'JIB' LIFTING HELPDEVICE

LIFTING HOOK FOR HEAD CONSTRUCTION



SINCE THE CENTRE OF GRAVITY OF THE HEAD CONSTRUCTION IS SITUATED ABOVE THE UPPER TAIL ANGLE A SPECIAL LIFTINGHOOK IS APPLIED. A SMOOTH SLIDING OVER THE TOWERPIPE IS ACHIEVED IF THE FRONT IS OUT OF BALANCE APPR 5 DEGR.

ROTOR IS LIFTED AND POSITIONED AT THE TOP OF ITS SHAFT AND SHIFTED IN ITS ORIGINAL POSITION (CENTREPOINTS!) AND FIXED. NOW THE 'JIB' CAN BE REMOVED AND THE BLADES, SAFETY DEVICE AND MOVING PARTS ARE ASSEMBLED.

14	2	BOLT NUT WASHER	M.10 x 75 (W 3/4" x 3")
13	1		M.10 x 125 (W 3/4" x 5")
12	2		M.10 x 50 (W 3/4" x 2")
11	1	ROD	Ø10 (Ø 3/8") x 200
10	1	FLAT	25 x 5 (1" x 1/4") x 100
9	1		x 550
8	2		x 200
7	1	ANGLE IRON	30 x 30 x 3 (1 1/4" x 1 1/4") x 385
6	1		x 200
5	1		x 550
4	3		x 500
3	2		x 1700
2	1	GASPIPE	Ø 3" x 4000
1	1	PULLEY SHAFT AND ROPE OR STEELCABLE	(30 M)
<b>NO 7 OF 7</b>			
<b>MATERIAL NAME/REMARKS/MEASUREMENTS</b>			
7 OF 7			
INSTALLING THE WINDMILL — 12 PU 350 —			
FOR INFORMATION:			